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.

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:
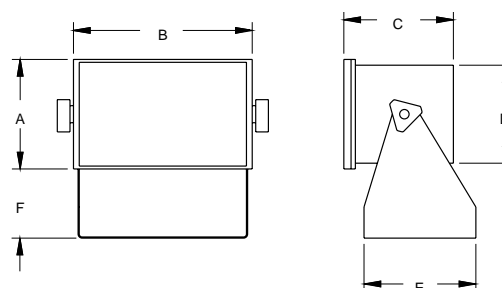Steel with black 2-part epoxy finish

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)	

IQ plus® 355 Digital Weight Indicator

Super Bright LED Display!

Measurement Canada Approved

c(UL)us LISTED

(OIML) *Pending*

CE *Pending*

ANOTHER *REVOLUTION™* SOLUTION

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

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:
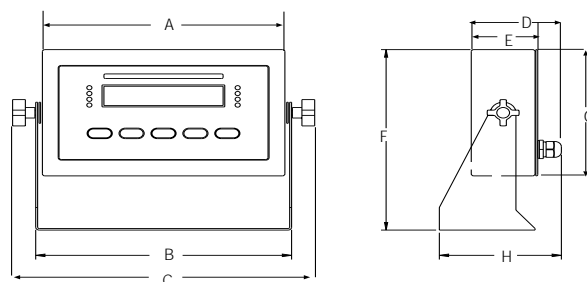NTEP certified per H-44 at 10,000 Divisions, Class III/IIIL,
CC# 97-130A1; Measurement Canada approved, AM-5213,
Class III/IIIHD at 10,000 Divisions; UL & CUL listed, CE
pending, OIML pending

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)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

IQ plus® 390-DC Battery Powered Digital Weight Indicator

Now Available! Livestock Weighing Option!

Measurement Canada Approved

CE *Pending*

c(UL)us 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

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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;
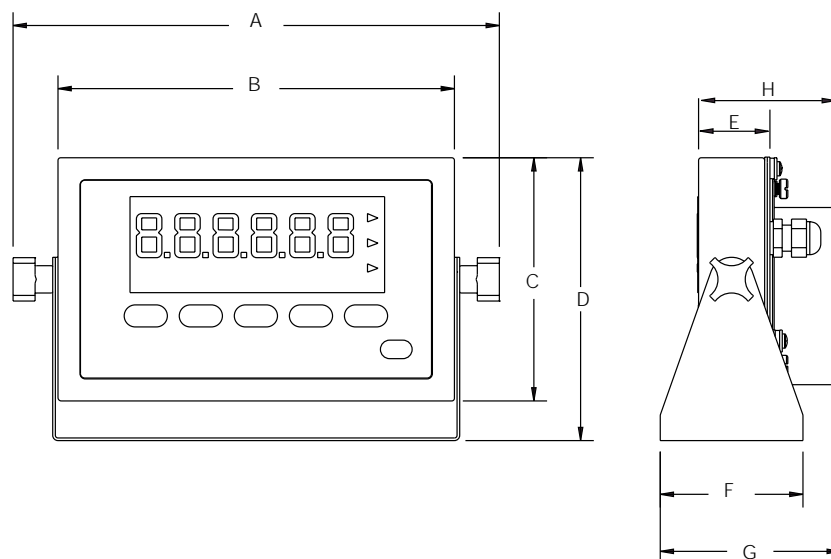CE pending, UL & CUL listed

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)

IQ plus® 590-DC Battery Powered Digital Weight Indicator

Measurement Canada Approved

C E
Pending

c(UL)us
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

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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 $\pm$ 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, 7$\frac{1}{2}$, 3$\frac{3}{4}$ 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 $\pm$ .25 VDC

INPUT OVERLOAD:
$\pm$ 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:
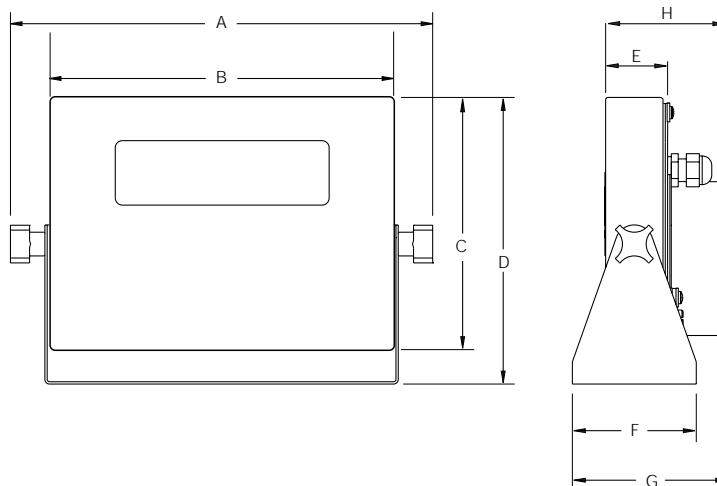NEMA 4X/IP66, stainless steel

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)

IQ plus® 510 Electronic Digital Weight Indicator

Sloped face model shown

Measurement Canada Approved

ANOTHER *REVOLUTION* SOLUTION

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.

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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,
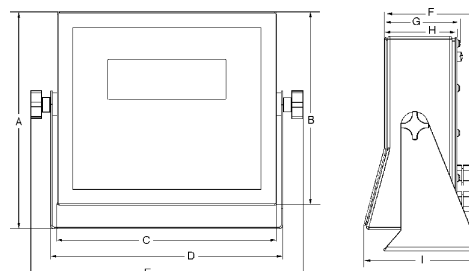Class III/IIIL, CC#98-081; Measurement Canada approved,
AM-5253, Class III/IIIL, III at 10,000 Divisions and IIIHD at
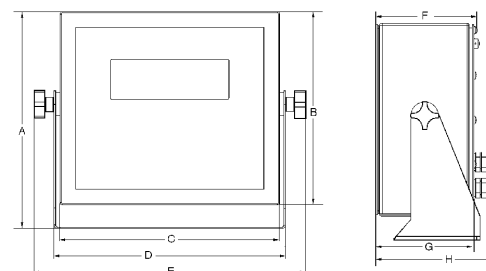20,000 Divisions; CE marked, UL & CUL listed, OIML approved

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)	

IQ plus® 710 Electronic Digital Weight Indicator

Measurement Canada Approved

Sloped face model shown

ANOTHER **REVOLUTION**™ SOLUTION

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

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:
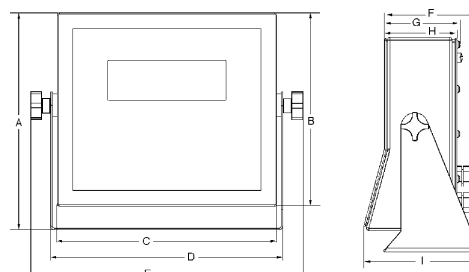Sloped: 7.4 lb (3.3 kg)   Flat: 7.8 lb (3.5 kg)

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
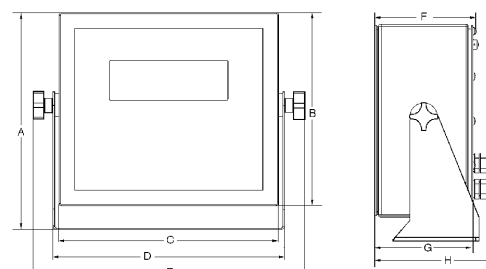
WARRANTY:
Two year limited warranty

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.

IQ plus® 800   Digital Weight Indicator

Measurement Canada Approved

IQ plus 800 shown with optional bar graph module.

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.

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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:
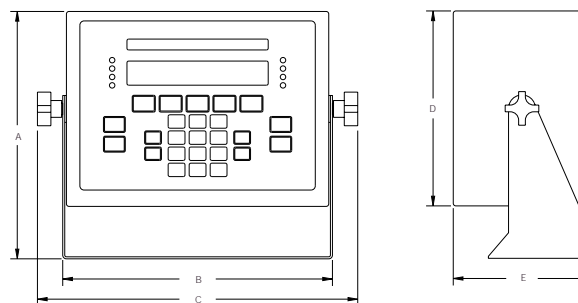NEMA 4X stainless steel

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)	D = 7.25" (184.2mm)
B = 10.03" (254.8mm)	E = 5.11" (129.8mm)
C = 11.91" (302.5mm)	

IQ plus® 810 Digital Weight Indicator

Measurement Canada Approved

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*

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.

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.

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.

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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:
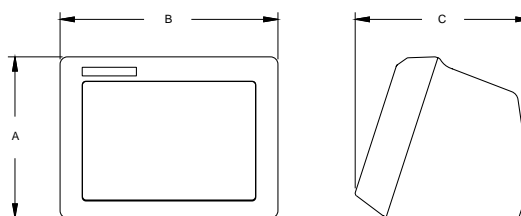NEMA 4 zinc die cast

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)	C = 8.87" (225.3mm)
B = 11.06" (280.9mm)	

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)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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:
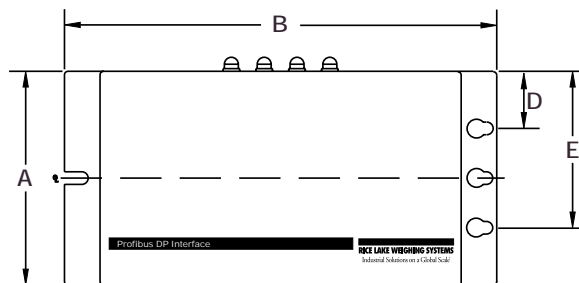14°F to 104°F (-10°C to 40°C)

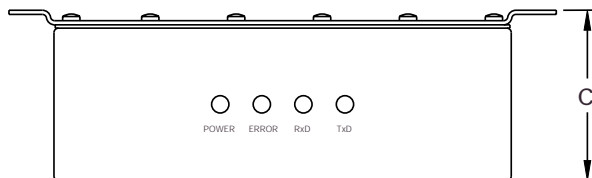**RATING/MATERIAL:**
NEMA 4X stainless steel

WEIGHT:
6 lb (2.7 kg)

WARRANTY:
One year limited warranty

(Front View)

(Top View)

DIMENSIONS

A	= 4.9" (124mm)		D	= 1.2" (30.2mm)
B	= 9.9" (251mm)		E	= 3.7" (93.9mm)
C	= 3.1" (79.5mm)			

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale

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.

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:
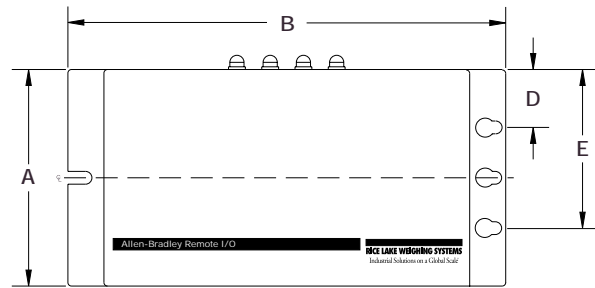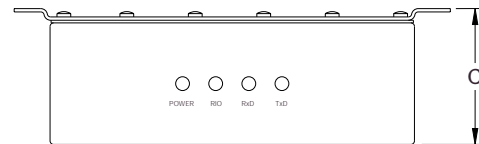NEMA 4X stainless steel

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)			

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

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
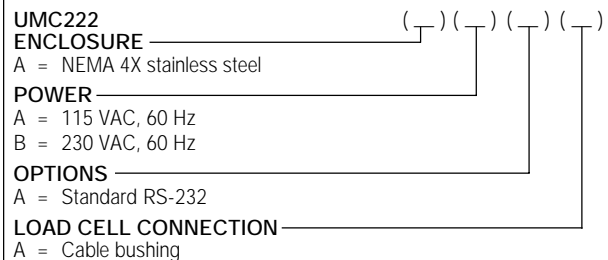
• Bench, tank, floor, railroad track, and truck scales

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

Part #	Description
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

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

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

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

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.

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

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale

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
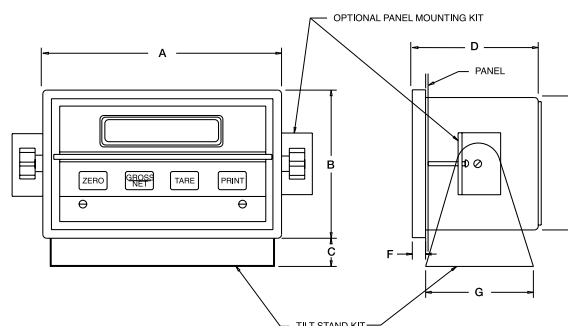
WEIGHT:
Approximately 5.5 lb (2.5 kg)

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)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

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.

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale

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
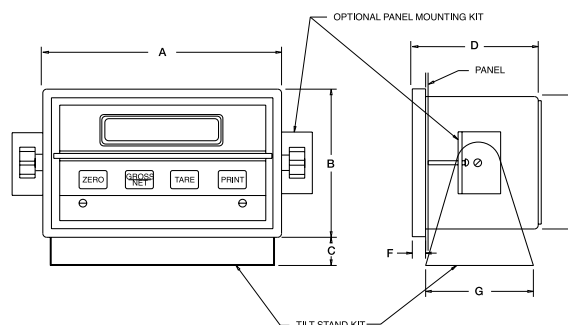
WEIGHT:
Approximately 5.5 lb (2.5 kg)

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)

CONDEC™ UMC600 Digital Weight Indicator

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.

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)

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

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.

Measurement Canada Approved

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

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

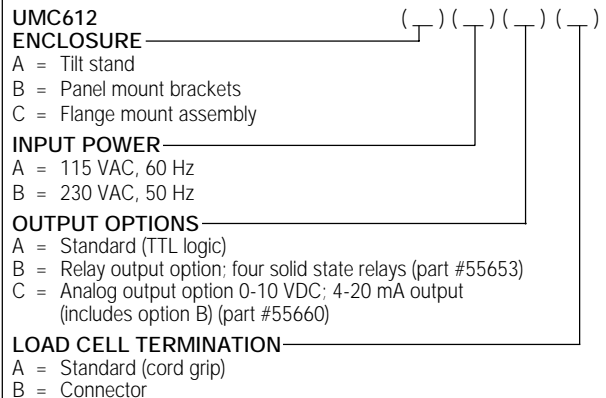- Checkweighing, draft weighing, setpoint control, automatic batching

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

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 program- mable 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

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:
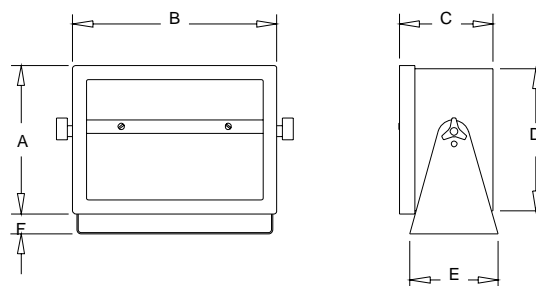NEMA 4X stainless steel

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)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

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

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:
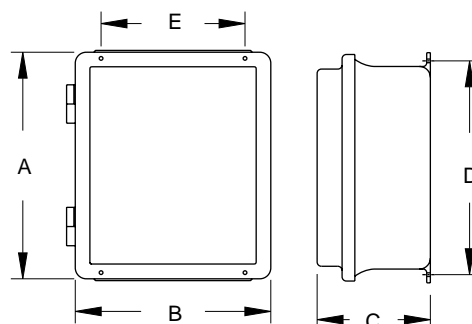14°F to 104°F (-10°C to 40°C)

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)

IQ plus® 810HE/810SS Digital Weight Indicator

Measurement Canada Approved

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)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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:
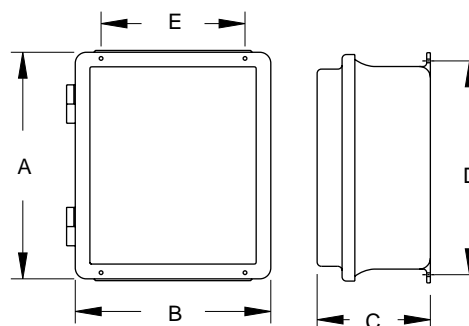IQ plus 810HE: approximately 17.3 lb (7.8 kg)
IQ plus 810SS: approximately 24 lb (10.9 kg)

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.*

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

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

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)
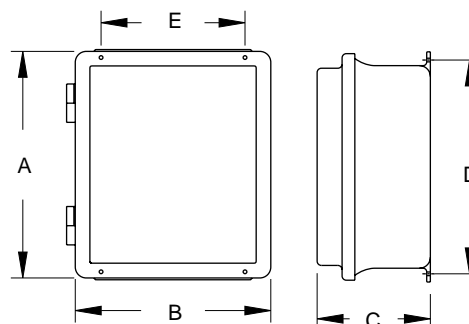
RATING/MATERIAL:
NEMA 4X FRP

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)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

SURVIVOR® CW-80   Checkweigher Indicator Only

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

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

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

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.

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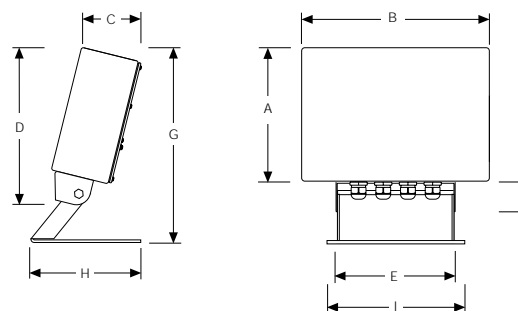
OPERATING TEMPERATURE:
14°F to 104°F (-10°C to 40°C)

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)	

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

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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:
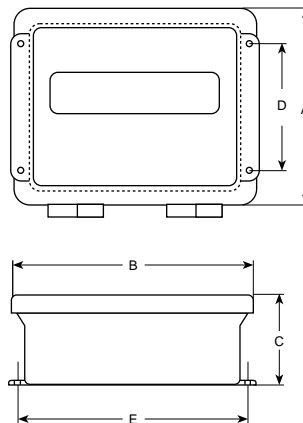-13°F to 104°F (-25°C to 40°C)

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)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale

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

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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:
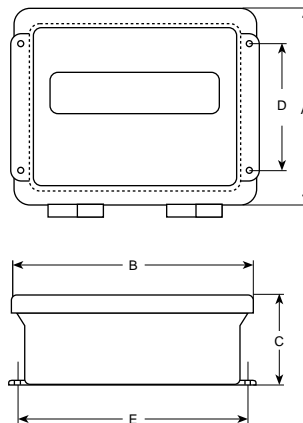-13°F to 104°F (-25°C to 40°C)

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)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

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)

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

IR-22

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
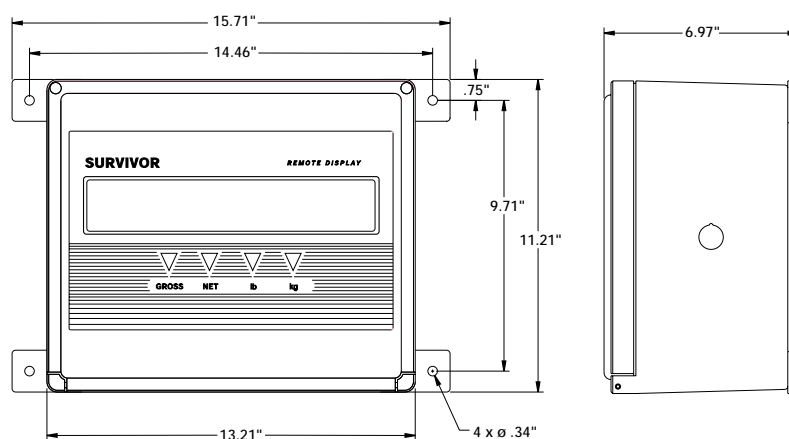70 lb (31.7 kg) SURVIVOR IQ F60

RATING/MATERIAL:
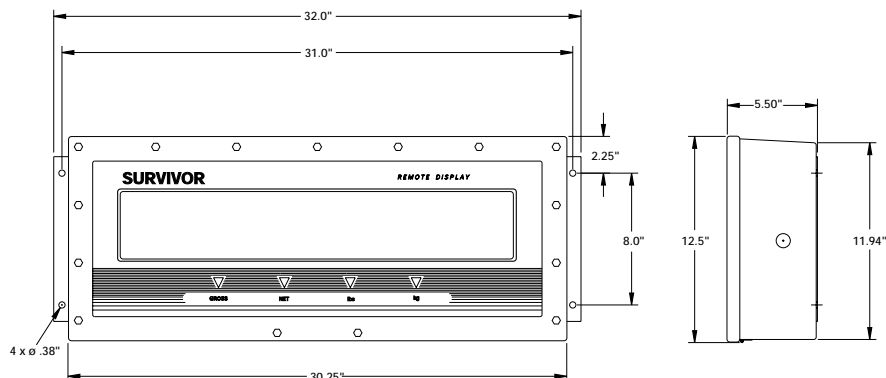All-steel NEMA 4 enclosure for 4" and 6" models
FRP enclosure on 1.5" model

WARRANTY:
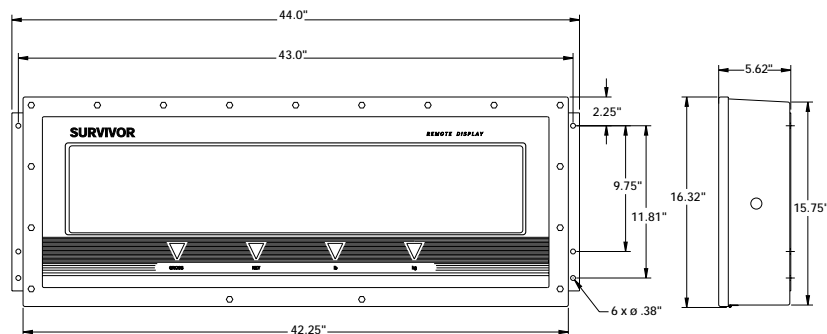One year limited warranty

PN #43598
SURVIVOR IQ F15

PN #40879
SURVIVOR IQ F40

PN #40880
SURVIVOR IQ F60

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

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale®

ISO 9001 REGISTERED

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
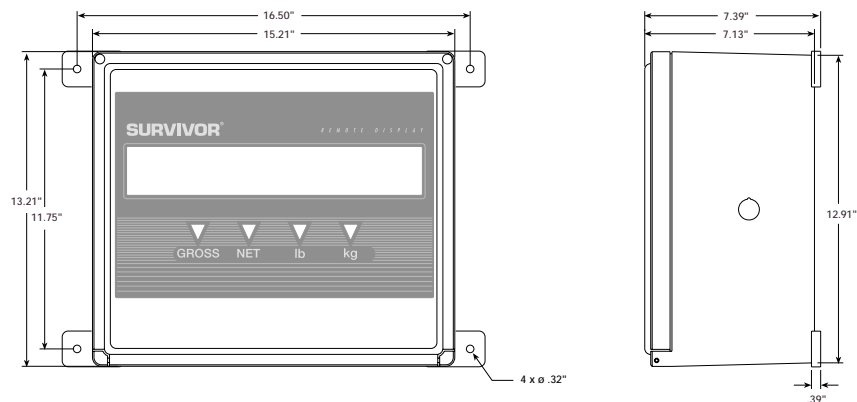
RATING/MATERIAL:
All-steel NEMA 4 enclosure on 3.0" model
NEMA 4 FRP enclosure on 2.0" model

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

RICE LAKE WEIGHING SYSTEMS
Industrial Solutions on a Global Scale