Master[pro] Toploaders (LP Series)

- User-friendly operating design displays menu and application prompts in English.
- ReproTEST function determines the reproducibility of the balance under the user's installation conditions
- isoCAL fully automatic internal calibration on all models
- Detachable, high-contrast backlit LCD display is easy to read under any lighting conditions
- The bi-directional RS-232 output will generate GLP/GMP compliant record when connected to a PC or an optional printer
- IP54 water/dust protection rating on all models protects balances from harsh environments
- MCl technology features a 40Hz microcomputer chip dedicated to weighing
- Six built-in application programs, including: counting, net/total formulation, weighing in %, over/under checkweighing, animal weighing and mass unit conversions
- Alphanumeric data can be easily input via the keyboard
- Addressable for network systems

Basic[plus] (BP Series)

- "Touch and click" keypad with only one function to a key and two tare keys
- Easy-access applications programs: counting, % weighing, net totaling, mass unit conversion, and animal weighing
- Weighing range from 61g to 34kg and readability from .01mg to 1g
- Anti-theft locking lug and level indicator
- ISO/GLP-compliant recording /printout of calibration and weighing data with optional printer
- Easy-to-read high-contrast LCD display
- Intelligent filling mode
- Selectable digital vibration filters for fastest stabilization possible
- Pinwheel pan supports act as lateral shock absorbers on square pan models
- Smooth-track: a large all-glass draft chamber (0.1 mg analyticals) for easy viewing and excellent draft protection
- Standard RS-232 data interface (bidirectional)
- Cylindrical glass draft ring (1mg toploaders)
- High-grade stainless steel weighing pans
- Internal calibration on analytical and semi-micro models
- IP54 water/dust protection rating

Ultra-Mico (SC2)

- Fine readability of 0.1g and a 2.1µg capacity
- Motorized weighing chamber with access from front or either side
- Built-in automatic internal calibration with isoCAL software
- Four selectable vibration filters for fast stabilization in adverse conditions
- Standard RS-232 data interface (bidirectional)
- Numeric keypad for data entry
- Built-in software application programs for counting and backweighing

Micro (MC5, M2P)

- Full electronic weighing range eliminates need for substitution weights
- Standard RS-232 data interface (bidirectional)
- Four selectable vibration filters for fast stabilization in adverse conditions
- Calibration weight and forces included (M2P)
- 5g capacity with 1 µg readability full range (MC5)
- Equipped with EUREKA air buoyancy correction software (MC5)

Semi-Micro Analytical (ME Series)

- MC1 technology features a 40 MHz microcomputer chip dedicated to weighing
- Moveable backlit display with linear range indicator
- Motorized, cylindrical glass draft chamber with 170° access
- isoCAL fully automatic internal calibration
- Standard RS-232 data interface (bidirectional)
- Standard GLP/GMP self identification printout capability with optional printer
- Seven application programs, including: density determination, mass unit conversion, counting, checkweighing, net totaling, % weighing, backweighing
- Four selectable vibration filters for fast stabilization in adverse conditions
- Anti-theft lock-down ring
- Equipped with EUREKA air buoyancy correction software

Analytical (LA Series)

- MC1 technology features a 40 MHz microcomputer chip dedicated to weighing
- Backlit display, linear capacity indicator
- Oversized glass draft chamber with 3-way access
- isoCAL automatic Internal Calibration
- Standard RS-232 data interface (bidirectional)
- Thirteen application programs, including: mass unit conversion, counting, checkweighing, net totaling and % weighing
- Four selectable vibration filters for fast stabilization in adverse conditions
- Anti-theft lock-down ring
- Alpha numeric keypad for data entry

Semi-Micro (BP211D) with Monolithic Weighing System

- Delivers excellent, consistently accurate weighing results within an incredibly fast response time
- Highly sensitive in measuring the weight of a sample, but rugged in facing real-world situations
- Minimizes the effects of ambient temperature on balance accuracy

Master^{pro} Toploaders (LA Series)

All the features of the LPs, with the following additions:

- Built-in applications for statistics, totalizing, formulation, timer mode, calculation (addition, subtraction, division, multiplication), preset tare
- Up to three applications can be combined
- Backlit graphic display
- User-definable four-line header for printouts
- Storage of custom-configurable application parameters in a non-volatile memory to eliminate data loss
- Addressable for network systems

Portable Toploaders (BL Series)

- High grade stainless steel weighing pans
- Easy-to-read LCD display with linear range indicator
- Five application programs, including: mass unit conversion, counting, checkweighing, net totaling and % weighing
- Optional 9V battery (except BL150S, BL 1500S)
- Optional RS-232 data interface (bidirectional)

Specifications subject to change without notice
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Industrial Balances (Express Series)

- IP65/NEMA 4 ratings makes these scales washdown-resistant and dust-tight
- Wide selection of capacity ranges, from 6 kg to 150 kg
- Base mounted display with 2' cable for remote capacity
- Die cast aluminum housing with stainless steel weighing platform
- Standard RS-232C data interface (bi-directional)
- 2-year warranty
- Backlit display

Explosion-Proof Balances

- Capacity to 12 kg and resolution down to 1 mg
- Factory Mutual Research Approval
- PMA-X: Class 1, Division 1, Groups C and D and come with non-hazardous power supply (no options)
- FC-X series approved for Class l, Division l, Groups ABCD
- FC-X series have fully automatic internal calibration

Density Determination Kits for Solids and Liquids

- High quality, rugged construction virtually eliminates breakage
- Includes hardware to measure solids with a density less than one
- Specially designed glass plummet for easy, accurate measurement of liquids
- YDK01 compatible with MC's, AC's, 1mg LC's and BP analyticals
- Density is automatically internally calculated on MC's, AC-00MS versions and LA Series, saving valuable time and reducing error
- Statistical data also available with above models

Rice Lake MB Series Balances

MB-3000E

PART #	DESCRIPTION	PART #	DESCRIPTION
66742	150g x 0.001g	66744	600g x 0.01g
66741	150g x 0.01g	66745	1500g x 0.1g
66743	300g x 0.01g	66746	3000g x 0.1g
66756	600g x 0.02g	66747	6000g x 0.1g

The MB Series offers performance at an affordable price. Capacities range from 150g x .001g to 6000g x 0.1g.

Its revolutionary tuning fork technology provides automatic tracking for superior accuracy under any condition. Requiring no warm-up period, the MB Series also provides quick display response—precise measurement takes less than two seconds.

Applications

NEW! Product!

- Quality control
- Research laboratory

Standard Features

- Liquid Crystal Display (LCD), 0.64" (16.5mm)
- Automatic zero tracking
- Measures in three units: g, ct and oz (or lb)
- Switchable between any two weight units.
- No warm-up period required after power-up
- Five year limited warranty

Options/Accessories

42566 ..... 115 volt adapter
42168 ..... 230 volt adapter
42169 ..... Internal rechargeable battery with sleep mode
42175 ..... Bidirectional RS-232 interface
42179 ..... Glass breeze shield (round pan balance only)
42183 ..... Carrying case
42192 ..... Additional operating manual

Rice Lake QB Series Balances

QB-620E

QB-6200E

PART #	DESCRIPTION	PART #	DESCRIPTION
66754	300g x 0.01g	66751	3000g x 0.1g
66755	600g x 0.02g	66752	3000g x 0.01g
66749	620g x 0.01g	66753	6200g x 0.1g
66750	1500g x 0.1g		

Offering fast, stable, and trouble-free measurement of lightweight items, the QB Series uses durable tuning fork technology. Capacities rance from 300g x 0.01g to 6kg x 0.1g.

Easy to operate, it uses only three keys to activate all balance functions such as straightweigh mode, counting mode and over/under checkweighing mode. The QB Series can display weight in 12 units, making it truly international and able to function anywhere.

Applications

NEW! Product!

- Industrial environments
- Counting, checkweighing and formulating for industrial applications

Standard Features

- Liquid Crystal Display (LCD), 0.5" (12.5mm)
- Automatic zero tracking
- Measures in 12 units: g, kg, ct, oz, lbs, ozt, dwt, gr, Taels and mommes
- Counting mode
- Checkweighing mode
- Switchable for straightweighing, piece count, over/under checkweighing modes
- No warm-up period required after power-up
- Five year limited warranty
- Dust Cover

Options/Accessories

42566 ..... 115 volt adapter
42168 ..... 230 volt adapter
42171 ..... Internal rechargeable battery with sleep mode
42174 ..... Bidirectional RS-232 interface
42177 ..... Glass breeze shield
41555 ..... Limit output pack
42181 ..... Dust cover
42194 ..... Additional operating manual

Rice Lake IB Series Balances

NEW! Product!

IB-2000

IB-15K

PART #	DESCRIPTION
66757	1000g x 0.005g
66758	2000g x 0.01g
66759	5000g x 0.01g
66760	10 kg x 0.05g
66761	15 kg x 0.1g

The IB Series combines accuracy, reliability, and versatility into an efficient balance that is simple to operate. Capacities and resolution range from 1kg x .005g to 15kg x .1g.

Providing maximum precision using super-sensitive tuning fork technology, the IB Series also enhances operator efficiency with an easy-to-read fluorescent display. Built for durability for use in harsh industrial applications.

Applications

- High resolution counting, formulating and checkweighing for industrial environments

Standard Features

- Vacuum Fluorescent Display (VFD), 0.5" (12.5mm)
- Automatic zero tracking
- Measures in 13 units: mg, g, kg, ct, oz, lb, ozt, dwt, gr, Taels and mommes
- Switchable between any two weight units
- Below balance weighing
- Output for dedicated printer
- Accumulation mode
- Classification mode
- Percent and counting modes
- No warm-up period required after power-up
- Five year limited warranty

Options/Accessories

42167 ..... 115 volt adapter
42168 ..... 230 volt adapter
42170 ..... Internal rechargeable battery with sleep mode
42172 ..... Bidirectional RS-232 interface
42176 ..... Glass breeze shield
41555 ..... Limit output pack
42180 ..... Dust cover
42193 ..... Additional operating manual

Specifications subject to change without notice
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BenchMark™ SL Series Light-Capacity Bench Scales

(SEE CHART ON BACK OF PAGE FOR PART #'S.)

Measurement Canada Approved

BenchMark SL Series bench scales offer unprecedented reliability and accuracy for light-capacity bench-top weighing applications. The unique LifeGuard™ base design provides tough load cell protection by isolating the load cell from mechanical overloads and shock loads. The efficient single-point design provides for highly sensitive load introduction.

The BenchMark SL performs exceptionally in a variety of industrial weighing environments including food and chemical processing. It's constructed of 304 stainless steel that's easily maintained. As your customers' needs grow, the BenchMark SL Series can be fitted with a variety of mounting options and indicators for complete stand-alone operation. The optional stainless steel clamshell load cell shield delivers added protection in washdown environments.

Applications

- Food and chemical processing
- Washdown Environments
- Rugged industrial use
- Legal-For-Trade

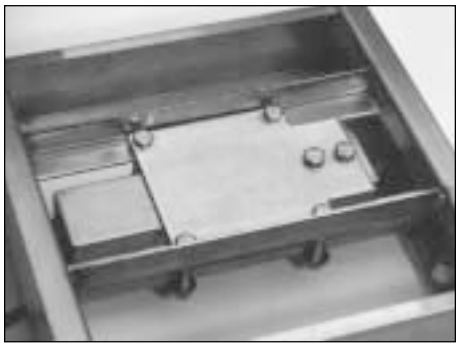
Standard Features

- 304 stainless steel construction
- LifeGuard™ base design isolates load cell from overloads and shock loads, for added durability
- Lift-up protection screw prevents load cell damage when transported
- Specially-designed adjustable support feet provide exceptional traction and won't scratch surfaces
- RL1042-N5 encapsulated single-point NTEP-certified aluminum load cell
- Adaptable to SURVIVOR® CW-80 columns
- Bubble level

Options/Accessories

53001 ..... 304 stainless steel clamshell for added load cell protection
64574 ..... 12" column for IQ plus® 355 or IQ plus® 210
64575 ..... 12" column for IQ plus® 390-DC or IQ plus® 590-DC
66691* ..... 18" column for IQ plus® 355 or IQ plus® 210
66692* ..... 18" column for IQ plus® 390-DC or IQ plus® 590-DC
64576 ..... Attachment bracket for IQ plus® 355 or IQ plus® 210
64577 ..... Attachment bracket for IQ plus® 390-DC or IQ plus® 590-DC
35196 ..... 10" x 10" cutting board, white food-grade plastic
35197 ..... 12" x 12" cutting board, white food-grade plastic
22125 ..... Additional operating manual

** Not recommended for use with scale bases smaller than 12" x 12"*



Optional stainless steel clamshell

(Specifications on back)

BenchMark SL Series

Specifications

LOAD CELL, NTEP CERTIFIED:
RL1042-N5 encapsulated single-point

RATED OUTPUT:
0.91 mV/V (0.6 mV/V on 2 lb capacity)

OUTPUT IMPEDANCE:
350 ohms

MAXIMUM OVERLOAD:
200%

OVERLOAD PROTECTION:
Shock-absorbing spider

CABLE LENGTH:
10' (3m) 6-wire shielded

COMPENSATED TEMPERATURE RANGE:
14°F to 104°F (-10°C to 40°C)

SAFE TEMPERATURE RANGE:
-22°F to 158°F (-30°C to 70°C)

APPROVALS
NTEP-certified per H-44, Class III, 5000d, CC #95-072A1, Measurement Canada approved, AM-5082

WARRANTY:
Two year limited warranty

DIMENSIONS

PART#	CAPACITY LB (KG)	PLATFORM DIMENSIONS INCHES (MM)	HEIGHT INCHES (MM)	SHIP WEIGHT LB (KG)
18575*	2 lb (1.0 kg)	10" L x 10" W (254mm L x 254mm W)	3.15" (80mm)	13 lb (5.9 kg)
18576	5 lb (2.5 kg)	10" L x 10" W (254mm L x 254mm W)	3.15" (80mm)	13 lb (5.9 kg)
18577	10 lb (5 kg)	10" L x 10" W (254mm L x 254mm W)	3.15" (80mm)	13 lb (5.9 kg)
18578	20 lb (10 kg)	10" L x 10" W (254mm L x 254mm W)	3.15" (80mm)	13 lb (5.9 kg)
18579	30 lb (15 kg)	10" L x 10" W (254mm L x 254mm W)	3.15" (80mm)	13 lb (5.9 kg)
32914	30 lb (15 kg)	12" L x 12" W (305mm L x 305mm W)	3.25" (83mm)	14 lb (6.4 kg)
32913	50 lb (25 kg)	12" L x 12" W (305mm L x 305mm W)	3.25" (83mm)	14 lb (6.4 kg)
35198	100 lb (50 kg)	12" L x 12" W (305mm L x 305mm W)	3.25" (83mm)	14 lb (6.4 kg)

** Non-NTEP*

Specifications subject to change without notice
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BenchMark™ CW-80B Series Bench Scales

(SEE CHART ON BACK OF PAGE FOR PART #'S.)

Measurement Canada Approved

BenchMark CW-80B Series bench scales offer unprecedented reliability and accuracy for light-capacity bench-top weighing applications. The unique LifeGuard™ base design provides tough load cell protection by isolating the load cell from mechanical overloads and shock loads. A stainless steel load cell resists corrosion for long life in washdown applications. The efficient single-point design provides for highly sensitive load introduction.

The BenchMark CW-80B Series performs exceptionally in a variety of industrial weighing environments. It's constructed of 304 stainless steel that's easily maintained. As your customers' needs grow, the BenchMark CW-80B Series can be fitted with a variety of mounting options and indicators for complete stand-alone operation.

Applications

- Food and chemical processing
- Hostile washdown environments
- Rugged industrial use
- General purpose weighing

Standard Features

- Industrial-quality 304 stainless steel construction
- Rugged 5-point overload protection
- LifeGuard™ shock-absorbing base design
- Highly-durable and corrosion-resistant RL1380 stainless steel load cell
- Lift-up protection screw prevents load cell damage when transported
- Specially-designed adjustable support feet provide exceptional traction and won't scratch surfaces
- Adaptable to SURVIVOR® CW-80 columns
- Bubble level

Options/Accessories

53001 ..... 304 stainless steel clamshell for added load cell protection
64574 ..... 12" column for IQ plus® 355 or IQ plus® 210
64575 ..... 12" column for IQ plus® 390-DC or IQ plus® 590-DC
66691* ..... 18" column for IQ plus® 355 or IQ plus® 210
66692* ..... 18" column for IQ plus® 390-DC or IQ plus® 590-DC
64576 ..... Attachment bracket for IQ plus® 355 or IQ plus® 210
64577 ..... Attachment bracket for IQ plus® 390-DC or IQ plus® 590-DC
35196 ..... 10" x 10" cutting board, white food-grade plastic
35197 ..... 12" x 12" cutting board, white food-grade plastic
22125 ..... Additional operating manual

** Not recommended for use with scale bases smaller than 12" x 12"*

(Specifications on back)

BenchMark CW-80B Series

Specifications

LOAD CELL, NTEP CERTIFIED:
RL1380 encapsulated stainless steel single-point load cell

RATED OUTPUT:
2.0 mV/V

OUTPUT IMPEDANCE:
350 ohms

MAXIMUM OVERLOAD:
200%

OVERLOAD PROTECTION:
Shock-absorbing spider

CABLE LENGTH:
10' (3m) 4-wire shielded

COMPENSATED TEMPERATURE RANGE:
14°F to 104°F (-10°C to 40°C)

APPROVALS
NTEP-certified per H-44, Class III, 3000d, CC #96-107;
Measurement Canada approved, AM-5156

WARRANTY:
Two year limited warranty

DIMENSIONS

PART#	CAPACITY LB (KG)	PLATFORM DIMENSIONS INCHES (MM)	HEIGHT INCHES (MM)	SHIP WEIGHT LB (KG)
35075	6 lb (3 kg)	10" L x 10" W (254mm L x 254mm W)	3.15" (80mm)	13 lb (5.9 kg)
35076	10 lb (5 kg)	10" L x 10" W (254mm L x 254mm W)	3.15" (80mm)	13 lb (5.9 kg)
35077	15 lb (7 kg)	10" L x 10" W (254mm L x 254mm W)	3.15" (80mm)	13 lb (5.9 kg)
35078	30 lb (15 kg)	10" L x 10" W (254mm L x 254mm W)	3.15" (80mm)	13 lb (5.9 kg)
35079	30 lb (15 kg)	12" L x 12" W (305mm L x 305mm W)	3.25" (83mm)	14 lb (6.4 kg)
35080	60 lb (30 kg)	12" L x 12" W (305mm L x 305mm W)	3.25" (83mm)	14 lb (6.4 kg)

Specifications subject to change without notice
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BenchMark™ Series Medium- to High-Capacity Bench Scales

(SEE CHART ON BACK OF PAGE FOR PART #'S.)

Measurement Canada Approved

BenchMark Series bench scales offer unprecedented reliability and accuracy for medium-capacity bench-top weighing. Heavy-duty steel construction provides durability and long life in a variety of demanding industrial weighing environments. An efficient single-point design offers highly sensitive load introduction.

The BenchMark Series is available in rugged 304 stainless steel construction. Stainless steel models are easily maintained, making them ideal for food and chemical processing applications. As your needs grow, the BenchMark SL Series can be fitted with a variety of mounting options and indicators for complete stand-alone operation. An optional stainless steel clamshell load cell shield offers added protection in washdown environments.

Optional stainless steel clamshell

Applications

- Food and chemical processing
- Rugged industrial environments
- Medium- to high-capacity bench-top weighing
- Commercial buying and selling

Standard Features

- Mild steel construction
- 304 stainless steel cover
- Rugged 5-point overload protection
- Four stainless steel leveling feet
- Bubble level
- Optional 304 stainless steel construction
- RL1042-N5 encapsulated single-point NTEP-certified aluminum load cell (12" x 12" and 12" x 18"); RL1260-N5 encapsulated single-point, aluminum load cell (18" x 18", 18" x 24" and 24" x 24"); RL1250-N5 encapsulated single-point NTEP-certified aluminum load cell on all 1,000 lb bases

Options/Accessories

53001 ..... 304 stainless steel clamshell for added load cell protection (12" x 12" and 12" x 18")
41292 ..... 304 stainless steel clamshell for added load cell protection (18" x 18", 18" x 24" and 24" x 24"), except 1000 lb capacity
18805 ..... 304 stainless steel clamshell for added load cell protection (18" x 18", 18" x 24" and 24" x 24"), 1000 lb capacity only
64574 ..... 12" column for IQ plus® 355 or IQ plus® 210
64575 ..... 12" column for IQ plus® 390-DC or IQ plus® 590-DC
66691* ..... 18" column for IQ plus® 355 or IQ plus® 210
66692* ..... 18" column for IQ plus® 390-DC or IQ plus® 590-DC
64576 ..... Attachment bracket for IQ plus® 355 or IQ plus® 210
64577 ..... Attachment bracket for IQ plus® 390-DC or IQ plus® 590-DC
22125 ..... Additional operating manual

** Not recommended for use with scale bases smaller than 12" x 12"*

Load Cell Options—Non-NTEP

N/A ..... RL1140 potted single-point, non-NTEP stainless steel load cell (50 lb capacity, 12" x 12" or 12" x 18")
N/A ..... RL1140 potted single-point, non-NTEP stainless steel load cell (100 lb capacity, 12" x 12" or 12" x 18")

(Specifications on back)

LOAD CELL, NTEP CERTIFIED:
RL1042-N5 encapsulated single-point: 12" x 12" and 12" x 18"
RL1260-N5 encapsulated single-point: 18" x 18", 18" x 24" and 24" x 24"
RL1250-N5 encapsulated single-point on all 1,000 lb bases
Optional non-NTEP RL1140 potted single-point, stainless steel on 50 lb and 100 lb capacities, 12" x 18" only

RATED OUTPUT:
0.91 mV/V

OUTPUT IMPEDANCE:
350 ohms

MAXIMUM OVERLOAD:
200%

OVERLOAD PROTECTION:
5 point, independently adjusted

CABLE LENGTH:
10' (3m) 6-wire shielded

COMPENSATED TEMPERATURE RANGE:
14°F to 104°F (-10°C to 40°C)

APPROVALS
NTEP-certified per H-44, Class III, 5000d, CC #95-072A1, Measurement Canada approved, AM-5082

WARRANTY:
Two year limited warranty

DIMENSIONS

MILD STEEL PART #	STAINLESS STEEL PART #	CAPACITY LB (KG)	PLATFORM DIMENSIONS INCHES (MM)	HEIGHT INCHES (MM)	SHIPPING WEIGHT LB (KG) (*2 boxes)
18580	**	30 lb (15 kg)	12" L x 12" W (305mm L x 305mm W)	4.12" (105mm)	23 lb (10.5 kg)
18582	**	50 lb (25 kg)	12" L x 12" W (305mm L x 305mm W)	4.12" (105mm)	23 lb (10.5 kg)
18584	**	100 lb 50 kg)	12" L x 12" W (305mm L x 305mm W)	4.12" (105mm)	23 lb (10.5 kg)
18586	32918	50 lb (25 kg)	12" L x 18" W (305mm L x 458mm W)	4.12" (105mm)	30 lb (10.5 kg)
18588	32919	100 lb (50 kg)	12" L x 18" W (305mm L x 458mm W)	4.12" (105mm)	30 lb (10.5 kg)
18590	18591	50 lb (25 kg)	18" L x 18" W (458mm L x 458mm W)	5.25" (134mm)	62 lb (28.1 kg)
18592	18593	100 lb (50 kg)	18" L x 18" W (458mm L x 458mm W)	5.25" (134mm)	62 lb (28.1 kg)
18594	18595	150 lb (75 kg)	18" L x 18" W (458mm L x 458mm W)	5.25" (134mm)	62 lb (28.1 kg)
18596	18597	200 lb (100 kg)	18" L x 18" W (458mm L x 458mm W)	5.25" (134mm)	62 lb (28.1 kg)
18598	18599	250 lb (125 kg)	18" L x 18" W (458mm L x 458mm W)	5.25" (134mm)	62 lb (28.1 kg)
18600	18601	300 lb (150 kg)	18" L x 18" W (458mm L x 458mm W)	5.25" (134mm)	62 lb (28.1 kg)
18602	18603	500 lb (250 kg)	18" L x 18" W (458mm L x 458mm W)	5.25" (134mm)	62 lb (28.1 kg)
18604	18605	1000 lb (500 kg)	18" L x 18" W (458mm L x 458mm W)	5.25" (134mm)	62 lb (28.1 kg)
18606	18607	50 lb (25 kg)	18" L x 24" W (458mm L x 610mm W)	5.25" (134mm)	60 & 24 lb (27.2 & 10.9 kg)*
18608	18609	100 lb (50 kg)	18" L x 24" W (458mm L x 610mm W)	5.25" (134mm)	60 & 24 lb (27.2 & 10.9 kg)*
18610	18611	150 lb (75 kg)	18" L x 24" W (458mm L x 610mm W)	5.25" (134mm)	60 & 24 lb (27.2 & 10.9 kg)*
18612	18613	200 lb (100 kg)	18" L x 24" W (458mm L x 610mm W)	5.25" (134mm)	60 & 24 lb (27.2 & 10.9 kg)*
18614	18615	250 lb (125 kg)	18" L x 24" W (458mm L x 610mm W)	5.25" (134mm)	60 & 24 lb (27.2 & 10.9 kg)*
18616	18617	300 lb (150 kg)	18" L x 24" W (458mm L x 610mm W)	5.25" (134mm)	60 & 24 lb (27.2 & 10.9 kg)*
18618	18619	500 lb (250 kg)	18" L x 24" W (458mm L x 610mm W)	5.25" (134mm)	60 & 24 lb (27.2 & 10.9 kg)*
18620	18621	1000 lb (500 kg)	18" L x 24" W (458mm L x 610mm W)	5.25" (134mm)	60 & 24 lb (27.2 & 10.9 kg)*
18622	18623	100 lb (50 kg)	24" L x 24" W (610mm L x 610mm W)	5.25" (134mm)	64 & 28 lb (29.0 & 12.7 kg)*
18624	18625	150 lb (75 kg)	24" L x 24" W (610mm L x 610mm W)	5.25" (134mm)	64 & 28 lb (29.0 & 12.7 kg)*
18626	18627	200 lb (100 kg)	24" L x 24" W (610mm L x 610mm W)	5.25" (134mm)	64 & 28 lb (29.0 & 12.7 kg)*
18628	18629	250 lb (125 kg)	24" L x 24" W (610mm L x 610mm W)	5.25" (134mm)	64 & 28 lb (29.0 & 12.7 kg)*
18630	18631	300 lb (150 kg)	24" L x 24" W (610mm L x 610mm W)	5.25" (134mm)	64 & 28 lb (29.0 & 12.7 kg)*
18632	18633	500 lb (250 kg)	24" L x 24" W (610mm L x 610mm W)	5.25" (134mm)	64 & 28 lb (29.0 & 12.7 kg)*
18634	18635	1000 lb (500 kg)	24" L x 24" W (610mm L x 610mm W)	5.25" (134mm)	64 & 28 lb (29.0 & 12.7 kg)*

** See Benchmark SL and CW-80B benchscales

Specifications subject to change without notice
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IQ plus® 2100 Digital Bench Scale

IQ plus 2100 with attachment bracket

IQ plus 2100 with column

IQ plus 2100 with tilt stand

Measurement Canada Approved

(Indicator only)

(SEE CHART ON BACK OF PAGE FOR PART #'S)

From carton to countertop, the new IQ plus 2100's easy-setup design will have you instantly up and weighing. Factor in a highly-visible display, convenient mounting options, and extra load cell protection, and you've got the best-built bench scale in its class!

Whether controlling portions or weighing parts, the 2100 is designed for quick and easy use. All operations are controlled through just two buttons–zero and units. Configuration can be completed through the indicator's front panel, EDP port, or from a personal computer with Revolution™ software. Select from lb, kg, oz, lb and oz, or grams to serve your specific needs.

Perfect for use in portion control and a variety of food processing applications, the IQ plus 2100 guarantees dependable, long-lasting performance. Sealed, stainless steel buttons and a NEMA 4X/IP66 stainless steel washdown indicator enclosure guard electronics against messy ingredient spills, while standard overload and upload stops help protect the scale base from load cell damage.

Applications

- Portion control
- Baker's scale
- Pizza scale
- General purpose weighing

Standard Features

- NEMA 4X, 304 stainless steel
- Large, bold 0.8" Light Emitting Diode (LED) Display
- Status annunciators: lb, kg, oz, g, negative, motion, center of zero
- One full duplex RS-232 port
- Two digital inputs for remote zero, print, and units
- 12" column, attachment bracket, or tilt stand for table, wall or under counter mounting
- 115 VAC operation, 230 VAC available
- RL1042 aluminum, single point load cell
- Overload and upload stops on scale base
- Stainless steel, tactile feel, piezo zero and units buttons
- Displays units in decimal lb, kg, oz, lb & oz, and grams

Options/Accessories

53001 ..... 304 stainless steel clamshell for added load cell protection
64126 ..... Load cell quick disconnect
64123 ..... Remote switch for zero, units, and print (non-washdown)
N/A ..... Print button mounted on the top of the enclosure (not field installable)
N/A ..... RL1380 stainless steel load cell
N/A* ..... 18" column replacing standard 12" column
53415 ..... Additional operation manual

** Not recommended for use with scale bases smaller than 12" x 12"*

IQ plus® 2100SL Digital Bench Scale

For harsh applications, the IQ plus 2100SL package offers the same benefits with added features of the legendary BenchMark SL base. The unique LifeGuard™ breakaway base of the SL incorporates extra load cell protection from overloads.

See price page BCS-5 (P) for part numbers and pricing

(Specifications on back)

LINE VOLTAGES:
115 or 230 VAC

FREQUENCY:
50 or 60 Hz

POWER CONSUMPTION:
70 mA @ 115 VAC (8W)
35 mA @ 230 VAC (8W)

FUSING:
115 VAC: 2 x 200 mA TR5 subminiature fuses
Wickmann Time-Lag 19374 Series
UL Listed, CSA Certified

230 VAC: 2 x 200 mA TR5 subminiature fuses
Wickmann Time-Lag 19374 Series
UL Recognized, VDE Approved

FULL SCALE INPUT SIGNAL:
Up to 35 mV

EXCITATION VOLTAGE:
10 ± 0.25 VDC, 4 x 350Ω load cells

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V — 4.5 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 µV/graduation minimum, 1.5 µV/graduation recommened

INPUT IMPENDENCE:
200 MΩ, typical

DISPLAY RESOLUTION:
10,000 dd

INPUT SENSITIVITY:
200 nV per internal count

SYSTEM LINEARITY:
Within 0.01% of full scale

CALIBRATION METHOD:
Software, constants stored in EEPROM

COMMON MODE VOLTAGE:
± 4 V, referred to earth

INPUT OVERLOAD:
± 12 V continuous, static discharge protected

RFI PROTECTION:
Signal, excitation, and sense lines protected by capacitor bypass

DIGITAL INPUTS:
Two inputs, TTL or switch closure, active-low

DIGITAL FILTER:
Software selectable

SERIAL COMMUNICATIONS:
Full duplex RS-232; 9600, 4800, 2400, 1200 bps; 7 or 8 data bits; even, odd, or no parity

DISPLAY:
6-digit Light Emitting Diode (LED) display. 7-segment, 0.8" (20mm) digits

LED ANNUNCIATORS:
Negative value, center of zero, motion, kg, g, lb, oz

KEYPAD:
Two stainless steel piezo switches

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

STORAGE TEMPERATURE:
14°F to 122°F (-10°C to 50°C)

DIMENSIONS:
Indicator: 9.5" x 6.0" x 2.75" (241mm x 152mm x 70mm)
Base: Listed below

RATING/MATERIAL:
NEMA 4X/IP66, stainless steel

APPROVALS:
Indicator: NTEP certified per H-44, Class IIIL 10,000d; CC# 00-045
Measurement Canada approved, AM-5374; UL & C-UL listed
Base: NTEP certified per H-44, Class III 5,000d; CC# 95-072A2

WARRANTY:
Two year limited warranty

IQ PLUS 2100SL SPECIFICATIONS

For indicator specifications please refer to the above listed.

For base specifications please refer to the BenchMark SL Series catalog page BCS-1.

PART #	PLATFORM SIZE	CAPACITY (lb/kg/gm/oz)	DESCRIPTION	SHIP WEIGHT LB (KG)
IQ plus 2100 - 115 VAC				
63043	10" x 10" (254 x 254mm)	5 x 0.001 lb/2.5 x 0.0005 kg/2,500 x 0.5 gm/80 x 0.02 oz	with attachment bracket	23 lb (10 kg)
63048	10" x 10" (254 x 254mm)	5 x 0.001 lb/2.5 x 0.0005 kg/2,500 x 0.5 gm/80 x 0.02 oz	with 12" column	25 lb (11 kg)
63053	10" x 10" (254 x 254mm)	5 x 0.001 lb/2.5 x 0.0005 kg/2,500 x 0.5 gm/80 x 0.02 oz	with tilt stand	23 lb (10 kg)
63042	10" x 10" (254 x 254mm)	10 x 0.001 lb/2.5 x 0.0005 kg/2,500 x 0.5 gm/80 x 0.02 oz	with attachment bracket	23 lb (10 kg)
63047	10" x 10" (254 x 254mm)	10 x 0.002 lb/5 x 0.001 kg/5,000 x 1 gm/160 x 0.05 oz	with 12" column	25 lb (11 kg)
63052	10" x 10" (254 x 254mm)	10 x 0.002 lb/5 x 0.001 kg/5,000 x 1 gm/160 x 0.05 oz	with tilt stand	23 lb (10 kg)
63041	10" x 10" (254 x 254mm)	25 x 0.002 lb/5 x 0.001 kg/5,000 x 1 gm/160 x 0.05 oz	with attachment bracket	23 lb (10 kg)
63046	10" x 10" (254 x 254mm)	25 x 0.005 lb/10 x 0.002 kg/10,000 x 2 gm/400 x 0.10 oz	with 12" column	25 lb (11 kg)
63051	10" x 10" (254 x 254mm)	25 x 0.005 lb/10 x 0.002 kg/10,000 x 2 gm/400 x 0.10 oz	with tilt stand	23 lb (10 kg)
63040	12" x 12" (304.8 x 304.8mm)	50 x 0.01 lb/25 x 0.005 kg/25,000 x 5 gm/800 x 0.20 oz	with attachment bracket	26 lb (12 kg)
63045	12" x 12" (304.8 x 304.8mm)	50 x 0.01 lb/25 x 0.005 kg/25,000 x 5 gm/800 x 0.20 oz	with 12" column	28 lb (13 kg)
63050	12" x 12" (304.8 x 304.8mm)	50 x 0.01 lb/25 x 0.005 kg/25,000 x 5 gm/800 x 0.20 oz	with tilt stand	26 lb (12 kg)
63039	12" x 12" (304.8 x 304.8mm)	100 x 0.02 lb/50 x 0.01 kg/50,000 x 10 gm/1,600 x 0.50 oz	with attachment bracket	26 lb (12 kg)
63044	12" x 12" (304.8 x 304.8mm)	100 x 0.02 lb/50 x 0.01 kg/50,000 x 10 gm/1,600 x 0.50 oz	with 12" column	28 lb (13 kg)
63049	12" x 12" (304.8 x 304.8mm)	100 x 0.02 lb/50 x 0.01 kg/50,000 x 10 gm/1,600 x 0.50 oz	with tilt stand	26 lb (12 kg)
IQ plus 2100 - 230 VAC				
63058	10" x 10" (254 x 254mm)	5 x 0.001 lb/2.5 x 0.0005 kg/2,500 x 0.5 gm/80 x 0.02 oz	with attachment bracket	23 lb (10 kg)
63063	10" x 10" (254 x 254mm)	5 x 0.001 lb/2.5 x 0.0005 kg/2,500 x 0.5 gm/80 x 0.02 oz	with 12" column	25 lb (11 kg)
63068	10" x 10" (254 x 254mm)	5 x 0.001 lb/2.5 x 0.0005 kg/2,500 x 0.5 gm/80 x 0.02 oz	with tilt stand	23 lb (10 kg)
63057	10" x 10" (254 x 254mm)	10 x 0.002 lb/5 x 0.001 kg/5,000 x 1 gm/160 x 0.05 oz	with attachment bracket	23 lb (10 kg)
63062	10" x 10" (254 x 254mm)	10 x 0.002 lb/5 x 0.001 kg/5,000 x 1 gm/160 x 0.05 oz	with 12" column	25 lb (11 kg)
63067	10" x 10" (254 x 254mm)	10 x 0.002 lb/5 x 0.001 kg/5,000 x 1 gm/160 x 0.05 oz	with tilt stand, 230 VAC	23 lb (10 kg)
63056	10" x 10" (254 x 254mm)	25 x 0.005 lb/10 x 0.002 kg/10,000 x 2 gm/400 x 0.10 oz	with attachment bracket	23 lb (10 kg)
63061	10" x 10" (254 x 254mm)	25 x 0.005 lb/10 x 0.002 kg/10,000 x 2 gm/400 x 0.10 oz	with 12" column	25 lb (11 kg)
63066	10" x 10" (254 x 254mm)	25 x 0.005 lb/10 x 0.002 kg/10,000 x 2 gm/400 x 0.10 oz	with tilt stand	23 lb (10 kg)
63055	12" x 12" (304.8 x 304.8mm)	50 x 0.01 lb/25 x 0.005 kg/25,000 x 5 gm/800 x 0.20 oz	with attachment bracket	26 lb (12 kg)
63060	12" x 12" (304.8 x 304.8mm)	50 x 0.01 lb/25 x 0.005 kg/25,000 x 5 gm/800 x 0.20 oz	with 12" column	28 lb (13 kg)
63065	12" x 12" (304.8 x 304.8mm)	50 x 0.01 lb/25 x 0.005 kg/25,000 x 5 gm/800 x 0.20 oz	with tilt stand	26 lb (12 kg)
63054	12" x 12" (304.8 x 304.8mm)	100 x 0.02 lb/50 x 0.01 kg/50,000 x 10 gm/1,600 x 0.50 oz	with attachment bracket	26 lb (12 kg)
63059	12" x 12" (304.8 x 304.8mm)	100 x 0.02 lb/50 x 0.01 kg/50,000 x 10 gm/1,600 x 0.50 oz	with 12" column	28 lb (13 kg)
63064	12" x 12" (304.8 x 304.8mm)	100 x 0.02 lb/50 x 0.01 kg/50,000 x 10 gm/1,600 x 0.50 oz	with tilt stand	26 lb (12 kg)
Indicator Only				
65137	IQ plus 210 with tilt stand, 115 VAC			9.3 lb (4.2 kg)
65138	IQ plus 210 with tilt stand, 230 VAC			9.3 lb (4.2 kg)

See price page BCS-5 (P) for IQ plus 2100SL part numbers and pricing

Specifications subject to change without notice
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SURVIVOR® CW-80 Over/Under Checkweigher

Measurement Canada Approved

(SEE CHART ON BACK OF PAGE FOR PART #'S)

The SURVIVOR CW-80 features a new generation Tough-Touch™ keypad, designed to withstand the most demanding industrial applications. International symbols and an extra-bright, rapid response display make the CW-80 instantly readable in almost any environment.

A true NEMA 4X/IP66 indicator enclosure is designed to seal out moisture and contaminants. The exclusive LifeGuard™ shock-absorbing base provides exceptional protection against overload and impact forces on 10" x 10" and 12" x 12" platforms. A stainless steel load cell resists corrosion for long life in washdown applications (6-60 lb capacities only).

115 VAC or 230 VAC power configurations, and optional battery "backup power" with one of three available outputs, make operation possible anywhere. Battery backup power eliminates down time due to power failure, and supports limited portability. Optional RS-485 communication enables interfacing to a computer network, while the transaction memory buffer saves the last weighments for network retrieval and analysis.

Applications

- Food processing
- Industrial processing
- Kit assembly operations
- General filling operations
- General-purpose weighing

Standard Features

- Large, bold 0.8" LED rapid-response display
- Industrial-quality 304 stainless steel construction
- Rugged 5-point overload protection on platform bases
- LifeGuard™ shock-absorbing bases on 6 lb to 100 lb capacities in base sizes up to 12" x 12"
- Highly-durable and corrosion-resistant stainless steel load cell on 6 lb to 60 lb capacities
- Field-proven aluminum load cell on 100 lb to 1000 lb capacities
- NEMA 4X/IP66 indicator enclosure
- ToughTouch™ industrial touch-control front panel with keys for over, under, tare, zero, units, print, target and ID
- Front-panel "Independent Key Disabling" for: OVER, UNDER, TARE, PRINT and UNITS keys
- Displays units in decimal lb, kg, oz, lb & oz, grams
- Annunciator lights for unit selection
- High-intensity LED for over, under and accept
- Storage for up to 300 tare and tolerance settings
- Automatic zero tracking
- 115 or 230 VAC operation
- Bidirectional RS-232 and/or simplex 20mA current loop communication

Options/Accessories

ELECTRONICS:
32147 ..... Battery charger assembly, CW80 6VDC, 0.6A with 29" cable
Option A .... 230 VAC operation
OUTPUTS:
Option B .... 3 TTL level setpoints
Option C ... 3 normally-open relays
Option D ... 3 normally-closed relays
Option E .... 3 TTL level setpoints with 6V battery backup power supply
Option F .... 3 normally-open relays with 6V battery backup power supply
Option G ... 3 normally-closed relays with 6V battery backup power supply
SOFTWARE:
Option H ... RS-485 communication
HARDWARE:
Option I ..... 12" column replacing standard column
Option J .... 18" column replacing standard column
Option K .... 24" column replacing standard column
Option L .... 30" column replacing standard column
Option M ... Combination desk/wall mount bracket
Option N ... 10" x 10" cutting board, white food-grade plastic
Option O ... 12" x 12" cutting board, white food-grade plastic
Option P .... 304 stainless steel clamshell load cell protection, 12" x 12" model, 100 lb capacity only
41292 ..... 304 stainless steel clamshell load cell protection for capacities of 100 lb and over

** Please consult factory for pricing if your application requires hermetically sealed load cells.*

(Specifications on back)

SURVIVOR CW-80 Checkweigher

Specifications

DISPLAY:
Large 0.8" 7-segment, 6-digit high-intensity red LED display, Decimal point available at each digit

STATUS ANNUCIATORS:
lb, kg, g, net, motion, center of zero, neg

KEYBOARD:
8-key tough control with international symbols

BAR GRAPH:
5-segment, 7-range programmable multicolored array tracks Over, Under, Accept status in relation to target value

INTERNAL RESOLUTION:
50,000 to 1,000,000 based on filtering selection

DISPLAY RESOLUTION:
Selectable up to 50,000 dd

MEASUREMENT RATE:
25 updates/second

SYSTEM LINEARITY:
0.01% of F.S.

ZERO STABILITY:
100 nV/°C maximum

SPAN STABILITY:
3ppm/°C maximum

AZM (ZERO TRACK):
off, ±.5, 1, 2 or 3 dd

OPERATIONAL AZM:
±2% or 100% F.S

MOTION BAND:
Off, .5, 1, 2, 3, 5, 10 dd

CALIBRATION METHOD:
Software

EXCITATION VOLTAGE:
10 ± .05 VDC, 4 x 350Ω load cell

DIGITAL FILTER:
Software selectable 1, 2, 4, 8, 16, 32, 64, 128

SENSE AMPLIFIER:
Differential amplifier with 6-wire sensing

RFI PROTECTION:
Signal, excitation and sense lines protection. 33V/m for 100 kHz to 1 GHz, ≤1 µV susceptibility

DIGITAL OUTPUTS:
(Optional) 3 TTL outputs (5VDC) or 3 N/O relays (10 watts, 0.5 amp, 100 VDC) or 3 N/C relays to (10 watts, 0.5 amp, 100 VDC)

EPD PORT:
Full duplex, RS-232 or 20 mA simplex output (RS-485 optional)

LINE VOLTAGES:
Available in 115 or 230 VAC (nom.) models

FREQUENCY:
50 or 60 Hz

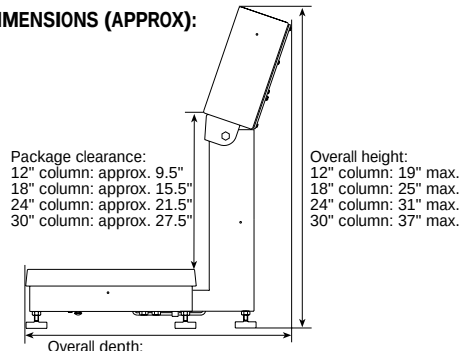
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°)

INDICATOR DIMENSIONS:
9.5" W x 8.5" H x 3.25" D (241mm x 216mm 83)

APPROVALS:
System approved to 3,000 divisions, NTEP-certified per H-44; Indicator, 10,000d, Class III/IIIL, CC #96-118A1, Base, CC #96-107. Measurement Canada approved: Indicator, AM-5146, Base, AM-5156, OIML certificate #R76/1992-DE-97.02, UL & C-UL listed, CE marked

WARRANTY:
Two year limited warranty

OVERALL DIMENSIONS (APPROX):



PART #	CAPACITY LB (KG)	PLATFORM DIMENSIONS INCHES (MM)	COLUMN HT. INCHES (MM)	SHIP WEIGHT LB (KG)
35113	6 lb x .002 (3 kg x .001) 96 oz x .05	10" L x 10" W x 3"H (254mm L x 254mm W x 77mm H)	12" (305mm)	20 lb (8.8 kg)
35114	10 lb x .005 (5 kg x .002) 160 oz x .1	10" L x 10" W x 3"H (254mm L x 254mm W x 77mm H)	12" (305mm)	20 lb (8.8 kg)
35115	15 lb x .005 (7 kg x .002) 240 oz x .1	10" L x 10" W x 3"H (254mm L x 254mm W x 77mm H)	12" (305mm)	20 lb 8.8 kg)
35116	30 lb x .01 (15 kg x .005) 480 oz x .2	10" L x 10" W x 3"H (254mm L x 254mm W x 77mm H)	12" (305mm)	20 lb (8.8 kg)
35121	30 lb x .01 (15 kg x .005) 480 oz x .2	12" L x 12" W x 3" H (305mm L x 305mm W x 77mm H)	12" (305mm)	23 lb (10.4 kg)
35122	60 lb x .02 (30 kg x .01) 960 oz x .5	12" L x 12" W x 3" H (305mm L x 305mm W x 77mm H)	12" (305mm)	23 lb (10.4 kg)
35175	100 lb x .02 (50 kg x .01) 1600 oz x .5	12" L x 12" W x 3" H (305mm L x 305mm W x 77mm H)	12" (305mm)	23 lb (10.4 kg)
35176	100 lb x .02 (50 kg x .01) 1600 oz x .5	18" L x 18" W x 5.25" H (457mm L x 457mm W x 134mm H)	18" (458mm)	78 lb (35.4 kg)
35177	200 lb x .05 (100 kg x .02) 3200 oz x 1	18" L x 18" W x 5.25" H (457mm L x 457mm W x 134mm H)	18" (458mm)	78 lb (35.4 kg)
35178	300 lb x .1 (150 kg x .05) 4800 oz x 2	18" L x 18" W x 5.25" H (457mm L x 457mm W x 134mm H)	18" (458mm)	78 lb (35.4 kg)
35179	500 lb x .1 (250 kg x .05) 8000 oz x 2	18" L x 18" W x 5.25" H (457mm L x 457mm W x 134mm H)	18" (458mm)	78 lb (35.4 kg)
35181	200 lb x .1 (100 kg x .05) 3200 oz x 2	24" L x 18" W x 5.25" H (610mm L x 457mm W x 134mm H)	18" (472mm)	95 lb (43.1 kg)
35182	300 lb x .1 (150 kg x .05) 4800 oz x 2	24" L x 18" W x 5.25" H (610mm L x 457mm W x 134mm H)	18" (472mm)	95 lb (43.1 kg)
35183	500 lb x .1 (250 kg x .05) 8000 oz x 5	24" L x 18" W x 5.25" H (610mm L x 457mm W x 134mm H)	18" (472mm)	95 lb (43.1 kg)
35184	1000 lb x .2 (500 kg x .1) 16000 oz x 5	24" L x 18" W x 5.25" H (610mm L x 457mm W x 134mm H)	18" (472mm)	95 lb (43.1 kg)
35185	200 lb x .05 (100 kg x .02) 3200 oz x 1	24" L x 24" W x 5.25" H (610mm L x 610mm W x 134mm H)	18" (472mm)	110 lb (49.9 kg)
35186	300 lb x .1 (150 kg x .05) 4800 oz x 2	24" L x 24" W x 5.25" H (610mm L x 610mm W x 134mm H)	18" (472mm)	110 lb (49.9 kg)
35187	500 lb x .1 (250 kg x .05) 8000 oz x 2	24" L x 24" W x 5.25" H (610mm L x 610mm W x 134mm H)	18" (472mm)	110 lb (49.9 kg)
35188	100 lb x .2 (500 kg x .1) 16000 oz x 5	24" L x 24" W x 5.25" H (610mm L x 610mm W x 134mm H)	18" (472mm)	110 lb (49.9 kg)
KG ONLY (230 VAC)				
66682	3 kg x .001	10" L x 10" W x 3"H (254mm L x 254mm W x 77mm H)	12" (305mm)	20 lb (8.8 kg)
66681	5 kg x .002	10" L x 10" W x 3"H (254mm L x 254mm W x 77mm H)	12" (305mm)	20 lb (8.8 kg)
66680	7.5 kg x .005	10" L x 10" W x 3"H (254mm L x 254mm W x 77mm H)	12" (305mm)	20 lb (8.8 kg)
OIML CERTIFIED (230 VAC)				
51200	30 lb x .01 (15 kg x .005) 480 oz x .2	10" L x 10" W x 3"H (254mm L x 254mm W x 77mm H)	12" (305mm)	20 lb (8.8 kg)
51201	30 lb x .01 (15 kg x .005) 480 oz x .2	12" L x 12" W x 3" H (305mm L x 305mm W x 77mm H)	12" (305mm)	23 lb (10.4 kg)
51202	60 lb x .02 (30 kg x .01) 960 oz x .5	12" L x 12" W x 3" H (305mm L x 305mm W x 77mm H)	12" (305mm)	23 lb (10.4 kg)

Specifications subject to change without notice
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Kubota KA-100 Series

Battery-Powered Platform Scales

PART # **DESCRIPTION**

51059 ..... KA-100, 150 lb (60kg)
51060 ..... KA-100, 300 lb (150kg)

The new KA-100 Kubota Bench Scale is ideal for shipping/receiving, recycling, and material handling applications. This functional scale has a large display that provides easy readability from any angle. Additionally, it features an extra-long battery life—approximately 1,000 hours on 6 D-cell batteries. It is available in 150 lb and 300 lb capacities and includes an automatic power-off function for operator convenience.

A handy counting function can be used to automatically count the number of items on the platform. An over/under checkweighing function is available to monitor product weight for the maximum or minimum weight allowance.

Applications

- Shipping and Receiving
- Recycling
- Material Handling

Standard Features

- Capacities: 150 lb and 300 lb
- Automatic “auto ranging” to adjust division size based on capacity
- Large Liquid Crystal Display (LCD), 1.7" (43mm) character height
- Long battery life of approximately 1,000 hours.
- Ability to toggle between lb and kg from operating mode
- Auto Tare can tare up to 100% of scale capacity
- Over/under checkweighing displays instant “HI”, “LO”, or “OK” readout
- Counting function with selectable sampling

Options/Accessories

16413 ..... AC Adapter, model 5268

(Specifications on back)

CAPACITY:
150 lb, 300 lb

DIVISIONS (AUTO RANGING):
150 lb: 0.02 lb from 0 lb - 60 lb, 0.05 lb from 60 lb - 150 lb
300 lb: 0.05 lb from 0 lb - 150 lb, 0.1 lb from 150 lb - 300 lb

MAX. TARE WEIGHT:
150 lb, 300 lb

SIZE OF PLATFORM:
14.6" (370mm) x 19.7" (500mm)

WEIGHT INDICATOR:
Liquid Crystal Display (LCD), 5 digits, character height: 1.7" (43mm), 7 segment characters

FUNCTIONS:
Zero reset
Taring
Preset Taring
Upper and lower limit comparison
Counting
Net / Gross weight display switching
Auto power-off

NUMBER OF SAMPLINGS:
5, 10, 20, 50, or 100 (selectable)

MAXIMUM PIECE COUNT:
150 lb: approx. 12,000
300 lb: approx. 15,000

OPERATING TEMPERATURE:
14° F to 104° F (-10 °C) to (40 °C)

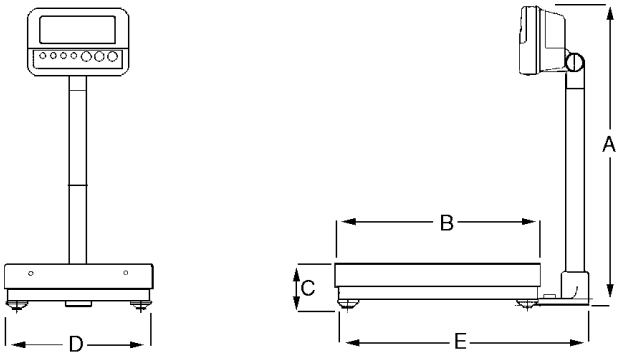
POWER SUPPLY:
6 D-cell Alkaline Batteries (batteries not included), optional AC Adapter

BATTERY LIFE:
Approx. 1,000 hours at 77°F

NET WEIGHT:
Approx. 28.67 lb (14 kg)

APPROVALS:
NTEP #98-184 Class III 1:3000

WARRANTY:
One year limited warranty



DIMENSIONS

A = 28.7" - 29.5" (730mm - 750mm)
B = 19.7" (500mm)
C = 4.02" - 4.8" (102mm - 122mm)
D = 14.6" (370mm)
E = 24.9" (633mm)

Specifications subject to change without notice
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Kubota KA-10HB Series

Battery-Powered Platform Scales

PART #	DESCRIPTION
19695	KA-10HB-70L-A
19696	KA-10HB-150L-A
19697	KA-10HB-300L-A

The KA-10HB Series offers lightweight, versatile and economical scales designed for use in a wide variety of weighing applications, including agricultural, marine, industrial, and chemical. Portability and counting capability make the KA-10HB perfect for many rental applications, as well as permanent shipping room uses.

Its functional, attractive design makes this scale an easy fit in any setting, from a contemporary medical office to a dock-side fish market.

Applications

- Agricultural
- Marine
- Industrial
- Chemical
- Rental application

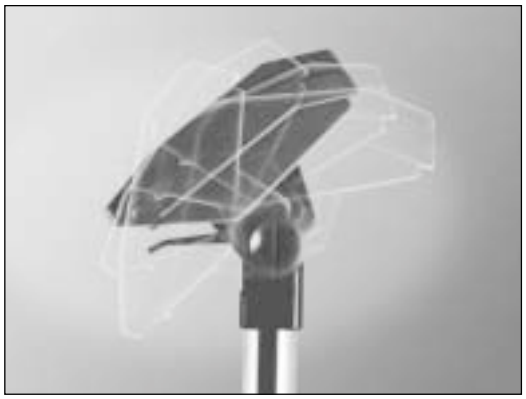
Standard Features

- Low power consumption—140-300 hours on six C-cell batteries
- Lightweight for easy portability; only 33 lb for 150 lb capacity scale
- System expandability, with a complete line of options available
- Over/under checkweighing displays instant “HI”, “LO”, or “OK” readout
- Counting function up to 3000 items at minimum unit weight
- Enhanced counting capability—1 part in 15,000 resolution
- Auto tare can tare up to 100% of scale capacity
- “Easy wash” platform drip-proof design for easy cleanup
- Wide weighing range capacities from 70 to 300 lb
- High-visibility LCD display displays weight in lb, kg or piece count

Options/Accessories

16413 ..... AC Adapter Model 5268
19867 ..... Tape printer
19869 ..... RS-232 interface
19870 ..... 12' (3.7m) cable kit for remote mounting of indicator
19871 ..... Tabletop support for indicator
16850 ..... Additional operating manual
16841 ..... Technical/service manual

Swivel Head Design
Allows maximum readability from almost any angle. Indicator can also be remotely mounted up to 20 ft. away from the platform.



(Specifications on back)

Display of Weight (kg or lb)

Tare Mark (▼) is shown when taring.

Stable Mark (O) motion detection.

Zero Mark (▼) is shown when display is at the center of zero.

Zero Key instantly zeroes scale.

Tare Key subtracts weight of tare (dishes, ect.) up to the maximum capacity.

Net/Gross Mark is shown to indicate the weight mode

Over-Under Checkweighing Display: HI, OK, and LO are displayed when the comparator mode is available.
HI - Scale value is > than maximum setting.
OK - Scale value is ≤ maximum setting and ≥ minimum setting.
LO - Scale value is < minimum setting.

ON/OFF Key - The display power automatically shuts off after "zero" display remains on for three minutes.

NET/GROSS Key changes the weight mode to and from Net or Gross.

SELECT UNIT Key in the Straight-Weighing Mode, does LB/KG conversions. In the Over/Under Mode, selects HI and LO setup parameters.

Set Key changes operating modes between over/under and straight weighing, or between counting and straight weighing (counting mode requires factory modification).

*** Key** has two different functions:
1. Comparator Mode: to input the setpoint values after selecting the digit by using the Set Key.
2. Counting Mode Option: changes the sample size from 10 to 20 or 50 samples (requires factory modification).

APPROVALS:
NTEP-certified per H-44, Class III, 3500d, CC#88-019

DIMENSIONS

PART #	MODEL #	CAPACITY LB (KG)	PLATFORM DIMENSIONS INCHES (MM)	SHIP WEIGHT LB (KG)
19695	KA-10HB-70L-A	70 lb x .02 (32 kg x .01)	20" L x 14" W x 4" H (508mm L x 355.6mm W x 101.6mm H)	33 lb (15 kg)
19696	KA-10HB-150L-A	150 lb x .05 (60 kg x .02)	20" L x 14" W x 4" H (508mm L x 355.6mm W x 101.6mm H)	33 lb (15 kg)
19697	KA-10HB-300L-A	300 lb x .1 (150 kg x .05)	20" L x 14" W x 4" H (508mm L x 355.6mm W x 101.6mm H)	37 lb (16.8 kg)

Specifications subject to change without notice
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MTX/MTB Series Bench Scales

MTB-60L

MTX-300L

PART #	DESCRIPTION
41446	MTX-60L, 60 lb, 30 lb, 15 lb
41450	MTB-60L, 60 lb, 30 lb, 15 lb
41447	MTX-300L, 300 lb, 150 lb, 60 lb
41451	MTB-300L, 300 lb, 150 lb, 60 lb

With multiple weighing ranges that can be changed with the touch of a key, the MTX/B Series can boost operational efficiency anywhere.

Weight verification, product counting, and data management will completely change the way you do business.

Applications

- Shipping & receiving areas
- Industrial processing

Standard Features

- Easy-to-read rotating display
- Liquid Crystal Display (LCD), (MTB models)
- Vacuum Fluorescent Display (VFD) (MTX models)
- Stainless steel platform cover
- Multiple weighing ranges
- Weight verification
- Counting & checkweighing modes
- Battery powered with 6 D-cell batteries (MTB models)

Options/Accessories

45101 ..... Roller conveyor, front to back (MTX-300)
41817 ..... Built-in journal printer (MTX models)
41814 ..... RS-232 interface (MTX models)
42231 ..... Additional operating manual

MTX-W Series "Splash-Proof" Bench Scales

MTX-300

MTX-60W

PART #	DESCRIPTION
41448	MTX-60W, 60 lb
41449	MTX-300W, 300 lb

c UL us LISTED

Ideal for food processing applications, the MTX-W Series is constructed of water resistant stainless steel.

The MTX-W Series offers several advanced features, including weight verification, product counting, data management, multiple weighing ranges and much more.

Applications

- Food processing
- Light washdown environments

Standard Features

- Easy-to-read adjustable display
- Vacuum Fluorescent Display (VFD)
- Stainless steel platform cover and indicator enclosure
- Multiple weighing ranges
- Weight verification
- Product counting
- Data management

Options/Accessories

42233 ..... Additional operating manual

(Specifications on back)

MTX/B Series

Specifications

MTX-60L & MTX-300L:

DISPLAY:
Vacuum Fluorescent Display (VFD)

DISPLAY ITEMS:
Weight: 5 digits
Zero Point: ◀
Tare: ◀
Weight Check: over orange
accept green
under red
Capacity: green
Counting mode: orange

POWER CONSUMPTION:
6 watts

ELECTRICAL POWER:
AC , 115V, 10%, 50/60 Hz

CAPACITY:
60 lb, 30 lb, 15 lb (triple range) (MTX-60L)
300 lb, 150 lb, 60 lb (triple range) (MTX-300L)

MINIMUM GRADUATION:
0.02 lb, 0.01lb, 0.005lb,(MTX-60L)
0.1 lb, 0.05 lb, 0.02 lb, (MTX-300L)

WEIGHT:
27 lb (13 kg), MTX-60L
42 lb (19 kg), MTX-300L

DIMENSIONS:
13" x 12.25" x 3.5", MTX-60L
13.8" x 19.6" x 4.5", MTX-300L

APPROVALS:
NTEP certified per H-44, Class III, 3000d; CC #96-080A1, USDA approved

WARRANTY:
One year limited warranty

MTB-60L & MTB-300L:

DISPLAY:
Liquid Crystal Display (LCD)

DISPLAY ITEMS:
Weight: 5 digits
Zero Point: ◀
Tare: ◀
Stability: *
Weight Check ▶: over, accept, under
Battery replacement: B
Capacity: ▼
Counting mode: ▼

POWER CONSUMPTION:
0.07 watts

ELECTRICAL POWER:
6 D-cell batteries (R20)

CAPACITY:
60 lb, 30 lb (dual range) (MTB-60L)
300 lb, 150 lb (dual range) (MTB-300L)

MINIMUM GRADUATION:
0.02 lb, 0.01 lb (MTB-60L)
0.1lb, 0.05 lb (MTB-300L)

WEIGHT:
27 lb (13 kg), MTB-60L
42 lb (19 kg), MTB-300L

DIMENSIONS:
13" x 12.25" x 3.5", MTB-60L
13.8" x 19.6" x 4.5", MTB-300L

APPROVALS:
NTEP-certified per H-44, Class III, 3000d; CC #96-080A1

WARRANTY:
One year limited warranty

MTX-W Series

Specifications

DISPLAY:
Vacuum Fluorescent Display (VFD)

DISPLAY ITEMS:
Weight: 5 digits
Zero Point: ◀
Tare: ◀
Weight Check: over orange
accept green
under red
Capacity: green
Counting mode: orange

POWER CONSUMPTION:
6 watts

ELECTRICAL POWER:
AC 115V, 10%, 50/60 Hz

OPERATING TEMPERATURE:
23°F to 104°F (-5°C to 40°C)

HUMIDITY:
20 - 85%

CAPACITY:
60 lb, 30 lb, 15 lb (triple range) (MTX-60W)
300 lb, 150 lb, 60 lb (triple range) (MTX-300W)

MINIMUM GRADUATION:
0.02 lb, 0.01 lb. 0.005 lb (MTX-60W)
0.1 lb, 0.05 lb. 0.02 lb (MTX-300W)

WEIGHT:
27 lb (13 kg), MTX-60W
42 lb (19 kg), MTX-300W

DIMENSIONS:
13" x 12.25" x 3.5", MTX-60W
13.8" x 19.6" x 4.5", MTX-300W

APPROVALS:
NTEP-certified per H-44, Class III, 3000d; CC #96-080A1, UL and C-UL listed

WARRANTY:
One year limited warranty

Specifications subject to change without notice
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MTE Series Bench Scale

NEW! Low Price!

PART #	DESCRIPTION
41452	MTE-300d, fixed head die cast base, 300 lb (150 kg)
41453	MTE-300, fixed head stainless steel base, 300 lb (150 kg)

The MTE-300 is the most cost effective digital platform scale in its class.

It offers a simple tare function with an easy-to-read display and a checkweighing function that simplifies controls.

Applications

- Shipping and receiving
- Industrial processing

Standard Features

- Easy-to-read Vacuum Fluorescent Display (VFD)
- Stainless steel or die cast platform base
- Weight verification
- Simple tare function
- 115 VAC power cord

Options/Accessories

48716 ..... Tilt stand
42230 ..... Additional operating manual

MG-3000 Series Checkweigher

PART #	DESCRIPTION
41445	MG-3000, 15 lb

This compact, water-resistant scale provides quick, accurate weighments and an easy-to-read color bar graph display.

The MG-3000 over/under checkweigher is designed to meet increasing demands for strong, durable, and easy-to-use scales to weigh product such as fish, meat and frozen foods.

Applications

- Food processing
- Light washdown environments

Standard Features

- Color bar graph display
- Large Liquid Crystal Display (LCD)
- Stainless steel exterior & platform
- Compact design
- Easy dual-range selection
- Over/under weight verifier
- AC adapter
- Set tare by weight or digital entry

Options/Accessories

41635 ..... Built-in NiCad battery
42227 ..... RS-232 interface battery
42234 ..... Additional operating manual

CWS Series Portable Bench Scale

CWS-10

PART #	DESCRIPTION
41466	CWS-5 lb
41467	CWS-10 lb
41468	CWS-20 lb
41469	CWS-50 lb
41923*	CWS-5 lb/oz
41924*	CWS-10 lb/oz
41925*	CWS-19 lb/oz

** Lb/oz display versions cannot be converted to kg-only or lb-only display. Lb/oz versions are NTEP for postal use only.*

The CWS Series is a battery-powered, easy-to-use digital bench scale.

It can be used anywhere and provides highly reliable weighing data any time. A variety of power-conserving functions assure optimum battery use.

Applications

- Parcel weighing
- Light industrial weighing
- Portion weighing

Standard Features

- LCD display
- Stand-by mode
- Auto power-off function
- Low battery indicator
- Weighing
- Battery-powered, low power consumption design (1,000-hour life cycle with 6 D-cell batteries)

Options/Accessories

42228 ..... Additional operating manual
44063 ..... Stainless steel top plate

(Specifications on back)

MTE Series Specifications

CAPACITY:
300 lb (150 kg)

MINIMUM GRADUATION:
0.1 lb (50 g)

ACCURACY:
1/3000

WEIGH METHOD:
Strain-gauge load cell

DISPLAY:
Vacuum Fluorescent Display (VFD)

DISPLAY ITEMS:
Weight: 5 digits
Center of zero
Tare
Checkweighing: Over “H”, Under “L”

POWER CONSUMPTION:
6 watts

ELECTRICAL POWER:
115 VAC ± 10%, 50 Hz

WEIGHT:
48 lb (22 kg)

DIMENSIONS:
15.5" x 21.6" x 3.2"

OPERATING TEMPERATURE:
14º F to 104º F (-10º C to 40º C)

APPROVALS:
NTEP certified per H-44, Class III, 3000d; CC#98-067

WARRANTY:
One year limited warranty

MG-3000 Series Specifications

CAPACITY:
15 lb

MINIMUM GRADUATION:
0.005 lb

DISPLAY:
Liquid Crystal Display (LCD)

DISPLAY ITEMS:
Weight: 5 digits
Bar graph: 31 bars
Under/Over: ← →
Units: lb, kg, oz
Zeros: ◀
Values set: ◀
Tare: ◀
Set mode: ★

TARE
Set by actual weight via [TARE]
Set digitally via [TARE], [CHG/VAL] and [SET/COL]
Tare value limited to scale capacity

TARGET, UPPER LIMIT:
Set by actual weight via [SET] and [CHG/VAL]
Set digitally via [SET] and [CHG/VAL]

POWER SOURCE:
AC 115V ± 10% (AC adapter)

MATERIAL:
Stainless steel exterior

WEIGHT:
12 lb (6 kg)

PLATFORM DIMENSIONS:
10" L x 8" W

OPERATING TEMPERATURES:
14º F to 104º F (-10º C to 40º C)

APPROVALS:
NTEP certified per H-44, Class III, 3000d;
CC #91-121

WARRANTY:
One year limited warranty

CWS Series Specifications

CWS SERIESCAPACITY/GRADUATION:
CWS-5 lb: 2000 g x 2 g, 2 kg x 0.002 kg, 100 oz x 0.1 oz, 5 lb x 0.005 lb
CWS-10 lb: 5000 g x 5 g, 5 kg x 0.005 kg, 200 oz. x 0.2 oz., 10 lb x 0.01 lb
CWS-20 lb: 10 kg x 0.01 kg, 20 lb x 0.02 lb
CWS-50 lb: 20 kg x 0.02 kg, 50 lb x 0.05 lb

WEIGHT:
6 lb (3 kg)

DIMENSIONS:
Overall: 9.5" x 7.1" x 9.7" (240mm x 180mm x 245mm)
Plate: 7.9" x 8.9" (200mm x 224mm)

ELECTRICAL POWER:
6 D-cell batteries (R20)

APPROVALS:
NTEP certified per H-44, Class III, 1000d; CC #94-018

WARRANTY:
One year limited warranty

Specifications subject to change without notice
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IQ 9500 Series Counting Scale

IQ 9500 Single Platform

IQ 9500 Dual Platform

(SEE CHART ON BACK OF PAGE FOR ADDITIONAL PART #'S)

Featuring a sophisticated design that provides flexibility as well as easy operation, the IQ 9500 counting scale is designed to exceed your customer's counting needs.

From quality and inventory control to shipping and receiving, the IQ 9500 provides industry-leading accuracy and repeatability for a variety of counting applications. A weighing resolution of 1/10,000 and a counting (internal) resolution of 1/1,000,000 provide high-accuracy performance without the high-end price tag. User accuracy is enhanced with features like an easy-to-operate keypad, three vibrant fluorescent displays that show weight, unit weight and quantity simultaneously, and the choice of unit weight/1000 or average piece weight (APW) modes.

Each scale contains the hardware to accommodate the options and accessories customers demand. Three RS-232 ports allow connection to peripherals such as bar code laser or pen scanners, Eltron bar code printers, ticket or tape printers, and a PC. Just tell us your customer's application requirements, and we will help you complete the package.

Providing convenience in any application, the indicator head can be unlatched from the base for pole, wall mount or remote use. Enhanced data collection opportunities and portability are available with 200-item memory and an optional rechargeable battery.

More than just a counting scale, the IQ 9500 provides customers with precision weight-based inventory and data management.

Applications

- Inventory and quality control
- Parts packaging
- Shipping and receiving

Standard Features

- 1/1,000,000 counting (internal) resolution
- 1/10,000 weighing resolution
- Three fluorescent displays for weight, unit weight and quantity
- Up to four scale operation (three scales and one force balance)
- AC or battery operation (battery is optional)
- Three RS-232 ports for connecting to peripherals such as Eltron bar code printers, ticket/tape printers, bar code laser/pen scanners, PCs, and a force balance
- 200-item recall
- Up to six setpoints (TTL logic)

Options/Accessories

31793 ..... AC power supply adapter, 115 VAC (only required when ordering part number 64842)
32479 ..... AC power supply adapter, 230 VAC (only required when ordering part number 64842)
53826 ..... 20" high column assembly
53827 ..... Rechargeable battery pack, 4 hours continuous use (lead acid type)
53828† ..... Multi-scale "Y" cable
32375** ... Remote scale connector
35319 ..... 20' RoughDeck home run cable w/remote scale connector installed
23113 ..... TM-U295 ticket printer, 115 VAC/230 VAC
34492 ..... TM-U200 tape printer, 115 VAC
34469 ..... TM-U200 tape printer, 230 VAC
53120 ..... Eltron LP-2722 direct thermal printer (115 VAC)
53124 ..... Eltron LP-2722 direct thermal printer (230 VAC)
65617 ..... Direct Thermal labels, 2.25" W x 4.50" L, 5" roll diameter, 600 labels/roll, perforated, 1" core size
64660 ..... 5' RS-232 cable, 9-pin D-sub male to 9-pin D-sub male (Eltron printer)
64661 ..... 5' RS-232 cable, 8-pin DIN male to 9-pin D-sub male (Eltron printer)
41279 ..... 5' RS-232 cable, 9-pin D-sub male to 25-pin D-sub male (TM-U295 or TM-U200)
32810 ..... 5' RS-232 cable, 8-pin DIN male to 25-pin D-sub male (TM-U295 or TM-U200)
65616 ..... Wand, RS-232 decoded, 6 mil visable light
65317 ..... CCD Scanner, Densei, scan width up to 4.5", RS-232 w/8-pin DIN connector
65619 ..... QS6000, KBN, RS-232 cable, power supply, cable to connect to IQ 9500
53785*** .. Additional operating manual

Please refer to our BenchMark™ bench scales and RoughDeck™ floor scales for remote platform options.

† Required in three-channel system when channels #1 and #2 are not a dual channel platform.

*** This connector needs to be installed on the load cell cable of any remote base. (i.e. bench scale load cell, or floor scale)*

**** Authorized distributors can download for free from www.rlws.com*

(Specifications on back)

WEIGHT DISPLAY RESOLUTION:
1/10000, 1/5000, 1/2500

COUNTING RESOLUTION:
1/1,000,000

POWER SOURCE:
115 VAC or 230 VAC, 50/60 Hz

POWER CONSUMPTION:
20 W

INPUT SENSITIVITY:
0.40-4.00 mV/V

ZERO ADJUST RANGE:
100% full scale

A/D CONVERSION RATE:
10 times per second

LOAD CELL EXCITATION:
12 V DC

NUMBER OF SCALE CHANNELS:
Up to four scales can be connected (three load cell scales and one force balance)

NUMBER OF LOAD CELLS PER REMOTE PLATFORM SCALE:
4 x 350Ω load cells

WEIGHT DISPLAY:
Five digits

UNIT WEIGHT DISPLAY:
Five digits

QUANTITY DISPLAY:
Seven digits

MEMORY ITEMS:
200 items maximum

LOAD CELL INPUT CONNECTOR:
Amphenol 14-pin

BAR CODE SCANNER CONNECTOR:
DIN 8-pin (RS-232)

LAB BALANCE, PC OR BAR CODE LABEL PRINTER CONNECTOR:
DIN 8-pin (RS-232) or D-sub 9-pin (RS-232)

SETPOINT OUTPUT CONNECTOR:
Mini DIN 8-pin

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

DIMENSIONS:
Pole type: 16.4" W x 16.5" L x 17.9" H (416mm W x 419mm L x 454mm H)

Bench type: 16.4" W x 17.1" L x 4.9" H (416mm W x 434mm L x 124mm H)

WEIGHT:
Pole type: 19.4 lb (8.8 kg)

Bench type: 17.6 lb (8 kg)

WARRANTY:
One year limited warranty

IQ 9500 SERIES

PART #	CAPACITY	INTERNAL RESOLUTION	PLATTER DIMENSIONS
Single Scale - 115 VAC (Includes scale platform & console)			
53802	0.5 lb/0.25 kg	0.0000005 lb (0.0000002 kg)	6" x 8" (152 x 203mm)
53803	1 lb/0.5 kg	0.000001 lb (0.0000005 kg)	6" x 8" (152 x 203mm)
53804	2.5 lb/1.0 kg	0.0000025 lb (0.000001 kg)	7" x 10" (177 x 254mm)
53805	5 lb/2.5 kg	0.000005 lb (0.0000025 kg)	11" x 16" (279 x 406mm)
53806	10 lb/5.0 kg	0.00001 lb (0.000005 kg)	11" x 16" (279 x 406mm)
53807	25 lb/10.0 kg	0.000025 lb (0.00001 kg)	11" x 16" (279 x 406mm)
53808	50 lb/25.0 kg	0.00005 lb (0.000025 kg)	11" x 16" (279 x 406mm)
53809	100 lb/50.0 kg	0.0001 lb (0.00005 kg)	11" x 16" (279 x 406mm)
Single Scale - 230 VAC (Includes scale platform & console)			
65152	0.5 lb/0.25 kg	0.0000005 lb (0.0000002 kg)	6" x 8" (152 x 203mm)
65151	1 lb/0.5 kg	0.000001 lb (0.0000005 kg)	6" x 8" (152 x 203mm)
65150	2.5 lb/1.0 kg	0.0000025 lb (0.000001 kg)	7" x 10" (177 x 254mm)
65149	5 lb/2.5 kg	0.000005 lb (0.0000025 kg)	11" x 16" (279 x 406mm)
65148	10 lb/5.0 kg	0.00001 lb (0.000005 kg)	11" x 16" (279 x 406mm)
65147	25 lb/10.0 kg	0.000025 lb (0.00001 kg)	11" x 16" (279 x 406mm)
65146	50 lb/25.0 kg	0.00005 lb (0.000025 kg)	11" x 16" (279 x 406mm)
65146	100 lb/50.0 kg	0.0001 lb (0.00005 kg)	11" x 16" (279 x 406mm)
Dual Scale - 115 VAC (Includes scale platform & console)			
53794	0.5/10 lb (0.25/5.0 kg)	0.0000005/0.00001 lb (0.0000002/0.000005 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
53795	0.5/25 lb (0.25/10.0 kg)	0.0000005/0.000025 lb (0.0000002/0.00001 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
53796	0.5/50 lb (0.25/25.0 kg)	0.0000005/0.00005 lb (0.0000002/0.000025 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
53797	1/10 lb (0.5/5.0 kg)	0.000001/0.00001 lb (0.000001/0.000005 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
53798	1/25 lb (0.5/10.0 kg)	0.000001/0.000025 lb (0.000001/0.000005 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
53799	1/50 lb (0.5/25.0 kg)	0.000001/0.00005 lb (0.000001/0.000025 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
65336	2.5/10 lb (1.0/5.0 kg)	0.0000025/0.00001 lb (0.000001/0.000005 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
53800	2.5/25 lb (1.0/10.0 kg)	0.0000025/0.000025 lb (0.000001/0.00001 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
53801	2.5/50 lb (1.0/25.0 kg)	0.0000025/0.00005 lb (0.000001/0.000025 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
65335	5.0/10 lb (2.5/5.0 kg)	0.000005/0.00001 lb (0.000001/0.000005 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
65334	5.0/25 lb (2.5/10.0 kg)	0.000005/0.000025 lb (0.000001/0.000005 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
65333	5.0/50 lb (2.5/25.0 kg)	0.000005/0.00005 lb (0.000001/0.000025 kg)	4" x 6"/9" x 12" (101 x 152/228 x 304mm)
Dual Scale - 230 VAC			
Consult factory for pricing and delivery.			
Console Only			
64842	IQ 9500 (Requires part number 31793 or 32479 for power)		

Specifications subject to change without notice
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CONDEC™ ECS 5000 Digital Counting Console

Designed for ease of installation and operation, the innovative ECS 5000 Counting Console offers a full function numerical keyboard providing user-friendly operation. The standard unit is available in 2 lb to 100 lb configuration with the capability of adding a second remote channel with capacities from 1 lb to 20,000 lb. More advanced features include the ECS 5000's full duplex serial output, configurable to provide up to seven fields of information including a keyed entry 6-digit ID number.

Applications

- Counting and weighing
- Shipping and receiving
- Stockroom and production area

Standard Features

- Full function numerical keyboard
- Full duplex serial output, configurable to provide up to seven fields of information including a keyed entry six-digit ID number
- Bright Light Emitting Diode (LED) Display
- Negative counting
- Sample enhancement

Options/Accessories

16815 ..... Service manual
55522 ..... Additional operating manual

PART # DESCRIPTION (PART NUMBERING CHART ON BACK OF PAGE)

115 VAC

57125 .... ECS5000AAAA, 2 lb x 0.0002 lb, 115 VAC 50/60 Hz, local scale only, standard
57172 .... ECS5000AACA, 2 lb x 0.0002 lb, 115 VAC 50/60 Hz, remote scale option (AC only), standard
61995 .... ECS5000CACA, 10 lb x 0.001 lb, 115 VAC 50/60 Hz, remote scale only (AC only), standard
62016 .... ECS5000CADA, 10 lb x 0.001 lb, 115 VAC 50/60 Hz, remote scale only with lb/kg switch (AC only), standard
61172 .... ECS5000DAAA, 25 lb x 0.002 lb, 115 VAC 50/60 Hz, local scale only, standard
61218 .... ECS5000DADA, 25 lb x 0.002 lb, 115 VAC 50/60 Hz, remote scale option with lb/kg switch (AC only), standard
61941 .... ECS5000EAAA, 50 lb x 0.005 lb, 115 VAC 50/60 Hz, local scale only, standard
61973 .... ECS5000EACA, 50 lb x 0.005 lb, 115 VAC 50/60 Hz, remote scale option (AC only), standard
61992 ..... ECS5000EADA, 50 lb x 0.005 lb, 115 VAC 50/60 Hz, remote scale option with lb/kg switch (AC only), standard
60592 ..... ECS5000FAAA, 75 lb x 0.005 lb, 115 VAC 50/60 Hz, local scale only, standard
54007 ..... ECS5000FACA, 75 lb x 0.005 lb, 115 VAC 50/60 Hz, remote scale option (AC only), standard
61929 ..... ECS5000GAAA, 100 lb x 0.01 lb, 115 VAC 50/60 Hz, local scale only, standard
62546 ..... ECS5000GEAA, 100 lb x 0.01 lb, 115 VAC 50/60 Hz w/internal battery, local scale only, standard
61949 ..... ECS5000GACA, 100 lb x 0.01 lb, 115 VAC 50/60 Hz, remote scale option (AC only), standard
61972 ..... ECS5000GADA, 100 lb x 0.01 lb, 115 VAC 50/60 Hz, remote scale option with lb/kg switch (AC only), standard

All other part number configurations are available as special order units.

ECS5000 Part Numbering Guide

ECS5000 ( )( ) ( )( )

LOCAL SCALE CAPACITY
A = 2 lb x 0.0002 lb
B = 5 lb x 0.0005 lb
C = 10 lb x 0.001 lb
D = 25 lb x 0.002 lb
E = 50 lb x 0.005 lb
F = 75 lb x 0.005 lb
G = 100 lb x 0.01 lb

POWER SOURCE
A = 115 VAC, 50/60 Hz
B = 230 VAC, 50/60 Hz
C = 115 VAC, 50/60 Hz with battery base
D = 230 VAC, 50/60 Hz with battery base
E = 115 VAC, 50/60 Hz with internal battery
F = 230 VAC, 50/60 Hz with internal battery

OPERATING MODE SELECTION
A = Local scale only
B = Local scale only with lb/kg switch
C = Remote scale option (AC only)
D = Remote scale option with lb/kg switch (AC only)

OPTIONS
A = Standard

(Specifications on back)

ECS 5000 Specifications

CONSULT FACTORY FOR ADDITIONAL SPECIFICATIONS

DISPLAYED RESOLUTION:
12,500 Grads. max.

INTERNAL RESOLUTION:
100,000 counts, 1,000,000 during sampling

ID STORAGE:
Storage of 20 tare and average piece weight values (local channel)

POUNDS/KILOGRAM:
Configurable to “lb only”, “kg only”, or conversions with optional switch

ACCUMULATOR:
Single register 999,999 piece count maximum

SERIAL DATA OUTPUT:
Port 1: full duplex, RS-232 or 20 mA loop
Port 2: simplex RS-232 or 20 mA loop

SERIAL DATA PRINTED:
Configurable to provide 6-digit ID number, gross weight, tare weight, net weight, instantaneous piece count, average piece weight, accumulated total piece count

OVERALL DIMENSIONS:
17" L x 11.5" W x 5.25" H

WEIGHT:
AC unit: 21 lb (9.5 kg) Battery unit: 40 lb (18 kg)

WARRANTY:
One year limited warranty

Specifications subject to change without notice
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NCS Series Counting Scales

c UL us LISTED

PART #	DESCRIPTION
41456	NCS 6 lb, 6 lb x .001
41457	NCS 12 lb, 12 lb x .002
41458	NCS 30 lb, 30 lb x .005
41459	NCS 60 lb, 60 lb x .01

The NCS Series is the solution for light-capacity counting and weighing applications.

Available in capacities from 6 lb to 60 lb, the NCS series features a bright VFD that shows weight, unit weight and piece count simultaneously.

Count on its accurate, dependable performance for simple and precise counting.

Applications

- Inventory and quality control
- Shipping and receiving
- Production counting applications

Standard Features

- 0.5" (11.5mm) Vacuum Fluorescent Display (VFD)
- 15 preset keys for average piece weight storage
- Large 13.8" x 9.6" (350mm x 243mm) platform
- Six-digit weight or count display, five-digit weight display, five-digit average piece weight display

Options/Accessories

42232 ..... Additional operating manual

(Specifications on back)

CAPACITY/READABILITY:
6 lb x 0.001 lb, 12 lb x 0.002 lb, 30 lb x 0.005 lb, 60 lb x 0.01 lb

INTERNAL RESOLUTION:
1:30,000

DISPLAY:
VFD, 0.5" letter height

WEIGHT DISPLAY ACCURACY:
1/6000

OPERATING TEMPERATURE:
23°F to 104°F (-5°C to 40°C)

DISPLAY ITEMS:
Weight: five digits
Unit weight: five digits
Count: six digits
Annunciators: Zero point, tare, weight check (shortage), count number (target)

FUNCTIONS:
Tare: actual weight, numeric entry
Preset: (variable setting)
Unit weight setting: actual weight or numeric entry
Power Source: 120V, 10%, 50/60 Hz

POWER CONSUMPTION:
Approximately 5 watts, 110/115 VAC

APPROVALS:
UL and C-UL listed

WARRANTY:
One year limited warranty

Specifications subject to change without notice
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CS™ Series, 200/750/1500/3000 Crane Scales, Intercomp

CS3000

CS200

PART # DESCRIPTION

CS200 (battery included):

43734 ..... CS200, 25 lb
43735 ..... CS200, 50 lb (25 kg)
43736 ..... CS200, 100 lb (50 kg)
43737 ..... CS200, 250 lb (125 kg)

CS750 (batteries not included):

43643 ..... CS750, 100 lb (50 kg)
43644 ..... CS750, 300 lb (150 kg), NTEP certified
43645 ..... CS750, 500 lb (250 kg), NTEP certified
43646 ..... CS750, 1000 lb (500 kg), NTEP certified

CS1500 (batteries not included):

43647 ..... CS1500, 1000 lb (500 kg), NTEP certified
43648 ..... CS1500, 2000 lb (1000 kg), NTEP certified
43649 ..... CS1500, 5000 lb (2500 kg), NTEP certified
43650 ..... CS1500, 10,000 lb (5000 kg), NTEP certified
43651 ..... CS1500, 20,000 lb (10,000 kg), NTEP certified

CS3000 (batteries not included):

43652 ..... CS3000, 5000 lb (2500 kg), NTEP certified
43653 ..... CS3000, 10,000 lb (5000 kg), NTEP certified
43654 ..... CS3000, 20,000 lb (10,000 kg), NTEP certified
43655 ..... CS3000, 30,000 lb (15,000 kg), NTEP certified
43656 ..... CS3000, 50,000 lb (25,000 kg), NTEP certified
43657 ..... CS3000, 70,000 lb (35,000 kg), NTEP certified
43658 ..... CS3000, 100,000 lb (50,000 kg)

Featuring a high-resolution 20-bit A/D converter, the Intercomp CS200/750/1500/3000 crane scales provide accuracies of ±0.1% of the applied load. The unique design allows you to choose the model and weighing capacity you need, from 25 lb to 100,000 lb.

Digital calibration and a simple keypad allow easy operation. The weatherproof aluminum case protects all electronics from moisture and dust. A highly-visible display and recessed push-button switches allow simple, trouble-free operation.

Applications

- Overhead industrial weighing

Standard Features

All CS Models:

- Ultra-high resolution, 20-bit A/D converter
- Keypad setup
- Digital calibration
- Auto shut-off

CS750:

- Shock-mounted in weatherproof extruded aluminum case.
- 1" LCD digital readout
- Membrane push-button switch
- Powered by 6 “D” cell batteries

CS1500:

- NEMA 4X cast aluminum case
- 0.8" LED digital readout
- Recessed push-button switch
- Powered by 8 “D” cell batteries

CS3000:

- NEMA 4X cast aluminum case
- 1" LCD digital readout
- Display automatically adjusts to lighting conditions
- Recessed push-button switch
- Powered by 8 “D” cell batteries

Options/Accessories

43939 ..... RS-232 serial ouput (CS750, CS1500)
43940 ..... Battery pack and external charger, 120 VAC (CS750, CS1500)
43941 ..... Battery pack and external charger, 230 VAC (CS750, CS1500)
43943 ..... Anti-heat shield (CS3000)
43944 ..... Anti-magnetic shield (C3000)

NOTE: Part numbers 43943 and 43944 must be installed at time of order to get list price. To add options at a later time, please contact RLWS for additional pricing and lead time.

CS750

CS1500

(Specifications on back)

CS Series 200/750/1500/3000 Specifications

All CS Models:

FILTERING:
6 pole, 10 hertz low pass

AUTO SHUT-OFF:
Low battery, or after 5 minutes without use

SPEED:
3 seconds to typical reading

ACCURACY:
±0.1% of reading

HUMIDITY:
10 to 95% non-condensing

TEMPERATURE:
Operating -4°F to 140°F (-20°C to 60°C)

NOMINAL OVERLOAD:
200% of capacity

MAXIMUM OVERLOAD:
500% of capacity

WARRANTY:
One year limited warranty

CS200:

RESOLUTION:
12 bit A/D delivers over 1,000,000 internal counts

GENERAL:
Zero, On, Off, lb

DISPLAY:
.5" (12mm) 5-digit LCD

BATTERY LIFE:
1 year normal use

BATTERIES:
1 9V disposable alkaline dry cells (or rechargeable nickel-cadmium cells, not included)

DIMENSIONS:
3.75" W x 2" D x 6" H (94mm W x 50mm D x 150mm H)

ENCLOSURE:
Weatherproof ABS plastic case

EST. SHIP WEIGHT:
2.2 lb (1 kg)

CS200 CAPACITIES

CAPACITY	GRADUATION
25 lb	.01 lb
50 lb	.02 lb
100 lb	.05 lb
250 lb	0.1 lb
500 lb	0.2 lb

CS750:

RESOLUTION:
20 bit A/D delivers over 1,000,000 internal counts

GENERAL:
Zero, On, Off, Backlight

DISPLAY:
1" (25mm) 5-digit LCD

INDICATORS:
lb/kg

BATTERY LIFE:
1 year normal use

BATTERIES:
(Batteries are not included) 6 “D” size disposable alkaline dry cells or rechargeable nickel-cadmium cells

DIMENSIONS:
Control box: 8.5" L x 5" W x 4.25" H (216mm L x 127mm W x 108mm H)

Lifting eye to hook: 9.5" (241mm)

ENCLOSURE:
Weatherproof extruded aluminum case

APPROVALS:
NTEP-certified per H-44, Class III, 3000d; Class III, 5000d, CC# 97-135A1

EST. SHIP WEIGHT:
8.5 lb (4 kg)

CS750 CAPACITIES

CAPACITY	GRADUATION
25 lb	.01 lb
50 lb	.02 lb
100 lb	.05 lb
250 lb	0.1 lb
500 lb	0.2 lb
1000 lb	0.5 lb

CS3000:

RESOLUTION:
20 bit A/D delivers over 1,000,000 internal counts

GENERAL:
Zero, lb/kg, Tare Set/ Display, Tare Clear, On, Off

DISPLAY:
1" (25mm) 5-digit liquid crystal (LCD)

INDICATORS:
lb/kg and Net

BATTERY LIFE:
Up to 400 hours continuous use

BATTERIES:
(Batteries are not included) 8 “D” size disposable alkaline dry cells or rechargeable nickel-cadmium cells

TARE:
Up to 100% of capacity

DIMENSIONS:
See table

ENCLOSURE:
NEMA 4 cast aluminum case

HOOK OR EYE:
Crosby-Laughlin or equivalent

APPROVALS:
NTEP-certified per H-44, Class III,3000d; Class III, 5000d, CC# 97-135A1

CS3000 DIMENSIONS

CAPACITY LB	GRADUATIONS	OVERALL HEIGHT	*	EST. SHIP WEIGHT
5000 lb	1 lb	22"	*	60 lb (27 kg)
10,000 lb	2 lb	22"	*	60 lb (27 kg)
20,000 lb	5 lb	31"	*	100 lb (45.5 kg)
30,000 lb	10 lb	31"	*	125 lb (57 kg)
50,000 lb†	10 lb	46.1"	17.0 lb	225 lb (102 kg)
70,000 lb†	20 lb	48.6"	17.0 lb	253 lb (115 kg)
100,000 lb†	20 lb	56"	18.0 lb	397 lb (180 kg)

** Dimensions are top to bottom shackle, eye to eye on 25-50 to (12.5 - 25 metric ton) capacity models.*

† Unit comes standard with top shackle and bottom swivel hook.

CS1500:

RESOLUTION:
20 bit A/D delivers over 1,000,000 internal counts

GENERAL:
Zero, lb/kg, On, Off

DISPLAY:
0.8" (20mm) 5 1/2" LED

INDICATORS:
lb/kg

BATTERY LIFE:
Up to 100 hours continuous use

BATTERIES:
(Batteries are not included) 8 “D” size disposable alkaline dry cells or rechargeable nickel- cadmium cells

DIMENSIONS:
See table

ENCLOSURE:
NEMA 4 cast aluminum case

HOOK OR EYE:
Crosby-Laughlin or equivalent

APPROVALS:
NTEP-certified per H-44, Class III,3000d; Class III, 5000d, CC# 97-135A1

CS1500 DIMENSIONS

CAPACITY LB	GRADUATIONS	OVERALL HEIGHT	EST. SHIP WEIGHT
1000 lb	0.5 lb	12"	21.5 lb (10 kg)
2000 lb	1 lb	12"	21.5 lb (10 kg)
5000 lb	2 lb	17"	37.5 lb (17 kg)
10000 lb	5 lb	17"	37.5 lb (17 kg)
20000 lb	10 lb	17"	45 lb (20 kg)

Specifications subject to change without notice
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ZLC™ 421 Zero Language Controller

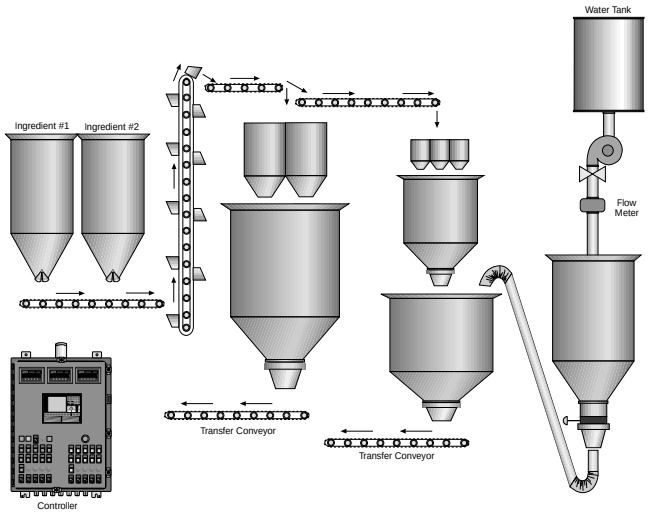
DESCRIPTION

ZLC™ 421 Zero Language Controller (consult factory for quotations)

The new ZLC™ 421 provides all the flexibility of a programmable indicator/controller without requiring the operator to know any programming language, hence the name ZLC™ (Zero Language Controller). With the ZLC™, batching has never been easier. Running on a Windows™ 95/98/NT industrial PC for industrial environments, this controller gets you up and running in a flash. It features multiple scale support with up to 288 digital input/output points, data collection, and reporting.

The ZLC™ also features configurable materials and digital input/output points that are flexible and easy to use. Additionally, operators are able to run an entire batching process by simply pointing and clicking with a mouse! And since it's user configurable in the field—one system can handle all of your applications.

So get ready for the 21st century by putting the ZCL™ 421 in control of your operation.



Applications

- Batching
- Process control

Standard Features

- Pentium class industrial PC
- Automated batching, manual batching or combination
- Materials can be added via scales, flow meters, or hand added
- Stores thousands of materials and recipes used by system (limited only by disk space)*
- Auto-learn preact
- Auto-jog
- Inventory tracking and reporting
- Batch tracking and reporting (inventory tracking, user activity, batch activity, enhanced batch report, and data listings)
- Graphic real-time display
- System alarm output
- Single- or dual-speed fills
- Database backup/restore
- Reporting follows indicator units of measure (lbs, kgs, tons, grams, etc.)
- English/Spanish versions
- Three levels of security (administrator, supervisor, operator)
- 144 input/output points using OPTO 22 G4 I/O modules
- Safety interlocks
- Loss of power batch recovery
- Control lights, blenders, gates, motors, conveyors, scanners, flow meters, pumps, valves, and more

Options/Accessories

49580 ..... Card, input/output digital 144 point
49581 ..... Card, input/output digital 48 point
Consult factory for these additional options:

- Connecting to flow meters
- Connecting to computer network
- Ethernet connectivity
- Three indicators per system
- 288 input/output points

**Demo software allows customer demonstrations on a laptop computer and the ability to generate project configuration files that can be used with the final system.*

Windows is a trademark of Microsoft Corporation.
Pentium is a registered trademark of Intel Corporation.

(Specifications on back)

ZLC™ 421 Zero Language Controller

Specifications

MATERIALS AND RECIPES:
Materials can be configured to batch automatically or manually
Limited by disk space—thousands can be added

EXTERNAL DEVICES:
Can be configured in the software

SECURITY:
Three levels of user security

BATCHING:
Start, stop, and pause ability. Automatic recovery in case of power loss during batching

REPORTS:
Material usage, inventory, batch report, data listings, and user activity report

TEST:
Test peripheral devices in a controlled manner

DISPLAY:
11.3" diagonal, flat TFT (thin film resistor) 800x600 resolution, adjustable brightness control

MOUSE:
Round membrane panel integrated mouse for permanent operation

KEYBOARD:
28 alpha keys, 28 numeric and symbol keys
Keys labeled K1–K12, function keys F1–F12 configurable

INTERFACE PORTS:
External PS/2 port
External PC 104 key style keyboard

DISK DRIVES:
Minimum 4.3 GB hard drive, shock mount
Front panel access to 1.44 MB 3.5" floppy disk drive

SERIAL OUTPUT:
Standard 1 serial RS-232 bi-directional
Optional: 2 additional RS-232 bi-directional serial ports

PARALLEL OUTPUT:
1 parallel port for printers

RELAY INPUTS AND OUTPUTS:
48 minimum, 144 standard, 288 maximum locally

POWER:
Input voltage: 85-132, 170-264 VAC auto-switching, 47-63 Hz
Input power: Maximum: 230 Watts (785 BTU/hr) 465 VA max
Typical: 96 Watts (328 BTU/hr) with Pentium II, 266 Mhz, A-B PCI video card, ISA keyboard interface card, digital I/O card
Output Power: 155 Watts max, at 50˚ C (180/210 W power supply)

OPERATING TEMPERATURE:
41˚F to 122˚F (5˚C to 50˚C)
-13˚F to 122˚F (-25˚C to 50˚C) non-operating temperature

FRONT-PANEL LED INDICATORS:
Power On, Hard Drive Access, Over-Temperature, Caps Lock, and Insert

RELATIVE HUMIDITY:
8% to 80% non-condensing

OPERATING SHOCK:
15G (1/2 Sine, 11 millisecond duration)

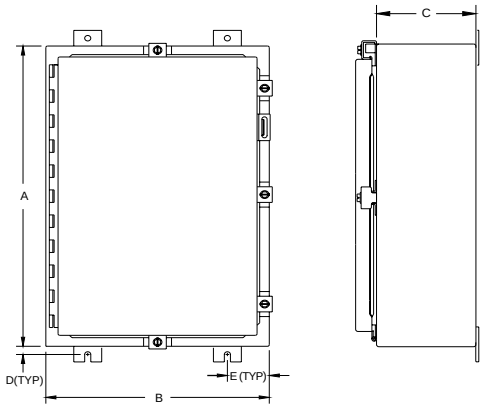
UNIT WEIGHT:
37 lbs (not mounted in an enclosure)

DIMENSIONS (NOT INCLUDING NEMA 4 PAINTED MILD STEEL ENCLOSURE) APPROX:
Front panel height: 14" (355.6cm)
Width: 19" (482.6cm)
Depth: 8.38" (212.9cm)

WARRANTY:
One year limited warranty on hardware
90-day warranty on software

OPERATING SYSTEM OPTIONS:
Windows 95/98/NT

VENTILATION:
Main ventilation fan (changeable filter)
Power supply fan



DIMENSIONS (TYPICAL)

A = 48.00" (1219mm)	D = 0.64" (16mm)
B = 36.00" (914mm)	E = 3.0" (76mm)
C = 16.00" (406mm)	

Specifications subject to change without notice
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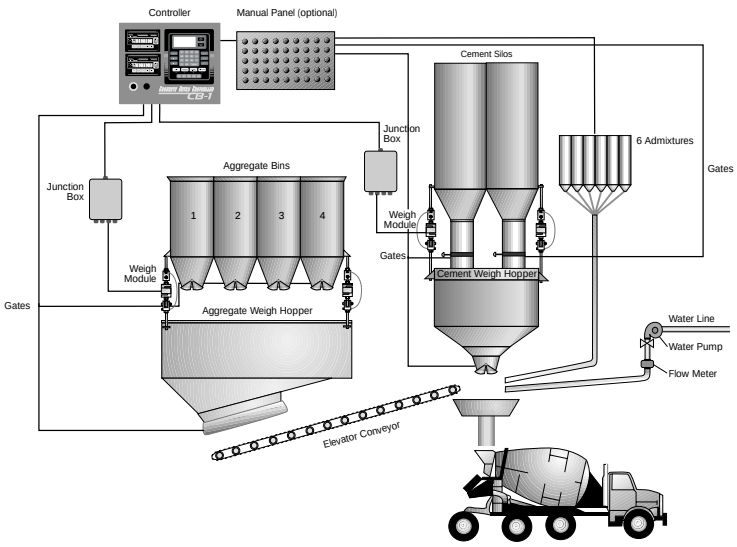
CB-1 Concrete Batch Controller

Dual-Scale Automated Batching System

PART #	DESCRIPTION
43267	CB-1 Concrete Batch Controller, 115 VAC
45093	CB-1 Concrete Batch Controller, 230 VAC
45095	CB-1 Concrete Batch Controller without indicators, 115 VAC
45094	CB-1 Concrete Batch Controller without indicators, 230 VAC

A digital batch controller provides dual-scale control in this automated concrete batching system. Two high-quality Rice Lake weight indicators—one for each hopper—gather weight data used to control the release of four separate aggregates and three cements.

The system also controls water addition and six admixtures by monitoring a pulse from a flow meter. Configurable formula setup and user-definable inputs and outputs allow full control of the batching routine.



Applications

- Automated concrete batching applications
- Ready-mix plants
- Concrete block plants

Standard Features

- Controls for 3 types of cement, 4 aggregates, 6 admixtures, 1 metered water control
- Two-speed concrete batching
- Real-time display of batch status
- NEMA 4 mild steel enclosure
- User-friendly backlit touchscreen interface with 32-key tactile membrane keypad
- OPTO 22 G4 I/O module outputs
- Opoisolated inputs
- Gross/net weighing modes
- 100 mix designs
- Autolearn preact algorithms
- Advanced self-test screen
- RATTLETRAP® vibration control
- Configurable ingredient setup
- Reporting includes batch and material usage reports
- Safety interlocks
- System alarm output
- Adjustable control of cement and aggregate inching gates
- Moisture compensation for aggregates
- Controls for cement and aggregate vibrators
- Automatic discharge rate control

Options/Accessories

48418 ..... PC program to upload/download parameter files
45045 ..... Additional installation/operation manual
Consult factory for these additional options:

- NEMA 4X stainless steel enclosure
- Audible alarms
- Manual panel
- Weighed water control
- Simulator
- Moisture probe
- Printer cable

(Specifications on back)

CB-1 Concrete Batching Controller

Specifications

LOAD CELL EXCITATION (PER INDICATOR):
10 ± 0.5 VDC, 6 x 350-ohm load cells or 12 x 700-ohm

LOAD CURRENT:
175 mA maximum (6 350-ohm load cells)

INTERCONNECTION CABLE REQUIREMENTS:
6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduation minimum
Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:
±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:
50/second, typical

RESOLUTION:
Selectable up to 60,000 displayed graduations
Approximately 1,000,000 graduations internal

DISPLAY INCREMENTS:
1, 2, 5

UNDERRANGE BLANKING:
-2 mV signal nominal

OVER/UNDER CAPACITY ANNUNCIATION:
Overload displayed as: ---
Underload displayed as: ___

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAY:
0.55" 7-digit VFD weight displays,
5" x 2.5" backlit graphic LCD process display

POLARITY INDICATION:
" – " sign

DECIMAL POINTS:
8888888, 888888.8, 88888.88, 8888.888, 888.8888,
88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:
Front-panel push button

FRONT-PANEL KEYPAD:
32-key membrane keypad

FRONT-PANEL ANNUNCIATORS:
Motion, Center of Zero, Units

SERIAL OUTPUT:
"Printer" port, duplex RS-232
"PC" port, duplex RS-232/RS-485

OPTOISOLATED INPUTS:
20 inputs

RELAY OUTPUTS:
40 outputs

AZM APERTURE:
±1.9% of selected full scale capacity or 100%, internal selectable

DIGITAL FILTERING:
Standard range software selectable

MOTION BAND:
1, 2, 3, off

MOTION TIME SENSITIVITY:
Fixed at 1 second

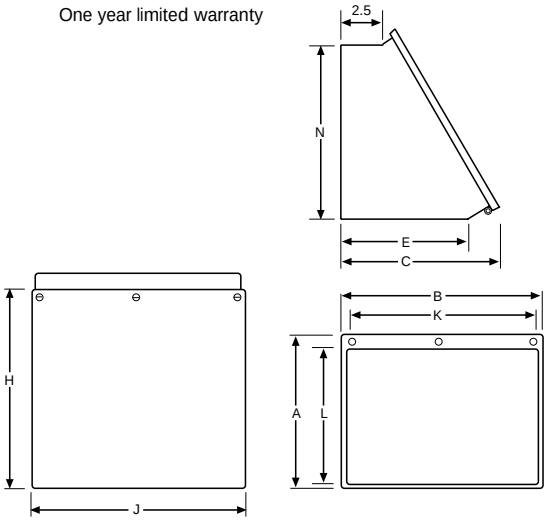
POWER:
Line voltages: 115 VAC +10%/-15%
Frequency: 50 or 60 Hz
Indicator Fusing: 100-120 VAC-2 x 0.25A SB (UL/CSA) 5 x 20mm
220-240 VAC-2 x 0.125A (IEC 127) 5 x 20mm
Output Controller Fusing: 3A TS5 Fastact fuse

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

PACKAGING:
Enclosure: NEMA 4 painted mild steel
Weight: Approximately 45 lb (20.4 kg)

APPROVALS:
NTEP certified Class III/IIL, CC# 98-156

WARRANTY:
One year limited warranty



DIMENSIONS

A =	20.00" (508mm)	J =	24.28" (617mm)
B =	24.00" (610mm)	K =	22.62" (575mm)
C =	13.09" (332mm)	L =	18.62" (473mm)
E =	11.62" (295mm)	N =	18.00" (457mm)
H =	20.28" (515mm)		

Specifications subject to change without notice
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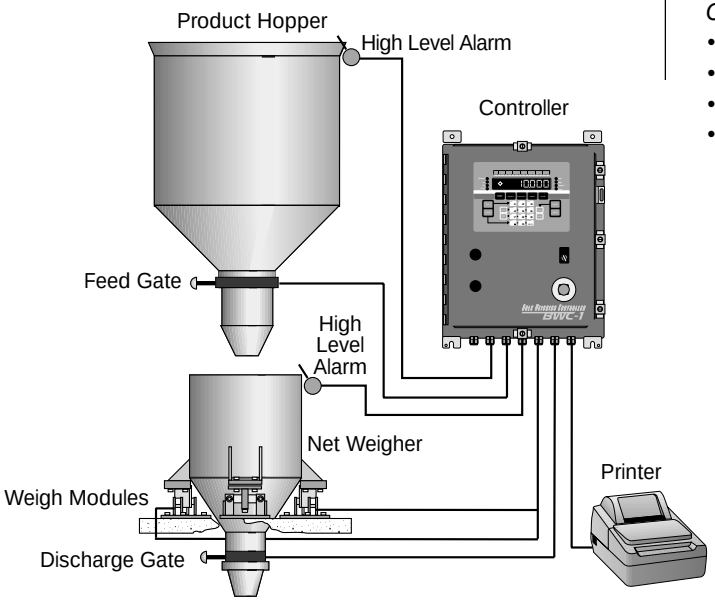
BWC-1 Bulkweighing Controller

FGIS/GIPSA approved

PART #	DESCRIPTION
43262	BWC-1 Bulkweighing Controller, 115 VAC
48421	BWC-1 Bulkweighing Controller, 230 VAC
48419	BWC-1 Bulkweighing Controller, NEMA 4X Stainless Steel Enclosure, 115 VAC
48420	BWC-1 Bulkweighing Controller, NEMA 4X Stainless Steel Enclosure, 230 VAC

The BWC-1 bulkweighing controller provides the precision and control required in bulk weighing applications. This versatile bulkweigher allows weighing of up to 50 products, and offers both shipping and receiving modes. Two-speed fill and learned preacts provide accurate drafts and filling. Real-time printing of draft weights gives you the weight data you need throughout the draft process.



Applications

- Bulk shipping/receiving
- Railcars
- Barges

Standard Features

- Single-scale bulkweighing
- Up to 50 different products
- Two-speed fill for accurate drafts
- Automatic and manual operating modes
- Learned preacts for accurate filling
- NEMA 4 mild steel enclosure
- OPTO 22 G4 I/O modules
- Real-time accumulation
- RATTLETRAP® vibration control
- Safety interlocks for hopper gates
- Subtotal draft printing
- Auto-adjusting final draft
- Real-time printing of draft weights
- Shipping and receiving modes
- User selectable alarm outputs
- Automatic build-up test
- Flow monitoring
- 48-segment bar graph display of sequence, draft process, or progress to target

Options/Accessories

65084 ..... 5' RS-2332 printer interface cable assembly
65083 ..... 5' Epson printer status interface cable assembly

Consult factory for these additional options:

- Manual override switches
- Audible alarms
- RS-485 two-wire interface
- Simulator

(Specifications on back)

BWC-1 Bulkweighing Controller

Specifications

LOAD CELL EXCITATION:
10 ± 0.5 VDC, 16 x 350-ohm load cells (on up to 4 channels)

LOAD CURRENT:
460 mA maximum (16 350-ohm load cells)

INTERCONNECTION CABLE REQUIREMENTS:
6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduation minimum
Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:
±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:
20/second, typical (standard resolution)
10/second, typical (high resolution)

RESOLUTION:
Selectable up to 100,000 displayed graduations
Selectable up to 740,000 graduations internal

DISPLAY INCREMENTS:
1, 2, 5

UNDERRANGE BLANKING:
-2 mV signal nominal

OVER/UNDER CAPACITY ANNUNCIATION:
Overload displayed as: ---
Underload displayed as: ___

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAY:
Large .55" (14.0mm) 7-digit, 14-segment blue/green VFD

POLARITY INDICATION:
" - " sign

DECIMAL POINTS:
8888888, 888888.8, 88888.88, 8888.888, 888.8888, 88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:
Front-panel push button

FRONT-PANEL CONTROL SWITCHES:
Start/Stop, Target, Product, Draft, Done, Fill, Clear, F1, F2, Cust, Cont, Dump, Print

FRONT-PANEL ANNUNCIATORS:
Manual, lb/kg, Slow, Low, High, Hopper/Gate

SERIAL OUTPUT:
"EDP" port, full duplex RS-232; 20 mA or RS-485 optional
"Printer" port, simplex RS-232 and 20 mA current loop

RELAY INPUTS:
8 inputs

RELAY OUTPUTS:
8 outputs standard

AZM APERTURE:
±1.9% of selected full scale capacity or 100%, internal selectable

ANALOG FILTERING:
Software selectable: 2, 8 Hz typical/3 pole, off (25 Hz)

DIGITAL FILTERING:
Standard range software selectable: 1, 2, 4, 8, 16, 32, 64, 128
RATTLETRAP® high vibration control: 4, 8, 16, 32, 64, 128

MOTION BAND:
1, 2, 3, 5, 10, 20, off

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line voltages: 115 or 230 VAC +10%/-15%
Frequency: 50 or 60 Hz
Power consumption: 12 VA with minimum configuration, 30 VA with all options
Fusing: 0.25A SB (UL/CSA) 5x20mm @ 120V operation
0.125A SB (UL/CSA) 5x20mm @ 240V operation

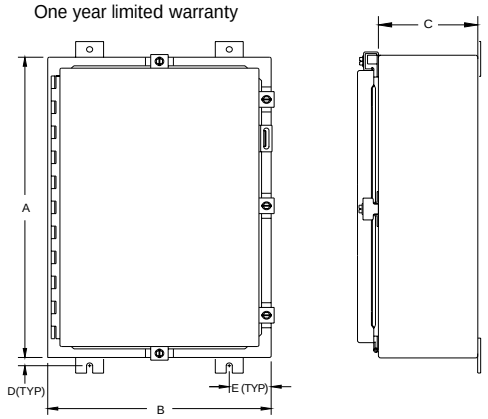
DISPLAY CHECK:
All digit segments and annunciators simultaneously illuminated upon application of power

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

PACKAGING:
Enclosure: NEMA 4 painted mild steel
Weight: Approximately 40 lb (18 kg)

APPROVALS:
NTEP, FGIS/GIPSA certified, Class III/IIIL, CC# 98-157

WARRANTY:
One year limited warranty



DIMENSIONS

A = 20.00" (508mm)	D = 0.62" (16mm)
B = 16.00" (406mm)	E = 3.0" (76mm)
C = 6.00" (152mm)	

Specifications subject to change without notice
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ATS-1 Automated Truck Scale System

DESCRIPTION

ATS-1 Automated Truck Scale System

The ATS-1 automated truck scale system allows for unattended outdoor truck scale terminal operation. The system features a Rice Lake NEMA 4 mild steel outdoor control station equipped with an IQ plus 810 weight indicator. Easy to set up, the ATS-1 provides formattable tickets and several options for gross vehicle weighing activation. The optional painted mild steel weather shroud protects the terminal from the elements.

Applications

- Unattended gross vehicle weight
- Truck stops

Standard Features

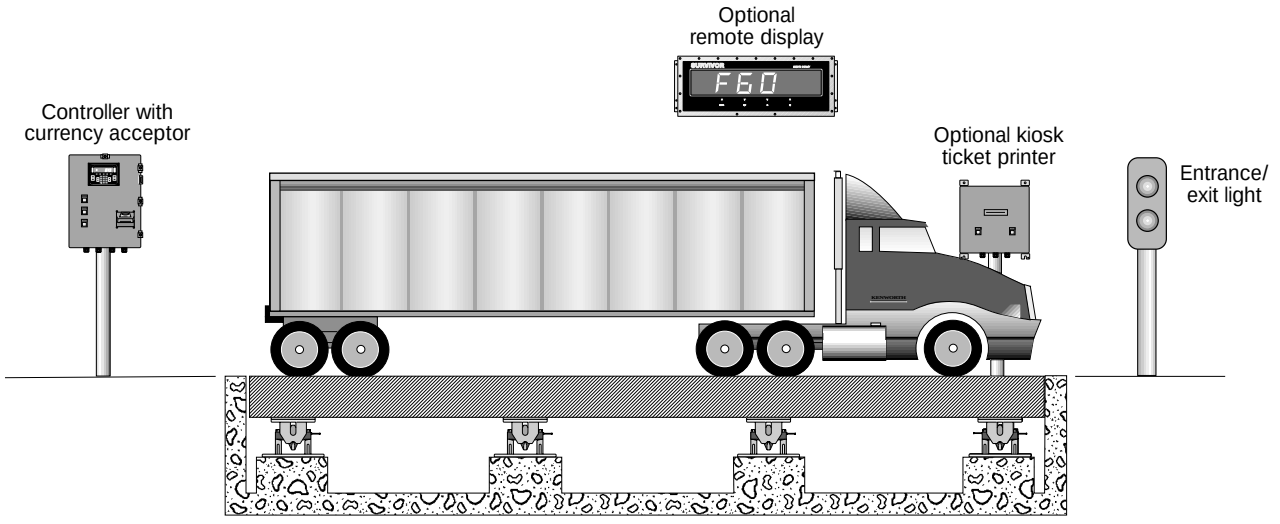
- Operator prompting
- Formattable tickets that print at the end of a transaction
- Traffic light control
- Transmits weight to remote display (only when activated)
- 115 VAC
- Currency acceptor (US currency only)

Options/Accessories

43598 ..... SURVIVOR® IQ F15, 1.5" flip digit remote display, 115/230 VAC
40879 ..... SURVIVOR® IQ F40, 4.0" flip digit remote display, 115/230 VAC
40880 ..... SURVIVOR® IQ F60, 6.0" flip digit remote display, 115/230 VAC
36966 ..... Internal heater
21159 ..... Internal transient protection
23146 ..... Traffic light
49567 ..... Kiosk printer

Consult factory for these additional options:

- Stainless steel enclosure
- RF tags/antenna for truck IDs
- Bar code badge scanner
- 230 VAC
- Weather shroud
- Foreign currency acceptor



(Specifications on back)

ATS-1 Automated Truck Scale System

Specifications

LOAD CELL EXCITATION:
10 ± 0.5 VDC, 32 x 700-ohm load cells

LOAD CURRENT:
115 mA maximum (8 700-ohm load cells)

INTERCONNECTION CABLE REQUIREMENTS:
6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduation minimum
Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:
±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:
20/second, typical

RESOLUTION:
Selectable up to 999,000,000 displayed graduations
740,000 graduations internal

DISPLAY INCREMENTS:
1, 2, 5

UNDERRANGE BLANKING:
-2 mV signal nominal

OVER/UNDER CAPACITY ANNUNCIATION:
Overload displayed as: ---
Underload displayed as: ___

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAY:
9.0mm 4-line x 20-character alphanumeric blue/green VFD

POLARITY INDICATION:
" – " sign

DECIMAL POINTS:
8888888, 888888.8, 88888.88, 8888.888, 888.8888, 88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:
Front-panel push button

FRONT-PANEL KEYPAD:
Mylar with stainless steel dome switches

FRONT-PANEL ANNUNCIATORS:
Motion, Center of Zero, Units

SERIAL OUTPUT:
"Remote Display" port, simplex RS-232

RELAY INPUTS:
3 inputs

RELAY OUTPUTS:
16 outputs

AZM APERTURE:
±1.9% of selected full scale capacity or 100%, internal selectable

DIGITAL FILTERING:
Rattletrap

MOTION BAND:
1, 2, 3, 5, 10, 20, off

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line voltages: 115 VAC +10%/-15%, 230 VAC +10%-15%
Frequency: 50 or 60 Hz
Indicator Fusing: .1A TR5 Fastact fuse

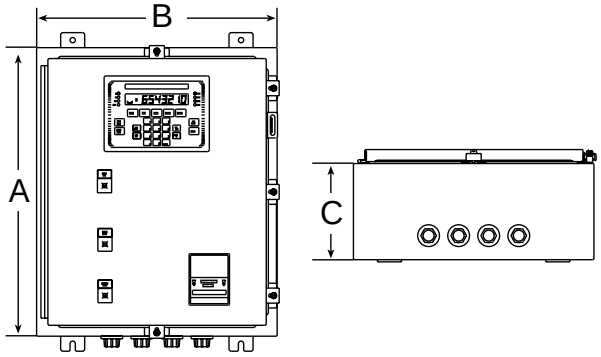
DISPLAY CHECK:
All digit segments and annunciators simultaneously illuminated upon application of power

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

PACKAGING:
Enclosure: NEMA 4 painted mild steel
Weight: Approximately 40 lb (18 kg)

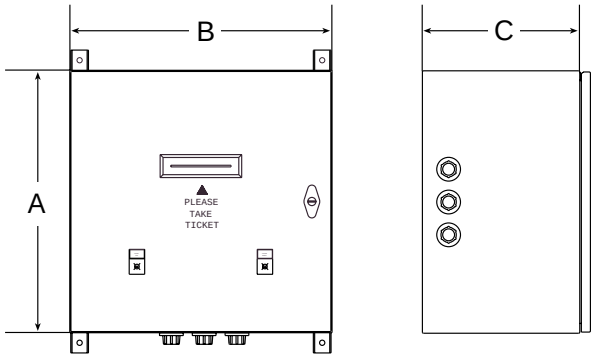
APPROVALS:
NTEP certified Class III/IIIL, CC# 98-158

WARRANTY:
One year limited warranty



INDICATOR BOX DIMENSIONS

A = 20.00" (508mm)
B = 16.00" (406mm)
C = 8.00" (203mm)



PRINTER BOX DIMENSIONS

A = 20.00" (508mm)
B = 18.50" (mm)
C = 12.00" (mm)

Specifications subject to change without notice
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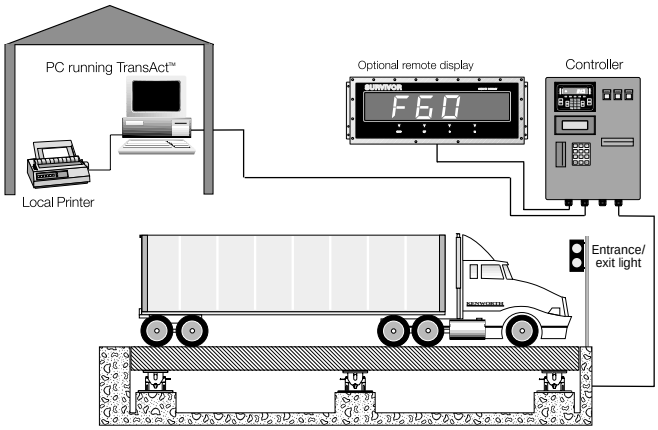
ATS-2 Automated Truck Scale System WITH TRANSACT®

ULTIMATE DATA MANAGEMENT

PART #	DESCRIPTION
44015	ATS-2 Automated Truck Scale System, 115 VAC
44014	ATS-2 Plus Automated Truck Scale System, 115 VAC

From the platform, to the invoice, to account management, the ATS-2 automated truck scale system is the ultimate solution for your unattended outdoor truck scale needs. A Pentium® PC and our TransAct™ data management software make setting up the operation a snap, and the 40-column internal kiosk printer provides driver tickets. The ATS-2 system also includes an IQ plus® 810 digital indicator for accurate weighments, controls for traffic lights, a tough vandal-proof numeric keypad for data entry, an industrial bar code badge scanner, and an easy-to-read 4 x 20 VFD display for operator prompting.



Applications

- Automated inbound/outbound scale terminals
- Unattended vehicle management

Standard Features

- TransAct™ PC software
- Current production PC
- Okidata 320 Turbo printer with parallel cable
- ATS-2 controller:
  - Large, bright, easy-to-read 4 x 20 digit Vacuum Fluorescent Display (VFD) for operator prompting
  - Vandal-proof cast aluminum numeric keypad
  - Bar code badge scanner
  - System and printer status lights
  - Kiosk ticket printer
- Traffic light kit (one red/green light)
- 50 pre-printed security badges

ATS-2 Plus:

- Same features as ATS-2, with TransAct Plus full accounting package PC software

Options/Accessories

43598 ..... SURVIVOR® IQ F15, 1.5" flip digit remote display, 115/230 VAC
40879 ..... SURVIVOR® IQ F40, 4.0" flip digit remote display, 115/230 VAC
40880 ..... SURVIVOR® IQ F60, 6.0" flip digit remote display, 115/230 VAC
43898 ..... TransAct Version 3.1.14A (ATS-2 compatible)
43899 ..... TransAct Plus Version 3.1.14A (ATS-2 compatible)
36966 ..... Internal heater for controller
21159 ..... Internal transient protection for controller
23146 ..... Additional traffic light kit, 115 VAC
48397 ..... Additional operation manual

Consult factory for these additional options:

- UPS power supply
- RF transmitter for PC connection
- RF tags/antenna for truck IDs
- RF transmitter for remote displays
- Currency acceptors
- Stainless steel controller enclosure
- Loop detectors
- Satellite controller for control at both ends of the scale
- Multiple deck truck scale control
- 230 VAC

Pentium is a registered trademark of Intel Corporation

(Specifications on back)

ATS-2 Automated Truck Scale System

Specifications

Controller Specifications:

LOAD CELL EXCITATION:
10 ± 0.5 VDC, 16 x 350-ohm load cells (on up to 4 channels)

LOAD CURRENT:
460 mA maximum (16 350-ohm load cells)

INTERCONNECTION CABLE REQUIREMENTS:
6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduation minimum
Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:
±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:
20/second, typical (standard resolution)
10/second, typical (high resolution)

RESOLUTION:
Selectable up to 100,000 displayed graduations
Selectable up to 740,000 graduations internal

DISPLAY INCREMENTS:
1, 2, 5

UNDERRANGE BLANKING:
-2 mV signal nominal

OVER/UNDER CAPACITY ANNUNCIATION:
Overload displayed as: ---
Underload displayed as: ___

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAYS:
Large .55" (14.0mm) 7-digit, 14-segment blue/green VFD
9.0mm 4-line x 20-character alphanumeric blue/green VFD

POLARITY INDICATION:
" – " sign

DECIMAL POINTS:
8888888, 888888.8, 88888.88, 8888.888, 888.8888, 88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:
Front-panel push button

FRONT-PANEL ANNUNCIATORS:
Paper low, Printer Error, System Error, lb/kg, motion center of zero

SERIAL OUTPUT:
"Remote Display" port, simplex RS-232 and 20 mA current loop

INPUTS (2):
Inbound photoeye/loop detector
Outbound photoeye/loop detector

OUTPUTS (4):
Inbound red/green lights
Outbound red/green lights

AZM APERTURE:
±1.9% of selected full scale capacity or 100%, internal selectable

ANALOG FILTERING:
Software selectable: 2, 8 Hz typical/3 pole, off (25 Hz)

DIGITAL FILTERING:
Standard range software selectable: 1, 2, 4, 8, 16, 32, 64, 128
RATTLETRAP® high vibration control: 4, 8, 16, 32, 64, 128

MOTION BAND:
1, 2, 3, 5, 10, 20, off

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line voltages: 115 VAC +10%/-15%
Frequency: 50 or 60 Hz
Fusing: 5A circuit breaker

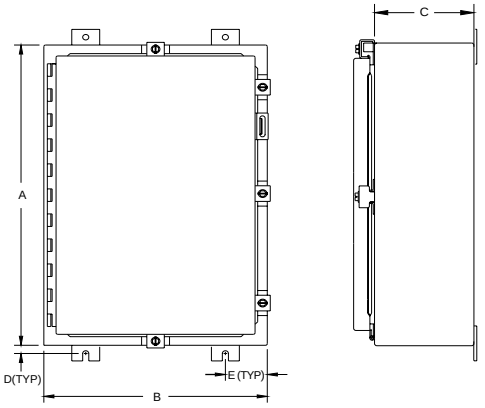
DISPLAY CHECK:
All digit segments and annunciators simultaneously illuminated upon application of power

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

PACKAGING:
Enclosure: NEMA 4 painted mild steel
Weight: Approximately 100 lb (45.3 kg)

APPROVALS:
NTEP certified, Class III/IIIL, CC# 98-158

WARRANTY:
One year limited warranty



DIMENSIONS

A = 30.00" (762mm)	D = 0.62" (16mm)
B = 24.00" (610mm)	E = 3.0" (76mm)
C = 12.00" (305mm)	

PC Specifications (minimum):

PROCESSOR:
Intel 166 mHZ Pentium with MMX technology

MEMORY:
32 MB SDRAM

HARD DRIVE:
2 GB 11mS Ultra ATA

CD ROM:
12x min, 24x max

MONITOR:
15" (13.9" viewable)

GRAPHICS ADAPTER:
2 MB 3-D 64-bit PCI

PC PACKAGE CONTAINS:
Desktop case, 104 + keyboard, MS Mouse, Windows™ 95 and MSOffice (Small Business Edition)

WARRANTY:
PC warranty is through PC manufacturer

Windows is a trademark of Microsoft Corporation

Specifications subject to change without notice
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IMC-1 In-motion Checkweighing System

DEMO CD Available Upon Request

Complete system includes: controller, scale, and conveyor.

The IMC-1 In-motion Checkweighing System offers consistent performance along with the versatility needed in today's process control applications. This checkweigher features a vivid 4.3" x 5" easy-to-read LCD display with an adjustable backlight and bold, one-inch characters that read in either gross or net, pounds or kilograms. In addition, a full alphanumeric keyboard makes programming precise and easy even for someone with limited operating experience.

Rice Lake's checkweigher was designed with the future in mind, offering three expansion slots to add serial communication cards and closed loop feedback circuits, depending on your needs. This system can easily accommodate conveyors from 28" through 5'6" long at speeds up to 200' per minute.

Offering 75 discrete product setups, this is one of the most flexible checkweighing systems on the market. Each setup is clearly described with its own set of menu-driven, on-screen instructions. Looking further into this system's capabilities, the IMC-1 can also be configured to operate as a random package checkweigher and offers password-enabled access to protect calibration.

Applications

- Automated control of package processing
- In-motion variable box, carton, and package weighing
- Industrial or retail applications requiring in-motion weighing of products (food, pharmaceutical, automotive, and apparel)

Standard Features

Controller:

- NEMA 4X enclosure and keypad
- 115 VAC operation
- Large 1" (25.4mm) Liquid Crystal Display (LCD) weight display
- Displays weight in either gross or net, lb or kg
- Easy-to-use menu-driven display
- Full alphanumeric keyboard
- Front panel display counters
- 75 discrete product setups
- Password-enabled access to protect calibration
- Built-in diagnostics
- Trend alarms
- Five-zone relay output
- Reject outputs with timers
- Product name and lot number entries
- Time and date
- Self-charging memory backup system
- Maximum production rate—40 units per minute

Conveyor:

- 28" through 5'6" long
- Friction surface or food grade V-guide belt
- Easy-to-replace spliced belt
- Heavy-duty slider bed construction
- Dynamically-balanced pulleys
- 1/2 HP gear motor and drive belt, TE FC rating
- Mild steel construction
- Minimum overall height of 16"
- 14" belt

Scale:

- Rugged, single load cell design
- Stainless steel flexures
- Easy to install and maintain

Options/Accessories

Consult factory for these additional options:

- Custom support stand
- Special conveyor lengths 28" to 47" or 49" to 60"
- Special stainless steel coatings available
- Statistical analysis package
- Additional operating manual

(Specifications on back)

CONTROLLER:

DISPLAY:
1" (25.4mm) weight display characters; 4.3" W x 5" H
(109mm W x 127mm H) Liquid Crystal Display (LCD)

KEYBOARD:
Full alphanumeric keypad

VOLTAGE:
115 VAC

FREQUENCY:
50/60 Hz

RELAY OUTPUT:
24 VDC to 115 VAC

REAL TIME CLOCK:
Time and date are standard

CAPACITY:
10 lb to 120 lb

DISPLAYED RESOLUTION:
0.02 lb, 0.01 kg

TYPICAL ACCURACY:
± 0.05 lb, 0.03 kg (@ 2 Sigma)

TYPICAL REPEATABILITY:
± 0.03 lb (@ 2 Sigma)

RELAY OUTPUT:
Five-zone

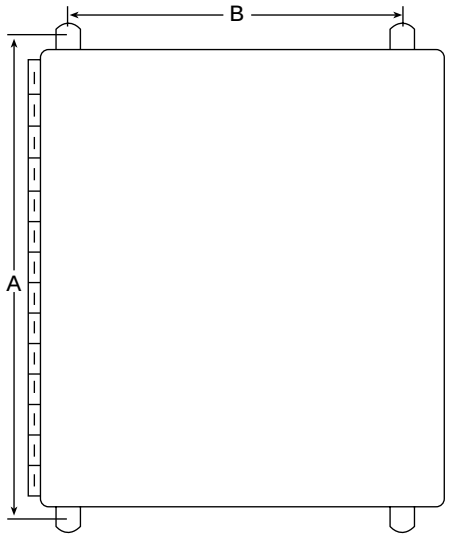
OVERALL DIMENSIONS:
16.8" H x 14" W x 8" D (406mm H x 355mm W x 203mm D)

SHIPPING WEIGHT:
25 lb (11.34 kg)

WARRANTY:
Two year limited warranty

CONTROLLER DIMENSIONS

A = 12" (304mm) B = 19.9" (429mm)



CONVEYOR:

SPEED:
0 to 280' (0 to 85.3 m) per minute
0 to 210' (0 to 64 m) per minute

PRODUCTION RATES:
0 to 350 units per minute
0 to 60 units per minute

VOLTAGE:
115 or 230 VAC

OVERALL DIMENSIONS:
Application dependent

SHIPPING WEIGHT:
Application dependent

WARRANTY:
Two year limited warranty

SCALE:

CAPACITY:
Up to 500 lb

LOAD CELL:
High-alloy tool steel, double chrome over nickel

OVERALL DIMENSIONS:
Application dependent

APPROVALS:
NTEP certified at 5,000 Divisions, Class III, CC#95-062

SHIPPING WEIGHT:
Application dependent

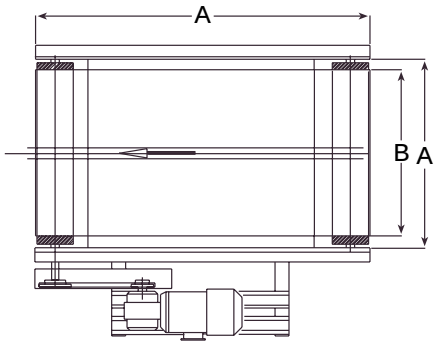
WARRANTY:
Two year limited warranty

CONVEYOR & SCALE DIMENSIONS

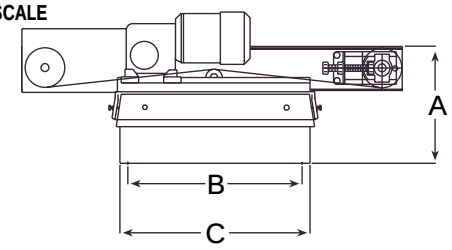
Conveyor:
A = 48" (1219mm) B = 24" (609mm)
C = 27" (685mm)

Scale:
A = 15.4" (391mm) B = 22" (558mm)
C = 24" (609mm)

CONVEYOR



SCALE



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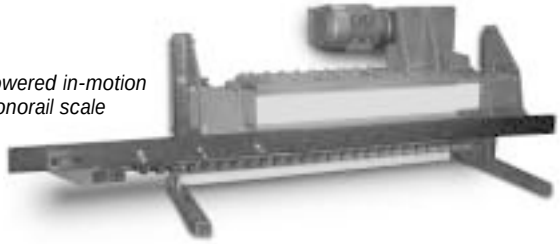
Sortation/Classifier Systems

Sortation/classifier system



Powered in-motion monorail scale

Sortation/classifier systems quickly separate products by various criteria such as weight, size, shape, color, % lean, visual grading and more. Systems will include an in-feed spacing belt, in-motion conveyor scale and divert conveyor. Various types of bins or collection receptacles are also available.

Product arrives on the in-feed either even spaced by a prior process, or an operator must space the product on the in-feed belt. Often times a visual grade is entered by the same operator, or a machine automatically grades the product. The grade signal from the operator or machine is fed into the system controller. The product location on the belt is positively determined and associated with the optical encoder. The product is conveyed to the in-motion conveyor scale and is weighed while in motion. The controller links the product's weight information to its grade information and sorts it to the proper location. The controller constantly determines the location status of the sorting conveyor in reference to the product positioning and activates the proper divert mechanism at the precise position of sorting conveyor.

The proper product is thus diverted from the conveyor, allowing sorting of product by various parameters including weight. Sortation/classifiaction data is available for report purposes.

Applications

- Food (poultry processing, beef processing, pork processing, fruit processing and vegetable processing)
- Small container applications

Standard Features

- Optical encoder-based distance measuring (not time based) to assure divert accuracy
- Rugged stainless steel tube structure design
- Infeed/Scale/Sorting conveyors built for the application specifications (length, width, height, number of diverts, etc.)
- Designed for easy daily washdowns of the food industry
- Stainless steel conveyors specifically designed for sorting/ classifying food product such as meat, poultry, fish, fruits, vegetables, dairy, hides, etc.
- Stainless steel divert arms are standard for thorough and easy cleaning
- Scale sorting systems use standard in-motion scale equipment
- 23 potential diverts locations
- Current divert count display
- Current divert accumulation display
- Total divert count display
- Total divert accumulation display
- Configurable screen display, divert capacity shut off by product count settings, divert capacity shut off by accumulation, product grade naming, input for exterior grading interface
- Duplicate divert parameters can be paired between two diverts to allow continuous sorting regardless of fill status
- Ability to change the divert configuration while system is sorting
- Ability to view digital inputs, communication inputs, input buffers, divert buffers, group values and divert status during operation
- Divert open/close testing function to allow quick trouble shooting
- Totals reports via optional external printers/computers

Options/Accessories

Consult factory for these additional options:

- Bins, combo, or pack-off stations at diverts
- Push or pull diverts

(Specifications on back)

Sortation/Classifier Systems

Specifications

CONTROLLER:

KEYBOARD:
Full alphanumeric keypad

VOLTAGE:
115 or 230 VAC

FREQUENCY:
50/60 Hz

RELAY OUTPUT:
24 VDC to 230 VAC

REAL TIME CLOCK:
Time and date are standard

CAPACITY:
10 lb to 120 lb

DISPLAYED RESOLUTION:
0.01 lb, 0.05 kg

TYPICAL ACCURACY:
± 0.05 lb, 0.03 kg (@ 2 Sigma)

TYPICAL REPEATABILITY:
± 0.03 lb (@ 2 Sigma)

RELAY OUTPUT:
Up to 28 zones

OVERALL DIMENSIONS:
application dependant

WARRANTY:
One year limited warranty

CONVEYOR:

SPEED:
0 to 280' (0 to 85.3 m) per minute

PRODUCTION RATES:
0 to 120 units per minute

VOLTAGE:
115 or 230 VAC

OVERALL DIMENSIONS:
Application dependent

SHIPPING WEIGHT:
Application dependent

WARRANTY:
One year limited warranty

SCALE:

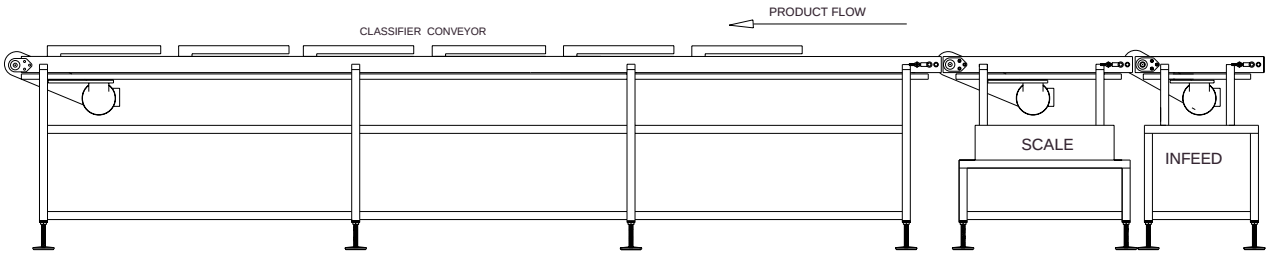
CAPACITY:
Up to 120 lb

LOAD CELL:
Aluminum single point

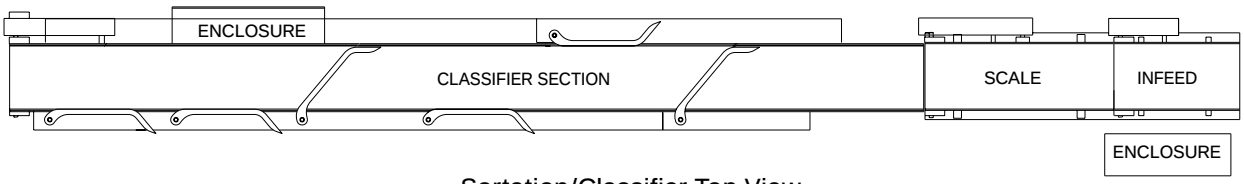
OVERALL DIMENSIONS:
Application dependent

SHIPPING WEIGHT:
Application dependant

WARRANTY:
One year limited warranty



Sortation/Classifier Side View



Sortation/Classifier Top View

Specifications subject to change without notice
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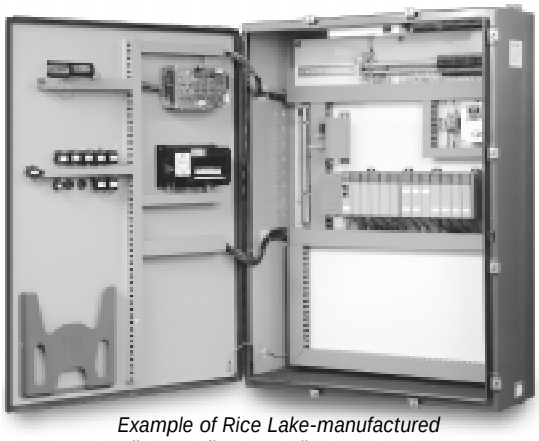
Allen-Bradley Components

PART #	A-B PART #	DESCRIPTION
49593 ...	1746-P2	Power supply SLC 500
49592 ...	1746-A13	Chassis 13-slot SLC 500
49591 ...	1746-A10	Chassis 10-slot SLC 500
49590 ...	1746-A7	Chassis 7-slot SLC 500
49589 ...	1746-A4	Chassis 4-slot SLC 500
49588 ...	1747-L542	Processor SLC 5/04 32K
49587 ...	1747-SN	Module, remote I/O scanner SLC 500
49586 ...	1746-IA16	Module, input 120 VAC, 16-channel
49585 ...	1746-OW16	Module, output, relay, 16-channel SLC 500
49584 ...	1746-NIO4V	Module, analog, 2 selectable inputs, two 0–10 volt VDC voltage outputs
49583 ...	1746-NIO4I	Module, analog, 2 selectable inputs, two 0–20mA current output

The Allen-Bradley SLC 500 line of processors is the choice for high-end control applications. These logic controllers are built around two flexible hardware options that offer more I/O flexibility than other programmable logic controllers.

The SLC 5/03 processors allow modular configuration of up to 960 I/O (discrete digital and analog I/O modules, and intelligent I/O modules) and a 12K instruction memory capacity. With bit execution times of less than 0.5µs, they set the pace for speed in small programmable controllers. In addition to DF1 and DH-485 serial communication capabilities, the SLC 5/03 processor also supports reading and writing ASCII strings.

The SLC 5/04 processors have the same features as the SLC 5/03 processors, except instead of a DH-485 port, the SLC 5/04 has a built-in DH+ port. Communication via the DH+ network takes place three times faster than DH-485 communication. The built-in serial port is capable of DF1, ASCII or DH-485 communication. An SLC 5/04 processor has up to 20K instruction memory capacity.



Example of Rice Lake-manufactured Allen-Bradley controller system

Applications

- Packaging
- Bottling
- Canning
- Material handling
- SCADA

Standard Features

- Capable of addressing material handling, HVAC control, and assembly operations
- Advanced instruction set based on PLC-5 mid-size processors
- DH-485 communication for programming and remote monitoring
- Broad line of discrete digital and analog and intelligent I/O modules
- Displays/user interface elements—consult factory

Options/Accessories

49579 ...	6180-BFCBEGAZCBZ ..	Industrial computer 11.3 TFT display (NEMA 4)
49582 ...	ABP-2711K6C8	PanelView 600 color display

PanelView 600 color display

For Use With:

- Allen-Bradley SLC 5/03, 5/04, 5/05 PLCs

(Specifications on back)

Controllers Specifications:

I/O CAPACITY:
SLC-5/03 = up to 960 I/O
SLC-5/04 = up to 905 I/O

I/O MODULE TYPES:
4-I/O, 8-I/O, 12-I/O, 16-I/O, and 32-I/O modules
Input-only, output-only, and combination input/output modules
Analog and digital I/O circuits

MEMORY CAPACITY:
SLC-5/03 = 12K instructions, plus 4K data table
SLC-5/04 = 20K instructions, plus 4K data table

MEMORY TYPE:
Battery-backed RAM, EPROM, or EEPROM

POWER-SUPPLY LOADING:
SLC-5/03 = 0.500A @ 5 VDC, 0.175A @ 24 VDC
SLC-5/04 = 800 mA @ 5 VDC, 60 mA @ 24 VDC

WARRANTY:
One year limited warranty

Power Supply Specifications:

LINE VOLTAGE:
85-132/170-265 VAC, 47-63 Hz

LINE POWER REQUIREMENT:
165 VA @ 120 VAC, 180 VA @ 240 VAC

MAXIMUM INRUSH CURRENT:
20A

INTERNAL CURRENT CAPACITY:
5A @ 5 VDC, 0.96A @ 24 VDC

FUSE PROTECTION:
1746-F2 or equivalent; 250V-3A fuse, SANO SOC SD4 or BUSSMANN AGC 3

24 VDC USER POWER CURRENT CAPACITY:
200 mA

24 VDC USER POWER VOLTAGE RANGE:
18-30 VDC

AMBIENT OPERATING TEMPERATURE RANGE:
32 to 140°F (0 to 60°C)
(Current capacity derated 5% above 55°C)

STORAGE TEMPERATURE:
-40 to 185°F (-40 to 85°C)

HUMIDITY RATING:
5-95% non-condensing

WIRING:
2 #14 AWG wires per terminal, max

APPROVALS:
UL, CSA

WARRANTY:
One year limited warranty

Specifications subject to change without notice
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Solar Power Systems

NEW! Product!

DESCRIPTION

- Solar Power System

Eliminate the time and expense of changing batteries in outdoor systems. Our solar panel systems will power a digital weight indicator around the clock, summer and winter.

The solar kit includes a solar enery collection panel, charging controller and battery. The battery is charged during daylight hours. The charging controller prevents overcharging the battery and all systems are fused.

Applications

- Remote truck scales
- Remote displays
- Rock quarries
- Feed lots
- Cattle weighing stations
- On board weighing

Standard Features

- 12 or 24 VDC power output
- System includes solar panels, charging controller, deep cycle battery and disconnects
- Systems range from 4 Watts to 114 Watts
- Many different mounting configurations available
- Compatible with IQ plus® 310A DC, RD 300 DC, RD 232 DC, IQ plus® 390, IQ plus® 590 and RF radios

Options/Accessories

Consult factory for these additional options:

- Individual solar modules
- Charge controllers
- Batteries
- Support structures

(Specifications on back)

SOLAR MODULE:

MAXIMUM POWER:
20 Watts

VOLTAGE AT PEAK POWER:
17.1 Volts

CURRENT AT PEAK POWER:
1.17 Amps

GUARANTEED MINIMUM POWER:
18 Watts

MODULE DIMENSIONS:
17.5" L x 19.5" W x 0.38" D (44mm L x 50mm W x 9.5mm D)

WARRANTY:
Five year limited warranty

Specifications subject to change without notice
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ATS Options

DESCRIPTION
- Heavy-duty Model 500 industrial barrier gate can be set up for automated operations with loop detectors, card readers, and other remote control devices

DESCRIPTION
- 1/3" CCD digital signal processing b/w camera

DESCRIPTION
- Model G-89 barrier gate

DESCRIPTION
- 16" indoor/outdoor extruded aluminum housing for 1/2" and 1/3" cameras

DESCRIPTION
- 9" diagonal B/W video monitor

DESCRIPTION
- Futaba industrial radio control system, *3-channel, dry contacts

DESCRIPTION
- Futaba industrial radio control system, *6-channel, dry contacts

DESCRIPTION
- Microprocessor-based intercom system

DESCRIPTION
- VHS time-lapse recorder/player

Intercom Systems

NEW! Product!

- Proven in truck scale applications
- Both single- and multi-channel operation
- Hands-free operation
- Superior clarity in noisy areas

PART #	DESCRIPTION
51806	TAP-1R-CM Compact Automation Master, 4 7/8" W x 7 1/4" H x 4 3/8" D
51807	TAP-4R-CM Compact Automation Master, 4 7/8" W x 7 1/4" H x 4 3/8" D
51804	TAP-200C Amplifier/Power Supply, 115 VAC, 14 1/2" W x 3 1/8" H x 8 3/4" D
51805	K-C-20 Horn Speaker, 9" diameter
51808	TAP-JB204A Junction Box (not shown), 16" W x 3 1/4" H x 4 1/4" D

TAP-1R-CM

TAP-4R-CM

K-C-20 Horn Speaker

TAP-200C Amplifier/Power Supply

*(Specifications on back)

Futaba Industrial 3-Channel Radio Control System

Specifications

FREQUENCY:
304 MHz, single frequency

FREQUENCY CONTROL:
Surface-Acoustic-Resonator (SAW)

WAVE FORM:
AM ASK

BASEBAND DATA FORMAT:
Direct Sequence Encoded

COMMUNICATION MODE:
Omni-directional, simplex

ERROR CHECKING:
CRC-CCIT

DATA CHANNELS:
3 discrete channels

SECURITY:
16-bit ID code (65,536 unique codes)

OPERATING DISTANCE:
More than 65 ft, greater with line-of-sight

RESPONSE TIME:
150 ms average

STORAGE TEMPERATURE:
-4° to + 140° F (-20° C to + 60° C)

HUMIDITY:
Up to 90% RH, non-condensing

VIBRATION TEST CONDITION:
4.4 G

SHOCK TEST CONDITION:
20 G

WARRANTY:
One year limited warranty

Futaba Industrial 6-Channel Radio Control System

Specifications

FREQUENCY:
3.15.95 to 319.05 MHz

FREQUENCY CONTROL:
Crystal-controlled frequency synthesizer

COMMUNICATIONS:
Simplex

OPERATING DISTANCE:
More than 200 ft. (60 meters)—line-of-sight, no obstructions

OPERATING TEMPERATURE:
-4° to 146°F (-20° to 60°C)

HUMIDITY:
Up to 90% RH, non condensing

VIBRATION TEST:
4.4 G

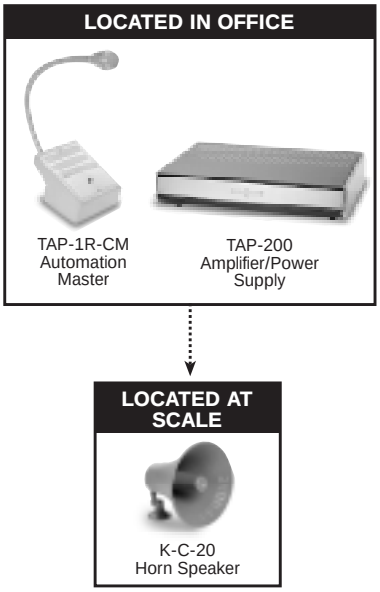
SHOCK TEST:
20 G

WARRANTY
One year limited warranty

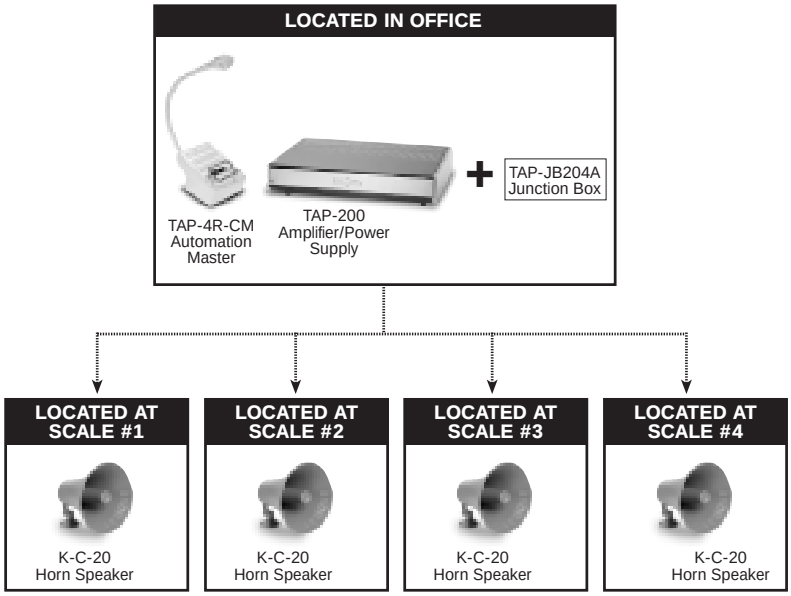
Intercom Systems

System Diagram

SYSTEM EXAMPLE 1:



SYSTEM EXAMPLE 2:



Specifications subject to change without notice
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Keypads

PART # **DESCRIPTION**

43932 ..... Sealed, detachable 84-key keyboard with RS-232 encoder

PART # **DESCRIPTION**

42114 ..... Waterproof 82-key keyboard with RS-232 encoder (panel mount)

PART # **DESCRIPTION**

22478 ..... Waterproof alpha and numeric keypads* (panel mount)

*RS-232 requires Part #38472

For Use With:

- Rice Lake V400 controllers
- Any system using RS-232 communications
- IQ plus® 810, with custom software

PART # **DESCRIPTION**

36914 ..... Vandal-proof cast aluminum keypad*

*RS-232 requires Part #38472

Traffic Light Kits

DESCRIPTION

23146 ..... Traffic Light Kit, 8", 60W, mounting hardware to mount to 4" pipe

Manual Overrides

DESCRIPTION

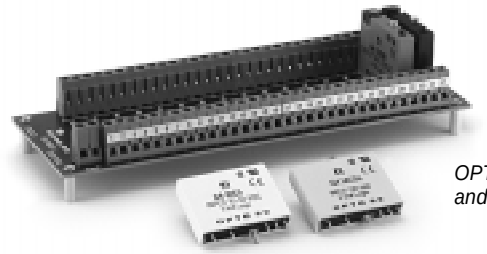
- Key switches
- Lighted pushbuttons
- Pilot lights
- 2- and 3-position switches
- Colored pushbuttons
- Emergency stop mushroom switches
- Custom legend plates

Alarms

PART # **DESCRIPTION**

22838 ..... Buzzer, 80 dB, steady
22839 ..... Buzzer, 80 dB, pulse
43931 ..... Strobe lights, red
43930 ..... Strobe lights, amber
43929 ..... Strobe lights, blue

Input/Output Components



OPTO 22 G4 Relays and Relay Board

OPTO 22 COMPONENTS:

PART #	DESCRIPTION
15973	IO 104 – 4-channel relay board
15975	IO 116 – 16-channel relay board
41035	16-position jumper strap
21735	4A fuse, G4
26834	1A fuse, G4
36954	Input test module
15969	10-32 VDC input relay module
15972	AC input relay module, 115 VAC
36631	AC input relay module, 230 VAC
15970	100 VDC/130 VAC dry contact output relay module
15971	Solid state AC output relay module, 115 VAC
36632	Solid state AC output relay module, 230 VAC
22847	24-280 VAC output relay module (N/C)
22848	100 VDC/130 VAC dry contact relay module (N/C)

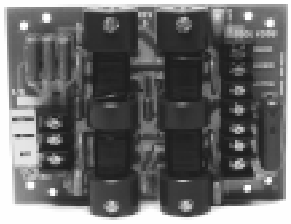
OTHER RELAYS:

15960 ..... 8-pin octal relay module, 6 VDC coil
15961 ..... 8-pin octal socket
15952 ..... 115 VAC DPDT relay

PART #	DESCRIPTION
43942	Allen-Bradley multi-function relay with digital display

PART #	DESCRIPTION
29616	Dayton multi-function relay

EL226 Transient Protection Board



PART #	DESCRIPTION
21159	EL226 AC Transient Protection Board

Applications

- Protects sensitive microprocessor-based equipment against spikes and short-duration surges while providing RFI/EMI protection

Standard Features

- Excellent as a prefilter for constant voltage transformers
- Small board design allows mounting within existing enclosure
- 10 Amp glass fuse with fuse cover
- Standoffs and hardware for mounting to a panel

Modem

33.6K Fax Modem

PART #	DESCRIPTION
43928	33.6K Fax modem

Applications

- Used where long communication cable runs are required
- On-line troubleshooting of Allen-Bradley/PC systems
- Transfer PC databases/information to other systems

Standard Features

Fax modems:

- 33.6K bits per second
- Auto-answer feature
- Fax capable
- Externally mounted
- Indicator lights

Specifications subject to change without notice
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EZ-Com Wireless LAN Transceiver

PART # DESCRIPTION

43798 ..... WL9D-MOD EZ-Com Wireless LAN Transceiver*

Designed for multiple-access networking, point-to-point or multi-point operation, the EZ-Com is a complete 900 MHz Direct Sequence, Spread Spectrum (DSSS) industrial modbus transceiver. Based on spread spectrum technology, the EZ-Com provides unbeatable reliability by reducing interference and extending the range. This versatile transceiver operates in full or half duplex modes and supports the maximum RS-232 data rate (115 Kbs).

Applications

- Multiple-access networking in industrial environments
- Extremely long-distance communications
- Security/alarm systems

Standard Features

- 2000 ft obstructed, 20 miles line-of-sight with Yagi antenna
- Omni-directional antenna
- High immunity to interference and jamming
- High-speed 500 kbs data range
- Built-in clear channel assessment
- Multiple station configuration

Options/Accessories

43797 ..... Directional Yagi antenna

** Requires two transceivers for complete system. Requires programming prior to shipment.*

Trilithic Transceiver

PART # DESCRIPTION

52378 ..... Transceiver*

63110 ..... Transceiver kit**

** Requires two transceivers for complete system. Antenna not included with transceiver.*

*** Kit includes 2 transceivers, manual and configuration software. Antenna not included with kit.*

This radio frequency serial linker combines a dependable 1 watt transmitter with a small package. The ConnectAir transciever operates on 9 VDC @ 800mA, so it can be adapted to some mobile applications.

Consult factory for application limitations.

Applications

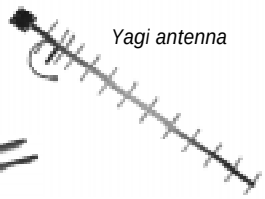
- Wireless serial communications
- Remote displays, printers, computers

Standard Features

- 2.4 GHz frequency
- Spread spectrum technology
- 300 ft obstructed 3000 ft line-of-sight
- Internal omni-directional antenna

Options/Accessories

52376 ..... Yagi antenna
52377 ..... Patch antenna
52375 ..... Omni antenna
65414 ..... Window antenna



Yagi antenna

Patch antenna

Omni antennas

Window antennas

(Specifications on back)

EZ-Com Specifications

SUPPLY VOLTAGE:
11 to 25 VDC

CURRENT CONSUMPTION:
500 mA receive, 1.2A transmit

INTERFACE TYPE:
RS-232 (EIA/TIA-232-E)

LINES SUPPORTED:
Tx, Rx, Gnd, CTS

WAVEFORM:
Direct sequence spread spectrum

RF FREQUENCY BAND:
902 to 928 MHz

MODULATION TYPE:
Differential QPSK

COMMUNICATION MODE:
Half duplex

CHIP RATE:
10.0 Meps

CHANNEL BURST DATA RATE:
Programmable to 317.5, 645.2, 1818.2 kbps

PROCESSING GAIN:
10 dBm minimum

RECEIVER SENSITIVITY AT 10-6 BER:
-104 dBm

MAXIMUM TRANSMITTER OUTPUT POWER:
1.0 W

MAXIMUM EFFECTIVE RADIATED POWER:
4 W (36 dBm)

SPURIOUS OUTPUT:
FCC Part 15; meets 15.245 & 15.247

INDICATORS:
LEDs—Power, multicolor signal strength, Local Error, Remote Error, test & buffer high water marks for both Transmit and Receive buffers

OPERATING TEMPERATURE RANGE:
-40 to 70°C

HUMIDITY:
0 to 90%

DIMENSIONS:
9.2" W x 4.8" H x 1.9" D
(233.7mm W x 121.9mm H x 48.3mm D)

WEIGHT:
8 lb (3.6 kg)

WARRANTY:
One year limited warranty

Trilithic Transceiver Specifications

INDOOR RANGE:
500 ft. (152 m) to 1,500 ft. (457 m) normal construction

OUTDOOR RANGE:
Line of sight up to 2 miles (3.2 km) standard antenna
Line of sight up to 12 miles (19.3 km) optional antenna

DATA RATE:
9.6 KB full duplex per channel

CHANNELS:
1 channel with access to 550 independent frequencies

CONNECTIVITY:
Standard serial (RS-232)

FREQUENCY BAND:
2.4 GHz license-tree industrial, scientific, and medical (ISM) banc

RADIO TYPE:
Frequency-hopping spread-spectrum (FHSS)

RADIO POWER OUTPUT:
10mW to 500mW

RADIO ANTENNAS:
Standard omni-directional (optional types available)

RADIO WEIGHT:
1 lb (.45 kg)

RADIO DIMENSIONS:
5.1" L x 3.3" W x 1.2" H
(129.5mm L x 83.8mm W x 30.5mm H)

RADIO TEMPERATURE RANGE:
-4° F to 140° F (-20° C to 60°C)

CERTIFICATIONS:
FCC Part 15

RADIO INPUT VOLTAGE:
115 Volt wall-former
7.2 Volt battery pack

WARRANTY:
One year parts and labor

Specifications subject to change without notice
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Ethernet Thin Server

PART # **DESCRIPTION**

65383 ..... Ethernet Thin Server

The new Ethernet Thin Server is a cost-effective communication solution for devices that lack network connectivity. Replacing expensive PCs and miles of serial cable, this device provides a quick and easy way to connect to the network, and streamline data management.

It supports RS232, RS422 and RS485. What's more, Flash ROM allows for easy software upgrades.

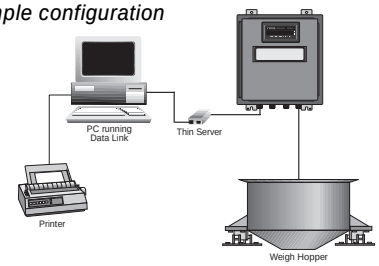
Applications

- Replaces expensive dedicated PCs or lengthy serial cables with fast and reliable networking technology

Standard Features

- Supports any asynchronus serial device with 7- or 8-bit data, with or without parity requiring Ethernet access
- Compact size, smaller than a deck of playing cards
- Supports RS-232, RS-422 and RS-485
- 10 MB Ethernet through the RJ-45 connector
- Configure via HTTP, SNMP, DHCP or Telnet
- Flash ROM for easy software upgrades
- 115 VAC external adapter

Sample configuration



Model 8555 Load Cell to Frequency Converter

PART # **DESCRIPTION**

65415 ..... Model 8555 Converter

A cost-effective solution for single- or multiple-channel PLC I/O systems, Model 8555 is designed to operate into the PLC high-speed counter inputs. With an input range of 0 to 50 mV, the 8555 is compatible with most strain gauge-based load cell or pressure transducer outputs.

Built-in 10V excitation drives one 350-ohm bridge, providing output linear to 0.01% with an accuracy of better than 0.1%.

Applications

- PLC control systems
- Descrete automation
- Industrial process control systems
- Automated control systems

Standard Features

- 0 to 50 mV differential analog input
- Frequency output to 5 kHz
- Compatible with PLC high speed counter inputs
- Includes 10V excitation supply
- Isolated input to output
- 12 bit resolution
- Din rail mountable
- Operates on 24 VDC supply

(Specifications on back)

Ethernet Thin Server — Specifications

PROTOCOLS SUPPORTED:
ARP, UDP, TCP, Telnet, ICMP, SNMP, DHCP, TFTP and HTTP

DEVICE SUPPORT:
Supports any asynchronus serial device with 7- or 8-bit data, with or without parity requiring Ethernet access

NETWORK INTERFACE:
RJ45 (10BASE-T) Ethernet

SERIAL INTERFACE:
Female DB25 RS-232/RS-422/RS-485 serial port with DCE configuration

DATA RATES:
Serial speeds 300 bps to 115Kbps

MODEM CONTROLS:
RTS, CTS, DSR, DCD and DTR

FLOW CONTROL:
Software: XON/XOFF
Hardware: CTS/RTS

MANAGEMENT:
Internal HTTP server
SNMP (read only)
Serial login
Telnet login

FIRMWARE:
Flash ROM standard; downloadable from a TCP/IP host (TFTP) or over the serial port

LEDs:
Good link: green
Network transmit/receive data: yellow
Collisions: red
Diagnostic: red
Status: green

POWER REQUIREMENTS:
External adapter included as 115 VAC
Required input power or 6.0 - 9 VDC @ 250 mA maximum

OPERATING TEMPERATURE:
41° F to 122° F (5° C to 50° C)

STORAGE TEMPERATURE:
-40° F to 151° F (-40° C to 66° C)

WEIGHT:
0.8 lb (0.35 kg)

DIMENSIONS:
0.9" H x 2.5" W x 3.5" D

APPROVALS:
CE marked, FCC B, TUV, CUL listed

WARRANTY:
One year limited warranty

Model 8555 — Specifications

INPUT:
0 to 50 mV differential signal from full bridge strain gauge

RESISTANCE:
1000 mega-ohmΩ

CURRENT:
10 nA

COMMON MODE:
0 to +5 volts

OUTPUT:
0 to 5 kHz, floating optocoupoler transistor, 7 mA pulse - 50 µSec width

RESOLUTION:
10 microvolts - 12 bits

BRIDGE EXCITATION:
10 volts for one 350Ω bridge

POWER REQUIREMENTS:
24 VDC @ 45 mA

DIMENSIONS:
1.65" H x 1.06" W x 3.78" L
(42mm H x 27mm W x 96mm L)

WARRANTY:

Specifications subject to change without notice
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430 Bridgesensor

4-20 mA Load Cell Signal Conditioner

Applications

- Load cell to PLC interface
- Strain gauge transducer signal conditioner
- Compatible with most low-output sensors

Standard Features

- 4-20 mA, 0-20 mA or 12 ± mA output
- Potentiometer-adjustable excitation, zero offset and span gain
- 115 VAC ±10% 50/60 Hz at 6.5 VA
- Screw terminal connections
- Single-point component design
- Epoxy-encapsulated, sealed enclosure
- Remote sensing for line voltage drop compensation

PART # DESCRIPTION

20975 ..... 430 Bridgesensor,115 VAC 35276 ..... 430 Bridgesensor, 230 VAC

The 430 Bridgesensor is a current output load cell/ transducer signal conditioner. The 430 provides a direct interface between transducers/sensors and a monitoring or control device requiring a 4-20 mA analog input signal.

Compatible with most load cell (force), pressure and torque transducers, the 430 provides a stable excitation supply voltage and converts to millivolt return signal to a proportional 4-20 mA analog signal.

The 430's internal power supply eliminates the need for an external loop power supply, providing a compact, self-contained package for installation into new or existing systems.

(Specifications on back)

EXCITATION:
4-15 VDC adjustable

LOAD CURRENT:
0-100 mA maximum (4 350-ohm load cell @ 8.5 VDC; external 15 ohm, 1/2 watt load resistor required)

TRANSDUCER CABLING:
6-wire with remote sensing, 4-wire with sense jumpers

ANALOG SIGNAL INPUT RANGE:
10-50 mV

LINEARITY:
±0.1% of full scale output @ 25°C (77°F)

TEMPERATURE STABILITY:
59°F to 93°F (15°C to 35°C)
.02% F.S.O./°C @ 320 mA/V maximum
.02% F.S.O./°C @ 1600 mA/V maximum
Hysteresis 0.1% maximum

OUTPUT CURRENT:
0-20 mA with adjustable zero and span, 25 mA maximum, zero stability 6 µA/deg Celsius maximum

OUTPUT LOOP RESISTANCE:
0-500 ohms

OUTPUT RESPONSE TIME:
To 1% of final value—200 mS, typical
To 0.1% of final value—300 mS, typical

POWER INPUT:
115 VAC, ±10% 50/60 Hz @ 6.5 VA maximum
Optional: 100, 220 or 240 VAC

OPERATING TEMPERATURE RANGE:
32°F to 131°F (0°C to 55°C)

PACKAGING:
Epoxy potted plastic enclosure with exposed screw terminal connections

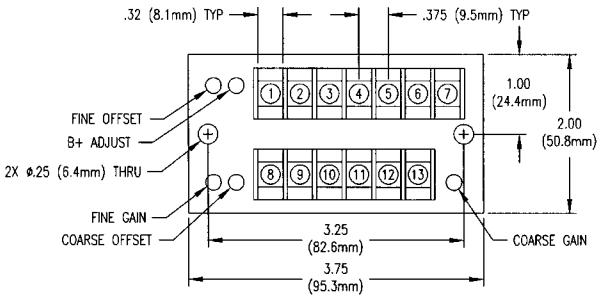
WEIGHT:
18 oz (510 g)

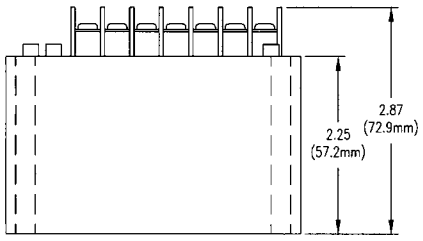
WARRANTY:
One year limited warranty

430 ELECTRICAL CONNECTIONS

SCREW TERMINAL	FUNCTION	SCREW TERMINAL	FUNCTION
1	-SENSE	8	CURRENT OUTPUT
2	-EXCITATION	9	AMPLIFIER CMN
3	+SENSE	10	+SIGNAL
4	+EXCITATION	11	-SIGNAL
5	NOT USED	12	EXT. GAIN
6	AC	13	EXT GAIN
7	AC		

CASE DIMENSIONS:





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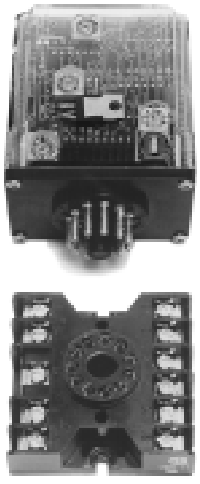
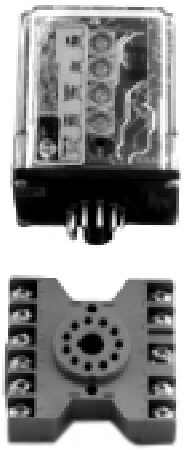
API 4058G - 441/442 Bridgesensors

Load Cell Signal Conditioners



API 4058G Bridgesensor



441/442 Bridgesensor

PART # DESCRIPTION

22778 ..... API 4058G Bridgesensor
38902 ..... 441 Bridgesensor, 115 VAC
38904 ..... 442 Bridgesensor, 9-30 VDC

The API 4058G Bridgesensor offers advanced circuitry including filtering and processing for effective use in noisy industrial environments. User-selectable switches enable the convenient selection of popular input and output ranges and nine excitation voltages. 115 mA current capability provides sufficient power to drive up to four 350-ohm load cells. Two LED indicators verify PLC (output) and load cell (input) communications links.

Versatile and reliable, the Bridgesensor 441 is AC-powered, and the 442 is 9-30 VDC powered. They allow ±100% offset of deadload, and accept 4- or 6-wire load cell cable if lead length or barrier resistance compensation is required. Optical isolation eliminates ground loop problems between input and output circuits and reduces cross-talk on PLC inputs. Non-interactive zero and span calibration provides easy field calibration, with only one adjustment of zero and span necessary.

Applications

- Load cell to PLC interface
- New or existing batch control systems
- Inventory control systems
- Tank farm systems

Standard Features

API 4058G Bridgesensor:

- User-selectable input/output ranges and excitation voltages
- Convenient setup via rotary and slide switches
- Excitation voltage at 115 mA (10V) drives four 350-ohm load cells
- LED input/output signal indicators
- Selectable voltage or current outputs
- Functional test pushbutton

441/442 Bridgesensor:

- Input/output ranges and excitation voltage are selectable by easy-access rotary switches
- Non-interactive zero and span control
- Offset switch allows cancelling or “taring” of non-zero dead-weights
- Excitation voltage of 115 mA (10V) drives up to four 350-ohm bridges
- Input/output LoopTracker™ LEDs show input/output status
- Functional test pushbutton with fixed level output to facilitate setup and troubleshooting
- Full isolation (input/output power) eliminates the effects of ground loops and noise

(Specifications on back)

API 4058G - 441/442 Bridgesensors

Specifications

API 4058G Bridgesensor Specifications:

INPUT/OUTPUT RANGES:
See table. Other switch-selectable ranges possible. See calibration instructions for more complete information, or consult factory.

INPUT IMPEDANCE:
1 Megohm minimum

OUTPUT CAPABILITY:
Voltage: ±10 VDC; ± 10 mA
Current: 25 mA DC; 20 V compliance

ZERO/SPAN CONTROLS:
Top-accessible, multi-turn
Range: ±15% of span typical

EXCITATION:
10 VDC maximum @ 115 mA nominal; switch-selectable, 0-10 VDC in 1 volt increments; fine adjust; ±2.5% via multi-turn

EXCITATION STABILITY:
±0.1% per degree Celsius

RESPONSE TIME:
70 mS standard

COMMON MODE REJECTION:
Better than .02% of span per degree Celsius

OPERATING TEMPERATURE RANGE:
14 to 140°F (-10 to 60°C)

POWER:
Standard: 115 VAC, ±10%, 50/60 Hz, 2.5 W max
Optional: 230 VAC, ±10%, 50/60 Hz, 2.5 W max
12 VDC versions available; consult factory for availability

APPROVALS:
Model API 4058G: UL listed; consult factory for numbers

WEIGHT:
Approximately 2 lb (0.9 kg)

WARRANTY:
One year limited warranty

API 4058G INPUT/OUTPUT RANGES:

INPUT SPANS		OUTPUTS VOLTAGE		CURRENT
0-5 mV	0-100 mV	0-1 V	0-8 V	0-2 mA
0-10 mV	0-200 mV	0-2 V	2-10 V	0-10 mA
0-20 mV	0-250 mV	0-4 V	0-10 V	2-10 mA
0-25 mV	0-300 mV	0-5 V		0-16 mA
0-30 mV	0-400 mV	1-5 V		4-20 mA
0-40 mV	0-1000 mV	±5 V		0-20 mA
0-50 mV	0-1200 mV	±10 V		

Bridgesensor 441/442 Specifications:

INPUT/OUTPUT RANGES:
See table below. Other switch-selectable ranges possible.

INPUT IMPEDANCE:
200K ohm typical

OUTPUT CAPABILITY:
Voltage: ±10 VDC; @ ± 10 mA
Current: 25 mA DC; 20 V compliance

ZERO/SPAN CONTROLS:
Top-accessible, multi-turn, non-interactive
Range: ±15% of span typical

EXCITATION:
Switch-selectable, 0-10 VDC in 1 volt increments
Fine adjust: ±5% via multi-turn potentiometer

EXCITATION CURRENT CAPABILITY:
120 mA DC @ 10 VDC excitation; drives up to four 350-ohm load cells @ 10 VDC

EXCITATION STABILITY:
±.01% per degree Celsius

RESPONSE TIME:
70 mS standard; faster responses available

SENSE LEAD COMPENSATION:
Better than 0.01% per 1 ohm change in leadwire resistance

LEADWIRE RESISTANCE:
10 ohm max for 10 VDC excitation/350-ohm bridge

COMMON MODE REJECTION:
100 dB minimum

ISOLATION:
2000 V RMS minimum

OPERATING TEMPERATURE RANGE:
14 to 140°F (-10 to 60°C)

POWER:
441: 115 VAC, ±10%, 50/60 Hz, 2.5 W max
441 Optional: 230 VAC, ±10%, 50/60 Hz, 2.5 W max
442: 9-30 VDC @ 200 mA typical

WARRANTY:
Lifetime

441/442 INPUT/OUTPUT RANGES:

INPUT SPANS		OUTPUTS VOLTAGE	CURRENT
0-5 mV	0-50 mV	0-1 V	0-20 mA
0-10 mV	0-100 mV	0-5 V	4-20 mA
0-20 mV	0-200 mV	1-5 V	
0-25 mV	0-250 mV	0-10 V	
0-30 mV	0-300 mV	±5 V	
0-40 mV	0-400 mV	±10 V	

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X-Purge Components

Many custom panels can utilize purge technology to bring high-level control to hazardous areas.

Call a Rice Lake EPD Sales Engineer for more information.

DESCRIPTION

- X-Purge system components

Applications

- Hazardous/explosive environments
- X-Purge reduces the classification within the protected enclosure from Class 1 & 2, Division 1 to Safe.
- Z-Purge reduces the classification within the protected enclosure from Class 1 & 2, Division 2 to Safe.

Options/Accessories

X- & Z-Purge:

- Vents
- Explosion-proof audible alarm
- Explosion-proof strobe light
- Fittings
- Tubing

X-Purge Only:

- Operational bypass switch
- Rapid Exchange® purging technology

Z-Purge Components

DESCRIPTION

- Z-Purge system components

Vent

Explosion-proof audible alarm

Explosion-proof strobe light

Rapid Exchange is a registered trademark of Bebco Industries, Inc.

Custom Systems Financial Terms/Custom Software Warranty Statement

Rice Lake Weighing Systems Engineered Product Development (EPD) Custom Systems Terms and Conditions:

FINANCIAL TERMS:

USA AND CANADA:

Our Financial Services Group reviews open account requests. Upon approval of open account terms, orders are subject to the following payment terms:

Orders of $5,000 or less are Net 30 days.

Orders greater than $5,000:

- 20% down with the order
- 40% payment prior to order shipment
- 40% Net 30 days

INTERNATIONAL:

Cash In Advance

- 25% down with the order
- 50% with approval of drawings
- 25% upon notification that the system is ready for shipment

OR

Letter of Credit

- 25% down with the order via wire transfer
- 75% confirmed letter of credit, under mutually agreed terms and conditions

DISCOUNTS AND SELLING PRICE:

All custom system prices quoted are Net.

CANCELLATIONS AND RETURNS:

Cancellation of order at any time after acceptance of specification and receipt of a corresponding purchase order will result in forfeiture of the greater of the initial down payment or the balance of time and material accrued to date less any down payment.

Due to the special nature of each RLWS-EPD custom system, RLWS-EPD will not accept returns of any custom systems except as provided for in its Limited Warranty Statement.

Rice Lake Weighing Systems (RLWS) warrants that (a) the software will perform in accordance with the accompanying printed materials for a period of ninety (90) days from the date of receipt, and (b) any hardware accompanying the software will be free from defects in materials and workmanship under normal use and service for a period of one (1) year from the date of receipt.

This Limited Warranty is void if failure of the software or hardware has resulted from accident, abuse, misapplication, or incorrect customer specification. Any replacement software will be warranted for the remainder of the original warranty period or thirty (30) days, whichever is longer.

If the software fails to conform to these warranties, RLWS will, at its option, repair or replace such goods returned within the warranty period subject to the following conditions:

- Upon discovery by Buyer of such non-conformity, RLWS will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Examination of software by RLWS confirms that the non-conformity exists, and was not caused by accident, misuse, neglect, alteration, improper installation, improper repair, improper testing, or incorrect customer specification. RLWS shall be the sole judge of all alleged non-conformities.
- RLWS will have a reasonable time to repair or replace the software. Buyer is responsible for shipping charges both ways.
- In no event will RLWS be responsible for travel time or on-location repairs, including assembly or disassembly of equipment. Nor will RLWS be liable for the cost of any repairs made by others.

THESE WARRANTIES EXCLUDE ALL OTHER WARRANTIES, EXPRESSED OR IMPLIED, INCLUDING WITHOUT LIMITATION WARRANTIES OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. NEITHER RLWS NOR DISTRIBUTOR WILL, IN ANY EVENT, BE LIABLE FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES.

RLWS AND BUYER AGREE THAT RLWS' SOLE AND EXCLUSIVE LIABILITY HEREUNDER IS LIMITED TO REPAIR OR REPLACEMENT OF SUCH GOODS. IN ACCEPTING THIS WARRANTY, THE BUYER WAIVES ANY AND ALL OTHER CLAIMS TO WARRANTY.

SHOULD THE SELLER BE OTHER THAN RLWS, THE BUYER AGREES TO LOOK ONLY TO THE SELLER FOR WARRANTY CLAIMS.

No terms, conditions, understanding, or agreements purporting to modify the terms of this warranty shall have any legal effect unless made in writing and signed by a corporate officer of RLWS and the Buyer.

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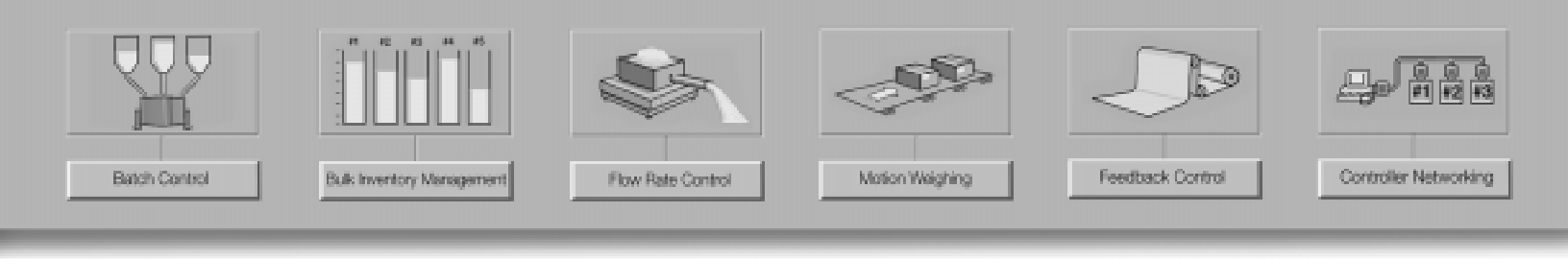

Your entry into the fastest growing segment of the weighing industry is just a phone call away!

As companies continue to specialize their production processes, the opportunities for selling unique weighing solutions continue to increase. There are many process and general scale applications where standard products cannot meet the operational needs of the customer. This creates an opportunity for your company to pursue selling custom control systems.

THE RICE LAKE ADVANTAGE

Rice Lake Weighing Systems has been designing, manufacturing and supporting customized weighing equipment since 1946. We have thousands of systems in place and are continually increasing the functional complexity and technology used in our custom systems business. Over the years we have established a comprehensive system for documenting customer requirements and turning those requirements into a tangible product. We apply the same customer-driven process to both our standard products and to our custom systems. Our ISO 9000 quality procedures ensure that we approach every opportunity the same way, regardless of industry, type of product, or customer we serve.

COMPREHENSIVE SOLUTIONS

Our experience has taught us that there is no such thing as a "preliminary quote." We provide comprehensive solutions. However, in order to provide comprehensive solutions, we have to understand your customer's application. To help you get the most out of every application, call or fax us and we will provide you with a questionnaire. Please use this as a guide when talking to your customer. Then send or fax it to us and one of our sales engineers will call you to discuss any remaining questions.

We will then send you a comprehensive quotation for both your approval and the approval of your customer.

WE'LL MAKE IT YOUR WAY

Once both you and your customer agree on the specifications, we will provide a wide range of options for completing the system. For those companies new to the process control industry, we can handle every aspect of the project. On the other end of the spectrum, we can provide hardware and software and you can handle the rest of the solution. All of the value-add is in your hands! We'll even interface our controllers with indicators and other products not manufactured by Rice Lake. In addition, we can private label the system for you or your customer. From turn-key, on-site installations to simply assisting you during the installation via our support department, you decide the level of assistance you need from us. We accept nothing less than complete customer satisfaction.

Rice Lake Weighing Systems' Engineered Product Development offers real-time system troubleshooting, support and maintenance.

(Specifications on back)

1 COMPLETING A SYSTEM SPECIFICATION

Contact our Engineered Product Development (EPD) Sales Engineers by phone or fax to outline your custom application. We will respond with a easy to use systems questionnaire. Return the questionnaire and we will prepare a detailed Project Specification.

You will then receive the Project Specification including a quote and a tentative lead time for your review and approval. Return the Project Specification to Rice Lake Weighing Systems with any changes and the approval signature of both key contacts.

2 ESTABLISHING AN ORDER

Three items are required to move your order into production:

- A Project Specification signed by you and your customer.
- A purchase order.
- When applicable, a deposit based on the terms and conditions for custom systems. Rice Lake Weighing Systems will immediately assign a ship date to your project and confirm it with the key contacts.

3 SYSTEM DEVELOPMENT

During the development process, teleconferences will be scheduled to review project components. These communications give you a real-time opportunity to review the project for accuracy in meeting the project specification, and allow time for any requested modifications. Project modifications are handled much more efficiently when made early in the development process. All modifications based on teleconferences are documented by your Sales Engineer and promptly communicated to you.

Remember, extensive changes to system functionality can be expensive. Be certain to gain a complete understanding of your system during system specification and sign off.

4 SYSTEM INSTALLATION AND START UP

In order to ensure complete custom solutions, you can choose to have Rice Lake involved in your pre-site inspections, on-site installation, and start-up assistance. The following rates apply to our on-site support and training services:

$1000.00 per work day (not to exceed 8 work hours). Additional daily hours prorated at $150.00/hour.

An additional 50% charge will be added for Saturday and Sunday services performed. Customer is responsible for travel expenses between Rice Lake, Wisconsin and job location, regardless of mode of transportation. Travel time is included in the per-day charge. Meals, lodging, and shipment of special equipment to and from the on-site location will be billed at cost. Discounts do not apply to on-site support service rates.

If you've got a great opportunity... talk to a Rice Lake Sales Engineer to make it a reality.

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Controller Platform Comparative Matrix/Price Ranges

Application	Controller	MMI*	Max # of Scale Inputs	Memory	Digital I/O	Reporting	Connectivity	Analog	Price Range
Single-formula batching, Simple filling operations	**IQ plus® 810**	7-digit VFD display	4	Consult factory	16 out, 3 in	No (accumulators)	RS-232/485, 20 mA, Remote I/O	2 out	$1,200 to $3,000
Multi-formula batching	**IQ plus® 810 with recipe storage software**	7-digit VFD display	4	Consult factory	16 out, 3 in	No (accumulators)	RS-232/485, 20 mA, Remote I/O	2 out	$1,400 to $4,000
Truck in/out systems, Mid-range batching, Flow rate control	**IQ plus® 810 with custom software**	7-digit VFD display	1-4 (depending on modification)	Consult factory	16 out, 3 in	No (accumulators)	RS-232/485, 20 mA, Remote I/O	2 out	$1,500 to $5,000
Data collection, Complex batch control, Truck management systems, Flow rate control	**V400**	4 x 20 VFD Touchscreen	4 (via serial)	384K NVM	Up to 72	Yes	RS-232/485	2 out 1 in	$5,000 to $12,000
Data collection, Networking, Complex batching, Supervisory control	**ZLC™421 Zero Language Controller**	Industrial PC TFT color LCD display	4	32MB RAM hard drive for data storage	Up to 288 (local)	Yes	RS-232/485, Ethernet	System dependent	$12,000 to $45,000
Complex batching, Material handling, Supervisory control, Networking	**Allen-Bradley SLC 5/03, 5/04**	PanelView keypad, PanelView touchscreen	Up to 16 per scanner (RI/O)	8-64K Data table	Up to 960	Yes	RS-232, DH+, DH-485, Remote I/O, Modbus Plus, Profibus	Any mix up to 116	$12,000 to $100,000+

** Man-Machine Interface*

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®
ISO 9001 REGISTERED

Rice Lake Weighing Systems PC Programming Services

Custom PC programs for:

- Automated Batch Control
- Statistical Analysis
- Automated filling system
- Multiple line packaging systems
- Bar Code Label Printer Systems
- Material Handling Management
- Plant Floor Quality Control
- Manifest Systems
- Inventory Management
- Multimedia Security Systems

Industries Supported

- Food & Beverage
- Aerospace
- Pharmaceutical
- Chemical, Oil & Gas
- Mining & Metals
- Pulp & Paper
- Agriculture
- Consumer Products

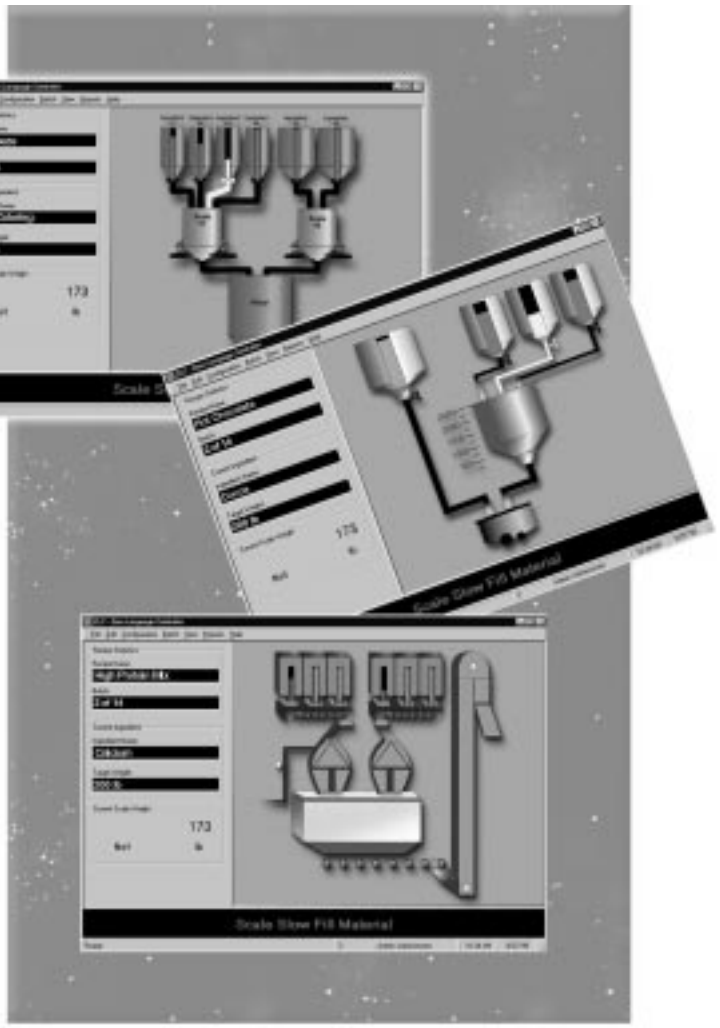
Operating Environment

- MS DOS™
- PC DOS™
- Windows™
- Windows™ 95
- Windows™ 98
- Windows™ NT
- Windows™ 2000

Tools & Technologies

- C
- Visual C++
- Visual Basic
- Microsoft® Access
- Seagate Crystal Reports
- Ethernet
- TCP/IP
- ActiveX Control for Digital Weight Indicators
- Text-to-Speech Engine
- Microsoft® Certified Professionals on staff

** Contact an EPD Sales Engineer for further information.*



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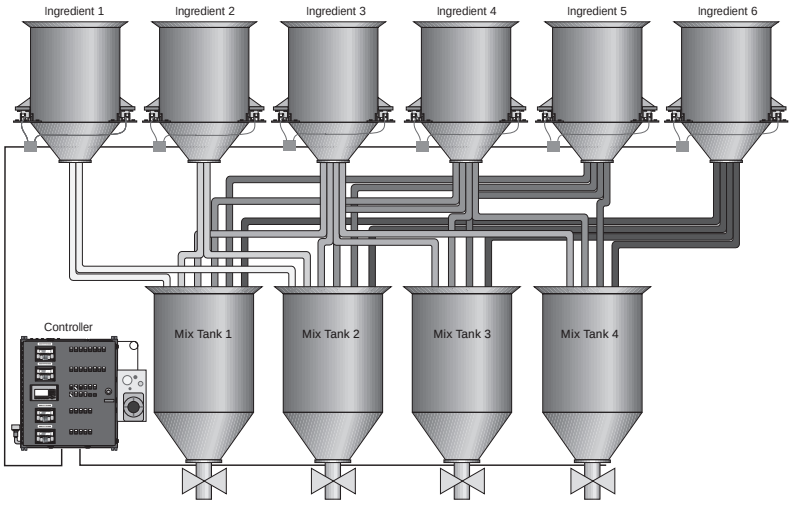
Multi-Scale Process Control System

System Attributes:

- X-purge for hazardous environments
- 4-scale operation using IQ plus® 810 weight indicators
- 6-ingredient formula batching
- Allen-Bradley SLC 5/03 controller
- Usage reporting, batch reporting
- Graphic display using PanelView 550
- Full manual overrides

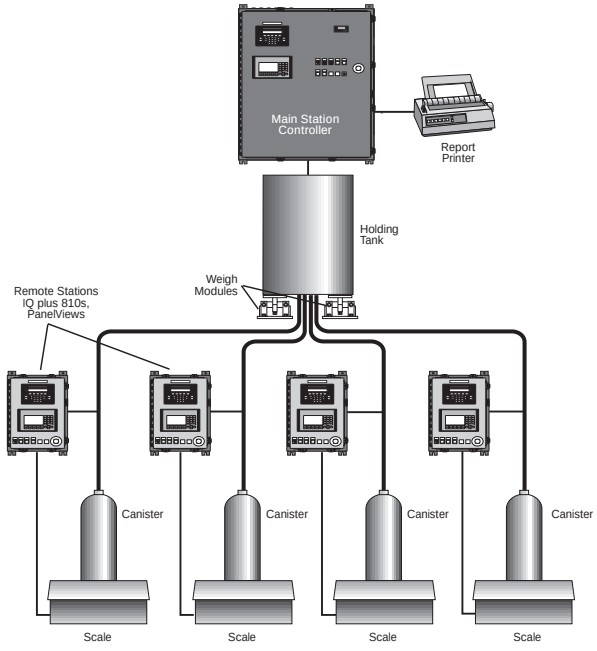


This multi-scale process control system includes controls for automating the sequential dispensing the mixing of ingredients into four mix tanks. The system prompts the operator through the programming and editing of the stored formulas. The controller also incorporates interlocks and system checks to protect against inadvertent mistakes in formulation or system faults.

Material Filling System

System Attributes:

- Allen-Bradley SLC 5/03 controller
- Multiple operator stations communicating via DH-485
- Simultaneous filling operation
- Batch reporting
- Shift reporting
- Temperature compensation of pressure setpoints
- Passcode protection
- Graphic display on all stations using PanelView 550



This material filling and storage tank monitoring system consists of four remote fill stations that operate independently of one another, and a main tank station that monitors pressure, temperature, and weight. All panels include a PanelView 550 graphic display for operator interface, and an IQ plus 810 digital indicator for weight monitoring.

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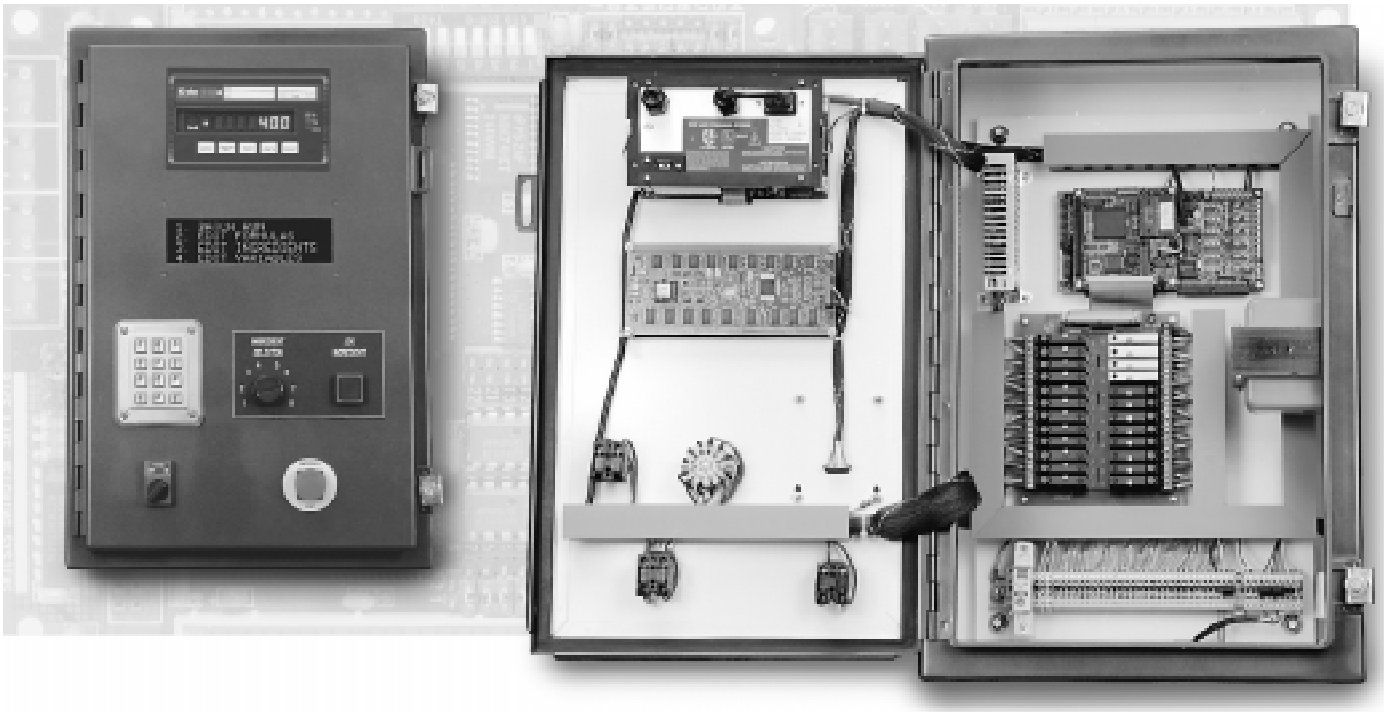
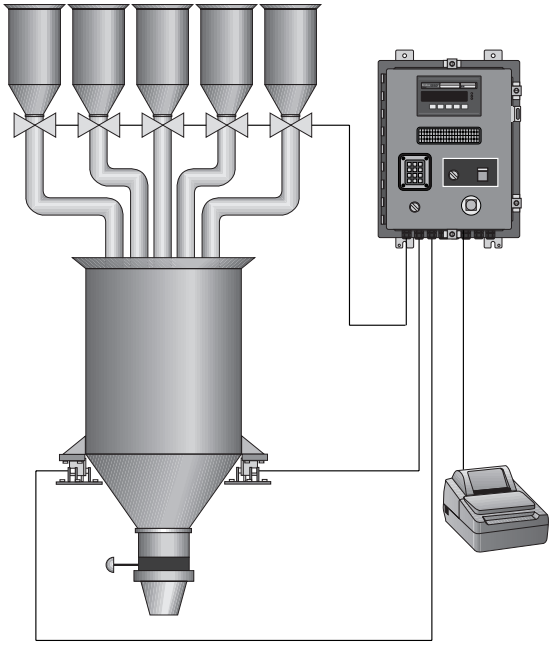
Multi-Ingredient Batching System



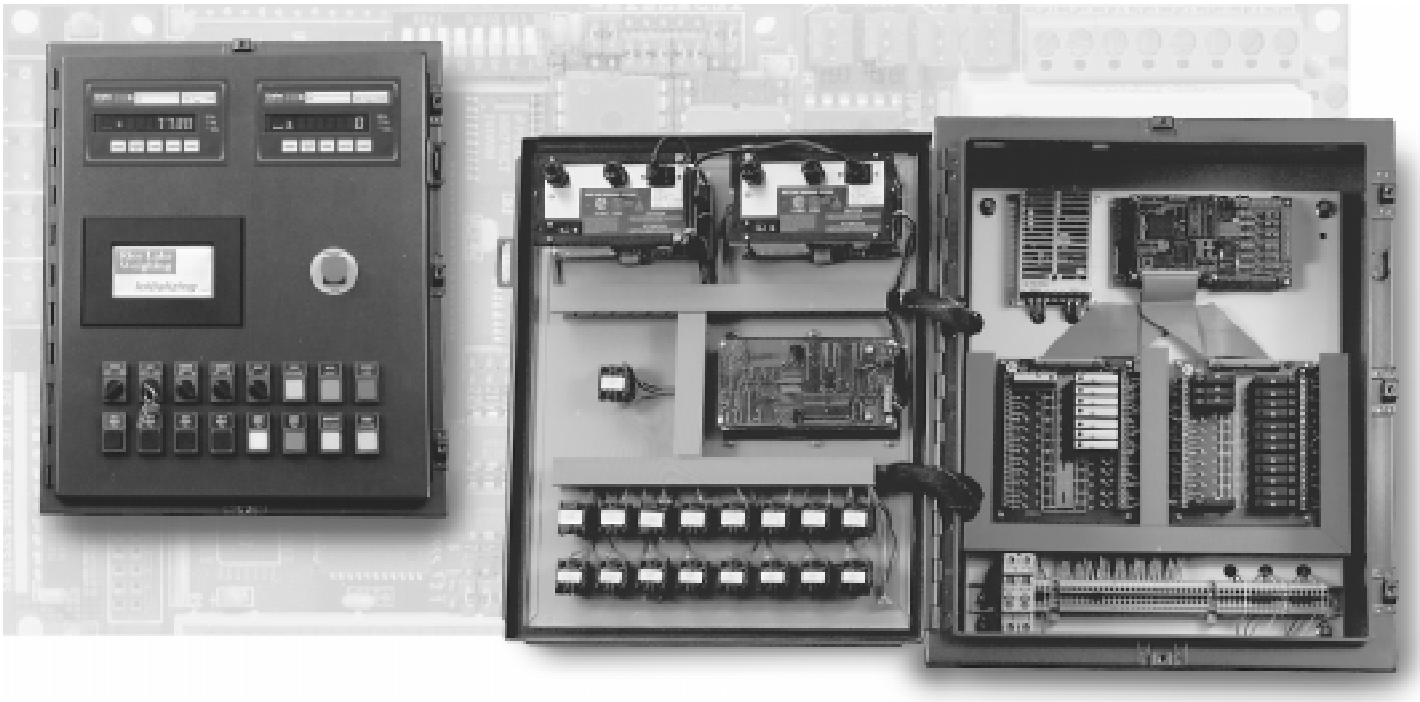
System Attributes:

- V400-based controller
- Batch control of multi ingredients
- 20-formula storage
- Batch reporting
- Material usage reporting
- Manual overrides
- Passcode protection
- 230 VAC operation



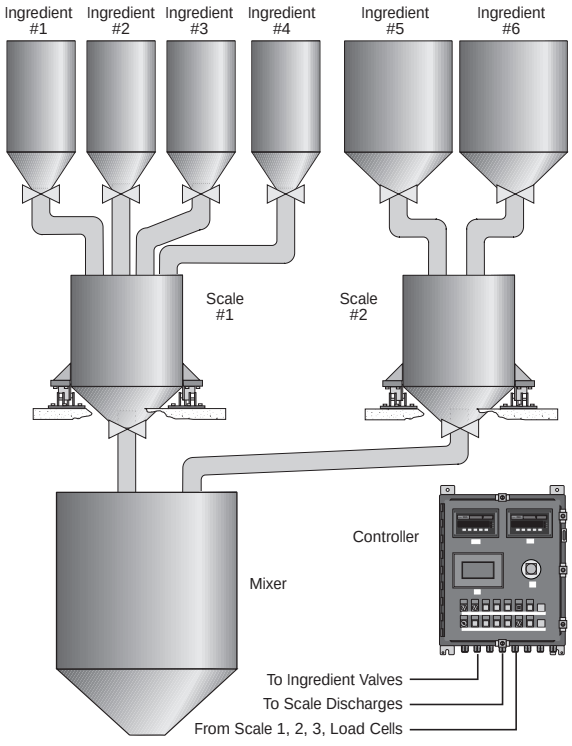
This multi-ingredient batching system provides sequential batch control and two-speed fill control for up to eight ingredients into a hopper scale. The system features multiple formula storage with full editing capability, data collection, reporting, and full manual overrides in case of system faults. It includes an easy-to-read VFD display and a numeric keypad for data entry.

Multi-Ingredient Process Control System



System Attributes:

- V400-based control system
- Graphic display of process with LCD touchscreen
- Easy-to-use operator interface
- Dual scale system using IQ plus® 310A weight indicators
- Full manual overrides
- Multiple formulas
- Multiple ingredients
- Batch reporting
- Material usage reporting



This process control system features simultaneous batching of ingredients into two independent hopper scales. It provides an easy-to-use touchscreen operator interface, and two panel-mounted IQ plus 310A digital indicators for weight data. In case of faults, the V400 controller provides full manual overrides, as well as comprehensive built-in self diagnostics.

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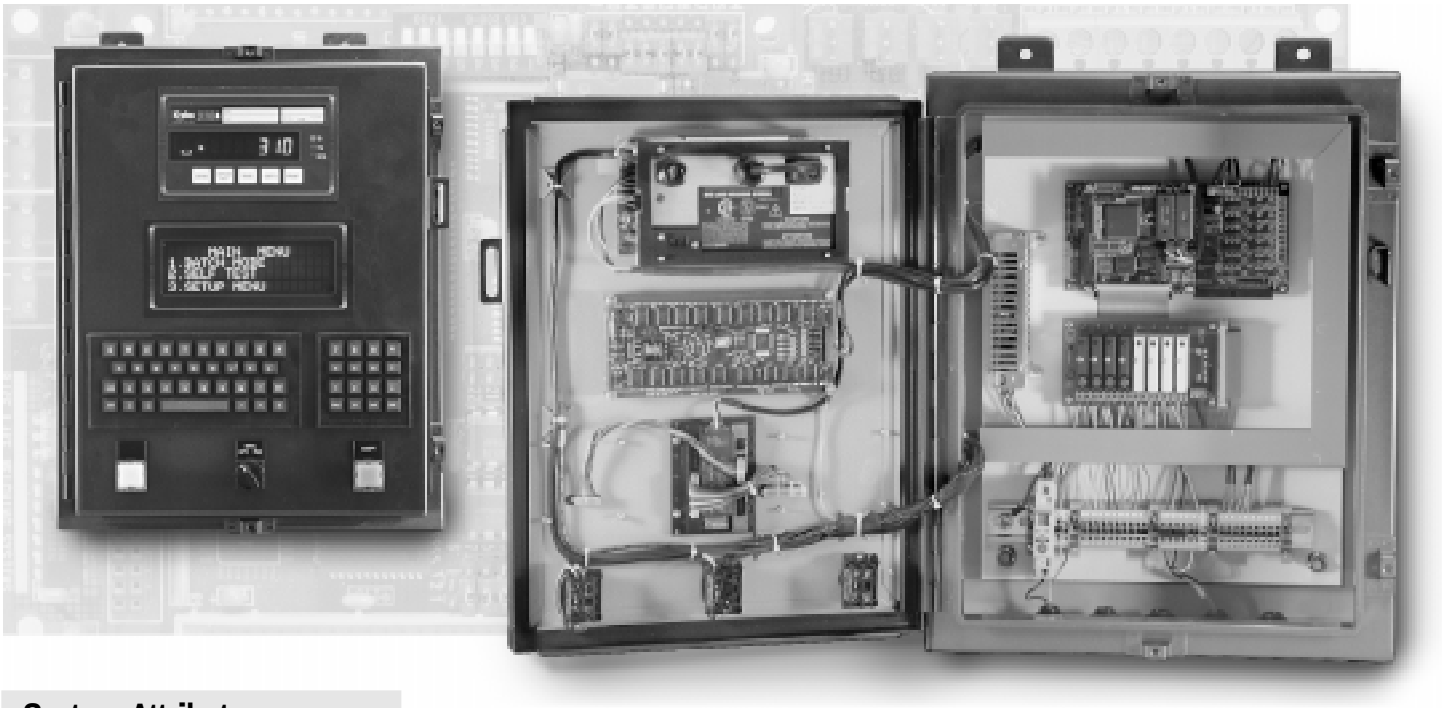
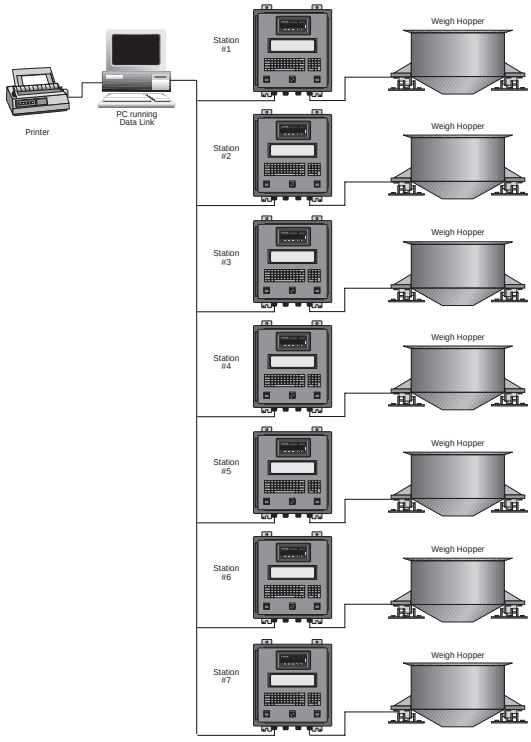
PC-Controlled Batching System



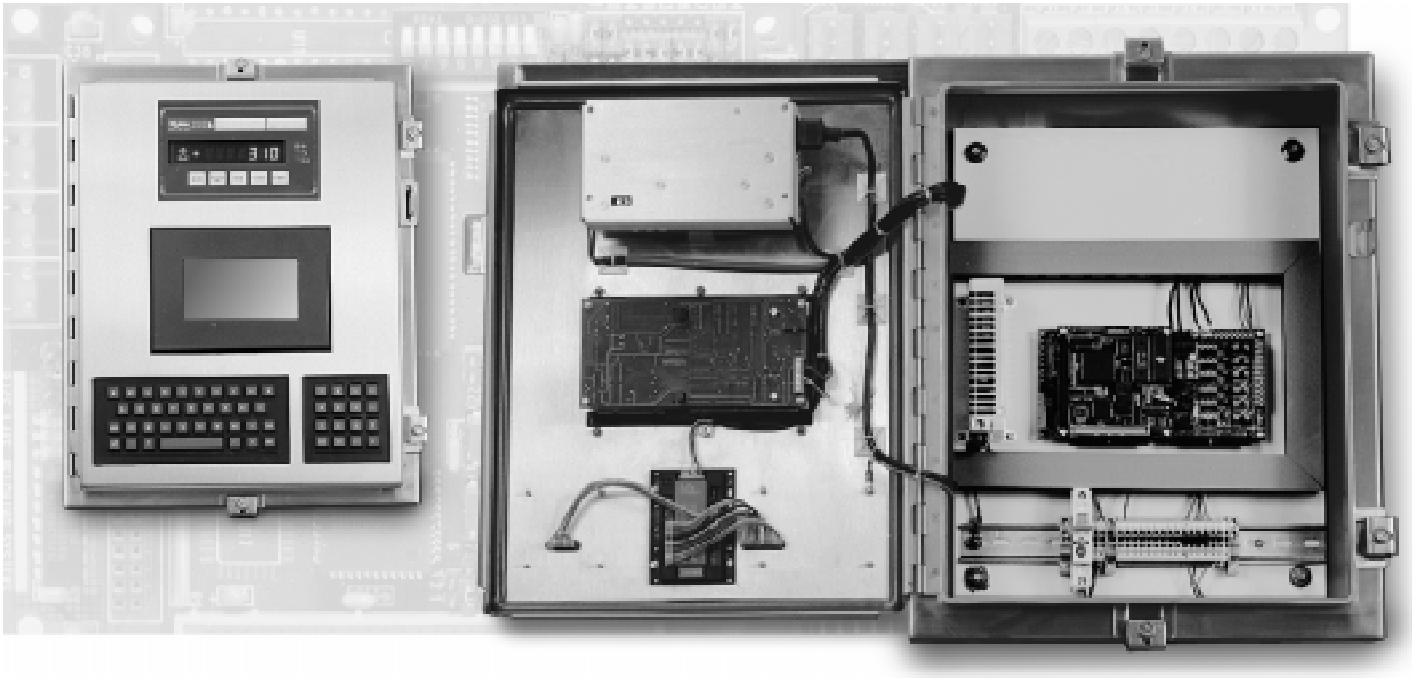
System Attributes:

- V400-based system
- RS-485 controller network
- PC program provides easy supervisor control
- Complex data acquisition
- Multiple reports via PC program
- On-line formula scheduling
- Alphanumeric entry of data at controller with full keypads
- Bright, easy-to-read 4 x 20 VFD display
- Manual batching via operator prompting at controllers
- Tolerance checking of ingredients
- Comprehensive built-in self test and controller diagnostics



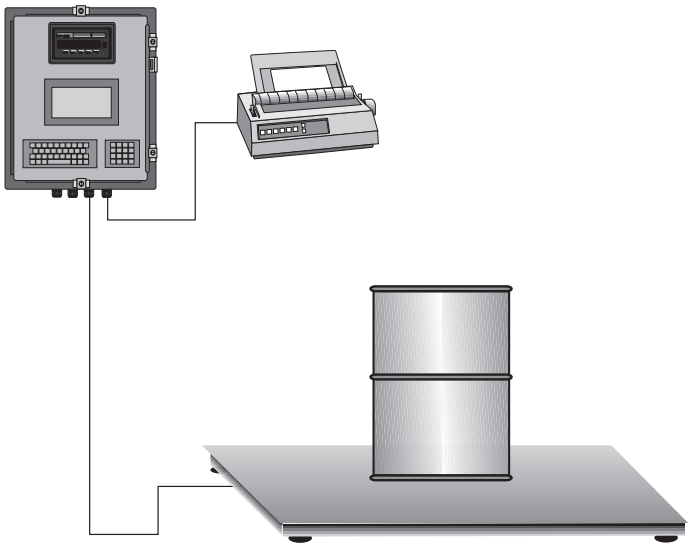
This PC-controlled batching system includes DataLink, a Windows-based PC program, that provides supervisory control of production scheduling of various stored formulas to be run on a network of seven V400-based operator terminals. The PC program also provides detailed production reports, material usage reports, and productivity reports.

Material Handling/Data Collection System



System Attributes:

- V400-based controller
- Material management system
- Easy-to-use graphic touchscreen
- Alphanumeric data entry via full keyboard
- Multiple material reports, including: daily usage, monthly usage, material delivery log
- Comprehensive built-in self test and controller diagnostics



This material handling/data collection system weighs containers of material for reporting purposes. The reports include information about daily usage, previous daily usages, and total monthly usage as well as location and material information. Using a full keyboard, the operator can enter alphanumeric material and location data.

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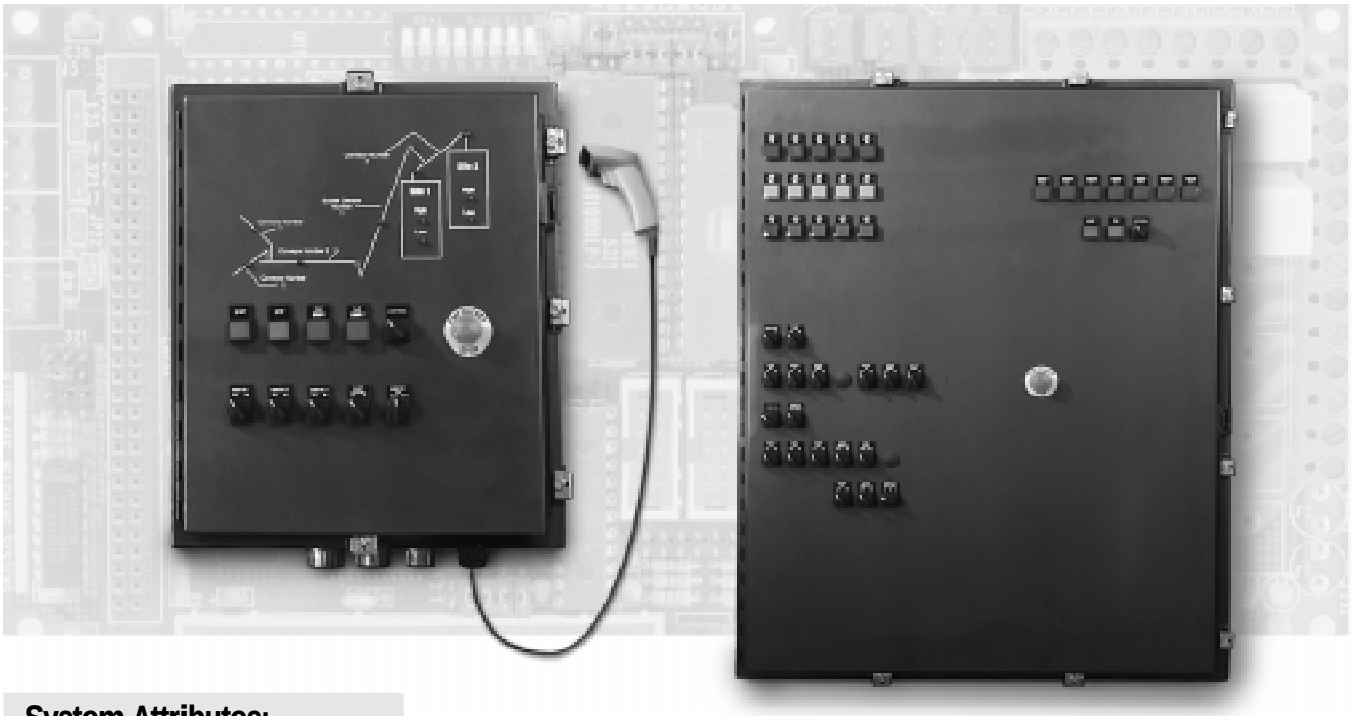
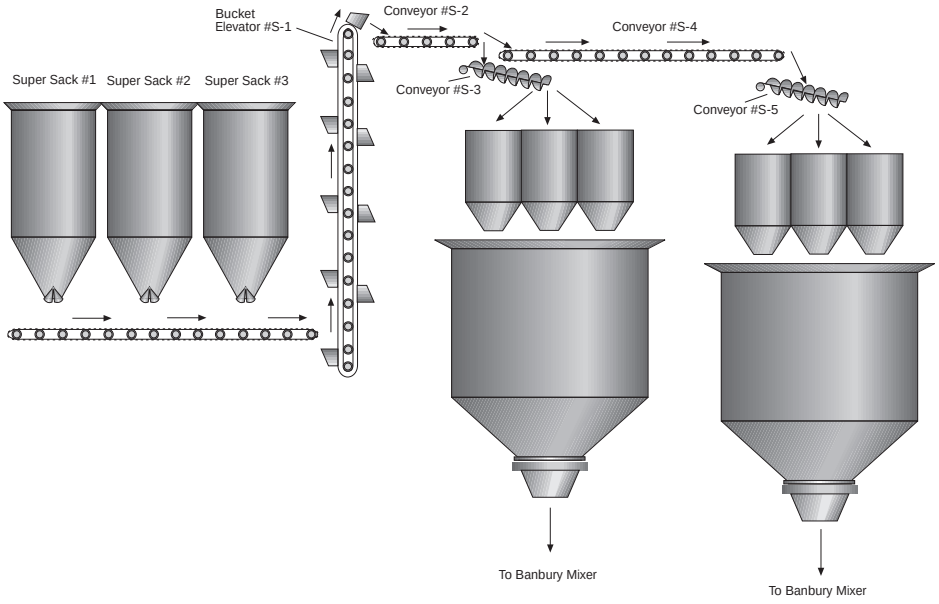
Conveyor Control System



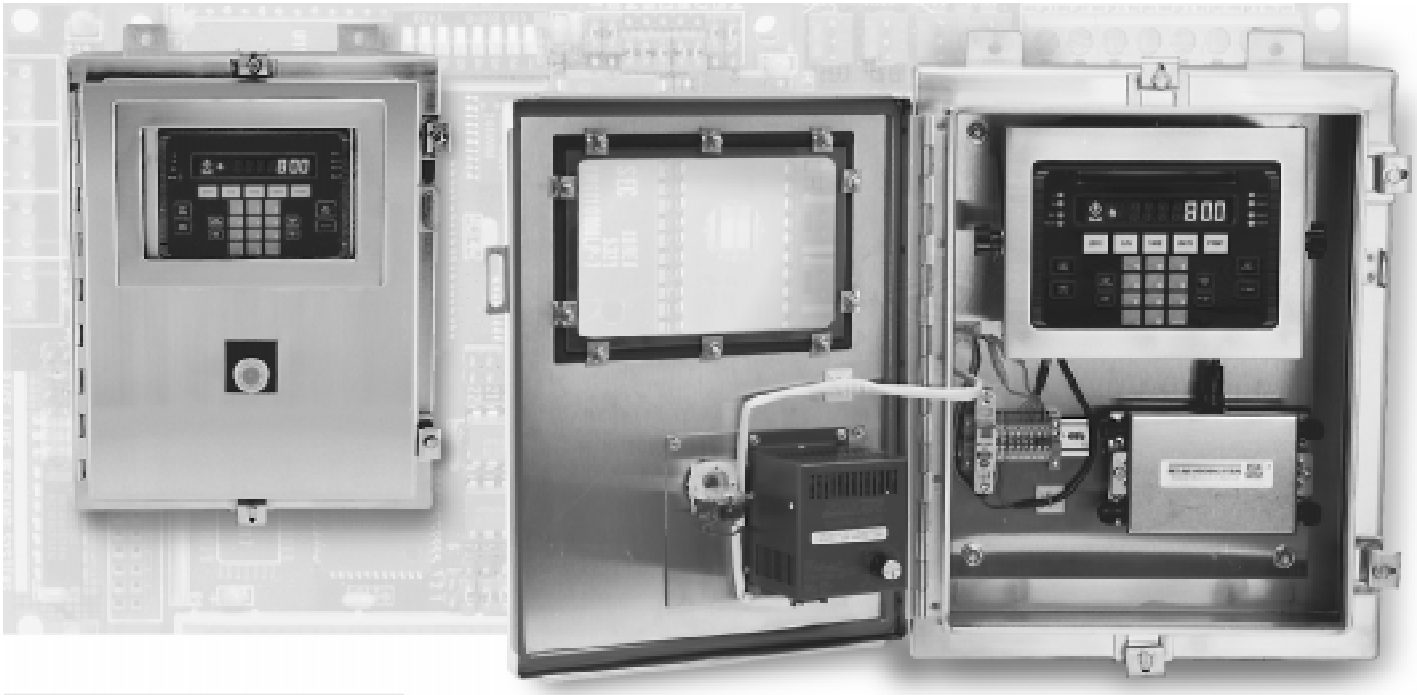
System Attributes:

- Allen-Bradley SLC 5/04 controllers
- Multiple input monitoring
- Conveyor control of materials
- Bar code input of material ID
- Full manual overrides
- Silkscreen graphic of system with indicators



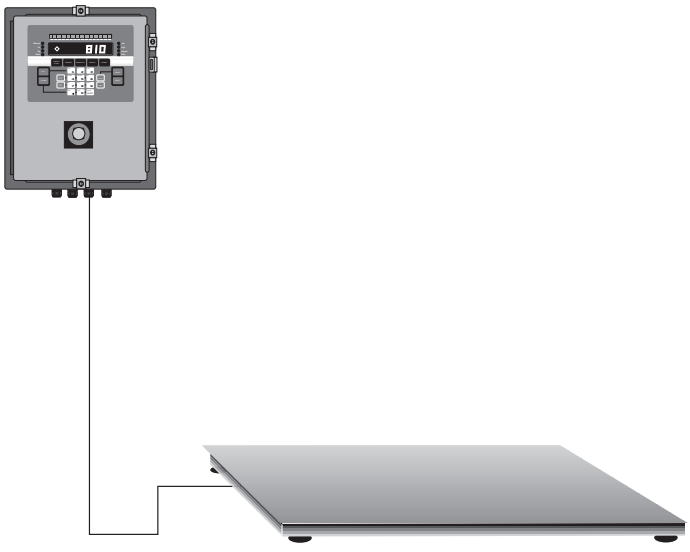
This system controls the unloading and distribution of material received from railroad cars (in this example). It utilizes Allen-Bradley SLC 5/04-based controllers to control the various conveyors, diverters and gates in the system. It also contains full manual overrides in case of system faults.

Double-Enclosed Controller



System Attributes:

- Double stainless steel enclosure
- Internal heater
- Internal junction box
- Built for corrosive, intense washdown environments
- IQ plus® 800 digital weight indicator



This unit utilizes an IQ plus 800 digital indicator for control. What makes this system unique is that the indicator is contained within another stainless steel enclosure. This ensures that the unit will function in extreme, intense washdown areas. This double enclosure also contains an internal heater to prevent condensation.

Specifications subject to change without notice
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Explosive Environment Equipment Policy

∆*Caution!* *The equipment contained within this Explosive Environment section requires greater attention to specification and installation guidelines. Improper specification, installation or service of these products can result in loss of equipment or serious injury.*

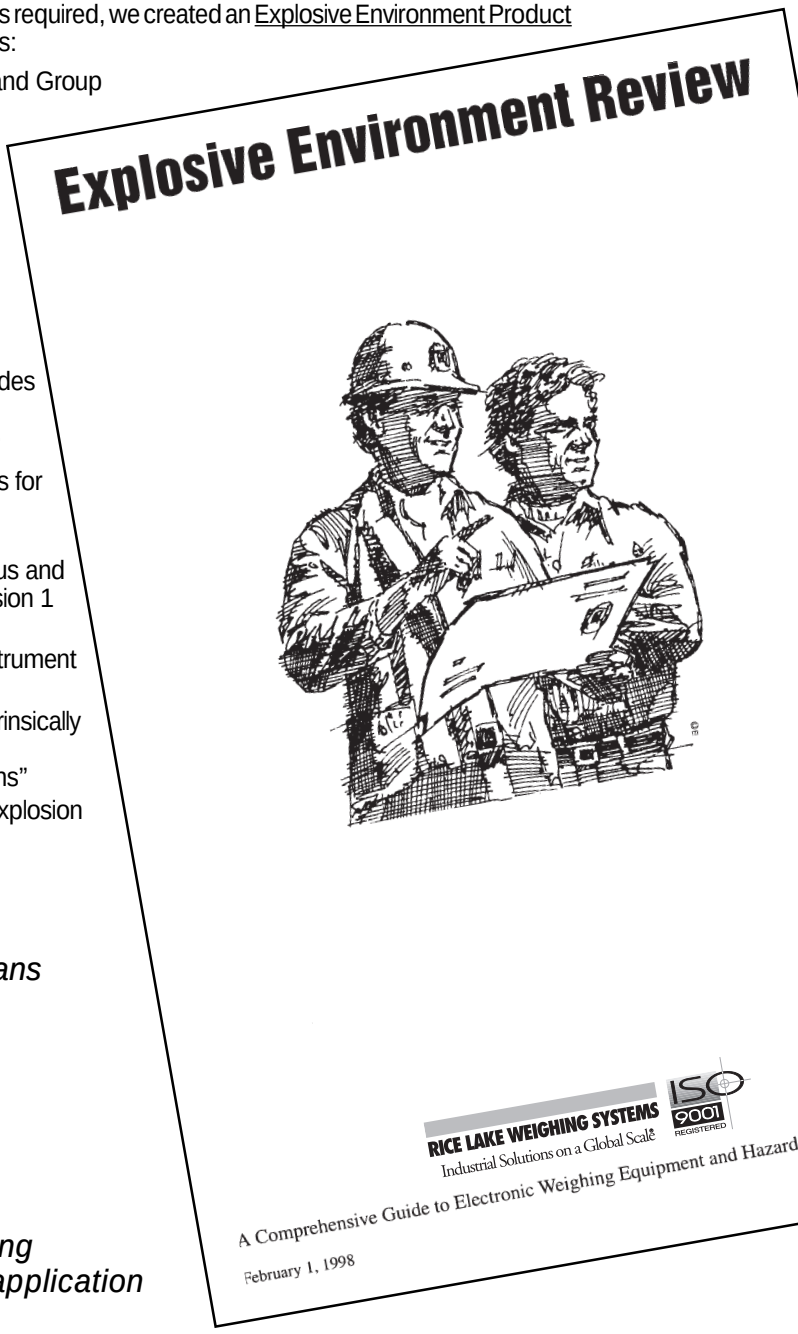
Rice Lake Weighing Systems has assembled the very best in Intrinsically Safe and Explosion Proof equipment. In order to properly specify, install and service this equipment, it is necessary that our distributors understand and appreciate the possible risks involved.

In an effort to educate our customers on some of the precautions required, we created an Explosive Environment Product Review. Available upon request, this 81-page booklet reviews:

- Explosive environment designations: Class, Division and Group
- Standards and Codes applicable to hazardous environment equipment
- Equipment liability
- Theory of Intrinsically Safe, Explosion Proof, and Purged systems
- Equipment specification guidelines
- Proper installation procedures
- Service precautions

The Explosive Environment Product Review booklet also includes resource information on:

- NFPA 70, "National Electrical Code (NEC) Handbook"
- NFPA 496, "Classification of Gases, Vapors and Dusts for Electrical Equipment in Hazardous (Classified) Locations"
- ANSI/UL 913, "Standard for Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II and III, Division 1 Hazardous Locations"
- ANSI/ISA RP 12.6, "Installation of Intrinsically Safe Instrument Systems for Hazardous (Classified) Locations"
- FM Approval Standard 3610, "Approval Standard, Intrinsically Safe Apparatus and Associated Apparatus for use in Class I, II and III, Division 1 Hazardous Locations"
- FM Approval Standard 3615, "Approval Standards, Explosion Proof Electrical Equipment"
- "Electrical Installations in Hazardous Locations"



Plant Safety Engineers and Certified Electricians should always be involved in the specification and installation of any Explosive Environment Equipment.

Please see next page for assistance in selecting Hazardous Area Control Equipment for your application requirements

(Specifications on back)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

Hazardous Area Classification

For assistance in selecting Hazardous Area Control Equipment for your application requirements, please complete this form and submit, along with a description of the application, to:

Rice Lake Weighing Systems
Attn: Hazardous Environment
230 West Coleman Street
Rice Lake, WI 54868
Telephone: 715-234-9171
Fax: 715-234-6967

RLWS File #: _____ Date: _____ Sales Order #: _____ Checked By: _____ Equipment PN#(s) & Serial Number(s): _____ Factory Mutual Not Applicable _____ (International Orders Only)	For RLWS Office Use Only

RLWS CUSTOMER INFORMATION:

RLWS Customer Name: _____ Customer Number: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: (_____) _____ Fax: (_____) _____

Contact Name: _____
(Printed name) (Signature) (Date)

Authorized Signature: _____
(Printed name) (Signature) (Date)

END USER INFORMATION:

End User Company Name: _____

Address: _____

City: _____ State: _____ Zip: _____

Telephone: (_____) _____ Fax: (_____) _____

Contact Name: _____
(Printed name) (Signature) (Date)

Authorized Signature: _____
(Printed name) (Signature) (Date)

Title: _____

(The following information is to be defined and completed by the END USER'S Plant Safety Engineer or other authorized party)

Hazardous Area Classification: Class _____, Division _____, Group _____

Specific Hazard/Material (please print): _____

Defining Individual: _____
(Printed name) (Signature) (Date)

Defining Authority (Title): _____

Please retain a copy of this completed form for your records.

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Explosive Environment Solutions

Caution! *The equipment contained within this Explosive Environment section requires greater attention to specification and installation guidelines. Improper specification, installation or service of these products can result in loss of equipment or serious injury.*

Explosion Proof, Purged, and Intrinsically Safe Systems

EXPLOSION PROOF

What is an explosion-proof indicator? It's simply a digital weight indicator enclosed in a special case. The purpose of an explosion-proof indicator is not, as the name suggests, to protect the indicator. Instead, the case prevents any explosion WITHIN the case from causing subsequent fire or explosion in the surrounding atmosphere.

For example, in a grain elevator application, combustible dusts (Class II hazardous atmosphere) may be present. A spark in a non-explosion-proof indicator could ignite an elevator-wide explosion. However, with an explosion-proof indicator, the spark (or even an explosion) is contained within the case. The hazardous atmosphere cannot be ignited, and the elevator is protected.

EXPLOSION PROOF ADVANTAGES

- Explosion containment
- Requires low maintenance
- No electronics
- No moving parts

EXPLOSION PROOF DISADVANTAGES

- Cannot indicate failure of containment capability
- Cost of protection per cubic foot increases with enclosure size
- Promotes condensation
- Cumbersome, limited access
- Causes harmful heat build up
- Limited sizes
- Bulky designs
- Excessive weight

PURGE

Purged systems are ideal for hazardous environments and use positive pressure to prevent particles, gases, and fibers from entering the controller enclosure. As an added safeguard, a differential pressure switch automatically cuts off power when the pressure falls below the acceptable level. Type X, Y, and Z purging hardware is available that meets National Fire Protection Association (NFPA) article 496 guidelines.

The three configurations are as follows:

Type X Pressurizing: Reduces the classification within the protected enclosure from Division 1 to Safe.

Type Y Pressurizing: Reduces the classification within the protected enclosure from Division 1 to Division 2.

Type Z Pressurizing: Reduces the classification within the protected enclosure from Division 2 to Safe.

PURGE ADVANTAGES

- Reduces heat build-up
- Inhibits metal corrosion
- Requires low maintenance
- Increases equipment longevity
- Allow fast access to equipment
- Reduces moisture and dust build-up
- Reduces classification within enclosure
- Continuous system status indication
- Protects enclosures up to 450 cubic feet
- Allows use of any enclosure shape
- Cost of protection per cubic foot decreases with enclosure size

PURGE DISADVANTAGES

- Contains moving parts
- Requires instrument air supply
- Some systems contain electronics
- Some systems require electrical power

INTRINSICALLY SAFE

Intrinsically safe load cells and safety barriers take the explosion proof principle a step further. Intrinsic safety ensures that the indicator's electrical wiring and components are, by design, incapable of releasing enough energy to ignite flammable or combustible atmospheric mixtures in their most easily ignitable concentrations. In short, an intrinsically safe device eliminates the conditions for an explosion no matter what the circumstances.

INTRINSICALLY SAFE ADVANTAGES

- Limits energy to device
- Requires low maintenance
- No moving parts
- Ideal for sensors

INTRINSICALLY SAFE DISADVANTAGES

- One barrier is required for each conductor
- Project cost increases with number of conductors
- Offers no protection against heat, moisture and dust
- Requires protection or installation in nonclassified area
- 24 VDC, 50 mA maximum power and signal strength limit

(Specifications on back)

Explosive Environment

Hazardous Atmospheres (for reference only)

Hazardous atmospheres are divided into three general classes and two divisions:
CLASS I: Flammable Gases or Vapors
CLASS II: Combustible Dusts
CLASS III: Ignitable Fibers or Flyings
DIVISION 1: Hazard exists under normal conditions.
DIVISION 2: Hazardous material is handled, processed or stored. Hazard is not normally present, but may be released due to accident or equipment malfunction.

CLASS I:
Flammable Gases or Vapors
CLASS I, GROUP A: (d)
acetylene

CLASS I, GROUP B: (d)
acrolein (inhibited)
arsine
butadiene
ethylene oxide
hydrogen
manufactured gases containing more than 30% hydrogen by volume
propylene oxide
propylnitrate

CLASS I, GROUP C: (c, d)
acetaldehyde
allyl alcohol
n-butyraldehyde
carbon monoxide
crotonaldeghyde
cyclopropane
diethyl ether
diethylamine
epichlorohydrin
ethylene
ethylenimine
ethyl mercaptan
ethyl sulfide
morpholine
2-nitropropane
tetrahydrofuran
unsymmetrical dimethyl hydrazine (UMDH 1, 1-dimethyl hydrazine)

CLASS I, GROUP D: (c, d)
acetic acid
acetone
acrylonitrile
ammonia
benzene
butane
1-butanol (butyl alcohol)
2-butanol (secondary butyl alcohol)
n-butyl acetate
isobutyl acetate
di-isobutylene
ethane
ethanol (ethyl alcohol)
ethyl acetate
ethyl acrylate (inhibited)
ethylene diamine (anhydrous)
ethylene dichloride
ethylene glycol monomethyl ether
gasoline
heptanes
hexanes
isoprene
isopropyl ether
mesityl oxide
methane (natural gas)
methanol (methyl alcohol)
3-methyl 1-butanol (isoamyl alcohol)
methyl ethyl ketone
2-methyl 1-propanol (isobutyl alcohol)
2-methyl 2-propanol (teriary butyl alcohol)
petroleum naptha
pyridine
octanes
pentanes
1-pentanol (amyl alcohol)
propane
1-propanol (propyl alcohol)
2-propanol (isopropyl alcohol)
propylene
styrene
toluene
vinyl acetate
vinyl chloride
xylenes

CLASS II:
Combustible Dusts (c)
CLASS II, GROUP E (c, d)
Atmospheres containing metal dust, including aluminum, magnesium and their commercial alloys, as well as other metals of similarly hazardous characteristics with a resistivity of 100 ohms per centimeter.

CLASS II, GROUP F (c, d)
Atmospheres containing carbon black, charcoal, coal or coke dusts that have more than 8% total volatile material, or atmospheres containing these dusts sensitized by other materials so that they present an explosion hazard.
They will also have a resistivity greater than 100 ohms per centimeter and equal to or less than 100 megohms per centimeter.

CLASS II, GROUP G (c, d)
Atmospheres containing flour, starch or grain as well as combustible plastics or chemical dusts having resistivity greater than 1 megohm per centimeter.

CLASS III:
Ignitable Fibers or Flyings (c, d)
Atmospheres containing parts of rayon, cotton, and other textiles. Combustible fiber manufacturing and processing plants such as cotton gins, cottonseed mills, flax processing plants, clothing manufacturing plants, sawmills and other woodworking locations.

Easily ignitable fibers and flyings include rayon, cotton (including cotton linters and cotton wastes), sisal or henequen, istle, jute, hemp, tow, cocoa, oakum, baled waste kapok, spanish moss, excelsior, sawdust, wood chips and other similar materials.

(b) Rice Lake Weighing Systems' purged indicators and controllers can be custom manufactured for use in Class I, Group B atmospheres.
(c) Rice Lake Weighing Systems' explosion-proof indicators with intrinsically safe load cells may be used in these atmospheres.
(d) Rice Lake Weighing Systems' intrinsically safe systems may be used in these atmospheres.

Specifications subject to change without notice
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IQ 700 IS Intrinsically Safe Digital Weight Indicator

This indicator is FM Approved for use in hazardous locations per Rice Lake Weighing Systems' control drawing file number 33476.

PART # DESCRIPTION

32708 ..... IQ 700 IS Hostile Environment Digital Weight Indicator (Requires power supply or battery)

System Hardware:

31222 ..... 115 VAC EP/IS power supply w/15' AC cable

31221 ..... 230 VAC EP/IS power supply w/15' AC cable

31215* ..... IS battery option w/12" cable w/connector

** Tilt stand #52216 required for indicator with battery*

See price page for power supply cable assembly and load cell cable assembly.

In dangerously-explosive and dimly-lit environments, the FM-approved intrinsically-safe IQ 700 IS shines as the new indicator of choice. From the big and bright LED display to the convenient numeric keypad for entering tares, the IQ 700 IS is designed to be operator-friendly. The proven IQ 700 IS hardware and familiar software make setup a breeze for installers.

A revolutionary intrinsically-safe 115 VAC power supply has been designed for mounting within the hazardous area. This eliminates the need for barrier strips, and simplifies wiring by requiring only a single AC conduit line and seal from the safe area. In addition, an optional battery is available.

For IS system compatibility, Rice Lake offers hundreds of FM-approved load cells that interface with the IQ 700 IS in accordance with the official FM control drawings. To achieve complete system integration, an optional I/O barrier mounts in the safe area for connection to printers, computers, or other peripherals.

Applications

- Class I, Divisions 1 & 2, Groups A, B, C & D; Class II, Divisions 1 & 2, Groups E, F & G and Class III hazardous locations
- Chemical plants
- Portable hazardous weighing
- Fueling stations, liquid or gaseous
- Paint and ink manufacturing and/or mixing plants
- Fertilizer plants

Standard Features

- Bright Light Emitting Diode (LED)
- Stainless steel NEMA 4X enclosure
- Front-panel digital calibration
- Automatic zero and span temperature compensation
- Excitation for four 350Ω load cells at 5 VDC
- Gross/Tare/Net computation
- Time and date
- Accumulator
- Tilt stand
- Set up parameters printout
- Bi-directional 20 mA current loop communication port

Options/Accessories

51966 ..... Battery charger, 115 VAC

63027 ..... Battery charger, 230 VAC

52216 ..... Tilt stand, required for indicator with battery

44061 ..... I/O barrier assembly

63224 ..... Analog output, 0-10 VDC or 4-20 mA (safe area option, requires I/O barrier)

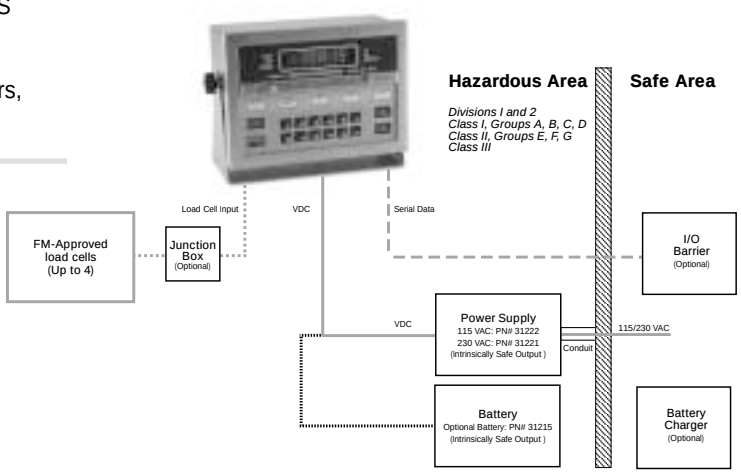
36528 ..... Additional operating manual

Serial output cable assembly (required with I/O barrier):

See price page for part numbers.

IS Cable:

Hazardous environment load cell cable—see price page for part numbers.



(Specifications on back)

LOAD CELL EXCITATION:
1 - 350Ω load cell @ 4.56 VDC
2 - 350Ω load cell @ 4.28 VDC
3 - 350Ω load cell @ 4.06 VDC
4 - 350Ω load cell @ 3.82 VDC

LOAD CELL CURRENT:
57 mA (4 x 350Ω load cells)

LOAD CELL CABLING:
6-wire with remote sensing

ANALOG SIGNAL INPUT RANGE:
0.7 mV/V - 3.2 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 µV/graduation

CONVERSION RATE:
10 updates/second

INTEGRATION TIME:
20 mSec typical

RESOLUTION:
10,000 displayed graduations (NTEP), 80,000 expanded
The maximum number of allowed graduations will vary by application

DISPLAY INCREMENTS:
1, 2, 5, 10, 20, 50, 100

UNDERRANGE COUNT CAPACITY:
(–) 400 graduations, typical

LEAD ZERO BLANKING:
Standard per NBS Handbook H-44

DISPLAY:
Six digits, Light Emitting Diode (LED); 0.6" (15.2mm), 7-segment display digits

POLARITY INDICATION:
" – " sign

DECIMAL POINT:
Configurable to 0, 0.0, 0.00, 0.000, 0.0000

LB/KG SWITCHING:
Configurable for front panel operation with conversion for tare and setpoint values

FRONT-PANEL CONTROL SWITCHES:
ZERO, GROSS/NET, TARE, TARE RECALL, PRINT, lb/kg CONV

5-POINT LINEARIZATION:
Allows up to 5 entry points when selected

NUMERIC KEYBOARD:
0-9 keys plus ENT (Enter) and CE (Clear Entry) keys

FRONT-PANEL LED ANNUNCIATORS:
Center Zero, Gross, Net, Motion, lb, kg

AZM: (ZERO TRACK)
"Gross" mode only; operable over ±5 grads, ±1.0 grads, ±3.0 grads (or Off)

PAZ AND AZM APERATURE:
Configurable to ±1.9% Full Scale or 100% Full Scale

MOTION BAND:
Configurable to ±1 or ±3 graduations, 1 second delay (or Off)

POWER INPUT:
115/230 VAC; 50/60 Hz
6 VDC battery option

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

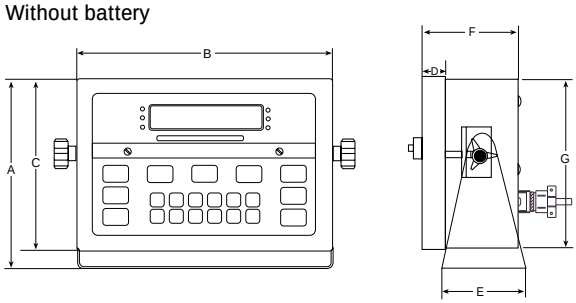
RATING/MATERIAL:
NEMA 4X polished stainless steel housing

WEIGHT:
9.5 lb (4.31 kg)

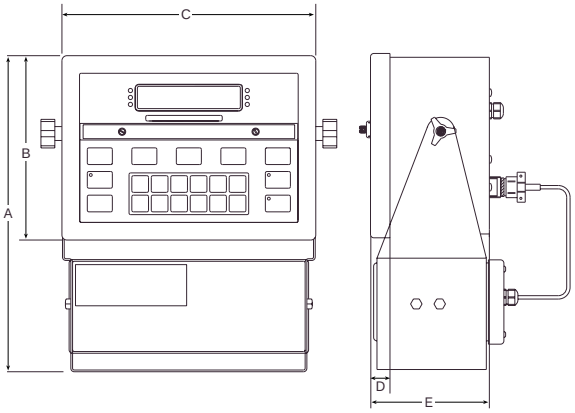
APPROVALS:
NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 89-023A2
Factory Mutual approved, #0Z0A2.AX

WARRANTY:
One year limited warranty

Without battery



With optional battery and tilt stand



DIMENSIONS

Without battery

A = 7.36"	(186.9mm)	E = 3.94"	(100.1mm)
B = 9.12"	(231.6mm)	F = 4.14"	(105.2mm)
C = 6.62"	(168.1mm)	G = 6.35	(161.3mm)
D = .70"	(17.8mm)		

With optional battery and tilt stand

A = 11.35"	(288.3mm)	D = 0.70"	(17.8mm)
B = 6.62"	(168.1mm)	E = 4.25"	(107.9mm)
C = 9.12"	(231.6mm)		

WARNING! The equipment contained within this Explosive Environment section requires explicit attention to specification and installation guidelines. Improper specification, installation, or service of these products can result in loss of equipment or serious injury.

Specifications subject to change without notice
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Condec™ UMC 600 IS Hazardous Environment Indicator

FM APPROVED

The UMC 600 IS weight indicator is the latest in the UMC product line that now has Factory Mutual Approval for Class I, II, III; Division 1 and 2; Groups A, B, C, D, E, F, and G.

This state-of-the-art and cost effective solution to intrinsically safe weighing is specifically designed for easy installation.

UMC 600 IS Part Numbering Guide

UMC 600 IS ( ) ( ) ( ) ( )

UNIT MOUNTING STYLE
- A = Tilt stand
- B = Panel mounting bracket

OPERATING POWER
- A = 115 VAC, 50/60 Hz
- B = Battery power supply

DISPLAY
- A = Light Emitting Diode (LED)
- B = Liquid Crystal Display (LCD)

TERMINATIONS
- A = Mating connectors
- B = Junction box/mating cables

PART # DESCRIPTION

115 VAC

57038 .... UMC600ISAAAA, tilt stand, 115 VAC, LED, mating connectors

61943 .... UMC600ISAABA, tilt stand, 115 VAC, LCD, mating connectors

57043 .... UMC600ISAAAB, tilt stand, 115 VAC, LED, junction box/ mating cables

BATTERY POWER

62079 .... UMC600ISABAA, tilt stand, battery power supply, charger, LED, mating connectors

62097 .... UMC600ISABBA, tilt stand, battery power supply, charger, LCD, mating connectors

62081 .... UMC600ISABAB, tilt stand, battery power supply, charger, LED, junction box/mating cables

Applications

- Fueling stations, liquid or gaseous
- Paint & ink manufacturing and mixing plants
- Fertilizer plants
- Portable hazardous weighing
- Control solutions for Class I, II, III; Division 1 and 2; Groups A, B, C, D, E, F, and G

Standard Features

- Auto and manual batch modes with setpoint output control
- Bi-directional 20 mA current loop port
- Light Emitting Diode (LED) or Liquid Crystal Display (LCD)
- Stainless steel NEMA 4 enclosure
- Time and date
- Tilt stand
- Gross/Tare/Net computation
- Front-panel calibration

Options/Accessories

45898 ..... I/O cable and load cell cable (sold by foot)

54074 ..... Load cell connector kit, 6-pin

54084 ..... I/O connector kit, 5-pin

45897 ..... Power supply cable (sold by foot)

54080 ..... Power supply connector kit, 3-pin

54087 ..... Battery charger, 115 VAC

63224 ..... Analog output, 0-10 VDC or 4-20 mA (safe area option, requires I/O barrier)

55683 ..... I/O barrier assembly

58645 ..... Additional operating manual

(Specifications on back)

LOAD CELL EXCITATION:
1 - 350Ω load cell @ 4.56 VDC
2 - 350Ω load cell @ 4.28 VDC
3 - 350Ω load cell @ 4.06 VDC
4 - 350Ω load cell @ 3.82 VDC

LOAD CELL CURRENT:
57 mA (4 x 350Ω load cells)

LOAD CELL CABLING:
6-wire with remote sensing

ANALOG SIGNAL INPUT RANGE:
0.3 uV/V - 3.3 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 uV/graduation

CONVERSION RATE:
10 updates/second

INTEGRATION TIME:
20 mSec typical

RESOLUTION:
10,000 displayed graduations (NTEP), 80,000 expanded
The maximum number of allowed graduations will vary by application

DISPLAY INCREMENTS:
1, 2, 5, 10, 20, 50, 100

UNDERRANGE COUNT CAPACITY:
(-) 400 graduations, typical

LEAD ZERO BLANKING:
Standard, per NBS Handbook H-44

DISPLAY:
6-digits, Light Emitting Diode (LED) or Liquid Crystal Display (LCD), 0.6" (15.2mm), 7 segment display digits

POLARITY INDICATION:
(-) sign

DECIMAL POINT:
Configurable to 0, 0.0, 0.00, 0.000, 0.0000

LB/KG SWITCHING:
Configurable for front panel operation with conversion for tare and setpoint valves

FRONT-PANEL CONTROL SWITCHES:
ZERO, GROSS/NET, TARE, TARE RECALL, PRINT, lb/kg CONV

NUMERIC KEYBOARD:
0-9 keys ENT (Enter) and CE (Clear Entry) keys

FRONT-PANEL LED ANNUNCIATORS:
Center Zero, Gross, Net, Motion, lb, kg

AZM: (ZERO TRACK)
"Gross" mode only; operable over ±5 grads, ±1.0 grads, ±3.0 grads (or Off)

PAZ AND AZM APERATURE:
Configurable to ±1.9% Full Scale or 100% Full Scale

MOTION BAND:
Configurable to ±1 or ±3 graduations, 1 second delay (or Off)

POWER INPUT:
115 VAC; 50/60 Hz
6 VDC battery option

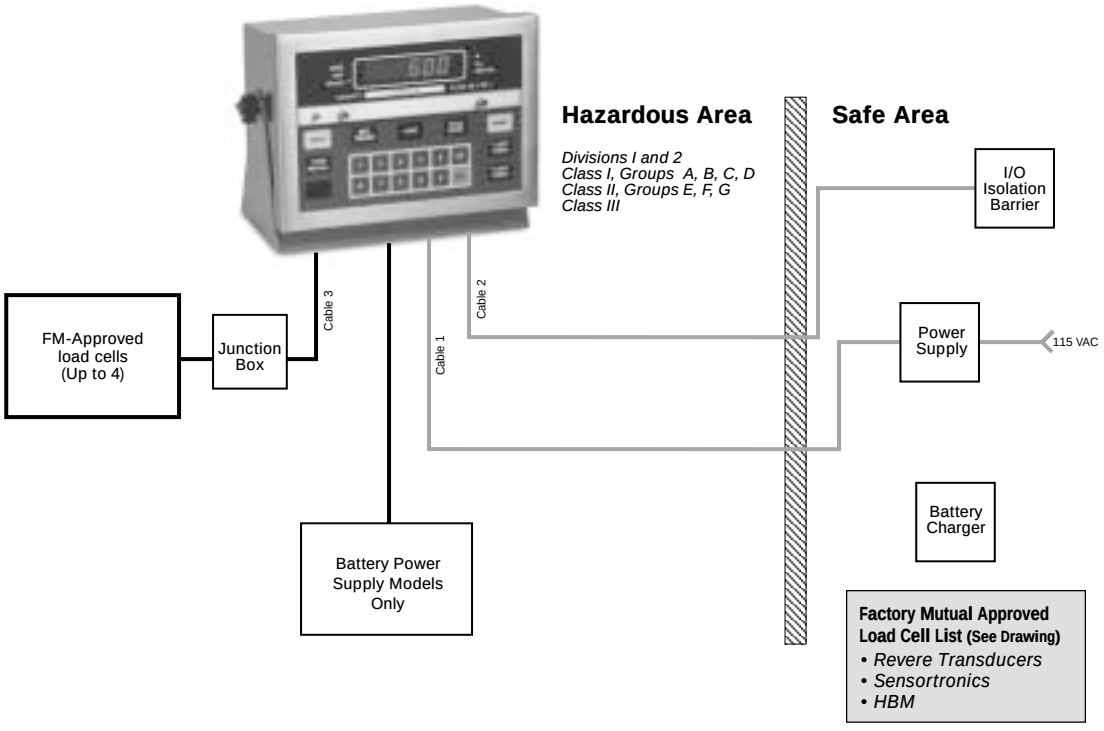
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

RATING/MATERIAL:
NEMA 4X polished stainless steel housing

OVERALL DIMENSIONS:
9.12" L x 6.62" H x 4.18" W
(251mm L x 168mm H x 106mmW)

APPROVALS:
Factory Mutual approved, #J.I. 1B2A9.AX (AC power) and #J.I 3000436 (battery module)

WARRANTY:
One year limited warranty



Specifications subject to change without notice
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EL232 XPCD Explosion Proof Remote Serial Display

PART # DESCRIPTION
20904 ..... EL232 XPCD

Applications

- For remote weight readings in Class I, Division 1 & 2, Groups C & D; Class II, Division 1 & 2, Groups E, F & G and Class III hazardous environments

Standard Features

- 20 mA current loop or RS-232 input
- Compatible with all IQ plus® series indicators
- NEMA 4, 7CD, 9EFG enclosure

Options/Accessories

Options and accessories for the EL232 XPCD may require additional hardware; consult factory with your application and specification needs.

- Vinyl organisol coating
- Polyurethane coating
- 20 mA current loop output
- Multi-scale inputs (4) accumulative
- Accumulation with reset
- RS-232 intrinsic safety barrier

Intrinsic Safety Barriers

PART # DESCRIPTION

Barrier Sets

19382 ..... Uncased barrier set for use with IQ plus 320 HE, IQ plus 810 HE and IQ plus 810SS

19505 ..... Cased barrier set for use with UMC555, UMC2000, IQ plus 310, IQ plus 700HB, UMC600, IQ plus 800 and IQ plus 810

Individual Barriers

30263 ..... +/- Signal barrier

30264 ..... +/- Sense barrier

30265 ..... + Excitation barrier

30266 ..... - Excitation barrier

Applications

Uncased unit

- For use with IQ plus® 320HE, IQ plus® 810HE and IQ plus® 810SS

Cased unit

- For use with UMC555, UMC2000, IQ plus® 310, IQ plus® 700HB, UMC600, IQ plus® 800 and IQ plus® 810

Standard Features

- Each system features excitation, sense and signal barriers
- Available in an enclosure for external mounting or in a chassis mount version
- R Stahl or equivielent barriers that are approved by Factory Mutual
- Load cells must have a bridge resistance of 350 to 750Ω

Options/Accessories

Consult factory for systems designed for other indicators

(Specifications on back)

EL232 XPCD

Specifications

DISPLAY:
High-intensity, red LED, 0.8" (20.3mm) high digits

INPUT VOLTAGE:
115 VAC, 60 Hz

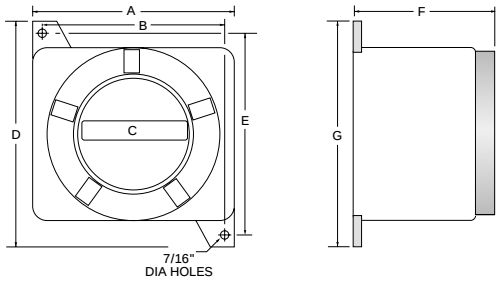
WEIGHT:
Approximately 25 lb (11.3 kg)

NEC CLASSIFICATIONS:
Class I, Division 1, Groups C & D; Class II, Division 1, Groups E, F & G and Class III hazardous environments

BAUD RATE:
1200, 2400, 4800 and 9600

INTERFACES:
20 mA CL and RS-232 standard. The EL232 XPCD can communicate, as shipped, with twelve of the most common scale indicator families currently available. Please consult factory for model numbers and interface requirements.

WARRANTY:
One year limited warranty



DIMENSIONS

A = 10.50" (266.7mm)	D = 11.75" (298.5mm)
B = 9.50" (241.3mm)	E = 10.50" (266.7mm)
C = 5.81" (147.7mm) (Glass Diameter)	F = 7.50" (190.5mm)
	G = 11.75" (298.5mm)

CAUTION! The equipment contained within this Explosive Environment section requires greater attention to specification and installation guidelines. Improper specification, installation, or service of these products can result in loss of equipment or serious injury.

Barriers

Specifications

PART NUMBER 30263 +/- SIGNAL BARRIER

VOLTAGE RANGE:
6 - 7.7 VDC

INTERNAL RESISTANCE:
482Ω

OPEN CIRCUIT VOLTAGE:
9.6

SHORT CIRCUIT CURRENT:
20.4 mA

CLASSIFICATIONS:
FM3610 Class I, II, III, Cenelec EN50 020, CSA C22.2 No.157, Short circuit-proof at rated voltage Group A to G

PART NUMBER 30264 +/- SIGNAL BARRIER

VOLTAGE RANGE:
6 - 8 VDC

INTERNAL RESISTANCE:
482Ω

OPEN CIRCUIT VOLTAGE:
9.3

SHORT CIRCUIT CURRENT:
19.8 mA

CLASSIFICATIONS:
FM3610 Class I, II, III, Cenelec EN50 020, CSA C22.2 No.157, Short circuit-proof at rated voltage Group A to G

PART NUMBER 30265 + EXCITATION BARRIER

VOLTAGE RANGE:
6 - 7.3 VDC

INTERNAL RESISTANCE:
30Ω

OPEN CIRCUIT VOLTAGE:
8.6

SHORT CIRCUIT CURRENT:
377.6 mA

CLASSIFICATIONS:
FM3610 Class I, II, III, Cenelec EN50 020, CSA C22.2 No.157, Short circuit-proof at rated voltage Group A to G

PART NUMBER 30266 + EXCITATION BARRIER

VOLTAGE RANGE:
6 - 7.3 VDC

INTERNAL RESISTANCE:
30Ω

OPEN CIRCUIT VOLTAGE:
8.6

SHORT CIRCUIT CURRENT:
377.6 mA

CLASSIFICATIONS:
FM3610 Class I, II, III, Cenelec EN50 020, CSA C22.2 No.157, Short circuit-proof at rated voltage Group A to G

Specifications subject to change without notice
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IQ plus® 310 XPCD

Explosion Proof Weight Indicator

PART # DESCRIPTION

19212 ..... IQ plus® 310 XPCD Indicator

The IQ plus 310 XPCD is built with advanced digital circuitry providing fast, stable and accurate readings in hazardous industrial environments. Highly-sophisticated analog-to-digital conversion, RFI/EMI signal protection and digital filtering provide high-level signal integrity in hazardous industrial environments.

The 310 XPCD features a cast aluminum explosion-proof enclosure certified for use in Class I, Division 1 & 2, Groups C & D; Class II, Division 1 & 2, Groups E, F, & G; NEMA 4, 7CD, 9EFG. Four externally-mounted buttons provide operator interface.

Our exclusive RATTLETRAP™ vibration control eliminates interference from agitators, mixers, blenders and other sources of industrial environment vibration. Now you can achieve stable, accurate weight information, regardless of motion on or around your scale.

Printer and computer communication is available with one full duplex RS-232 port and a simplex RS-232 or 20 mA port. All operation, setup and calibration features can be duplicated from a computer or other controller. Two digital inputs may be used to simulate any two front-panel keys, enabling remote “push-button” control of various weighing operations such as tare, zero or print; consult factory.

Applications

- Class I, Division 1 & 2, Groups C & D; Class II, Division 1 & 2, Groups E, F & G; Class III hazardous environments
- Chemical plants
- Fueling stations

Standard Features

- Cast aluminum explosion-proof enclosure with pre-wired intrinsic safety barriers
- 4 button external: Gross/Net, Tare, Zero, Print
- Bright, bold vacuum fluorescent display (VFD)
- Wall mount
- Two communication ports, (1) simplex, (1) full duplex
- Full duplex port: RS-232: simplex port: RS-232 or 20 mA
- The maximum number of displayed graduations will vary by application; consult factory
- Approximately 1,000,000 graduations internal
- 50 updates per second
- AC powered; no batteries to charge or replace
- R Stahl® intrinsic safety barriers
- RATTLETRAP® vibration control
- Includes 2 sealing fittings, packing and cement

Options/Accessories

Options and accessories for the 310 XPCD may require additional hardware; consult factory with your application and specification needs.

- Parallel BCD output
- Breather drain fittings
- Vinyl organisol coating
- Polyurethane coating

(Specifications on back)

LOAD CELL EXCITATION:
1 350-ohm load cell at 8.5 VDC
4 350-ohm load cells at 5.88 VDC
6 350-ohm load cells at 4.40 VDC

LOAD CURRENT:
Capable of driving 6 350-ohm load cells per channel

INTERCONNECTION CABLE REQUIREMENTS:
6-wire, remote sensing required

ANALOG SIGNAL INPUT RANGE:
0.5 mV/V to 4.0 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduations minimum

INPUT OVERLOAD:
±12V continuous

A/D CONVERSION RATE:
50/second

INTEGRATION TIME:
20 milliseconds

RESOLUTION:
Selectable up to 60,000 displayed graduations
Approximately 1,000,000 graduations internal
The maximum number of allowable displayed graduations will vary by application; consult factory

DISPLAY INCREMENTS:
1, 2, 5

OVER/UNDERRANGE BLANKING:
F.S., F.S.+1d, F.S.+9d, F.S.+2%

OVER/UNDER CAPACITY ANNUNCIATION:
Overload displayed as: - - -
Underload displayed as: _ _ _

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAY:
14-segment vacuum fluorescent, 7 full-digit display

POLARITY INDICATION:
" – " sign

DECIMAL POINTS:
8888888, 888888.8, 88888.88, 8888.888, 888.8888, 88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:
Front panel push-button, optional

FRONT PANEL CONTROL SWITCHES:
Zero, Net/Gross, Tare, Print

FRONT PANEL ANNUNCIATORS:
lb, kg, Preset Tare, Tare in System, Stable, Center of Zero, Gross, Net, Minus, Entry mode

AZM: (ZERO TRACK)
"Gross" mode only

AZM APERTURE:
±2% of selected full scale capacity or 100%, selectable

AZM CAPTURE RANGE:
Selectable: "Off", ±.5, ±1, ±2, or ±3 graduations

DIGITAL FILTERING:
3 separately programmable digital filter parameters with selection 1, 2, 4, 8, 16, 32, 64

MOTION BAND:
1, 2, 3, Off

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line Voltages: 115 or 230 VAC +10%/-15%
Frequency: 50/60 Hz, 12VA maximum
Fusing: 115 VAC: 2 x 0.25A SB (UL/CSA) 5x20mm
230 VAC: 2 x T 125 mA (IEC 127) 5x20mm

DISPLAY CHECK:
All digit segments and annunciators simultaneously illuminated upon application of power

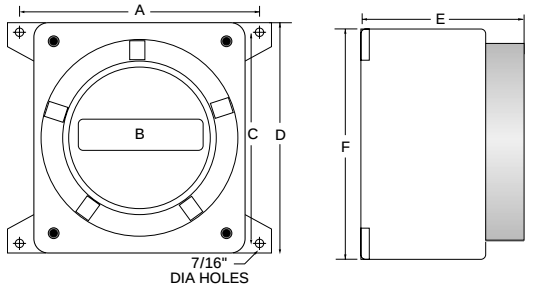
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

ENCLOSURE:
NEMA 4, 7CD, 9EFG housing for Class I, Division 1 & 2, Groups C & D; Class II, Division 1 & 2, Groups E, F & G; Class III hazardous environments

CONDUIT ENTRIES:
3 @ 3/4" - NPT located in bottom side of enclosure 3.625" from mounting plane and centered on 3.5" centers

WEIGHT:
Approximately 44 lb (20 kg)

WARRANTY:
One year limited warranty



DIMENSIONS

A =	12.13" (308.0 mm)	D =	12.0" (304.8 mm)
B =	7.38" (187.3 mm)	E =	8.50" (215.9 mm)
C =	10.75" (273.1 mm)	F =	12.0" (304.8 mm)

CAUTION! The equipment contained within this Explosive Environment section requires greater attention to specification and installation guidelines. Improper specification, installation, or service of these products can result in loss of equipment or serious injury.

Specifications subject to change without notice
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UMC555 XPCD

Explosion Proof Digital Weight Indicator

PART # **DESCRIPTION**

19211 ..... UMC555 XPCD

The UMC555 XPCD is a full-featured explosion proof weight indicator at a very competitive price. The UMC555 XPCD offers the latest in solid state reliability and accuracy, packaged for direct use in Class I and II environments without batteries or trickle charges. UMC555 XPCD indicators are AC powered and feature a bright 0.6" LED display ideal for indoor or outdoor environments.

The UMC555 XPCD model comes complete with R. Stahl® intrinsic safety barriers and can be used with up to 4 350-ohm cells, 8 700-ohm cells, or 10 1,000-ohm strain gauge load cells in Class I, Groups C & D, Class II, Groups E, F & G, or Class III hazardous environments. The unit is also available without barriers for use in Division 2 areas where the customer determines barriers are not necessary.

Applications

- Class I, Division 1 & 2, Groups C & D; Class II, Division 1 & 2, Groups E, F & G and Class III hazardous environments
- Paint plants
- Fertilizer plants

Standard Features

- AC powered, 115 VAC
- Bright 0.6" LED display
- NEMA 4, 7CD, 9EFG enclosure
- Full digital configuration and calibration
- 10,000 displayed graduation, 100,000 internal graduations
- Temperature compensated to comply with NTEP and Canadian guidelines
- Sensitivity to 0.3 µV/graduation
- External “Zero”, “Gross/Net”, “Tare” and “Print” explosion proof push buttons
- RFI/EMI shielding
- Full duplex RS-232, simplex RS-232 and current loop
- 10 updates/second conversion rate with adjustable digital averaging and “auto-averaging”
- Includes 2 sealing fittings, packing and cement

Options/Accessories

Options and accessories for the UMC555 XPCD may require additional hardware; consult factory with your application and specification needs.

- Parallel BCD output
- 0-10 VDC analog output
- 4-20 mA analog output
- Breather drain fittings
- Vinyl organisol coating
- Polyurethane coating

(Specifications on back)

LOAD CELL EXCITATION:
±5 VDC, fixed short-circuit proof

LOAD CURRENT:
Suitable for up to 4 350-ohm, 8 700-ohm or 10 1,000-ohm strain gauge load cells

LOAD CELL CABLING:
6-wire with full remote sensing required through the intrinsic barrier system

ANALOG SIGNAL INPUT RANGE:
0.7 mV/V - 2.0 mV/V (“High Span”)
1.7 mV/V - 3.2 mV/V (“Low Span”)

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduations maximum

TRANSIENT OVERLOAD:
±100 VDC without damage,
100 microsecond duration at 2% duty cycle

UPDATE RATE:
10 updates per second, no averaging

INTEGRATION TIME:
20 millisecond, typical

DISPLAY RESOLUTION:
10,000 displayed grads
100,000 internal grads

DISPLAY INCREMENTS:
1, 2, 5, 10, 20, 50, 100

FULL SCALE CAPACITY:
Programmable 1.0000 x 0.0001 through 999900 x 100

DISPLAY BLANKING:
Overrange blanking occurs at 103% of full scale capacity.
Under-range at -400 displayed graduations, typical

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAY:
Six decades, 0.6" red LED

POLARITY INDICATION:
“ – ” sign LED

DECIMAL POINTS:
Keyboard selectable to the right of any active digit

LB/KG SWITCHING:
Via customer supplied switch with conversion for weight and tare values. May be specified instead of Print Switch

EXTERNAL SWITCHES:
Zero, Gross/Net, Tare, Print

ANNUNCIATORS:
Center Zero, Net, lb, kg, Motion (spot LED with white legend)

AZM: (ZERO TRACK)
“Gross” mode only

AZM CAPTURE BAND:
Selectable: “Off”, ±0.5, ±1.0, or ±3.0 graduations

AZM APERTURE:
Keyboard selectable to ±1.9% or 100% Full Scale

MOTION BAND:
Keyboard selectable to ±1 or ±3 displayed grads, 1 second delay

POWER INPUT:
115/230 VAC, 50-60 Hz

DISPLAY CHECK:
All digit segments and annunciators sequentially illuminated upon power application

SERIAL OUTPUT:
Standard RS-232 full duplex port; RS-232 simplex port; 20 mA simplex current loop

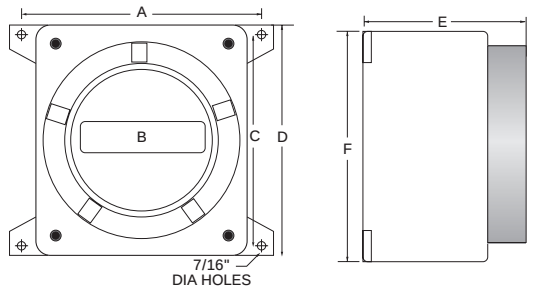
BAUD RATES:
1200, 2400, 4800, 9600 individually selectable for ports 1 and 2

ENCLOSURE:
Cast aluminum explosion proof housing for Class I, Division 1 & 2, Groups C & D; Class II, Division 1 & 2, Groups E, F & G hazardous environments; NEMA 4, 7CD, 9EFG

CONDUIT ENTRIES:
3 @ 3/4" - NPT located in bottom side of enclosure 3.625" from mounting plane and centered on 3.5" centers

WEIGHT:
Approximately 52 lb (23.6 kg)

WARRANTY:
One year limited warranty



DIMENSIONS

A = 12.13" (308.0 mm)	D = 12.0" (304.8 mm)
B = 7.38" (187.3 mm)	E = 8.50" (215.9 mm)
C = 10.75" (273.1 mm)	F = 12.0" (304.8 mm)

CAUTION! The equipment contained within this Explosive Environment section requires greater attention to specification and installation guidelines. Improper specification, installation, or service of these products can result in loss of equipment or serious injury.

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IQ plus® 810 XPCD

Explosion Proof Digital Weight Indicator

PART # **DESCRIPTION**

19213 ..... IQ plus 810 XPCD

The IQ plus 810 XPCD... never before has this level of power been available in a digital weight indicator. Its unique hybrid digital circuitry provides the fastest, most accurate and flexible performance that existing technology can offer. The bright blue-green display is unmistakable even in poor visibility conditions. An optional LED bar graph enhances software capabilities and interactive operation.

Our exclusive RATTLETRAP® vibration control eliminates interference from agitators, mixers, blenders and other sources of industrial environment vibration. Now you can achieve stable, accurate weight information regardless of motion on or around your scale.

The IQ plus 810 XPCD is a batching Automation Control Center™. Its unique programmable setpoint software contains a comprehensive array of batch process possibilities. It's even self-correcting, learning as it works to assure your process integrity. The standard configuration includes 20 setpoint steps, 4 digital outputs and 3 digital inputs, providing more basic power than many custom controllers. An array of hardware and software options offer virtually unlimited solutions for your complex operations.

Applications

- Class I, Division 1 & 2, Groups C & D; Class II, Division 1 & 2, Groups E, F & G and Class III hazardous environments
- Multiple ingredient batching
- Multiple scale operation
- Complex material flow control

Standard Features

- Cast aluminum explosion proof enclosure Class I, Division 1 & 2, Groups C & D; Class II, Division 1 & 2, Groups E, F, & G; NEMA 4, 7CD, 9EFG
- Bright, bold vacuum fluorescent display (VFD)
- Includes four-channel opto22 rack with four output relays
- 27 individual externally mounted buttons for setpoint or fixed tare entry, Gross/Net, Tare, Units and Print
- Time and date
- 20 updates/second
- Advanced digital filtering
- RATTLETRAP® vibration control
- 20 programmable setpoint steps
- Multi-channel accumulators
- Three digital inputs, TTL or dry contact closure
- Four TTL digital outputs expandable to 16—consult factory
- Selectable print data and format, via EDP port
- One communication port; EDP port, full duplex RS-232 or 20 mA selectable; optional—One additional serial port
- Multi-scale control expandable to four scale inputs
- Intrinsic barriers are included for a single scale input; for multi-scale applications, consult factory
- XPCD seal-off kit for four holes
- Front panel keyswitch-protected digital calibration and configuration

Options/Accessories

Options and accessories for the IQ plus 810 XPCD may require additional hardware; consult factory with your application and specification needs.

- Multi-scale input module and expansion board
- Analog output module, 0-10VDC/4-20 mA
- Header in print
- Rate of change
- Peak hold
- Password
- 12-channel digital setpoint output module
- 48-segment LED bar graph module
- 4-channel relay rack
- 16-channel relay rack
- RS-485 serial communication
- 20 mA full duplex EDP port

I/O relay modules sold separately:

- DC input relay module
- Dry contact output relay module (N/O)
- AC output relay module, 115 VAC
- AC input relay module, 115 VAC
- AC output relay module, 230 VAC (N/C)
- AC input relay module, 230 VAC (N/O)

(Specifications on back)

LOAD CELL EXCITATION:
1 350-ohm load cell at 8.5 VDC
4 350-ohm load cells at 5.88 VDC

LOAD CURRENT:
Capable of driving 4 350-ohm load cells per channel

INTERCONNECTION CABLE REQUIREMENTS:
6-wire remote sensing required

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduations minimum
Legal-for-trade recommended minimum
1 microvolt/graduations

INPUT OVERLOAD:
±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:
20/second, typical (standard resolution)
15/second, typical (high resolution)
Added channels reduce conversion rate per channel

RESOLUTION:
Selectable up to 100,000 displayed graduations
Selectable up to 740,000 graduations internal
The maximum number of displayed graduations will vary by application—consult factory

DISPLAY INCREMENTS:
1, 2, 5

UNDERRANGE BLANKING:
-2 mV signal nominal

OVER/UNDER CAPACITY ANNUNCIATION:
Overload displayed as: ---
Underload displayed as: ---

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAY:
Large .55" (14.0mm) 7-digit, 14-segment blue/green VFD

POLARITY INDICATION:
" – " sign

DECIMAL POINTS:
8888888, 888888.8, 88888.88, 8888.888, 888.8888, 88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:
Front panel push button

FRONT PANEL CONTROL SWITCHES:
Zero, Net/Gross, Tare, Units, Print, Disp Accum, Disp R.O.C., Disp Tare, Time/Date, New I.D., Base #, Set Point, Clear

FRONT PANEL ANNUNCIATORS:
lb, kg, R.O.C., Accum, Push Tare, Keyed Tare, Motion, Center of Zero, Gross, Net

SERIAL OUTPUT:
"EDP" port, full duplex RS-232 or 20 mA
"Printer" port, simplex RS-232 and 20 mA current loop - optional

DIGITAL INPUTS:
3 inputs, TTL or switch closure, active low

AZM: (ZERO TRACK)
"Gross" mode only

SETPOINTS:
20 fully programmable steps

AZM APERTURE:
±1.9% of selected full scale capacity or 100%, internal selectable

AZM CAPTURE RANGE:
Selectable to: "Off", ±.5, ±1, or ±3 graduations

ANALOG FILTERING:
Software selectable: 2, 8 Hz typical/3 pole, Off (25 Hz)

DIGITAL FILTERING:
Standard range software selectable: 1,2,4,8,16,32,64,128,Off
RATTLETRAP® high vibration control: 4,8,16,32,64,128

MOTION BAND:
1, 3, 5 or 10 dd

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line Voltages: 115 or 230 VAC +10%/-15%
Frequency: 50 or 60 Hz
Power Consumption: 12 VA with minimum configuration, 30 VA with all options
Fusing: 0.25A SB (UL/CSA) 5x20mm @ 115V operation
0.125A SB (UL/CSA) 5x20mm @ 230V operation

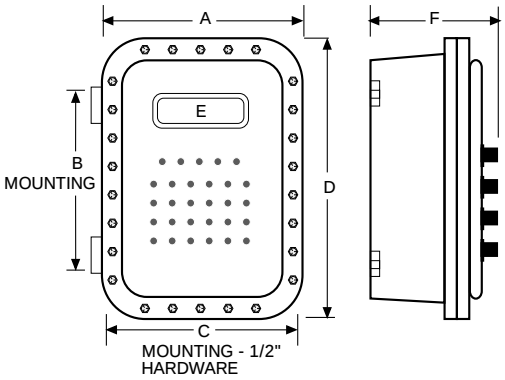
DISPLAY CHECK:
All digit segments and annunciators simultaneously illuminated upon application of power

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

WEIGHT:
Approximately 135 lb (61.2 kg)

WARRANTY:
One year limited warranty

ENCLOSURE:
NEMA 4, 7CD, 9EFG housing for Class I, Division 1 & 2, Groups C & D; Class II, Division 1 & 2, Groups E, F & G; Class III hazardous environments



DIMENSIONS

A = 17.5" (444.5mm)
B = 21.0" (533.4mm)
C = 17.5" (444.5mm)
D = 29.0" (736.6mm)
E = 7.0"x2.0" (177.8mmx50.8mm)
F = 12.0" (304.8mm)

CAUTION! The equipment contained within this Explosive Environment section requires greater attention to specification and installation guidelines. Improper specification, installation, or service of these products can result in loss of equipment or serious injury.

Specifications subject to change without notice
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IQ plus® 810 Purged/Pressurized Hazardous Environment Indicator

The IQ plus 810 indicator has the following approvals:

Measurement Canada Approved

The Purged/Pressurized systems have the following approvals:

UL & CSA approval applies to electrical power control unit only

PART # DESCRIPTION

40081 ..... IQ plus 810 X-Purged/Pressurized Indicator

The strength of the IQ plus 810 indicator is now available for use in hazardous areas without the expense of NEMA 7/9 explosion-proof hardware. If your customer has an existing plant air or inert gas system, the purged IQ plus 810 may be the solution to their hazardous environment control requirements. This indicator is manufactured to the American National Standards Institute/National Fire Protection Association (ANSI/NFPA) Article 496 guidelines for purged and pressurized enclosures. Positive pressure within the enclosure prevents particles, gases, and fibers from entry. A differential pressure switch may be used to remove power when the pressure falls below the acceptable level, such as when the door is opened or the enclosure is penetrated. Three possible configurations are available:

Type X Pressurizing: Reduces the classification within the protected enclosure from Division 1 to Safe

Type Z Pressurizing: Reduces the classification within the protected enclosure from Division 2 to Safe

Note: Plant safety engineers and certified electricians must always be involved in the specification and installation of any explosive environment equipment.

Note: Consult factory for preset factory configuration of enclosure pressure switch cutoffs.

Applications

- Hazardous areas that require setpoint control
- Petroleum refineries, solvent plants, grain dust areas, fueling stations
- Control solutions for Class I, Divisions 1 and 2, Groups C and D; Class II, Divisions 1 and 2, Groups E, F, and G; Class III hazardous environments

Standard Features

- Enclosure manufactured to ANSI/NFPA Article 496 guidelines for purged/pressurized enclosures
- Flow and pressure gauges used to track and display purge status
- Factory-installed safety barriers for hazardous area interface
- Enclosure protection vent with tamper-proof regulator
- SURVIVOR® oil tight switches per NFPA 496
- NEMA 4X stainless steel wall mount enclosure
- Bright, bold Vacuum Fluorescent Display (VFD) with1/4" clear vinyl cover plate per NFPA 496
- Full keyboard for setpoint or fixed tare entry
- Front-panel calibration
- Advanced digital filtering and RATTLETRAP® vibration control
- 20 programmable setpoint steps
- Multi-channel accumulators
- 3 digital inputs, TTL or hard contact closure; 4 TTL digital outputs, expandable to 16
- Multi-scale control expandable to 4 scale inputs, with individual scale setup
- NTEP and Canadian Weights & Measurements certified
- Models with JetPak™ option feature 100 Hz A/D for 100 updates per second; available with single channel unit only

Options/Accessories

19363 ..... 48-segment LED bar graph module
40386 ..... Dual load cell input module (3rd and 4th scale)
19371 ..... Single load cell input module
40385 ..... Expansion board (keyboard connection only)
19357 ..... Analog output module, 0-10 VDC/4-20 mA
19358 ..... Header in print
19359 ..... Rate of change
19360 ..... Peak hold
30547 ..... Password
19372 ..... RS-485 communication
19374 ..... 20 mA full duplex EDP port
36642 ..... 12-channel digital setpoint output mod
19375 ..... Supervisory setpoint configuration access switch
19365 ..... 4-channel relay rack
19373 ..... 16-channel relay rack (Requires #19362 setpoint expander board)
30263 ..... ± Signal barrier
30264 ..... ± Sense barrier
30265 ..... + Excitation barrier
30266 ..... – Excitation barrier
31542 ..... RS-232 communications barrier
31202 ..... 4-20 mA analog output barrier

I/O relay modules sold separately:

15969 .... DC input relay module (N/O)
15970 .... Dry contact output relay (N/O)
22847 .... 230 VAC output relay (N/C)
15971 .... AC output relay module (N/O)
15972 .... AC input relay module (N/O)
36632 .... 230 VAC output relay (N/O)

42100 ..... Additional operating manual (Version 3)

(Specifications on back)

LOAD CELL EXCITATION:
Maintained intrinsically safe by factory-selected barrier set (on up to 4 channels)

INTERCONNECTION CABLE REQUIREMENTS:
6-wire shielded (sense leads required)

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduation minimum
Legal-for-trade recommended minimum 1 microvolt/graduation

CONVERSION RATE AT FULL SCALE:
20/second, typical (standard resolution)
10/second, typical (high resolution)
Added channels reduce conversion rate per channel

RESOLUTION:
Selectable up to 100,000 displayed graduations
Selectable up to 740,000 graduations internal

DISPLAY INCREMENTS:
1, 2, 5

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAY:
Large .55" (14.0mm) 7-digit, 14-segment blue/green VFD

DECIMAL POINTS:
8888888, 888888.8, 88888.88, 8888.888, 888.8888, 88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:
Front-panel push button

FRONT-PANEL CONTROL SWITCHES:
Zero, Net/Gross, Tare, Units, Print, Disp Accum, Disp R.O.C., Disp Tare, Time/Date, New ID, Base #, Set Point, Clear

FRONT-PANEL ANNUNCIATORS:
Lb, Kg, R.O.C., Accum, Push Tare, Keyed Tare, Motion, Center of Zero, Gross, Net

SERIAL OUTPUT:
"EDP" port, full duplex RS-232 or 20 mA optional
"Printer" port, simplex RS-232 and 20 mA current loop

DIGITAL INPUTS:
3 inputs, TTL or switch closure, active low

DIGITAL OUTPUTS:
4 outputs standard, TTL active low, expandable to 16

SETPOINTS:
20 fully-programmable setpoint steps

AZM CAPTURE RANGE:
Selectable to: "Off", ±.5, ±1, or ±3 graduations

ANALOG FILTERING:
Software selectable: 2, 8 Hz typical/3 pole, off (25 Hz)

DIGITAL FILTERING:
Standard range software selectable: 1, 2, 4, 8,16, 32, 64, 128
RATTLETRAP® high vibration control: 4, 8, 16, 32, 64, 128

MOTION BAND:
1, 2, 3, 5, 10, 20, off

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line voltages: 115/230 VAC + 10%/-15%
Frequency: 50 or 60 Hz
Power consumption: 12 watts with minimum configuration, 30 watts with all options
Fusing: 0.25A SB (UL/CSA) 5x20mm @ 115/230 operation
0.125A SB (UL/CSA) 5x20mm @ 240V operation

DISPLAY CHECK:
All digit segments and annunciators simultaneously illuminated upon application of power

OPERATING TEMPERATURE RANGE:
14°F to 104°F (-10°C to 40°C)

PACKAGING:
Enclosure: NEMA 4X FRP wall mount (IQ plus 810HE); NEMA 4X stainless steel (IQ plus 810SS)
Weight: IQ plus 810HE = approximately 17.3 lb (7.8 kg)
IQ plus 810SS = approximately 24 lb (10.9 kg)

APPROVALS:
NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 92-013 A2. Measurement Canada approved, AM-4840

WARRANTY:
One year limited warranty

EPCU Pressurized Unit:

SUPPLY PRESSURE RANGE:
5-120 PSI max.

SUPPLY REQUIREMENTS:
Clean air or inert gas
1.5 oz @ 20 Micron filtration
0.25"/1" @ safe pressure

SYSTEM SUPPLY PORT:
1/4" tube fitting

EPCU CONDUIT PORT SIZE:
1/2" FPT

EPCU POWER REQUIREMENTS:
115 VAC 60 Hz

EPV-1 VENT:
120 PSI maximum to 5 PSI minimum

DIMENSIONS

The dimensions of equipment configurations vary with each application. Consult factory for individual dimensions.

CAUTION! The equipment contained within this Explosive Environment section requires greater attention to specification and installation guidelines. Improper specification, installation, or service of these products can result in loss of equipment or serious injury.

Specifications subject to change without notice
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RoughDeck™ *Rough-n-Ready* System Floor Scale / Indicator Package

(Shown with optional floor stand for indicator. Set-up and calibration is done at Rice Lake Weighing Systems. Package includes 4 x 4 - 5,000 lb or 10,000 lb mild steel RoughDeck only.)

Measurement Canada Approved

Choice of 3 Quality Indicators

IQ plus 355 *IQ plus 390-DC* *IQ plus 590-DC*

(SEE CHART ON BACK OF PAGE FOR PART #'S)

The Rough-n-Ready System is designed and built for high-accuracy industrial applications. By utilizing a rigid 6-inch steel channel frame under a painted steel diamond treadplate deck, the Rough-n-Ready System offers the ultimate in durability. Combined with your choice of three different indicators, this NTEP-certified RoughDeck package provides accuracy, versatility and dependability for all of your shipping/receiving and manufacturing applications.

This product package is available with the IQ plus 355 digital weight indicator for 5-button operation in simple weighing application. If getting power to the scale is a problem, your solution is the handy IQ plus 390-DC featuring battery operation and a simple five-button keypad. For more advanced applications, use the IQ plus 590-DC featuring battery operation and a full numeric keypad for easy configuration.

Configured, corner-trimmed and calibrated for 5000 divisions, this impressive system comes complete with an indicator tilt stand and 20 ft of SURVIVOR EL147HE 6-conductor hostile environment load cell cable.

Available options include a stand-alone indicator pedestal, floor anchor plates, access ramps and pit frames.

Applications

- Legal-For-Trade
- Shipping and receiving
- Manufacturing
- General purpose weighing

Standard Features

- NEMA 4 aluminum J-box
- Welded seal load cells
- All-inclusive FIVE YEAR limited warranty on RoughDeck only
- Heavy-duty industrial design
- Rugged diamond safety treadplate deck
- Rigid structural steel channel frame
- Four adjustable stainless steel SUREFOOT™ support feet
- Signal trim summing board
- Threaded eyebolt holes for easy lifting
- 20 ft SURVIVIOR® EL147HE hostile environment load cell cable

Options/Accessories

RoughDeck HP Floor Scale:

18777 ..... Floor anchor plates, mild steel (set of two)
18778 ..... Floor anchor plates, stainless steel (set of two)
18803 ..... Four drilled deck holes for scale height adjustment
19352 ..... Floor stand for indicator, 36.3" high, suitable for IQ plus® 310A, IQ plus® 355, IQ plus® 390, IQ plus® 590, IQ 700, IQ plus® 800, IQ plus® 510, IQ plus® 710, UMC444 and UMC555
66662 ..... Additional operating manual

Access ramps and pit frames available. See price page FS-5 (P)

IQ plus 355, IQ plus 390-DC, and IQ plus 590-DC Indicator:

43381 ..... Analog output: selectable 0-10V, 4-20 mA, IQ plus 355 only
52948 ..... Panel mount kit, IQ plus 355 only
46030 ..... Revolution™ Scale Software
51980 ..... Additional operating manual, IQ plus 355
43544 ..... Additional operating manual, IQ plus 390-DC
51778 ..... Additional operating manual, IQ plus 590-DC

Consult factory for Canadian Legal-For-Trade packages

(Specifications on back)

ROUGHDECK HP FLOOR SCALE

LOAD CELL CAPACITY:
2500 lb on 5000 lb bases,
4000 lb on 10,000 lb bases

END LOAD CAPACITY:
100% full scale 5000 lb bases
80% on 10,000 lb base

APPROVALS:
NTEP-certified per H-44 at 5,000 Divisions,
UL & C-UL listed, Class III, CC #92-001A5, Measurement Canada Approved, AM-4827, HC Series, Consult factory for canadian part numbers

mV/V OUTPUT:
1.50 - 1.87 mV/V nominal

CABLE LENGTH:
20 ft (6.1 m)

HEIGHT:
3.25" (82.6mm) min

WARRANTY:
Five year limited warranty

ROUGHDECK ROUGH-N-READY SYSTEM

PACKAGE INCLUDES: IQ plus® 355, IQ plus® 390-DC, or IQ plus® 590-DC indicator, RoughDeck 4' x 4' floor scale, 20 ft of hostile environment load cell cable and quick disconnect.

PART#	INDICATOR	Capacity LB (KG)	EST. SHIP WEIGHT
53423	IQ plus 590, 115 VAC	5000 lb (2500 kg)	405 lb
53424	IQ plus 390, 115 VAC	5000 lb (2500 kg)	405 lb
53425	IQ plus 355, 115 VAC	5000 lb (2500 kg)	405 lb
53429	IQ plus 590, 230 VAC	5000 lb (2500 kg)	405 lb
53430	IQ plus 390, 230 VAC	5000 lb (2500 kg)	405 lb
53431	IQ plus 355, 230 VAC	5000 lb (2500 kg)	405 lb
53420	IQ plus 590, 115 VAC	10,000 lb (5000 kg)	405 lb
53421	IQ plus 390, 115 VAC	10,000 lb (5000 kg)	405 lb
53422	IQ plus 355, 115 VAC	10,000 lb (5000 kg)	405 lb
53426	IQ plus 590, 230 VAC	10,000 lb (5000 kg)	405 lb
53427	IQ plus 390, 230 VAC	10,000 lb (5000 kg)	405 lb
53428	IQ plus 355, 230 VAC	10,000 lb (5000 kg)	405 lb

Access ramps and pit frames available.
See price page FS-5 (P)

IQ plus 355

Standard Features
- Large .8" (20.3mm) LED Display
- Configurable analog to digital measurement rate
- Power for eight 350Ω load cells or sixteen 700Ω load cells
- Primary/secondary units configuration: lb, kg, ounces, short tons, metric tons, grams, or none
- NEMA 4X/IP66 stainless steel washdown enclosure
- 5-button operation
- 2 independent communication ports: (1) full duplex, (1) unidirectional or active 20 mA current loop
- Standardized EDP command sets
- Programmable ticket formats up to two 300-character printouts
- Full front-panel digital calibration and configuration
- Universal mounting stand
- Three-stage digital filtering
- Two year limited warranty

ANOTHER REVOLUTION™ SOLUTION

Measurement Canada Approved

OIML *Pending*

IQ plus 390-DC

Standard Features
- NEMA 4X/IP66-rated stainless steel enclosure
- Large 1" (24.5mm), six-digit LCD display
- 6-button operation
- Power for four 350Ω load cells or eight 700Ω load cells
- Configurable units multiplier
- Supports 4- and 6-wire load cell connections
- EDP port for full duplex, RS-232 communications
- Powered by 6 “C” cell alkaline batteries for complete portability (batteries not included)
- AC adapter for 115 or 230 VAC power
- Configurable standby mode that saves battery life
- RATTLETRAP® three-stage digital filtering
- Piece count mode
- Two year limited warranty

ANOTHER REVOLUTION™ SOLUTION

Measurement Canada Approved

IQ plus 590-DC

Standard Features
- Full numeric keypad
- Keyboard entry of piece weight, tare weight, calibration, and sample size
- Display tare button
- Powered by 6 “C” cell alkaline batteries for complete portability (batteries not included)
- Revolution™ Scaleware support
- Three 300-character print ticket formats
- Power for four 350Ω load cells or eight 700Ω load cells
- Supports 4- and 6-wire load cell connections
- EDP port for full duplex, RS-232 communications
- NEMA 4X/IP66-rated stainless steel enclosure
- Large 1" (24.5mm), six-digit LCD display
- AC adapter for 115 or 230 VAC power
- Configurable standby mode to prolong battery life
- RATTLETRAP® three-stage digital filtering
- Configurable units multiplier
- Configurable analog to digital measurement rate
- Self-resetting thermal fuse
- Two year limited warranty

ANOTHER REVOLUTION™ SOLUTION

Measurement Canada Approved

Please refer to indicator section of this catalog for complete indicator specifications

Specifications subject to change without notice
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RoughDeck™ HP

High-Precision Structural Steel Low-Profile Floor Scale

All-Inclusive 5 YEAR! LIMITED WARRANTY

The BEST floor scale in the business is now even BETTER!

Product Enhancements!
- NEMA 4 aluminum J-box
- Welded seal load cells
- Quick disconnect cable at the J-box
- All-inclusive **FIVE YEAR** limited warranty

*Measurement Canada Approved***

(SEE CHART ON BACK OF PAGE FOR PART #s)

The RoughDeck HP's best-in-class features have been enhanced to deliver even more reliability and higher performance than ever before.

The RoughDeck HP's new NEMA 4 aluminum junction box is protected from forks and industrial abuse by a 6" structural steel channel frame and diamond treadplate safety deck. The J-box is also mounted as a handy slide-out tray that eases setup and service access. Cables include sturdy cord grips and quick disconnect for added convenience. In addition, all load cell cables are enclosed in conduit, alleviating danger of rough handling. The RoughDeck HP incorporates the new welded seal RL30000W load cell for increased protection from the elements. All load cells are recessed within the channel for protection on all sides, while maintaining easy access for leveling. What's more, the RoughDeck HP is backed by an all-inclusive five year limited warranty!

Available in 1000 to 30,000 lb capacities, the RoughDeck HP is the industry leader for high-precision weighing in Legal-for-Trade applications.

Applications

- Legal-For-Trade Applications
- High accuracy requirements

Standard Features

NEW!
- Four NTEP-certified alloy steel, welded seal, shear beam load cells
- Unique side-entry "integral" aluminum J-box with quick disconnect
- Five year limited warranty on all parts

- Heavy-duty industrial design
- Rugged diamond safety treadplate deck
- Rigid structural steel channel frame
- Four adjustable stainless steel SUREFOOT™ support feet
- Signal trim summing board
- Threaded eyebolt holes for easy lifting
- Four corner overload stops (Canadian versions only)
- Level bubble (Canadian versions only)
- 20 ft SURVIVIOR® EL147HE hostile environment load cell cable

Options/Accessories

18777 ..... Floor anchor plates, mild steel (set of two)
18778 ..... Floor anchor plates, stainless steel (set of two)
18803 ..... Four drilled deck holes for scale height adjustment
19352 ..... Floor stand for indicator, 36.3" high, suitable for IQ plus® 310A, IQ plus® 355, IQ plus® 390, IQ plus® 590, IQ 700, IQ plus® 800, IQ plus® 510, IQ plus® 710, UMC444 and UMC555
66662 ..... Additional operating manual
MS-1* ..... Mild steel deck with stainless steel load cells, junction box, and hardware
MS-2* ..... Mild steel deck with welded seal stainless steel load cells, junction box, and hardware
MS-3 ..... Mild steel deck with Sensortronics Factory Mutual-Approved load cells, junction box, and hardware (Contact Intrinsically Safe Specialist for WS900 system approved load cells)
MS-4 ..... Mild steel deck with Sensortronics Factory Mutual-Approved junction box and load cells
MS-5* ..... Mild steel deck with Sensortronics Factory Mutual-Approved stainless steel load cells (Contact Intrinsically Safe Specialist for WS900 system approved load cells)
MS-6* ..... Mild steel deck with Sensortronics Factory Mutual-Approved junction box and stainless steel load cells
MS-8* ..... Mild steel deck with Sensortronics Factory Mutual-Approved junction box and HE load cells
MS-9 ..... Mild steel deck with NEMA 4X stainless steel junction box
MS-11 ..... Top access J-box
MS-12 ..... Forklift channel options (up to 5' x 7' 10K, accomodates fork tines no larger than 5" W x 2" H)

Access ramps and pit frames available. See price page FS-5 (P)
** Load cell and junction box substitution.*
*** RoughDeck HP-H scales are not Measurement Canada Approved.*

(Specifications on back)

APPROVALS:
NTEP certified, CC# 92-001A5
Class III, 5000d, Measurement Canada Approved, AM-4827, HC Series

END LOAD CAPACITY
100% full scale to 20,000 lbs
66% full scale at 33,000 lbs

mV/V OUTPUT:
1.50-1.87
mV/V nominal

CABLE LENGTH:
20 ft (6.1m) (for connecting j-box to indicator)

WARRANTY:
Five year limited warranty

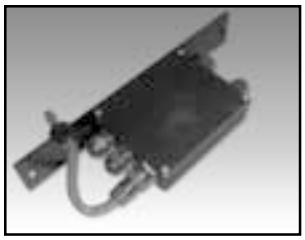
ROUGHDECK HP BASES

U.S NTEP PART #	SIZE (W x L x H)	CAPACITY	SHIP WT
66320*	3' x 3' x 3.5"	1000 lb (500 kg)	232 lb
66319*	4' x 4' x 3.5"	1000 lb (500 kg)	375 lb
66318†	2.5' x 2.5' x 3.5"	2000 lb (1000 kg)	173 lb
66317†	3' x 3' x 3.5"	2000 lb (1000 kg)	232 lb
66316	4' x 4' x 3.5"	5000 lb (2500 kg)	375 lb
66315	4' x 4' x 3.5"	10,000 lb (5000 kg)	375 lb
66314	4' x 5' x 3.5"	5000 lb (2500 kg)	437 lb
66313	4' x 5' x 3.5"	10,000 lb (5000 kg)	567 lb
66312	4' x 6' x 3.5"	5000 lb (2500 kg)	510 lb
66311	4' x 6' x 3.5"	10,000 lb (5000 kg)	656 lb
66310	5' x 5' x 3.5"	5000 lb (2500 kg)	541 lb
66309	5' x 5' x 3.5"	10,000 lb (5000 kg)	696 lb
66308	5' x 6' x 3.5"	5000 lb (2500 kg)	646 lb
66307	5' x 6' x 3.5"	10,000 lb (5000 kg)	821 lb
66306	5' x 7' x 3.5"	5000 lb (2500 kg)	734 lb
66305	5' x 7' x 3.5"	10,000 lb (5000 kg)	929 lb

CANADIAN WEIGHTS & MEASURES CERTIFIED**

66464	3' x 3' x 3.5"	1000 kg	232 lb
66465	4' x 4' x 3.5"	2500 kg	375 lb
66466	4' x 4' x 3.5"	5000 kg	375 lb
66467	5' x 5' x 3.5"	2500 kg	541 lb
66468	5' x 5' x 3.5"	5000 kg	696 lb
66469	5' x 7' x 3.5"	2500 kg	934 lb
66470	5' x 7' x 3.5"	5000 kg	929 lb

** Special load cells and feet to achieve 5000d NTEP certification, please consult factory for additional pricing.*
*** Includes four corner overload stops and level bubble.*
† Not recommended for use with pallet jacks.
Options/Accessories and Access Ramps and Pit Frames available. See price pages FS-2 (P) and FS-5 (P)



The new NEMA 4 aluminum J-box and sturdy cord grips resist wear and tear.

ROUGHDECK HP-H HEAVY CAPACITY*** (MILD STEEL ONLY)

U.S NTEP PART #	SIZE (W x L x H)	CAPACITY	SHIP WT
66474	4' x 4' x 4"	20,000 lb (10,000 kg)	601 lb
66475	4' x 5' x 4"	20,000 lb (10,000 kg)	775 lb
66476	4' x 6' x 4"	20,000 lb (10,000 kg)	926 lb
66477	4' x 7' x 4"	20,000 lb (10,000 kg)	1135 lb
66478	5' x 5' x 4"	20,000 lb (10,000 kg)	926 lb
66479	5' x 6' x 4"	20,000 lb (10,000 kg)	1104 lb
66480	5' x 7' x 4"	20,000 lb (10,000 kg)	1377 lb
66481	6' x 6' x 4"	20,000 lb (10,000 kg)	1319 lb
66482	6' x 8' x 4"	20,000 lb (10,000 kg)	1861 lb
66483	7' x 9' x 4"	20,000 lb (10,000 kg)	2408 lb
66484	7' x 10' x 4"	20,000 lb (10,000 kg)	2959 lb
66485	8' x 10' x 4"	20,000 lb (10,000 kg)	3108 lb
66486	4' x 4' x 4"	30,000 lb (15,000 kg)	675 lb
66487	4' x 5' x 4"	30,000 lb (15,000 kg)	839 lb
66488	4' x 6' x 4"	30,000 lb (15,000 kg)	1071 lb
66489	4' x 7' x 4"	30,000 lb (15,000 kg)	1200 lb
66490	5' x 5' x 4"	30,000 lb (15,000 kg)	1021 lb
66491	5' x 7' x 4"	30,000 lb (15,000 kg)	1448 lb
66492	6' x 6' x 4"	30,000 lb (15,000 kg)	1438 lb
66493	7' x 10' x 4"	30,000 lb (15,000 kg)	3372 lb
66494	8' x 10' x 4"	30,000 lb (15,000 kg)	3699 lb

**** NOTE: RoughDeck HP-H scales are not Measurement Canada Approved.*

Heavy Capacity Options/Accessories and Access Ramps and Pit Frames available. See price pages FS-3 (P) and FS-4 (P)

The RL30000W welded seal load cells are recessed within the channel and protected on all sides. SUREFOOT™ supports provide a superior load introduction surface, reducing extraneous forces which might affect scale accuracy.

Specifications subject to change without notice
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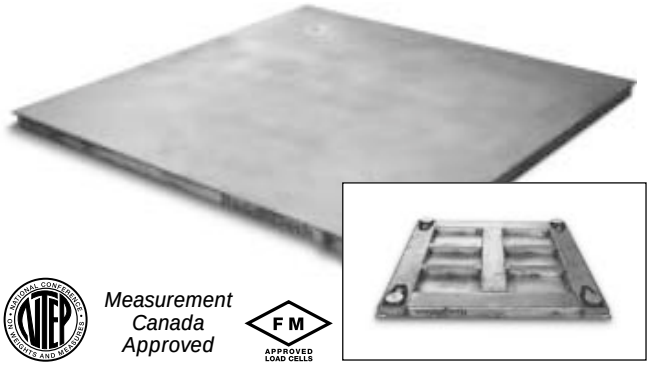
RoughDeck™ SS Stainless Steel Low-Profile Floor Scale



Measurement Canada Approved

(SEE CHART ON BACK OF PAGE FOR PART #'S)

The RoughDeck SS is a stainless steel floor scale, NTEP certified Legal-For-Trade, designed specifically for applications requiring the added corrosion protection of stainless steel. Applications include dry chemical operations, fertilizer plants and other industries which require non-washdown corrosion resistance.

A rigid 6-inch, 304 stainless steel channel frame and smooth top plate provide a durable scale deck. For added corrosion resistance, four NTEP-certified stainless steel load cells and leveling feet, a stainless steel summing junction box and EL147HE hostile environment load cell cable complete the RoughDeck SS package.

As in all RoughDeck floor scales, the channel frame provides added protection by enclosing load cells, cable and junction box inside, away from chemicals and other industrial elements. The scale design allows the following installation options:

- Free standing for portability
- Secured with stainless steel floor anchor plates
- Stainless steel access ramps
- Flush mounted in a shallow pit

Applications

- Legal-For-Trade
- Corrosive dry chemical environments
- Portable or permanent installations
- High-accuracy weighing requirements

Standard Features

- Rugged non-corrosive design
- 304 stainless steel construction
- Four stainless steel NTEP-certified shear beam load cells
- Rigid stainless steel channel frame
- Four adjustable stainless steel SUREFOOT™ support feet
- EL604STA stainless steel NEMA 4X junction box
- 20 ft of SURVIVOR® EL147HE hostile environment load cells cable
- Threaded eyebolt holes for easy lifting

Options/Accessories

18778 ..... Floor anchor plates, stainless steel (set of two)
18803 ..... Four drilled deck holes for scale height adjustment
28740 ..... Floor stand for indicator, 36.3" high, stainless steel, suitable for IQ plus® 310A, IQ plus® 355,IQ plus® 390, IQ plus® 590, IQ plus® 800, IQ700, IQ plus® 510, IQ plus® 710, UMC444 and UMC555
16960 ..... Additional operating manual
S-1* ..... Stainless steel deck with Sensortronics Factory Mutual-Approved stainless steel underdeck (Contact Intrinsically Safe Specialist for WS900 system approved load cells)
S-2* ..... Stainless steel deck with Sensortronics Factory Mutual-Approved junction box and stainless steel load cells
S-3 ..... Stainless steel diamond treadplate safety deck, *Consult Factory*
N/A ..... Canadian Legal-For-Trade versions, *Consult Factory*

Access ramps and pit frames available. See price page FS-7 (P)
** Load cell and junction box substitution.*

The load cells are recessed within the channel and protected on all sides. SUREFOOT™ supports provide a superior load introduction surface, reducing extraneous forces which might affect scale accuracy.

Unique side-entry junction box provides easy access.

(Specifications on back)

APPROVALS:
NTEP certified, CC #92-001A5 Class III 5000d
Measurement Canada Approved, AM-4827,
HCSS Series

END LOAD CAPACITY:
1.50-1.87
mV/V nominal

CABLE LENGTH:
20 ft (6.1 m) (for connecting j-box to indicator)

WARRANTY:
Five year limited warranty

DIMENSIONS

SS BASES

PART #	SIZE (W x L x H)	CAPACITY LB (KG)	SHIP WT LB
18663*	2.5' x 2.5' x 3.5"	2000 lb (1000 kg)	173 lb
46239	3' x 3' x 3.5"	1000 lb (500 kg)	232 lb
18664*	3' x 3' x 3.5"	2000 lb (1000 kg)	232 lb
46240†	4' x 4' x 3.5"	500 lb (225 kg)	375 lb
46241	4' x 4' x 3.5"	1000 lb (500 kg)	375 lb
18665	4' x 4' x 3.5"	5000 lb (2500 kg)	375 lb
18666	4' x 4' x 3.5"	10,000 lb (5000 kg)	490 lb
18667	4' x 5' x 3.5"	5000 lb (2500 kg)	437 lb
18668	4' x 5' x 3.5"	10,000 lb (5000 kg)	567 lb
18671	5' x 5' x 3.5"	5000 lb (2500 kg)	541 lb
18672	5' x 5' x 3.5"	10,000 lb (5000 kg)	696 lb
18676	5' x 7' x 3.5"	10,000 lb (5000 kg)	929 lb

** Not recommended for use with pallet jacks.*
† NTEP certified up to 2500d.
Access ramps and pit frames available.
See price page FS-7 (P)

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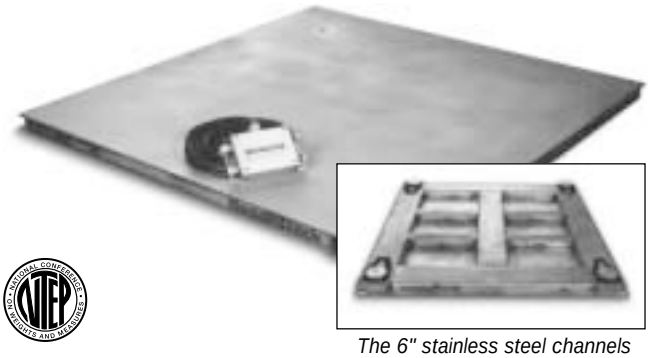
RoughDeck™ HE Hostile Environment Stainless Steel Low-Profile Floor Scale



The 6" stainless steel channels provide superior protection for load cells and cable.

(SEE CHART ON BACK OF PAGE FOR PART #'S)

The RoughDeck HE is a hostile environment, stainless steel floor scale designed specifically for corrosion resistance and long life in demanding washdown and wet corrosive applications.

A 6-inch, 304 stainless steel channel frame and smooth top plate provide a durable scale deck. The HE package provides four stainless steel hermetically sealed load cells, four stainless steel support feet, a stainless steel NEMA 4X summing junction box and EL147HE hostile environment load cell cable.

The stainless steel channel frame provides added protection by enclosing load cell cable and load cells, yet provides easy access for installation and service. The NEMA 4X summing junction box can be remotely mounted up to 10 ft from the scale, keeping sensitive electronic connections away from moisture and chemicals.

The RoughDeck HE design allows the following installation options:

- Free standing for portability
- Secured with stainless steel anchor plates
- Stainless steel access ramps
- Flush mounted in a shallow pit

Applications

- Harsh chemical or washdown environments
- Portable or permanent installations

Standard Features

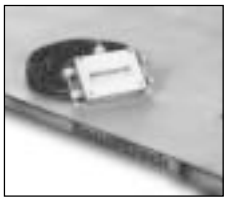
- Rugged washdown design
- 304 stainless steel construction
- Smooth stainless steel deck
- Four stainless steel, welded seal shear beam load cells
- Load cells protected on all four sides
- Rigid 304 stainless steel channel frame
- Remote EL604STA stainless steel NEMA 4X junction box
- Four adjustable stainless steel SUREFOOT™ support feet
- 20 ft of SURVIVOR® EL147HE hostile environment load cell cable
- Threaded eyebolt holes for easy lifting
- FM-approved load cells

Options/Accessories

18778 ..... Floor anchor plates, stainless steel (set of two)
18803 ..... Four drilled deck holes for scale height adjustment
28740 ..... Floor stand for indicator, 36.3" high, stainless steel, suitable for IQ plus® 310A, IQ plus® 355,IQ plus® 390, IQ plus® 590, IQ plus® 800, IQ700, IQ plus® 510, IQ plus® 710, UMC444 and UMC555
16960 ..... Additional operating manual
HE-3 ..... Stainless steel diamond treadplate safety deck, *Consult Factory*

Access ramps and pit frames available. See price page FS-7 (P)

The load cells are recessed within the channel and protected on all sides. SUREFOOT™ supports provide a superior load introduction surface, reducing extraneous forces which might affect scale accuracy.



Remote EL604STA stainless steel NEMA 4X junction box with 20 ft of hostile environment load cell cable.

(Specifications on back)

APPROVALS:
NTEP certified, CC# 92-001A5
Designed to meet or exceed H44,
5000, 10,000 - Class III 5000d
2000 - Class III 4000d

END LOAD CAPACITY:
100% full scale

mV/V OUTPUT:
1.50-1.87 mV/v

CABLE LENGTH:
20 ft (6.1 m)

WARRANTY:
Five year limited warranty

DIMENSIONS

HE BASES

PART #	SIZE (W x L x H)	CAPACITY LB (KG)	SHIP WT LB
18660*	2.5' x 2.5' x 3.5"	2000 lb (1000 kg)	173 lb
18681*	3' x 3' x 3.5"	2000 lb (1000 kg)	232 lb
18682	4' x 4' x 3.5"	5000 lb (2500 kg)	375 lb
18683	4' x 4' x 3.5"	10,000 lb (5000 kg)	490 lb
18684	4' x 5' x 3.5"	5000 lb (2500 kg)	437 lb
18685	4' x 5' x 3.5"	10,000 lb (5000 kg)	567 lb
18688	5' x 5' x 3.5"	5000 lb (2500 kg)	541 lb
18689	5' x 5' x 3.5"	10,000 lb (5000 kg)	696 lb
18693	5' x 7' x 3.5"	10,000 lb (5000 kg)	929 lb

** Not recommended for use with pallet jacks.*
Access ramps and pit frames available.
See price page FS-7 (P)

Specifications subject to change without notice
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AutoLift HE

Hostile Environment Stainless Steel Low Profile Lift Floor Scale

Automatic lifting option for RoughDeck™ HE Series Floor Scales!

PART #	SIZE	CAPACITY
42207	4' x 4'	2000 lb
42208	4' x 4'	5000 lb
42209	4' x 4'	10,000 lb
42211	5' x 5'	2000 lb
42212	5' x 5'	5000 lb
42213	5' x 5'	10,000 lb

Manual drop-in-place safety bar when scale is in upright position.

Ideal for food processing and other applications requiring frequent washdown, the AutoLift HE provides easy underdeck cleaning by using two pneumatic lifting cylinders to raise the scale. Once the deck is raised, a manual safety bar can be positioned and the underdeck area can be thoroughly washed out.

The AutoLift HE features a rugged washdown design, including 304 stainless steel construction and four stainless steel hermetically sealed shear beam load cells. Adjustable SUREFOOT™ support feet provide superior accuracy and repeatability by accommodating side impacts and decreasing extraneous forces on the load cell.

Applications

- Applications where complete cleaning is required

Standard Features

- Rugged washdown design
- 304 stainless steel construction
- Smooth stainless steel deck
- Four stainless steel welded seal shear beam load cells
- Load cells protected on all four sides
- Rigid 304 stainless steel channel frame
- Remote EL604 stainless steel NEMA 4X junction box
- Four adjustable stainless steel SUREFOOT™ support feet
- 20 ft of SURVIVOR® hostile environment load cell cable
- Safety bar
- Requires 85-100 psi air pressure

Options/Accessories

44169 ..... Four drilled deck holes for scale height adjustment

28740 ..... Floor stand for indicator, 36.3" high, stainless steel, suitable for IQ plus® 310A, IQ plus® 355,IQ plus® 390, IQ plus® 590, IQ plus® 800, IQ700, IQ plus® 800, IQ plus® 510, IQ plus® 710, UMC444 and UMC555

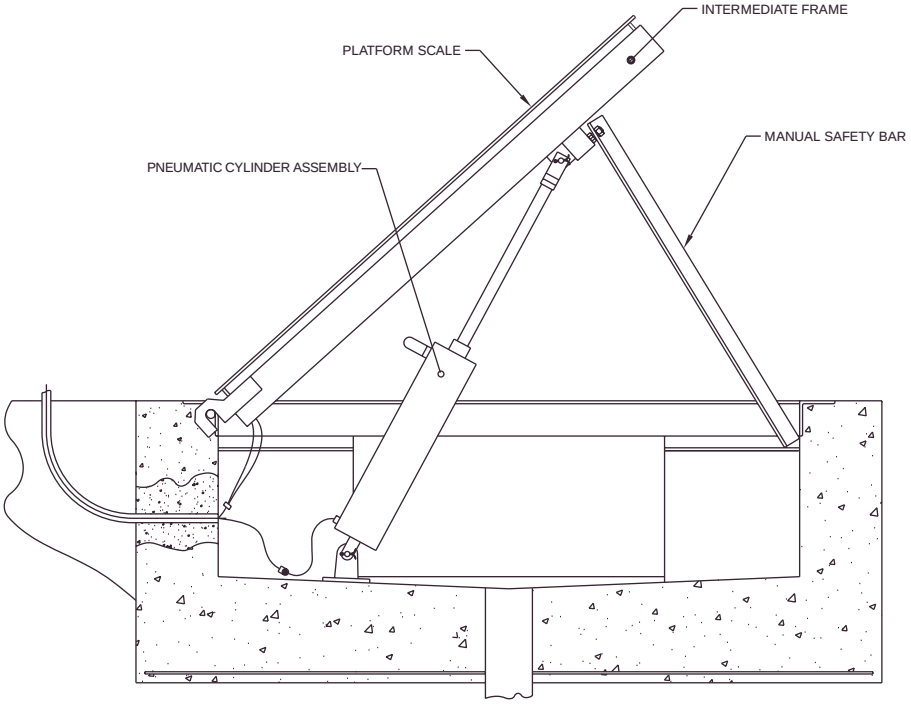
(Specifications on back)

END LOAD CAPACITY:
100% full scale

mV/V OUTPUT:
1.50-1.87 mV/V nominal

CABLE LENGTH:
20 ft (6.1m)

WARRANTY:
Five year limited warranty



Specifications subject to change without notice
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RoughDeck™ QC Quick Clean Stainless Steel Floor Scale

Shown with optional treadplate

(SEE CHART ON BACK OF PAGE FOR PART #'S)

As easy to lift as the hood on your car, the RoughDeck QC provides an efficient mechanism for busy cleanup personnel.

Ideal for food processing and other applications requiring frequent washdown, the RoughDeck QC provides easy underdeck cleaning by using two gas shock lifting cylinders to raise the top of the scale. Once the deck is raised, a manual safety bar can be positioned and the underdeck area can be thoroughly washed out.

The RoughDeck QC features a rugged washdown design, including 304 stainless steel construction and four stainless steel hermetically sealed shear beam load cells. Adjustable SUREFOOT™ support feet provide superior accuracy and repeatability by accommodating side impacts and decreasing extraneous forces on the load cell.

Applications

- Food and chemical processing
- Low-profile pit or above-ground use

Standard Features

- Rugged washdown design
- Smooth, 304 stainless steel top deck
- Four stainless steel welded seal shear beam load cells
- Rigid 304 stainless steel tube frame
- Remote EL604 stainless steel NEMA 4X junction box
- Four adjustable stainless steel SUREFOOT™ support feet
- 20 ft of SURVIVOR® EL147HE hostile environment load cell cable
- Manual drop-in-place safety bar

Options/Accessories

28740 ..... Floor stand for indicator, 36.3" high, stainless steel, suitable for IQ plus® 310A, IQ plus® 355, IQ plus® 390, IQ plus® 590, IQ plus® 800, IQ700, IQ plus® 510, IQ plus® 710, UMC444 and UMC555

Consult factory for this additional option:

- Treadplate stainless steel top deck

Access ramps and pit frames available. See price page FS-8 (P)

(Specifications on back)

APPROVALS:
NTEP certified per H-44, Class III 5000d; CC# 92-001A5

END LOAD CAPACITY:
100% full scale

mV/V OUTPUT:
1.50-1.87 mV/V nominal

CABLE LENGTH:
20 ft (6.1m) (for connecting j-box to indicator)

REMOTE J-BOX:
Stainless steel enclosure can be located up to 10 ft away from scale

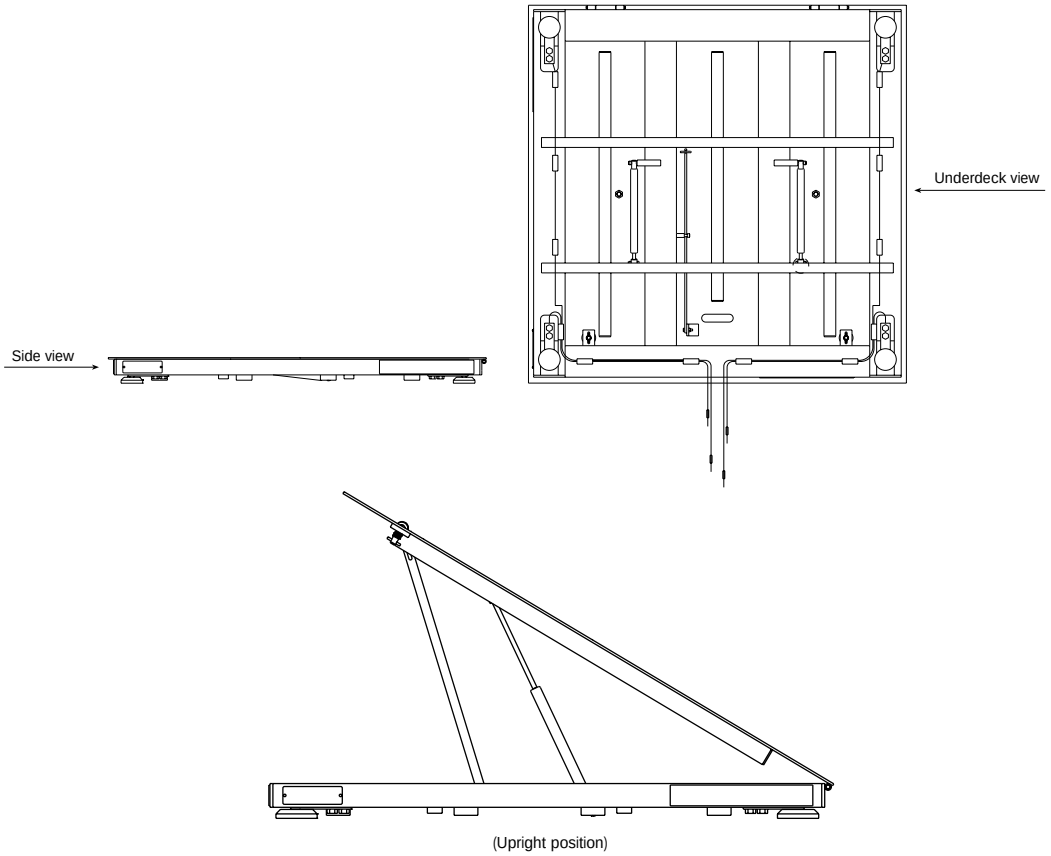
WARRANTY:
Five year limited warranty

DIMENSIONS

QC BASES

PART #	SIZE (W x L x H)	CAPACITY LB (KG)	SHIP WT LB
50402	2.5' x 2.5' x 3.5"	2000 lb (1000 kg)	158 lb
50403	3' x 3' x 3.5"	2000 lb (1000 kg)	208 lb
50404	4' x 4' x 3.5"	2000 lb (1000 kg)	338 lb
50405	4' x 4' x 3.5"	5000 lb (2500 kg)	338 lb
50406	4' x 4' x 4.5"	10,000 lb (5000 kg)	447 lb
50407	4' x 5' x 3.5"	2000 lb (1000 kg)	406 lb
50408	4' x 5' x 4.5"	5000 lb (2500 kg)	406 lb
50409	4' x 5' x 4.5"	10,000 lb (5000 kg)	540 lb
50410	4' x 6' x 4.5"	2000 lb (1000 kg)	477 lb
50411	4' x 6' x 4.5"	5000 lb (2500 kg)	477 lb
50412	4' x 6' x 5.5"	10,000 lb (5000 kg)	637 lb
50413	5' x 5' x 4.5"	2000 lb (1000 kg)	478 lb
50414	5' x 5' x 4.5"	5000 lb (2500 kg)	478 lb
50415	5' x 5' x 4.5"	10,000 lb (5000 kg)	637 lb
50416	5' x 7' x 5.5"	2000 lb (1000 kg)	705 lb
50417	5' x 7' x 4.5"	5000 lb (2500 kg)	705 lb
50418	5' x 7' x 4.5"	10,000 lb (5000 kg)	908 lb

Access ramps and pit frames available. See price page FS-8 (P)



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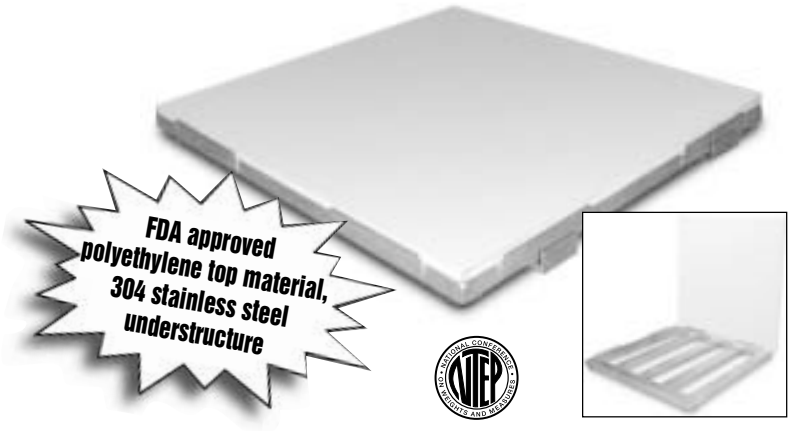
RoughDeck™ SD Sanitary Deck Floor Scale



SEE CHART ON BACK OF PAGE FOR PART #'S)

An easy-to-lift polyethylene top plate on the RoughDeck SD provides an efficient mechanism for busy cleanup personnel.

Ideal for food processing and other applications requiring frequent washdown, the RoughDeck SD provides easy underdeck cleaning by lifting the plastic top to gain access to the stainless steel understructure.

The RoughDeck SD features a rugged design, including 304 stainless steel construction and four stainless steel hermetically-sealed shear beam load cells. Adjustable SUREFOOT™ support feet provide superior accuracy and repeatability by accommodating side impacts and decreasing extraneous forces on the load cell.

Applications

- Washdown environment

Standard Features

- Rugged washdown design
- 304 stainless steel construction
- Removable polyethylene deck (Deck weight: 80 lb (36.6 kg) on 4' x 4' size)
- Four stainless steel welded seal shear beam load cells
- Load cells protected on all four sides
- Side brackets to hold deck during washdown
- Remote EL604 stainless steel NEMA 4X/IP66 junction box
- Four adjustable stainless steel SUREFOOT™ support feet
- 20 ft (6m) of SURVIVOR® EL147HE hostile environment load cell cable

Options/Accessories

28740 ..... Floor stand for indicator, 36.3" high, stainless steel, suitable for IQ plus® 310A, IQ plus® 350, IQ plus® 355, IQ plus® 390, IQ plus® 590, IQ plus® 800, IQ700, IQ plus® 510, IQ plus® 710, UMC444 and UMC555

Consult factory for these additional options:

- Access ramps
- Pit frames

IMPORTANT NOTE:
Applications where oily substances may be spilled could cause the deck to become slippery—caution should be used. The RoughDeck QC is recommended in these instances.

(Specifications on back)

END LOAD CAPACITY:
100% full scale

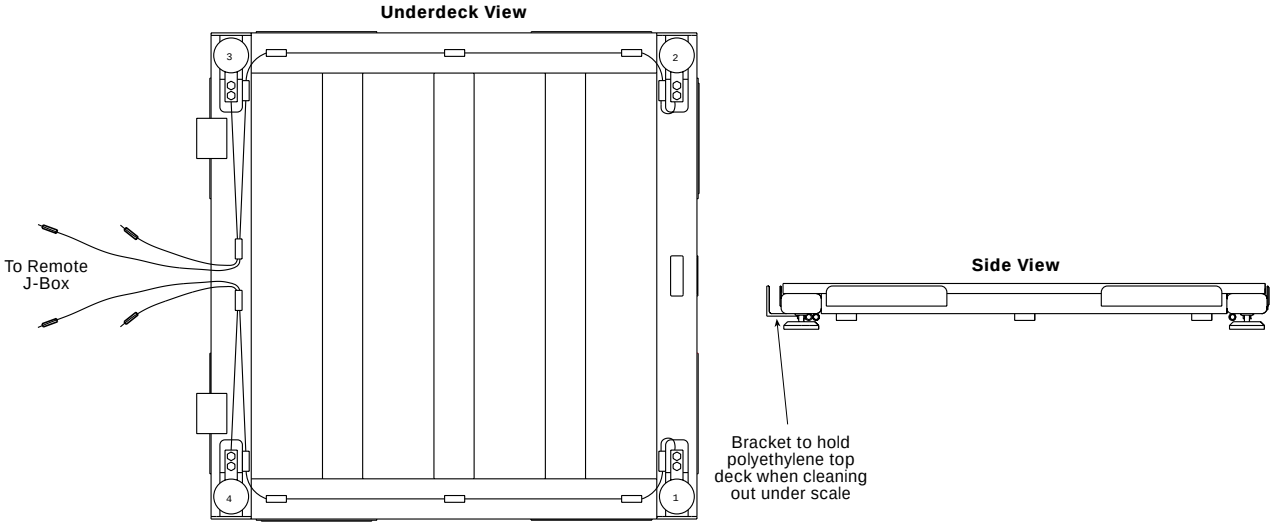
mV/V OUTPUT:
1.50-1.87 mV/V nominal

CABLE LENGTH:
20 ft (6.1m) (for connecting j-box to indicator)

REMOTE J-BOX:
Stainless steel enclosure can be located up to 10 ft away from scale

APPROVALS:
NTEP certified per H-44, Class III 5000d; CC# 92-001A5

WARRANTY:
Two year limited warranty



DIMENSIONS

PART #	SIZE (W x L x H)	CAPACITY LB (KG)	SHIPT WT LB
50385	2.5' x 2.5' x 4.4"	2000 lb (1000 kg)	158 lb
50386	3' x 3' x 4.4"	2000 lb (1000 kg)	208 lb
50387	4' x 4' x 4.4"	2000 lb (1000 kg)	338 lb
50388	4' x 4' x 4.4"	5000 lb (2500 kg)	338 lb
50389	4' x 4' x 5.4"	10,000 lb (5000 kg)	447 lb
50390	4' x 5' x 4.4"	2000 lb (1000 kg)	406 lb
50391	4' x 5' x 5.4"	5000 lb (2500 kg)	406 lb
50392	4' x 5' x 5.4"	10,000 lb (5000 kg)	540 lb
50393	4' x 6' x 5.4"	2000 lb (1000 kg)	477 lb
50394	4' x 6' x 5.4"	5000 lb (2500 kg)	477 lb
50395	4' x 6' x 6.4"	10,000 lb (5000 kg)	637 lb
50396*	5' x 5' x 5.4"	2000 lb (1000 kg)	478 lb
50397*	5' x 5' x 5.4"	5000 lb (2500 kg)	478 lb
50398*	5' x 5' x 5.4"	10,000 lb (5000 kg)	637 lb
50399*	5' x 7' x 6.4"	2000 lb (1000 kg)	705 lb
50400*	5' x 7' x 6.4"	5000 lb (2500 kg)	705 lb
50401*	5' x 7' x 6.4"	10,000 lb (5000 kg)	908 lb

Do not use this scale in a pit application.

** Constructed of two pieces of polyethylene to make up the top deck.*

IMPORTANT NOTE:
Applications where oily substances may be spilled could cause the deck to become slippery—caution should be used. The RoughDeck QC is recommended in these instances.

Specifications subject to2 change without notice
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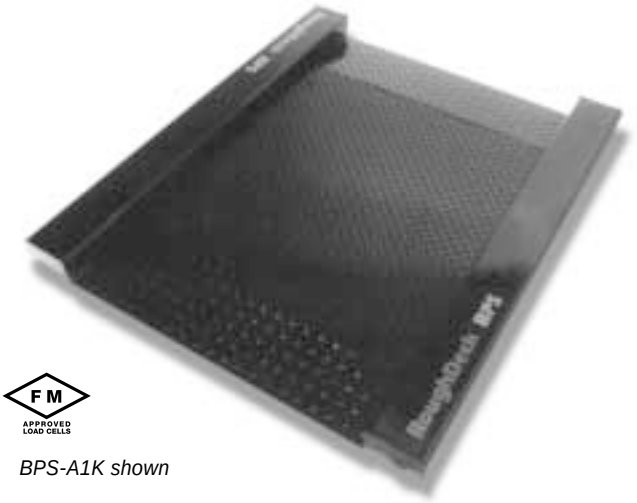
RoughDeck™ BPS Low-Profile Barrel and Drum Scale



BPS-A1K shown

PART #	DESCRIPTION
26953	BPS-A1K mild steel
26952	BPS-B1K mild steel portable
26954	BPS-C1K stainless steel
26951	BPS-D1K stainless steel, portable
26955	BPS-E1K hostile environment stainless steel
26950	BPS-F1K hostile environment stainless steel, portable

Built with rugged dependability for a lifetime of heavy use, this versatile roll-on barrel scale doubles as a pallet scale with its 3.5" high live rails supporting oversized loads for straddle weighments.

Barrels can be safely rolled onto the 1.5" high nonskid deck, or wheeled up the 9" ramp section with a barrel dolly. Pallets and wider items up to 1,000 lb can be loaded on the live rails with a forklift. To prevent damage, the load cells and cables are recessed into structural steel channels. Even the 4-channel junction box is fully protected in the frame, yet is easily accessed.

For special applications, choose the RoughDeck BPS constructed of 304 stainless steel for hostile environments, or portable models in mild or stainless steel with lockdown wheels and integral indicator stand. Hermetically-sealed stainless steel load cells are available for corrosive or washdown applications, and Factory Mutual-approved load cells can be specified for explosive environments.

Applications

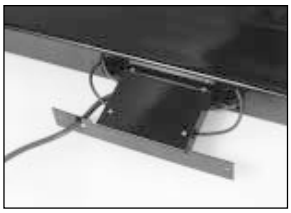
- Barrel weighing
- Industrial processing
- Shipping and receiving

Standard Features

- 1,000 lb (500 kg) capacity
- Easy-access integral live ramps
- Low-profile design
- Diamond treadplate safety deck
- Side-entry integral junction box with 4-channel trimming
- Four adjustable SUREFOOT™ support feet
- Portable models include wheel assemblies and integral indicator stand with transport grips
- Stainless steel models feature stainless steel junction box, load cells and SUREFOOT™ support feet
- Stainless steel HE models utilize welded seal load cells for harsh washdown environments
- FM-approved load cells

Options/Accessories

19352	Stand-alone (floor mount) indicator stand, 36.3" high, mild steel
28740	Stand-alone (floor mount) indicator stand, 36.3" high,stainless steel
28001	Scale-mounted indicator stand with transport grips, mild steel
28002	Scale-mounted indicator stand with transport grips, stainless steel
18777	Floor anchor plates, mild steel (set of two)
18778	Floor anchor plates, stainless steel (set of two)
28082	Additional operating manual



Fully-enclosed junction box and slide-out tray provide superior protection and quick access.

BPS-D1K stainless steel, portable, scale-mounted indicator stand with transport grips shown at right.

(Specifications on back)

FULL SCALE CAPACITY:
1000 lb (500 kg)

END LOAD CAPACITY:
100% full scale

LOAD CELL CAPACITY:
1000 lb (500 kg)

RATED EXCITATION:
10 VDC - 15 VDC max

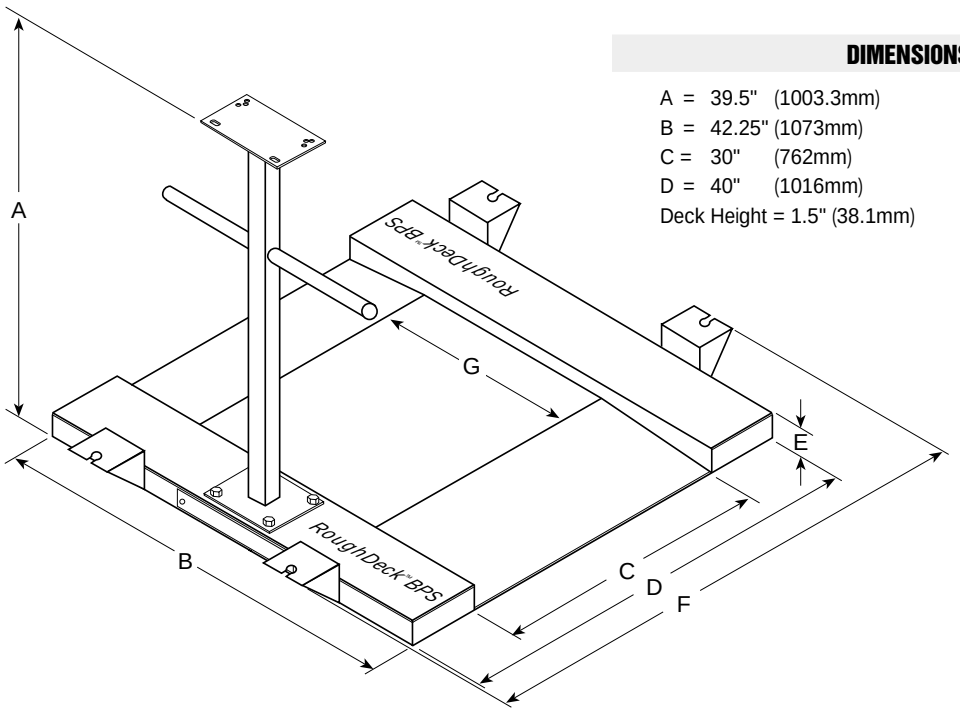
BRIDGE RESISTANCE:
Four 350-ohm load cells

mV/V OUTPUT:
0.75 mV/V

CABLE LENGTH:
20 ft (6.1 m)

SHIPPING WEIGHT:
Stationary: 180 lb (81.6 kg)
Portable: 215 lb (97.6 kg)

WARRANTY:
One year limited warranty



DIMENSIONS

A =	39.5"	(1003.3mm)	E =	3.5"	(88.9mm)
B =	42.25"	(1073mm)	F =	48"	(1219mm)
C =	30"	(762mm)	G =	24"	(609.6mm)
D =	40"	(1016mm)			

Deck Height = 1.5" (38.1mm)

Specifications subject to change without notice
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Altralite™ Portable Low-Profile Floor Scale

The Altralite is a highly portable, aluminum, low-profile floor scale well suited for a variety of industrial weighing environments. An efficient frame design delivers exceptional durability and accuracy. It is the ideal solution for applications that demand an easily-transportable floor scale.

The 120 lb Altralite features a 6-inch channel frame and diamond treadplate safety deck with a durable black anodized finish. Four tool steel load cells, SUREFOOT™ support feet, convenient slide-out junction box and SURVIVOR® hostile environment load cell cable complete the package.

Applications

- Rental applications
- Portable installations

Standard Features

- Low-profile design
- Black anodized aluminum construction
- 6" (152.4mm) channel frame
- Diamond treadplate safety deck
- Four alloy steel shear beam load cells
- Side-entry integral junction box
- 20 ft of SURVIVOR® hostile environment load cell cable
- Four adjustable SUREFOOT™ support feet

Options/Accessories

22290 ..... Additional operating manual

The channel-frame design provides strength and unequalled load cell, cable and junction box protection. Junction box cable may be wrapped around a cleat for convenient and safe storage during transportation. Adjustable SUREFOOT support feet offer superior load introduction.

A fully-enclosed junction box summing box and slide-out tray provide protection and quick access for service and installation.

(Specifications on back)

END LOAD CAPACITY:
100% full scale

MV/V OUTPUT:
1.50-1.87 mV/V nominal

CABLE LENGTH:
20 ft (6.1 m)

HEIGHT:
3.25 in (82.6mm) min

WARRANTY:
One year limited warranty

DIMENSIONS

ALTRALITE BASES

PART #	CAPACITY KB (KG)	SIZE (W x L x H)	SHIP WT LB (KG)
18677	5000 lb (2599 kg)	4' x 4' x 3.5"	150 lb (68 kg)

Specifications subject to change without notice
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DeckHand™ Portable Scale

Shown with optional ramp.
Indicator sold separately; shown for illustration only.

Measurement Canada Approved

(SEE CHART ON BACK OF PAGE FOR PART #'S)

Designed for easy one-person operation, the DeckHand portable floor scale features two large rubber wheels for easy movement on rough floors. Unlike portable scales that rest on four wheels, the DeckHand's wheels only touch the floor when the unit is tilted back for movement. This means the weighing platform remains stable even on uneven floors.

Available in painted steel or stainless steel, these rugged scales stand up to tough conditions. Two opposed off-center load cells provide superior accuracy without the need for leveling feet. IQ plus Series indicators can be easily column-mounted with slight modifications. A mounting bracket for our models IQ plus® 310A, IQ plus® 390-DC, IQ plus® 510, IQ plus® 710, and IQ plus® 800 indicators come standard on the column assembly.

Applications

- General industrial applications
- Rental fleets

Standard Features

- Mild steel or stainless wheeled frame, base, and indicator stand
- 500 lb, 1000 lb, 2000 lb capacity
- Standard indicator mount with integral handles for the IQ plus® 310A, IQ plus® 390-DC, IQ plus® 510, IQ plus® 590, IQ plus® 710, and IQ plus® 800 indicators, painted or stainless steel available
- Large rubber wheels simplify movement on uneven floors
- One-person portability
- RL1260 aluminum load cells

Options/Accessories

41292** ... Clam shell for 1260 load cell, stainless steel
43376* ..... Ramp assembly, 500/1000 lb
43377* ..... Ramp assembly, stainless steel, 500/1000 lb
43378* ..... Ramp assembly, 2000 lb
43379* ..... Ramp assembly, stainless steel, 2000 lb
43978 ..... Additional operating manual
** Ramp sizes = 25" x 27"*
*** Must order in quantities of two*

Optional Indicator Mounts

41371 ..... Mounting bracket for IQ 700 IS, stainless steel, 4" x 9.12"
41373 ..... Mounting bracket for IQ 700 IS, painted steel, 4" x 9.12"
43938 ..... Mounting bracket for CW 80-I, stainless steel, 4" x 7.5"

(Specifications on back)

APPROVALS:
NTEP certified, CC# 98-004, Class III, 2500d;
Measurement Canada approved, AM-5218

END LOAD CAPACITY:
100% end loading

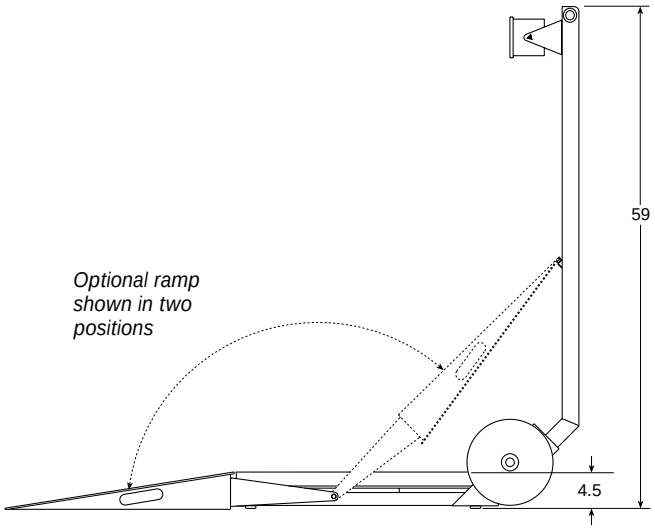
mV/V OUTPUT:
2 mV/V

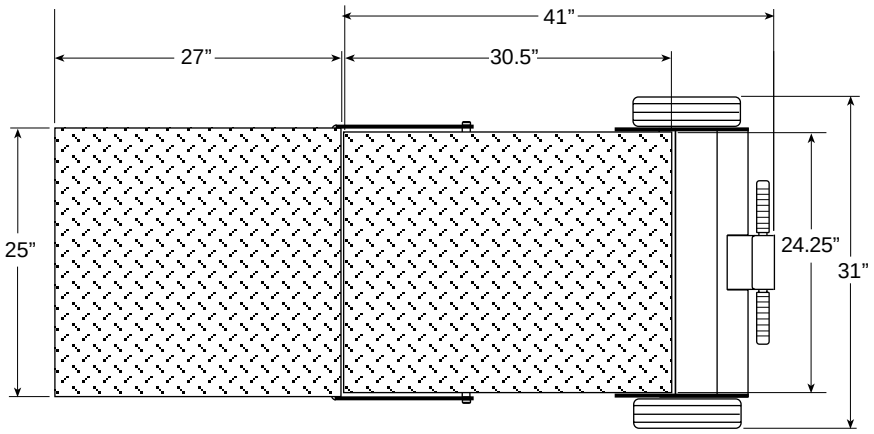
CABLE LENGTH:
9' 10" (3 m)

HEIGHT:
Weighing platter: 4.5" H when in weigh mode

COLUMN HEIGHT:
59"

WARRANTY:
One year limited warranty





DIMENSIONS

DECKHAND

PART #	MODEL	OVERALL SIZE (W x L x H)	CAPACITY LB (KG)	APPROXIMATE SHIP WEIGHT LB (KG)	APPROXIMATE SHIP WEIGHT LB (KG)
41293	DH-500	31" x 41" x 4.5"	500 lb (226.8 kg)	336 lb (152 kg)	380 lb (172 kg) w/ramp & indicator
41294	DH-1000	31" x 41" x 4.5"	1000 lb (453.6 kg)	356 lb (161 kg)	400 lb (181 kg) w/ramp & indicator
41295	DH-2000	31" x 41" x 4.5"	2000 lb (907.2 kg)	373 lb (169 kg)	430 lb (195 kg) w/ramp & indicator
41296*	DH-500	31" x 41" x 4.5"	500 lb (226.8 kg)	336 lb (152 kg)	380 lb (172 kg) w/ramp & indicator
41297*	DH-1000	31" x 41" x 4.5"	1000 lb (453.6 kg)	356 lb (161 kg)	400 lb (181 kg) w/ramp & indicator
41298*	DH-2000	31" x 41" x 4.5"	2000 lb (907.2 kg)	373 lb (169 kg)	430 lb (195 kg) w/ramp & indicator

* *Stainless steel*

Specifications subject to change without notice
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RoughDeck™ FXB Flexure Lever Floor Scale

(SEE CHART ON BACK OF PAGE FOR PART #'S)

Designed to handle extreme motion and shock loading, the RoughDeck FXB provides accurate, reliable weighments under the most abusive operating conditions.

The RoughDeck FXB will perform with consistent accuracy in shock-loading, end-loading or corner-loading conditions where other scales will not survive. Spring steel flexures and heavy-duty lever system transmit load forces to one centralized load cell, providing for extreme durability and lower overall operating and maintenance costs.

The RoughDeck FXB comes standard with rugged all-steel construction, providing stability and durability. NTEP-certified models range in size and capacity from 24" x 24" 500 lb to 72" x 96" 10,000 lb.

The RoughDeck FXB flexure lever floor scale delivers accuracy and reliability in environments with motion, shock-loading and vibration.

Applications

- Industrial processing
- Heavy-duty weighing
- Pallet weighing
- Shipping and receiving

Standard Features

- Rugged all-steel construction
- Unique flexure design filters motion and shock loading
- Spring steel flexures
- One Rice Lake Weighing Systems brand RL20000 series nickel-plated S-beam load cell and plated wire rope
- NTEP-certified models in sizes 24" x 24" 500 lb through 72" x 96" up to 10,000 lb capacity

Options/Accessories

32958 ..... Additional operating manual

Consult factory for pricing and availability:

- Fork lift skids
- Fork lift skids with indicator column
- Epoxy-painted base
- Stainless steel platform cover
- All stainless steel construction
- Special sizes, heights and capacities

(Specifications on back)

APPROVALS:
NTEP certified, CC# 95-062, Class III 5000d

ELECTRICAL:

EXCITATION:	10 VDC - 15 VDC max
NONLINEARITY:	.03% FS
HYSTERISES:	.02% FS
BRIDGE RESISTANCE:	350 ohms
OUTPUT:	3.0 mV/V

LOAD CELL CONSTRUCTION:
High-alloy tool steel, double plated chrome over nickel

END LOADING CAPACITY:
100% of scale capacity

SAFE OVERLOAD CAPACITY:
150% of scale capacity

WARRANTY:
Two year limited warranty

DIMENSIONS

FXB BASES	PART #	CAPACITY LB (KG)	L x W x H INCHES	SHIP WT LB
* FXB-1824-.5K	33134	500 lb (250 kg)	18" x 24" x 6.62"	120 lb
* FXB-1824-1K	33066	1000 lb (500 kg)	18" x 24" x 6.62"	125 lb
* FXB-1830-1K	33136	1000 lb (500 kg)	18" x 30" x 6.62"	130 lb
* FXB-2424-.5K	33067	500 lb (250 kg)	24" x 24" x 6.62"	135 lb
* FXB-2424-1K	33068	1000 lb (500 kg)	24" x 24" x 6.62"	155 lb
* FXB-3030-.5K	33138	500 lb (250 kg)	30" x 30" x 6.62"	177 lb
* FXB-3030-1K	33069	1000 lb (500 kg)	30" x 30" x 6.62"	177 lb
* FXB-3030-1.5K	33139	1500 lb (750 kg)	30" x 30" x 6.62"	197 lb
* FXB-3030-2K	33070	2000 lb (1000 kg)	30" x 30" x 8.25"	280 lb
* FXB-3636-1K	33140	1000 lb (500 kg)	36" x 36" x 8.25"	320 lb
* FXB-3636-2K	33071	2000 lb (1000 kg)	36" x 36" x 8.25"	390 lb
* FXB-3636-5K	33072	5000 lb (2500 kg)	36" x 36" x 8.25"	420 lb
* FXB-3846-1K	33141	1000 lb (500 kg)	38" x 46" x 8.25"	610 lb
* FXB-4848-2K	33073	2000 lb (1000 kg)	48" x 48" x 8.25"	690 lb
* FXB-4848-5K	33074	5000 lb (2500 kg)	48" x 48" x 8.25"	725 lb
* FXB-4848-10K	33075	10,000 lb (5000 kg)	48" x 48" x 9.25"	780 lb
FXB-4848-20K	33076	20,000 lb (10,000 kg)	48" x 48" x 13.25"	1020 lb
* FXB-4860-5K	33077	5000 lb (2500 kg)	48" x 60" x 8.25"	935 lb
* FXB-4860-10K	33078	10,000 lb (5000 kg)	48" x 60" x 9.25"	1015 lb
* FXB-4872-5K	33149	5000 lb (2500 kg)	48" x 72" x 9.25"	1005 lb
* FXB-4872-10K	33080	10,000 lb (5000 kg)	48" x 72" x 9.25"	1085 lb
FXB-4872-20K	33150	20,000 lb (10,000 kg)	48" x 72" x 13.25"	1435 lb
* FXB-6060-5K	33081	5000 lb (2500 kg)	60" x 60" x 8.25"	1110 lb
* FXB-6060-10K	33082	10,000 lb (5000 kg)	60" x 60" x 9.25"	1180 lb
FXB-6060-20K	33152	20,000 lb (10,000 kg)	60" x 60" x 13.25"	1500 lb
* FXB-6072-10K	33083	10,000 lb (5000 kg)	60" x 72" x 10.25"	1290 lb
* FXB-6084-10K	33156	10,000 lb (5000 kg)	60" x 84" x 13.25"	1400 lb
FXB-6084-20K	33157	20,000 lb (10,000 kg)	60" x 84" x 13.25"	1900 lb
* FXB-7296-10K	33159	10,000 lb (5000 kg)	72" x 96" x 13.25"	1920 lb
FXB-7296-20K	33160	20,000 lb (10,000 kg)	72" x 96" x 15.25"	2340 lb
FXB-84108-20K	33163	20,000 lb (10,000 kg)	84" x 108" x 15.25"	3550 lb
FXB-96120-30K	33166	30,000 lb (15,000 kg)	96" x 120" x 19.50"	5600 lb

* *NTEP certified*

Specifications subject to change without notice
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SURVIVOR® FB Series Electronic Flexure Base Floor Scale

(SEE CHART ON BACK OF PAGE FOR PART #'S)

The SURVIVOR FB features a unique flexure design that transmits all force via stainless steel flexures. The load is transferred from the levers to the load cell by a wire rope assembly, resulting in greater stability, increased weighment accuracy and a base that is more resistant to shock-loads and vibration.

The FB base utilizes “through pivot head loading.” This exclusive Rice Lake Weighing Systems feature loads the flexures for optimal signal sensitivity and places the load tubes well into the base corners to prevent deck tipping.

Setup can be accomplished in a matter of minutes by simply backing off six bolts and connecting the load cell cable to your meter. The SURVIVOR FB can be used with any Rice Lake Weighing Systems indicator.

Applications

- Industrial processing
- Heavy-duty weighing
- Pallet weighing
- Shipping and receiving

Standard Features

- One S-type, double-plated load cell
- Rugged all-steel construction
- Unique flexure design filters motion and shock loading
- Stainless steel flexures
- NTEP certified

Options/Accessories

19352 ..... Floor stand for indicator, suitable for IQ plus® 310A, IQ700, UMC444 & UMC555
16940 ..... Additional operating manual

Fork Lift Skid with fixed pedestals:

18747 ..... FBP48, 48" (1219.2mm) wide
18748 ..... FBP60, 60" (1524.0mm) wide
18749 ..... FBP72, 72" (1828.8mm) wide
18750 ..... FBP84, 84" (2133.6mm) wide

Consult factory for additional options:

- Hot dipped galvanized coating
- Stainless steel construction
- Stainless steel load cell
- Special sizes, heights and capacities available upon request

(Specifications on back)

APPROVALS:
NTEP certified, CC# 91-138, Class III 5000d

ELECTRICAL:

EXCITATION:	10 VDC - 15 VDC max
NONLINEARITY:	.03% FS
HYSTERISES:	.02% FS
BRIDGE RESISTANCE:	350 ohms
OUTPUT:	3.0 mV/V

LOAD CELL CONSTRUCTION:
High-alloy tool steel, double plated chrome over nickel

END LOADING CAPACITY:
100% of scale capacity

SAFE OVERLOAD CAPACITY:
150% of scale capacity

WARRANTY:
Two year limited warranty

DIMENSIONS

FXB BASES	PART #	CAPACITY LB (KG)	L x W x H INCHES	SHIP WT LB
FB2424-500	18696	500 lb (250 kg)	24" x 24" x 7.25"	180 lb
FB2424-1000	18697	1000 lb (500 kg)	24" x 24" x 7.25"	180 lb
FB3030-1000	18728	1000 lb (500 kg)	30" x 30" x 7.25"	215 lb
* FB3030-2000	18733	2000 lb (1000 kg)	30" x 30" x 8.25"	232 lb
FB3030-5000	18730	5000 lb (2500 kg)	30" x 30" x 8.00"	225 lb
* FB3636-3000	18698	3000 lb (1500 kg)	36" x 36" x 8.25"	275 lb
FB4848-3000	18732	3000 lb (1500 kg)	48" x 48" x 8.00"	740 lb
* FB4848-5000	18699	5000 lb (2500 kg)	48" x 48" x 8.00"	740 lb
* FB4848-10,000	18700	10,000 lb (5000 kg)	48" x 48" x 10.00"	770 lb
* FB4848-20,000	18701	20,000 lb (10,000 kg)	48" x 48" x 13.50"	1175 lb
* FB4860-5000	18702	5000 lb (2500 kg)	48" x 60" x 10.00"	850 lb
* FB4860-10,000	18703	10,000 lb (5000 kg)	48" x 60" x 10.00"	888 lb
* FB4860-20,000	18704	20,000 lb (10,000 kg)	48" x 60" x 13.50"	1300 lb
* FB4872-5000	18705	5000 lb (2500 kg)	48" x 72" x 11.25"	1275 lb
* FB4872-10,000	18706	10,000 lb (5000 kg)	48" x 72" x 11.25"	1325 lb
* FB6060-5000	18708	5000 lb (2500 kg)	60" x 60" x 10.00"	1025 lb
* FB6060-10,000	18709	10,000 lb (5000 kg)	60" x 60" x 10.00"	1045 lb
* FB6060-20,000	18710	20,000 lb (10,000 kg)	60" x 60" x 13.50"	1400 lb
* FB6072-20,000	18712	20,000 lb (10,000 kg)	60" x 72" x 13.50"	1575 lb
* FB6084-10,000	18713	10,000 lb (5000 kg)	60" x 84" x 11.25"	1600 lb
* FB6084-20,000	18714	20,000 lb (10,000 kg)	60" x 84" x 13.50"	1850 lb
FB7272-30,000	18717	30,000 lb (15,000 kg)	72" x 72" x 17.75"	2000 lb
FB8484-30,000	18722	30,000 lb (15,000 kg)	84" x 84" x 15.50"	2900 lb
FB96120-30,000	18727	30,000 lb (15,000 kg)	96" x 120" x 19.75"	4700 lb

** NTEP certified*

FORK LIFT SKID WITH FIXED PEDESTALS

PART #	WIDTH IN (MM)	SHIP WT LB (KG)
18747	48" (1219.2mm)	52 lb (23.6 kg)
18748	60" (1524.0mm)	64 lb (29.1 kg)
18749	72" (1828.8mm)	75 lb (34.1 kg)
18750	84" (2133.6mm)	86 lb (39.0 kg)

Specifications subject to change without notice
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IQ plus® 310A Digital Weight Indicator

Measurement Canada Approved

PART # DESCRIPTION

22986 ..... IQ plus 310A w/tilt stand
22987 ..... IQ plus 310A w/panel mount
22988 ..... IQ plus 310A
36069 ..... IQ plus 310A w/Allen-Bradley Remote I/O & tilt stand
22989 ..... IQ plus 310A NEMA 4 w/tilt stand
22990 ..... IQ plus 310A NEMA 4 w/panel mount
22991 ..... IQ plus 310A NEMA 4
36071 ..... IQ plus 310A NEMA 4, w/Allen-Bradley Remote I/O w/tilt stand
32709 ..... IQ plus 310A, 230 VAC w/tilt stand
36070 ..... IQ plus 310A, 230 VAC, w/Allen-Bradley Remote I/O w/tilt stand

It's a fact…industry requires tough, high-speed equipment. The IQ plus 310A is built tough with an all-steel enclosure, available in standard or NEMA 4 versions, for extra long life in industrial environments.

A simple five-button front panel and bright, bold display provide easy operation and monitoring. Two digital inputs offer "remote" pushbutton control of any two of the five front panel keys and keypad lockout.

Fully compatible with Allen-Bradley (A-B) Remote I/O and Profibus DP, the IQ plus 310A provides a fast, simple and affordable networking solution for open access to other measurement and control devices.

With a speed of 50 updates/second typical, the IQ plus 310A can be configured for a variety of applications. Advanced digital filtering and selectable display update rates make the unit ideal for standard and high-vibration applications.

Two standard serial ports provide an interface to peripherals such as printers and computers. Unique formattable data communications allow for positioning of weight data on a ticket.

Applications

- Straight weighing
- Truck scales
- Shipping and receiving
- Mechanical conversions
- Panel mounting

Standard Features

- 50 updates/second
- Selectable display update rate
- 5-button operation
- Selectable units: lb, kg, ton, T, gram, grain, oz
- Steel enclosure with two-part epoxy finish
- Bright, bold Vacuum Fluorescent Display (VFD)
- Full front-panel digital calibration and configuration
- Universal mounting stand
- Two communication ports, (1) simplex, (1) full duplex Printer port selectable RS-232 or 20 mA current loop, RS-232 for the EDP port
- Two inputs for remote operation of any front-panel key or keypad lockout
- RATTLETRAP® vibration control

Options/Accessories

35888 ..... Allen-Bradley Remote I/O, 115 VAC (external)
36593 ..... Allen-Bradley Remote I/O, 230 VAC (external)
49974 ..... PROFIBUS® DP Interface, 115 VAC (external)
49975 ..... PROFIBUS® DP Interface, 230 VAC (external)
30352 ..... Panel mount
19355 ..... BCD Output, 115 VAC (external)
19366 ..... Load cell port quick connect
19367 ..... Serial port quick connect
22979 ..... Additional operating manual

NOTE: Because A-B Remote I/O and Profibus DP interface with programs written by non-RLWS parties, please consult factory for latest technical updates before quoting.

(Specifications on back)

EXCITATION VOLTAGE:
10 ± 0.5 VDC, 6 x 350Ω load cells or 12 x 700Ω load cells

LOAD CURRENT:
175 mA maximum (6 x 350Ω load cells)

LOAD CELL CABLE REQUIREMENTS:
4/6 wire selective with jumpers

ANALOG SIGNAL INPUT RANGE:
0.5 mV/V - 3.5 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduations minimum

INPUT OVERLOAD PROTECTION:
±12 volt continuous

MEASUREMENT RATE:
50 updates/second typical

SYSTEM LINEARITY:
Within 0.01% of FS

RESOLUTION:
Internal: Approximately 1,000,000 graduations
Display: Selectable up to 60,000 dd

DISPLAY:
Large .55" (14.0mm), 14-segment blue/green vacuum fluorescent, 7 full digit display (VFD). Decimal point available at each digit.

LB/KG SWITCHING:
Front panel pushbutton

FRONT-PANEL CONTROL SWITCHES:
Zero, Net/Gross, Tare, Units, Print

STATUS ANNUNCIATORS:
Tare, entered tare, standstill, net, gross, center of zero, minus sign, lb, kg, entry mode

KEYBOARD:
5-key flat membrane, tactile feel stainless domes

SERIAL OUTPUT:
Both Ports: EDP (Full duplex): RS-232
Printer Port (Simplex): RS-232 or 20 mA. 8 data bits, no parity; 7 data bits, even parity; 7 data bits, odd parity
Baud Rates: 19200, 9600, 4800, 2400, 1200

DIGITAL INPUTS:
2 inputs, TTL or switch closure, Active Low

DIGITAL FILTER:
3 separately programmable digital filter parameters with selections of 1, 2, 4, 8, 16, 32, 64

CALIBRATION METHOD:
Software

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line Voltages: 115 or 230 VAC +10%/-15%
Frequency: 50/60 Hz
Power Consumption: 11W maximum, 12 VA maximum
Fusing: 100-120 VAC—2 x 0.25A SB (UL/CSA) 5 x 20mm
220-240 VAC—2 x 0.125 A (IEC127) 5 x 20mm

RFI PROTECTION:
Signal, excitation and sense lines protected

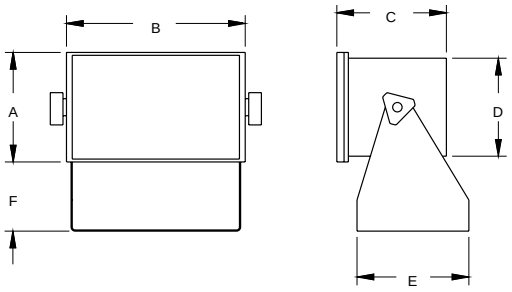
OPERATING TEMPERATURE:
-10°C to 40°C (14°F to 104°F)

RATING/MATERIAL:
Steel with black 2-part epoxy finish

WEIGHT:
Approximately 9.0 lb (4.1 kg)

APPROVALS:
NTEP certified per H-44, at 10,000 Divisions, Class III/IIIL, CC# 91-132A3. Measurement Canada approved, AM-4838, Class III/IIIHD, III at 10,000 Divisions and IIIHD at 20,000 Divisions. UL and CSA listed.

WARRANTY:
One year limited warranty



DIMENSIONS

A =	4.80" (121.9mm)	D =	4.31" (109.5mm)
B =	7.75" (196.9mm)	E =	4.85" (123.2mm)
C =	5.10" (129.5mm)	F =	3.25" (82.6mm)

Specifications subject to change without notice
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IQ plus® 355 Digital Weight Indicator

Super Bright LED Display!

Measurement Canada Approved

cULus LISTED

OIML Pending

ANOTHER REVOLUTION SOLUTION

CE Pending

PART # DESCRIPTION

51968 ..... IQ plus 355, 115 VAC
66729 ..... IQ plus 355, 230 VAC, CE marked/OIML approved

The IQ plus 355 is a product built to outlast and outperform any indicator in its class.

Providing the ultimate protection is an all stainless steel NEMA 4X/IP66 washdown enclosure that means extra-long life even in the harshest conditions. This cost-effective indicator also reduces operator error and accelerates productivity with an extra-large 6-digit LED display.

The IQ plus 355 drives up to eight 350-ohm load cells for use in multi-cell applications such as truck scales. It also features three-stage digital filtering, virtually eliminating vibration interference and providing stable, accurate weight data regardless of the environment. A simple five-button front panel provides easy operation, and full calibration and configuration.

Two independent communication ports provide full EDP and print ticket programmability—a feature that is enhanced by Revolution™ Scale Software. This unique Windows®-based software allows the IQ plus 355 to easily program up to two 300-character ticket formats. In addition, the two standard serial ports allow it to be remotely configured and calibrated using Revolution Scaleware.

Applications

- Straight weighing
- Agricultural
- Truck scales
- Floor and bench scales
- Tank weighing

Standard Features

- Large .8" (20.3mm) Light Emitting Diode (LED) Display
- Configurable analog to digital measurement rate
- Power for eight 350Ω load cells or sixteen 700Ω load cells
- Primary/secondary units configuration: lb, kg, ounces, short tons, metric tons, grams, or none
- NEMA 4X/IP66 stainless steel washdown enclosure
- 5-button operation
- 2 independent communication ports: (1) full duplex, (1) unidirectional or active 20 mA current loop
- Standardized EDP command sets
- Programmable ticket formats up to two 300-character printouts
- Full front-panel digital calibration and configuration
- Universal mounting stand
- Three-stage digital filtering
- Consecutive transaction numbering

Options/Accessories

43381 ..... Analog output: selectable 0-10V, 4-20 mA
52948 ..... Panel mount kit
46030 ..... Revolution™ Scale Software
51980 ..... Additional operating manual

IQ plus 355 print ticket examples

(Specifications on back)

LINE VOLTAGES:
115 or 230 VAC

FREQUENCY:
50 or 60 Hz

POWER CONSUMPTION:
70 mA @ 115 VAC (8W)
35 mA @ 230 VAC (8W)

FUSING:
2 x 160 mA (115 VAC) or 2 x 80 mA (230 VAC)
Slo-Blo radial lead subminiature fuses

FULL SCALE INPUT SIGNAL:
4.5 mV/V (max)

LOAD CELL EXCITATION:
10 ± 0.5 VDC, 8 x 350Ω load cells or 16 x 700Ω load cells

SENSE AMPLIFIER:
Differential amplifier with 4- and 6-wire sensing

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 4.5 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 µV/graduation minimum,
1.5 µV/grad recommended

INPUT IMPEDANCE:
200 MΩ, typical

NOISE (REF TO INPUT):
0.3 µV p-p with digital filters at 4-4-4

INTERNAL RESOLUTION:
308,000 internal graduations

DISPLAY RESOLUTION:
100,000 displayed graduations

MEASUREMENT RATE:
30, 15, 7 1/2, 3 3/4 per second

FILTERING:
RATTLETRAP® 3-level software filtering

SYSTEM LINEARITY:
Within 0.01% of full scale

ZERO STABILITY:
150 nV/°C, maximum

SPAN STABILITY:
3.5 ppm/°C, maximum

CALIBRATION METHOD:
Software, constants stored in EEPROM

COMMON MODE VOLTAGE:
.95 V, referred to earth

INPUT OVERLOAD:
± 12 V continuous, static discharge protected

ANALOG OUTPUT:
Voltage output: 0-10 VDC
Load resistance: 1KΩ minimum
Current output: 4-20 mA
External loop resistance: 500Ω maximum

DIGITAL INPUTS:
2 inputs with 8 functions to select from

DIGITAL FILTERS:
3 filters, software selectable

EDP PORT:
Full duplex RS-232

PRINTER PORT:
Output-only RS-232 or active 20 mA current loop

BOTH PORTS:
9600, 4800, 2400, 1200, 600, 300 bps; 7 or 8 data bits; even, odd or no parity

PRINT OUTPUT STRINGS:
300 character user programmable gross string
300 character user programmable net string

DISPLAY:
0.8" (20.3mm), 6-digit Super Red Light Emitting Diode (LED) display, 7-segment, number digits

ANNUNCI'S, 4 UNIT DESCRIPTORS

ADDITIONAL SYMBOLS:
Designators for: center of zero, stand still, gross, net center of zero, standstill, lb, kg, oz, g

KEYBOARD:
5-key flat membrane panel

CONSECUTIVE NUMBER:
Selectable start point of "0" or "1" to 999,999

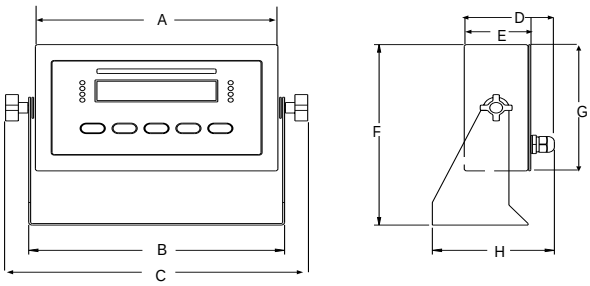
OPERATING TEMPERATURE:
-10° to 40°C/14° to 104°F (legal)
-10° to 50°C/14° to 122°F (industrial)

WEIGHT:
6.4 lb (2.9 kg)

RATING/MATERIAL:
Enclosure: NEMA 4X/IP66, heavy gauge stainless steel

APPROVALS:
NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 97-130A1; Measurement Canada approved, AM-5213, Class III/IIIHD at 10,000 Divisions; UL & CUL listed, CE pending, OIML pending

WARRANTY:
Two year limited warranty



DIMENSIONS

A = 9.50"	(241.3mm)	E = 2.75"	(69.9mm)
B = 10.02"	(254.5mm)	F = 8.57"	(217.7mm)
C = 11.80"	(299.7mm)	G = 6.00"	(152.4mm)
D = 3.67"	(93.2mm)	H = 3.85"	(97.8mm)

Specifications subject to change without notice
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IQ plus® 390-DC Battery Powered Digital Weight Indicator

Now Available! Livestock Weighing Option!

Measurement Canada Approved

Pending

LISTED

ANOTHER REVOLUTION SOLUTION

PART #	DESCRIPTION
48815	IQ plus 390-DC, Battery powered with 115 VAC wall adapter
50064	IQ plus 390-DC, Battery powered with 230 VAC wall adapter
66727	IQ plus 390-DC, Battery powered, CE marked (voltage adapter sold separately)

Featuring DC operation, a huge 1-inch, six-digit LCD display, and a stainless steel NEMA 4X/IP66 enclosure, the IQ plus 390-DC delivers heavy-duty performance without a heavy-duty price.

With a battery life in excess of 300 hours utilizing one load cell, the IQ plus 390-DC not only outperforms rivals but enhances productivity by reducing operator error with its easy to read display. And unlike most competitive units, the IQ plus 390-DC features a piece count mode that allows the indicator to serve as a part of a portable counting scale system. For added efficiency, it includes a configurable standby mode that saves battery life and an AC adapter for flexible operation.

The IQ plus 390-DC is encased in a stainless steel NEMA 4X/IP66 enclosure for long lasting performance regardless of environment. In addition, three 300-character ticket formats are easily programmed using Revolution™ Scale Software. This unique Windows®-based software also allows simple remote calibration and configuration of the IQ plus 390-DC.

Suitable for multi-cell applications, the IQ plus 390-DC runs on standard C-cell alkaline batteries and drives up to four 350-ohm load cells. It also incorporates RATTLE-TRAP® three-stage digital filtering that provides stable, accurate weight data regardless of the environment. A six-button panel provides simple operation, calibration, and configuration.

Applications

- Washdown environments
- Portable scales
- Warehousing
- Floor and bench scales
- Agricultural
- Portable counting

Standard Features

- NEMA 4X/IP66-rated stainless steel enclosure
- Large 1" (24.5mm), six-digit Liquid Crystal Display (LCD)
- 6-button operation
- Power for four 350Ω load cells or eight 700Ω load cells
- Configurable units multiplier
- Supports 4- and 6-wire load cell connections
- EDP port for full duplex, RS-232 communications
- Powered by 6 “C” cell alkaline batteries for complete portability (batteries not included)
- AC adapter for 115 or 230 VAC power
- Configurable standby mode that saves battery life
- RATTLETRAP® three-stage digital filtering
- Piece count mode

Options/Accessories

65738 ..... Livestock weighing program, AW 1.02
46030 ..... Revolution™ Scale Software
48820 ..... Additional operating manual

(Specifications on back)

POWER:
9 VDC, provided by 6 “C” cell alkaline batteries or AC adapter

POWER CONSUMPTION:
100 mA (using 4 x 350Ω load cells),
25 mA typical (1 load cell)

FULL SCALE INPUT SIGNAL:
Up to 17mV

EXCITATION VOLTAGE:
5 ± 0.25 VDC, 4 x 350Ω or 8 x 700Ω load cells

SENSE AMPLIFIER:
Differential amplifier with 4- and 6-wire sensing

INPUT RANGE:
-2.5 mV — 22.5 mV or -.5 mV/V — 4.5 mV/V

SENSITIVITY:
0.3 µV/graduation minimum
1.5 µV/grad recommended

INPUT IMPEDANCE:
200 MΩ

INTERNAL RESOLUTION:
1,000,000 counts

DISPLAY RESOLUTION:
100,000dd

MEASUREMENT RATE:
30, 15, 7 1/2, 3 3/4 per second

SYSTEM LINEARITY:
Within 0.01% of full scale

ZERO STABILITY:
155 nV/°C, maximum

SPAN STABILITY:
4.0 ppm/°C, maximum

CALIBRATION METHOD:
Software, constants stored in EEPROM

COMMON MODE VOLTAGE:
2.5 ± .25 VDC

INPUT OVERLOAD:
± 12 V continuous, static discharge protected

DIGITAL SPECIFICATIONS:
Digital Filter: RATTLETRAP® software filtering

SERIAL COMMUNICATIONS:
EDP/Printer Port: Full Duplex RS-232

OPERATOR INTERFACE:
Display: 1" (24.5mm) 6-digit Liquid Crystal Display (LCD)
Annunciators: Lb, Kg, PC (piece count mode), gross, net, standstill, center of zero, tare, low battery
Keyboard: 6-key flat membrane panel

OPERATING TEMPERATURE:
14° to 104°F/-10° to 40°C (legal)
14° to 122°F/-10° to 50°C (industrial)

WEIGHT:
3.13 lb (1.42 kg)

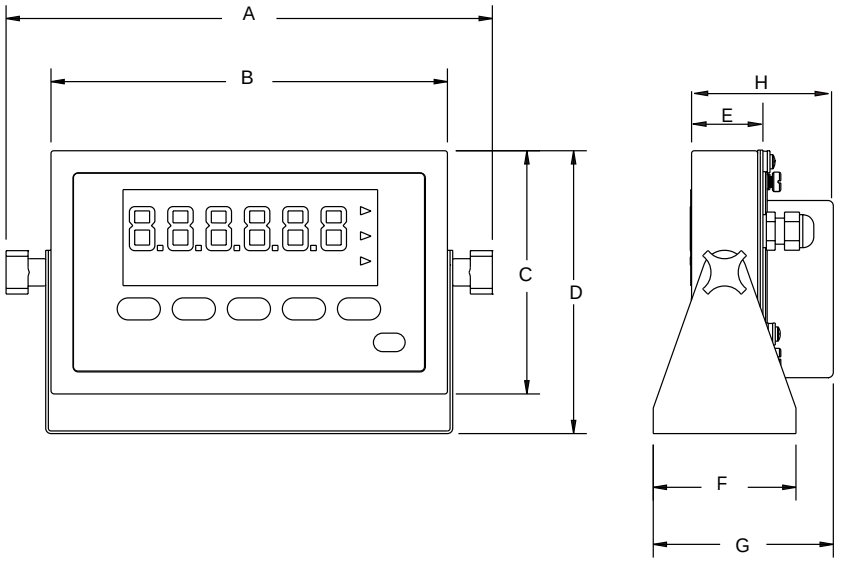
RATING/MATERIAL:
NEMA 4X/IP66, stainless steel

APPROVALS:
NTEP certified, per H-44, Class III/IIIL, CC# 98-203A1
Measurement Canada approved, AM-5300, Class III/IIIHD, III at 10,000 Divisions and IIIHD at 20,000 Divisions;
CE pending, UL & CUL listed

WARRANTY:
Two year limited warranty

DIMENSIONS

A =	11.04" (280.4mm)	E =	1.62" (41.1mm)
B =	9.0" (228.6mm)	F =	3.24" (82.3mm)
C =	5.52" (140.2mm)	G =	4.09" (103.9mm)
D =	6.42" (163.1mm)	H =	3.0" (76.2mm)



Specifications subject to change without notice
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IQ plus® 590-DC Battery Powered Digital Weight Indicator

Measurement Canada Approved

Pending

LISTED

ANOTHER REVOLUTION™ SOLUTION

PART #	DESCRIPTION
52486	IQ plus 590-DC, battery powered with 115 VAC wall adapter
52485	IQ plus 590-DC, battery powered with 230 VAC wall adapter
66728	IQ plus 590-DC, battery powered, CE marked (voltage adapter sold separately)

Take full advantage of your weighing system with the new IQ plus 590-DC. Featuring C-cell battery power and a full numeric keypad, this handy unit makes setup and operation a snap! From tare entry to counting, the IQ plus 590-DC allows numeric entry directly from the keypad, saving time by eliminating the need to scroll and toggle.

The IQ plus 590-DC has a superior battery life of over 300 hours, meaning weeks or months of worry free operation! And with a stainless steel NEMA 4X/IP66 enclosure, you can rely on top performance in any environment. It's the perfect solution for outdoor weighing systems, portable warehouse scales, and material handling applications.

The IQ plus 590-DC's prominent LCD display shows up to six numerals in large one-inch digits for easy character recognition. When left idle, the unit prolongs battery life by using a configurable standby mode. This unique indicator even serves as a portable counting scale in piece count mode with sample size or average piece weight entry. Plus, an AC adapter is provided to prolong battery life when power is available.

In environments where vibration is a concern, the IQ plus 590-DC includes RATTLETRAP® three-stage digital filtering and selectable measurement rates, ensuring accurate weighments anywhere, anytime.

Applications

- Washdown environments
- Portable scales
- Warehousing
- Floor and bench scales
- Agricultural
- Portable counting

Standard Features

- Full numeric keypad
- Keyboard entry of piece weight, tare weight, calibration, and sample size
- Display tare button
- Powered by 6 "C" cell alkaline batteries for complete portability (batteries not included)
- Revolution™ Scaleware support
- Three 300-character print ticket formats
- Power for four 350Ω load cells or eight 700Ω load cells
- Supports 4- and 6-wire load cell connections
- EDP port for full duplex, RS-232 communications
- NEMA 4X/IP66-rated stainless steel enclosure
- Large 1" (24.5mm), six-digit Liquid Crystal Display (LCD)
- AC adapter for 115 or 230 VAC power
- Configurable standby mode to prolong battery life
- RATTLETRAP® three-stage digital filtering
- Configurable units multiplier
- Configurable analog-to-digital measurement rate
- Self-resetting thermal fuse

Options/Accessories

46030 ..... Revolution™ Scale Software
51778 ..... Additional operating manual

(Specifications on back)

POWER:
9 VDC, provided by 6 C-cell alkaline batteries or AC adapter

POWER CONSUMPTION:
<100mA

FULL SCALE INPUT SIGNAL:
Up to 17mV

EXCITATION VOLTAGE:
5 ± 0.25 VDC, 4 x 350Ω or 8 x 700Ω load cells

SENSE AMPLIFIER:
Differential amplifier with 4- and 6-wire sensing

INPUT RANGE:
-2.5 mV — 22.5 mV

SENSITIVITY:
0.3 µV/graduation minimum
1.5 µV/grad recommended

INPUT IMPEDANCE:
200 MΩ

INTERNAL RESOLUTION:
1,000,000 counts

DISPLAY RESOLUTION:
100,000 dd

COUNTING CAPACITY:
100,000 pieces

MEASUREMENT RATE:
30, 15, 7½, 3¾ per second

SYSTEM LINEARITY:
Within 0.01% of full scale

ZERO STABILITY:
155 nV/°C, maximum

SPAN STABILITY:
4.0 ppm/°C, maximum

CALIBRATION METHOD:
Software, constants stored in EEPROM

COMMON MODE VOLTAGE:
2.5 ± .25 VDC

INPUT OVERLOAD:
± 12 V continuous, static discharge protected

DIGITAL SPECIFICATIONS:
Digital Filter: RATTLETRAP® software filtering

SERIAL COMMUNICATIONS:
EDP/Printer Port: Full Duplex RS-232

OPERATOR INTERFACE:
Display: 1" (24.5mm) 6-digit Liquid Crystal Display (LCD)

Annunciators: Units (lb/kg), piece count mode (PC), gross, net, standstill, center of zero, tare, low battery

Keyboard: 19-key flat membrane panel

OPERATING TEMPERATURE:
14° to 104°F/-10° to 40°C (legal)
14° to 122°F/-10° to 50°C (industrial)

WEIGHT:
6.5 lb (2.95 kg)

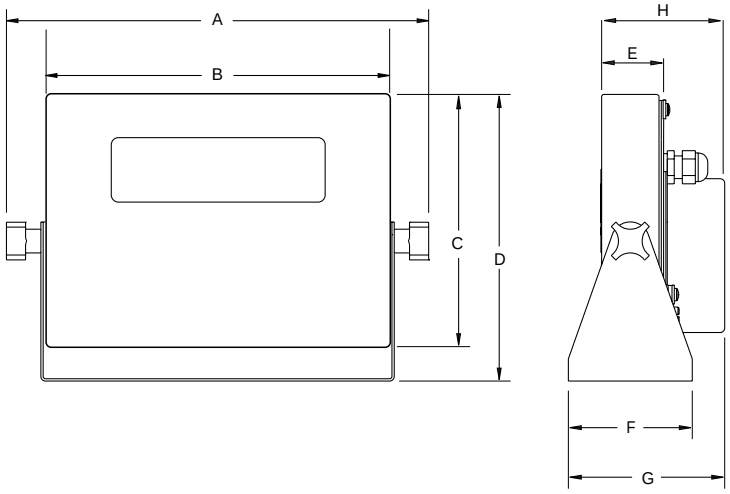
RATING/MATERIAL:
NEMA 4X/IP66, stainless steel

APPROVALS:
NTEP certified, per H-44 at 10,000 Divisions, Class III/IIIL, CC# 98-203A1; Measurement Canada approved, AM-5300, Class III at 10,000 Divisions, Class IIIHD at 20,000 Divisions; CE pending, UL & CUL listed

WARRANTY:
Two year limited warranty

DIMENSIONS

A = 11.0"	(280mm)	E = 1.6"	(41mm)
B = 9.0"	(229mm)	F = 3.2"	(82mm)
C = 6.5"	(166mm)	G = 4.1"	(104mm)
D = 7.5"	(190mm)	H = 3.0"	(76mm)



Specifications subject to change without notice
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IQ plus® 510 Electronic Digital Weight Indicator

Sloped face model shown

Measurement Canada Approved

PART # DESCRIPTION

44543 ..... IQ plus 510, 115 VAC, sloped face
44542 ..... IQ plus 510, 230 VAC, sloped face
45526 ..... IQ plus 510, 115 VAC, flat face, deep enclosure
46041 ..... IQ plus 510, 230 VAC, flat face, deep enclosure
52054 ..... IQ plus 510, CE 230 VAC, sloped face
52053 ..... IQ plus 510, CE 230 VAC, flat face, deep enclosure

The IQ plus 510 offers an exceptional combination of high-performance and affordability.

Completely menu driven and featuring a large 16-character alphanumeric VFD display, the IQ plus 510 simplifies operation and reduces operator error, even in the most poorly-lit environments. Additionally, operator productivity is optimized by the IQ plus 510's intuitive panel display and simple five-button keypad.

Operating at a speed of 30 updates/second, the IQ plus 510 consistently delivers timely and accurate weighments. Two independent communication ports enable simple setup and programming through Revolution™ Scale Software. It is encased in a tough, all stainless steel NEMA 4X/IP66 enclosure for maximum protection from the harshest environments. The IQ plus 510 is available in a panel-mountable flat face model or a convenient sloped face model.

Two independent communication ports provide full EDP and programmable printer ports. Using Revolution™ Scale Software, print tickets can be programmed with up to six 300-character formats and the two serial ports support attached printer, remote displays, or remote configuration/calibration. Five-point linearization calibration ensures the highest accuracy in every application.

Allen-Bradley and Profibus DP enabled, the IQ plus 510 interfaces with networks for fast, simple, and accurate measurement and control of complex, multi-ingredient batching and blending.

Applications

- Industrial weighing applications
- Truck scales
- Straight weighing

Standard Features

- 8 digital inputs
- Selectable analog-to-digital measurement rate
- Operates on 115 or 230 VAC
- Two communication ports: (1) EDP port, full duplex RS-232 or RS-485, (1) printer port, simplex RS-232 or 20 mA
- Three programmable ticket formats, up to 300 characters each
- Power for eight 350Ω load cells or sixteen 700Ω load cells
- NEMA 4X/IP66 stainless steel enclosure
- Completely menu driven
- Front panel or EDP serial interface calibration
- Simple operation with 5-button keypad
- Intuitive display
- Large 0.75" (19mm) Vacuum Fluorescent Display (VFD)
- Key functions: zero, tare, gross/net, print, units
- 5-point linearization calibration
- Time and date

Options/Accessories

43381 ..... Analog output: selectable 0-10V, 4-20 mA
45409 ..... Allen-Bradley Remote I/O (internal)
49976 ..... PROFIBUS® DP Interface kit (internal)
45410 ..... Panel mount kit (flat face only)
46030 ..... Revolution™ Scale Software
45390 ..... Additional operating manual

NOTE: Because A-B Remote I/O and Profibus DP interface with programs written by non-RLWS parties, please consult factory for latest technical updates before quoting.

(Specifications on back)

LINE VOLTAGES:
115 or 230 VAC

FREQUENCY:
50 or 60 Hz

POWER CONSUMPTION:
100 mA @ 115 VAC (11.5W)
50 mA @ 230 VAC (11.5W)

FUSING:
2 x 250 mA (115 VAC) or 2 x 125 mA (230 VAC)

LOAD CELL EXCITATION:
10 +/- 0.5 VDC, 8 x 350Ω load cells or
16 x 700Ω load cells

FULL SCALE INPUT SIGNAL:
4.5 mV/V (max)

INPUT IMPEDANCE:
200 MΩ, typical

NOISE (REFERRED TO INPUT):
0.3 uV p-p with digital filter at 4

INTERNAL RESOLUTION:
1,000,000+ internal graduations

EXTERNAL RESOLUTION:
Up to 60,000 displayed graduations

MEASUREMENT RATE:
30, 15, 7 1/2, 3 3/4 per second

FILTERING:
RATTLETRAP® software filtering

ANALOG FILTERING:
2 Hz, 8 Hz, OFF

SYSTEM LINEARITY:
Within 0.01% of FS

ZERO STABILITY:
150 nV/°C maximum

SPAN STABILITY:
3.5 ppm/°C maximum

CALIBRATION METHOD:
Software calibration, constants stored in EEPROM

COMMON MODE VOLTAGE:
+/- 4V, referred to earth

INPUT OVERLOAD:
+/- 12V

SENSE AMPLIFIER:
Differential amplifier with selectable 4- and 6-wire sensing

REAL TIME CLOCK:
Time and date are standard, accessible by EDP command, battery-backed

SERIAL PORTS:
Two channels, RS-232, full duplex. Channel 1 has an additional RS-485 transceiver; RS-485 is used if an RS-485 address is configured. Channel 2 simplex also has a 20 mA active transceiver.

DIGITAL INPUTS:
8 digital inputs, active low

ANALOG OUTPUT:
Voltage output: 0-10 VDC
Load resistance: 1KΩ minimum
Current output: 4-20 mA
External loop resistance: 500Ω maximum

PRINT TICKETS:
Three programmable print formats — 300 characters each with 50-character title blocks

DISPLAY:
Large 0.75" (19mm) Vacuum Fluorescent Display (VFD)
7-digit, 2 unit descriptors, 16 5x7 VFD dot matrix secondary display

KEYBOARD:
5-key flat membrane panel

OPERATING TEMPERATURE:
Legal: 14° to 104°F/-10° to 40°C
Industrial: 14° to 122°F/-10° to 50°C

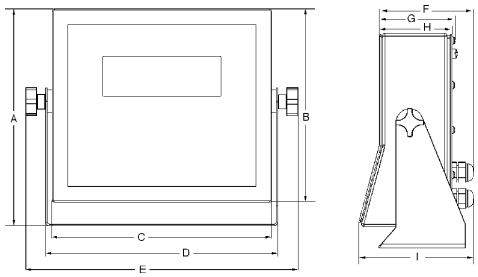
WEIGHT:
Sloped: 7.4 lb (3.3 kg) Flat: 7.8 lb (3.5 kg)

RATING/MATERIAL:
NEMA 4X/IP66, stainless steel

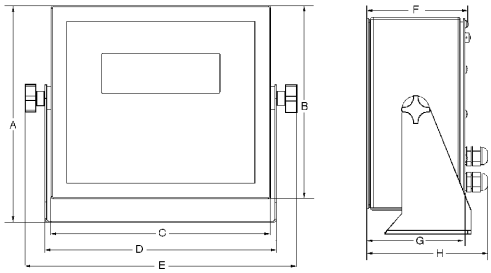
CERTIFICATIONS AND APPROVALS:
NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC#98-081; Measurement Canada approved, AM-5253, Class III/IIIL, III at 10,000 Divisions and IIIHD at 20,000 Divisions; CE marked, UL & CUL listed, OIML approved

WARRANTY:
Two year limited warranty

SLOPED FACE



FLAT FACE



DIMENSIONS

Sloped face		Flat face	
A = 9.88"	(250.9mm)	A = 9.88"	(250.9mm)
B = 8.38"	(212.9mm)	B = 8.38"	(212.9mm)
C = 9.50"	(241.3mm)	C = 9.50"	(241.3mm)
D = 10.02"	(254.5mm)	D = 10.02"	(254.5mm)
E = 11.78"	(299.2mm)	E = 11.78"	(299.2mm)
F = 4.07"	(103.3mm)	F = 4.36"	(110.7mm)
G = 3.30"	(83.8mm)	G = 4.25"	(107.9mm)
H = 3.15"	(80.0mm)	H = 5.25"	(133.3mm)
I = 4.95"	(125.7mm)		

Specifications subject to change without notice
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IQ plus® 710 Electronic Digital Weight Indicator

Sloped face model shown

Measurement Canada Approved

PART # DESCRIPTION

44545 ..... IQ plus 710, 115 VAC, sloped face
44544 ..... IQ plus 710, 230 VAC, sloped face
45527 ..... IQ plus 710, 115 VAC, flat face, deep enclosure
45528 ..... IQ plus 710, 230 VAC, flat face, deep enclosure
52052 ..... IQ plus 710, CE 230 VAC, sloped face
52051 ..... IQ plus 710, CE 230 VAC, flat face, deep enclosure

For those seeking maximum digital performance—the IQ plus 710 delivers. Designed and built to provide superior programmability and durability, the IQ plus 710 offers an array of advanced features.

Utilizing a large VFD display and full alphanumeric keypad, the IQ plus 710 can store and display 16-character programmable user prompts, 300 truck ID numbers, or part numbers. Four programmable macro function keys (each capable of 30 steps) enable the IQ plus 710 to quickly and accurately complete a variety of functions. Additionally, macros can be linked to setpoints during batching operations, allowing the macro to initiate each batch setpoint. For easy operation, all functions and parameters are selected by menus.

Two independent communication ports provide full EDP and programmable printer ports. Using Revolution™ Scale Software, print tickets can be programmed with up to six 300-character formats and a 300-character title block. Furthermore, two serial ports allow remote configuration and calibration. Five-point linearization calibration ensures the highest accuracy in every application.

Allen-Bradley and Profibus DP enabled, the IQ plus 710 interfaces with networks for fast, simple, and accurate measurement and control of complex, multi-ingredient batching and blending.

The IQ plus 710 is encased in a tough, all stainless steel NEMA 4X/IP66 enclosure and is available in a flat face model or sloped face. The flat face is panel-mountable and features a deeper enclosure, allowing it to utilize an A-B I/O, as well as two, 4-channel relay boards, and an analog output option. The sloped face model utilizes the analog output option and either the A-B I/O option or the one 4-channel relay boards.

Applications

- High-performance industrial weighing
- Batch weighing
- Truck weighing applications

Standard Features

- Stainless steel NEMA 4X/IP66 washdown enclosure
- Large 0.75" (19mm) Vacuum Fluorescent Display (VFD) with 16 characters for operator prompting
- Selectable analog to digital measurement rate
- 5-point linearization calibration
- 4 macros, 30 steps each, ability to interconnect macros with setpoints (macro can start batch setpoints)
- 8 digital inputs plus 8 digital outputs
- 60 16-character programmable fields for display prompts.
- Power for eight 350Ω load cells or sixteen 700Ω load cells
- Expanded 29-key alphanumberic keyboard
- Full alphanumeric keyboard for entering truck ID, numbering, prompts, etc.
- 300-ID truck in/out programs (6 modes)
- Batching and continuous mode setpoint functions
- Programmable consecutive numbering
- Two communication ports: (1) EDP port, full duplex RS-232 or RS-485, (1) printer port, simplex RS-232 or 20 mA
- Operate, configure and calibrate via 2 interfaces: front panel (keyboard & display) or EDP serial command port (RS-232, RS-485)
- Six 300-character programmable output formats, independent transmission to EPD or printer port
- 300-character alphanumeric “title block” for custom printouts
- Completely menu driven
- Angled/sloped keypad for user comfort
- Time and date
- Accumulator

Options/Accessories

43381 ..... Analog output: selectable 0-10V, 4-20 mA
45409 ..... Allen-Bradley Remote I/O (internal)
49976 ..... PROFIBUS® DP Interface kit (internal)
45408 ..... 4-channel internal relay board (requires two for 8 relays)
45410 ..... Panel mount kit (flat face only)
19369 ..... Batching start/stop switch box
46030 ..... Revolution™ Scale Software
45391 ..... Additional operating manual

I/O relay modules sold separately:

15969 ..... 10-32 VDC Input relay module (N/O)
15970 ..... Dry contact 100 VDC/1.5A output (N/O)
22848 ..... Dry contact 100 VDC/1.5A output (N/C)
15971 ..... 115 VAC Output relay module (N/O)
15972 ..... 115 VAC Input relay module (N/O)
22847 ..... 115/230 VAC Output relay module (N/C)
36632 ..... 115/230 VAC Output relay module (N/O)
36631 ..... 230 VAC Input relay module (N/O)
16478 ..... Quencharc arc supressor

(Specifications on back)

LINE VOLTAGES:
115 or 230 VAC

FREQUENCY:
50 or 60 Hz

POWER CONSUMPTION:
100 mA @ 115 VAC (11.5W)
50 mA @ 230 VAC (11.5W)

FUSING:
115 VAC 2 x 250 mA
230 VAC 2 x 125 mA

ANNUNCIATORS:
Text description

LOAD CELL EXCITATION:
10 +/- 0.5 VDC, 8 x 350Ω load cells or
16 x 700Ω load cells

FULL SCALE INPUT:
4.5 mV/V (max)

INPUT IMPEDANCE:
200 MΩ typical

NOISE (REFERRED TO INPUT):
0.3 uV p-p with digital filter at 4

INTERNAL RESOLUTION:
1,000,000+ internal graduations

EXTERNAL RESOLUTION:
Up to 60,000 displayed graduations

MEASUREMENT RATE:
30, 15, 7 1/2, 3 3/4 per second

FILTERING:
RATTLETRAP® software filtering

ANALOG FILTERING:
2 Hz, 8 Hz, OFF

SERIAL PORTS:
Two channels, RS-232, full duplex. Channel 1 has an additional RS-485 transceiver; RS-485 is used if an RS-485 address is configured. Channel 2 simplex also has a 20 mA active transceiver.

SYSTEM LINEARITY:
Within 0.01% of FS

ZERO STABILITY:
150 nV/°C maximum

SPAN STABILITY:
3.5 ppm/°C maximum

CALIBRATION METHOD:
Software calibration, constants stored in EEPROM

COMMON MODE VOLTAGE:
+/- 4V, referred to earth

INPUT OVERLOAD:
+/- 12V

SENSE AMPLIFIER:
Differential amplifier with selectable 4- and 6-wire sensing

CONSECUTIVE NUMBER:
Selectable start point of “0” or “1” to 999,999

RFI PROTECTION:
Signal, excitation, and sense lines protected by capacitor bypass

REAL TIME CLOCK:
Time and date are standard, accessible by EDP command, battery-backed

DIGITAL INPUTS/OUTPUTS:
8 digital inputs, 8 digital open collector outputs

PRINT TICKETS:
6 programmable print formats — 300 characters each with 50-character title blocks

ANALOG OUTPUT:
Voltage output: 0-10 VDC
Load resistance: 1KΩ minimum
Current output: 4-20 mA
External loop resistance: 500Ω maximum

DISPLAY:
Large 0.75" (19mm) Vacuum Fluorescent Display (VFD)
7-digit, 2 unit descriptors, 16 5x7 VFD dot matrix secondary display

KEYBOARD:
Full 29-key alphanumeric flat membrane panel

OPERATING TEMPERATURE:
Legal: 14° to 104°F/-10° to 40°C
Industrial: 14° to 122°F/-10° to 50°C

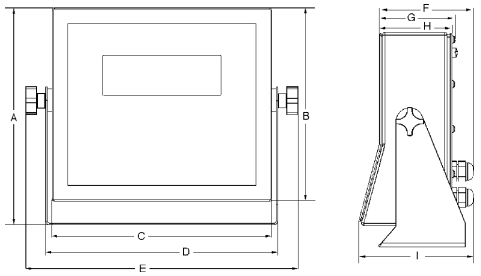
RATING/MATERIAL:
NEMA 4X/IP66, stainless steel

WEIGHT:
Sloped: 7.4 lb (3.3 kg) Flat: 7.8 lb (3.5 kg)

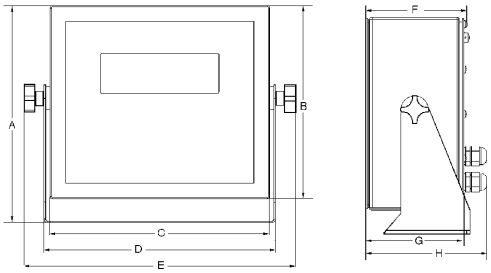
APPROVALS:
NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC#98-081; Measurement Canada approved, AM-5253, Class III/IIIHD, III at 10,000 Divisions and IIIHD at 20,000 Divisions; CE marked, UL & CUL listed, OIML approved

WARRANTY:
Two year limited warranty

SLOPED FACE



FLAT FACE



DIMENSIONS

Sloped face			Flat face		
A	9.88"	(250.9mm)	A	9.88"	(250.9mm)
B	8.38"	(212.9mm)	B	8.38"	(212.9mm)
C	9.50"	(241.3mm)	C	9.50"	(241.3mm)
D	10.02"	(254.5mm)	D	10.02"	(254.5mm)
E	11.78"	(299.2mm)	E	11.78"	(299.2mm)
F	4.07"	(103.3mm)	F	4.36"	(110.7mm)
G	3.30"	(83.8mm)	G	4.25"	(107.9mm)
H	3.15"	(80.0mm)	H	5.25"	(133.3mm)
I	4.95"	(125.7mm)			

NOTE: Because A-B Remote I/O and Profibus interface with programs written by non-RLWS parties, please consult factory for latest technical updates before quoting.

Specifications subject to change without notice
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IQ plus® 800 Digital Weight Indicator

IQ plus 800 shown with optional bar graph module.

Measurement Canada Approved

ROCKWELL AUTOMATION ENCOMPASS AMERICAS PARTNER

PROFIBUS

c UL us LISTED

ANOTHER REVOLUTION SOLUTION

PART #	DESCRIPTION
40943	Desktop, 115 VAC
36072	Desktop, 115 VAC w/Allen-Bradley Remote I/O
41226	Desktop, 230 VAC
36073	Desktop, 230 VAC w/Allen-Bradley Remote I/O
41227	Dual Channel Desktop, 115 VAC
41228	Dual Channel Desktop, 230 VAC
41229	JetPak™ Desktop, 115 VAC*
41230	JetPak™ Desktop, 230 VAC*
23140	Uncased version, 115 VAC

** Not Legal-For-Trade U.S./Canada*

NOTE: Because A-B Remote I/O and Profibus DP interface with programs written by non-RLWS parties, please consult factory for latest technical updates before quoting.

The IQ plus 800 indicator sets new standards in versatility. With its NEMA 4X stainless steel enclosure, full numeric keyboard, and bright display, this unit can be desk-, panel-, or wall-mounted. This unique indicator powers up to 16 350-ohm load cells on one or two separately configured scales*. An optional LED bar graph enhances software capabilities and offers interactive operation for truly flexible performance.

Compatible with Allen-Bradley (A-B) and Profibus DP, the IQ plus 800 provides fast, simple, and accurate measurement and control of complex, multi-ingredient batching and blending*.

The IQ plus 800 stores up to 200 six-digit truck ID numbers and truck tares, and allows setup in any of six different operating modes, meeting a wide range of truck scale applications. The formattable print tickets for truck weigh-in and weigh-out allow up to 300 characters, and can be set via the EDP port or front keypad.

The IQ plus 800 provides 20 setpoint steps that can be assigned to any of the 4 standard and 12 optional digital outputs. Three digital inputs are also standard. Our exclusive RATTLETRAP® vibration control is ideal for batching applications where scales are subjected to a high degree of industrial vibration.

With the addition of JetPak™, weigh data processing is performed at least five times faster than with conventional meters. At an impressive rate of 100 updates-per-second, this indicator is ideal for high-speed bag filling, checkweighing, and multi-step batching operations. An array of additional hardware and software options offer virtually unlimited solutions for your complex operations.

Applications

- Sophisticated truck in/out management systems
- Multiple-scale operation of up to 2 scales*
- Material flow control*
- High-speed bag filling and checkweighing*

Standard Features

- NEMA 4X stainless steel enclosure
- Bright, bold Vacuum Fluorescent Display (VFD)
- Full keyboard for setpoint or fixed tare entry
- Time and date
- 20 updates/second, nominal
- Advanced digital filtering, RATTLETRAP® vibration control
- 20 programmable setpoint steps
- Multi-channel accumulators
- 3 digital inputs, TTL or hard contact closure, 4 TTL digital outputs standard, expandable to 16
- Multi-functional 200 ID Truck in/out program
- Selectable print data and format via EDP port or front keypad
- 2 communication ports: (1) EDP port, full duplex RS-232 or 20 mA, (1) printer port, simplex RS-232/20 mA current loop
- Multi-scale control expandable to 2 scale inputs, with individual scale setup*
- Power for up to sixteen 350Ω load cells on single or dual channels*
- Formattable print tickets for Gross, Net, Truck Weigh-In/Weigh-Out, and setpoint push print ticket
- Models with JetPak feature 100 Hz A/D for 100 updates per second, single channel unit*

Options/Accessories

46030	Revolution™ Scale Software
61138	Dual Range option
35888	Allen-Bradley Remote I/O, 115 VAC (external)
36593	Allen-Bradley Remote I/O, 230 VAC (external)
49974	PROFIBUS® DP Interface, 115 VAC (external)
49975	PROFIBUS® DP Interface, 230 VAC (external)
41932	Panel mount kit
19363	48-segment LED bar graph module,
19357**	Analog output module, 0-10 VDC/4-20 mA
19372	RS-485 serial communication
19374	20 mA full duplex EDP port
19362	12-channel digital setpoint output module
16418	5 VDC power supply for digital output
19369	Batching start/stop switch box
19365	4-channel relay rack, relays sold separately (for external mounting
30549	2-channel relay rack w/relays (internal mount)
36080	4-channel relay rack w/relays (internal mount)
19373	16-channel relay rack, relays sold separately (for external mounting) (Requires Part #19362 setpoint expander board)

I/O relay modules sold separately:

15969	10-32 VDC Input relay module (N/O)
15970	Dry contact 100 VDC/1.5A output (N/O)
22848	Dry contact 100 VDC/1.5A output (N/C)
15971	115 VAC Output relay module (N/O)
15972	115 VAC Input relay module (N/O)
22847	115/230 VAC Output relay module (N/C)
36632	115/230 VAC Output relay module (N/O)
36631	230 VAC Input relay module (N/O)
16478	Quencharc arc supressor

42100 ..... Additional operating manual (Version 3)

** This feature is available on specific models. Optional hardware/software may be required to add this feature to existing field units.*

*** One analog module per channel (dual scale only). Second analog module must be installed on expansion board.*

(Specifications on back)

LOAD CELL EXCITATION:
10 ± 0.5 VDC, 16 x 350Ω load cells (on up to 2 channels)*

LOAD CURRENT:
460 mA maximum (16 x 350Ω load cells)

INTERCONNECTION CABLE REQUIREMENTS:
6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduation minimum
Legal-for-Trade recommended minimum 1 microvolt graduation

INPUT OVERLOAD:
±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:
20/second, typical (standard resolution)
10/second, typical (high resolution)
Added channels reduce conversion rate per channel*

RESOLUTION:
Selectable up to 100,000 displayed graduations
Selectable up to 740,000 graduations internal

UNDERRANGE BLANKING:
-2 mV signal nominal

DISPLAY:
Large .55" (14.0mm) 7-digit, 14-segment blue/green Vacuum Fluorescent Display (VFD)

LB/KG SWITCHING:
Front panel pushbutton

FRONT-PANEL CONTROL SWITCHES:
Zero, Net/Gross, Tare, Units, Print, Disp Accum, Disp R.O.C., Disp Tare, Time/Date, New ID, Scale #, Set Point, Clear

FRONT-PANEL ANNUNCIATORS:
Lb, Kg, R.O.C., Accum, Push Tare, Keyed Tare, Motion, Center of Zero, Gross, Net

SERIAL OUTPUT:
"EDP" port, full duplex RS-232 or 20 mA optional
"Printer" port, simplex RS-232 and 20 mA current loop

DIGITAL INPUTS:
3 inputs, TTL or switch closure, active low

DIGITAL OUTPUTS:
4 outputs standard, TTL active low, expandable to 16

SETPOINTS:
20 fully-programmable setpoint steps

** This feature is available on specific models. Optional hardware/ software may be required to add this feature to existing field units.*

ANALOG FILTERING:
Software selectable: 2, 8 Hz typical/3 pole, off (25 Hz)

DIGITAL FILTERING:
RATTLETRAP® high vibration control

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line voltages: 115 or 230 VAC +10%/-15%

Frequency: 50 or 60 Hz

Power consumption: 12 VA with minimum configuration, 30 VA with all options

Fusing: 0.25A SB (UL/CSA) 5x20mm @ 120V operation
0.125A SB (UL/CSA) 5x20mm @ 240V operation

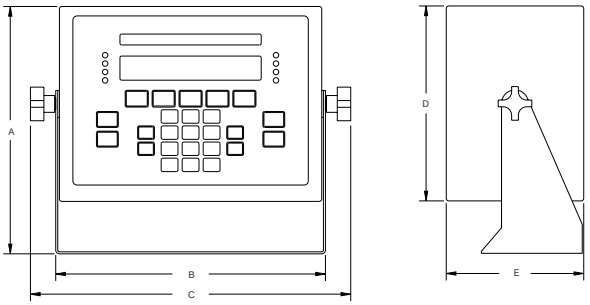
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

RATING/MATERIAL:
NEMA 4X stainless steel

WEIGHT:
Approximately 14 lb (6.4 kg)

APPROVALS:
NTEP certified per H-44, at 10,000 Divisions, Class III/IIIL, CC# 92-013A1. Measurement Canada approved, AM-4840; UL & CUL listed

WARRANTY:
One year limited warranty



DIMENSIONS

A = 9.20" (233.7mm)
B = 10.03" (254.8mm)
C = 11.91" (302.5mm)
D = 7.25" (184.2mm)
E = 5.11" (129.8mm)

Specifications subject to change without notice
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IQ plus® 810 Digital Weight Indicator

Measurement Canada Approved

ANOTHER REVOLUTION™ SOLUTION

PART #	DESCRIPTION
19249	Desktop, 115 VAC
36074	Desktop, 115 VAC w/Allen-Bradley Remote I/O
19250	Desktop, 230 VAC
36075	Desktop, 230 VAC w/Allen-Bradley Remote I/O
19265	Dual Channel Desktop, 115 VAC
19266	Dual Channel Desktop, 230 VAC
22176	JetPak™ Desktop, 115 VAC*
22177	JetPak™ Desktop, 230 VAC*
23140	Uncased version, 115 VAC

** Not Legal-For-Trade U.S./Canada*

NOTE: Because A-B Remote I/O and Profibus DP interface with programs written by non-RLWS parties, please consult factory for latest technical updates before quoting.

The IQ plus 810...a digital weight indicator with power. Its unique hybrid digital circuitry provides faster, more accurate and more flexible performance than conventional technology. Providing power for 16 350-ohm load cells on up to four individually configured scales*, this unit simplifies multi-scale control. Housed in a NEMA 4 enclosure, the IQ plus 810 incorporates a full numeric keyboard, and a bright display that's easily readable, even in poor lighting. An optional LED bar graph enhances software capabilities and interactive operation.

Our exclusive RATTLETRAP® vibration control eliminates interference from agitators, mixers, blenders, fork truck traffic, and other sources of industrial environment vibration.

Allen-Bradley (A-B) and Profibus DP enabled, the IQ plus 810 interfaces with networks to provide fast, simple, and accurate measurement and control of complex, multi-ingredient batching and blending*.

The IQ plus 810's programmable setpoint software offers a comprehensive array of batch process possibilities. It's even self correcting, learning as it works to assure your process integrity. The standard configuration includes 20 setpoint steps, 4 digital outputs and 3 digital inputs, providing more basic power than many custom controllers. With the addition of JetPak™, weigh data processing is performed at least five times faster than conventional meters. At an impressive rate of 100 updates per second, it's ideal for high-speed bag filling, checkweighing, and multi-step batching operations.

Applications

- Multiple-scale operation up to 4 scales*
- Complex material flow control
- Sophisticated truck in/out management systems
- High-speed bag filling and checkweighing*

Standard Features

- NEMA 4 zinc die-cast enclosure
- Bright, bold Vacuum Fluorescent Display (VFD)
- Full keyboard for setpoint or fixed tare entry
- Time and date
- 20 updates/second, nominal
- Advanced digital filtering, RATTLETRAP® vibration control
- 20 programmable setpoint steps
- Multi-channel accumulators
- 3 digital inputs, TTL or hard contact closure; 4 TTL digital outputs, expandable to16
- Multifunctional 200 ID Truck in/out program
- Selectable print data and format via EDP port or front keypad
- 2 communication ports: (1) EDP port, full duplex RS-232 or 20 mA optional, (1) printer port, simplex RS-232/20 mA current loop
- Multi-scale control expandable to 4 scale inputs, with individual scale setup*
- Power for up to sixteen 350Ω load cells on single or multiple channels*
- Formattable print tickets for Gross, Net, Truck Weigh-In/Weigh-Out, and setpoint push print ticket
- Models with JetPak feature 100 Hz A/D for 100 updates per second, single channel unit*

Options/Accessories

46030	Revolution™ Scale software
61138	Dual Range option
35888	Allen-Bradley Remote I/O, 115 VAC (external)
36593	Allen-Bradley Remote I/O, 230 VAC (external)
49974	PROFIBUS® DP Interface, 115 VAC (external)
49975	PROFIBUS® DP Interface, 230 VAC (external)
19364	Panel mount kit
19353	Wall mount bracket
19363	48-segment LED bar graph module
40386	Dual load cell input module (3rd and 4th scale)
40385**	Expansion board (keyboard connection only)
19357**	Analog output module, 0-10 VDC/4-20 mA
19372	RS-485 serial communication
19374	20 mA full duplex EDP port
19362	12-channel digital setpoint output module
16418	5 VDC power supply for digital output
19369	Batching start/stop switch box
19365	4-channel relay rack kit, relays sold separately
19373	16-channel relay rack, relays sold separately (for external mounting) (Requires Part #19362 setpoint expander board)

I/O relay modules sold separately:

15969	10-32 VDC Input relay module (N/O)
15970	Dry contact 100 VDC/1.5A output (N/O)
22848	Dry contact 100 VDC/1.5A output (N/C)
15971	115 VAC Output relay module (N/O)
15972	115 VAC Input relay module (N/O)
22847	115/230 VAC Output relay module (N/C)
36632	115/230 VAC Output relay module (N/O)
36631	230 VAC Input relay module (N/O)
16478	Quencharc arc supressor

42100 ..... Additional operating manual (Version 3)

** This feature is available on specific models. Optional hardware/software may be required to add this feature to existing field units.*

*** One analog module per channel (dual scale only). Second analog module must be installed on expansion board.*

(Specifications on back)

LOAD CELL EXCITATION:
10 ± 0.5 VDC, 16 x 350Ω load cells (on up to 4 channels)*

LOAD CURRENT:
460 mA maximum (16 x 350Ω load cells)

INTERCONNECTION CABLE REQUIREMENTS:
6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduation minimum
Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:
±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:
20/second, typical (standard resolution)
10/second, typical (high resolution)
Added channels reduce conversion rate per channel*

RESOLUTION:
Selectable up to 100,000 displayed graduations
Selectable up to 740,000 graduations internal

UNDERRANGE BLANKING:
-2 mV signal nominal

DISPLAY:
Large .55" (14.0mm) 7-digit, 14-segment blue/green Vacuum Fluorescent Display (VFD)

LB/KG SWITCHING:
Front panel pushbutton

FRONT-PANEL CONTROL SWITCHES:
Zero, Net/Gross, Tare, Units, Print, Disp Accum, Disp R.O.C., Disp Tare, Time/Date, New ID, Scale #, Set Point, Clear

FRONT-PANEL ANNUNCIATORS:
Lb, Kg, R.O.C., Accum, Push Tare, Keyed Tare, Motion, Center of Zero, Gross, Net

SERIAL OUTPUT:
"EDP" port, full duplex RS-232 or 20 mA optional
"Printer" port, simplex RS-232 and 20 mA current loop

DIGITAL INPUTS:
3 inputs, TTL or switch closure, active low

DIGITAL OUTPUTS:
4 outputs standard, TTL active low, expandable to 16

** This feature is available on specific models. Optional hardware/ software may be required to add this feature to existing field units.*

SETPOINTS:
20 fully-programmable setpoint steps

ANALOG FILTERING:
Software selectable: 2, 8 Hz typical/3 pole, off (25 Hz)

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line voltages: 115 or 230 VAC +10%/-15%

Frequency: 50 or 60 Hz

Power consumption: 12 VA with minimum configuration, 30 VA with all options

Fusing: 0.25A SB (UL/CSA) 5x20mm @ 120V operation
0.125A SB (UL/CSA) 5x20mm @ 240V operation

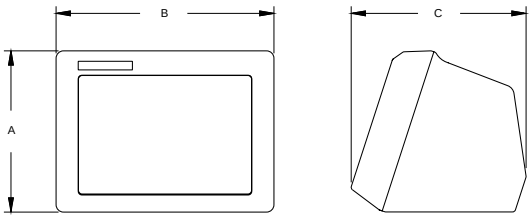
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

RATING/MATERIAL:
NEMA 4 zinc die cast

WEIGHT:
Approximately 15 lb (6.8 kg)

APPROVALS:
NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 92-013A1. Measurement Canada approved, AM-4840; UL & CUL listed

WARRANTY:
One year limited warranty



DIMENSIONS

A = 8.17" (207.5mm)
B = 11.06" (280.9mm)
C = 8.87" (225.3mm)

Specifications subject to change without notice
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PROFIBUS® DP Interface

PART # DESCRIPTION

49974 ..... PROFIBUS DP Interface, 115 VAC (external)
49975 ..... PROFIBUS DP Interface, 230 VAC (external)
49976* ..... PROFIBUS DP Interface kit (internal)
** For use with IQ plus 510 & 710 indicators*

Providing a fast, simple and affordable network communication solution, our IQ plus® 310A, 510, 710, 800 and 810 indicators interface with Profibus DP, a powerful and open field bus that delivers fast response times. Through our DP interface, you have instant access to over 3,000,000 Profibus devices, with approximately 2,000 unique products.

Profibus is an effective multi-vendor interface device that communicates information between Siemens automation systems and distributed field devices. Utilizing a minimal amount of hardware, Profibus DP creates a high-speed serial link that transmits information such as input and output data, parameters, diagnostic data, and programs to other devices.

The IQ plus 310A, 800 and 810 indicators function with a stand alone, external version, while the IQ plus 510 and 710 indicators work with an internally mounted version of Profibus DP. Indicators already in the field can be easily retrofitted with the interface on-site without causing costly delays to your customers' operations. Older versions can be retrofitted at the factory with a small hardware change.

Applications

- Automated process weighing
- Material flow control
- Multi-scale monitoring and manipulation
- IQ plus® 310A, 510, 710, 800, and 810 compatible

Standard Features

- DP intelligent slave
- Open configuration permits plug & play
- Standard GSD file on disk
- 128 selectable addresses
- Auto sensing baud rate up to 12 megabaud
- 4-word, 8-bit format
- Generates up to 32-bit word
- Complies with EN50170 standard
- Fast data exchange, less than 10 milli-seconds
- Supports sync & freeze mode
- RS-232 or 20 mA interface
- On board LED diagnostics

Additional features with IQ plus 310A & 510:

- 5-button operation
- Panel mountable
- High-speed update rate

Additional features with IQ plus 710:

- Local batch control
- 8-digital outputs, 8-digital inputs
- Display messaging

Additional features with IQ plus 800 & 810:

- Drives up to 4 scales
- 16 digital outputs, 3 digital inputs
- Enclosure types: panel mount, stainless steel, FRP, and XPCD

Options/Accessories

50955 ..... Operating manual, external version (800/810/310A)
52579 ..... Operating manual, internal version (510/710)

NOTE: Because this product interfaces with programs written by non-RLWS parties, please consult factory for latest technical updates before quoting.

(Specifications on back)

Profibus DP Interface

Specifications

ELECTRICAL:
Voltage: 115 or 230 VAC (-10%/+15%)
Frequency: 60 Hz
Fusing: Two .75 A @ 125V microfuses for 115 VAC operation, two .50 A @ 250V microfuses for 230 VAC operation

COMMUNICATIONS:
RS-485 network: 2-wire cable, network at 56, 38, 19, or 9.6 Kbps

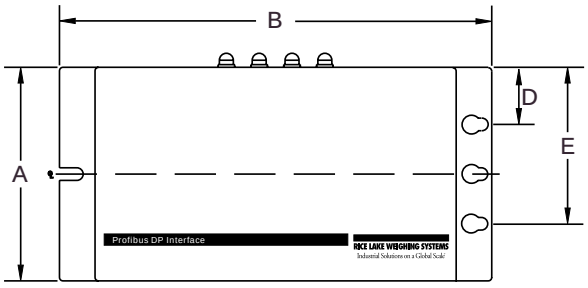
SERIAL COMMUNICATIONS:
Interface: RS-232, 20mA available
Data Rate: 9600 to 19.2 Kbps
ASCII Encoding: 1 start bit, 8 data bits, 1 stop bit

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

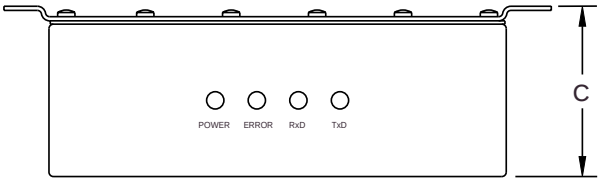
RATING/MATERIAL:
NEMA 4X stainless steel

WEIGHT:
6 lb (2.7 kg)

WARRANTY:
One year limited warranty



(Front View)



(Top View)

DIMENSIONS

A = 4.9" (124mm)
B = 9.9" (251mm)
C = 3.1" (79.5mm)
D = 1.2" (30.2mm)
E = 3.7" (93.9mm)

Specifications subject to change without notice
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Allen-Bradley Remote I/O

PART # DESCRIPTION

35888 ..... Allen-Bradley Remote I/O, 115 VAC (external)
36593 ..... Allen-Bradley Remote I/O, 230 VAC (external)
45409 ..... Allen-Bradley Remote I/O (internal)

Our most powerful digital indicators are now Allen-Bradley (A-B) enabled! Utilizing the A-B remote I/O option, our IQ plus® 310A, 510, 710, 800, and 810 digital indicators provide an interface to any of the over one million existing A-B PLCs.

Two configurations are available; standalone, external version for use with the IQ plus 310A, 800, and 810 or internally mounted in the IQ plus 510 and 710.

The versatile IQ plus 810 allows up to 4 scales or 16 load cells to be controlled through a single A-B remote I/O interface. In addition, fully programmable setpoints and configurations can be downloaded from the PLC directly to the indicators. Both discrete and block data transfer modes are supported by the A-B remote I/O option.

Existing IQ plus 800 and 810 indicators (version 3.0 or later) can be retrofitted in the field with the A-B option. Older versions can be retrofitted at the factory with a small hardware change.

Economical and efficient, our IQ plus 310A and 510 digital indicators also interface with A-B networks by using the A-B remote I/O option.

Applications

- Automated process weighing
- Material flow control
- Multi-scale monitoring and manipulation
- IQ plus® 310A, 510, 710, 800, and 810 compatible

Standard Features

- 115 or 230 VAC operation
- Discrete data transfer
- Block data transfer
- Field-retrofitting available for existing IQ plus® 800/810 and IQ plus 310A indicators
- Blind keypad capability (IQ plus 800/810)
- NEMA 4X stainless steel enclosure

Additional features with IQ plus 310A & 510:

- 5-button operation
- Panel mountable
- High-speed update rate

Additional features with IQ plus 710:

- Local batch control
- 8-digital outputs, 8-digital inputs
- Display messaging

Additional features with IQ plus 800 & 810:

- Drives up to 4 scales
- 16 digital outputs, 3 digital inputs
- Enclosure types: panel mount, stainless steel, FRP, and XPCD

Options/Accessories

36254 ..... Operating manual, external version (800/810/310A)
45775 ..... Operating manual, internal version (510/710)

NOTE: Because this product interfaces with programs written by non-RLWS parties, please consult factory for latest technical updates before quoting.

(Specifications on back)

Allen-Bradley Remote I/O

Specifications

ELECTRICAL:
Voltage: 115 or 230 VAC (-10%/+15%)
Frequency: 60 Hz
Fusing: Two .75 A @ 125V microfuses for 115 VAC operation, two .50 A @ 250V microfuses for 230 VAC operation

COMMUNICATIONS:
A-B Remote I/O network: Twinaxial cable attachment to networks at 56.6, 115.2, or 230.4 Kbps

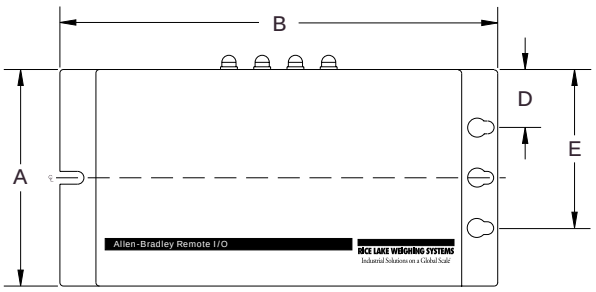
SERIAL COMMUNICATIONS:
Interface: RS-232
Data Rate: 9600 or 19.2 Kbps
ASCII Encoding: 1 start bit, 8 data bits, 1 stop bit

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

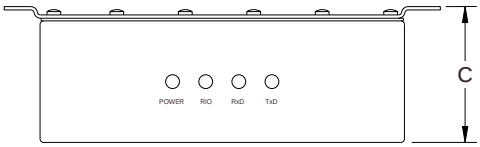
RATING/MATERIAL:
NEMA 4X stainless steel

DIMENSIONS:
4.88" H x 9.88" W x 3.13" D
(123.9mm H x 250.9mm W x 79.5mm D)

WARRANTY:
One year limited warranty



FRONT VIEW



TOP VIEW

DIMENSIONS

A =	4.88" (123.9mm)	D =	1.19" 30.2mm)
B =	9.88" (250.9mm)	E =	3.70" (93.9mm)
C =	3.13" (79.5mm)		

Specifications subject to change without notice
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CONDEC™ UMC222 Digital Weight Indicator

NEW! Product!

Combining durability, performance and affordability, the UMC222 includes more features than most weight indicators in its class. From bench and floor scales to railroad track and motor truck scales, the UMC222 weight indicator is the ideal solution for light to heavy industrial applications.

The UMC222 incorporates easy-to-use front panel calibration and configuration, simplifying installation and setup. It's housed in a NEMA 4X stainless steel enclosure for maximum protection in harsh environments, and offers digital filtering for accurate weighments in areas where vibration is a factor. Assisting in data management, the UMC222 provides a 10-digit accumulator for calculating total weight, time and date, and sequential ticket numbering. It also offers a counting mode, and optional battery power for portable applications.

Applications

- Bench, tank, floor, railroad track, and truck scales

Standard Features

- Easy to use front panel configuration
- Adjustable high-performance digital filter
- Smart Serial™ ticket formating
- Adjustable digital filter for low frequency vibration
- NEMA 4X stainless steel enclosure
- Time and date
- 10-digit accumulator
- Supports 4- and 6-wire connections
- Count mode
- One digital input

Options/Accessories

55255 ..... Serial expander assembly (RS-485, RS-422, 20 mA loop)
55262 ..... Panel mount bracket
55268 ..... Battery option
64983 ..... Additional operating manual

UMC222 PART NUMBERING GUIDE

UMC222 ( ) ( ) ( ) ( )

ENCLOSURE
A = NEMA 4X stainless steel

POWER
A = 115 VAC, 60 Hz
B = 230 VAC, 60 Hz

OPTIONS
A = Standard RS-232

LOAD CELL CONNECTION
A = Cable bushing

PART #	DESCRIPTION
115 VAC	
65479	UMC222AAAA, NEMA 4X stainless steel enclosure, 115 VAC 60 Hz, standard RS-232, cable bushing
65510	UMC222ABAA, NEMA 4X stainless steel enclosure, 230 VAC 60 Hz, standard RS-232 w/time and date, cable bushing

(Specifications on back)

LOAD CELL EXCITATION:
5 VDC, 4 x 350Ω or 8 x 700Ω load cells

ANALOG INPUT SIGNAL RANGE:
0.1 mV/V to 4.5 mV/V

ANALOG INPUT SENSITIVITY:
0.3 uV/graduation

CONVERSION RATE:
15 updates/second

DISPLAY GRADUATIONS:
0.8" (20.32mm) 6-digit, 7-segment Light Emitting Diode (LED)

REMOTE INPUT:
ZERO, TARE, PRINT

SERIAL COMMUNICATION:
Port 1: full duplex RS-232
Port 2: simplex RS-232
Baud rate: 600 baud to 19,200 baud

POWER INPUT:
115/230 VAC, 50/60 Hz, 5W

RATING/MATERIAL:
NEMA 4X stainless steel

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

OVERALL DIMENSIONS:
8.75" L x 5.25" H x 3.5" W (222mm L x 133mm H x 88mm W)

WEIGHT:
5 lb (2.3 kg)

APPROVALS:
NTEP certified

WARRANTY:
One year limited warranty

Specifications subject to change without notice
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CONDEC™ UMC444 Digital Weight Indicator

Measurement Canada Approved

The UMC444 digital weight indicator combines proven technology with user-friendly configuration and calibration—all in one economical package. The UMC444 is available in a mild steel painted enclosure with a tilt stand base or with panel mounting brackets, a NEMA 4X stainless steel enclosure, and even an uncased board set for custom applications. Standard 20mA current loop communications also provides a printer interface.

Applications

- Mechanical conversions
- Straight weighing

Standard Features

- Four-button operation
- Mild steel NEMA 1 enclosure
- Tilt stand base
- Front-panel calibration
- Zero, Net/Gross, Tare and Print keys

Options/Acessories

19576 ..... BCD output, external, 115 VAC
55458 ..... BCD output, external, 230 VAC
19578 ..... Analog output, 0-10/4-20 mA, 115 VAC
55469 ..... Analog output, 0-10/4-20 mA, 230 VAC
19577 ..... Battery pack, 115/230 VAC
56116 ..... RS-485 serial expander
16815 ..... Technical manual
16819 ..... Additional operating manual

UMC444 PART NUMBERING GUIDE

UMC444 ( ) ( ) ( ) ( )

ENCLOSURE
A = Mild steel painted enclosure with tilt stand
B = Mild steel painted enclosure with panel mount brackets
C = Uncased board set
D = NEMA 4X stainless steel enclosure

INPUT POWER
A = 115 VAC, 60 Hz
B = 230 VAC, 50 Hz
C = 12 VDC (external output)
D = 115 VAC with battery option (Part #19577)
E = 230 VAC with battery option (Part #19577)

OPTIONS
B = Duplex serial (RS-232 or 20 mA)

LOAD CELL TERMINATION
C = RFI - shielded
D = RFI - shielded with load cell connector

PART # DESCRIPTION

115 VAC

61264 .... UMC444AABC, mild steel enclosure w/tilt stand, 115 VAC 60 Hz, duplex serial (RS-232 or 20 mA), RFI shielded
62084 .... UMC444BABC, mild steel enclosure w/panel mounting brackets, 115 VAC 60 Hz, duplex serial (RS-232 or 20 mA), RFI shielded
61256 .... UMC444CABC, uncased board set, 115 VAC 60 Hz, duplex serial (RS-232 or 20 mA), RFI shielded
62070 .... UMC444DABC, NEMA 4X stainless steel enclosure, 115 VAC 60 Hz, duplex serial (RS-232 or 20 mA), RFI shielded
61563 .... UMC444ADBC, mild steel enclosure w/tilt stand, 115 VAC w/battery, duplex serial (RS-232 or 20 mA), RFI shielded
61265 .... UMC444AABD, mild steel enclosure w/tilt stand, 115 VAC 60 Hz, duplex serial (RS-232 or 20 mA), RFI shielded w/load cell connector

PART # DESCRIPTION

115 VAC (CONT.)

62086 .... UMC444BABD, mild steel enclosure w/panel mounting brackets, 115 VAC 60 Hz, duplex serial (RS-232 or 20 mA), RFI shielded w/load cell connector
62941 .... UMC444BABD-14, mild steel enclosure w/panel mounting brackets, 115 VAC 60 Hz, duplex serial (RS-232 or 20 mA), RFI shielded w/load cell connector w/internal BCD option

12 VDC (EXTERNAL INPUT)

62413 .... UMC444DCBC, NEMA 4X stainless steel enclosure, 12 VDC (external input), duplex serial (RS-232 or 20 mA), RFI shielded

230 VAC

61357 .... UMC444ABBC, mild steel enclosure w/tilt stand, 230 VAC 50 Hz, duplex serial (RS-232 or 20 mA), RFI shielded
62248 .... UMC444BBBC, mild steel enclosure w/panel mounting brackets, 230 VAC 50 Hz, duplex serial (RS-232 or 20 mA), RFI shielded
62250 .... UMC444BBBD, mild steel enclosure w/panel mounting brackets, 230 VAC 50 Hz, duplex serial (RS-232 or 20 mA), RFI shielded w/load cell connector

All other part number configurations are available as special order units.

(Specifications on back)

LOAD CELL EXCITATION:
10 VDC, fixed, short-circuit proof

LOAD CELL CURRENT:
240 mA maximum (8 350Ω load cells)

ANALOG SIGNAL INPUT RANGE:
0.7 mV/V - 2.0 mV/V “high span”
1.7 mV/V - 3.2 mV/V “low span”

CONVERSION RATE AT FULL SCALE:
10 updates per second, no averaging

RESOLUTION:
10,000 displayed graduations
80,000 internal graduations

DISPLAY:
6-digit, 0.6" (15.2mm) red Light Emitting Diode (LED) Display

LB/KG SWITCHING:
Via customer supplied switch, with conversion for weight, tare values

FRONT-PANEL CONTROL SWITCHES:
Zero, Gross/Net, Tare, Print

FRONT-PANEL ANNUNCIATORS:
Center Zero, Net, lb, kg, Motion (Red bar LEDs)

SERIAL OUTPUT:
Port 1: Full duplex RS-232, 20 mA current loop (optional RS-485/422)
Port 2: Simplex RS-232, 20 mA current loop

WEIGHT AVERAGING:
10 updates per second fixed

MOTION BAND:
Selectable: Off, ±1, ±3 graduations, 1 second delay

POWER INPUT:
115/230 VAC, 50/60 Hz, or external DC

POWER CONSUMPTION:
15 watts

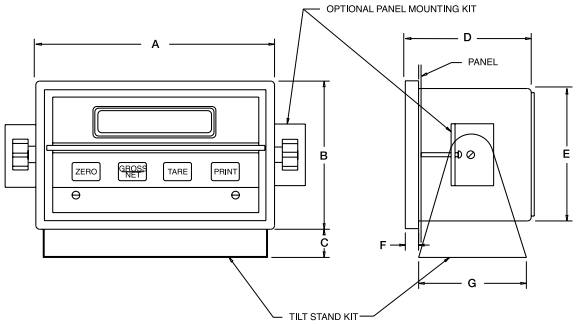
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

RATING/MATERIAL:
Mild steel, NEMA 1 general purpose, tilt stand base standard

WEIGHT:
Approximately 5.5 lb (2.5 kg)

APPROVALS:
NTEP certified, CC# 00-005; Measurement Canada approved, MAL-SWA-4408 rev. 4; CSA

WARRANTY:
Two year limited warranty



DIMENSIONS

A =	7.72"	(196.1mm)	D =	3.78"	(96.0mm)
B =	4.75"	(120.6mm)	E =	4.31"	(109.5mm)
C =	1.31"	(33.3mm)	F =	0.12"	(3.0mm)
or	2.06"	(52.3mm)	G =	3.50"	(88.9mm)

Specifications subject to change without notice
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CONDEC™ UMC555 Digital Weight Indicator

Measurement Canada Approved

The UMC555 is a rugged industrial digital weight indicator designed for simple operation in a variety of applications. The UMC555 is available in a mild steel painted enclosure with a tilt stand base, panel mounting brackets, or an uncased version for custom applications. Primary applications include platform scales, tank scales, truck scales, and railroad track scales.

The UMC555 also offers BCD output (UMC2000 compatible), RFI/EMI shielded, (12-bit) optically-isolated 4-20 mA or 0-10VDC analog output, and versatile battery operation.

Applications

- Mechanical conversions
- Straight weighing

Standard Features

- Four-button operation
- Mild steel NEMA 1 enclosure
- Tilt stand base
- Front-panel calibration
- Zero, Net/Gross, Tare and Print keys

Options/Accessories

19576 ..... BCD output, external, 115 VAC
55458 ..... BCD output, external, 230 VAC
19578 ..... Analog output, 0-10/4-20 mA, 115 VAC
55469 ..... Analog output, 0-10/4-20 mA, 230 VAC
19577 ..... Battery pack, 115/230 VAC
56116 ..... RS-485 serial expander
16815 ..... Technical manual
16819 ..... Additional operating manual

UMC555 PART NUMBERING GUIDE

UMC555 ( ) ( ) ( ) ( )

ENCLOSURE
A = Mild steel painted enclosure with tilt stand
B = Mild steel painted enclosure with panel mount brackets
C = Uncased board set

INPUT POWER
A = 115 VAC, 60 Hz
B = 230 VAC, 50 Hz
C = 12 VDC (external output)

OPTIONS
A = Standard
B = Battery pack with charger (part #19577)
C = Parallel BCD, 115 VAC (part #19576)
D = Analog output 0-10 VDC; analog output 4-20 mA (115 VAC part #19578) (230 VAC #55469)

LOAD CELL TERMINATION
C = RFI - shielded

PART # DESCRIPTION

115 VAC

19189 ..... UMC555AAAC, mild steel enclosure w/tilt stand, 115 VAC 60 Hz, standard options, RFI shielded
61959 ..... UMC555BAAC, mild steel enclosure w/panel mount brackets, 115 VAC 60 Hz, standard, RFI shielded
61178 ..... UMC555CAAC, uncased board set, 115 VAC 60 Hz, standard, RFI shielded
61224 ..... UMC555AACC, mild steel enclosure w/tilt stand, 115 VAC 60 Hz, parallel BCD, RFI shielded
61237 ..... UMC555AADC, mild steel enclosure w/tilt stand, 115 VAC 60 Hz, Analog output 0-10 VDC; Analog output 4-20 mA, RFI shielded
62018 ..... UMC555BADC, mild steel enclosure w/panel mount brackets, 115 VAC 60 Hz, Analog output 0-10 VDC; Analog output 4-20 mA, RFI shielded
61869 ..... UMC555AAAC-35, mild steel enclosure w/tilt stand, 115 VAC 60 Hz, standard options, RFI shielded w/internal BCD
64572 ..... UMC555BAAC-35, mild steel enclosure w/panel mount brackets, 115 VAC 60 Hz, standard, RFI shielded w/internal BCD

12 VDC (EXTERNAL INPUT)

61363 ..... UMC555CCAC, uncased board set, 12 VDC, standard, RFI shielded
62269 ..... UMC555BCAC, mild steel enclosure w/panel mount brackets, 12 VDC, standard, RFI shielded

230 VAC

61279 ..... UMC555ABAC, mild steel enclosure w/tilt stand, 230 VAC 50 Hz, standard, RFI shielded
61290 ..... UMC555ABBC, mild steel enclosure w/tilt stand, 230 VAC 50 Hz, battery pack w/charger, RFI shielded

All other part number configurations are available as special order units.

(Specifications on back)

LOAD CELL EXCITATION:
10 VDC, fixed, short-circuit proof

LOAD CELL CURRENT:
240 mA maximum (8 350Ω load cells)

ANALOG SIGNAL INPUT RANGE:
0.7 mV/V - 2.0 mV/V “high span”
1.7 mV/V - 3.2 mV/V “low span”

CONVERSION RATE AT FULL SCALE:
10 updates per second, no averaging

RESOLUTION:
10,000 displayed graduations
80,000 internal graduations

DISPLAY:
6-digit, 0.6" (15.2mm) red Light Emitting Diode (LED) Display

LB/KG SWITCHING:
Via customer supplied switch, with conversion for weight, tare values

FRONT-PANEL CONTROL SWITCHES:
Zero, Gross/Net, Tare, Print

FRONT-PANEL ANNUNCIATORS:
Center Zero, Net, lb, kg, Motion (Red bar LEDs)

SERIAL OUTPUT:
Port 1: Full duplex RS-232, 20 mA current loop (optional RS-485/422)
Port 2: Simplex RS-232, 20 mA current loop

WEIGHT AVERAGING:
10 updates per second fixed

MOTION BAND:
Selectable: Off, ±1, ±3 graduations, 1 second delay

POWER INPUT:
115/230 VAC, 50/60 Hz, or external DC

POWER CONSUMPTION:
15 watts

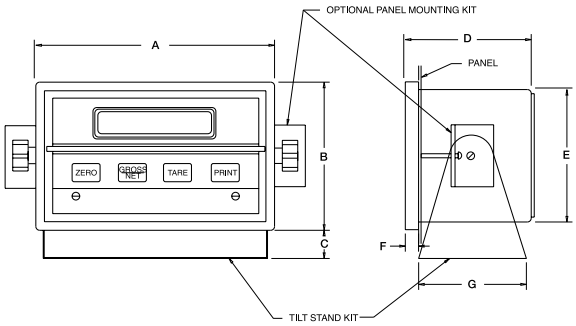
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

RATING/MATERIAL:
Mild steel, NEMA 1 general purpose, tilt stand base standard

WEIGHT:
Approximately 5.5 lb (2.5 kg)

APPROVALS:
NTEP certified, CC# 00-005; Measurement Canada approved, MAL-SWA-4408 rev. 4; CSA

WARRANTY:
Two year limited warranty



DIMENSIONS

A =	7.75"	(196.8mm)	D =	4.09"	(103.9mm)
B =	4.81"	(122.2mm)	E =	4.31"	(109.5mm)
C =	0.92"	(23.4mm)	F =	0.43"	(10.9mm)
or	2.06"	(52.3mm)	G =	3.50"	(88.9mm)

Specifications subject to change without notice
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CONDEC™ UMC600 Digital Weight Indicator

Measurement Canada Approved

Excelling a variety of demanding most applications, the UMC600 is one of the most versatile weight indicators available today. It offers simple prompting sequences for easy calibration and configuration. It locks in the most accurate weighments with features like automatic zero tracking (AZT) and 80,000 displayed graduations. Encased in a NEMA 4X stainless steel enclosure, the UMC600 ensures long-lasting performance and durability regardless of the environment.

PART # DESCRIPTION (PART NUMBERING CHART ON BACK OF PAGE)

115 VAC

19198 ..... UMC600AAAC, stainless steel enclosure w/tilt stand, 115 VAC 60 Hz, LED, RFI shielded
55623 ..... UMC600BAAC, stainless steel enclosure w/panel mount brackets, 115 VAC 60 Hz, LED, RFI shielded
61652 ..... UMC600DAAC, flange mount, 115 VAC 60 Hz, LED, RFI shielded
59659 ..... UMC600ACAC, stainless steel enclosure w/tilt stand, 115 VAC 60 Hz w/battery, LED, RFI shielded
54117 ..... UMC600AFAC, stainless steel enclosure w/tilt stand, 115 VAC analog 0-10 VDC; 4-20 mA output, LED, RFI shielded
54722 ..... UMC600AHAC, stainless steel enclosure w/tilt stand, 115 VAC relay output (solid state), LED, RFI shielded
55622 ..... UMC600AKAC, stainless steel enclosure w/tilt stand, 115 VAC analog 0-10 VDC; 4-20 mA output; 4 SS relays, LED, RFI shielded
56231 ..... UMC600BCAC, stainless steel enclosure w/panel mount brackets, 115 VAC 60 Hz w/battery, LED, RFI shielded
57186 ..... UMC600BFAC, stainless steel enclosure w/panel mount brackets, 115 VAC analog 0-10 VDC; 4-20 mA output, LED, RFI shielded
57774 ..... UMC600BHAC, stainless steel enclosure w/panel mount brackets, 115 VAC relay output (solid state), LED, RFI shielded
62337 ..... UMC600DHAC, flange mount, 115 VAC relay output (solid state), LED, RFI shielded
59057 ..... UMC600AABC, stainless steel enclosure w/tilt stand, 115 VAC 60 Hz, LCD, RFI shielded
59709 ..... UMC600ACBC, stainless steel enclosure w/tilt stand, 115 VAC 60 Hz w/battery, LCD, RFI shielded
55657 ..... UMC600AKBC, stainless steel enclosure w/tilt stand, 115 VAC analog 0-10 VDC; 4-20 mA output; 4 SS relays, LCD, RFI shielded

Applications

- Batching systems, platform scales, truck scales, railroad track scales

Standard Features

- Surge protection board
- Auto/manual batching modes
- 80,000 display graduations available
- RFI/EMI shielded
- Easy digital configuration and calibration
- Four control inputs/outputs
- Truck in/out weighing mode, 300 truck ID storage
- One 10-digit accumulator
- 5-point linearization
- Keyboard customized serial output
- Time and date
- Front panel key lockout
- Temperature compensated -18° to 104°F (-10° to 40°C)

Options/Accessories

55633 ..... Relay board with solid state relays (old style), KBT7116-11
55637 ..... Relay board with dry contact relays (old style), KBT7116-12
55649 ..... Battery, KBT7116-14
55653 ..... Relay board with four solid state relays (new style), KBT7116-16
55658 ..... Analog kit (no board), KBT7116-17
55660 ..... Analog output board, KBT7116-18
55662 ..... Relay and analog output board, KBT7116-19
16815 ..... Technical manual
30261 ..... Additional operating manual

PART # DESCRIPTION (PART NUMBERING CHART ON BACK OF PAGE)

12 VDC (EXTERNAL INPUT)

62934 ..... UMC600AEAC, stainless steel enclosure w/tilt stand, 12 VDC, LED, RFI shielded
56864 ..... UMC600BEAC, stainless steel enclosure w/panel mount brackets, 12 VDC, LED, RFI shielded

230 VAC

59318 ..... UMC600ABAC, stainless steel enclosure w/tilt stand, 230 VAC 50 Hz, LED, RFI shielded
55960 ..... UMC600BBAC, stainless steel enclosure w/panel mount brackets, 230 VAC 50 Hz, LED, RFI shielded
58514 ..... UMC600BJAC, stainless steel enclosure w/panel mount brackets, 230 VAC relay output (solid state), LED, RFI shielded
59295 ..... UMC600BLAC, stainless steel enclosure w/panel mount brackets, 230 VAC analog 0-10 VDC; 4-20 mA output; 4 SS relays, LED, RFI shielded

All other part number configurations are available as special order units.

(Specifications on back)

LOAD CELL EXCITATION:
10 VDC, fixed, short-circuit proof
LOAD CELL CURRENT:
240 mA maximum (8 350Ω load cells)
ANALOG SIGNAL INPUT RANGE:
0.7 mV/V - 2.0 mV/V “high span”
1.7 mV/V - 3.2 mV/V “low span”
CONVERSION RATE AT FULL SCALE:
10 updates per second, no averaging
RESOLUTION:
10,000 displayed graduations, expanded 80,000 (max.)
80,000 internal graduations
DISPLAY:
6-digit, 0.6" (15.2mm) red Light Emitting Diode (LED) Display
FRONT-PANEL CONTROL SWITCHES:
Zero, Gross/Net, Tare, Print
FRONT-PANEL ANNUNCIATORS:
Center Zero, Net, lb, kg, Motion (Red bar LEDs)
SERIAL OUTPUT:
Port 1: Full duplex RS-232, 20 mA current loop (optional RS-485)
Port 2: Simplex RS-232, 20 mA current loop
MOTION BAND:
Selectable: Off, ±1, ±3 graduations, 1 second delay

SETPOINT OUTPUT CONTROL:
4 bi-polar 5VDC logic levels
REMOTE CONTROL INPUTS:
4, 5VDC logic levels
POWER INPUT:
115/230 VAC, 50/60 Hz, or external DC
POWER CONSUMPTION:
15 watts
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)
OVERALL DIMENSIONS:
9.12" L x 6.62" H x 4.18" W (251mm L x 168mm H x 106mm W)
WEIGHT:
Approximately 9.5 lb (4.3kg)
APPROVALS:
NTEP certified, CC# 00-004; CE marked (on selected modules);
Measurement Canada approved, MAL-SWA-4131; CSA
WARRANTY:
Two year limited warranty

UMC600 PART NUMBERING GUIDE

UMC600 (__)(__) (__)(__)

ENCLOSURE
A = Stainless steel with tilt stand
B = Stainless steel with panel mount brackets
D = Flange Mount

INPUT POWER
A = 115 VAC, 60 Hz
B = 230 VAC, 50 Hz
C = 115 VAC, 60 Hz with battery option (part #55649)
D = 230 VAC, 50 Hz with battery option (part #55649)
E = 12 VDC (external input)
F = 115 VAC with analog output option 0-10 VDC; 4-20 mA (part #55660)
G = 230 VAC with analog output option 0-10 VDC; 4-20 mA (part #55660)
H = 115 VAC with relay output option (solid state) (part #55653)
J = 230 VAC with relay output option (solid state) (part #55653)
K = 115 VAC with analog & relay output option 0-10 VDC; 4-20 mA output, 4 SS relays (part #55662)
L = 230 VAC with analog & relay output option 0-10 VDC; 4-20 mA, 4 SS relays (part #55662)

DISPLAY
A = Light Emitting Diode (LED)
B = Liquid Crystal Display (LCD)

LOAD CELL TERMINATION
C = RFI - shielded 6-wire connector

Specifications subject to change without notice
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CONDEC™ UMC612 Digital Weight Indicator

Measurement Canada Approved

The UMC612 digital weight indicator offers advanced capabilities and performance for checkweighing, draft weighing, and setpoint control or automatic batching applications. Utilizing new conversion technology, the UMC612 processes up to 100 conversions per second, features bi-polar resolution up to 1 million counts, and is easily configured for custom applications.

Available in a stainless steel NEMA 4X enclosure, the UMC612 also features full EMI/RFI-shielding, dual serial ports, time and date display, and expansion capabilities.

Applications

- Checkweighing, draft weighing, setpoint control, automatic batching

Standard Features

- Bi-polar resolution up to 1,000,000 counts
- EMI/RFI shielding
- Dual serial ports
- Time and date
- NEMA 4X stainless steel
- Multi-line display, six digits for weight and 16 alpha-numeric for process status information
- Digital and selective 2Hz analog filtering
- Active temperature compensation for zero and span
- Automatic gain adjustment
- Selectable conversion rate
- 10-point linearity compensation
- Automatic dead load compensation
- Rate-by-weight and peak hold
- Eight setpoint outputs and four process inputs
- Programmable batch sequence and print format
- Multi-ingredient accumulation
- Full serial control with 20mA, RS-232, RS-422 or RS-485

Options/Accessories

55653 ..... Relay board with four solid state relays (new-stlye), KBT7116-16
55658 ..... Analog kit (no board), KBT7116-17
55660 ..... Analog board, KBT7116-18
55662 ..... Relay and analog output board, KBT7116-19
55665 ..... RS-485 serial output
55825 ..... Additional operating manual

PART #	DESCRIPTION
115 VAC	
56701	UMC612AAAA, tilt stand, 115 VAC 60 Hz, standard, standard
62888	UMC612BAAA, panel mount brackets, 115 VAC 60 Hz, standard, standard
61847	UMC612AABA, tilt stand, 115 VAC 60 Hz, four solid state relays, standard
61862	UMC612AACA, tilt stand, 115 VAC 60 Hz, analog 0-10 VDC; 4-20 mA output (includes option B), standard
62901	UMC612BACA, panel mount brackets, 115 VAC 60 Hz, analog 0-10 VDC; 4-20 mA output (includes option B), standard
61845	UMC612CACA, flange mount, 115 VAC 60 Hz, analog 0-10 VDC; 4-20 mA output (includes option B), standard
61837	UMC612AAAB, tilt stand, 115 VAC 60 Hz, standard, connector
61849	UMC612AABB, tilt stand, 115 VAC 60 Hz, four solid state relays, connector
62895	UMC612BABB, panel mount brackets, 115 VAC 60 Hz, four solid state relays, connector
61866	UMC612AACB, tilt stand, 115 VAC 60 Hz, analog 0-10 VDC; 4-20 mA output (includes option B), connector
62902	UMC612BACB, panel mount brackets, 115 VAC 60 Hz, analog 0-10 VDC; 4-20 mA output (includes option B), connector
230 VAC	
61928	UMC612CBAA, flange mount, 230 VAC 50 Hz, standard, standard
61942	UMC612ABAB, tilt stand, 230 VAC 50 Hz, standard, connector
61952	UMC612ABBB, tilt stand, 230 VAC 50 Hz, four solid state relays, connector

UMC612 PART NUMBERING GUIDE

UMC612 ( ) ( ) ( ) ( )

ENCLOSURE
A = Tilt stand
B = Panel mount brackets
C = Flange mount assembly

INPUT POWER
A = 115 VAC, 60 Hz
B = 230 VAC, 50 Hz

OUTPUT OPTIONS
A = Standard (TTL logic)
B = Relay output option; four solid state relays (part #55653)
C = Analog output option 0-10 VDC; 4-20 mA output (includes option B) (part #55660)

LOAD CELL TERMINATION
A = Standard (cord grip)
B = Connector

All other part number configurations are available as special order units.

(Specifications on back)

LOAD CELL EXCITATION:
10 VDC

LOAD CELL CURRENT:
240 mA maximum (8 x 350Ω load cells)

ANALOG SIGNAL INPUT RANGE:
0.5 to 3.4 mV/V

CONVERSIONS PER SECOND:
7.5, 10, 20, 30, 40, 60, or 100

ANALOG FILTERING:
Active 2 Hz or wide band

DIGITAL FILTERING:
Adaptive

DIGITAL AVERAGING:
Selectable 1-99

DEAD LOAD COMPENSATION:
Auto adjust to 2 mV/V

LINEARIZATION:
10-point

DISPLAY GRADUATIONS:
100,000 maximum

WEIGHT DISPLAY:
6-digit (7segment), 0.55" (14mm) Light Emitting Diode (LED)

AUX. DISPLAY:
16 alpah-numeric LED characters

FRONT PANEL CONTROL KEYS:
"Mode", "Xero", "Tare", "Print", "Trim", "Step", "Start/Stop", "Total", "Recall", "ID", "Time", "Date", "Setpt", "Delay", "Units", "Count", and "0-9"

OPERATING MODELS:
Gross, net, rate, peak or batch

DIGITAL (SERIAL) OUTPUT:
Port 1: simplex/duplex, RS-232, RS-422, RS-485, or 20 mA
Port 2: simplex, RS-232, or 20 mA

ACCUMULATORS:
10, 10-digit accumulators

DELAYS:
10, 1 to 999 sec.

ID'S:
10, up to 8 characters each

COUNTER:
6-digit batch counter

PROCESS CONTROLS:
Setpoints: 8 logic outputs
Inputs: 4 logic inputs
Batch: variable sequence
Peak: store peak
Gross, Net, or Rate

POWER INPUT:
115, 230, or 240 VAC 50/60 Hz

OPERATING TEMPERATURE:
4°F to 122°F (-20°C to 50°C)

RATING/MATERIAL:
NEMA 4X stainless steel

OVERALL DIMENSIONS:
9.12" L x 6.62" H x 6.35" W
(231mm L x 168mm H x 161mm W)

WEIGHT:
12 lb (5.4 kg)

APPROVALS:
NTEP certified, CC# 00-007
Measurement Canada approved, MAL-AM-5055

WARRANTY:
Two year limited warranty

Specifications subject to change without notice
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IQ 700HB Digital Weight Indicator

Measurement Canada Approved

PART # DESCRIPTION

19191 ..... IQ 700HB LED display, 115 VAC
34752 ..... IQ 700HB LED display, 230 VAC

The IQ 700HB is an AC-powered indicator with a bright LED display and is part of our board-compatible series of indicators and scales. It is designed for general weighing and truck scale applications.

The IQ 700HB features a 300-truck ID memory and versatile setpoint capabilities as standard equipment. These improved software capabilities give the IQ 700HB the flexibility to monitor truck IN/OUT operations or control various process control operations like filling and checkweighing. Other standard features include dual serial ports (one bidirectional), gross/tare/net printout, power for eight 350-ohm load cells, and two programmable setpoints. Its NEMA 4X stainless steel enclosure protects electronics in demanding environments.

Applications

- Truck scales
- Industrial weighing
- Filling and checkweighing

Standard Features

- Bright Light Emitting Diode (LED) display
- AC power
- Stainless steel NEMA 4X enclosure
- Front-panel digital calibration
- Automatic zero and span temperature compensation
- Excitation for eight 350Ω load cells at 10 VDC
- Two fully programmable setpoints with “Zero Band”
- Two serial ports offering bidirectional RS-232 and simplex RS-232 or 20 mA current loop
- Gross/Tare/Net computation
- Time and date
- Accumulator
- 300-truck ID memory
- Versatile tilt stand
- Set-up parameters printout

Options/Accessories

30352 ..... KBT7116-5 Panel mount kit
19281 ..... 2 Unlatched solid state output relays
15959 ..... Unlatched dry contact 4-relay board
19576 ..... BCD output (external)
19578 ..... Analog output 0-10 VDC, 4-20 mA
22922 ..... Analog output 0-10 VDC, 4-20 mA (internal mount)
55662 ..... Combination relay and analog board
16815 ..... Technical manual
16821 ..... Additional operating manual

(Specifications on back)

LOAD CELL EXCITATION:
10 VDC, fixed, short-circuit proof

LOAD CELL CURRENT:
240 mA maximum (8 x 350Ω load cells)

LOAD CELL CABLING:
4- or 6-wire selective

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.33 mV/V

ANALOG SENSITIVITY:
0.3 microvolts/graduation minimum

TRANSIENT OVERLOAD PROTECTION:
±100 VDC without damage—100 microsecond duration at 2% duty cycle

CONVERSION RATE AT FULL SCALE:
10 updates per second, typical

INTEGRATION TIME:
17 milliseconds to 28 milliseconds

RESOLUTION:
80,000 displayed graduations
100,000 internal graduations

DISPLAY BLANKING:
Occurs at 103% of selected capacity

DISPLAY INCREMENTS:
1, 2, 5, 10, 20, 50, 100

UNDERRANGE BLANKING:
400 graduations, typical

OVER/UNDER CAPACITY ANNUNCIATION:
OL = overload, UL = underload

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAY:
IQ 700HB: Six red Light Emitting Diode (LED) digits, 0.6" (15.2mm)

POLARITY INDICATION:
" – " sign

DECIMAL POINT:
Selectable—888888, 88888.8, 8888.88, 888.888, 88.8888, 8.88888, 888880, 888800

LB/KG SWITCHING:
Front-panel selectable, can be disabled

FRONT-PANEL CONTROL SWITCHES:
Zero, Gross/Net, Auto Tare, lb/kg conversion, Print, Tare Recall, SP1, SP2 and Data Entry Keys

FRONT-PANEL ANNUNCIATORS:
Center Zero, Net, Gross, lb, kg and Motion (LED)

SERIAL OUTPUTS:
Port 1: Bidirectional RS-232 or 20 mA.
Port 2: Simplex RS-232 or 20 mA current loop; truck IN/OUT only on port 2

AZM: (ZERO TRACK)
"Gross" mode only

SETPOINTS:
2 bi-polar setpoint outputs, TTL compatible equipped with "zero band" which operates at a programmable number of graduations around zero

AZM CAPTURE RANGE:
Selectable: Off, ±0.5, ±1, ±3 graduations

AZM APERTURE:
Selectable: ±1.9% full scale, 100% internal selectable

WEIGHT AVERAGING:
8 internal selections

MOTION BAND:
Selectable: ±1, ±3, ±5, ±10 graduations

ZERO BAND:
Selectable: Off, 1, 2, 3, 4, 5, 6, 7, 8, 9,10 graduations

POWER INPUT:
115 VAC at 20 watts at 50/60 Hz (Optional 230 VAC, 50 Hz)

POWER CONSUMPTION:
20 watts typical

DISPLAY CHECK:
All digit segments and annunciators sequentially illuminated upon power application

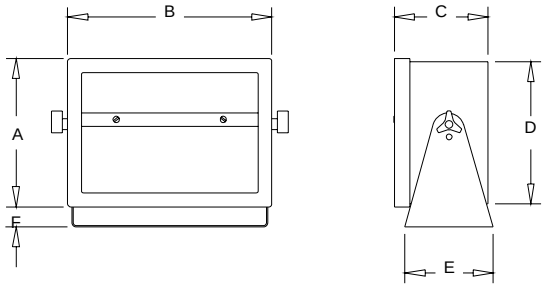
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

RATING/MATERIAL:
NEMA 4X stainless steel

WEIGHT:
9.5 lb (4.31 kg)

APPROVALS:
NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 89-023A2; Measurement Canada approved, S.WA-4131; CSA

WARRANTY:
One year limited warranty



DIMENSIONS

A =	6.62" (168.1mm)	D =	6.34" (161.0mm)
B =	9.12" (231.6mm)	E =	3.94" (100.1mm)
C =	4.18" (106.2mm)	F =	0.90" (22.9mm)

Specifications subject to change without notice
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SURVIVOR® 555HE

Hostile Environment Digital Weight Indicator

PART # DESCRIPTION

19156 ..... SURVIVOR 555HE

The SURVIVOR 555HE is a rugged industrial instrument that combines the features of the UMC555 with our environmentally protected SURVIVOR package. It's designed and proven to withstand some of the most hostile environments in the field.

The SURVIVOR 555HE is equipped with temperature compensation and RFI/EMI filtering to ensure peak performance in demanding applications. The advanced communications provide "real time" data generation in industrial environments.

For added flexibility, the SURVIVOR 555HE can be operated from an external DC power source.

Applications

- Straight weighing
- Corrosive environments
- Harsh washdown

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) enclosure
- Rubber-booted SURVIVOR watertight switches
- Nylon watertight cable fittings
- High visibility, bright red 0.8" (20.3mm) Light Emitting Diode (LED) display
- Full digital front-panel calibration
- Excitation for eight 350Ω cells
- Full RFI/EMI filtering
- Two serial ports offering bidirectional RS-232 and simplex RS-232 or 20 mA current loop
- 115 VAC, 230 VAC available

Options/Accessories

19298 ..... Internal thermostatically-controlled heater, maintains inner unit temperature to within recommended operating specifications
19576 ..... BCD output
19341 ..... Battery option
19578 ..... Analog output, 0-10 VDC/4-20 mA
16819 ..... Additional operating manual

(Specifications on back)

LOAD CELL EXCITATION:
10 VDC, fixed, short-circuit proof

LOAD CELL CURRENT:
240 mA maximum (8 x 350Ω load cells)

LOAD CELL CABLING:
4-wire standard, 6-wire (remote sensing) with PC trace cuts

ANALOG SIGNAL INPUT RANGE:
0.7 mV/V - 2.0 mV/V, "high span"
1.7 mV/V - 3.2 mV/V, "low span"

ANALOG SENSITIVITY:
0.3 microvolts/graduation maximum

TRANSIENT OVERLOAD PROTECTION:
±100 VDC without damage, 100 microsecond duration at 2% duty cycle

CONVERSION RATE AT FULL SCALE:
10 updates per second, no averaging

INTEGRATION TIME:
20 millisecond, typical
17 millisecond, "low span"
28 millisecond, "high span"

DISPLAY RESOLUTION:
10,000 displayed graduations
100,000 internal graduations

FULL SCALE DISPLAY CAPACITY:
Selectable to: 500, 1000, 1500, 2000, 2500, 3000, 4000, 5000, 6000, 8000, 10,000

DISPLAY BLANKING:
Occurs at 103% of selected capacity

DISPLAY INCREMENTS:
1, 2, 5, 10, 20, 50, 100

UNDERRANGE BLANKING:
400 graduations, typical

OVER/UNDER CAPACITY ANNUNCIATION:
OL = overload, UL = underload

LEAD ZERO BLANKING:
Standard, per NIST H-44 requirements

DISPLAY:
Six-digit, red Light Emitting Diode (LED), 0.8" (20.3mm)

POLARITY INDICATION:
" – " sign

DECIMAL POINTS:
Selectable: 888888, 88888.8, 8888.88, 888.888, 88.8888, 8.88888, 888880, 888800

FRONT-PANEL CONTROL SWITCHES:
Zero, Gross/Net, Tare, Print

FRONT-PANEL ANNUNCIATORS:
Center Zero, Net, lb, kg, and Motion (red bar LEDs)

SERIAL OUTPUT:
Standard RS-232 bidirectional serial port; simplex RS-232 or 20 mA current loop

AZM (ZERO TRACK):
"Gross" mode only

AZM CAPTURE RANGE:
Selectable: "Off," ±0.5, ±1, ±3 graduations

AZM APERTURE:
Selectable: ±1.9% or 100% full scale

WEIGHT AVERAGING:
Fixed

MOTION BAND:
Selectable: ±1 or ±3 displayed graduations, 1 second delay

POWER INPUT:
115/230 VAC, 50/60 Hz or external DC

POWER CONSUMPTION:
15 watts typical

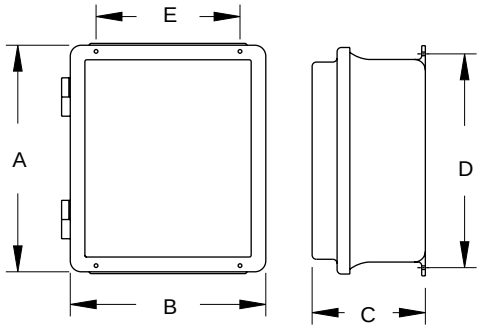
DISPLAY CHECK:
All digit segments and annunciators sequentially illuminated upon application of power

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

RATING/MATERIAL:
NEMA 4X wall mount, FRP

WEIGHT:
Approximately 13 lb (5.90 kg)

WARRANTY:
One year limited warranty



DIMENSIONS

A = 13.38" (339.8mm)	D = 12.75" (323.8mm)
B = 11.50" (292.1mm)	E = 8.00" (203.2mm)
C = 6.75" (171.4mm)	

Specifications subject to change without notice
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IQ plus® 810HE/810SS Digital Weight Indicator

Measurement Canada Approved

LISTED

ANOTHER REVOLUTION SOLUTION

PART #	DESCRIPTION
36917	HE FRP Enclosure, 115 VAC
36918	HE FRP Enclosure, 230 VAC
36919	HE Dual Channel, 115 VAC
36920	HE Dual Channel, 230 VAC
36921	HE JetPak™, 115 VAC*
36922	HE JetPak™, 230 VAC*
19251	SS NEMA 4X, 115 VAC
19252	SS NEMA 4X, 230 VAC
19263	SS Dual Channel, 115 VAC
19264	SS Dual Channel, 230 VAC
22174	SS JetPak™, 115 VAC*
22175	SS JetPak™, 230 VAC*

** Not Legal-For-Trade U.S./Canada*

IQ plus 810SS stainless steel

The IQ plus 810... never before has this level of power been available in a digital weight indicator. Its unique hybrid digital circuitry provides faster, more accurate and more flexible performance than conventional technology. It provides power for 16 350-ohm load cells on up to four separate scales, simplifying multi-scale control*. For use in hostile environments, the NEMA 4X FRP SURVIVOR enclosure ensures superior corrosion and condensation protection, inside or outside. The IQ plus 810SS NEMA 4X stainless steel is also available. The bright blue/green display is unmistakable even in poor visibility conditions. An optional LED bar graph enhances software capabilities and interactive operation.

The IQ plus 810 offers six different operating selections for truck scale management. The large internal memory holds up to 200 six-digit ID numbers and truck tares. Selectable automatic ticket printing and traffic reporting eliminate the need for a scale house computer.

Our exclusive RATTLETRAP® vibration control eliminates interference from agitators, mixers, blenders, fork truck traffic and other sources of industrial environment vibration. Now you can achieve stable, accurate weight information regardless of motion on or around your scale.

The IQ plus 810 is a batching Automation Control Center™. Its unique programmable setpoint software contains a comprehensive array of batch process possibilities. It's even self-correcting, learning as it works to assure your process integrity. The standard configuration includes 20 setpoint steps, 4 digital outputs and 3 digital inputs, providing more basic power than many custom controllers. With the addition of JetPak™, weigh data processing is performed at least five times faster than with conventional meters. At an impressive rate of 100 updates per second, it's ideal for high-speed bag filling, checkweighing and multi-step batching operations. An array of additional hardware and software options offer virtually unlimited solutions for your complex operations.

Applications

- Multi-scale operation, up to four scales*
- Sophisticated batching systems
- Outdoor and corrosive environments
- Perishable goods industry
- High-speed bag filling and checkweighing*

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) wall mount enclosure/NEMA 4X stainless steel wall mount enclosure
- Rubber-booted SURVIVOR watertight switches (IQ plus 810HE)
- Bright, bold Vacuum Fluorescent Display (VFD)
- Full keyboard for setpoint or fixed tare entry
- Time and date
- 20 updates/second, nominal
- Advanced digital filtering and RATTLETRAP® vibration control
- 20 programmable setpoint steps
- Multi-channel accumulators
- 3 digital inputs, TTL or hard contact closure; 4 TTL digital outputs, expandable to16
- Multi-functional 200 ID Truck in/out program
- Selectable print data and format via EDP port or front panel
- 2 communication ports: (1) EDP port, full duplex RS-232 or 20 mA optional; (1) printer port, simplex RS-232/20 mA current loop
- Multi-scale control expandable to 4 scale inputs, with individual scale setup*
- Power for up to sixteen 350Ω load cells on single or multiple channels*
- Models with JetPak feature 100 Hz A/D for 100 updates per second, single channel unit*

Options/Accessories

46030 ..... Revolution™ Scale Software
61138 ..... Dual Range option
35888 ..... Allen-Bradley Remote I/O, 115 VAC (external)
36593 ..... Allen-Bradley Remote I/O, 230 VAC (external)
49974 ..... PROFIBUS® DP Interface, 115 VAC (external)
49975 ..... PROFIBUS® DP Interface, 230 VAC (external)
19363 ..... 48-segment LED bar graph module
40386 ..... Dual load cell input module (3rd and 4th scale)
40385** ..... Expansion board (keyboard connection only)
19357** ..... Analog output module, 0-10 VDC/4-20 mA
19372 ..... RS-485 serial communication
19374 ..... 20 mA full duplex EDP port
19362 ..... 12-channel digital setpoint output module
16418 ..... 5 VDC power supply for digital output
19368 ..... Batching start/stop switch box
19375 ..... Supervisory setpoint configuration access switch
19365 ..... 4-channel relay rack, relays sold separately
19373 ..... 16-channel relay rack, relays sold separately
(Requires Part #19362 setpoint expander board)

I/O relay modules sold separately:
15969 .... 10-32 VDC Input relay module (N/O)
15970 .... Dry contact 100 VDC/1.5A output (N/O)
22848 .... Dry contact 100 VDC/1.5A output (N/C)
15971 .... 115 VAC Output relay module (N/O)
15972 .... 115 VAC Input relay module (N/O)
22847 .... 115/230 VAC Output relay module (N/C)
36632 .... 115/230 VAC Output relay module (N/O)
36631 .... 230 VAC Input relay module (N/O)
16478 .... Quencharc arc supressor

42100 ..... Additional operating manual (Version 3)

** This feature is available on specific models. Optional hardware/software may be required to add this feature to existing field units.*
*** One analog module per channel (dual scale only). Second analog module must be installed on expansion board.*

(Specifications on back)

LOAD CELL EXCITATION:
10 ± 0.5 VDC, 16 x 350Ω load cells (on up to 4 channels)*

LOAD CURRENT:
460 mA maximum (16 x 350Ω load cells)

INTERCONNECTION CABLE REQUIREMENTS:
6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduation minimum
Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:
± 12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:
20/second, typical (standard resolution)
10/second, typical (high resolution). Added channels reduce conversion rate per channel*

RESOLUTION:
Selectable up to 100,000 displayed graduations
Selectable up to 740,000 graduations internal

UNDERRANGE BLANKING:
-2 mV signal nominal

DISPLAY:
Large .55" (14.0mm) 7-digit, 14-segment blue/green Vacuum Fluorescent Display (VFD)

LB/KG SWITCHING:
Front panel pushbutton

FRONT-PANEL CONTROL SWITCHES:
Zero, Net/Gross, Tare, Units, Print, Disp Accum, Disp R.O.C., Disp Tare, Time/Date, New ID, Base #, Set Point, Clear

FRONT-PANEL ANNUNCIATORS:
Lb, Kg, R.O.C., Accum, Push Tare, Keyed Tare, Motion, Center of Zero, Gross, Net

SERIAL OUTPUT:
"EDP" port, full duplex RS-232 or 20 mA optional
"Printer" port, simplex RS-232 and 20 mA current loop

DIGITAL INPUTS:
3 inputs, TTL or switch closure, active low

DIGITAL OUTPUTS:
4 outputs standard, TTL active low, expandable to 16

SETPOINTS:
20 fully-programmable setpoint steps

ANALOG FILTERING:
Software selectable: 2, 8 Hz typical/3 pole, Off (25 Hz)

** This feature is available on specific models. Optional hardware/ software may be required to add this feature to existing field units.*

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line voltages: 115 or 230 VAC, +10%/-15%
Frequency: 50 or 60 Hz
Power consumption: 12 VA with minimum configuration, 30 VA with all options
Fusing: 0.25A SB (UL/CSA) 5x20mm @ 120V operation
0.125A SB (UL/CSA) 5x20mm @ 240V operation

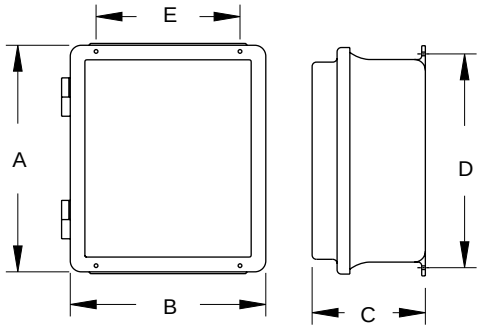
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

RATING/MATERIAL:
IQ plus 810HE: NEMA 4X FRP wall mount
IQ plus 810SS: NEMA 4X stainless steel

WEIGHT:
IQ plus 810HE: approximately 17.3 lb (7.8 kg)
IQ plus 810SS: approximately 24 lb (10.9 kg)

APPROVALS:
NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 92-013A2. Measurement Canada approved, AM-4840; UL & CUL listed

WARRANTY:
One year limited warranty



DIMENSIONS

FRP Enclosure	Stainless Steel Enclosure
A = 14.50" (368.3mm)	A = 14.25" (362.0mm)
B = 12.50" (317.5mm)	B = 12.25" (311.1mm)
C = 8.28" (210.3mm)	C = 6.25" (158.8mm)
D = 14.94" (379.4mm)	D = 14.75" (374.6mm)
E = 10.00" (254.0mm)	E = 10.00" (254.0mm)

NOTE: Because A-B Remote I/O and Profibus interface with programs written by non-RLWS parties, please consult factory for latest technical updates before quoting.

Specifications subject to change without notice
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SURVIVOR® 320HE & 390HE

Hostile Environment Digital Weight Indicators

Measurement Canada Approved

PART # DESCRIPTION

35826 ..... 115 VAC SURVIVOR 320HE
35827 ..... 230 VAC SURVIVOR 320HE

From fertilizer and chemical scales to corrosive washdown environments, the SURVIVOR 320HE and SURVIVOR 390HE indicators provide the ideal solution for severe-duty industrial and agricultural applications.

In bright sunlight or black of night, the SURVIVOR 320HE can be read from up to 40 feet away! Remote key operation, selective switch disabling, and switch lockout limit operator access to only the controls required to run their operation, reducing costly errors.

The SURVIVOR 320HE and SURVIVOR 390HE have unparalleled response time from actual scale loading to display update. RATTLETRAP® vibration filtering makes this one of the most advanced special-purpose weight indicators available today.

A serial port drives printers, remote displays, computers, or other devices. A remote print key or serial print command allows printing from a remote print station, programmable controller, or host computer.

Applications

- Straight weighing
- Corrosive environments
- Oil refineries
- Chemical processing plants
- Wastewater treatment
- Agricultural applications

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) enclosure
- (320HE) Bright, bold backlit 2" Liquid Crystal Display (LCD)
- (390HE) Bright, bold 1" Liquid Crystal Display (LCD)
- Universal mounting tabs (replaceable)
- 50 updates/second typical (320HE)
- 30, 15, 7 1/2, 3 3/4 updates/second (390HE)
- Selectable display update rate
- lb/kg switching
- 5-button operation
- Selectable units
- One communication port, simplex, selectable RS-232 or 20 mA current loop
- RATTLETRAP® vibration control

Options/Accessories

30911 ..... Additional mounting tabs

Measurement Canada Approved

PART # DESCRIPTION

53517 ..... 115 VAC SURVIVOR 390HE

(Specifications on back)

EXCITATION VOLTAGE:
320HE: 10 ± 0.5 VDC, 6 x 350Ω load cells
390HE: 5 VDC, 4 x 350Ω load cells

LOAD CURRENT:
320HE: 175 mA maximum (6 x 350Ω load cells)
390HE: 60 mA maximum (4 x 350Ω load cells)

LOAD CELL CABLE REQUIREMENTS:
4-wire/6-wire selective with jumpers

ANALOG SIGNAL INPUT RANGE:
0.5 mV/V - 3.5 mV/V

ANALOG SIGNAL SENSITIVITY:
0.3 microvolts/graduations minimum

INPUT OVERLOAD PROTECTION:
± 12 volt continuous

MEASUREMENT RATE:
320HE: 50 updates/second, typical
390HE: 30, 15, 7 1/2, 3 3/4 updates/second

SYSTEM LINEARITY:
Within 0.01% of FS

RESOLUTION:
Internal: Approximately 1,000,000 graduations
Display: Selectable up to 60,000 dd (320HE)
Selectable up to 100,000 (390HE)

DISPLAY:
320HE: 2" (50.8mm) Liquid Crystal Display (LCD), with backlight
390HE: 1" (25.4mm) Liquid Crystal Display (LCD),
Decimal point available at each digit

LB/KG SWITCHING:
Front-panel switch

FRONT-PANEL CONTROL SWITCHES:
Zero, Net/Gross, Tare, Units, Print

STATUS ANNUNCIATORS:
Tare, entered tare, standstill, net, gross, center of zero, minus sign, lb, kg

FRONT-PANEL:
5-button rubber-booted SURVIVOR® watertight switches

SERIAL OUTPUT:
Printer port: RS-232 or 20 mA simplex, 8 data bits, no parity; 7 data bits, even parity; 7 data bits, odd parity
Baud rates: 19200, 9600, 4800, 2400, 1200

DIGITAL INPUTS:
2 inputs, TTL or switch closure, active low

DIGITAL FILTERING:
3 separately programmable digital filter parameters

DISPLAY FILTER:
Selectable from 250 mS to 4 sec

CALIBRATION METHOD:
Software

MOTION TIME SENSITIVITY:
Fixed at 1 second

POWER:
Line voltages: 115 or 230 VAC + 10%/-15%
Frequency: 50/60 Hz
Power consumption: 25W maximum

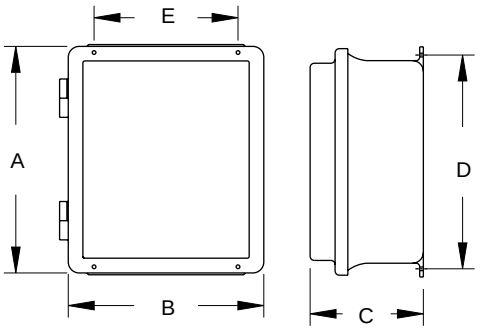
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

RATING/MATERIAL:
NEMA 4X FRP

WEIGHT:
320HE = approximately 18 lb (8.2 kg)
390HE = approximately 17 lb (7.2 kg)

APPROVALS:
320HE: NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 91-132A3. Measurement Canada approved, AM-4838
390HE: NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL, CC# 98-203A2. Measurement Canada approved, AM-5300

WARRANTY:
One year limited warranty



DIMENSIONS

SURVIVOR 320HE		SURVIVOR 390HE	
A =	14.50" (368.3mm)	A =	10.50" (267mm)
B =	12.50" (317.5mm)	B =	8.50" (216mm)
C =	8.28" (210.3mm)	C =	6.00" (152mm)
D =	14.94" (379.4mm)	D =	10.00" (254mm)
E =	10.00" (254.0mm)	E =	8.00" (203mm)

Specifications subject to change without notice
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SURVIVOR® CW-80 Checkweigher Indicator Only

Measurement Canada Approved

PART # DESCRIPTION

35974 ..... CW-80 Indicator, 115 VAC
35975 ..... CW-80 Indicator, 115 VAC w/TTL outputs
35976 ..... CW-80 Indicator, 115 VAC w/N.O. relays
35977 ..... CW-80 Indicator, 115 VAC w/N.C. relays
35978 ..... CW-80 Indicator, 115 VAC w/BBU and TTL outputs
35979 ..... CW-80 Indicator, 115 VAC w/BBU and N/O relays
35980 ..... CW-80 Indicator, 115 VAC w/BBU and N/C relays
35981 ..... CW-80 Indicator, 230 VAC
35982 ..... CW-80 Indicator, 230 VAC w/TTL outputs
35983 ..... CW-80 Indicator, 230 VAC w/N.O. relays
35984 ..... CW-80 Indicator, 230 VAC w/N.C. relays
35985 ..... CW-80 Indicator, 230 VAC w/BBU and TTL outputs
35986 ..... CW-80 Indicator, 230 VAC w/BBU and N/O relays
35987 ..... CW-80 Indicator, 230 VAC w/BBU and N/C relays

Offered as a SURVIVOR CW-80 checkweigher indicator only, the SURVIVOR CW-80 indicator offers adaptability to a wider variety of applications than the standard SURVIVOR CW-80 packages.

The SURVIVOR CW-80 features a new generation *Tough-Touch*™ keypad, designed to withstand the most demanding industrial applications. International symbols and an extra-bright, rapid-response display make the CW-80 instantly readable in almost any environment. A true NEMA 4X/IP66 indicator enclosure is designed to seal out moisture and contaminants.

115/230 power configurations and optional DC battery "backup power," with one of three available outputs, make operation possible anywhere. Battery backup power eliminates down time due to power failure, and supports limited portability. Optional RS-485 communication enables interfacing to a computer network, while the transaction memory buffer saves the last weighments for network retrieval and analysis. This unit powers four 350-ohm load cells.

Applications

- Food processing
- Industrial processing
- Kit assembly operations
- General filling operations
- General purpose weighing

Standard Features

- Large, bold 0.8" (20.3mm) Light Emitting Diode (LED) rapid-response display
- Industrial-quality 304 stainless steel construction
- NEMA 4X/IP66 indicator enclosure
- *Tough-Touch*™ industrial touch-control front panel with keys for over, under, tare, zero, units, print, target and ID
- Front-panel "Independent Key Disabling" for: OVER, UNDER, TARE, PRINT and UNITS keys
- Displays units in decimal lb, kg, oz, lb & oz, grams
- Annunciator lights for unit selection
- High-intensity LED for over, under and accept
- Storage for up to 300 tare and tolerance settings
- Automatic zero tracking
- 115 VAC or 230 VAC operation
- Bidirectional RS-232 and/or simplex 20 mA current loop communication
- RATTLETRAP® advanced digital filtering
- Combination desk/wall mount bracket
- Power for up to four 350-ohm load cells

Options/Accessories

32388 ..... 6 VDC replacement battery
32147 ..... Remote battery charger assembly, 6 VDC, 0.6A with 24" cable
32291 ..... Additional operating manual
Software:
32162 ..... RS-485 communication
Hardware:
30205 ..... 12" column replacing standard column
30206 ..... 18" column replacing standard column
30207 ..... 24" column replacing standard column
30208 ..... 30" column replacing standard column

(Specifications on back)

SURVIVOR CW-80 Indicator

Specifications

DISPLAY:
Large 0.8" 7-segment, 6-digit high-intensity red Light Emitting Diode (LED) display. Decimal point available at each digit

STATUS ANNUNCIATORS:
lb, kg, g, oz, net, motion, center of zero, neg

KEYBOARD:
8-key touch control with international symbols

BAR GRAPH:
5-segment, 7-range programmable multicolored array tracks Over, Under, Accept status in relation to target value

INTERNAL RESOLUTION:
50,000 to 1,000,000 based on filtering selection

DISPLAY RESOLUTION:
Selectable up to 50,000 dd

MEASUREMENT RATE:
25 updates/second

SYSTEM LINEARITY:
0.01% of F.S.

ZERO STABILITY:
100 nV/°C maximum

SPAN STABILITY:
3 ppm/°C maximum

AZM (ZERO TRACK):
Off, ±.5, 1, 2 or 3 dd

OPERATIONAL AZM:
±2% or 100% F.S.

MOTION BAND:
Off, .5, 1, 2, 3, 5, 10 dd

CALIBRATION METHOD:
Software

DIGITAL FILTER:
Software selectable 1, 2, 4, 8, 16, 32, 64, 128

SENSE AMPLIFIER:
Differential amplifier with 6-wire sensing

RFI PROTECTION:
Signal, excitation and sense lines protection.
3V/m for 100 kHz to 1 GHz, ≤1 µV susceptibility

DIGITAL OUTPUTS:
(Optional) 3 TTL outputs (5 VDC) or 3 N/O relays (10 watts, 0.5 amp, 100 VDC) or 3 N/C relays (10 watts, 0.5 amp, 100 VDC)

EDP PORT:
Full duplex, RS-232 or 20 mA simplex output (RS-485 optional)

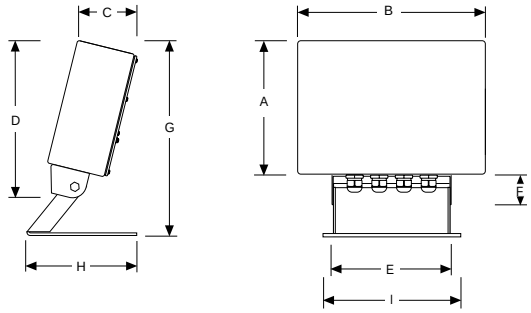
LINE VOLTAGES:
Available in 109-127 or 208-240 VAC models (DC battery backup optional; 24 hrs at 60% duty cycle).
Powers 4 x 350Ω load cells

FREQUENCY:
50 or 60 Hz

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

APPROVALS:
NTEP certified per Handbook 44, Class III/IIIL, 10,000d, CC #96-118; Measurement Canada approved, AM-5146. OIML Test certificate #D09-97.16 in accordance with EN 45501 (1992), Nr. 8.1, WELMEC-Document 2.1 (1995) OIML R 76-1 (1992), CUL and UL listed; CE marked

WARRANTY:
Two year limited warranty



DIMENSIONS

A =	6.75"	(171.5mm)	F =	1.50"	(38.1mm)
B =	9.50"	(241.3mm)	G =	10.25"	(260.4mm)
C =	3.25"	(82.6mm)	H =	6.50"	(165.1mm)
D =	8.50"	(215.9mm)	I =	4.55"	(115.6mm)
E =	6.00"	(152.4mm)			

Specifications subject to change without notice
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RD-300 Remote Display

PART #	DESCRIPTION
22530	RD-300 AC, FRP enclosure
22531	RD-300 DC, FRP enclosure
22532	RD-300 AC, FRP enclosure w/backlight
22533	RD-300 DC, FRP endclosure w/backlight
22534	RD-300 AC, stainless steel enclosure
22535	RD-300 DC, stainless steel enclosure
22536	RD-300 AC, stainless steel enclosure w/backlight
22537	RD-300 DC, stainless steel enclosure w/backlight
22540	RD-300 AC, panel mount w/backlight
22541	RD-300 DC, panel mount w/backlight
34749	RD-300 AC, 230 VAC, FRP enclosure
34750	RD-300 AC, 230 VAC, FRP enclosure w/backlight

The RD-300 Remote Display is designed for rugged reliability and versatility in demanding industrial, chemical and agricultural weighing environments.

Its compact NEMA 4X Fiberglass-Reinforced Polyester (FRP) enclosure is ideally suited for indoor and outdoor applications exposed to corrosive and caustic elements. An optional stainless steel enclosure provides solid washdown protection in food processing environments. Even in direct sunlight, its high-contrast liquid crystal display maximizes operator viewing. A display backlight option provides quick and accurate weight readings in dark conditions.

Standard RS-232 and 20mA current loop communications allow interfacing to host computers and digital weighing indicators. A unique universal data receiver provides compatibility with a wide variety of indicators by intuitively recognizing serial string formats.

Applications

- Indoor/outdoor use
- Washdown
- Bright sunlight and dark environments

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) wall mount enclosure
- Easily-readable 1" (25.4mm) Liquid Crystal Display (LCD)
- RS-232 and 20 mA active current loop interface
- Status annunciators
- AC or DC operation
- Optional NEMA 4X stainless steel wall mount enclosure
- Optional display with backlight for dark conditions
- Compatible with a variety of digital weighing indicators; intuitive data receiver automatically interprets serial strings
- 115 VAC, 230 VAC available

Options/Accessories

32724 ..... RD-300 AC/DC board only
32725 ..... RD-300 AC/DC board only w/backlight
33210 ..... Additional operating manual (RD-300/RD-232)

RD-300 NEMA 4X stainless steel enclosure

(Specifications on back)

DISPLAY:
6-digit, 7-segment, 1" (25.4mm) Liquid Crystal Display (LCD), optional backlight available (100,000-hour rated life)

STATUS ANNUNCIATORS:
lb, kg, g, gross, net, oz, pcs, tn, zero, count, under, over, OK

OPERATING VOLTAGE:
AC models—115 VAC 50/60 Hz standard;
DC models—6.6-13.6 and 12-18 VDC
230 VAC available

INPUT INTERFACE:
RS-232, 20mA active current loop, standard ASCII compatible

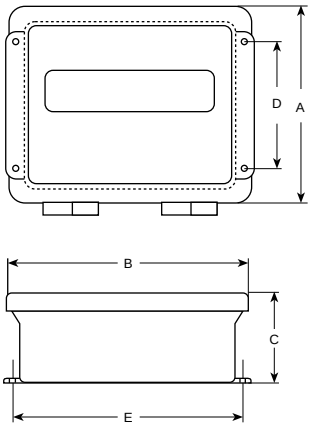
BAUD RATE:
Selectable: 1200, 2400, 4800 and 9600

OPERATING TEMPERATURE:
-13°F to 104°F (-25°C to 40°C)

RATING/MATERIAL:
NEMA 4X FRP or stainless steel

WEIGHT:
Approximately 4 lb (1.8 kg)

WARRANTY:
One year limited warranty



DIMENSIONS

FRP Enclosure			Stainless Steel Enclosure		
A =	8.00"	(203.2mm)	A =	6.00"	(152.4mm)
B =	9.50"	(241.3mm)	B =	9.50"	(241.3mm)
C =	5.25"	(133.4mm)	C =	3.87"	(98.3mm)
D =	4.00"	(101.6mm)	D =	4.00"	(101.6mm)
E =	8.75"	(222.3mm)	E =	8.75"	(222.3mm)

Specifications subject to change without notice
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RD-232 Remote Display

PART #	DESCRIPTION
32716	RD-232, 115 VAC/12 VDC, FRP enclosure
32717	RD-232, 115 VAC/12 VDC, stainless steel enclosure
32727	RD-232, 115 VAC/12 VDC, panel mount
34748	RD-232, 230 VAC/12 VDC, FRP enclosure

Featuring a NEMA 4X Fiberglass-Reinforced Polyester (FRP) enclosure, the RD-232 remote display is built to withstand the rigors of harsh treatment in wet and corrosive environments.

With a highly-visible .8" LED display and its full array of features, including a range of selectable interfaces, selectable baud rates, and annunciators, the RD-232 is ideal for truck, chemical, agricultural and paper applications. In food processing environments, the optional stainless steel enclosure provides maximum protection. A panel-mount version is also available.

Standard RS-232 or 20 mA current loop allows interfacing to a range of host devices. In applications requiring cable lengths in excess of 500 feet, the RD-232 actually pays for itself in cable savings when compared to parallel displays. Installation of the RD-232 is easy, requiring only two wire connections and a 115 VAC outlet or 12 VDC power supply.

Applications

- Hostile washdown applications
- Corrosive environments
- Harsh industrial areas
- Wet and humid areas
- Indoor/outdoor use

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) wall-mount enclosure
- Easy-to-read 6-digit 0.8" (20.3mm) Light Emitting Diode (LED)
- AC or DC operation
- 4 status annunciators
- Full floating decimal point
- RS-232 or 20 mA current loop active or passive interface
- Optional NEMA 4X stainless steel wall-mount enclosure or NEMA 12 panel-mount version
- Compatible with a variety of digital weighing indicators; DIP switch selectable intuitive data receiver interprets serial strings

Options/Accessories

33210 ..... Additional operating manual (RD-300/RD-232)

RD-232 NEMA 4X stainless steel wall mount enclosure

(Specifications on back)

DISPLAY:
6-digit, 7-segment, 0.8" (20.32 mm) Light Emitting Diode (LED)

STATUS ANNUNCIATORS:
lb, kg, gross, net

OPERATING VOLTAGE:
115 VAC/12 VDC, ±10% 60Hz, 230 VAC available
DC Voltage Range: 6.2-18 VDC

INPUT INTERFACE:
RS-232, 20 mA active or passive current loop, standard
ASCII compatible

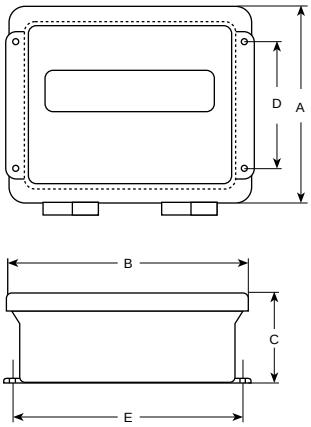
BAUD RATE:
Selectable: 300, 600, 1200, 2400, 4800, 9600, 19,200

OPERATING TEMPERATURE:
-13°F to 104°F (-25°C to 40°C)

RATING/MATERIAL:
NEMA 4X FRP or optional stainless steel

WEIGHT:
Approximately 5 lb (2.3 kg)
Stainless steel unit, approximately 6 lb (2.7 kg)

WARRANTY:
One year limited warranty



DIMENSIONS

FRP Enclosure		Stainless Steel Enclosure	
A =	8.00" (203.2mm)	A =	6.00" (152.4mm)
B =	9.50" (241.3mm)	B =	9.50" (241.3mm)
C =	5.25" (133.4mm)	C =	3.87" (98.3mm)
D =	4.00" (101.6mm)	D =	4.00" (101.6mm)
E =	8.75" (222.3mm)	E =	8.75" (222.3mm)

Specifications subject to change without notice
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SURVIVOR® IQ F-Series Flip Digit Smart Remote Displays

SURVIVOR F60

SURVIVOR F40

PART #	DESCRIPTION	DIGIT SIZE	MAX. VIEWING
43598	SURVIVOR IQ F15 Flip Digit Remote Display	1.5"	60' (18.2m)
40879	SURVIVOR IQ F40 Flip Digit Remote Display	4.0"	160' (48.8m)
40880	SURVIVOR IQ F60 Flip Digit Remote Display	6.0"	240' (73.2m)

The SURVIVOR IQ F-Series remote displays provide fast, accurate weight readings in bold easy-to-view numbers. Available in 1.5", 4", and 6" digit sizes, the display is easily readable from long distances and in bright sunlight.

The unique AutoLink™ software feature simplifies installation by examining the serial data stream sent from the indicator and determining the data rate and format used by the indicator. Simply install the communications cable between the indicator and remote display, and the IQ F-Series does the rest!

Applications

- Warehouse scales
- Truck scales
- Outdoors and bright sunlight environments

Standard Features

- AutoLink installation feature
- 6 highly-visible yellow display digits
- Fixed decimal point
- Annunicators for gross, net, lb, and kg
- Durable NEMA 4 enclosure
- RS-232, 20 mA current loop
- Weigh mode selection
- Available in 1.5", 4", and 6" digit sizes
- Auto sensing 115 VAC/ 230 VAC

Options/Accessories

43522 ..... Time
43412 ..... Temperature
65341 ..... Time and temperature
43599 ..... 1.5" backlight, 115 VAC, can be set to 230 VAC
40881 ..... 4" backlight, 115 VAC, can be set to 230 VAC
43520 ..... 6" backlight, 115 VAC, can be set to 230 VAC
41248 ..... 4" visor
41247 ..... 6" visor
43545 ..... Additional operating manual
Consult Factory:
RF transceiver for wireless communication

SURVIVOR F15

(Specifications on back)

DISPLAY:
6 active, highly-visible fluorescent yellow 1.5", 4" and 6" digits (38.1, 101.6, and 152.4mm)

INPUT INTERFACE:
20 mA current loop (active/passive), RS-232, standard ASCII serial characters.

BAUD RATE:
Self-learn 300, 600, 1200, 2400, 4800, 9600, and 19200 DIP switch selectable

CHARACTER FORMAT:
Self-learn character format, 7 odd, 7 even, 8 none, 1 or 2 stop bits. DIP switch selectable

UPDATE:
Selectable or continuous or out-of-motion only

POWER CONSUMPTION:
SURVIVOR IQ F15 – 18 watts, 52 watts with backlight
SURVIVOR IQ F40 – 52 watts, 75 watts with backlight
SURVIVOR IQ F60 – 75 watts, 115 watts with backlight

TIME:
DIP switch selectable ON/OFF or 12 hour/24 hour, external set switch, 12 and 24 hour format

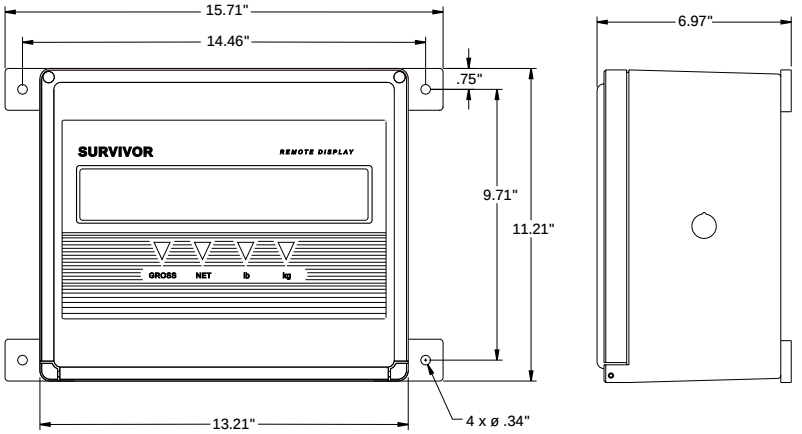
TEMPERATURE:
DIP switch selectable ON/OFF, Displays °C and °F

WEIGHT:
15 lb (6.8 kg) SURVIVOR IQ F15
45 lb (20.4 kg) SURVIVOR IQ F40
70 lb (31.7 kg) SURVIVOR IQ F60

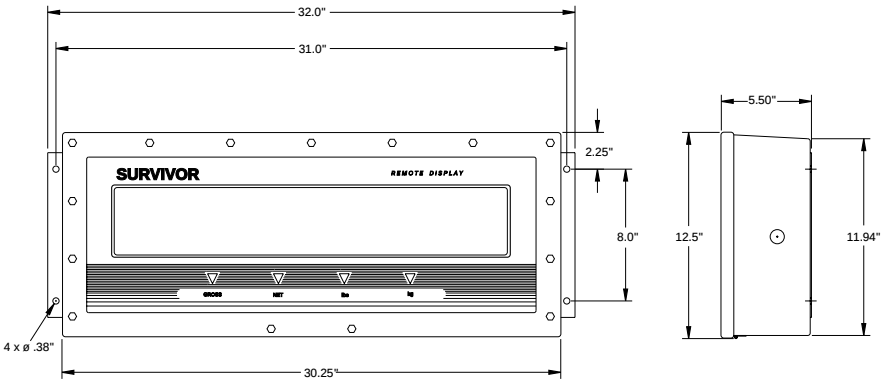
RATING/MATERIAL:
All-steel NEMA 4 enclosure for 4" and 6" models
FRP enclosure on 1.5" model

WARRANTY:
One year limited warranty

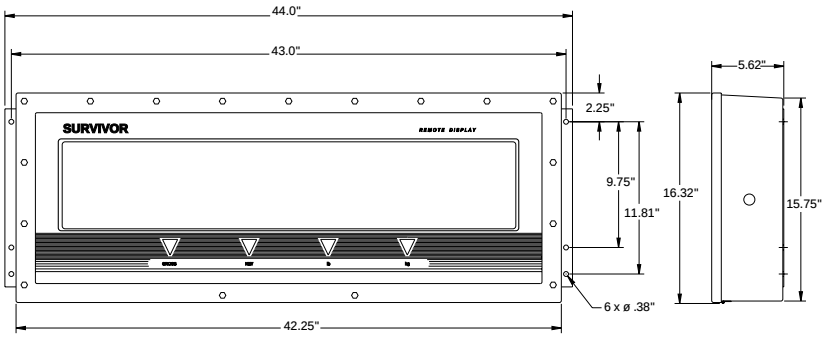
PN #43598
SURVIVOR IQ F15



PN #40879
SURVIVOR IQ F40



PN #40880
SURVIVOR IQ F60



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Survivor® IQ L-Series Remote Display

Survivor® IQ L30

Survivor® IQ L20

PART #	DESCRIPTION	DIGIT SIZE	MAX VIEWING
43983	SURVIVOR IQ L20 Remote Display, 115 VAC	2.0"	80' (24.2m)
46338	SURVIVOR IQ L20 Remote Display, 230 VAC	2.0"	80' (24.2m)
43982	SURVIVOR IQ L30 Remote Display, 115 VAC	3.0"	120' (36.4m)
46339	SURVIVOR IQ L30 Remote Display, 230 VAC	3.0"	120' (36.4m)

Featuring a unique 44-segment LCD display with backlight, the new SURVIVOR IQ L-Series provides incredibly bright alphanumeric prompts for accurate readings indoors. What's more, its 2" or 3" digit sizes and bright LED annuciators are easily read from long distances or in dimly-lit environments.

Encased in a durable NEMA 4 enclosure, the SURVIVOR IQ L-Series delivers maximum protection from the worst abuse. Additionally, a free-floating decimal point provides the versatility needed for a wide range of industrial applications.

Utilizing the advanced AutoLink™ software feature, the SURVIVOR IQ L-Series practically installs itself! Simply plug in the communications cable between the indicator and remote display, and the IQ L-Series automatically determines the data rate and format used by the indicator.

Applications

- Warehouse scales
- Truck scales
- Dimly-lit areas

Standard Features

- Large, easy-to-read 44-segment Liquid Crystal Display (LCD)
- AutoLink™ software for instant interfacing
- Fluorescent backlighting
- RS-232 and 20mA current loop
- Floating decimal point
- Annunciators for gross, net, lb, and kg
- Serial input/output port
- Durable all-steel NEMA 4 enclosure for L30 models NEMA 4 FRP enclosure on L20 models
- Weigh mode selection
- Available in 2" or 3" digit sizes

Options/Accessories

43522 ..... Time
43412 ..... Temperature
65341 ..... Time and temperature
52218 ..... Visor, L30 display
43546 ..... Additional operating manual

(Specifications on back)

DISPLAY:
6 active, high-visibility 44-segment digits, 2" (50.8mm), 3" (76.4mm) Liquid Crystal Display (LCD)

INPUT INTERFACE:
20 mA current loop (active/passive), RS-232, standard ASCII serial characters

BAUD RATE:
Self learn 300, 600, 1200, 2400, 4800, 9600 and 19200; AutoLink™, or DIP switch manual setting

CHARACTER FORMAT:
Self-learn character format. 7 odd, 7 even, 8 none, 1 or 2 stop bits; AutoLink™, or DIP switch manual setting

UPDATE:
Continuous update or out-of-motion-only update

POWER CONSUMPTION:
SURVIVOR IQ L20 — 70 W/600 mA
SURVIVOR IQ L30 — 115 W/1 A

LINE VOLTAGE:
115 or 230 VAC

TIME:
DIP switch selectable ON/OFF, external set switch, 12 and 24 hour format

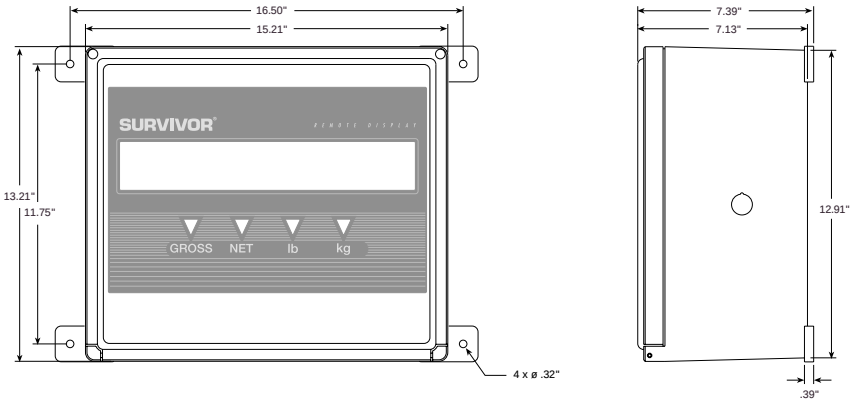
TEMPERATURE:
DIP switch selectable ON/OFF, displays °C and °F

RATING/MATERIAL:
All-steel NEMA 4 enclosure on 3.0" model
NEMA 4 FRP enclosure on 2.0" model

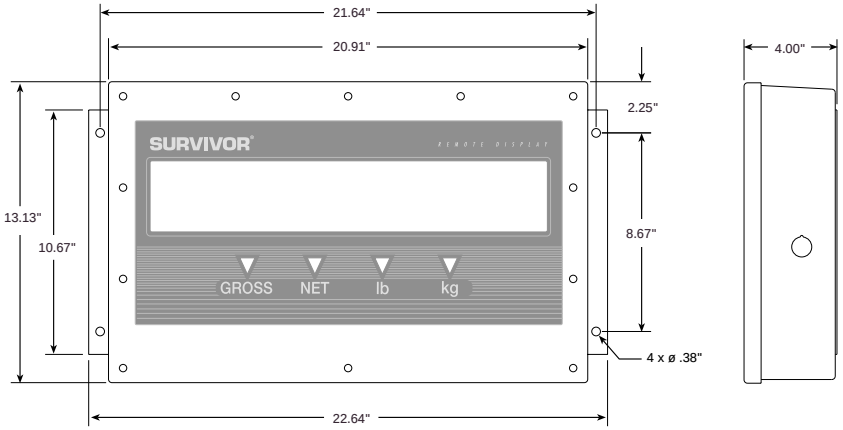
WEIGHT:
21.0 lb (9.5 kg) SURVIVOR IQ L20
39 lb (17.7 kg) SURVIVOR IQ L30

WARRANTY:
One year limited warranty

SURVIVOR® IQ L20



SURVIVOR® IQ L30



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EL210 Excitation Trim Junction Box

PART # **DESCRIPTION**
21162 ..... EL210

Applications

- Floor scales
- Tank, hopper or vehicle scales
- Summing 2, 3 or 4 cells with trim capability

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) enclosure
- Strain relief cable fittings

Number of cells:

- 2 to 4 single cells
- 4 to 8 load cells parallel connected
- Expansion port

Options/Accessories

23123 ..... Excitation trim, 4-channel board only
29846 ..... Additional operating manual
** Footnote*

EL211A Signal Trim Junction Box

PART # **DESCRIPTION**
23133 ..... EL211A

Applications

- Floor scales
- Tank, hopper or vehicle scales
- Can be used with gated power supplies
- Corner and/or section trim applications

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) enclosure
- Strain relief cable fittings

Number of cells:

- 2 or 4 single cells (even number of cells only)
- 4 or 8 load cells parallel connected
- Any unused channels require modification
- Expansion port

Options/Accessories

23124 ..... Signal trim, 4-channel board only
29848 ..... Additional operating manual

(Specifications on back)

EL210 Specifications

CABLE FITTINGS:
4 nylon cable strain reliefs 0.079"-0.314" (2.0mm-8.0mm)
2 nylon cable strain reliefs 0.236"-0.472" (6.0mm-12.0mm)

CONNECTORS:
#6 SEMS screw type, accepts spade lugs, tinned leads or bare wires up to #12 AWG

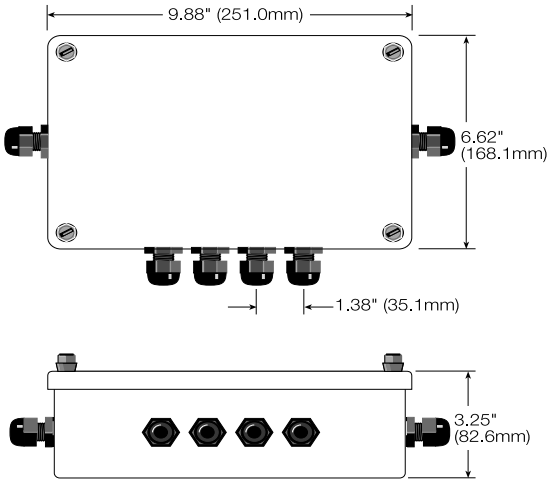
TRIMMING:
Individual cell, excitation trim. Three ranges: no trim, 0-37 ohms or 0-100 ohms

POTENTIOMETERS:
100 ohms, 25-turn cermet

ENCLOSURE:
FRP NEMA 4X, 40 psi washdown

CIRCUIT BOARD:
8.0" x 4.625" (203.2mm x 117.4mm) with anti-fungal coating

WARRANTY:
One year limited warranty



EL211A Specifications

CABLE FITTINGS:
4 nylon cable strain reliefs 0.079"-0.314" (2.0mm-8.0mm)
2 nylon cable strain reliefs 0.236"-0.472" (6.0mm-12.0mm)

CONNECTORS:
#6 SEMS screw type, accepts spade lugs, tinned leads or bare wires up to #12 AWG

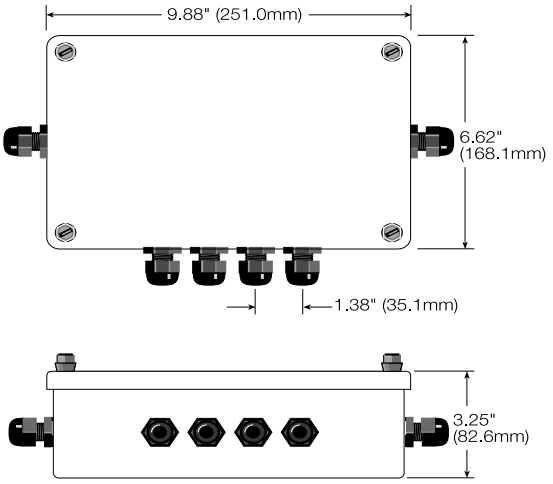
TRIMMING:
Individual cell, signal trim, 2.7K ohms isolation resistors with a 2.7K ohms limiting resistor

POTENTIOMETERS:
100K ohms, 25-turn cermet

ENCLOSURE:
FRP NEMA 4X, 40 psi washdown

CIRCUIT BOARD:
8.0" x 4.625" (203.2mm x 117.4mm) with anti-fungal coating

WARRANTY:
One year limited warranty



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EL304A Signal Trim Junction Box

PART # **DESCRIPTION**
21169 ..... EL304A

Applications

- Livestock scales
- Tank and vessel weighing
- Corner and/or section trim applications

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) enclosure
- Strain relief cable fittings
- Individual cell signal disconnect switches

Number of cells:

- 2 or 4 single cells (even number of cells only)
- Expansion port

Options/Accessories

21301 ..... Signal trim, 4-channel expandable board only
16937 ..... Additional operating manual

EL604STA Signal Trim Junction Box

PART # **DESCRIPTION**
23127 ..... EL604STA

Applications

- Tank scales
- Floor scales
- Limited space installations

Standard Features

- Stainless steel, NEMA 4X enclosure
- Strain relief cable fittings
- High-stability, non-zero interactive trim

Number of cells:

- 2 to 4 single cells
- Any unused channels require modification

Options/Accessories

23126 ..... Signal trim, 4-channel board only
29978 ..... Additional operating manual

(Specifications on back)

EL304A

Specifications

CABLE FITTINGS:
4 nylon cable strain reliefs 0.079"-0.236" (2.0mm-6.0mm)
2 nylon cable strain reliefs 0.236"-0.354" (6.0mm-9.0mm)

CONNECTORS:
Electrovert 0.197" (5.0mm) miniature screw terminals
Maximum wire size #14 AWG

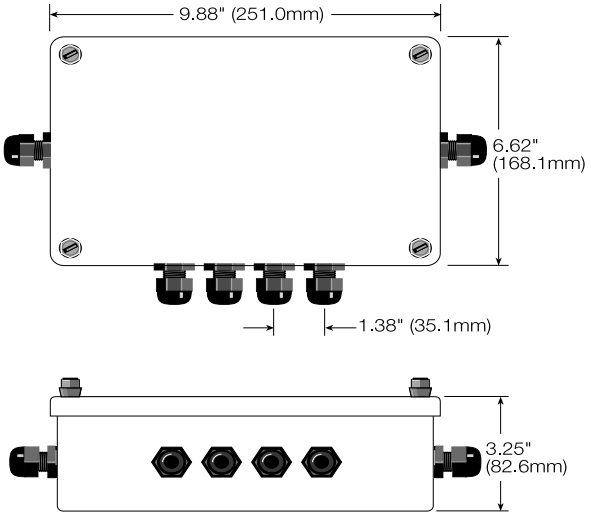
TRIMMING:
Individual cell & section, signal trim, 2.5K ohms isolation resistors, switch selectable limiting resistors

POTENTIOMETERS:
100K ohms, 25-turn cermet

ENCLOSURE:
FRP NEMA 4X, 40 psi washdown

CIRCUIT BOARD:
5.5" x 4" (139.7mm x 101.6mm) with anti-fungal coating

WARRANTY:
One year limited warranty



EL604STA

Specifications

CABLE FITTINGS:
4 nylon cable strain reliefs 0.079"-0.314" (2.0mm-8.0mm)
1 cable strain relief nylon 0.236"-0.472" (6.0mm-12.0mm)

CONNECTORS:
WAGO 256-4XX. Maximum wire size #14 AWG

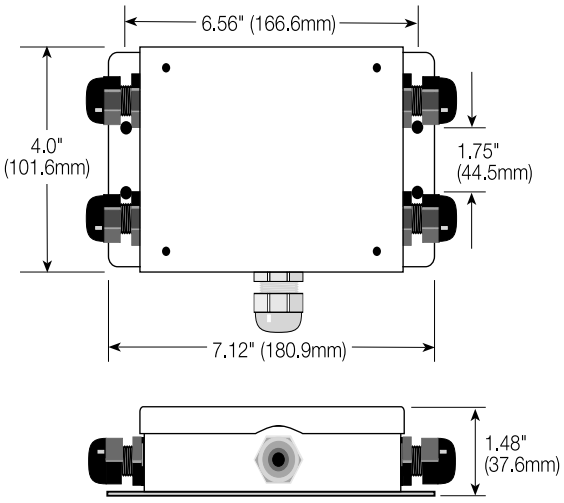
TRIMMING:
Individual cell, signal trim, 2.7K ohms isolation resistors with a 2.7K limiting resistor

POTENTIOMETERS:
100K ohms, 25-turn cermet

ENCLOSURE:
Stainless steel NEMA 4X, 40 psi washdown

CIRCUIT BOARD:
3.8" x 2.3" (96.5mm x 58.4mm) with anti-fungal coating

WARRANTY:
One year limited warranty



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EL604ETA Excitation Trim Junction Box

PART # DESCRIPTION
23129 ..... EL604ETA

Applications

- Tank scales
- Floor scales
- Limited space installations
- Summing 2, 3, 4 cells with trim capability

Standard Features

- Stainless steel, NEMA 4X enclosure
- Strain relief cable fittings

Number of cells:

- 2 to 4 single cells

Options/Accessories

23128 ..... Excitation trim, 4-channel board only
29980 ..... Additional operating manual

EL168 1-Cell Junction Box

PART # DESCRIPTION
21161 ..... EL168

Applications

- For splicing or extending load cell cable

Standard Features

- Non-metallic NEMA 4X enclosure with separate input and output cable fittings
- No soldering, compression or swage fittings are required

(Specifications on back)

EL604ETA Specifications

CABLE FITTINGS:
4 cable strain reliefs nylon 0.079"-0.314" (2.0mm-8.0mm)
1 cable strain relief nylon 0.236"-0.472" (6.0mm-12.0mm)

CONNECTORS:
WAGO 256-4XX
Maximum wire size #14 AWG

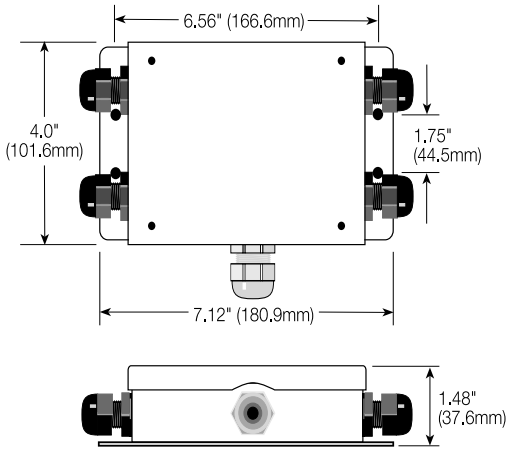
TRIMMING:
Individual cell, excitation trim
Three ranges: no trim, 0-37 ohms, 0-100 ohms

POTENTIOMETERS:
100 ohms, 25-turn cermet

ENCLOSURE:
Stainless steel NEMA 4X, 40 psi washdown

CIRCUIT BOARD:
3.8" x 2.3" (96.5mm x 58.4mm) with anti-fungal coating

WARRANTY:
One year limited warranty



EL168 Specifications

DIMENSIONS:
3.75" W x 3.75" H x 3" D
(95.3mm W x 95.3mm H x 76.2mm D)

MOUNTING CENTERS:
3.75" x 2.31" (95.2mm x 58.7mm)

CABLE FITTINGS:
Nylon waterproof strain-relief type

CABLE DIAMETER:
0.079"-0.314" (2.0mm-8.0mm)

TERMINAL BLOCK:
Rated 300 V/15A; 7-position, screw terminal can each accommodate up to #16 AWG

WARRANTY:
One year limited warranty

Specifications subject to change without notice
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JB 808S Signal Trim Junction Box

PART # **DESCRIPTION**
21170 ..... JB 808S

The JB 808S signal trim junction box can be used with up to eight load cells. Load cell output can be trimmed individually, and/or in pairs by altering the jumpers to "section trim" position. The electronics are protected by a fiberglass-reinforced polyester enclosure meeting NEMA 4X standards.

Applications

- Truck and railroad scales
- Summing 2, 4, 6 or 8 cells with individual and section trimming capability

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) enclosure
- Strain relief cable fittings
- Section and individual cell trim capability
- Includes 6 filling plugs for unused fittings
- Fungal resistant coating
- Large enclosure for plenty of working room
- Mounting hardware included
- Holes in flange for easy mounting

Number of cells:

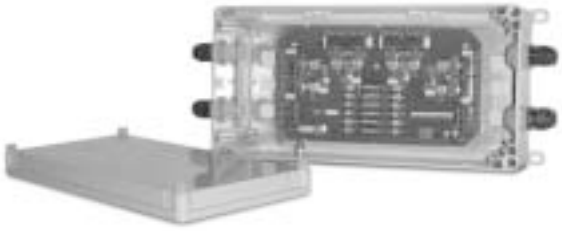
- 2, 4, 6 or 8 single load cells (even number of cells only)
- Any unused channels require modification

Options/Accessories

21306 ..... Circuit board only
16939 ..... Additional operating manual

JB 818ST Signal Trim Junction Box with Transient Protection

NEW! Product!



PART # **DESCRIPTION**
66999 ..... JB 818ST

The JB 818ST signal trim junction box features an expansion port that connects to other j-boxes for use in applications that require more than eight load cells or multiple junction boxes. It also offers on-board transient protection, reducing terminal connections and enhancing reliability*. Load cell output can be trimmed individually, and/or in pairs by altering the jumpers to "section trim" position. Electronics are protected by a NEMA 4X polycarbonate enclosure.

** Transient protection for 6-wire load cell cable includes parallel gas discharge tubes with series inductors.*

Applications

- Truck, livestock and railroad scales
- Summing 2, 4, 6 or 8 load cells with individual and section trimming capability

Standard Features

- NEMA 4X polycarbonate enclosure
- Load cell transient protection
- Section and individual cell trim capability
- Includes 6 filling plugs for unused fittings
- Fungal resistant coating
- Large enclosure for plenty of working room
- Mounting hardware included
- Strain relief cable fittings
- Individual cell signal disconnect switches

Number of cells:

- 2, 4, 6 or 8 single load cells (even number only)
- Expansion port

Options/Accessories

65504 ..... Circuit board only
67000 ..... Additional operating manual

(Specifications on back)

JB 808S

Specifications

CABLE FITTINGS:
8 nylon cable strain reliefs 0.375" (9.5mm) NPT for cable dimension range: 0.079"-0.314" (2.0mm-8.0mm)

1 cable strain relief nylon 0.5" (12.7mm) NPT for cable dimension range: 0.236"-0.472" (6.0mm-12.0mm)

CONNECTORS:
#6 SEMS screw type, accepts spade lugs, tinned leads or bare wires up to #12 AWG

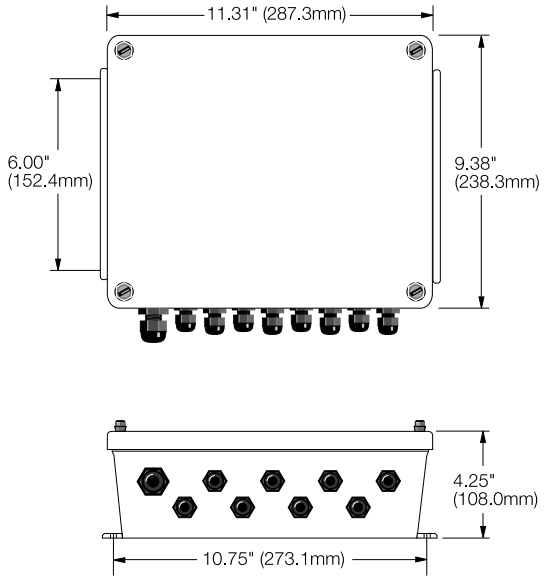
TRIMMING:
Individual cell, signal trim; sections, signal trim 2.7K isolation resistors with 2.7K limiting resistor

POTENTIOMETERS:
100K ohms, 25-turn cermet

ENCLOSURE:
FRP NEMA 4X, 40 psi washdown

CIRCUIT BOARD:
9.0" x 4.7" (228.6mm x 119.4mm) with anti-fungal coating

WARRANTY:
One year limited warranty



JB 818ST

Specifications

CABLE FITTINGS:
9 cable strain relief nylon 0.75" (19.05mm) NPT for cable dimension range: 0.236"-0.472" (6.0mm-12.0mm)

Designed to accept 0.75" seal tight conduit fittings if desired (conduit fittings not included)

CONNECTORS:
Electrovent 0.197" (5.0mm) minature screw
Terminals: maximum wire size #14 AWG

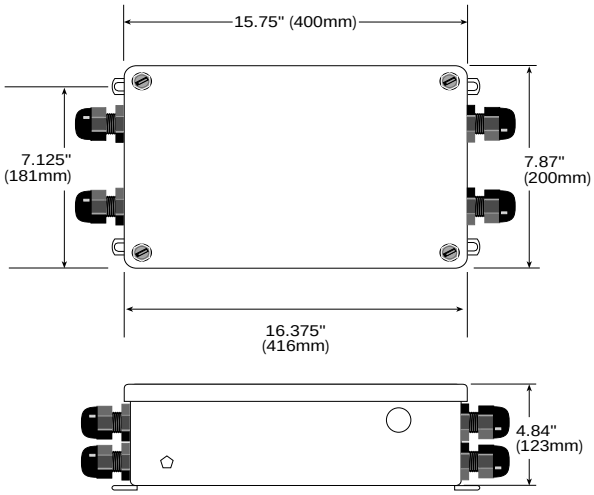
TRIMMING:
Individual cell and section signal trim 2.5K Ω isolation resistors
Switch selectable limiting resistors

POTENTIOMETERS:
100K ohms, 25-turn cermet

ENCLOSURE:
Polycarbonate NEMA 4X

CIRCUIT BOARD:
11.0" x 6" (280mm x 153mm) with anti-fungal coating

WARRANTY:
One year limited warranty



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JB1010 Signal/Stet Trim Junction Box with Transient Protection

PART # DESCRIPTION
36231 ..... JB1010

Applications

- Tank, truck, railroad, hopper and floor scales
- Universal field replacement of existing boxes
- Paralleling load cells
- Expansion of existing scales

Standard Features

- NEMA 4X Fiberglass-Reinforced Polyester (FRP) enclosure
- Load cell transient protection
- Signal or excitation trim
- Front panel mounting
- Strain relief cable fittings

Number of cells:

- 1 through 10 with expansion
- Trims odd numbers of cells without modification

Options/Accessories

36351 ..... Circuit board only
36329 ..... Additional operating manual

(Specifications on back)

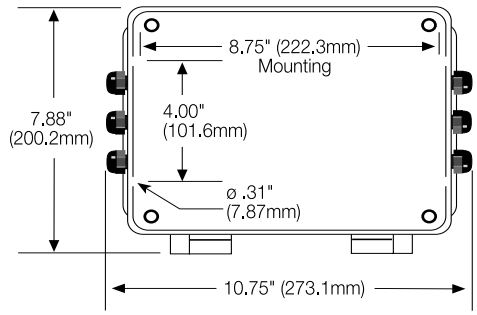
MOUNTING CENTERS:
3.75" x 2.31" (95.2mm x 58.7mm)

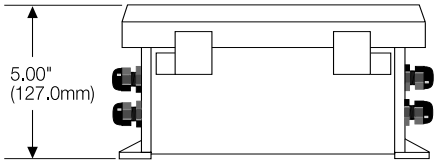
CABLE FITTINGS:
Nylon waterproof strain-relief type

CABLE DIAMETER:
0.079"-0.314" (2.0mm-8.0mm)

TERMINAL BLOCK:
Rated 300 V/15A; 7-position screw terminal can each accommodate up to #16 AWG

WARRANTY:
One year limited warranty





Specifications subject to change without notice
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Salter Super Samson Hanging Scale

- Overload protection
- Built-in tare mechanism
- Glass-filled polymer materials make the balance virtually indestructible in normal use
- Overall length at zero load: 10.3" (262mm)
- Scale length: 4.7" (120mm)
- Extended length: 15" (382mm)

Salter Little Samson Hanging Scale

- Lightweight
- Low cost
- Length at zero load: 6" (152mm)
- Scale length: 2.1" (54mm)
- Extended length: 7.7" (195mm)

Salter Model 235-10X Hanging Scale - NTEP Certified

- NTEP-certified, Class III
- Cast aluminum case
- Heavy-duty and corrosion resistant
- High-strength stainless steel fittings
- Overload protection
- Stable and accurate, 14°F to 104°F (-10°C to 40°C)
- Air dashpot
- Limited zero adjust (tool required)

Salter Model 235-6S Hanging Scale

- Shatterproof ABS case
- Versatile
- Lightweight
- Maintenance free
- Corrosion resistant
- High-strength stainless steel fittings
- Thumbwheel zero adjustment (approx. ± 10%)
- Top and bottom hook supplied
- Length with no hooks: 9.5"
- Length with hooks: 14.5"

Salter Model 235-10S Hanging Scale

- Shatterproof ABS case
- Lightweight and corrosion resistant
- High-strength stainless steel fittings
- Overload protection
- Thumbwheel zero adjustment (approx. ± 10%)

Salter Model 129 Hanging Scale

- Crane weigher
- Bottom hook—full swivel
- Dial diameter: 8.7" (220mm)
- 500% safety rating on hook and scale (SWL)

Salter Electro Samson Hanging Scale

- Re-zero during weighing to create a tare weight
- Allows weighing of container contents only
- Automatic shut-off after 2 minutes inactivity
- “HOLD” key feature
- Units of measure: lb-oz, kg, decimal lb
- Lifting handle
- Calibration through front panel
- Battery-operated; 9 volt alkaline battery required
- Dimensions: 13.4" x 3.7" x 2.2" (340mm x 95mm x 55mm)

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RL1100 Portable Platform Scale

Now Available with IQ plus® 390-DC Indicator

Portable Beam with IQ plus® 390-DC indicator

RL1100

PART # DESCRIPTION

19723 ..... Avoirdupois Beam, NTEP
26680 ..... Metric Beam, Non-NTEP
26681 ..... Avoirdupois Double Beam, Non-NTEP
26676 ..... Metric Double Beam, Non-NTEP
50948 ..... Portable Beam w/IQ plus® 390-DC Indicator, NTEP

The RL-1100 heavy-duty portable beam scale is known for its ability to deliver years of trouble-free industrial weighing performance. Strict RLWS quality specifications mean the RL1100's rugged cast iron platform, base and levers exceed stability, durability and value expectations. Self-aligning, hardened, precision tool steel pivots and bearings ensure accurate and consistent weighments. It also has a large cast weigh beam that offers dual-sided graduations with a high-contrast black background for easy weight readings. Counterpoise weights provided are cast iron, slotted, and marked to scale capacity. The RL1100 Avoirdupois Beam is NTEP certified legal-for-trade for Class III, 2000 divisions.

Now available with the battery-powered IQ plus 390-DC weight indicator, the RL1100 is ideal for applications requiring portability. The base is equipped with fully-enclosed wheels for increased protection, while the indicator's electronics are guarded by a NEMA 4X stainless steel enclosure. The IQ plus 390-DC's one-inch LCD is easy to read, and RATTLETRAP® three-stage digital filtering secures accurate weighments in areas where vibration and movement are a concern. For added efficiency, it includes a configurable standby mode that saves battery life.

Applications

- General warehouse use
- Shipping and receiving
- General weighing

Standard Features

- NTEP certified
- Cast iron construction
- 1000 lb or 500 kg capacity models available
- Single or double beam configurations
- Easy-to-read die cast beam
- Locking screw knob on poise
- Slotted cast iron counterpoise weights, marked to scale capacity
- Easy-to-use weigh beam lock
- Heavy-duty wheels for portability

Options/Accessories

50573* ..... Electronic conversion kit for existing scale (DC)
22253 ..... Additional operating manual

** Includes IQ plus® 390-DC, RL20000 load cell, and conversion hardware.*

Please refer to page IR-3 in the Indicator section for IQ plus® 390-DC standard features and options/accessories.

(Specifications on back)

CONSTRUCTION:
Cast iron platform, base and levers

WEIGH BEAM:
Die-cast aluminum dual-sided beam; graduations in .5 lb or .2 kg increments

POISE:
Steel locking screw provided

PIVOTS AND BEARINGS:
Precision-machined, hardened tool steel

OVERALL DIMENSIONS:
36.13" L x 20.25" W x 43.0" H
(917.7mm L x 514.3mm W x 215.9mm H)

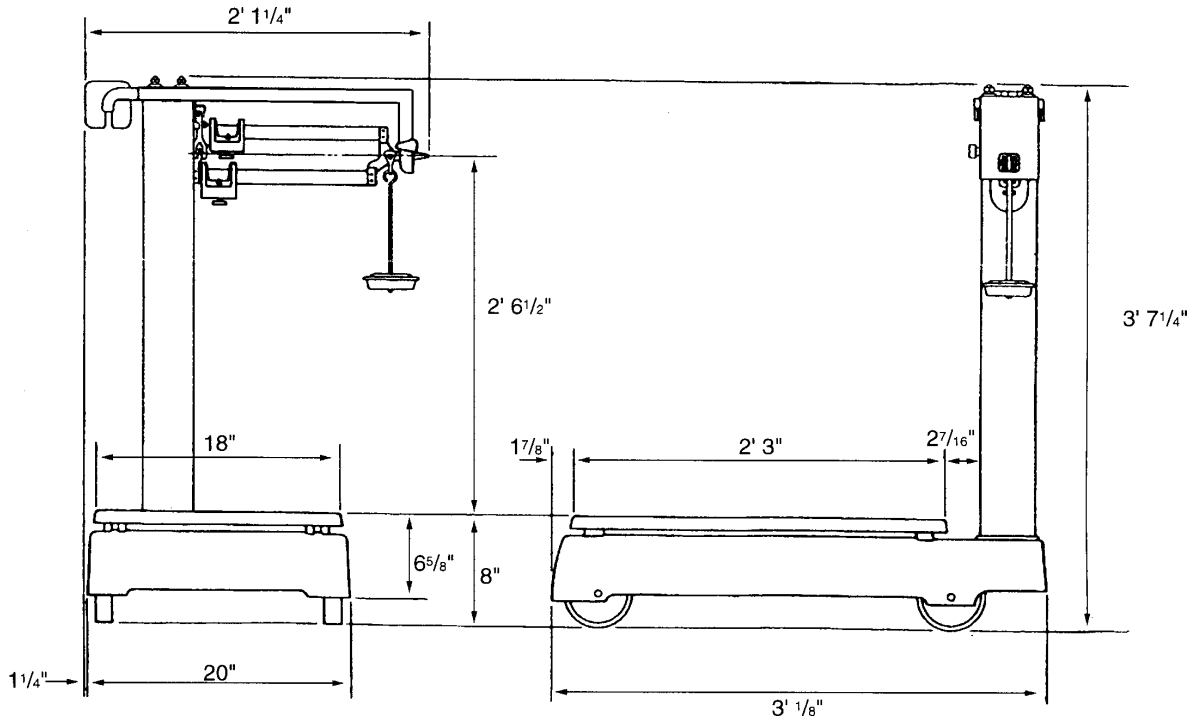
PLATFORM DIMENSIONS:
27" L x 18" W x 8.50" H
(457.2mm L x 685.8mm W x 215.9mm H)

CAPACITY:
1000 lb or 500 kg

WEIGHT:
Approximately 200 lb

WARRANTY:
One year limited warranty

Please refer to page IR-3 in the Indicator section for IQ plus® 390-DC specifications.



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Pipe Lever Scale

Measurement Canada Approved

Applications

- Process control in concrete, asphalt and fertilizer applications
- Simple weight monitoring
- Multi-ingredient batching

Standard Features

- Capacity range: 5,000 to 50,000 lb
- NTEP and Canadian type-approved models available
- RL20000 alloy steel load cell standard (prices includes load cell and ITCM load cell assembly)
- Mild steel construction, black paint finish
- Stainless steel, hermetically-sealed load cells available
- Custom-built-to-order

Options/Accessories

40817 ..... Additional assembly instructions

Consult factory for optional protective finishes and colors

These rugged tank and hopper scales combine the proven durability of a steel pipe lever system with a versatile and accurate precision load cell system. The encapsulated design prevents pivots from becoming unseated due to side loads and accidental impacts in heavy industrial use.

While standard capabilities are available, each scale can be custom built for your application. You choose the material, finish, and load cell type needed, then specify any of the nine critical dimensions needed from the keyed drawing on the reverse side of this page. We build to your specifications, and can even modify designs for suspended tank/hopper installations.

A variety of digital weight indicators and controllers are available for simple weight monitoring or multi-ingredient batching and process control in concrete, asphalt and fertilizer applications. All pipe lever models are legal for trade and carry type approvals in the United States.

AVAILABLE IN STAINLESS STEEL!
Call Factory for Special Pricing

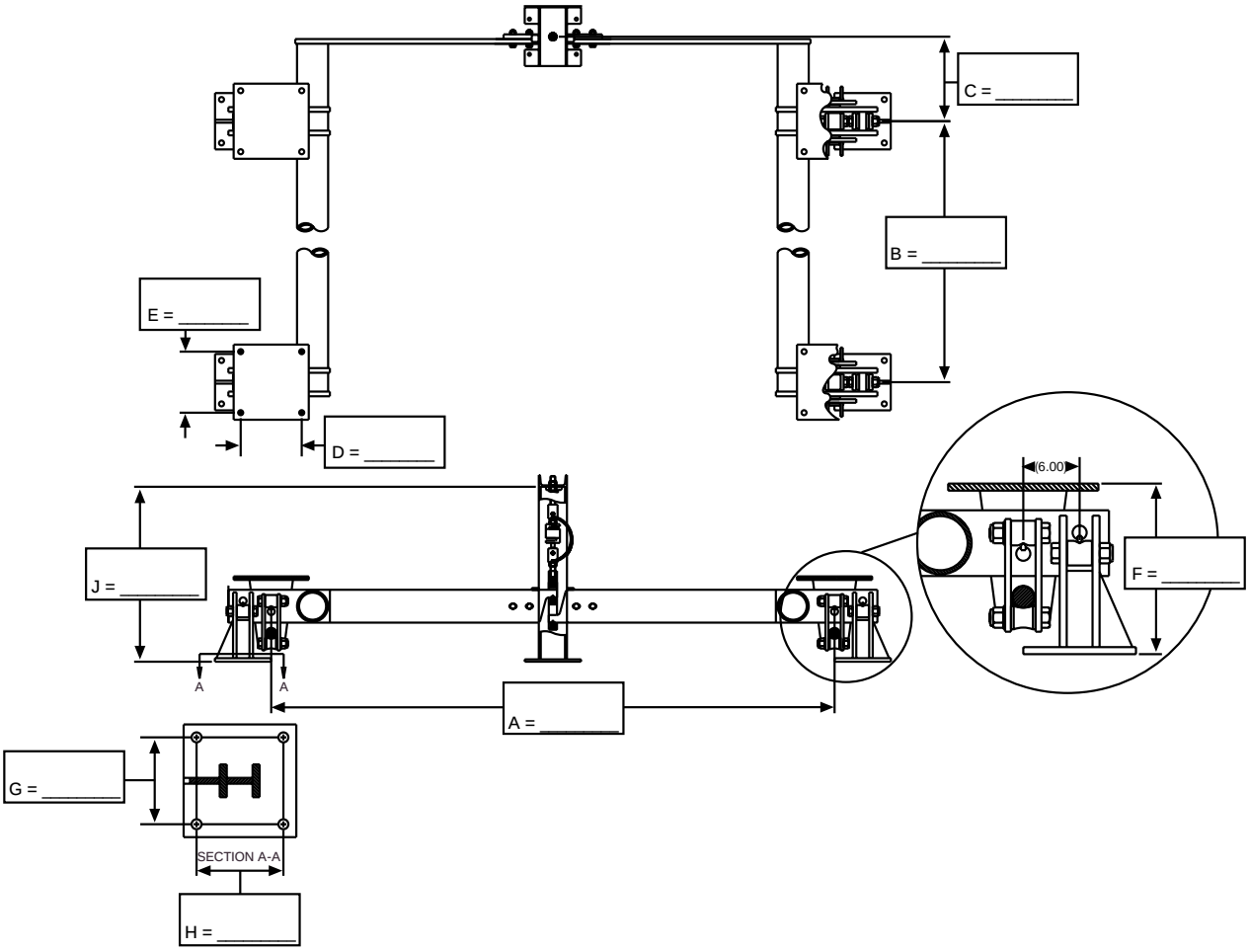
Standard and minimum lever length specifications. See back of sheet for line drawings that define dimensions.

⬇	5K		10K		25K		30K		40/50K	
	Standard	Minimum	Standard	Minimum	Standard	Minimum	Standard	Minimum	Standard	Minimum
A	–	36.00"	–	48.00"	–	48.00"	–	60.00"	–	60.00"
B	–	36.00"	–	48.00"	–	48.00"	–	60.00"	–	60.00"
C	12.25"	4.00"	12.25"	4.50"	15.50"	7.00"	15.62"	7.00"	18.00"	7.00"
D	5.50"	5.50"	6.00"	6.00"	9.50"	8.75"	9.50"	8.75"	13.00"	12.00"
E	5.50"	5.50"	6.00"	6.00"	9.50"	8.75"	9.50"	8.75"	13.00"	12.00"
F	7.25"	7.25"	8.62"	8.62"	13.56"	13.56"	13.81"	13.81"	18.18"	18.18"
G	3.50"	3.00"	4.50"	3.50"	6.50"	4.75"	6.50"	4.75"	9.25"	6.50"
H	3.50"	3.00"	4.50"	3.50"	6.50"	4.75"	6.50"	4.75"	9.25"	6.50"
J	24.00"	22.00"	24.00"	24.00"	32.25"	32.25"	32.25"	32.25"	37.25"	37.25"
	A x B must be equal to or less than 25 square feet, or consult factory.		*A x B must be equal to or less than 64 square feet, or consult factory.*		*A x B must be equal to or less than 100 square feet, or consult factory.*		*A x B must be equal to or less than 100 square feet, or consult factory.*		*A x B must be equal to or less than 100 square feet, or consult factory.*	

(Specifications on back)

Pipe Lever Customization

Specifications



Rice Lake Weighing Systems will design a pipe lever scale tailored to your needs. Provide us with the capacity and measurements as indicated above, and we will provide you with a quotation. (See front of page for the standard and minimum lever measurement specifications for each pipe lever system.)

A	
B	
C	
D	
E	
F	
G	
H	
J	

❑ 5K
❑ 10K
❑ 25K
❑ 30K
❑ 40K
❑ 50K

Material Type: _____

Finish: _____

NTEP: ❑ Yes ❑ No

❑ Stainless steel hermetically-sealed load cell *(specify model number)*

❑ Mild steel load cell *(specify model number)*

Specifications subject to change without notice • These drawings are not to be used as installation guidelines
© Rice Lake Weighing Systems 2000 PN 40415 2/00

MS200 & MS202 Portable & Permanent Monorail Scales

PART # DESCRIPTION

19740 ..... MS200 Portable Monorail Scale (pictured)
19741 ..... MS202 3/8" Permanent Monorail Scale
19742 ..... MS202 1/2" Permanent Monorail Scale

The MS200 for portable use is a unique monorail scale that brings innovation to rail scale technology. Now portable electronic weighing accuracy and dependability are available virtually anywhere your rail system travels, from loading dock to refrigerated cooler. Requiring less than 41" of existing straight rail to install, the MS200 portable scale requires no cutting of your existing rail. Installation is quick and easy, requiring only a 7/16" wrench.

The MS202 is recommended for permanent installation applications. A 52" section of rail is supplied with this model, allowing ample length for cutting to fit your area. The 8" live rail is mounted flush and level with the trolley rail to make the weighing operation as simple as possible.

The MS200 and MS202 models are USDA approved, making them acceptable for use in federally-inspected meat processing plants.

Both the MS200 and MS202 models have a recessed area in the live rail to hold the trolley roller stable during the weighing operation.

Applications

- Portable or permanent installations
- Quick and easy installation

Standard Features

- Complete with the IQ plus® 800 digital weight indicator in a NEMA 4X stainless steel enclosure
- 8" long live rail designed to weigh one trolley at a time
- 750 lb x .5 lb resolution in both portable and permanent models
- Available for rail sizes 3/8" x 2 1/2" or 1/2" x 2 1/2"
- Requires less than 41" of straight rail to install (14" between rail hangers for permanent model)
- Zinc plated, steel construction
- High accuracy, stainless steel load cell
- 25' of load cell cable for flexible installation
- Slightly recessed live rail for the trolley roller provides stable weighments

Options/Accessories

NTEP Models available

19743 ..... MS200HB-NTEP certified
MS200 with IQ plus® 800 indicator
19744 ..... MS202HB-3/8", NTEP certified
MS202 with IQ plus® 800 indicator
19745 ..... MS202HB-1/2", NTEP certified
MS202 with IQ plus® 800 indicator
59709 ..... Completely portable battery-powered IQ600HB electronic indicator in stainless steel NEMA 4X enclosure, LCD
59659 ..... Completely portable battery-powered IQ600HB electronic indicator in stainless steel NEMA 4X enclosure, LED
16984 ..... Additional operating manual
N/A ..... 2 scales installed and connected to one indicator
Consult Factory

(Specifications on back)

MS200/MS202 CONSTRUCTION:
Zinc-plated steel construction, stainless steel hardware

IQ plus 800 SPECIFICATIONS

LOAD CELL EXCITATION:
10 ± 0.5 VDC, 16 x 350-ohm load cells (on up to 2 channels)

LOAD CELL CURRENT
460 mA maximum, (16 350-ohm load cells)

ANALOG SIGNAL INPUT RANGE:
0.6 mV/V - 3.9 mV/V

CONVERSION RATE AT FULL SCALE:
20/second, typical (standard resolution),
10/second, typical (high resolution)
Added channels reduce conversion rate per channel

RESOLUTION:
Selectable up to 100,000 displayed graduations
Selectable up to 740,000 graduations internal

OVERLOAD CAPACITY:
102%

COMMUNICATIONS:
Bidirectional RS-232, RS-232 simplex and 20 mA current loop

DIGITAL FILTERING:
Standard range software selectable: 1, 2, 4, 8, 16, 32, 64, 128
RATTLETRAP® high vibration control: 4, 8, 16, 32, 64, 128

POWER INPUT:
120 or 240 VAC at 25 watts at 50/60 Hz

SETPOINTS:
20 fully-programmable setpoint steps

DISPLAY:
Six decades, high intensity red LED, 0.6" (15.2mm)

ENCLOSURE:
NEMA 4X stainless steel, 10" L x 6" W x 7.75" H
(254mm x 152.4mm x 196.9mm)

LOAD CELL SPECIFICATIONS

LOAD CELL CONSTRUCTION:
Stainless steel construction

EXCITATION:
10 VD

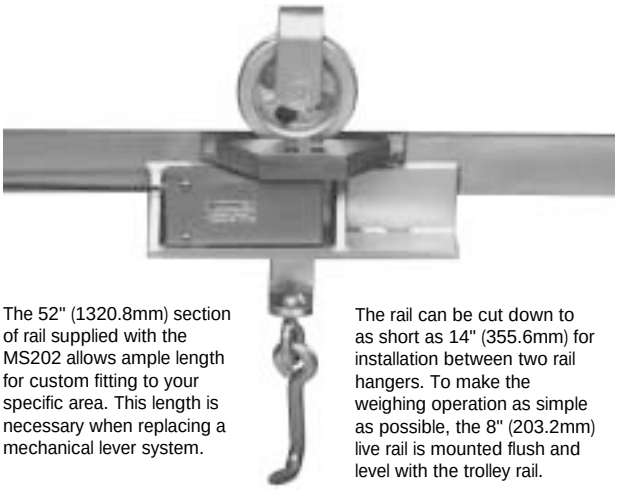
BRIDGE RESISTANCE:
350 ohms nominal

RATED OUTPUT:
2 mV/V

NONLINEARITY:
0.03% full scale

MS202 PERMANENT MONORAIL SCALE

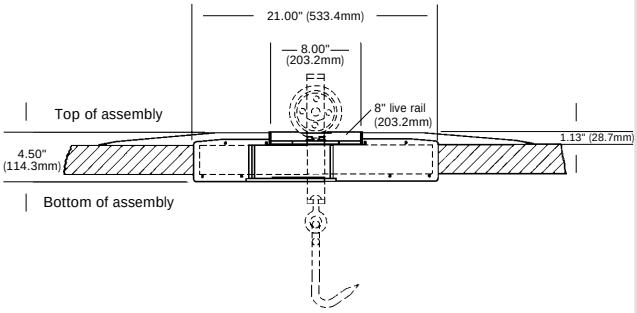
(Does not include trolley bar)



The 52" (1320.8mm) section of rail supplied with the MS202 allows ample length for custom fitting to your specific area. This length is necessary when replacing a mechanical lever system.

The rail can be cut down to as short as 14" (355.6mm) for installation between two rail hangers. To make the weighing operation as simple as possible, the 8" (203.2mm) live rail is mounted flush and level with the trolley rail.

MS200/MS202 DIMENSIONS



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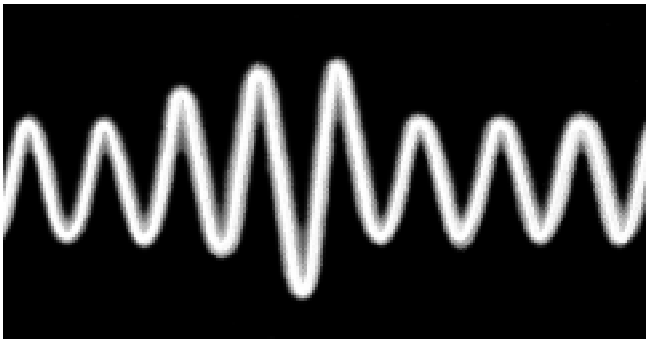
Selecting the Best Power Conditioning Devices/Equipment for Your Applications

Digital weighing indicators utilize an incredibly small signal in their operation. These signals are easily disturbed by any number of voltage distortions. Additionally, many weighing systems are now designed with a complex array of peripheral equipment, including printers and computers. To maintain proper operation and provide maximum protection, Rice Lake Weighing Systems offers this wide variety of power conditioning products as your first line of defense in the battle to improve power problems.

The following is a list of power problems you are likely to experience, with a reference to the equipment we recommend to solve that particular problem. A “quick reference” Power Conditioning equipment chart found on the back of PC-2 is also included for easy reference.

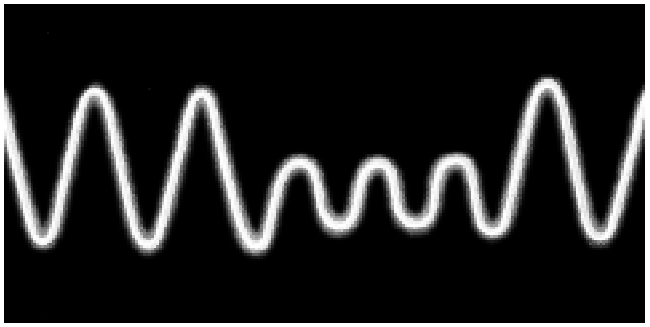
VOLTAGE SURGE

A voltage surge is a temporary rise in voltage level lasting at least one AC cycle (1/60 second). It is typically caused by switching off high-power electric motors (electric welders, compressors, machine tools, conveyors, material handling equipment and power tools), momentarily boosting the line voltage. Regulation of the line to an acceptable voltage level is required to prevent against the damage caused by voltage surges. The SOLA MCR series of voltage regulators, MCR070, MCR150 and MCR250, are designed to keep the voltage level within acceptable and harmless limits.



VOLTAGE DIP

A voltage dip is the opposite of a voltage surge, lasting at least one AC cycle (1/60 second). It is typically caused by a sudden nearby increase in an electrical load, such as turning on high-power electrical motors (electric welders, compressors, machine tools, conveyors, material handling equipment and power tools). During this time, every other piece of operating equipment is forced to make do with the reduced available voltage. Regulation of the line voltage is required to remedy this situation. The SOLA MCR series of voltage regulators, MCR070, MCR150 and MCR250, solve your problem by temporarily boosting the line voltage to within acceptable limits, until the voltage dip condition has corrected itself.



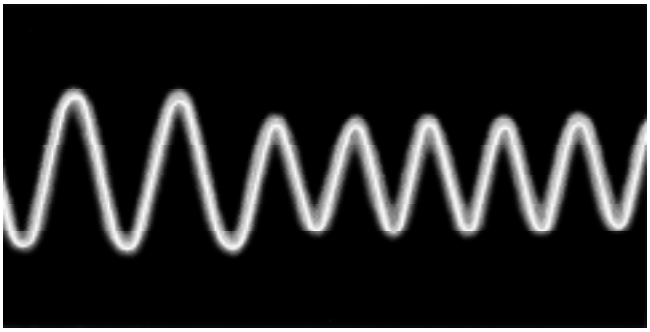
VOLTAGE SPIKES

A voltage spike is a large damaging voltage pulse caused when lightning strikes a powerline, a communications line, a signal or sensing line, or even the ground nearby. Voltage spikes last only a few milliseconds, but can reach a potential of 1000 volts. High-quality protection is the only practical answer. For your load cells, RS-232 or 20 mA communication lines and other DC protection needs, our UJB3T6, LCP-1 and TP-75 are practical solutions. For line-powered equipment, the Tripp-Lite ISOBLOK® and ISOBAR®, or the Rice Lake Weighing Systems EL225 or EL226 are the most effective protection against voltage spikes.

Power Conditioning

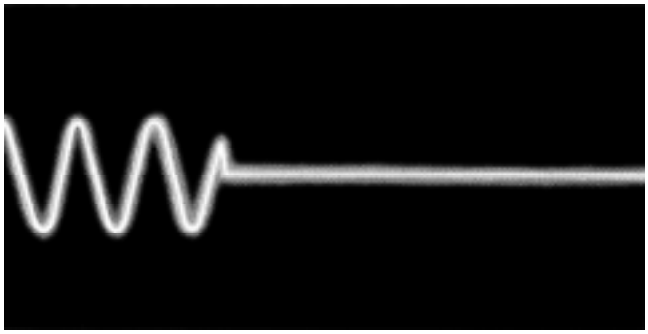
BROWNOUTS

Brownouts are prolonged voltage dips of as much as 15%, lasting from several hours to several days. This condition is initiated by local power companies during hours of unusually high demands. Brownouts create many forms of abnormal behavior. The only way to safeguard the operation of critical equipment is to bring the powerline voltage back up to normal specifications. The SOLA MCR series of line voltage regulators, MCR070, MCR150 and MCR250; or the Best Power™ Patriot® Series 250/425/600VA Uninterruptible Power Systems can eliminate the problems associated with brownout conditions.



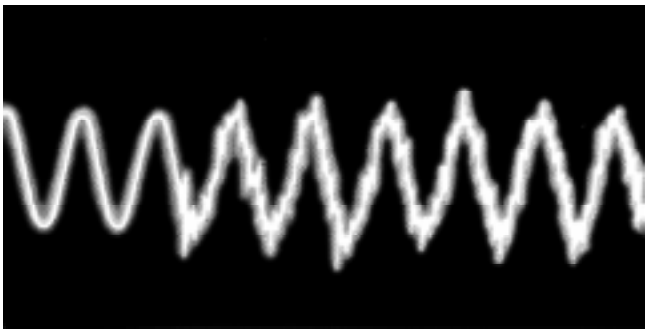
BLACKOUTS

The ultimate power problem! The only way to keep critical electrical equipment running during a blackout is to provide a new supply of power, either from batteries or from mechanical generators. The Best Power™ Patriot® Series 250/425/600VA Uninterruptible Power Systems are our answers to battery-supplied electrical power.



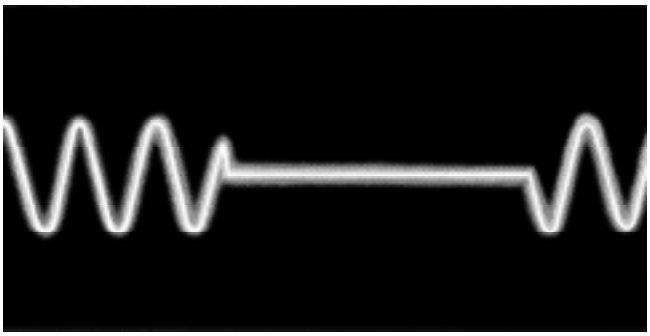
ELECTRICAL NOISE

Noise is a disturbance of electrical power caused by distant lightning, radio transmitters, welding equipment, electrical switching equipment, and poor brush contact on motors and other electronic devices utilizing switching power supplies. One solution is to prevent noise from entering the equipment by filtering the powerline input. The Tripp-Lite ISOBLOK® and ISOBAR®, or the Rice Lake Weighing Systems EL225 or EL226 will effectively filter most electrical noise problems. In severe cases, the use of Uninterruptible Power Systems such as Best Power™ Patriot® Series 250/425/600VA UPS and Sola 2000 Series are recommended.



DROPOUTS

A dropout is a temporary loss of electrical power normally caused by utility and maintenance switching functions where break-before-make switching strategies are used. This simply means that the old source of power is disconnected momentarily prior to the connection of the new power source. Your local utility company may be the most common source of this type of disturbance, causing many problems—notably computer lockups, software errors, equipment resets and diagnostic self-tests. The SOLA MCR series of regulators; MCR070, MCR150 and the MCR250 are available to deal with short-term dropouts (less than 3 milliseconds). For longer-lasting protection, Best Power™ Patriot® Series 250/425/600VA and Sola 2000 Series Uninterruptible Power Systems are recommended.



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Transient Protection AC, DC, Series and Parallel

AC PROTECTION

Designed for filtering voltage spikes and electrical noise from AC wall receptacles providing power to sensitive microprocessor-based equipment such as computers, printers and indicators. Clamping voltages typically are set to 140 volts AC rms and peak current handling capacities are near 6000 amperes.

DC PROTECTION

Designed for filtering voltage spikes and electrical noise from load cell cables, and both RS-232 and 20 mA serial communication lines protecting indicators, communications interfaces, and computers.

PARALLEL PROTECTION

Protection is provided by “diverting” or “bypass” elements that attempt to quickly change the direction of the voltage spike, typically toward earth ground. Examples of “diverting” type elements are gas tubes, MOVs and Transzorbs™. In a parallel-type of transient protector, the equipment to be protected is not removed from the line in the event of a protector damaging voltage spike, leaving the possibility of a second catastrophic voltage spike to enter the unprotected equipment.

SERIES PROTECTION

Protection is provided by “blocking” type elements that buffer the equipment to be protected from the line voltage available at the wall receptacle. Examples of “blocking” type protective elements that are used in series-type transient protectors are fuses, circuit breakers, common mode coils and inductors. In addition, series-type protectors will also utilize “diverting” elements used in parallel protectors. In the series type of transient protector, the equipment to be protected is generally removed from the line source in the event of a damaging transient or surge.

Rice Lake Weighing Systems endorses only series type AC and DC transient protectors. The additional performance and protection provided by them are substantial compared to parallel type counterparts.

A WORD ABOUT GROUNDS....

A good ground is essential for any successful transient protection scheme. However, simply driving a copper ground rod is not enough. The conductivity of the soil can vary seasonally, particularly if the local water table rises and falls with the season. An adequate ground in spring, when the water table is high, may not be adequate in late summer when the water table is low (and thunderstorms are common!). Check the resistivity of your ground regularly throughout the year. If problems appear, check with your local utility about alternate grounding techniques.

TYPE OF DISTURBANCE	AC Line Disturbance Solutions		
	TRANSIENT PROTECTORS	VOLTAGE REGULATORS	UNINTERRUPTIBLE POWER SYSTEMS
	ISOBLOK®/ISOBAR® *Our Best* -EL225, EL226	MCR Series	Best Power™ Patriot® Series 250/425/600 VA
SURGE	*	✔	✔
DIP		✔	✔
BROWNOUT		✔	✔
DROPOUT		✔	✔
BLACKOUT			✔
SPIKES	✔		✔
NOISE EMI/RFI	✔		✔

** Will provide some protection against surges, however we recommend that transient protectors be used on lines where spikes, noise and interference occur.*

OUR POLICY

Rice Lake Weighing Systems recommends the installation of AC and/or DC transient protection which is effective in significantly reducing both the frequency and degree of damage caused by AC and/or DC transient voltage occurences. However, transient protection devices will not eliminate all damage caused by transient voltage. Rice Lake Weighing Systems does not warrant or guarantee any transient protection device against damage or repair or any scale-related or other electrical/electronic device which is intended to be protected by any transient protection device. No other warranty or guarantees—express or implied—contrary to this written policy are supported or acknowledged by Rice Lake Weighing Systems.

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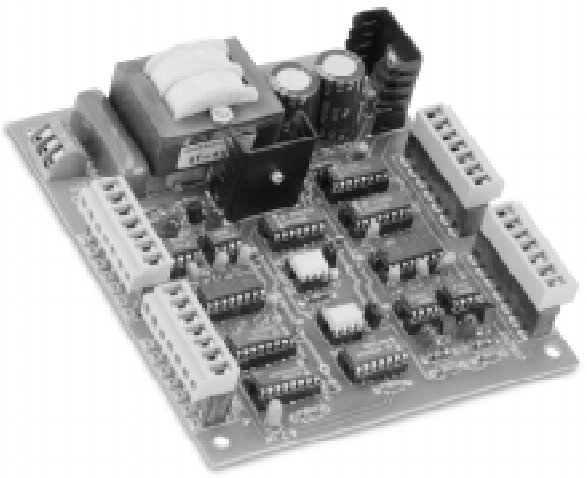
SER-PRO Serial Protocol Converter



PART # DESCRIPTION

21057 ..... SER-PRO, board only

The SER-PRO is a serial protocol converter, designed to solve communication problems. Most weighmeters use RS-232 or 20 mA current loop and often times don't have enough signal to drive several peripherals in series or cannot transmit the distances required in many installations. SER-PRO provides the signal strength via line drivers, while simultaneously buffering the transmission.

Utilizing two independent channels, oppositely oriented and optically isolated, the SER-PRO provides an efficient, cost effective means to buffer, isolate and convert serial protocols. It accepts any transmitted baud rate and format (start bits, data bits, parity, stop bits, etc.), duplicating them in the outgoing transmission. Offering two channels provides the capability to send different formats on each channel, select different protocols for simultaneous transmission or transmit full duplex.

Where line noise such as EMI or RFI is a problem, SER-PRO effectively isolates and eliminates noise.

Applications

- Converts serial protocol from/to RS-232, 20 mA current loop and RS-422
- Enhances signal strength
- Extends transmission distance
- Filters line noise

Standard Features

- Elevated current loop drive voltage of 13 VDC allows six or more passive devices to be connected in series
- Two independent, optically-isolated channels provide:
  - Full duplex capability or two single channels
  - Transmission in three protocols simultaneously
- Compatible with all devices transmitting in RS-232, 20 mA current loop and RS-422 protocol
- Transmits and receives 20 mA active or passive
- RS-422 differential transceiver channel—supports 50 Kbaud data rates
- RS-422 transmitter is fully buss compatible. Tri-state output accesses the RS-422 buss only when the data source sends data
- Self-contained dual internal power supplies

Options/Accessories

20980 ..... NEMA 4X stainless steel enclosure

Consult Factory for NEMA 7CD, 9EFG Explosion Proof Enclosure

(Specifications on back)

AC INPUT:
117 VAC/60 Hz three wire - approximately 6 watts

FUSING:
On board 1/2 Amp slo-blo

PRIMARY-SECONDARY ISOLATION:
Greater than 2,500 VAC typical

CURRENT LOOP (ACTIVE OR PASSIVE):
Logic Levels: less than 3 mA Logic Low "O" — greater than 12 mA Logic High "1"
Transmission rate up to 20 Kbaud at 1311.5' (400 m)

RS-232 INPUTS AND OUTPUTS:
EIA voltage compliance for inputs and outputs. Output swings are approximately ±10 VDC. Maximum baud rate is 19.2 Kbaud in normal operation.

RS-422 INPUTS AND OUTPUTS:
EIA RS-422 compatible. Outputs are differential with a maximum data transfer rate of greater than 100,000 baud to distances of 1311.5' (400 m). Outputs are Tri-stated and automatically disconnect from the buss when no data is being sent.

OPTICAL ISOLATION (INPUT TO OUTPUT):
1,440 VAC (1 minute) at 1 Mb/second per Ul E55361 dielectric withstand test

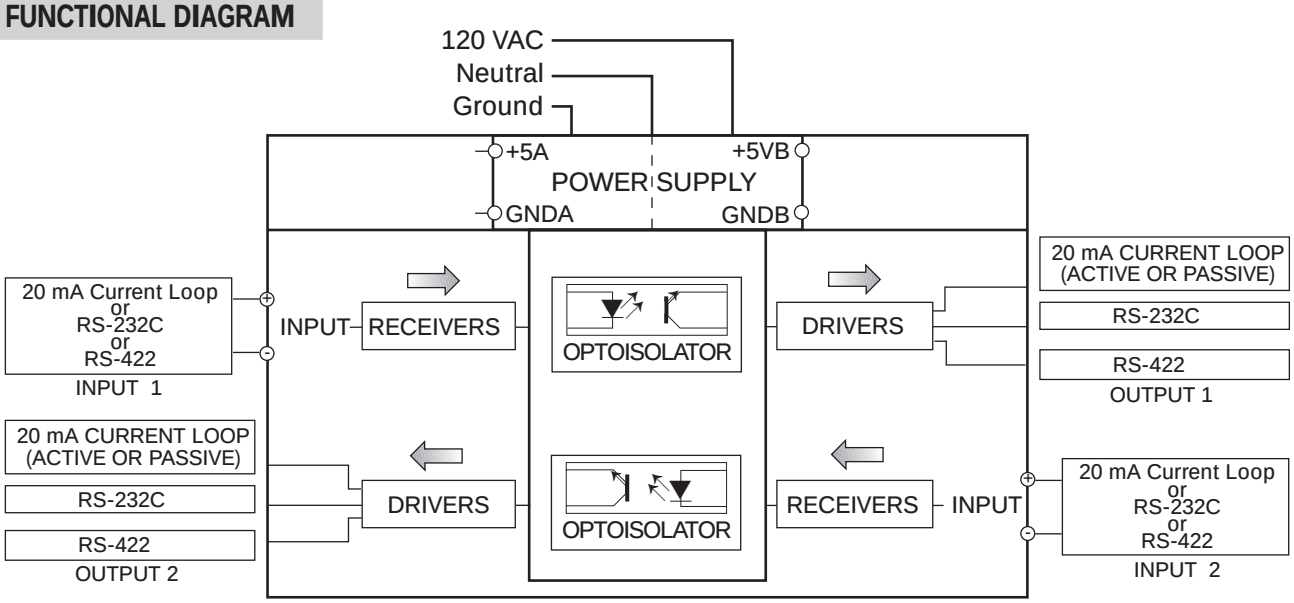
COMMON MODE TRANSIENT IMMUNITY:
1000V/µ second typical

ENCLOSURE:
The following optional enclosures are available:
NEMA 4X stainless steel or
NEMA 7CD, 9EFG Explosion Proof.

OPERATING TEMPERATURE RANGE:
14°F to 104°F (-10°C to 40°C) non-condensing

WARRANTY:
One year limited warranty

FUNCTIONAL DIAGRAM



Specifications subject to change without notice
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LCP-1 DC Transient Protection

Applications

- Cable extensions
- Protects serial communication lines
- Compatible with a variety of scale indicators and all types of load cells

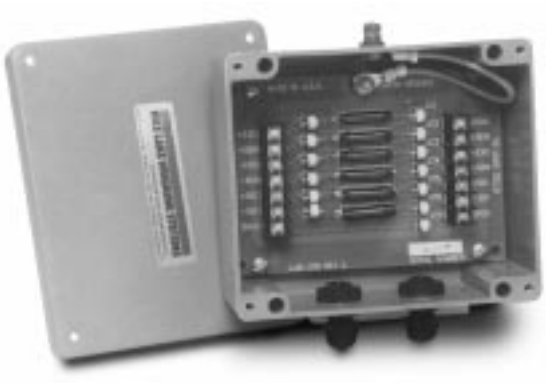
Standard Features

- Low cost, non-serviceable
- Self-contained; NEMA 1, 2, 3, 11 enclosure
- Effective series protection for strain gauge transducers
- Encapsulated circuitry ensures positive protection against fungus or corrosion on boards
- Two nylon strain reliefs for 0.187"-0.312" (4.7mm-7.9mm) diameter cable

PART # **DESCRIPTION**

21143 ..... LCP-1

UJB3T6 DC Transient Protection



Applications

- Protects load cells from voltage transients
- Compatible with signals down to 1µVgrad
- Installations exposed to significant transients
- Protects serial communication lines

Standard Features

- Factory serviceable
- Full 6-wire with shield protection
- #6 SEMS screw type; accepts spade lugs, tinned leads or bare wires up to #12 AWG
- Up to 8 parallel or summed load cells
- 50 Kbaud maximum transmission frequency
- Up to 6 serial data lines can be protected instead of load cells

Options/Accessories

21135 ..... UJB3T6 DC 6-channel load cell transient protector, board only

PART # **DESCRIPTION**

21134 ..... UJB3T6

TP75 DC Transient Protection

Applications

- Protects load cells and indicators from voltage transients
- Tank, bin, and hopper
- Truck and railroad track scales
- Suitable for outdoor use

Standard Features

- Avalanche diode design
- Full 6-wire with shield protection
- NEMA 4X enclosure
- Unlimited number of parallel load cells; up to 8 in series
- Terminal lugs provided

Options/Accessories

31164 ..... TP75 DC transient protector, board only

PART # **DESCRIPTION**

33185 ..... TP-75

(Specifications on back)

LCP-1, UJB3T6, TP75

Specifications

PROTECTION TYPE:
Four-channel series type with separate shield

MAXIMUM EXCITATION VOLTAGE:
18 VDC or 18 VAC

CLAMPING VOLTAGE:
75 VDC or 75 VAC

CLAMPING TIME:
<100 nanoseconds typical

PEAK SURGE CURRENTS:
5000 amperes any line to ground and 5000 amperes excitation to excitation

MAXIMUM SERIAL TRANSMISSION RATE:
30 Kbaud

GROUNDING:
Through a .25"(6.35mm) lug to a 20' (6.1m) insulated #10 AWG ground wire provided

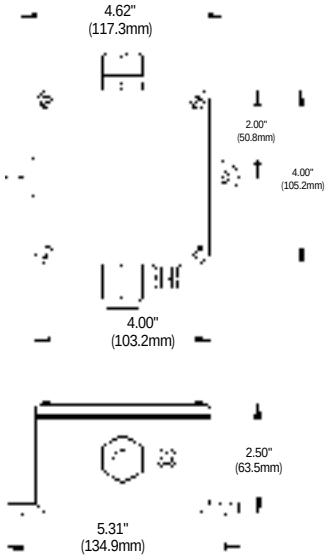
CABLE FITTING:
(2) Standard nylon strain relief for 0.187"-0.312" (4.7mm-7.9mm) diameter cable

ENCLOSURE:
Chemically-resistant PVC. This device, for outdoor or indoor service, is not intended for washdown service (NEMA 4) or for submersion (NEMA 6).
Optional NEMA 4X available

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C) consistent with NTEP guidelines

LEAKAGE:
7,500 MΩ minimum

DIMENSIONS:
4.0" W x 4.0" H x 2.50" D
(103.2mm W x 103.2mm H x 63.5mm D)



PROTECTION TYPE:
Six-channel series type with separate shield

MAXIMUM EXCITATION VOLTAGE:
20 VDC or 20 VAC

CLAMPING VOLTAGE:
75 VDC or 75 VAC

CLAMPING TIME:
75 VDC Stages <100 nanoseconds typical

PEAK SURGE CURRENTS:
75 VDC Stage - 5000 amperes

MAXIMUM SERIAL TRANSMISSION RATE:
50 Kbaud

SERIES RESISTANCE:
0.219 ohms typical

SERIES INDUCTANCE:
110µh typical

GROUNDING:
20' (6.1m) insulated #10 AWG wire

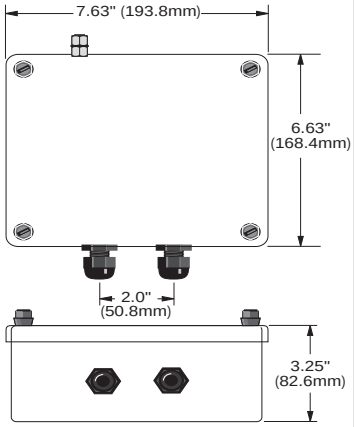
CABLE FITTING:
(2) nylon strain relief for 0.079"-0.236" (2.0-6.0mm) diameter cable

ENCLOSURE:
Fiberglass-Reinforced Polyester (FRP)
NEMA 4X, maximum 40 psi washdown

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

CIRCUIT BOARD:
6.75" x 4.75" (171.5mm x 120.7mm) with anti-fungal coating

DIMENSIONS:
7.63" W x 6.63" H x 3.25" D
(193.8mm W x 168.3mm H x 82.6mm D)



PROTECTION TYPE:
Six-channel series type with separate shield

MAXIMUM EXCITATION VOLTAGE:
22.8 VDC

RESPONSE TIME:
5 nanoseconds

PEAK SURGE CURRENTS:
100 amps

SERIES RESISTANCE:
0.0 ohms

SERIES INDUCTANCE:
0.0 µh

GROUNDING:
10 AWG wire or larger (not provided)

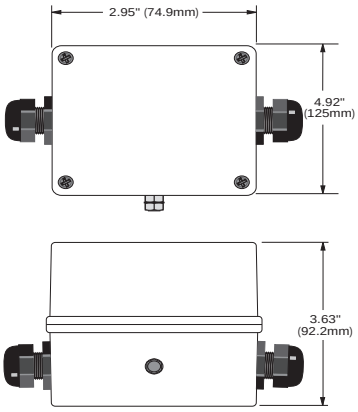
CABLE FITTING:
(2) nylon strain relief for 0.187"-0.312" (4.7mm-7.9mm) diameter cable

ENCLOSURE:
Impact-resistant polycarbonate
NEMA 4X, maximum 40 psi washdown

OPERATING TEMPERATURE:
4°F to 121°F (–20°C to 85°C)

CIRCUIT BOARD:
2.22" x 2.22" (56.4mm x 56.4mm)

DIMENSIONS:
4.38" W x 3.15" H x 3.38" D
(111.1mm W x 80mm H x 85.9mm D)



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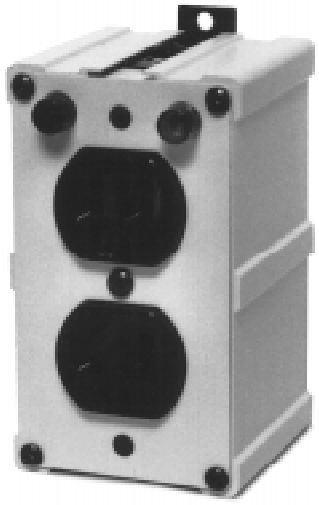
ISOBLOK® AC Transient Protector



PART # **DESCRIPTION**
21145 ..... Isoblok

Applications

- Protects electronic equipment such as digital weight indicators, printers and computers
- Protects against AC spikes and short-duration AC surges while providing RFI/EMI suppression

STANDARD FEATURES

- 2 outlets, direct plug-in
- LED indicator for power on
- LED indicator for protection circuitry
- UL1449 listed at 330 volts
- Mounting clamp assures positive connection

ISOBAR® AC Transient Protector

PART # **DESCRIPTION**
21146 ..... Isobar, 115 VAC
36663 ..... Isobar, 230 VAC

Applications

- Protects electronic equipment such as digital weight indicators, printers and computers
- Computer protection, prevents loss of data, disk skips, component damage, false printouts and monitor distortion

Standard Features

- 4 outlets
- 6-foot cord with grounded 3-prong plug
- Lighted on/off switch
- Circuit breaker protected
- Multiple filter design prevents the different components of your system from interfering with each other
- UL1449 listed at 330 volts
- Exclusive isolated filter banks prevent equipment interaction
- ISOBAR's cascade circuitry allows you to choose more protection for your most sensitive equipment, and a lesser degree of protection for equipment that's more tolerant

(Specifications on back)

ISOBLOK

Specifications

CLAMP VOLTAGE:
140 V rms

PEAK SURGE CURRENT:
6,500 Amps

CLAMPING TIME:
<5 nanoseconds

INPUT VOLTAGE:
120 VAC

MAXIMUM CURRENT:
15 Amps

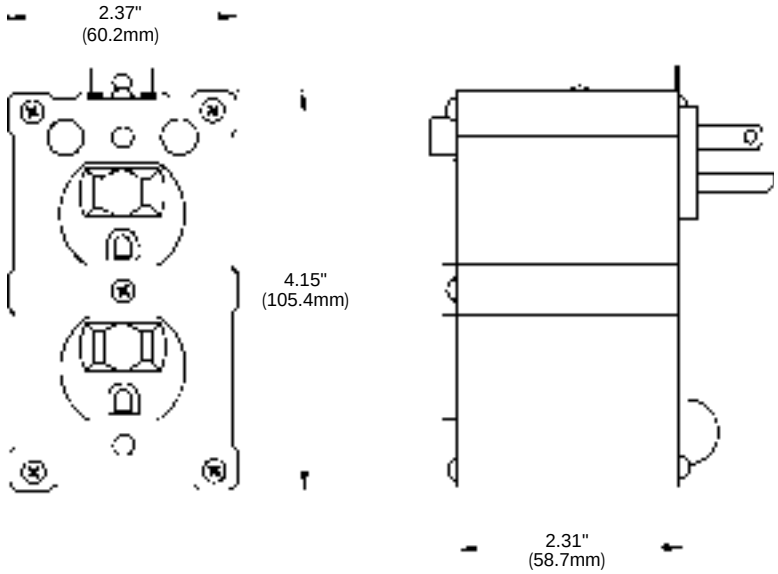
MAXIMUM POWER:
1875 Watts

NOISE SUPPRESSION:

FREQUENCY	ATTENUATION
50KHz	>20 db
150KHz	>40 db
1MHz	>80 db
>6MHz	>30 db

DIMENSIONS:
2.37" W x 4.15" H x 2.31" D
(60.2mm W x 105.4mm H x 58.7mm D)

WEIGHT:
Approximately 1 lb (0.45 kg)



ISOBAR

Specifications

CLAMP VOLTAGE:
140 V rms

PEAK SURGE CURRENT:
13,000 Amps

CLAMPING TIME:
<5 nanoseconds

INPUT VOLTAGE:
120 VAC

MAXIMUM CURRENT:
15 Amps

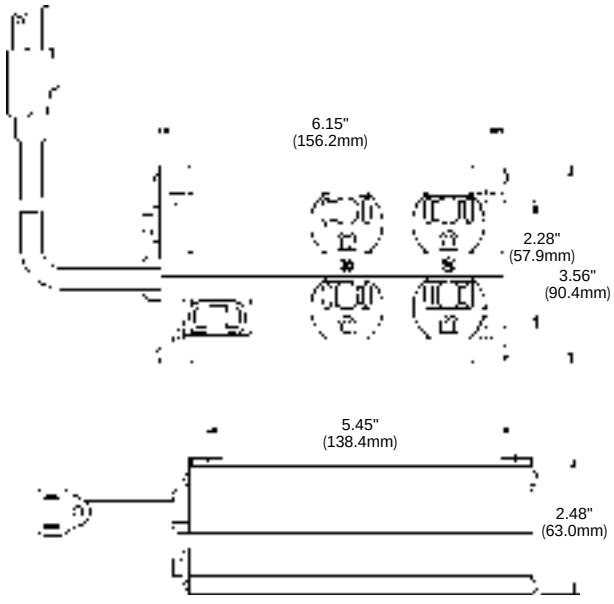
MAXIMUM POWER:
1875 Watts

NOISE SUPPRESSION:

FREQUENCY	ATTENUATION
50KHz	>20 db
150KHz	>40 db
1MHz	>80 db
>6MHz	>30 db

DIMENSIONS:
6.15" W x 3.56" H x 2.48" D
(156.2mm W x 90.4mm H x 65.0mm D)

WEIGHT:
Approximately 2` lb (0.91 kg)



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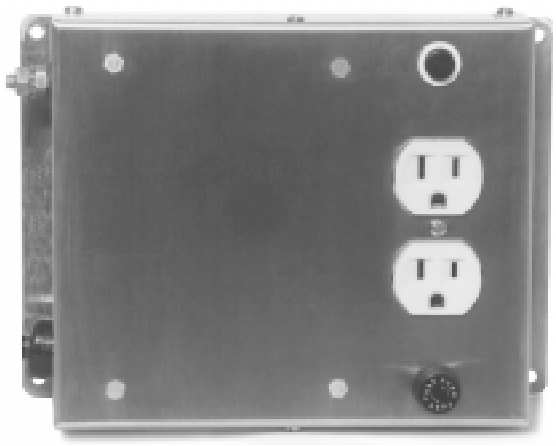
EL226 AC Transient Protector



PART # **DESCRIPTION**

21136 ..... EL226

Applications

- Protects electronic equipment such as digital weight indicators, printers and computers
- Protects against spikes and short-duration surges while providing RFI/EMI suppression

Standard Features

- Duplex receptacle
- 20' (6.1m) ground cable
- Factory serviceable
- 9' (2.7m) cord with 3-prong plug
- Stainless steel industrial enclosure
- Plugs into any grounded 3-prong outlet
- Indicator light shows protection is secure
- Excellent as a prefilter for voltage regulators
- Reliability and quality top-of-the-line performance
- Shielded line cord for protection against induced transients
- Positive proven protection for scales, computers, and printers
- Convenient mounting holes; can be mounted on any surface

The EL226 EMI/RFI protection circuits consist of a three-stage filter that removes high, low, and mid-range frequency transients, but passes 50/60 Hz power including voltage transients. But a transient that trips the first stage of the frequency transient filter also brings the two-stage inductive filters into action to remove the voltage transients.

The inductive filters slow the rise/fall time of the transient voltage. Since the filter coils are wound in opposite directions, a near-zero magnetic condition is created that cancels the transient. Therefore, clamping time becomes less critical because the circuit "slows" the surge before capture and dissipation. The frequency component of the transient itself actually helps protect against the voltage component! The design is bidirectional, removing the noise generated by printer heads, solenoids and relays so they will not be dumped back into the power line. You're protected coming and going!

EL225-4 Dedicated In-Line Instrument Transient Protection System

PART # **DESCRIPTION**

21142 ..... EL225-4 AC transient protector (chassis mount)

Applications

- Easy-to-use signal conditioning transient protection system
- Designed for installation in control panels or enclosures

Standard Features

- Dedicated series transient protection
- Bidirectional design reduces noise on surrounding lines

(Specifications on back)

EL226 Specifications

OPERATING VOLTAGE:
120 VAC 50/60 Hz, nominal

MAXIMUM CURRENT:
10 A rms instantaneous, 7.5 A rms continuous

CLAMPING TIME:
Less than 3-5 nanoseconds

EMI/RFI PROTECTION:
13 stages

PROTECTION TYPE:
Thirteen-stage series type filters out both common and normal mode transients

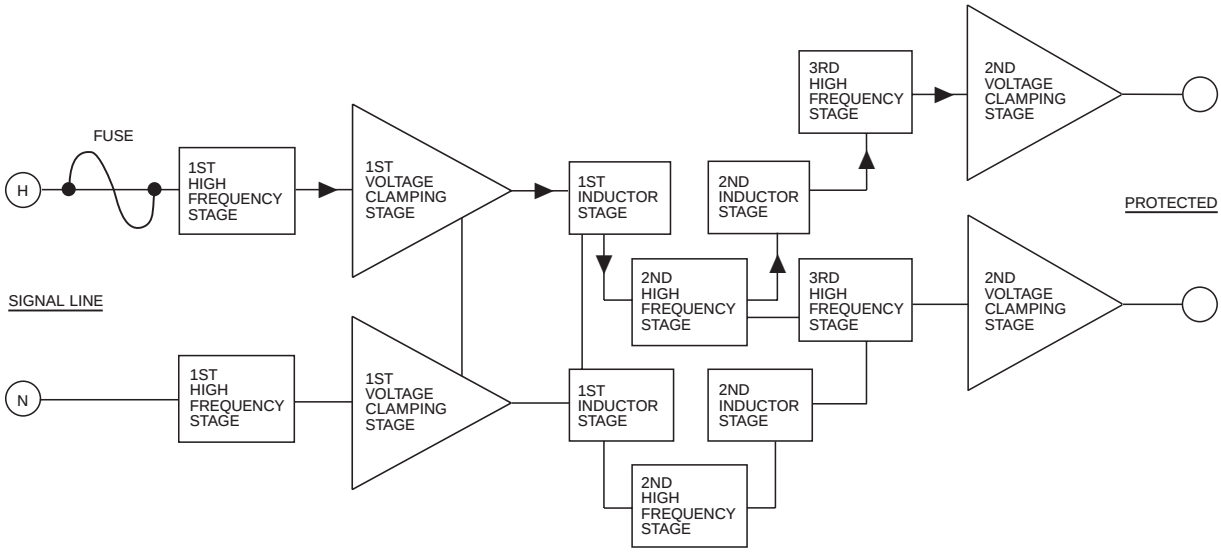
GROUNDING:
20' (6.1m) insulated #10 AWG wire provided

ENCLOSURE:
Stainless steel

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

CIRCUIT BOARD:
Fiberglass-reinforced 4-glass epoxy

DIMENSIONS:
8.00" W x 6.00" H x 2.50" D
(203.2mm W x 152.4mm H x 63.5mm D)



EL225-4 Specifications

OPERATING VOLTAGE:
117 VAC 50/60 Hz, nominal

MAXIMUM CURRENT:
2 Amp continuous

CLAMPING TIME:
Less than 5 nanoseconds

EMI/RFI PROTECTION:
9 stages

PROTECTION TYPE:
Nine-stage series type filters out both common and normal mode transients

GROUNDING:
20' (6.1m) insulated #10 AWG wire provided

OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

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Sola MCR Series

Mini/Microcomputer AC Power Regulators

PART #	DESCRIPTION
21155	Sola MCR 070
21156	Sola MCR 150
21157	Sola MCR 250

The Sola MCR Mini/Microcomputer AC Power Regulators are designed to protect you from problems resulting from voltage dips, surges, dropouts, and brownouts. The MCR design uses Sola's ferroresonant constant voltage sinusoidal transformer, which is proven both reliable and durable by more than 50 years of service. The MCR can be operated under high ambient temperatures.

The MCR also provides some spike protection. A special spike protection suppression module withstands a 6000 volt, 100 KHz ringwave to maintain better transient protection than other ferroresonant power conditioners. A side benefit of the MCR's ferroresonant technology is automatic overload protection. If the load exceeds the overload rating of the ferroresonant transformer, the output voltage quickly decreases, thereby protecting the MCR and the connected load.

Applications

- Portable and free standing
- Operates under high ambient temperatures
- Protects computers, printers, weight indicators and other sensitive equipment from voltage dips, surges, dropouts, and brownouts

Standard Features

- UL listed, CSA certified
- Automatic overload protection
- Convenient lighted on/off switches
- Available in 70, 150 and 250 VA outputs
- Offered in standard 120 volt, 60 Hz models
- Two duplex receptacles to allow several pieces of equipment to economically share the same source of regulated power

(Specifications on back)

INPUT:

VOLTAGE: 120 V

INPUT VOLTAGE RANGE: +10% to -20% of input nominal voltage

CONTROL: Lighted enable switch

OUTPUT:

VOLTAGE: 120 V

VOLTAGE REGULATION: ±3% for an input line variation of +10% to -20%. Output will remain within NEMA voltage specifications for input voltages as low as 65% of nominal. No loss of output for line loss of 3 milliseconds.

HARMONIC DISTORTION: Less than 3% total RMS content at full load

NOISE REDUCTION:

Common mode noise rejection exceeds 120 dB (DC to 1 MHz). Transverse mode noise rejection exceeds 60 dB (10 KHz to 1 MHz)

PROTECTION:

INPUT: Surge suppression module

OUTPUT: Surge suppression module and ferroresonant technology suppresses ANSI/IEEE C62.41-1980 Class A and B waveforms to safe levels (formerly IEEE 587-1980)

EFFICIENCY:

90% at full load (typical)

RELIABILITY:

25-year continuous life, average

OPERATING TEMPERATURE:

-4°F to 122°F (-20°C to 50°C)

CONSTRUCTION:

Cruciform-type construction with precision die-cut shunts, gaps, and spacing between windings

APPROVALS:

UL listed to UL1012; CSA certified to CSA C22.2-66

DIMENSIONS:

70, 150 & 250 VA - 6.75" W x 6.25" H x 9.25" D (171.5mm W x 158.8mm H x 235.0mm D)

WEIGHT:

70 VA - Approximately 16 lb (7.3 kg)
150 VA - Approximately 21 lb (9.5 kg)
250 VA - Approximately 26 lb (11.8 kg)

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Tripp-Lite Powerverter

PV Series Power Inverters

PART #	DESCRIPTION
21147	PV-200, 200VA
21148	PV-400, 400VA
40763	PV-500FC, 500VA*

** Frequency controlled*

The PV Series inverters come complete with 115 VAC outlet and convenient on/off switch. The device is ideal for locations where AC power is not available and you wish to run 115 VAC powered equipment from a 12 VDC battery.

The battery connects to the inverter terminals with convenient wing nuts. The PV Series inverters are available in 200, 400 and 500 load watt ratings.

Square wave output voltage varies directly with input voltage and is inversely proportional to load. Select the inverter with the wattage rating equal to or greater than the wattage required to power devices.

Applications

- Highly portable
- Ideal for remote locations where AC power is not available
- On-board vehicle scales
- Changes 12 VDC power to 115 VAC power
- Allows equipment to be isolated from building power and ground

Standard Features

- 3 conductor outlet
- Convenient on/off switch
- 20 Amp circuit breaker
- 115 VAC 60 Hz square wave output
- Available in 200, 400 and 500 watt ratings
- Transistorized and solid state for long life and quiet operation
- Packaged in a compact, rugged aluminum case

(Specifications on back)

INPUT VDC:
- PV-200—12 V
- PV-400—12 V
- PV-500FC—12V

OUTPUT VAC:
- PV-200—115 VAC
- PV-400—115 VAC
- PV-500FC—115 VAC

FREQUENCY HZ:
- PV-200—60 Hz
- PV-400—60 Hz
- PV-500FC—60 Hz

MAXIMUM OUTPUT CONTINUOUS:
- PV-200—200 watts
- PV-400—400 watts
- PV-500FC—500 watts

MAXIMUM OUTPUT INTERMITTENT:
- PV-200—220 watts
- PV-400—440 watts
- PV-500FC—1000 watts

INPUT AMP - NO LOAD:
- PV-200—3.5 amps
- PV-400—3.5 amps
- PV-500FC—2.2 amps

INPUT AMP - FULL LOAD:
- PV-200—18 amps
- PV-400—36 amps
- PV-500FC—50 amps

ENCLOSURE:
- Non-sealed aluminum

DIMENSIONS:
- 3.875" W x 4.50" H x 6" D
- (98.4mm W x 114.3mm H x 152.4mm D)

Specifications subject to change without notice
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Patriot® 250/425/600VA Uninterruptible Power Supply

PART #	DESCRIPTION
49916	Patriot 250VA, 115 VAC
49919	Patriot 250VA, 230 VAC
49917	Patriot 425VA, 115 VAC
49920	Patriot 425VA, 230 VAC
49918	Patriot 600VA, 115 VAC
49921	Patriot 600VA, 230 VAC

Applications

- Excellent system protection from lightning, brownouts and blackouts
- Stable, clean power for weighing instrumentation, computers, printers and sensitive electronics
- Noise (RF) isolation

Standard Features

- UL listed, C-UL listed to Canadian standards
- Quiet, compact and lightweight
- Advanced microprocessor design increases system reliability
- Front-panel LED low-battery and overload indicators
- Audible alarms for backups, low runtime, and shutdown
- Sophisticated power management extends battery life

Sola 2000 Uninterruptible Power System

NEW! Product!

PART #	DESCRIPTION
65422	Sola 350VA, 115 VAC
65423	Sola 470VA, 115 VAC
65424	Sola 700VA, 115 VAC
65425	Sola 350VA, 230 VAC
65426	Sola 470VA, 230 VAC
65427	Sola 700VA, 230 VAC

Applications

- Computers
- Workstations
- PLCs
- Computer peripherals

Standard Features

- Off-line with Automatic Voltage Regulation (AVR) topology
- Protects against most adverse power conditions, including: frequency variations, surge, noise, blackouts, lightning, spike, brownouts, and over and under voltages
- Data-line surge proection for phone or network included on every unit
- Greater uptime with intelligent power management, full-sequence battery testing, and two-level overload protection
- Small, lighweight design perfect for desktop use

(Specifications on back)

Patriot 250/425/600VA Specifications

LIGHTNING & SURGE PROTECTION:
Passes ANSI/IEEE C62.41 Category A testing

SAFTEY COMPLIANCE:
115 VAC: UL listed to UL1778, CSA certified to CSA C22.2
230 VAC: TUV/GS listed

EMC COMPLIANCE:
115 VAC: FCC Class B
230 VAC: CISPR 22 Class B, Vfg 243-91/46-92 B, EN55022, CE Marking Directive 93/68/EEC, low voltage directive 73/23/EEC

NOISE (RF) SUPPRESSION:
Full-time EMI/RFI filtering

EFFICIENCY:
>95% online

VOLTAGE RANGE:
115 VAC: 100-142 VAC on utility; operating on battery 0-100 VAC and 142-150 VAC
230 VAC: 192-278 VAC, on utility; operating on battery 0-192 VAC and 278-300 VAC

FREQUENCY:
50/60 Hz auto-sensing 57-63 Hz (60 Hz); 47-53 Hz (50 Hz)
(50/60 Hz ± 1 Hz on battery)

TRANSFER TIME:
4 MS typical

BATTERY:
Sealed, maintenance-free, valve-regulated, UL 924 recognized
250VA models: One 12V or two 6V, 4.2 AH batteries, 12 VDC
425VA models: One 12V 7.0 AH battery, 12 VDC
600VA models: One 12V 9.0 AH battery, 12 VDC

BATTERY RECHARGE TIME:
8 hours with output fully loaded

OPERATING TEMPERATURE:
32°F to 104°F (0°C to 40°C)

***STORAGE TEMPERATURE:**
5°F to 122°F (-15°C to 50°C)
Battery life is reduced above 77°F (25°C)

** If the Patriot unit is stored, the batteries should be recharged every 6 months. If stored above 77°F (25°C), recharge the batteries more often.*

MODEL	CAPACITY (VA/WATTS)	DIMENSIONS	WEIGHT	OUTPUT RECEPTACLES QUANTITY	OUTPUT RECEPTACLES TYPES
115 VAC:					
250VA	250/168	5.9" H X 2.3" W X 15.5" D (150mm X 59mm x 393mm)	6.6 lb (3.0 kg)	4 (UPS & Surge) 2 (Surge only)	NEMA 5-15R, cord attached
425VA	425/285	6.8" H x 3.1" W x 14.8" D (172mm x 79mm x 376mm)	9.2 lb (4.2 kg)	4 (UPS & Surge) 2 (Surge only)	NEMA 5-15R, cord attached
600VA	600/400	6.8" H x 3.1" W x 14.8" D (172mm x 79mm x 376mm)	9.4 lb (4.3 kg)	4 (UPS & Surge) 2 (Surge only)	NEMA 5-15R, cord attached
230 VAC:					
250VA	250/168	5.9" H X 2.3" W X 15.5" D (150mm X 59mm x 393mm)	6.6 lb (3.0 kg)	4 (UPS & Surge) 2 (Surge only)	CEE 22, recessed plug
425VA	425/285	6.8" H x 3.1" W x 14.8" D (172mm x 79mm x 376mm)	9.2 lb (4.2 kg)	4 (UPS & Surge) 2 (Surge only)	CEE 22, recessed plug
600VA	600/400	6.8" H x 3.1" W x 14.8" D (172mm x 79mm x 376mm)	9.4 lb (4.3 kg)	4 (UPS & Surge) 2 (Surge only)	CEE 22, recessed plug

PATRIOT RUNTIMES FOR TYPICAL APPLICATIONS IN MINUTES

Load	75VA	110VA	120VA	160VA	200VA	250VA	310VA	360VA	400VA	450VA	500VA	550VA	600VA
250VA	35	19	17	10	7	3.5	-	-	-	-	-	-	-
425VA	55	36	32	20	15	10	7	5	4	-	-	-	-
600VA	70	46	42	30	21	15	11	9	7.5	6	5	4.5	3.5

Sola 2000 Specifications

INPUT VOLTAGE RANGE:
Input: 90-5 VAC, single phase, 2-wire plus ground

COMMUNICATIONS:
SiteNet® 1 shutdown interface

APPROVALS:
UL & C-UL listed, CE marked

WARRANTY:
Two year limited warranty

MODEL	CAPACITY (VA/WATTS)	VOLTS, FREQUENCY IN/OUT	TYPICAL RUNTIME*	INPUT PLUG/ OUTPUT RECEPTACLE	WEIGHT
115 VAC:					
350VA	350/210	115/115, 50/60 Hz	5/15	5-15/(4) 5-15	13.2 lb (6.0 kg)
470VA	470/282	115/115, 50/60 Hz	5/12	5-15/(4) 5-15	15.4 lb (7.0 kg)
700	700/420	115/115, 50/60 Hz	5/13	5-15/(4) 5-15	22 lb (10.0 kg)
230 VAC:					
350VA	350/210	230/230, 50/60 Hz	5/15	EN60320-C14/(4) EN60320-C13	13.2 lb (6.0 kg)
470VA	470/282	230/230, 50/60 Hz	5/12	EN60320-C14/(4) EN60320-C13	15.4 lb (7.0 kg)
700	700/420	230/230, 50/60 Hz	5/13	EN60320-C14/(4) EN60320-C13	22 lb (10.0 kg)

* Full/half load (in minutes)

Air around the above units must be free of dust, chemicals, or other materials that corrode or contaminate

Specifications subject to change without notice
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R-30 Retail Scale

Measurement Canada Approved

PART #	MODEL	CAPACITY
64303	R-30 w/plastic platter	30 lb/15 kg
64302	R-30 w/stainless steel platter	30 lb/15 kg

The R-30 retail scale is the ultimate choice for basic price-computing applications. Delivering unmatched convenience and accuracy, the R-30 provides one-button operation while displaying weight to 1/100th of a pound.

For extra convenience, the R-30 features two LCD displays, one in front for the operator and the other in back for the customer. Additionally, it has a large 12" x 8 1/2" platter for easy and efficient weighing. What's more, the R-30 incorporates an accumulator for totaling the day's receipts.

The R-30 is NTEP certified and operates on either battery or AC. It is available in a 30-lb/15 kg capacity and has an optional stainless steel platter.

Applications

- Point-of-sale weighing and price-computing

Standard Features

- NTEP certified, Legal-For-Trade
- Customer display on rear of unit
- Operates on 12 VDC adapter or 6 "D" size alkaline batteries (adapter included)
- Compact design makes it easy to transport
- Configure for lb or kg

Options/Accessories

64982 ..... KG option
49790 ..... Additional AC-adapter
64041 ..... Additional operating manual

(Specifications on back)

WEIGHING RANGE:
30 lb x 0.01 lb
15 kg x 0.005 kg

SCALE INTERVAL:
0.01

TEMPERATURE RANGE:
Storage: 5°F to 140°F (-15°C to 60°C)
Operating: 32°F to 104°F (0°C to 40°C)

POWER:
6 x 1.5 volt size "D" alkaline

DC ADAPTER:
12 VDC, 50-100 mA

ZERO TRACKING:
Automatic
Center zero accuracy: ±1/2 div
Maximum range: ±2%

TARE REDUCTION:
Up to full scale capacity (lb version)
9.995 kg maximum (kg version)
Tare displayed with [-] sign to the left

LOAD CELL EXCITATION VOLTAGE:
5 VDC

DISPLAY:
5 digits for weight and price; 6 digits for total price

WEIGHT:
8.5 lb (3.9 kg)

APPROVALS:
NTEP certified, CC# 98-133, Class III 3000d
Measurement Canada approved, AM-5275

WARRANTY:
One year limited warranty

DIMENSIONS

Platter: 12" W x 8.5" D
Overall: 12.25" W x 13" D x 5" H

Specifications subject to change without notice
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Ishida Nova-II Price-Computing Scale

PART #	MODEL	CAPACITY	GRADUATION
46555	NOVA-II-15 lb	15 lb/6 kg	0.005 lb/0.002 kg
41465	NOVA-II-30 lb	30 lb/15 kg	0.01 lb/0.005 kg
46554	NOVA-II-60 lb	60 lb/30 kg	0.02 lb/0.01 kg
46556	NOVA-II-30 lb w/pole	30 lb/15 kg	0.01 lb/0.005 kg

The Ishida NOVA-II retail scale provides 1/3000 accuracy for high precision performance. NTEP-certified, this versatile scale offers an operator display as well as a convenient customer display. The compact design maximizes work space and advanced function keys simplify calculations.

Easy to use, the NOVA-II provides one-touch zero adjustment and tare selection. The "save" key stores tare and unit prices until new values are entered. Convenient preset keys store up to 15 unit prices or tares.

Applications

- Point-of-sale weighing and price computing

Standard Features

- High accuracy
- Advanced computing functions
- Convenient adjustment keys
- Memory function
- Compact design
- Customer display on rear of unit

Options/ Accessories

47976 ..... Fish Platter
47977 ..... Produce Platter
48727 ..... Additional operating manual
48728 ..... Additional service manual

(Nova-II 30 lb with pole display)

Ishida BC-3000 Price-Computing Scale with Printer

PART #	DESCRIPTION	CAPACITY
53867	Dual Range BC-3000	15 lb/0.005 lb 30 lb x 0.01 lb

The Ishida BC-3000 retail scale/printer offers sophisticated data storage and flexible printing capability in point-of-sale applications.

With the ability to store up to 176 preset items (with shift key), the BC-3000 can be configured for simple operation, and will speed up customer cycle times.

Choose from seven different character sites when programming text descriptions. In addition, reverse print is available for maximum label flexibility.

Applications

- Sophisticated point-of-sale weighing

Standard Features

- Dual range: 0-14.995 x 0.005 lb/15-30 x 0.01 lb
- 88 one-touch preset keys. Each key can be assigned two items using the shift key, for a total of 176 presets
- Thermal dot printer
- Reverse printing
- Seven different character sizes that are easily programmed
- Printed data positions can be freely altered, allowing the user to make unique label
- Keyboard formats for presetting and programming can be easily switched using key sheets
- Memory capacity: 128 K

Options/ Accessories

46916 ..... Produce Platter
46917 ..... Fish Platter
46921 ..... Korean/English language firmware
N/A ..... Chinese/Japanese/English firmware
46923 ..... KG version firmware
46919 ..... Remote load cell kit
47341 ..... Continuous roll thermal journal paper, 64mm wide
N/A ..... Single range firmware
44299 ..... Additional operating manual
48775 ..... Additional service manual

(Specifications on back)

NOVA-II Specifications

ACCURACY:
1/3000
DISPLAY:
VFD, 0.453" (11.5mm) character height
DISPLAY ITEMS:
Weight: 5 digits
Unit price: 5 digits
Total price: 6 digits
WEIGHT:
Without pole display: 14.3 lb (6.5 kg)
With pole display: 15.9 lb (7.2 kg)
PRESET KEY:
Stores up to 15 unit prices or tares
POWER SOURCE:
115/230V ±10%, 50/60Hz
POWER CONSUMPTION:
5 W (115 VAC)
6 W (230 VAC)

OPERATING TEMPERATURE:
23°F to 104°F (-5°C to 40°C)
CLASSIFICATION:
NTEP certified, CC# 98-001

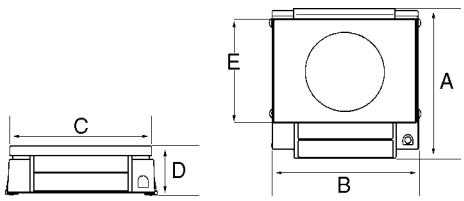
DIMENSIONS

Without pole display

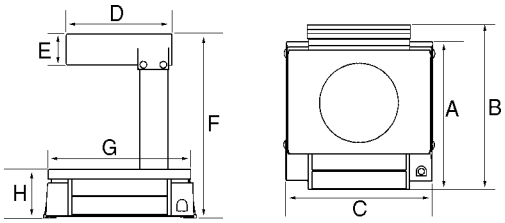
A:	14.1" (357mm)	C:	13.8" (350mm)
B:	14.2" (360mm)	D:	4.53" (115mm)
E:	9.8" (249mm)		

With pole display

A:	14.1" (357mm)	E:	2.76" (70mm)
B:	15.4" (390mm)	F:	16.9" (429mm)
C:	14.2" (360mm)	G:	13.8" (350mm)
D:	9.84" (250mm)	H:	4.53" (115mm)



Without pole display



With pole display

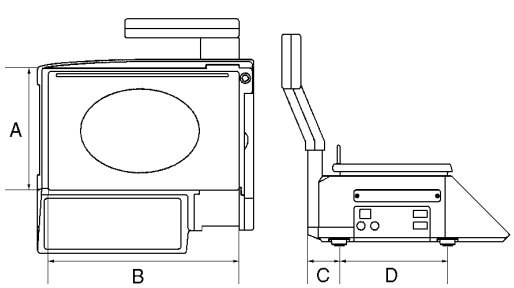
BC-3000 Specifications

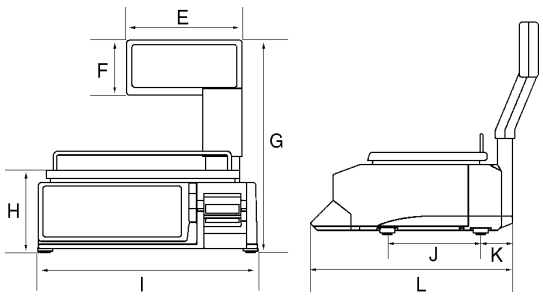
CAPACITY:
0-14.995 x 0.005 lb/15-30 x 0.01 lb
ACCURACY:
1/3000
DISPLAY:
U/P: 6 digits
Weight: 5 digits
Price: 7 digits
PRINTER:
Thermal dot printer
PRINTING SPEED:
70 mm (2.36" per second)
PRESET KEYS:
88 keys (176 presets using shift key)
MEMORY CAPACITY:
128 K
LABEL SIZE:
2.52" x 3.35" (64mm x 85mm) (variable)
Printing width: Max. 2.36" (60mm)

ELECTRICAL POWER:
115 VAC, 60Hz
POWER CONSUMPTION:
Stand-by: 50W
In operation: 100W
WEIGHT:
26.5 lb (12 kg)
CLASSIFICATION:
NTEP certified, CC# 95-057A3

DIMENSIONS

A:	9.84" (250mm)	G:	17.32" (440mm)
B:	15.75" (400mm)	H:	6.61" (168mm)
C:	2.56" (65mm)	I:	17.72" (450mm)
D:	8.86" (225mm)	J:	7.80" (198mm)
E:	9.45" (240mm)	K:	2.56" (65mm)
F:	4.53" (115mm)	L:	16.54" (420mm)





Specifications subject to change without notice
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Ishida AC-3000H

Hanging Scale with Printer

NEW! Product!

PART # MODEL

52273 ... AC-3000H Dual Display

The AC-3000H hanging scale provides all the capabilities of a sophisticated price computing scale and printer, yet maintains incredibly simple operation for staff and customers. Perfect for weighing seafood, fruits, and vegetables, the AC-3000H is able to store up to 176 PLUs.

For maximum protection, it's housed in a stainless steel enclosure and comes with two weighing pans to accommodate either dry or wet products. The AC-3000H has an easy-to-read display that indicates weight and prices, and scrolls promotional messages. This versatile product also includes flexible label formatting, allowing store owners to cater to the specific needs of their customers. Store managers will be sold on the AC-3000H when they see its ability to expedite the checkout process.

Applications

- Produce Department
- Fish/Seafood Department

Standard Features

- Flexible, efficient label production
- 88 one-touch preset keys. Each key can be assigned two items using the convenient shift key, for a total of 176 presets
- Keyboard formats for presetting and programming can be easily switched using key sheets
- Dot matrix display
- Easy-to-read display, shows weights, prices, and is capable of displaying messages
- Stainless steel enclosure

Options/Accessories

52311 ..... Operator's manual
52636 ..... Programmer's manual

** Because store designs and applications can vary greatly, mounting hardware must be supplied by the distributor or store.*

Rear display

(Specifications on back)

CAPACITY:
30 lb/0.01 lb (single)
(15 kg/0.005 kg) (single)

DISPLAY:
Unit price: 6 digits
Weight: 5 digits
Price: 7 digits
Dot display: 256 x 16 dots

PRINTING SPEED:
3.1"/sec (80mm/sec)

PRESET:
88 keys (176 presets)

MEMORY CAPACITY:
Standard: 256 KB

WEIGHT:
35.3 lbs (16 kg)

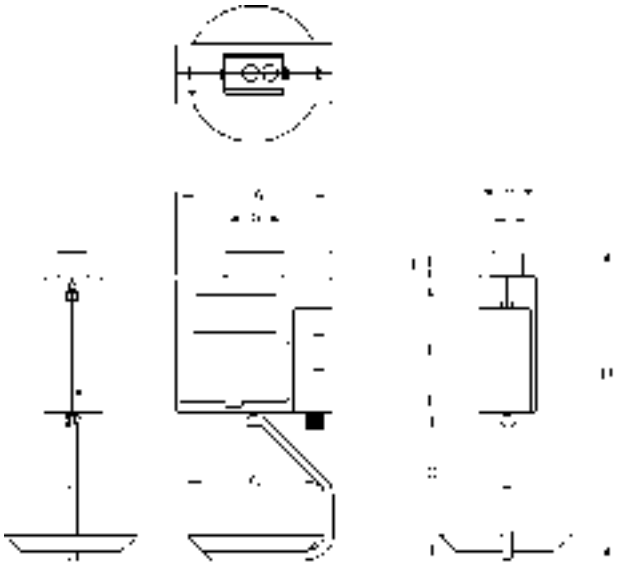
LABEL SIZE:
Flexible, max. width: 2.5" (64mm)

POWER SUPPLY:
AC115V/50/60 Hz

POWER CONSUMPTION:
Stand-by: 50W
In operation: 100W

CLASSIFICATION:
NTEP certified, CC# 95-057A3

WARRANTY:
One-year limited warranty



DIMENSIONS

A: 16.22" (412mm)	F: 13.85" (352mm)
B: 5.98" (152mm)	G: 13.77" (350mm)
C: 14.05" (357mm)	H: 5.98" (152mm)
D: 30.17" (766mm)	I: 3.14" (80mm)
E: 2.55" (65mm)	

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Ishida Astra Scale/Printer

NEW! Product!

PART #	MODEL	CAPACITY
64986	Astra	30 lb

The Astra exhibits a combination of performance and price unmatched by any scale in its class. It allows operators to create a variety of eye-catching point of purchase labels up to 64mm wide and 85mm long at an industry-leading 80mm per second. In addition, its ergonomic design successfully delivers customer convenience. The Astra's simple side label loading feature, easy-to-read display, and user-friendly keyboard design allows operators to deliver fast, friendly customer service.

The Astra's performance is enhanced by innovative features. Setup time is reduced with the help of unique, easy-to-use, software tools called AstraLink and AstraLabel. AstraLink allows PLUs, messages and presets to be programmed from a PC. It conveniently allows operators to generate preset key sheets from their own printer. AstraLabel allows simple label formatting. The Astra also offers a proportional tare feature that can be programmed per PLU or entered through the keyboard. What's more, operators can use the cloning feature to transfer some or all of the scale memory from one Astra directly to another.

From meat departments to delis, seafood to specialty shops, the Astra retail scale printer is the leader in form, function and value.

Applications

- Supermarket
- Deli
- Candy shop
- C-Store
- Seafood shop
- Specialty store

Standard Features

- Programmable function keys
- Store up to 2,000 PLUs
- Print speed of 3.15" (80mm) per second
- Convenient side-loading label feature
- RS-232 communications (for AstraLink)
- Proportional tare
- 44 keys store up to 88 presets

Options/Accessories

66435 ..... Astra CD-ROM (Contains AstraLink, AstraLabel, manuals and label format worksheets)
65989 ..... AstraLink PLU editing software (3.5" diskettes)
66533 ..... AstraLabel editing software (3.5" diskettes)
66535 ..... RS-232 Null modem 6' cable, DB9 female to DB9 female (Astra to PC, Astra to Astra)
46916 ..... Produce platter
46917 ..... Fish platter
66534 ..... Service manual*
65663 ..... Additional operator's manual*

** Manuals can be downloaded from the distributor section of the Ishida web site at www.ishidaretail.com*

(Specifications on back)

CAPACITY/GRADUATIONS:
30 x 0.01 lb (15 x 0.005 kg)

DISPLAY:
Tare: 4-digits
Weight: 5-digits
Unit/Price: 5-digits
Total Price: 6-digits

ACCURACY:
1/3000

LABEL WIDTH:
1.5" - 2.52" (38mm - 64mm)

LABEL LENGTH:
1.18" - 3.35" (30mm - 85mm)

LABEL BACKING PAPER WIDTH:
Up to 2.64" (up to 67mm)

PRINTING SPEED:
3.15" per second (80mm per second)

LABEL ROLL DIMENSION:
Inside diameter: 1.57" (40mm)
Outside diameter: 3.94" (100mm)

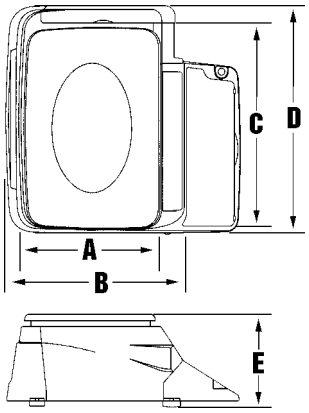
COMMUNICATIONS:
RS-232 (for AstraLink PLU editor)
Scale data copy function
Windows® 95, 98 and NT

KEYBOARD:
64 keys (88 presets using Mode key)

MEMORY CAPACITY:
256K, 2000 PLUs (30 characters per PLU)

APPROVALS:
NTEP certified COC# 00-107, UL listed

WARRANTY:
One year limited warranty



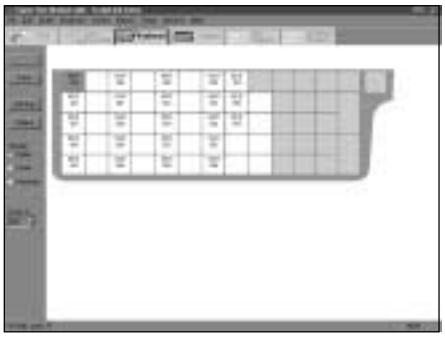
DIMENSIONS

A: 9.2" (234mm)	D: 15.7" (400mm)
B: 16.3" (414mm)	E: 6.5" (165mm)
C: 14.1" (358mm)	

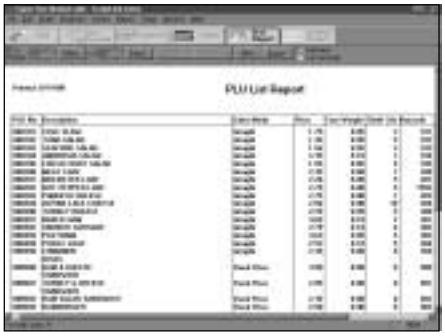
ASTRALINK PLU EDITING SOFTWARE

PLU Search Screen

PLU Entry Screen



Program Astra Preset Keys



Preview PLU List Report Before Printing

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LABEL MATRIX for Windows®

Label Creation Software

PART # DESCRIPTION

34676 ..... Label Matrix for Windows

Label Matrix provides advanced design, printing and database features that give you the flexibility to meet your most demanding labeling needs. Whether you need address labels for your small business or thousands of inventory labels for a multi-site warehousing plant, Label Matrix can do the job.

Applications

- Shipping labels
- Bar code printing
- Point of sale
- Inventory control

Standard Features

- True WYSIWYG design and editing
- Variable-size bar codes, text, lines, boxes and graphics
- Label design and printing wizards
- MDI (open multiple designs)
- Display cursor coordinates
- English and metric units of measure
- Tool tips and tabbed dialogs
- Data grid record preview
- Print preview
- Preview thumbnail label designs and descriptions before opening
- Undo/redo
- Zoom in/out
- Find and replace
- Cut, copy, move or paste single and multiple fields
- Rotate groups of images or entire label
- Resize or position objects using keyboard or mouse
- Image alignment tools
- Right mouse click shortcut menus
- Label designer grid
- Adjustable snap values
- Label stock display at print time
- Label directory tracking
- User-defined form types
- Dozens of “ready-to-print” samples and formats

(Specifications on back)

SYSTEM REQUIREMENTS:

WINDOWS VERSION

IBM compatible 486 or better
PC/MS-DOS 6.0 or above
Win 3.1, Win 95 or Win NT
8 MB RAM (16 recommended)
Windows-compatible monitor and graphics card

GRAPHICS

Import graphic formats including

BMP	DIB	DCX
GIF	IMG	JPG
PCX	TGA	TIF

DATABASE SUPPORT

Internal database utility
Database wizard
32-bit Microsoft ODBC support
SQL query capability
Ability to view records "live" on design screen
Multiple database support
Sequential access to database records
Keyed access using Primary or Primary/Secondary key
Import files format from:
- ASC11 (comma, tab and quote delimited)
- Access
- DBF
- Excel
- FoxPro

DATA ORIGINS

Fixed/Constant
Keyboard entry at print time
Import from database
Counter/serial numbers
Customizable date and time stamp
Combination origin for advanced math, string and logical functions

TEXT

Windows TrueType fonts
Paragraph text entry and auto text wrap
Set non-printing fields
Align left, right, top, bottom, horizontal and vertical
Stretch or rotate in any direction
Vertical, horizontal, and diagonal lines
Force straight lines with mouse
Set line length and thickness
Reversed boxes and text
Set box width, height and frame thickness

2-D BAR CODES SUPPORTED

PDF 417
Data Matrix
Maxi Code
Code 49
Code 16K

BAR CODE FORMATS SUPPORTED

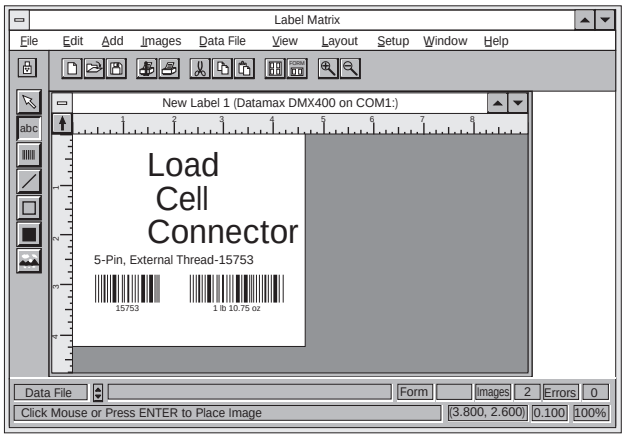
UPC-A and UPC-E
UPC+2 and +5
EAN-8 and -13
Ean +2 and +5
Code 39 and extended 39
Code 93 and extended 93
UCC/EAN -128
Code 128 (Auto A, B, or C)
Codabar
HIBC
Interleaved 2 of 5
MSI Plessey
Zip +4 Postnet

LANGUAGES

European Edition (includes Dutch, English, French, German, Italian, and Spanish with complete German manual and help files) International Edition (includes English, French and Spanish)

PRINTERS SUPPORTED

Astro-med	Eltron	OTC
ATC	Epson	Printonix
AT&T	FACIT	Ring
Avery	Genicom	Rice Lake Weighing Systems
Axiohm	Hewlett Packard	RJS
Brady	Intermec	SATO
C.ITOH	Kentek	Standard Register
CAB	Kroy	Taiwan Semiconductor
C.ITOH	Metro	TEC
Century	Microcom	Telxon
Codewriter	Monarch	UBI
ComNet	NCI/Weightronix	Unimark
Comtec	NEC	Weber
Datamax	Novexx	Willett
DH Cognitive	Opticon	Zebra
Dura		



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TekLynx LabelView Pro/Gold Bar Code Label Software

PART # DESCRIPTION

43900 ..... LabelView Pro for Windows®
43905 ..... LabelView Gold for Windows®

LabelView is a full-featured, easy-to-use bar code label design software package. Whether you're a novice or an expert user, you'll appreciate the power and simplicity it offers.

LabelView supports over 25 bar codes for virtually any industry, including two-dimensional symbologies such as PDF 417. Serial numbers can be incremented or decremented by any amount, and may appear as either bar codes or text. LabelView can also remember the last number used and continue where it left off.

For added label appeal, True Type fonts can be added to any Windows printer as well as any direct thermal/thermal transfer printer. LabelView also includes a powerful paragraph feature which is useful for displaying multi-line text such as lists of ingredients. In addition, work wrap, automatic centering, and left/right justification allow high-quality label appearance. Color graphics in PCX, BMP, TIFF, JPEG, GIF and TGA are supported as well.

To help with inventory control, LabelView keeps track of the available quantities of different label stock. Quantities are automatically adjusted when labels are printed, and when stock gets below the defined re-order point, users are notified. For additional control, LabelView includes a full-featured database manager that lets the user create, edit and query their own databases. The database works in any OBDC data format including Access, Excel, Lotus, and ASCII.

Applications

- Point-of-sale labels
- Bar code printing
- Shipping labels
- Inventory control labels

Standard Features

LabelView Pro:

- True Type fonts easily added
- Supports color PCX, BMP, TIFF, JPEG, GIF and TGA graphical formats
- Generate serial numbers
- Date and time stamps
- Paragraph feature
- Database merge
- Print over 25 bar codes for virtually any industry
- Password security
- Use data from any ODBC data format including Access, Excel, Lotus, and ASCII
- Open label preview
- Preview pictures
- Database editor
- Batch printing

LabelView Gold has all the above features, plus:

- Third-party integration using DDE, Command file, Datawatch and ComWatch
- Audit reporting

Options/Accessories

LabelView Gold:

43907 ..... 3-user network version for Windows®
43908 ..... 5-user network version for Windows®
43906 ..... Print-only version

(Specifications on back)

SYSTEM REQUIREMENTS:
IBM 486 or compatible, 8 megabytes of RAM 10 megabytes of hard disk space, 1 parallel and serial port

GRAPHICS:
Supports color, PCX, BMP, TIFF, JPEG, GIF & TGA graphical formats. Scale to any size, rotate in 4 directions

DATABASE MERGE:
Batch printing; print all records in a database, a range of records, or a single record; sort on any field in a database, database picture, and/or paragraph files

DATABASE MANAGER:
Create/modify databases, (field types) (character, numeric, date, logical, memo) search for records, index on any field, import/export to ASCII or DBF, DBASE III, IV compatible, edit ODBC Data

TEXT:
Print True Type fonts on any supported printer, rotate in 4 directions, reverse printing (white on black), increment/decrement, justification (left, right, center) move, copy, delete groups of fields, non-printing fields.
Multiple data sources: fixed, print-time entry, database merge, serial numbers, date stamp, sell-by-date, time stamp, linked/copied from other fields

BAR CODES:
Set bar width ratio, rotate in 4 directions
Multiple data sources: fixed, print-time entry, database merge, serial numbers, linked/copied from other fields

Symbologies:
UPC-A
UPC-E, UPC +2 and +5
EAN-8, EAN-13
Code 39, Code 39 mod 43
Code 93 Codabar
Int. 2 of 5, Int. 2 of 5 mod 10
Code 128-A, B, C
UCC 128, EAN 128
Postnet

2-D Symbologies:
PDF 417
Maxicode
DataMatrix

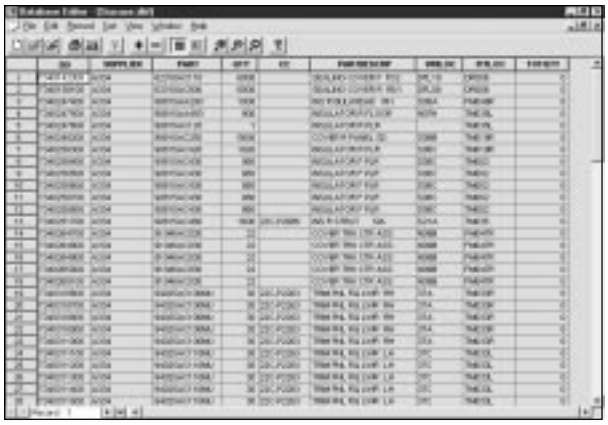
PASSWORDS:
User names, user passwords
Rights: design labels, print labels, modify serial numbers, use database editor, use text editor, modify label inventory

LABEL INVENTORY CONTROL:
Tracks quantity on-hand
Definable re-order points
Low stock level warning messages

LANGUAGES:
English, French, Spanish, Italian, German, Dutch, Chinese, Korean, and Portuguese. User translatable.

SUPPORTED PRINTERS:
Astro-Med, Automated Packaging, Avery Dennison, C.ITOH, Citizen, Code Writer, Cognitive Solutions, Comstar, Comtec, Datamax, Datasouth, DH Technologies, Eltron, Esselte Meto, Fuji, Facit, Genicom, Identco, Intermec, Microcom, Monarch, Novexx, Printronix, Ring, RJS, SATO, TEC, UBI, and Zebra

LabelView supports any laser and dot-matrix Windows printer driver.



Database Editor

Open label preview

Compliance label sample

Specifications subject to change without notice
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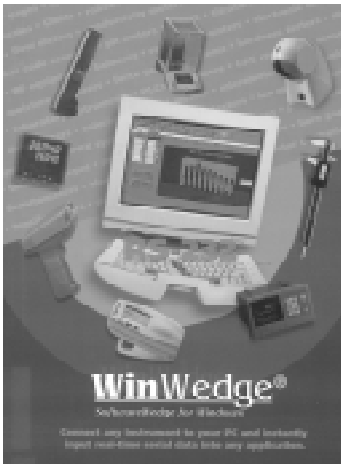
WinWedge® TAL Software

Bar Code Label Software

NEW! Product!



PART # DESCRIPTION

43966 ..... WinWedge® TAL Software

Applications

- Laboratory balances
- Industrial
- Quality and process control

Standard Features

- Input scale or instrument data directly into Excel, Access, statistical software, LIMS, MMIs, any Window 3. x, 95, 98 or NT application
- Transfers serial data quickly, accurately, and formatted to your exact specifications
- Powerful DDE support in Windows
- Extremely easy to set-up and use
- No programming required

WinWedge is easy-to-use data collection software, compatible with Excel, Access, statistical software, LIMS, MMIs...any Window 3. x, 95, 98, or NT application. WinWedge transfers serial data quickly, accurately, and formatted to your exact specifications, eliminating slow, error prone manual entry. In addition, WinWedge offers simplistic menu-driven set-up configurations with no programming required.

Data can be transferred either by sending keystrokes to the application's window or by passing the data through DDE (Dynamic Data Exchange) conversations. WinWedge is also able to collect data on any serial port (RS232, RS422 or RS485) and even multiple serial ports simultaneously.

Version 1.2 is designed to work with devices such as electronic scales, bar code readers, calipers, and gages, or any other device that transmits simple text data—either single field data or comma delimited data. WinWedge v1.2 also supports basic prompting and control of serial devices, selectable input buffer size (up to 32K), date and time stamps, and baud rates up to 19,200 baud.

(Specifications on back)

SYSTEM REQUIREMENTS:

Windows 95/98/NT (Windows 3.1 or higher)
IBM 486 or compatible, 8 megabytes of RAM
10 megabytes of hard disk space

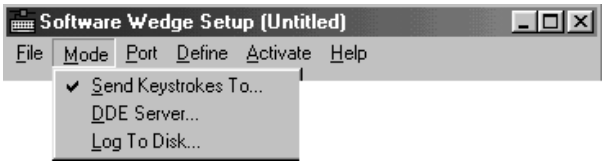
COMMUNICATIONS:

Windows is able to collect data on any serial port (RS232, RS422, or RS4850 and even multiple serial ports simultaneously

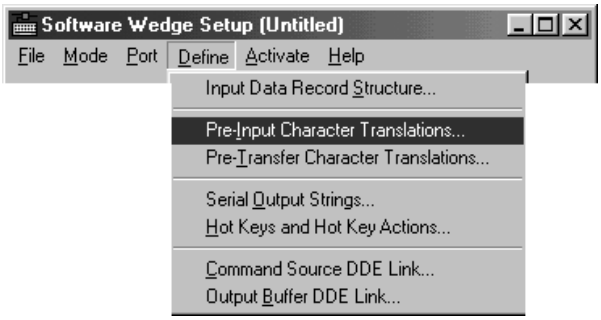
SOFTWARE SUPPORT:

Rice Lake Weighing Systems offers field software support for our software packages. Contact our Service Department for software support. Software support is a chargeable service.

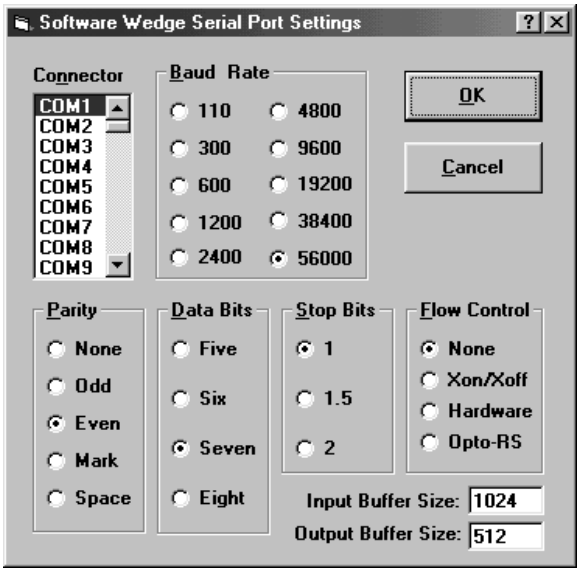
1. Select how you want the data collected:



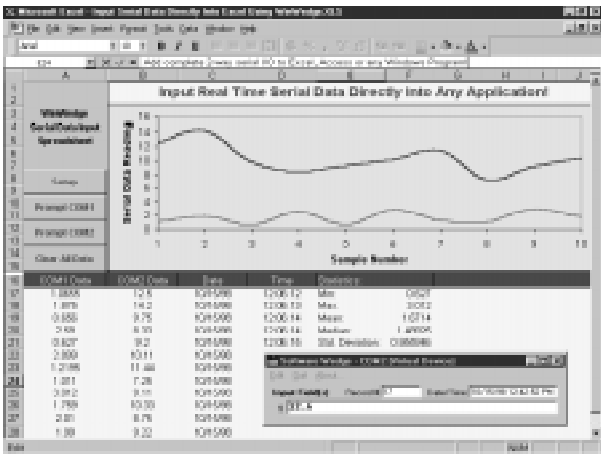
2. Chose the communication parameters for your serial device:



3. Define how you want the serial data to be parsed filtered and translated:



4. Activate WinWedge and watch your serial data "pop" into your application:



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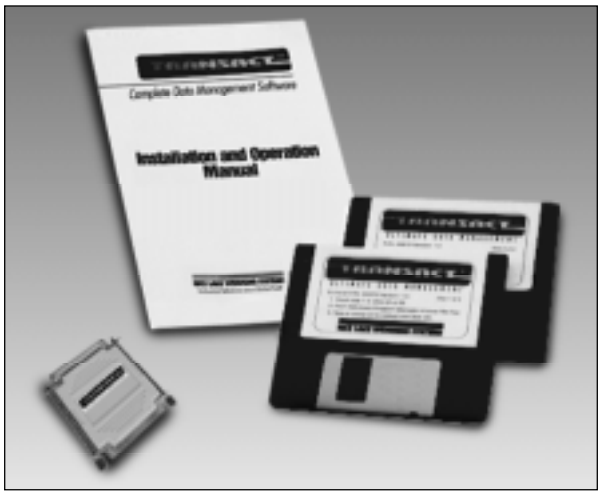
TransAct®/TransAct® Plus 3.0 Truck Data Management Software



PART # DESCRI2PTION

43898 ..... TransAct Version 3.0*
43899 ..... TransAct Plus Version 3.0
50268 ..... TransAct Version 3.0
(New Jersey tare requirements)
50269 ..... TransAct Plus Version 3.0
(New Jersey tare requirements)
44436 ..... TransAct Demo Package 3.0
** Now includes Job Table.*

With TransAct 3.0 you get the best of both worlds! Our latest version not only provides the same landfill management capabilities of 2.0, but also includes new features that enable you to specifically target the aggregate, forestry, and recycling industries.

Designed for scale operators with little computer experience and office managers who require quick and accurate information, TransAct and TransAct Plus feature intuitive menus, detailed transaction information, enhanced search capabilities, and configurable reports.

These versatile programs allow two-scale operation and multiple transactions per ticket. Aging reports show both current and extended balances, and credit weight limits automatically track weight per transaction in relation to the set limit.

TransAct and TransAct Plus also offer powerful features such as unlimited product, truck, and customer fields, full reporting with automatic accounting and invoicing, configurable ticket generation, superior data integrity, and much more. The optional pcANYWHERE package allows for long distance on-line product support. Also allows for easy transfer of transaction information to remote sites.

Applications

- Landfill and recycling
- Sand and gravel
- Solid waste management
- Forestry, mining

Standard Features

TransAct/TranAct Plus:

- Intuitive menu-driven program
- Powerful database with unlimited number of products, customers, weight containers, trucks, and trailers
- Configurable product rates
- Supports bar code, mag strip, or RF reader input for automatic transactions
- Report to screen or printer, or export by tab-delimited text format
- Three configurable tares
- Predetermined, keyboard and automatic tare entry
- Four configurable category tables
- Unlimited configurable ticket formats
- Automatic ticket processing
- Permit fields
- One-or two-scale operation
- Multiple transactions per ticket
- Networkable (Novell)
- Expandable reporting features
- Transaction importing/exporting for long distance transfers in non-networking applications
- Credit weight limits
- NTEP certified
- Job Table for contract purchases

TransAct Plus:

- Full accounting capabilities, including financial, payable, receivable and tracking
- Aging report showing current and extended balance 30, 60, 90 days
- Prints customer invoices with detailed transaction information
- Diverse reports by account, revenue, tonnage, material, transaction, customer, date and more
- Job table for contract purchases

Options/Accessories

15552 ..... Custom RS-232 interface cable
Custom cables are designed to interface with your specific equipment. Please specify equipment model number and connector type. Standard cable length is 5' (1.5m). Additional charge for cables over 5' (1.5m) long.
42745 ..... pcANYWHERE for Windows 95, 3.1, host and remote version
50270 ..... Additional operating manual

(Specifications on back)

SYSTEM REQUIREMENTS:
Windows 95/98/NT (Windows 3.1 or higher)
NOTE: TransAct/TransAct Plus will not run on DOS alone.
Pentium processor
16 megabytes (minimum) of RAM

DATABASES:
Virtually unlimited with user-definable categories.
Automatic journaling with automatic rebuild after crash or power interrupt.

COMMUNICATIONS:
Support for 2 printers with selectable drivers for most popular printers.

TRANSACTION TICKET:
Configurable weigh-in and weigh-out ticket formats, complete selection of variables and data types.

REPORTS:
Full reporting capabilities by account, vehicle, material, hauler, area, ticket, truck, container, trailer, or date.
Ages report 30, 60, 90 days.

EXPORT DATA:
Reports can be exported via tab-delimited file format.
Export/Import function for transferring transaction data in non-networking applications.

TRANSACTION CALCULATIONS:
Definable product rates, charges, taxes, and customer discounts.
Configurable percentage weight reductions for moisture and dockage.

ACCOUNTING:
Full accounting capabilities
- Accounts Payable
- Accounts Receivable
- Balance/Reconciliation

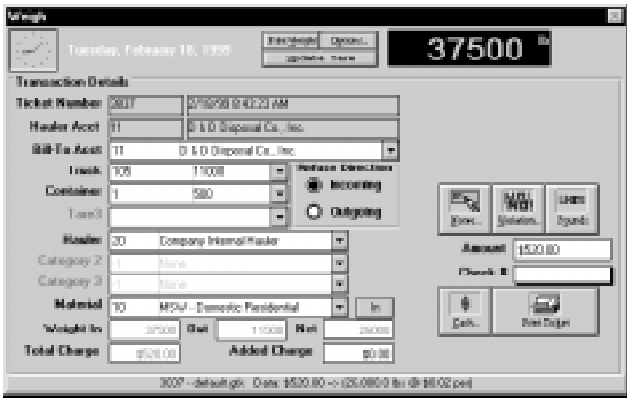
SOFTWARE SUPPORT:
Rice Lake Weighing Systems offers field software support for TransAct/TransAct Plus. Contact our Service Department for software support. Software support is a chargable service.

APPROVALS:
NTEP certified CC# 97-034

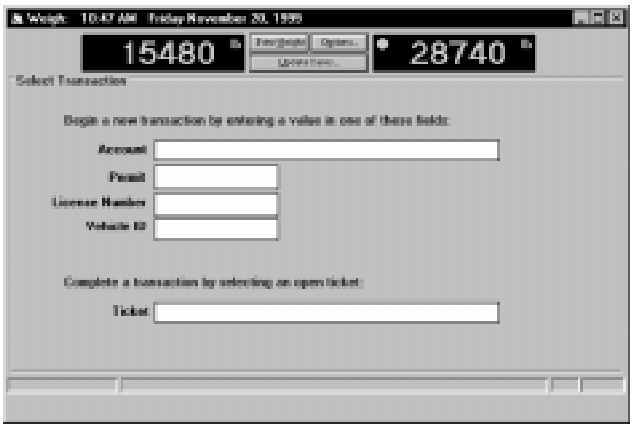
Version 3.0 Added Features:

- Ticket voiding
- Inventory tracking
- Rate category - multiple rate tables
- Expanded reporting capability - detail, summary, monthly
- Gross mode only weigh option
- Reduced pricing for Job Table
- Job/order table enhancements - by weight, yards, count
- Truck history - last transaction - daily totals
- Aging added to statement (TransAct Plus)
- Transaction posting - can post transactions from a scale PC to a billing PC
- Easy Cash feature - allows scale operators to automatically record cash transactions
- Cash account rounding - can round cash accounts to nearest penny, nickel, quarter, etc.
- Supports New Jersey tare requirements
- Statement and Ticket message capability

Customer Account Table



Truck/Container Cash Transaction



Dual Scale Weigh Form

Windows is a trademark of Microsoft Corporation.
pcANYWHERE is a trademark of Symantec Corporation.

Specifications subject to change without notice
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Intercomp SW™ Portable Racing Scales

(SEE CHART ON BACK OF PAGE FOR PART #'s)

The Intercomp SW portable racing scale provides the unbeatable accuracy and repeatability needed for fine tuning car weight and balance to varying track conditions. An easy-to-read display shows any combination of wheel weights or percentages of weights.

The SW allows on-site calibration and provides built-in memory for storage of up to 100 complete set-ups, including track name and car number. Built-in self diagnostics check memory, display, keypad, weighing channels, power supply and weigh pads.

Applications

- Fine tune race car weight/balance to varying track conditions

Standard Features

- High visibility Liquid Crystal Display (LCD)
- Gives total weight, individual wheel weight, percentage of total weight on each wheel, cross weight and many more combinations
- Storage of up to 100 complete setups including track name and car number
- Built-in self-diagnostics
- Push button zero/push button night light
- High accuracy in two models: 1/10 of 1% (2.5 times greater than other makes) or 1/4 of 1%
- 115 VAC external 12 VAC/VDC and internal, C-size nickel cadmium rechargeable or alkaline batteries
- Automatic turn off
- Low battery indicator
- Internal memory that recalls data of last vehicle weighed when unit is turned on
- Rugged, protective waterproof carrying case for control box
- Each system consists of 4 weigh pads, cables, control box (with case), battery recharger and instruction manual
- RFI/EMI protection

Options/Accessories

43948 ..... Serial RS-232 output
43956 ..... Up and down ramps

Intercomp SWII™ Portable Racing Scales

(SEE CHART ON BACK OF PAGE FOR PART #'s)

Providing exceptional accuracy and repeatability, the Intercomp SWII portable racing scale fine tunes car weight and balance to varying track conditions. Lightweight, low-profile weigh pads (3" x 15" x 15") make the SWII easy to transport and handle.

Automatic zero tracking and keypad calibration simplify operations. A large liquid crystal display shows any combination of wheel weights or percentages. Powered by six "AA" batteries, the affordable SWII includes a full one-year warranty.

Applications

- Fine tune race car weight/balance to varying track conditions

Standard Features

- Display that shows any combination of wheel weights or percentages of weight: left side, wedge, etc.
- Easy to use, automatic zero and keypad calibration
- High accuracy and repeatability
- Full one-year warranty
- Units of measure: lb/kg
- Lightweight, low-profile weigh pads, 15" x 15" each
- Weigh pads have leveling feet and handles
- Large Liquid Crystal Display (LCD)
- Powered by six "AA" batteries

Options/Accessories

43947 ..... Serial RS-232 output

(Specifications on back)

SW Scale Specifications

DISPLAY:
4-line, 20-character alphanumeric LCD readout

GENERAL CONTROLS:
Zero, lbs/kg, test, light, prints, help, set time/date, on, off

NUMERIC:
13-key standard layout

CHANNEL SELECTION:
Left front (LF), right front (RF), left rear (LR), right rear (RR), all

WEIGHT AND PERCENT:
8-key weight and percent selection

STORAGE REGISTERS:
Two-key register and I.D. selection

INDICATORS:
lbs/kg, Lo bat

OUTPUTS:
Two RS-232 serial

INPUTS:
4 analog channels

SPEED:
950 milliseconds to typical reading (static)

ACCURACY:
± 1/4 of 1% of reading. (± .1% optional)

CALIBRATION:
Keypad calibration

UNITS OF MEASURE:
lb/kg selectable

ANALOG:
Trans-besel filter

DIGITAL:
Average of several internal weights gives steady readings for unstable load

AUTO-ZERO:
Satisfies all HB-44 requirements

VOLTAGE:
12 VAC/VDC, 115/230 VAC

BATTERIES:
9 “C” size rechargeable NiCad or alkaline

HUMIDITY:
10 to 95% non-condensing

TEMPERATURE:
OPERATING: 32°F to 122°F (0°C to 50°C)
STORAGE: -40°F to 170°F (-40°C to 75°C)

CARRYING CASE/CONTROL BOX:
OVERALL DIMENSIONS: 17" L x 11" W x 7" H
WEIGHT: 10 lbs/4.5 kg
MATERIAL: ABS structural foam

WEIGH PAD:
OVERALL DIMENSIONS: 15" L x 15" W x 4" H
LEVELING: has adjustable feet for leveling on uneven surfaces
WEIGHT: 35 lbs/15.9 kg
MATERIAL: high strength aluminum alloy

RAMP:
OVERALL DIMENSIONS: 15.25" L x 15.25" W x 4" H
WEIGHT 4.8 lbs/2.2 kg
MATERIAL: high strength aluminum alloy

WARRANTY:
One year limited warranty

DIMENSIONS

PART #	MODEL	WEIGH PAD SIZE	CAPACITY	GRADUATION	EST. SHIP WT
43684	SW-D 6000	15" x 15" x 4"	6000 lb (2800 kg)	1 lb (.5 kg)	155 lb (70.3 kg)
43686	SW-D 8800	15" x 15" x 4"	8800 lb (4000 kg)	1 lb (.5 kg)	155 lb (70.3 kg)

SWII Scale Specifications

GENERAL CONTROLS:
Zero, test, on, off

CHANNEL SELECTION:
Left front (LF), right front (RF), left rear (LR), right rear (RR)

WEIGHT & PERCENT:
One-key weight and percent selection

INDICATORS:
Lo bat, %, LF, RF, LR, RR

SPEED:
950 milliseconds to typical reading (static)

ACCURACY:
± 1/2 of 1% of reading

CALIBRATION:
Keypad calibration

UNITS OF MEASURE:
Lb/kg

ANALOG:
Trans-besel filter

DIGITAL:
Average of several internal weights gives steady readings for unstable loads

AUTO-ZERO:
Satisfies all HB-44 requirements

VOLTAGE:
12/VDC, 115/230 VAC

BATTERIES:
6 “AA” size rechargeable Ni-cad or alkaline

HUMIDITY:
10 to 95% non-condensing

TEMPERATURE:
OPERATING: 32°F to 122°F (0°C to 50°C)
STORAGE: -40°F to 170°F (-40°C to 75°C)

CONTROL BOX:
OVERALL DIMENSIONS: 11 1/4" L x 5" W x 11 1/2" H
WEIGHT: 8 lbs/3.6 kg
MATERIAL: cast Aluminum

WEIGH PAD:
OVERALL DIMENSIONS: 15" L x 15" W x 3" H
LEVELING: has adjustable feet for leveling on uneven surfaces
WEIGHT: 17.7 lbs/8 kg
MATERIAL: high strength aluminum alloy

WARRANTY:
One year limited warranty

DIMENSIONS

PART #	MODEL	WEIGH PAD SIZE	CAPACITY	GRADUATION	EST. SHIP WT
43688	SWII 4000	15" x 15" x 3"	4000 lb (1814 kg)	1 lb (.5 kg)	105 lb (47.6 kg)
43689	SWII 6000	15" x 15" x 3"	6000 lb (2800 kg)	1 lb (.5 kg)	105 lb (47.6 kg)

Specifications subject to change without notice
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Intercomp PT300™ / PT300-DW™ Wheel Load Scale

PT300-DW shown

PART #	MODEL	CAPACITY
PT300™ Wheel Load Scale:		
43661†	PT300-55	5000 lbs x 5 lb
43662†	PT300-5	10,000 lbs x 5 lb
43663†	PT300-20	20,000 lbs x 20 lb
43738†*	PT300-50	20,000 lb x 50 lb
PT300-DW™ Double Wide Wheel Load Scale:		
43664†	PT300DW-55	5000 lb x 5 lb
43665†	PT300DW-5	10,000 lb x 5 lb
43666†	PT300DW-20	20,000 lb x 20 lb
43667†	PT300-DW-30K	30,000 lb x 50 lb
43668†	PT300-DW-40K	40,000 lb x 100 lb

** NTEP certified*

† Battery charging cable and transformer is included with orders for 2, 4, or 6 scales. See options for pricing on single scale charging cable and transformers.

Designed to handle tough conditions, the PT300/ PT300-DW wheel load scales are available in capacities of up to 40,000 lb. This versatile battery-operated scale comes standard with a charger adapter. The PT300/PT300-DW accurately weighs to ±2% as a wheel rolls over the scale by using the “HOLD” switch. For night use, light the display area by simply touching the “LAMP” switch.

Gain a total weight reading by linking any number of PT300/PT300-DW scales together. Display the total weight of all of the preceding scales by activating the “TOTAL” switch. Linked at the I/O terminal with an optional cable, the scales can also transmit data to a printer or a display.

Applications

- Wheel load weighing

Standard Features

- NTEP certified (PT300-50 only)
- 20mA current loop data interface
- Operates on 6 1.2 volt NiCad (standard) or alkaline batteries
- Battery life: approximately 5 years
- Battery duration between charges: approximately 8 hours of continuous use before the scale shuts itself off. (These numbers are lowered by the use of the lamps or active current loop transmission.)
- Charging voltage: 11.5 volts — 14.5 volts DC protection is provided for accidental reversal of the charging connections
- Charging current starts at 300mA and drops down to 50mA after 8 hours
- All-metal case provides EMI/RFI immunity
- ± 1% (±2% rollover) accuracy
- Units of measure: lb/kg

Options/Accessories

43683 ..... 20mA current loop output

Interconnect cables for totalizing and printing weights

43951 ..... 115 VAC charger and cable (1 scale)
43952 ..... 115 VAC interconnect/charging cable (2 scales)
43953 ..... 115 VAC interconnect/charging cable (4 scales)
43954 ..... 115 VAC interconnect/charging cable (6 scales)

(Specifications on back)

CLASSIFICATION:
NTEP certified (PT300-50 only) Class IV
CC # 90-106P

HUMIDITY:
10 to 95% non-condensing

TEMPERATURE:
OPERATING: -28°C to 65°C (-20°F to 150°F)
STORAGE: -40°C to 75°C (-40°F to 170°F)

EMI/RFI:
Meets Mil Spec 461

OVERALL SIZE:
PT300: 3" x 16" x 20" (76mm x 406mm x 508mm)
PT300-DW: 3" x 26" x 22" (76mm x 660mm x 559mm)

PLATFORM SIZE:
PT300: 12" x 12" (305mm x 305mm)
PT300-DW: 22" x 12" (559mm x 356mm)

WEIGHT:
PT300: 37 lb (16.8 kg)
PT300-DW: 49 lb (22 kg)

SHIP WEIGHT:
PT300: 40 lb (18 kg)
PT300-DW: 52 lb (24 kg)

CASE:
Heat treated aluminum

VOLTAGE:
Self-contained nickel cadmium batteries (standard) or alkalines
Integral recharger to charge or operate from a 12, 115 or 230 volt power source

AXLE TOTALIZING OUTPUT:
Transmits weight to another scale for totalizing individual axles. Will totalize axles, tandem axles or wheel group

PRINTER OUTPUT:
20mA current loop to interface with a remote printer or remote display

GENERAL CONTROLS:
All controls are located on a waterproof membrane keypad with large contact surfaces

PRINT:
When activated, outputs weight local

ON/OFF:
Two separate switches for unambiguous operation

ZERO/TEST:
PUSHBUTTON ZERO: checks for motion to HD-44.
TEST: performs internal test

HOLD/RELEASE:
HOLD: places scale in automatic capture mode for in-motion weighing.
RELEASE: places scale in “normal” static weighing mode

LAMP:
Momentary action to activate high efficiency light emitting diodes for night usage

LB/KG:
Sets units of measure

LOCAL/TOTAL:
LOCAL: standard mode for weighing
TOTAL MODE: enables the scale to accumulate weights

INDICATORS:
TOTAL: accumulative mode of weighing
BATTERY: low battery
HOLD: in-motion weighing mode
LB/KG: unit of measure

ANALOG:
π filter

DIGITAL:
Average of several internal weights gives steady readings for unstable load

AUTO-ZERO:
Satisfies all HB-44 requirements

SPEED:
950 milliseconds to typical reading (static)

ACCURACY:
± 1% of reading static mode
± 2% of reading hold mode

UNITS OF MEASURE:
lbs, kg selectable

SAFE OVERLOAD:
150% of capacity

EST. SHIP WEIGHT:
PT300: 40 lb (18.1 kg)
PT300DW: 60 lb (27.2 kg)

WARRANTY:
One year limited warranty

SCALE CAPACITIES

CAPACITY	GRADUATIONS
5000 lb/2000 kg	5 lb/2 kg
10,000 lb/5000 kg	5 lb/2 kg
20,000 lb/10,000 kg	20, 50lb/10, 20 kg
30,000 lb/14,000 kg	50 lb/20 kg
40,000 lb/18,200 kg	100 lb/50 kg

Specifications subject to change without notice
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Intercomp PW800™ Pallet Truck Scales

PART #	DESCRIPTION	CAPACITY
43659*	PW800-2748 (48" x 27" x 2.9")	5000 lb/2500 kg
43660*	PW800-2148 (48" x 21" x 2.9")	5000 lb/2500 kg

** Part number includes PW800, 115 VAC internal charger and 9 "D" size rechargable batteries.*

The PW800 pallet truck scale provides quick verification of incoming/outgoing weight anywhere in your plant, eliminating the need to haul loads to a platform scale. Easy-to-operate, the PW800 includes a highly-visible, .8" LED display for accurate readings at a glance.

This efficient scale offers fast parts counting for inventory purposes and low-cost operation on 9 D-cell batteries, providing up to 40 hours of battery life.

Applications

- Parts counting
- Check weighing

Standard Features

- Fast, low-cost parts counting for taking inventory
- Count totalization up to 1000,000 counts
- Accuracy of ± 0.1%
- Tare: up to 100% of capacity
- Zero: up to 100% of capacity
- Units of measure: lb/kg
- 5000 lb capacity in one-pound increments
- Push button print of gross, net, tare, total, and count total
- Displays gross, net, and tare weight
- Weight totalization up to 100,000 lb
- Adjustable baud rates from 75 to 9600
- Low-cost operation on 9 "D" cell batteries
- Quick verification of incoming/outgoing freight
- Instant check of truck loading by weight
- Large, easy-to-read 0.8" six-digit LED (Light Emitting Diode) display
- Adjustable display update/weight averaging
- Selectable AZT off, 0.6, 1, or 3 graduations
- Mild steel

Options/Accessories

43946 ..... RS-232 serial output

(Specifications on back)

PW800 Specifications

CAPACITY:
5000 lb (2500 kg)

GRADUATION:
1 lb (.5 kg)

ACCURACY:
± 0.1% of reading

BATTERY LIFE:
Up to 40 hours of continuous use

BATTERIES:
9 “D” size disposable alkaline dry cells or rechargeable nickel-cadmium cells

CHARGE TIME:
16 hours

CHARGE:
Charger/power transformer — 115/230 VAC

LOW BATTERY SHUT-OFF:
Unit automatically shuts off if batteries are low

AUTO SHUT-OFF:
Shuts off after up to 5 minutes of non-use (variable up to 30 min)

DISPLAY:
0.8 inch (20 mm) high — 5 1/2-digit Light Emitting Diode (LED)

INDICATORS:
Six (lb, kg, net, tare, total, count)

CONTROL SWITCHES:
Eight (on, off, set mode, print, tare, zero, lb/kg)

HUMIDITY:
10 to 95% non-condensing

TEMPERATURE:
OPERATING: -20°C to 60°C (-4°F to 140°F)

DIMENSIONS:

FORKS:	PW800-2748:	48" x 27" x 2.9" (1219mm x 686mm x 74mm)
	PW800-2148	48" x 21" x 2.9" (1219mm x 533mm x 74mm)

EST. SHIP WEIGHT:
300 lbs (136 kg)

WARRANTY:
One year limited warranty

Specifications subject to change without notice
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Ishida WPL-3000 Scale/Labeler System

(Shown with optional keyboard mount kit, infeed L-type free roller and exit free roller.)

PART #	MODEL	CAPACITY
48771	WPL-3000, left to right	30 lb
48770	WPL-3000, right to left	30 lb

The WPL-3000 is specifically designed to meet the needs of supermarket backrooms and the food processing industry. Featuring an ergonomic design, stainless steel construction, and advanced label applicator, the WPL-3000 provides enhanced convenience for an optimal working environment.

For increased efficiency and reliability, the WPL-3000's conveyor belt lowers when products are being weighed, rises after weighing, and transfers products smoothly to the labeling process. Its free formatting feature enables creation of appealing labels with coupons, eye-catching phrases, nutritional information, and POP messages. The WPL-3000 also offers on-line capabilities by providing interfaces to a personal computer and networked Ishida AC-3000/DP-3000 systems.

Applications

- Meat and produce departments
- Centralized processing

Standard Features

- Customized setup: Basic system includes scale, keyboard/display, printer and stand
- 88 preset keys, 176 presets using the shift key
- Programmable presets include: PLU, Logo, Coupon, Tare, Operator, Amount Discount, Percentage Discount, Message
- Flexible label format
- Large 9-inch label roll
- Prints all legally-required information
- Scale conveyor
- Automatic label applicator
- Use with hand wrap station or automatic wrapper
- Configurable in straight or "L" layout
- Speed increasing kit for use with some automatic wrappers

Options/Accessories

46932 ..... Infeed conveyor with stand
46934 ..... Sensor kit for heat belt (straight)
46935 ..... 3-roll wrap station with heat pad
48761 ..... 3-roll wrap station without heat pad
48762 ..... Left or right wing for wrap station
46936 ..... Infeed or exit free roller
47262 ..... Infeed L-type free roller
46933 ..... Heat belt
48768 ..... Power exit roller with stand
48765 ..... Gravity conveyor, 6 feet with stand
48764 ..... Gravity conveyor, 8 feet with stand
46940 ..... MSCU-3000, master board
46943 ..... Pack-off table
46945 ..... Rotary bin
47674 ..... Keyboard mount kit

(Specifications on back)

WEIGHING CAPACITY:
30 lb/0.01 lb

CONVEYOR CAPACITY:
10 lb

MEMORY CAPACITY:
Standard: 256K
Expandable to 1MB

****PROCESSING SPEED:**
The speed is dependent upon application variables such as I or L type configuration, whether you have the speed increasing kit installed, environmental factors, package weight, etc.

Based on our tests we approximate:
30-27 packages per minute from 1 to 3 pounds
27-23 packages per minute from 3.5 to 8.5 pounds

TRAY SIZE:
Length: 5.9" - 15.7" (150mm - 400mm)
Height: 0.6" - 3.9" (15mm - 100mm), including product height
Width: 3.1" - 9.8" (80mm - 250mm)

KEYS:
Function key: 32 keys
Preset key: 88 keys (176 presets by double shifts)

DISPLAY:
Full dot matrix alphanumeric display (256 x 16 dots)
Fluorescent segment character display

PRINTER:
Thermal system dot printer
Total 448 dots
Printing speed: 4.0" (100mm) per second

LABEL:
Flexible label format
Outer diameter of roll: 9.0" (230mm)
Width of backing paper: 2.7" (66mm)
Width of label: 2.5" (64mm)

POWER SUPPLY:
115 VAC ±10%, 60Hz

POWER CONSUMPTION:
Stand by: 50W
In operation: 100W

OPERATING TEMPERATURE:
32°F to 104°F (0°C to 40°C)

HUMIDITY RANGE:
20% to 90% (no condensation)

APPROVALS:
NTEP certified, CC# 95-057A2, UL listed

WARRANTY:
One-year limited warranty

DIMENSIONS

I-type

A	42.7"	(1088mm)	H:	24.0"	(610mm)
B:*	11.8" - 12.5"	(300mm-316mm)	I:*	3.7"-7.7"	(95mm-195mm)
C:	17.6"	(446mm)	J:	41.5"	(1054mm)
D:	11.0"	(280mm)	K:	11.8"	(300mm)
E:	19.25"	(489mm)	L:	12.6"	(320mm)
F:	50.25"	(1276mm)	M:	1.6"	(40mm)
G:	16.5"	(419mm)			

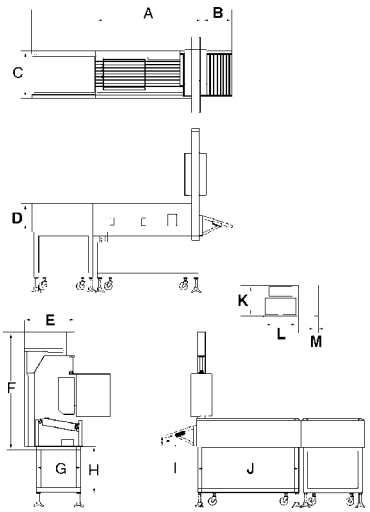
L-type

A:	42.7"	(1085mm)	H:	41.5"	(1054mm)
B:	11.8"-12.5"	(300mm-316mm)	I:	24.0"	(610mm)
C:	17.6"	(446mm)	J:*	11.8"	(300mm))
D:*	8.0-8.5"	(202mm-215mm)	K:	12.6"	(320mm)
E:	50.25"	(1276mm)	L:	1.6"	(40mm)
F:	16.5"	(419mm)			
G:*	3.7"-7.7"	(95mm-195mm)			

** UL approved*

*** Consult factory with your specifications for more precise results.*

I-TYPE



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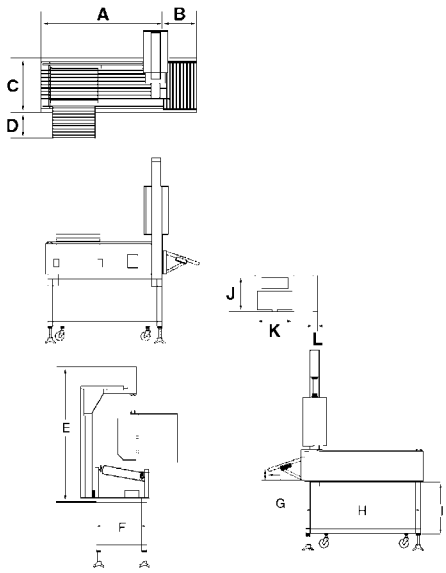

Specifications subject to change without notice
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SURVIVOR® SR Series Extreme-Duty Low-Profile Siderail Truck Scale

SEE CHART ON BACK FOR PART NUMBERS

The SURVIVOR SR Series truck scales feature a low-profile 8-inch thick steel and concrete weighbridge, and an up to 14-foot-wide loading area for greater safety and faster processing during peak usage times.

The 24-inch main I-beams limit deflection under heavy loads. Cross members approximately every 4 feet spread the loads evenly for less flexing and a longer life cycle.

The SURVIVOR SR Series truck scales maintain accuracy even with a 90,000 lb load (on a 4-foot loading area) in mid span. The weighbridge deflection is less than 1:900 (e.g., 0.26 inches on a 20-foot span). Less deflection means less cumulative metal fatigue and much longer life cycles.

SURVIVOR SR... Delivering accuracy and dependability in extreme-duty, high-traffic vehicle weighing applications.

Standard Features

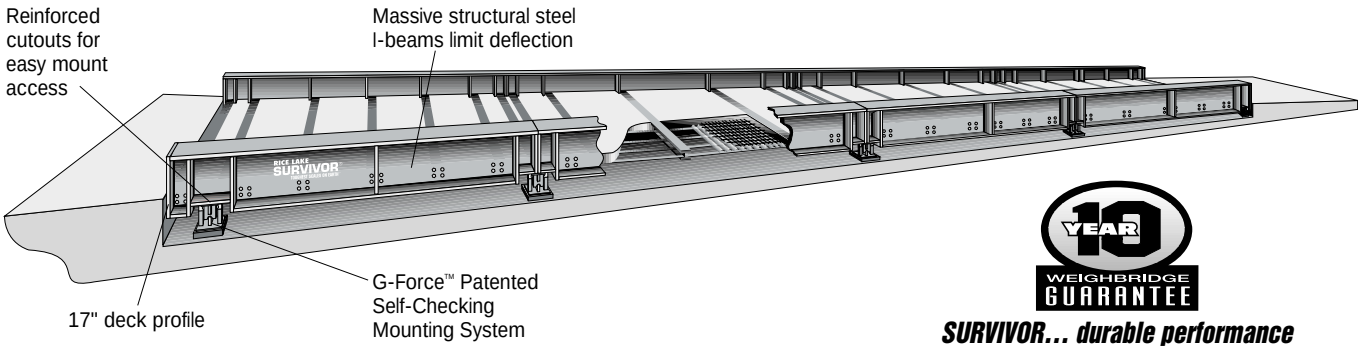
- Weighbridge modules for creating custom lengths
- 75,000 lb capacity load cells and pre-assembled mounts
- Junction box(es) appropriate for number of load cells utilized
- NTEP certified, CC #98-011A1
- 90,000 lb Concentrated Load Capacity (CLC)
- 2.65 “r” factor
- Up to 200,000 lb full scale capacity
- Very low deflection factor (1:900) under maximum load
- 8" thick reinforced concrete deck
- Three standard widths: 11 ft, 12 ft and 14 ft
- Lengths from 10 ft through 117 ft
- Up to 42' section span

Options/Accessories

- Lightning protection package
- Special loading configurations available
- Steel deck
- Grain dump modules
- Rebar and deck sheeting

Consult catalog for these additional options:

- IQ plus® Series digital indicators
- Ticket and document printers
- 4" or 6" remote flip-digit displays
- TransAct®/TransAct Plus® data management software
- Unattended truck scale system (ATS-2)
- Concrete batching control system



10 YEAR WEIGHBRIDGE GUARANTEE

SURVIVOR… durable performance measured not in years, but decades.

Package includes: *Weighbridge steel; weighbridge fasteners; load cells with conduit fitting; load cell mounts with leveling bolts and anchor bolts; copper transient bypass cables at each load cell; flexible plastic conduit from load cell to metal conduit; conduit fittings from plastic to metal conduit; FRP junction box(es); summing board; homerun cable to indicator (60' long); print packages including deck assembly, foundation drawing (pier or floating slab) and rebar placement for deck concrete; along with detailed installation manual with truck loading/ unloading diagram*

Package does not include: *Metal conduit on weighbridge for load cell cable runs; corrugated sheeting for deck; rebar for concrete deck; approach coping; foundation alignment posts; rebar and mesh for foundation; concrete; indicator; printer; freight charges including material handling, shipping charges, transportation permits and fees, escort(s) charge, and insurance transportation fees.*

(Specifications on back)

LOAD CELLS AND MOUNT ASSEMBLIES:
75,000 lb capacity; G-Force™ Patented Self-Checking Mounting System

"r" FACTOR:
2.65 (35 ft to 117 ft) [dual tandem axle design load, e.g., 90,000 lb ÷ 34,000 lb]

FULL SCALE CAPACITY:
Up to 200,000 lb (x 20 lb)

DEFLECTION FACTOR:
1:900 of span distance

CONCENTRATED LOAD CAPACITY (CLC):
90,000 lb (35 ft to 117 ft)

APPROVALS:
NTEP-certified per H-44, Class IIIL, CC #98-011A1

WARRANTY:
Ten-year limited warranty on the weighbridge
Two-year limited warranty on load cells/electronics
Up to five-year "build your own" lightning extended warranty

SR SERIES – 11 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	44566	SR1011-SC-60	5,300 lb	1	4	2.65	45
20 ft	60 tons	44567	SR2011-SC-60	8,200 lb	1	4	2.65	45
24 ft*	60 tons	44568	SR2411-SC-60	9,300 lb	1	4	2.65	45
35 ft	60 tons	44569	SR3511-SC-60	16,100 lb	1	4	2.65	45
40 ft	100 tons	44570	SR4011-SC-60	15,500 lb	2	6	2.65	45
47 ft*	100 tons	44571	SR4711-SC-60	18,200 lb	2	6	2.65	45
60 ft	100 tons	44572	SR6011-SC-100	23,000 lb	3	8	2.65	45
70 ft	100 tons	44573	SR7011-SC-100	31,400 lb	2	6	2.65	45
70 ft	100 tons	44574	SR7011-SC-100	26,800 lb	3	8	2.65	45
80 ft	100 tons	44575	SR8011-SC-100	30,500 lb	4	10	2.65	45
93 ft*	100 tons	44576	SR9311-SC-100	35,300 lb	4	10	2.65	45
100 ft	100 tons	44577	SR10011-SC-100	38,000 lb	5	12	2.65	45
117 ft*	100 tons	44578	SR11711-SC-100	44,300 lb	5	12	2.65	45

SR SERIES – 12 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	44579	SR1012-SC-60	5,500 lb	1	4	2.65	45
20 ft	60 tons	44580	SR2012-SC-60	8,400 lb	1	4	2.65	45
24 ft*	60 tons	44581	SR2412-SC-60	9,500 lb	1	4	2.65	45
35 ft	60 tons	44582	SR3512-SC-60	16,400 lb	1	4	2.65	45
40 ft	100 tons	44583	SR4012-SC-60	15,900 lb	2	6	2.65	45
47 ft*	100 tons	44584	SR4712-SC-60	18,700 lb	2	6	2.65	45
60 ft	100 tons	44585	SR6012-SC-100	23,600 lb	3	8	2.65	45
70 ft	100 tons	44586	SR7012-SC-100	32,000 lb	2	6	2.65	45
70 ft	100 tons	44587	SR7012-SC-100	27,500 lb	3	8	2.65	45
80 ft	100 tons	44588	SR8012-SC-100	31,200 lb	4	10	2.65	45
93 ft*	100 tons	44589	SR9312-SC-100	36,200 lb	4	10	2.65	45
100 ft	100 tons	44590	SR10012-SC-100	38,900 lb	5	12	2.65	45
117 ft*	100 tons	44591	SR11712-SC-100	45,400 lb	5	12	2.65	45

SR SERIES – 14 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	44592	SR1014-SC-60	5,800 lb	1	4	2.65	45
20 ft	60 tons	44593	SR2014-SC-60	8,800 lb	1	4	2.65	45
24 ft*	60 tons	44594	SR2414-SC-60	10,100 lb	1	4	2.65	45
35 ft	60 tons	44595	SR3514-SC-60	17,000 lb	1	4	2.65	45
40 ft	100 tons	44596	SR4014-SC-60	16,700 lb	2	6	2.65	45
47 ft*	100 tons	44597	SR4714-SC-60	19,600 lb	2	6	2.65	45
60 ft	100 tons	44598	SR6014-SC-100	24,700 lb	3	8	2.65	45
70 ft	100 tons	44599	SR7014-SC-100	33,200 lb	2	6	2.65	45
70 ft	100 tons	44600	SR7014-SC-100	28,800 lb	3	8	2.65	45
80 ft	100 tons	44601	SR8014-SC-100	32,700 lb	4	10	2.65	45
93 ft*	100 tons	44602	SR9314-SC-100	38,000 lb	4	10	2.65	45
100 ft	100 tons	44603	SR10014-SC-100	40,700 lb	5	12	2.65	45
117 ft*	100 tons	44604	SR11714-SC-100	47,600 lb	5	12	2.65	45

* 24 ft actual = 23' 4", 47 ft actual = 46' 8", 93 ft actual = 93' 4", 117 ft actual = 116' 8"

Specifications subject to change without notice
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SURVIVOR® PT Pit Type Truck Scale - Concrete Deck

SEE CHART ON BACK FOR PART NUMBERS

The SURVIVOR PT Series truck scales are prepared for a 6-inch-thick concrete weighbridge, and an up to 12-foot-wide loading area for greater safety and faster processing during peak usage times.

The 24-inch* main I-beams limit deflection under heavy loads. Eight-inch structural steel cross-members located approximately every 4 feet spread the loads evenly for less flexing and a longer life cycle.

The SURVIVOR PT Series truck scales maintain accuracy even with a 90,000 lb load in mid span (on a 4-foot loading area). The weighbridge deflection is less than 1:900 (e.g., 0.26 inches on a 20-foot span). Less deflection means less cumulative metal fatigue and much longer life cycles.

For dependable weighments over the long haul and a design life of decades, look to the SURVIVOR PT.

Standard Features

- Three standard widths: 10, 11, and 12 feet
- Lengths from 10 feet through 117 feet
- One 2' x 2' square manhole opening
- 75,000 lb capacity load cells and pre-assembled mounts
- Junction box(es) appropriate for number of load cells utilized
- 90,000 lb Concentrated Load Capacity (CLC)
- 2.65 “r” factor
- 6" reinforced concrete deck
- Up to 200,000 lb full scale capacity
- Very low deflection (1:900) under maximum load
- Up to 42' section span

Options/Accessories

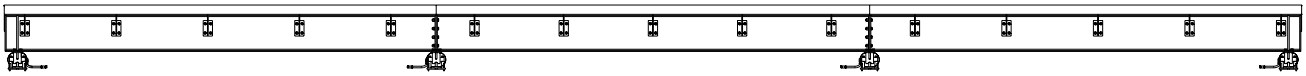
- Additional manholes
- Light fixture with bulb protection screen/guard
- Sump pump (UL listed power supply)
- Pit venting system (exhaust fan, UL listed power supply)
- Lightning protection package
- Special loading configurations available
- Steel deck
- Grain dump modules

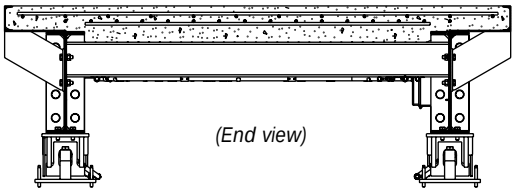
Consult catalog for these additional options:

- IQ plus® Series digital indicators
- Ticket and document printers
- 4" or 6" remote flip-digit displays
- TransAct®/TransAct Plus® data management software
- Unattended truck scale system (ATS-1 & ATS-2)
- Concrete batching control system (CB-1)

** States with 48" pit clean-out requirements must specify 18" main beams at time of order.*
Pit scales are designed to fit inside correctly-sized pits.
Example: 70' x 10' scale is actually 69' 10 1/2" L x 9' 10 1/2" W.

(Side view)





(End view)

10 YEAR WEIGHBRIDGE GUARANTEE

SURVIVOR… durable performance measured not in years, but decades.

Package includes: *Weighbridge steel; weighbridge fasteners; load cells with conduit fitting; load cell mounts with leveling bolts and anchor bolts; copper transient bypass cables at each load cell; flexible plastic conduit from load cell to metal conduit; conduit fittings from plastic to metal conduit; conduit for each load cell cable; FRP junction box(es); summing board; homerun cable to indicator (60' long); print packages including deck assembly, foundation drawing and rebar placement for concrete deck; along with detailed installation manual*

Package does not include: *Corrugated sheeting for deck; rebar for concrete deck; pit coping; rebar and mesh for foundation; concrete; indicator; printer; freight charges including material handling, shipping charges, transportation permits and fees, escort(s) charge, and insurance transportation fees.*

(Specifications on back)

LOAD CELLS AND MOUNT ASSEMBLIES:
75,000 lb capacity; G-Force™ Patented Self-Checking Mounting System

"r" FACTOR:
2.65 (35 ft to 117 ft) [dual tandem axle design load, e.g., 90,000 lb ÷ 34,000 lb]

FULL SCALE CAPACITY:
Up to 200,000 lb (x 20 lb)

DEFLECTION FACTOR:
1:900 of span distance

CONCENTRATED LOAD CAPACITY (CLC):
90,000 lb (35 ft to 117 ft)

APPROVALS:
NTEP-certified per H-44, Class IIIL, CC #98-011A1

WARRANTY:
Ten-year limited warranty on the weighbridge
Two-year limited warranty on load cells/electronics
Up to five-year "build your own" lightning extended warranty

PT SERIES – 10 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	51341	SR1010-PC-60	4900 lb	1	4	2.65	45
20 ft	60 tons	51342	SR2010-PC-60	7800 lb	1	4	2.65	45
24 ft*	60 tons	51343	SR2410-PC-60	8900 lb	1	4	2.65	45
40 ft	100 tons	51344	SR4010-PC-60	14,700 lb	2	6	2.65	45
47 ft*	100 tons	51345	SR4710-PC-60	17,400 lb	2	6	2.65	45
60 ft	100 tons	51346	SR6010-PC-100	21,800 lb	3	8	2.65	45
70 ft	100 tons	51347	SR7010-PC-100	25,400 lb	3	8	2.65	45
80 ft	100 tons	51348	SR8010-PC-100	28,800 lb	4	10	2.65	45
93 ft*	100 tons	51349	SR9310-PC-100	33,600 lb	4	10	2.65	45
100 ft	100 tons	51350	SR10010-PC-100	36,000 lb	5	12	2.65	45
117 ft*	100 tons	51351	SR11710-PC-100	42,300 lb	5	12	2.65	45

PT SERIES – 11 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	51352	SR1011-PC-60	5100 lb	1	4	2.65	45
20 ft	60 tons	51353	SR2011-PC-60	8100 lb	1	4	2.65	45
24 ft*	60 tons	51354	SR2411-PC-60	9100 lb	1	4	2.65	45
40 ft	100 tons	51355	SR4011-PC-60	15,100 lb	2	6	2.65	45
47 ft*	100 tons	51356	SR4711-PC-60	17,900 lb	2	6	2.65	45
60 ft	100 tons	51357	SR6011-PC-100	22,400 lb	3	8	2.65	45
70 ft	100 tons	51358	SR7011-PC-100	26,300 lb	3	8	2.65	45
80 ft	100 tons	51359	SR8011-PC-100	29,800 lb	4	10	2.65	45
93 ft*	100 tons	51360	SR9311-PC-100	35,600 lb	4	10	2.65	45
100 ft	100 tons	51361	SR10011-PC-100	36,900 lb	5	12	2.65	45
117 ft*	100 tons	51362	SR11711-PC-100	43,400 lb	5	12	2.65	45

PT SERIES – 12 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	51363	SR1012-PC-60	5400 lb	1	4	2.65	45
20 ft	60 tons	51364	SR2012-PC-60	8400 lb	1	4	2.65	45
24 ft*	60 tons	51365	SR2412-PC-60	9700 lb	1	4	2.65	45
40 ft	100 tons	51366	SR4012-PC-60	15,900 lb	2	6	2.65	45
47 ft*	100 tons	51367	SR4712-PC-60	18,800 lb	2	6	2.65	45
60 ft	100 tons	51368	SR6012-PC-100	23,500 lb	3	8	2.65	45
70 ft	100 tons	51369	SR7012-PC-100	27,600 lb	3	8	2.65	45
80 ft	100 tons	51370	SR8012-PC-100	31,100 lb	4	10	2.65	45
93 ft*	100 tons	51371	SR9312-PC-100	36,400 lb	4	10	2.65	45
100 ft	100 tons	51372	SR10012-PC-100	38,700 lb	5	12	2.65	45
117 ft*	100 tons	51373	SR11712-PC-100	45,600 lb	5	12	2.65	45

* 24 ft actual = 23' 2 1/2", 47 ft actual = 46' 6 1/2", 93 ft actual = 93' 2 1/2", 117 ft actual = 116' 6 1/2"

Pit scales are designed to fit inside correctly-sized pits. Example: 70' x 10' scale is actually 69' 10 1/2" L x 9' 10 1/2" W.

States with 48" pit clean-out requirements must specify 18" main beams at time of order.

Consult factory for pricing on 14' wide scales.

Specifications subject to change without notice
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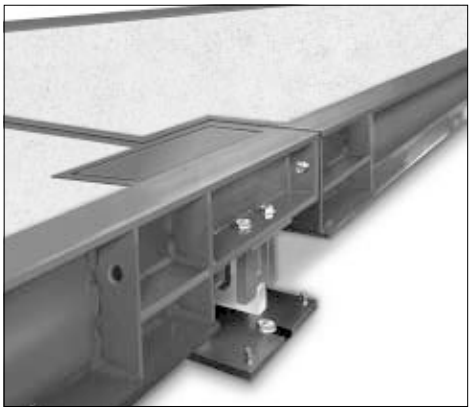
SURVIVOR® EZ Series Flattop Truck Scale - Concrete Deck



SEE CHART ON BACK FOR PART NUMBERS

The SURVIVOR EZ Series vehicle scales feature a low-profile 12.5-inch-thick steel and concrete weighbridge, and up to a 14-foot wide loading area for greater safety and faster processing during peak usage times.

Incorporating a unique steel/concrete weighbridge assembly, SURVIVOR EZ Series vehicle scales maintain legal-for-trade accuracy even with a 70,000 lb concentrated load in mid span of the weighbridge. The weighbridge deflection is less than 1:700 (e.g., 0.34 inches on a 20-foot span). Less deflection means less cumulative metal fatigue and much longer life cycles.

Standard Features

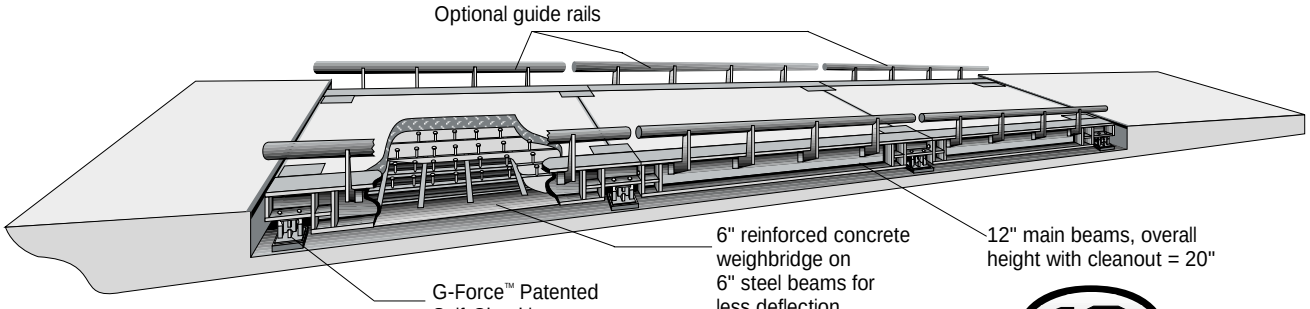
- Weighbridge modules for creating custom lengths
- 75,000-lb capacity load cells and pre-assembled mounts
- Junction box(es) appropriate for number of load cells utilized
- NTEP certified, CC #98-041A1
- 70,000 lb Concentrated Load Capacity (CLC)
- 70,000 lb Dual Tandem Axle (DTA)
- 2.06 “r” factor
- Up to 200,000 lb full scale capacity
- Extra-low deflection (1:700) under maximum load
- 6" thick concrete deck
- Four standard widths: 10 ft, 11 ft, 12 ft and 14 ft
- Lengths from 10 ft through 117 ft
- Undercarriage rust-proofed with sprayed asphalt emulsion

Options/Accessories

- Lightning protection package
- Special quotes
- Guide rails
- Grain dump modules

Consult catalog for these additional options

- IQ plus® series digital indicators
- Ticket and document printers
- 4" or 6" remote flip-digit displays
- TransAct®/TransAct Plus® data management software
- Unattended truck scale system (ATS-2)
- Concrete batching control system



10 YEAR WEIGHBRIDGE GUARANTEE

SURVIVOR… durable performance measured not in years, but decades.

Package includes: *Assembled weighbridge modules and weighbridge fasteners; load cells with conduit fitting; load cell mounts with leveling bolts and anchor bolts; copper transient bypass cables at each load cell; metal conduit on weighbridge for load cell cable runs; flexible plastic conduit from load cell to metal conduit; conduit fittings from plastic to metal conduit; FRP junction box(es); homerun cable to indicator (60' long); print packages including foundation drawing (pier or floating slab) and installation manual; galvanized pan for concrete.*

Package does not include: *Approach coping; foundation alignment posts; rebar and mesh for foundation; concrete; indicator; printer; freight charges including material handling; shipping charges, transportation permits and fees, escort(s) charge, and insurance transportation fees.*

(Specifications on back)

LOAD CELLS AND MOUNT ASSEMBLIES:
75,000 lb capacity; G-Force™ Patented Self-Checking Mounting System

"r" FACTOR:
2.06 (dual tandem axle design load, e.g., 70,000 lb ÷ 34,000 lb)

FULL SCALE CAPACITY:
Up to 200,000 lb (x 20 lb)

DEFLECTION FACTOR:
1:700 of span distance

CONCENTRATED LOAD CAPACITY (CLC):
70,000 lb

DUAL TANDEM AXLE (DTA):
70,000 lb

APPROVALS:
NTEP-certified per H-44, Class IIIL, CC #98-041A1

WARRANTY:
Ten-year limited warranty on the weighbridge
Two-year limited warranty on load cells/electronics
Up to five-year "build your own" lightning extended warranty

EZ SERIES – 10 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	44605	EZ1010-SC-60	4,700 lb	1	4	2.06	35
20 ft	60 tons	44606	EZ2010-SC-60	7,400 lb	1	4	2.06	35
24 ft*	60 tons	44607	EZ2410-SC-60	8,200 lb	1	4	2.06	35
40 ft	60 tons	44608	EZ4010-SC-60	13,900 lb	2	6	2.06	35
47 ft*	60 tons	44609	EZ4710-SC-60	15,700 lb	2	6	2.06	35
60 ft	100 tons	44610	EZ6010-SC-100	20,400 lb	3	8	2.06	35
70 ft	100 tons	44611	EZ7010-SC-100	23,200 lb	3	8	2.06	35
80 ft	100 tons	44612	EZ8010-SC-100	26,900 lb	4	10	2.06	35
93 ft*	100 tons	44613	EZ9310-SC-100	30,700 lb	4	10	2.06	35
100 ft	100 tons	44614	EZ10010-SC-100	33,400 lb	5	12	2.06	35
117 ft*	100 tons	44615	EZ11710-SC-100	38,200 lb	5	12	2.06	35

EZ SERIES – 11 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	44617	EZ1011-SC-60	5,200 lb	1	4	2.06	35
20 ft	60 tons	44618	EZ2011-SC-60	8,500 lb	1	4	2.06	35
24 ft*	60 tons	44619	EZ2411-SC-60	9,000 lb	1	4	2.06	35
40 ft	60 tons	44620	EZ4011-SC-60	15,300 lb	2	6	2.06	35
47 ft*	60 tons	44621	EZ4711-SC-60	17,300 lb	2	6	2.06	35
60 ft	100 tons	44622	EZ6011-SC-100	22,100 lb	3	8	2.06	35
70 ft	100 tons	44623	EZ7011-SC-100	25,600 lb	3	8	2.06	35
80 ft	100 tons	44624	EZ8011-SC-100	28,900 lb	4	10	2.06	35
93 ft*	100 tons	44625	EZ9311-SC-100	33,900 lb	4	10	2.06	35
100 ft	100 tons	44626	EZ10011-SC-100	35,700 lb	5	12	2.06	35
117 ft*	100 tons	44627	EZ11711-SC-100	42,200 lb	5	12	2.06	35

EZ SERIES – 12 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	44629	EZ1012-SC-60	5,700 lb	1	4	2.06	35
20 ft	60 tons	44630	EZ2012-SC-60	9,300 lb	1	4	2.06	35
24 ft*	60 tons	44631	EZ2412-SC-60	9,800 lb	1	4	2.06	35
40 ft	60 tons	44632	EZ4012-SC-60	16,700 lb	2	6	2.06	35
47 ft*	60 tons	44633	EZ4712-SC-60	18,900 lb	2	6	2.06	35
60 ft	100 tons	44634	EZ6012-SC-100	24,600 lb	3	8	2.06	35
70 ft	100 tons	44635	EZ7012-SC-100	28,000 lb	3	8	2.06	35
80 ft	100 tons	44636	EZ8012-SC-100	31,500 lb	4	10	2.06	35
93 ft*	100 tons	44637	EZ9312-SC-100	37,100 lb	4	10	2.06	35
100 ft	100 tons	44638	EZ10012-SC-100	38,900 lb	5	12	2.06	35
117 ft*	100 tons	44639	EZ11712-SC-100	46,200 lb	5	12	2.06	35

* 24 ft actual = 23' 4", 47 ft actual = 46' 8", 93 ft actual = 93' 4", 117 ft actual = 116' 8"

Consult factory for pricing on 14' wide scales.

Specifications subject to change without notice
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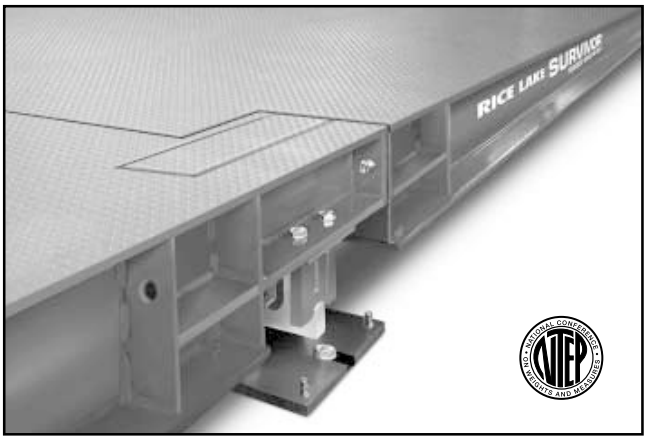
SURVIVOR® EZ-ST Flattop Truck Scale - Steel Deck



SEE CHART ON BACK FOR PART NUMBERS

Built with more steel than any other truck scale currently available, the new SURVIVOR EZ-ST truly sets itself apart as the toughest truck scale on earth. Featuring a 12.5-inch-thick steel weighbridge, the EZ-ST is certified by an independent PE to deliver exceptional performance for at least 2 million weighments!

Under the heaviest loads, the EZ-ST weighbridge deflects just 1:700—that's only .34 inches on a 20 ft span! In addition, it stands at an overall height of 20 inches, providing a large and easily accessible clean out. With an up to 12-foot-wide loading area it delivers greater safety and faster processing, allowing your operation to run at full potential.

In order to meet the growing need for flexibility, the EZ-ST incorporates a modular design and is expandable up to 117 feet. And as trafffic patterns change or your business grows, it can be relocated easily and quickly.

For years of dependable performance count on the SURVIVOR EZ-ST to take your business to the next level.

Standard Features

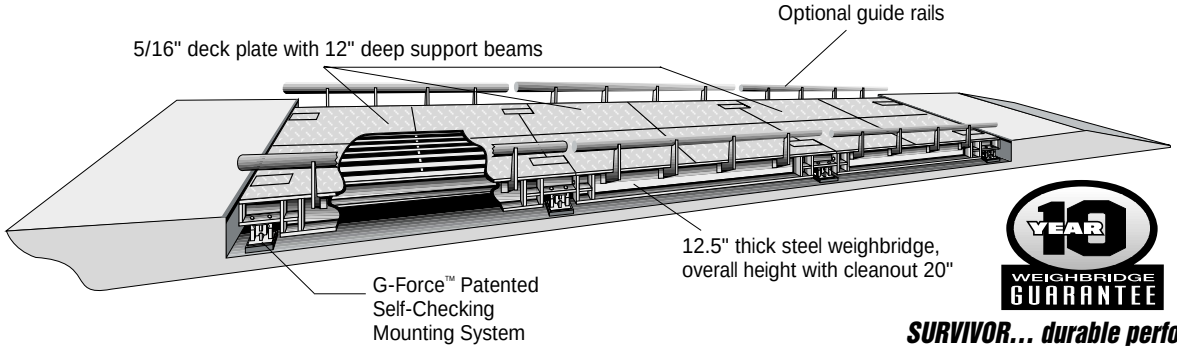
- Three standard widths: 10 ft, 11 ft and 12 ft
- Lengths from 10 ft through 117 ft
- 75,000 lb capacity load cells and pre-assembled mounts
- Undercarriage rust-proofed with sprayed asphalt emulsion
- Junction box(es) appropriate for number of load cells utilized
- 70,000 lb Concentrated Load Capacity (CLC)
- 70,000 lb Dual Tandem Axle (DTA)
- 2.06 "r" factor
- 5/16" deck plate, 12" deep support beams
- Up to 200,000 lb full scale capacity
- Extra-low deflection (1:700) under maximum dual axle loading (70,000 lb)

Options/Accessories

- Lightning protection package
- Special sizes and loading configurations available
- Guide rails
- Grain dump modules

Consult catalog for these additional options

- IQ plus® series digital indicators
- Ticket and document printers
- 4" or 6" remote flip-digit displays
- TransAct®/TransAct Plus® data management software
- Unattended truck scale system (ATS-1 & ATS-2)
- Concrete batching control system (CB-1)



SURVIVOR… durable performance measured not in years, but decades.

Package includes: *Assembled weighbridge modules and weighbridge fasteners; load cells with conduit fitting; load cell mounts with leveling bolts and anchor bolts; copper transient bypass cables at each load cell; metal conduit on weighbridge for load cell cable runs; flexible plastic conduit from load cell to metal conduit; conduit fittings from plastic to metal conduit; FRP junction box(es); homerun cable to indicator (60' long) and print packages including foundation drawing (pier or floating slab) and installation manual.*

Package does not include: *Approach coping; foundation alignment posts; rebar and mesh for foundation; indicator; printer; freight charges including material handling; shipping charges, transportation permits and fees, escort(s) charge, and insurance transportation fees.*

(Specifications on back)

LOAD CELLS AND MOUNT ASSEMBLIES:
75,000 lb capacity; G-Force™ Patented Self-Checking Mounting System

"r" FACTOR:
2.06 (dual tandem axle design load, e.g., 70,000 lb ÷ 34,000 lb)

FULL SCALE CAPACITY:
Up to 200,000 lb (x 20 lb)

DEFLECTION FACTOR:
1:700 of span distance

CONCENTRATED LOAD CAPACITY (CLC):
70,000 lb

DUAL TANDEM AXLE (DTA):
70,000 lb

APPROVALS:
NTEP certified per H-44, Class IIIL, CC #98-041A1

WARRANTY:
Ten-year limited warranty on the weighbridge
Two-year limited warranty on load cells/electronics
Up to five-year "build your own" lightning extended warranty

STEEL DECK EZ SERIES – 10 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	50065	EZ1010-ST-60	5000 lb	1	4	2.06	35
20 ft	60 tons	50066	EZ2010-ST-60	9000 lb	1	4	2.06	35
24 ft*	60 tons	50067	EZ2410-ST-60	10,200 lb	1	4	2.06	35
40 ft	60 tons	50068	EZ4010-ST-60	17,000 lb	2	6	2.06	35
47 ft*	60 tons	50069	EZ4710-ST-60	19,400 lb	2	6	2.06	35
60 ft	100 tons	50070	EZ6010-ST-100	26,000 lb	3	8	2.06	35
70 ft	100 tons	50071	EZ7010-ST-100	29,600 lb	3	8	2.06	35
80 ft	100 tons	50072	EZ8010-ST-100	34,000 lb	4	10	2.06	35
93 ft*	100 tons	50073	EZ9310-ST-100	38,800 lb	4	10	2.06	35
100 ft	100 tons	50074	EZ10010-ST-100	42,000 lb	5	12	2.06	35
117 ft*	100 tons	50075**	EZ11710-ST-100	49,000 lb	5	12	2.06	35

STEEL DECK EZ SERIES – 11 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	50076	EZ1011-ST-60	5500 lb	1	4	2.06	35
20 ft	60 tons	50077	EZ2011-ST-60	9900 lb	1	4	2.06	35
24 ft*	60 tons	50078	EZ2411-ST-60	11,200 lb	1	4	2.06	35
40 ft	60 tons	50079	EZ4011-ST-60	18,800 lb	2	6	2.06	35
47 ft*	60 tons	50080	EZ4711-ST-60	21,400 lb	2	6	2.06	35
60 ft	100 tons	50081	EZ6011-ST-100	28,700 lb	3	8	2.06	35
70 ft	100 tons	50082	EZ7011-ST-100	32,600 lb	3	8	2.06	35
80 ft	100 tons	50083	EZ8011-ST-100	37,600 lb	4	10	2.06	35
93 ft*	100 tons	50084	EZ9311-ST-100	42,800 lb	4	10	2.06	35
100 ft	100 tons	50085**	EZ10011-ST-100	46,500 lb	5	12	2.06	35
117 ft*	100 tons	50086**	EZ11711-ST-100	53,000 lb	5	12	2.06	35

STEEL DECK EZ SERIES – 12 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	50087	EZ1012-ST-60	6000 lb	1	4	2.06	35
20 ft	60 tons	50088	EZ2012-ST-60	10,400 lb	1	4	2.06	35
24 ft*	60 tons	50089	EZ2412-ST-60	11,800 lb	1	4	2.06	35
40 ft	60 tons	50090	EZ4012-ST-60	19,800 lb	2	6	2.06	35
47 ft*	60 tons	50091	EZ4712-ST-60	22,600 lb	2	6	2.06	35
60 ft	100 tons	50092	EZ6012-ST-100	30,400 lb	3	8	2.06	35
70 ft	100 tons	50093	EZ7012-ST-100	34,400 lb	3	8	2.06	35
80 ft	100 tons	50094	EZ8012-ST-100	39,800 lb	4	10	2.06	35
93 ft*	100 tons	50095	EZ9312-ST-100	45,200 lb	4	10	2.06	35
100 ft	100 tons	50096**	EZ10012-ST-100	50,200 lb	5	12	2.06	35
117 ft*	100 tons	50097**	EZ11712-ST-100	57,000 lb	5	12	2.06	35

** 24 ft actual = 23' 4", 47 ft actual = 46' 8", 93 ft actual = 93' 4", 117 ft actual = 116' 8"*
*** Units will have non-weighbridge components shipped via common carrier.*

Specifications subject to change without notice
© Rice Lake Weighing Systems 2001 PN 50906 2/01

SURVIVOR® OTR Series Flattop Truck Scale - Concrete Deck

SEE CHART ON BACK FOR PART NUMBERS

The SURVIVOR OTR Series vehicle scales feature a low-profile 12.5-inch-thick steel and concrete weighbridge, and an up to 12-foot-wide loading area for greater safety and faster processing during peak usage times.

The SURVIVOR OTR Series offers top access to all load cells and junction boxes, allowing easy installation and maintenance in above ground and pit applications.

The SURVIVOR OTR Series vehicle scales maintain legal-for-trade accuracy, even with a 60,000 lb concentrated load in mid span of the weighbridge. Designed for use with legal highway loads, the SURVIVOR OTR is a cost-effective approach to truck weighing in facilities with moderate traffic.

Standard Features

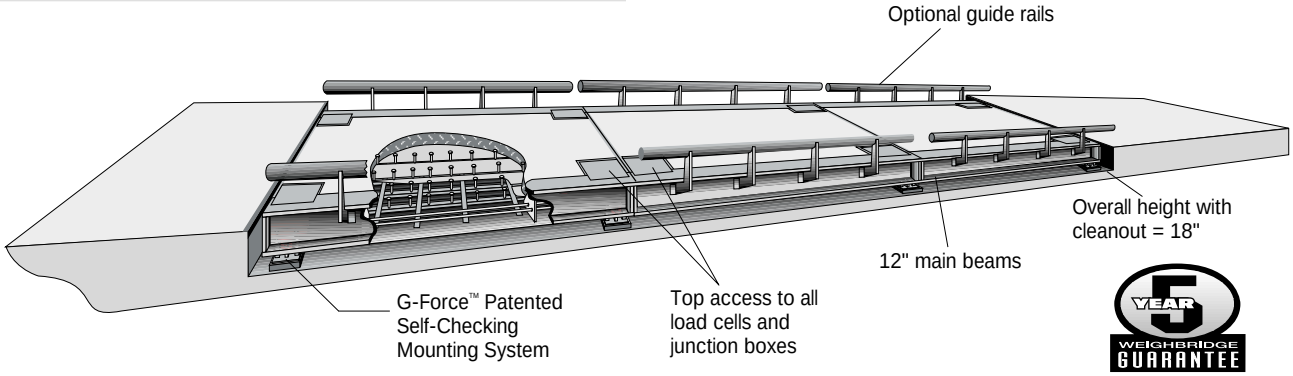
- Top access to load cells and junction box
- Weighbridge modules for creating custom lengths
- 75,000-lb capacity load cells and G-Force™ mount assemblies
- Junction box(es) appropriate for number of load cells utilized
- NTEP certified, CC #98-041A1
- 60,000 lb Concentrated Load Capacity (CLC)
- 60,000 lb Dual Tandem Axle (DTA)
- 1.76 “r” factor
- Up to 200,000 lb full scale capacity
- Low deflection (1:600) under maximum load
- 6" thick concrete deck
- Three standard widths: 10 ft, 11 ft and 12 ft
- Lengths from 10 ft through 117 ft

Options/Accessories

- Lightning protection package
- Shallow pit installation
- Guide rails

Consult catalog for these additional options

- IQ plus® series digital indicators
- Ticket and document printers
- 4" or 6" remote flip-digit displays
- TransAct®/TransAct Plus® data management software
- Unattended truck scale system (ATS-2)
- Concrete batching control system



Package includes: *Assembled weighbridge modules and weighbridge fasteners; load cells with conduit fitting; load cell mounts with leveling bolts and anchor bolts; copper transient bypass cables at each load cell; conduit for load cell cable runs; flexible plastic conduit from load cell to metal conduit; conduit fittings from plastic to metal conduit; FRP junction box(es); homerun cable to indicator (60' long); print packages including foundation drawing (pier, floating slab or pit) and installation manual; galvanized pan for concrete,*

Package does not include: *Approach coping; foundation alignment posts; rebar and mesh for foundation; concrete; indicator; printer; freight charges including material handling; shipping charges, transportation permits and fees, escort(s) charge, and insurance transportation fees.*

Shallow pit option is available: *Requires grout plates (PN63076). See components/options price page.*

(Specifications on back)

SURVIVOR OTR Series - Concrete Deck

Specifications

LOAD CELLS AND MOUNT ASSEMBLIES:
75,000 lb capacity; G-Force™ Patented Self-Checking Mounting System, top access to load cells

"r" FACTOR:
1.76 (dual tandem axle design load, e.g., 60,000 lb ÷ 34,000 lb)

FULL SCALE CAPACITY:
Up to 200,000 lb (x 20 lb)

DEFLECTION FACTOR:
1:600 of span distance

CONCENTRATED LOAD CAPACITY (CLC):
60,000 lb

DUAL TANDEM AXLE (DTA):
60,000 lb

APPROVALS:
NTEP-certified per H-44, Class IIIL, CC #98-041A1

WARRANTY:
Five-year limited warranty on the weighbridge
Two-year limited warranty on load cells/electronics
Up to five-year "build your own" lightning extended warranty

OTR SERIES – 10 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	EST. SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	53312	EZ1010-SC-60-OTR	4,200 lb	1	4	1.76	30
20 ft	60 tons	53315	EZ2010-SC-60-OTR	7,100 lb	1	4	1.76	30
24 ft*	60 tons	53318	EZ2410-SC-60-OTR	8,200 lb	1	4	1.76	30
40 ft	60 tons	53321	EZ4010-SC-60-OTR	13,800 lb	2	6	1.76	30
47 ft*	60 tons	53324	EZ4710-SC-60-OTR	16,600 lb	2	6	1.76	30
60 ft	100 tons	53327	EZ6010-SC-100-OTR	19,800 lb	3	8	1.76	30
70 ft	100 tons	53330	EZ7010-SC-100-OTR	22,500 lb	3	8	1.76	30
80 ft	100 tons	53333	EZ8010-SC-100-OTR	25,400 lb	4	10	1.76	30
93 ft*	100 tons	53336	EZ9310-SC-100-OTR	26,300 lb	4	10	1.76	30
100 ft	100 tons	53339	EZ10010-SC-100-OTR	31,400 lb	5	12	1.76	30
117 ft*	100 tons	53342	EZ11710-SC-100-OTR	32,800 lb	5	12	1.76	30

OTR SERIES – 11 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	EST. SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	53313	EZ1011-SC-60-OTR	4,400 lb	1	4	1.76	30
20 ft	60 tons	53316	EZ2011-SC-60-OTR	8,100 lb	1	4	1.76	30
24 ft*	60 tons	53319	EZ2411-SC-60-OTR	8,600 lb	1	4	1.76	30
40 ft	60 tons	53322	EZ4011-SC-60-OTR	14,400 lb	2	6	1.76	30
47 ft*	60 tons	53325	EZ4711-SC-60-OTR	17,400 lb	2	6	1.76	30
60 ft	100 tons	53328	EZ6011-SC-100-OTR	20,700 lb	3	8	1.76	30
70 ft	100 tons	53331	EZ7011-SC-100-OTR	23,600 lb	3	8	1.76	30
80 ft	100 tons	53334	EZ8011-SC-100-OTR	26,600 lb	4	10	1.76	30
93 ft*	100 tons	53337	EZ9311-SC-100-OTR	27,600 lb	4	10	1.76	30
100 ft	100 tons	53340	EZ10011-SC-100-OTR	32,500 lb	5	12	1.76	30
117 ft*	100 tons	53343	EZ11711-SC-100-OTR	39,400 lb	5	12	1.76	30

OTR SERIES – 12 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	53314	EZ1012-SC-60-OTR	4,900 lb	1	4	1.76	30
20 ft	60 tons	53317	EZ2012-SC-60-OTR	8,300 lb	1	4	1.76	30
24 ft*	60 tons	53320	EZ2412-SC-60-OTR	9,000 lb	1	4	1.76	30
40 ft	60 tons	53323	EZ4012-SC-60-OTR	15,100 lb	2	6	1.76	30
47 ft*	60 tons	53326	EZ4712-SC-60-OTR	17,600 lb	2	6	1.76	30
60 ft	100 tons	53329	EZ6012-SC-100-OTR	21,800 lb	3	8	1.76	30
70 ft	100 tons	53332	EZ7012-SC-100-OTR	25,000 lb	3	8	1.76	30
80 ft	100 tons	53335	EZ8012-SC-100-OTR	27,600 lb	4	10	1.76	30
93 ft*	100 tons	53338	EZ9312-SC-100-OTR	28,900 lb	4	10	1.76	30
100 ft	100 tons	53341	EZ10012-SC-100-OTR	34,200 lb	5	12	1.76	30
117 ft*	100 tons	53344	EZ11712-SC-100-OTR	36,100 lb	5	12	1.76	30

* 24 ft actual = 23' 4", 47 ft actual = 46' 8", 93 ft actual = 93' 4", 117 ft actual = 116' 8"

* Shipping weights vary with options, paint/coatings, and split shipment requirements. Consult factory for current freight estimate.

OTR scales feature undersized dimensions and are designed to fit into existing foundations. Example: 70' x 10' scale is actually 69' 10.5" L x 9' 10.5" W.

Specifications subject to change without notice
© Rice Lake Weighing Systems 2001 PN 63222 2/01

SURVIVOR® OTR Series Flattop Truck Scale - Steel Deck

NEW! Product!

SEE CHART ON BACK FOR PART NUMBERS

The SURVIVOR OTR Series vehicle scales feature a low-profile 12.5-inch-thick steel weighbridge, and an up to 12-foot-wide loading area for greater safety and faster processing during peak usage times.

The SURVIVOR OTR Series offers top access to all load cells and junction boxes, allowing easy installation and maintenance in above ground and pit applications.

The SURVIVOR OTR Series vehicle scales maintain legal-for-trade accuracy even with a 60,000 lb concentrated load in mid span of the weighbridge. Designed for use with legal highway loads, the SURVIVOR OTR is a cost-effective approach to truck weighing in facilities with moderate traffic.

Standard Features

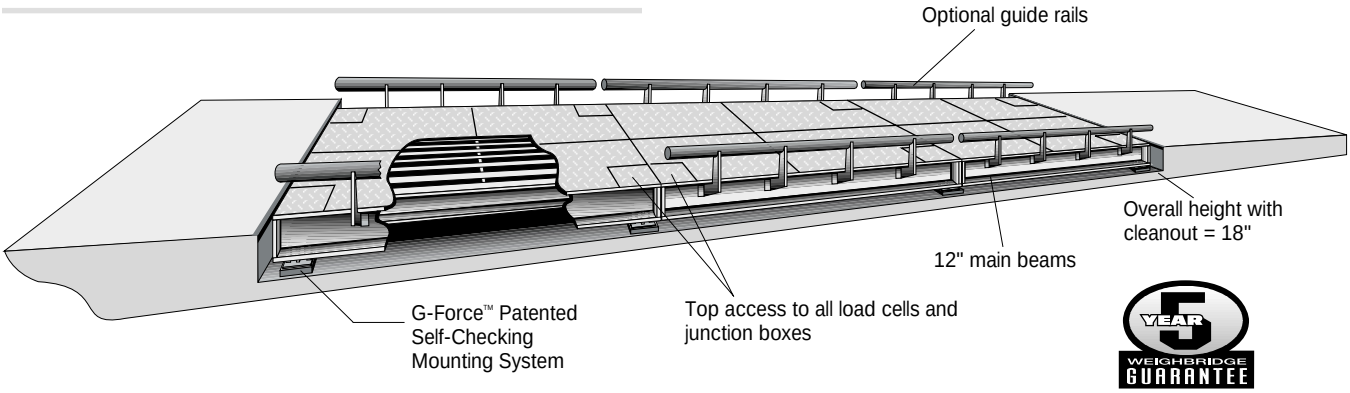
- Top access to load cells and junction box
- Weighbridge modules for creating custom lengths
- 75,000-lb capacity load cells and G-Force™ mount assemblies
- Junction box(es) appropriate for number of load cells utilized
- NTEP certified, CC #98-041A1
- 60,000 lb Concentrated Load Capacity (CLC)
- 60,000 lb Dual Tandem Axle (DTA)
- 1.76 “r” factor
- Up to 200,000 lb full scale capacity
- Low deflection (1:600) under maximum load
- Three standard widths: 10 ft, 11 ft and 12 ft
- Lengths from 10 ft through 117 ft

Options/Accessories

- Lightning protection package
- Shallow pit installation
- Guide rails
- Grain dump modules

Consult catalog for these additional options

- IQ plus® series digital indicators
- Ticket and document printers
- 4" or 6" remote flip-digit displays
- TransAct®/TransAct Plus® data management software
- Unattended truck scale system (ATS-2)
- Concrete batching control system



Package includes: *Assembled weighbridge modules and weighbridge fasteners; load cells with conduit fitting; load cell mounts with leveling bolts and anchor bolts; copper transient bypass cables at each load cell; metal conduit on weighbridge for load cell cable runs; flexible plastic conduit from load cell to metal conduit; conduit fittings from plastic to metal conduit; FRP junction box(es); homerun cable to indicator (60' long) and print packages including foundation drawing (pier, floating slab or pit) and installation manual.*

Package does not include: *Approach coping; foundation alignment posts; rebar and mesh for foundation; indicator; printer; freight charges including material handling; shipping charges, transportation permits and fees, escort(s) charge, and insurance transportation fees.*

Shallow pit option is available: *Requires grout plates (PN63076). See components/options price page.*

(Specifications on back)

LOAD CELLS AND MOUNT ASSEMBLIES:
75,000 lb capacity; G-Force™ Patented Self-Checking Mounting System, top access to load cells

"r" FACTOR:
1.76 (dual tandem axle design load, e.g., 60,000 lb ÷ 34,000 lb)

FULL SCALE CAPACITY:
Up to 200,000 lb (x 20 lb)

DEFLECTION FACTOR:
1:600 of span distance

CONCENTRATED LOAD CAPACITY (CLC):
60,000 lb

DUAL TANDEM AXLE (DTA):
60,000 lb

APPROVALS:
NTEP-certified per H-44, Class IIIL, CC #98-041A1

WARRANTY:
Five-year limited warranty on the weighbridge
Two-year limited warranty on load cells/electronics
Up to five-year "build your own" lightning extended warranty

OTR SERIES – 10 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	EST. SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	63174	EZ1010-ST-60-OTR	4,800 lb	1	4	1.76	30
20 ft	60 tons	63175	EZ2010-ST-60-OTR	8,200 lb	1	4	1.76	30
24 ft*	60 tons	63176	EZ2410-ST-60-OTR	9,600 lb	1	4	1.76	30
40 ft	60 tons	63177	EZ4010-ST-60-OTR	15,800 lb	2	6	1.76	30
47 ft*	60 tons	63178	EZ4710-ST-60-OTR	18,200 lb	2	6	1.76	30
60 ft	100 tons	63179	EZ6010-ST-100-OTR	24,200 lb	3	8	1.76	30
70 ft	100 tons	63206	EZ7010-ST-100-OTR	27,800 lb	3	8	1.76	30
80 ft	100 tons	63180	EZ8010-ST-100-OTR	31,600 lb	4	10	1.76	30
93 ft*	100 tons	63181	EZ9310-ST-100-OTR	36,400 lb	4	10	1.76	30
100 ft	100 tons	63182	EZ10010-ST-100-OTR	39,000 lb	5	12	1.76	30
117 ft*	100 tons	63183	EZ11710-ST-100-OTR	46,000 lb	5	12	1.76	30

OTR SERIES – 11 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	EST. SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	63184	EZ1011-ST-60-OTR	5,200 lb	1	4	1.76	30
20 ft	60 tons	63185	EZ2011-ST-60-OTR	9,300 lb	1	4	1.76	30
24 ft*	60 tons	63186	EZ2411-ST-60-OTR	10,600 lb	1	4	1.76	30
40 ft	60 tons	63187	EZ4011-ST-60-OTR	16,600 lb	2	6	1.76	30
47 ft*	60 tons	63188	EZ4711-ST-60-OTR	20,200 lb	2	6	1.76	30
60 ft	100 tons	63189	EZ6011-ST-100-OTR	26,900 lb	3	8	1.76	30
70 ft	100 tons	63190	EZ7011-ST-100-OTR	30,800 lb	3	8	1.76	30
80 ft	100 tons	63191	EZ8011-ST-100-OTR	35,200 lb	4	10	1.76	30
93 ft*	100 tons	63192	EZ9311-ST-100-OTR	40,400 lb	4	10	1.76	30
100 ft	100 tons	63193	EZ10011-ST-100-OTR	43,500 lb	5	12	1.76	30
117 ft*	100 tons	63194	EZ11711-ST-100-OTR	50,000 lb	5	12	1.76	30

OTR SERIES – 12 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	63195	EZ1012-ST-60-OTR	5700 lb	1	4	1.76	30
20 ft	60 tons	93196	EZ2012-ST-60-OTR	9800 lb	1	4	1.76	30
24 ft*	60 tons	63197	EZ2412-ST-60-OTR	11,200 lb	1	4	1.76	30
40 ft	60 tons	63198	EZ4012-ST-60-OTR	18,600 lb	2	6	1.76	30
47 ft*	60 tons	63199	EZ4712-ST-60-OTR	21,400 lb	2	6	1.76	30
60 ft	100 tons	63200	EZ6012-ST-100-OTR	28,600 lb	3	8	1.76	30
70 ft	100 tons	63201	EZ7012-ST-100-OTR	32,600 lb	3	8	1.76	30
80 ft	100 tons	63202	EZ8012-ST-100-OTR	37,400 lb	4	10	1.76	30
93 ft*	100 tons	63203	EZ9312-ST-100-OTR	42,800 lb	4	10	1.76	30
100 ft	100 tons	63204	EZ10012-ST-100-OTR	47,200 lb	5	12	1.76	30
117 ft*	100 tons	63205	EZ11712-ST-100-OTR	54,000 lb	5	12	1.76	30

* 24 ft actual = 23' 4", 47 ft actual = 46' 8", 93 ft actual = 93' 4", 117 ft actual = 116' 8"

* Shipping weights vary with options, paint/coatings, and split shipment requirements. Consult factory for current freight estimate.

OTR scales feature undersized dimensions and are designed to fit into existing foundations. Example: 70' x 10' scale is actually 69' 10.5" L x 9' 10.5" W.

Specifications subject to change without notice
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SURVIVOR® ATV Series

Fully Electronic Portable Flattop Truck Scale - Steel Deck

NEW! Product!

SEE CHART ON BACK FOR PART NUMBERS

Fully electronic, the portable SURVIVOR® ATV vehicle scale is designed for heavy-duty weighing in virtually any location a permanent installation isn't practical. Features like top access to load cells, self-seating hinge connectors, and dedicated transient protection components in each J-box greatly simplify installation and routine maintenance. Our patented G-Force™ mounting system's self-checking design controls loading forces, allowing faster processing and extending component life.

Versatile and cost-effective, the ATV's self-contained live modules and floating center modules make it easy to add or remove sections to fit your customer's application requirements. Standard bulkheads are heavily braced for high-compression backfilling with gravel or aggregate. In semi-permanent applications, choose from optional steel ramps or customized bulkheads for concrete approaches. The ATV also incorporates an exclusive lockout system that removes all weight from the load cells, suspending the deck free of links to avoid damage to electronics while transporting the scale. What's more, a five-year weighbridge guarantee ensures long-lasting performance.

Standard Features

- Three standard widths: 10 ft, 11 ft and 12 ft
- Lengths from 10 ft through 120 ft
- 75,000 lb load cells and pre-assembled G-Force™ mounts
- Up to 200,000 lb full scale capacity
- Top access for load cells
- NTEP certified, CC #98-041A1
- 60,000 lb Concentrated Load Capacity (CLC)
- 60,000 lb Dual Tandem Axle (DTA)
- Backfill ramp bulkheads
- Five year weighbridge warranty*

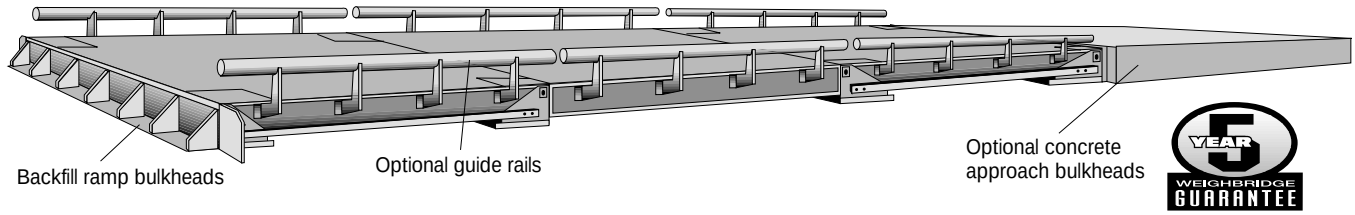
Options/Accessories

- Lightning protection package
- Guide rails
- Bulkheads for concrete approaches
- Custom lengths
- Steel ramps

Consult catalog for these additional options

- IQ plus® series digital indicators
- Ticket and document printers
- 4" or 6" remote flip-digit displays
- TransAct®/TransAct Plus® data management software
- Unattended truck scale system (ATS-2)
- Concrete batching control system
- Traffic signals

** ATV weighbridges are warranted against defects in material and workmanship for a period of five years from delivery.*



Package includes: *Backfill ramp bulkheads; assembled weighbridge modules and weighbridge fasteners; load cells with conduit fitting; load cell mounts; copper transient bypass cables at each load cell; metal conduit on weighbridge for load cell cable runs; flexible plastic conduit from load cell to metal conduit; conduit fittings from plastic to metal conduit; FRP junction box(es); homerun cable to indicator (60' long) and print packages including installation manual.*

Package does not include: *Indicator; printer; freight charges including material handling; shipping charges, transportation permits and fees, escort(s) charge, and insurance transportation fees.*

(Specifications on back)

LOAD CELLS AND MOUNT ASSEMBLIES:
75,000 lb capacity; G-Force™ Patented Self-Checking Mounting System, top access to load cells

"r" FACTOR:
1.76 (dual tandem axle design load, e.g., 60,000 lb ÷ 34,000 lb)

FULL SCALE CAPACITY:
Up to 200,000 lb (x 20 lb)

DEFLECTION FACTOR:
1:600 of span distance

CONCENTRATED LOAD CAPACITY (CLC):
60,000 lb

DUAL TANDEM AXLE (DTA):
60,000 lb

APPROVALS:
NTEP-certified per H-44, Class IIIL, CC #98-041A1

WARRANTY:
Five-year limited warranty on the weighbridge
Two-year limited warranty on load cells/electronics
Up to five-year "build your own" lightning extended warranty

ATV SERIES – 10 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	EST. SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	66986	EZ1010-ST-60-OTR	8,000 lb	1	4	1.76	30
20 ft	60 tons	64510	EZ2010-ST-60-OTR	11,500 lb	1	4	1.76	30
24 ft*	60 tons	64511	EZ2410-ST-60-OTR	12,500 lb	1	4	1.76	30
40 ft	100 tons	64512	EZ4010-ST-100-OTR	23,000 lb	2	8	1.76	30
47 ft*	100 tons	64513	EZ4710-ST-100-OTR	25,000 lb	2	8	1.76	30
60 ft	100 tons	64514	EZ6010-ST-100-OTR	29,500 lb	3	8	1.76	30
70 ft	100 tons	64515	EZ7010-ST-100-OTR	32,500 lb	3	8	1.76	30

ATV SERIES – 11 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	EST. SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	66987	EZ1011-ST-60-OTR	8,800 lb	1	4	1.76	30
20 ft	60 tons	64516	EZ2011-ST-60-OTR	12,700 lb	1	4	1.76	30
24 ft*	60 tons	64517	EZ2411-ST-60-OTR	13,750 lb	1	4	1.76	30
40 ft	100 tons	64518	EZ4011-ST-100-OTR	25,300 lb	2	8	1.76	30
47 ft*	100 tons	64519	EZ4711-ST-100-OTR	27,500 lb	2	8	1.76	30
60 ft	100 tons	64520	EZ6011-ST-100-OTR	32,500 lb	3	8	1.76	30
70 ft	100 tons	64521	EZ7011-ST-100-OTR	35,700 lb	3	8	1.76	30

ATV SERIES – 12 FOOT WIDTH

LENGTH	FULL SCALE CAPACITY	PART NUMBER	MODEL NUMBER	SHIPPING WEIGHT	NUMBER OF MODULES	NUMBER OF LOAD CELLS	"r" FACTOR	CLC (TONS)
10 ft	60 tons	66988	EZ1012-ST-60-OTR	9,600 lb	1	4	1.76	30
20 ft	60 tons	66989	EZ2012-ST-60-OTR	13,800 lb	1	4	1.76	30
24 ft*	60 tons	66990	EZ2412-ST-60-OTR	15,000 lb	1	4	1.76	30
40 ft	100 tons	66991	EZ4012-ST-100-OTR	27,600 lb	2	8	1.76	30
47 ft*	100 tons	66992	EZ4712-ST-100-OTR	30,000 lb	2	8	1.76	30
60 ft	100 tons	66993	EZ6012-ST-100-OTR	35,400 lb	3	8	1.76	30
70 ft	100 tons	66994	EZ7012-ST-100-OTR	39,000 lb	3	8	1.76	30

* 24 ft actual = 23' 4", 47 ft actual = 46' 8"

Specifications subject to change without notice
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SURVIVOR® Multi-Platform Truck Scales

Available in SR, EZ, PT and OTR models

Standard Features

- Standard widths from 10 ft to 14 ft
- 75,000 lb load cells and G-Force™ mounts
- Up to 200,000 lb capacity
- NTEP certified
- Available in various configurations

Options/Accessories

- Lightning protection package
- Custom software for axle weights

Consult catalog for these additional options

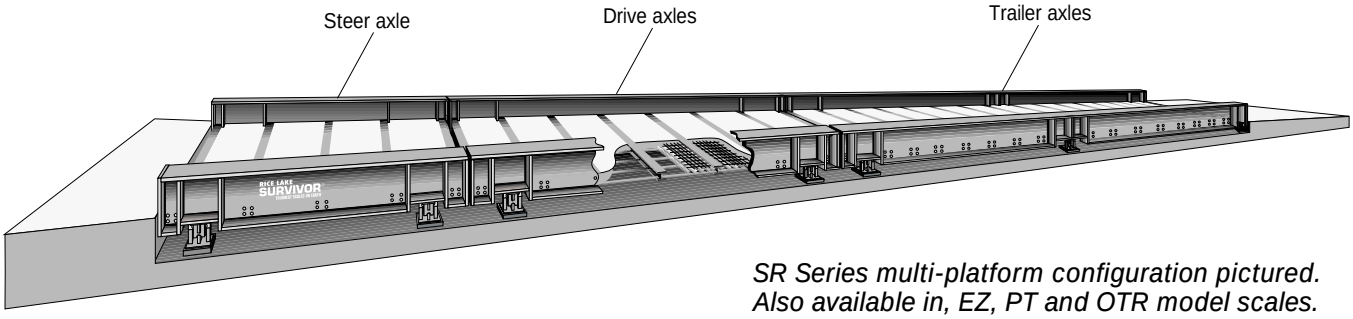
- IQ plus® series digital indicators
- Ticket and document printers
- 4" or 6" remote flip-digit displays
- TransAct®/TransAct Plus® data management software
- Unattended truck scale system (ATS-2)
- Concrete batching control system
- Traffic signals

SURVIVOR® multi-platform truck scales provide a simple solution for locking in accurate gross, net and axle weights in one weighment. Available in a multitude of standard and custom sizes, scales can be created to meet the needs of your application. Scale platforms are sized according to trucks' footprint in order to secure accurate weights of steer axles, drive axles and trailer axles.

Rice Lake SURVIVOR® SR, PT and EZ steel and concrete deck scales are an excellent choice for high-traffic commercial applications, such as truck stops and loading yards. Available in widths up to 14 feet, these scales allow faster, safer processing of standard and even overwidth loads. They're guaranteed for 2 million weighments, ensuring years of dependable use.

Rice Lake SURVIVOR® OTR steel and concrete scales are ideal for facilities with moderate traffic flow. Designed with top access to all electronics, these scales can be used in both pit and above ground applications where access to the side of the scale is limited.

With proper selection of standard instrumentation or custom unattended systems, Rice Lake will provide the solutions to your weighing requirements. Give us a call today with all your truck scale questions.



SR Series multi-platform configuration pictured. Also available in, EZ, PT and OTR model scales.

Package includes: *Weighbridge steel; weighbridge fasteners; load cells with conduit fitting; load cell mounts with leveling bolts and anchor bolts; copper transient bypass cables at each load cell; FRP junction box(es); summing board; homerun cable to indicator (60' long); print packages including deck assembly, foundation drawing (pier and floating slab) and rebar placement for deck concrete; installation manual with truck loading/unloading diagram. Please refer to catalog page for equipment which is included with each model.*

Package does not include: *Cable runs; corrugated sheeting for concrete deck; rebar for concrete deck; approach coping; foundation alignment posts; rebar and mesh for foundation; concrete; indicator; printer; freight charges including material handling, shipping charges, transportation permits and fees, escort(s) charge, and insurance transportation fees.*

(Specifications on back)

Due to the variety of configurations, please consult the factory to discuss application requirements and for complete specifications and price quotations.

Specifications subject to change without notice
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SURVIVOR® RT Series Railroad Track Scales

Standard Features

Due to the wide variety of installation configurations, please consult the factory to discuss application requirements and to receive complete specifications and price quotations.

Survivor RT Series railroad track scales utilize a proven design to meet the rigorous demands of railway applications. With both modular and full bridge designs, all RT Series scales feature a Cooper E-80 rated weighbridge that meets American Railway Engineering Association (A.R.E.A.) requirements for loading. Each scale model is also NTEP certified. Utilized in static weighing operations, RT Series scales excel in high-accuracy, legal-for-trade weighing.

Modular scales are available in single or double platforms with dead span determined by the size and type of cars weighed. Numerous combinations can be utilized to match the configuration needed for your weighing applications. Capacities of over 200 tons are available to allow you to meet the needs of even the heaviest applications.

Full bridge designs offer the fastest weighing process time because cars can be positioned anywhere on the scale. These designs range in length up to 72 feet, have 10 foot widths, and carry 180-ton sectional capacity. Featuring railroad track and the versatility of combination track and truck designs, the full bridge versions of the Survivor RT Series allow you to deliver dual functionality for your customer.

(Specifications on back)

Due to the variety of configurations, please consult the factory to discuss application requirements and for complete specifications and price quotations.

Specifications subject to change without notice
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SURVIVOR® LV-Series Livestock Ring Scale

DESCRIPTION

LV-Series livestock ring scale

Critical to the livestock industry is a method of determining weights of animals as they are bought and sold. The LV-Series livestock ring scale provides 50,000 lb full-scale capacity and is NTEP certified to ensure accuracy and reliability. On-site frame assembly makes installation incredibly easy, and concrete decks up to 8" thick guarantee durability.

Designed to fit within the existing ring area of a livestock barn, the LV-Series is installed in three simple phases. The subcomponents are bolted together, a concrete deck is poured, and then a calibration is performed. In addition, top access to load cells eases installation and any future service requirements.

Applications

- Livestock barns
- Stockyards
- Ranches and farms

Standard Features

- 50,000 lb capacity (x 5 lb); 70,000 lb capacity (x 10 lb)
- Platform lengths from 13.5' to 34.2'
- Platform widths from 13.3' to 22.8'

Options/Accessories

- Racks and gates

Consult factory for additional options and accessories

Due to the unique size and design requirements of ring scales, we will construct a scale to your specifications.

SURVIVOR® AG-Series Livestock/Agriculture Utility Scale

DESCRIPTION

AG-Series livestock/agriculture utility scale

Ideal for weighing utility-type trucks and trailers, Rice Lake Weighing Systems' new medium-capacity platform scale is the perfect choice when a full-size truckscale is too large or cost prohibitive for small to medium weighing operations.

With 30,000 lb full-scale capacity, the AG utility scale excels in operations such as livestock, vehicle or the weighing of agriculture trailers such as anhydrous ammonia tanks.

Applications

- Feed mills and cooperatives
- Livestock barns

Standard Features

- 30,000 lb full-scale capacity
- 20,000 lb concentrated load capacity (CLC)
- Lengths up to 35'
- Widths up to 12'

Options/Accessories

Consult factory for additional options and accessories

Due to the unique size and design requirements of ring scales, we will construct a scale to your specifications.

(Specifications on back)

LV-Series Specifications

CONSULT FACTORY FOR COMPLETE SPECIFICATIONS AND PRICE QUOTATIONS, AND TO DISCUSS APPLICATION REQUIREMENTS.

LOAD CELL CAPACITY:
50,000 lb

CONCENTRATED LOAD CAPACITY:
50,000 lb

FULL SCALE CAPACITY:
50,000 lb capacity (x 5 lb); 70,000 lb capacity (x 10 lb)

APPROVALS:
NTEP certified CC#98-010

WARRANTY:
Five year warranty on weighbridge
Two year warranty on electronics

AG-Series Livestock/Agriculture Specifications

CONSULT FACTORY FOR COMPLETE SPECIFICATIONS AND PRICE QUOTATIONS, AND TO DISCUSS APPLICATION REQUIREMENTS.

LOAD CELL CAPACITY:
25,000 lb

CONCENTRATED LOAD CAPACITY:
20,000 lb

FULL SCALE CAPACITY:
30,000 lb capacity (x 5 lb)

APPROVALS:
NTEP certified CC#98-008

WARRANTY:
Five year warranty on weighbridge
Two year warranty on electronics

Specifications subject to change without notice
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