

ZLC™ 421 Zero Language Controller



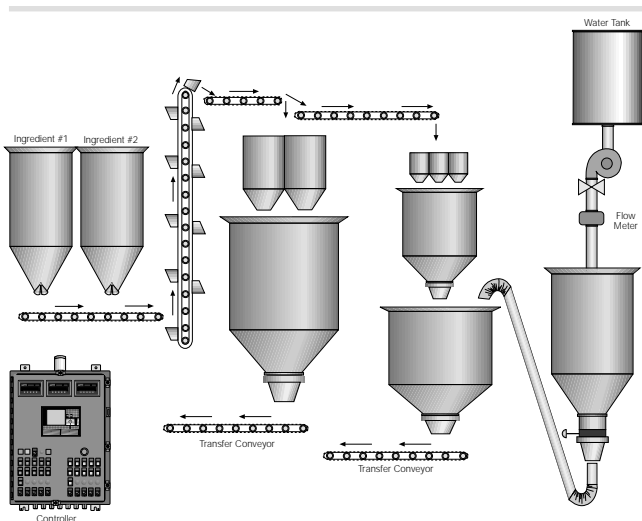
DESCRIPTION

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

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

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

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



(Specifications on back)

Applications

- Batching
- Process control

Standard Features

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

Options/Accessories

49580 Card, input/output digital 144 point

49581 Card, input/output digital 48 point

Consult factory for these additional options:

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

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

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

MATERIALS AND RECIPES:

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

EXTERNAL DEVICES:

Can be configured in the software

SECURITY:

Three levels of user security

BATCHING:

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

REPORTS:

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

TEST:

Test peripheral devices in a controlled manner

DISPLAY:

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

MOUSE:

Round membrane panel integrated mouse for permanent operation

KEYBOARD:

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

INTERFACE PORTS:

External PS/2 port
External PC 104 key style keyboard

DISK DRIVES:

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

SERIAL OUTPUT:

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

PARALLEL OUTPUT:

1 parallel port for printers

RELAY INPUTS AND OUTPUTS:

48 minimum, 144 standard, 288 maximum locally

POWER:

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

OPERATING TEMPERATURE:

41°F to 122°F (5°C to 50°C)
-13°F to 122°F (-25°C to 50°C) non-operating temperature

FRONT-PANEL LED INDICATORS:

Power On, Hard Drive Access, Over-Temperature, Caps Lock, and Insert

RELATIVE HUMIDITY:

8% to 80% non-condensing

OPERATING SHOCK:

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

UNIT WEIGHT:

37 lbs (not mounted in an enclosure)

DIMENSIONS (NOT INCLUDING NEMA 4 PAINTED MILD STEEL ENCLOSURE) APPROX:

Front panel height: 14" (355.6cm)
Width: 19" (482.6cm)
Depth: 8.38" (212.9cm)

WARRANTY:

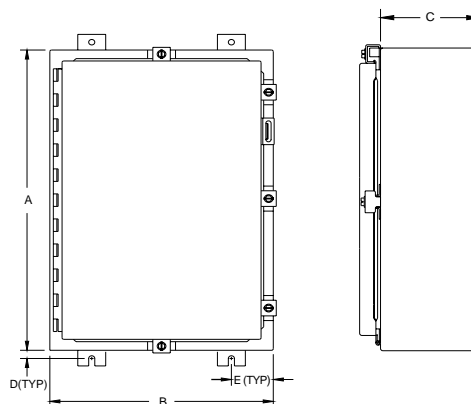
One year limited warranty on hardware
90-day warranty on software

OPERATING SYSTEM OPTIONS:

Windows 95/98/NT

VENTILATION:

Main ventilation fan (changeable filter)
Power supply fan



DIMENSIONS (TYPICAL)

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

CB-1 Concrete Batch Controller Dual-Scale Automated Batching System

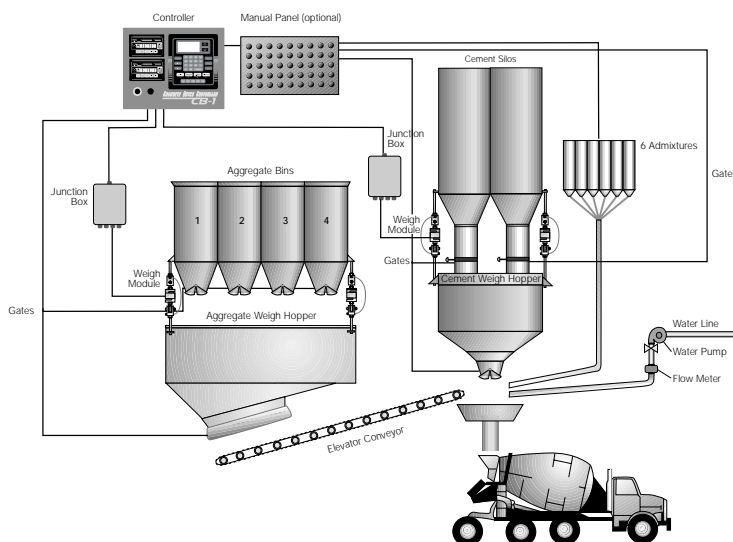


PART # DESCRIPTION

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

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

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



Applications

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

Standard Features

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

Options/Accessories

- 48418 PC program to upload/download parameter files
- 45045 Additional installation/operation manual

Consult factory for these additional options:

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

LOAD CELL EXCITATION (PER INDICATOR):

10 ± 0.5 VDC, 6 x 350-ohm load cells or 12 x 700-ohm

LOAD CURRENT:

175 mA maximum (6 350-ohm load cells)

INTERCONNECTION CABLE REQUIREMENTS:

6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:

0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:

0.3 microvolts/graduation minimum

Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:

±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:

50/second, typical

RESOLUTION:

Selectable up to 60,000 displayed graduations

Approximately 1,000,000 graduations internal

DISPLAY INCREMENTS:

1, 2, 5

UNDERRANGE BLANKING:

-2 mV signal nominal

OVER/UNDER CAPACITY ANNUNCIATION:

Overload displayed as: ---

Underload displayed as: ---

LEAD ZERO BLANKING:

Standard, per NIST H-44 requirements

DISPLAY:

0.55" 7-digit VFD weight displays,

5" x 2.5" backlit graphic LCD process display

POLARITY INDICATION:

" - " sign

DECIMAL POINTS:

8888888, 888888.8, 88888.88, 8888.888, 888.8888,

88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:

Front-panel push button

FRONT-PANEL KEYPAD:

32-key membrane keypad

FRONT-PANEL ANNUNCIATORS:

Motion, Center of Zero, Units

SERIAL OUTPUT:

"Printer" port, duplex RS-232

"PC" port, duplex RS-232/RS-485

OPTOISOLATED INPUTS:

20 inputs

RELAY OUTPUTS:

40 outputs

AZM APERTURE:

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

DIGITAL FILTERING:

Standard range software selectable

MOTION BAND:

1, 2, 3, off

MOTION TIME SENSITIVITY:

Fixed at 1 second

POWER:

Line voltages: 115 VAC +10%/-15%

Frequency: 50 or 60 Hz

Indicator Fusing: 100-120 VAC-2 x 0.25A SB (UL/CSA) 5 x 20mm

220-240 VAC-2 x 0.125A (IEC 127) 5 x 20mm

Output Controller Fusing: 3A TS5 Fastact fuse

OPERATING TEMPERATURE:

14°F to 104°F (-10°C to 40°C)

PACKAGING:

Enclosure: NEMA 4 painted mild steel

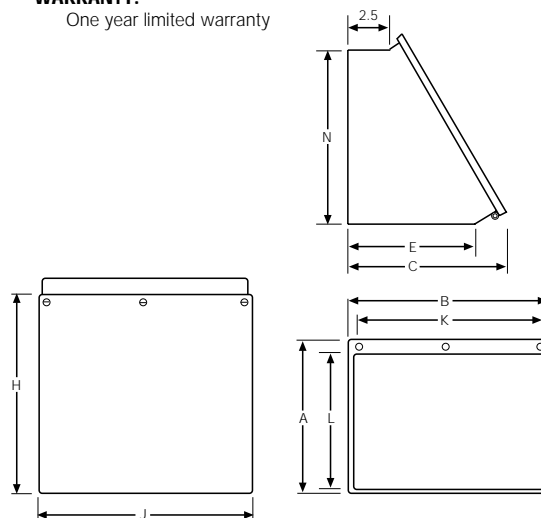
Weight: Approximately 45 lb (20.4 kg)

APPROVALS:

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

WARRANTY:

One year limited warranty



DIMENSIONS

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

BWC-1 Bulkweighing Controller



FGIS/GIPSA
approved

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

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

Applications

- Bulk shipping/receiving
- Railcars
- Barges

Standard Features

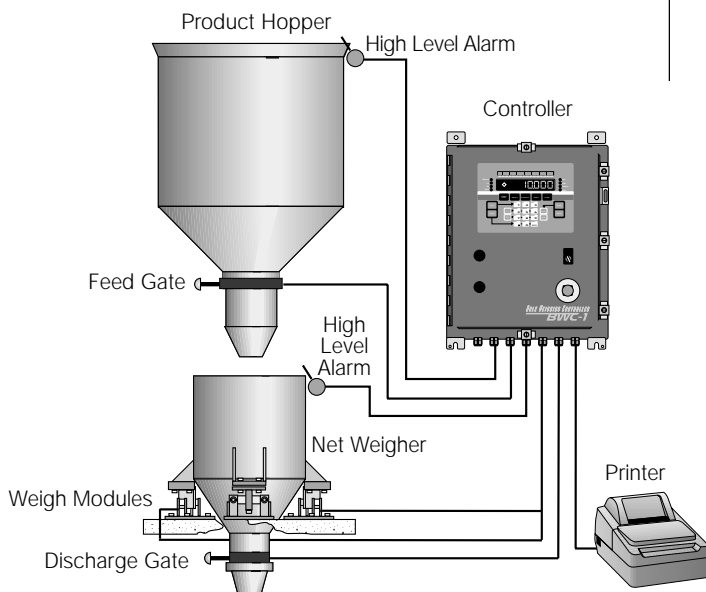
- Single-scale bulkweighing
- Up to 50 different products
- Two-speed fill for accurate drafts
- Automatic and manual operating modes
- Learned preacts for accurate filling
- NEMA 4 mild steel enclosure
- OPTO 22 G4 I/O modules
- Real-time accumulation
- RATTLETRAP® vibration control
- Safety interlocks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

Options/Accessories

- 65084 5' RS-232C printer interface cable assembly
- 65083 5' Epson printer status interface cable assembly

Consult factory for these additional options:

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



LOAD CELL EXCITATION:

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

LOAD CURRENT:

460 mA maximum (16 350-ohm load cells)

INTERCONNECTION CABLE REQUIREMENTS:

6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:

0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:

0.3 microvolts/graduation minimum

Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:

±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:

20/second, typical (standard resolution)

10/second, typical (high resolution)

RESOLUTION:

Selectable up to 100,000 displayed graduations

Selectable up to 740,000 graduations internal

DISPLAY INCREMENTS:

1, 2, 5

UNDERRANGE BLANKING:

-2 mV signal nominal

OVER/UNDER CAPACITY ANNUNCIATION:

Overload displayed as: ---

Underload displayed as: ...

LEAD ZERO BLANKING:

Standard, per NIST H-44 requirements

DISPLAY:

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

POLARITY INDICATION:

" - " sign

DECIMAL POINTS:

8888888, 888888.8, 88888.88, 8888.888, 888.8888,
88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:

Front-panel push button

FRONT-PANEL CONTROL SWITCHES:

Start/Stop, Target, Product, Draft, Done, Fill, Clear, F1, F2,
Cust, Cont, Dump, Print

FRONT-PANEL ANNUNCIATORS:

Manual, lb/kg, Slow, Low, High, Hopper/Gate

SERIAL OUTPUT:

"EDP" port, full duplex RS-232; 20 mA or RS-485 optional

"Printer" port, simplex RS-232 and 20 mA current loop

RELAY INPUTS:

8 inputs

RELAY OUTPUTS:

8 outputs standard

AZM APERTURE:

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

ANALOG FILTERING:

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

DIGITAL FILTERING:

Standard range software selectable: 1, 2, 4, 8, 16, 32, 64, 128

RATTLETRAP® high vibration control: 4, 8, 16, 32, 64, 128

MOTION BAND:

1, 2, 3, 5, 10, 20, off

MOTION TIME SENSITIVITY:

Fixed at 1 second

POWER:

Line voltages: 115 or 230 VAC +10%/-15%

Frequency: 50 or 60 Hz

Power consumption: 12 VA with minimum configuration, 30 VA
with all options

Fusing: 0.25A SB (UL/CSA) 5x20mm @ 120V operation

0.125A SB (UL/CSA) 5x20mm @ 240V operation

DISPLAY CHECK:

All digit segments and annunciators simultaneously illuminated
upon application of power

OPERATING TEMPERATURE:

14°F to 104°F (-10°C to 40°C)

PACKAGING:

Enclosure: NEMA 4 painted mild steel

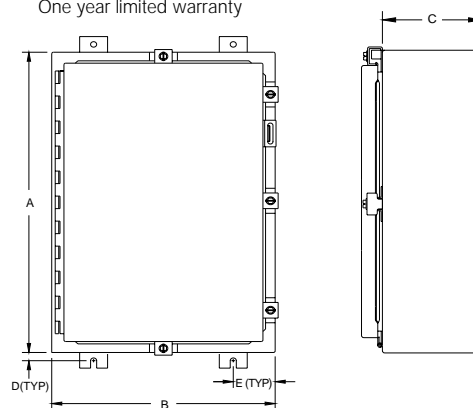
Weight: Approximately 40 lb (18 kg)

APPROVALS:

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

WARRANTY:

One year limited warranty


DIMENSIONS

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

ATS-1 Automated Truck Scale System



DESCRIPTION

ATS-1 Automated Truck Scale System

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

Applications

- Unattended gross vehicle weight
- Truck stops

Standard Features

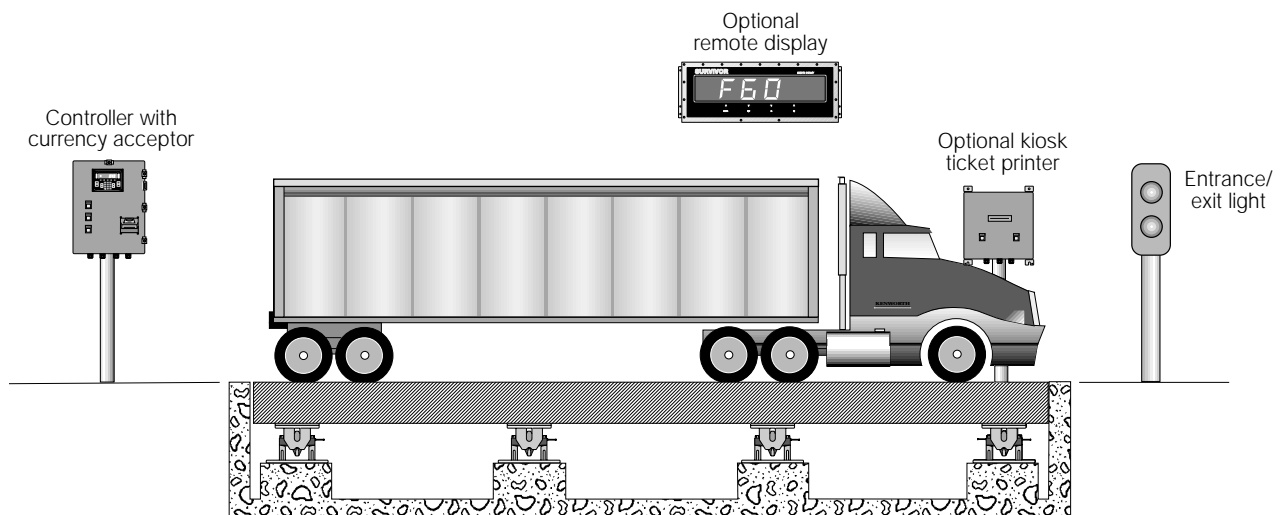
- Operator prompting
- Formattable tickets that print at the end of a transaction
- Traffic light control
- Transmits weight to remote display (only when activated)
- 115 VAC
- Currency acceptor (US currency only)

Options/Accessories

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

Consult factory for these additional options:

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



LOAD CELL EXCITATION:

10 ± 0.5 VDC, 32 x 700-ohm load cells

LOAD CURRENT:

115 mA maximum (8 700-ohm load cells)

INTERCONNECTION CABLE REQUIREMENTS:

6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:

0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:

0.3 microvolts/graduation minimum

Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:

±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:

20/second, typical

RESOLUTION:

Selectable up to 999,000,000 displayed graduations

740,000 graduations internal

DISPLAY INCREMENTS:

1, 2, 5

UNDERRANGE BLANKING:

-2 mV signal nominal

OVER/UNDER CAPACITY ANNUNCIATION:

Overload displayed as: ---

Underload displayed as: ---

LEAD ZERO BLANKING:

Standard, per NIST H-44 requirements

DISPLAY:

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

POLARITY INDICATION:

" - " sign

DECIMAL POINTS:

8888888, 888888.8, 88888.88, 8888.888, 888.8888,

88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:

Front-panel push button

FRONT-PANEL KEYPAD:

Mylar with stainless steel dome switches

FRONT-PANEL ANNUNCIATORS:

Motion, Center of Zero, Units

SERIAL OUTPUT:

"Remote Display" port, simplex RS-232

RELAY INPUTS:

3 inputs

RELAY OUTPUTS:

16 outputs

AZM APERTURE:

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

DIGITAL FILTERING:

Rattletrap

MOTION BAND:

1, 2, 3, 5, 10, 20, off

MOTION TIME SENSITIVITY:

Fixed at 1 second

POWER:

Line voltages: 115 VAC +10%/-15%, 230 VAC +10%-15%

Frequency: 50 or 60 Hz

Indicator Fusing: .1A TR5 Fastact fuse

DISPLAY CHECK:

All digit segments and annunciators simultaneously illuminated upon application of power

OPERATING TEMPERATURE:

14°F to 104°F (-10°C to 40°C)

PACKAGING:

Enclosure: NEMA 4 painted mild steel

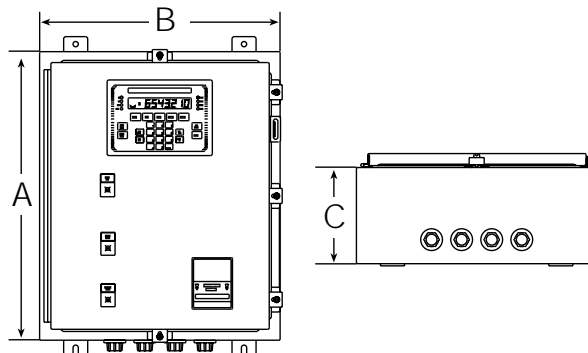
Weight: Approximately 40 lb (18 kg)

APPROVALS:

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

WARRANTY:

One year limited warranty

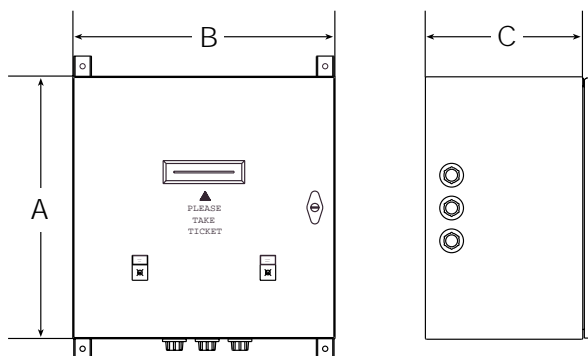


INDICATOR BOX DIMENSIONS

A = 20.00" (508mm)

C = 8.00" (203mm)

B = 16.00" (406mm)



PRINTER BOX DIMENSIONS

A = 20.00" (508mm)

C = 12.00" (mm)

B = 18.50" (mm)

ATS-2 Automated Truck Scale System

WITH

TRANSACT

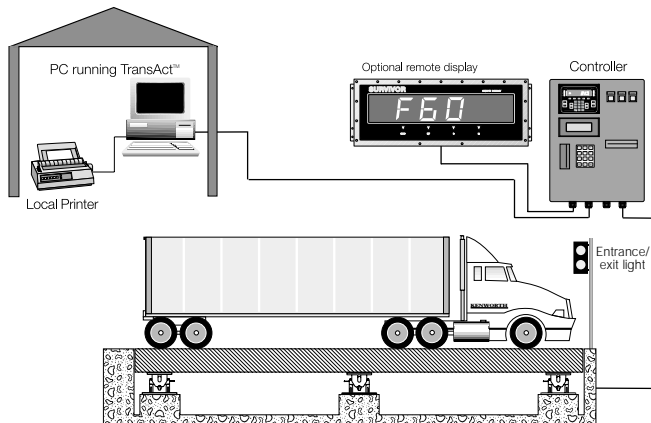
ULTIMATE DATA MANAGEMENT



PART # DESCRIPTION

44015	.....	ATS-2 Automated Truck Scale System, 115 VAC
44014	.....	ATS-2 Plus Automated Truck Scale System, 115 VAC

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



Pentium is a registered trademark of Intel Corporation

Applications

- Automated inbound/outbound scale terminals
- Unattended vehicle management

Standard Features

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

ATS-2 Plus:

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

Options/Accessories

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

Consult factory for these additional options:

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

(Specifications on back)

RICE LAKE WEIGHING SYSTEMS

Industrial Solutions on a Global Scale®



EPD-6

Controller Specifications:

LOAD CELL EXCITATION:

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

LOAD CURRENT:

460 mA maximum (16 350-ohm load cells)

INTERCONNECTION CABLE REQUIREMENTS:

6-wire selective (jumpers required on sense leads for 4-wire)

ANALOG SIGNAL INPUT RANGE:

0.6 mV/V - 3.9 mV/V

ANALOG SIGNAL SENSITIVITY:

0.3 microvolts/graduation minimum

Legal-for-trade recommended minimum 1 microvolt/graduation

INPUT OVERLOAD:

±12V continuous, static discharge protected

CONVERSION RATE AT FULL SCALE:

20/second, typical (standard resolution)

10/second, typical (high resolution)

RESOLUTION:

Selectable up to 100,000 displayed graduations

Selectable up to 740,000 graduations internal

DISPLAY INCREMENTS:

1, 2, 5

UNDERRANGE BLANKING:

-2 mV signal nominal

OVER/UNDER CAPACITY ANNUNCIATION:

Overload displayed as: ---

Underload displayed as: ...

LEAD ZERO BLANKING:

Standard, per NIST H-44 requirements

DISPLAYS:

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

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

POLARITY INDICATION:

" - " sign

DECIMAL POINTS:

8888888, 888888.8, 88888.88, 8888.888, 888.8888,

88.88888, 8.888888, 8888800, 8888880

LB/KG SWITCHING:

Front-panel push button

FRONT-PANEL ANNUNCIATORS:

Paper low, Printer Error, System Error, lb/kg, motion center of zero

SERIAL OUTPUT:

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

INPUTS (2):

Inbound photoeye/loop detector

Outbound photoeye/loop detector

OUTPUTS (4):

Inbound red/green lights

Outbound red/green lights

AZM APERTURE:

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

ANALOG FILTERING:

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

DIGITAL FILTERING:

Standard range software selectable: 1, 2, 4, 8, 16, 32, 64, 128

RATTLETRAP® high vibration control: 4, 8, 16, 32, 64, 128

MOTION BAND:

1, 2, 3, 5, 10, 20, off

MOTION TIME SENSITIVITY:

Fixed at 1 second

POWER:

Line voltages: 115 VAC +10%/-15%

Frequency: 50 or 60 Hz

Fusing: 5A circuit breaker

DISPLAY CHECK:

All digit segments and annunciators simultaneously illuminated upon application of power

OPERATING TEMPERATURE:

14°F to 104°F (-10°C to 40°C)

PACKAGING:

Enclosure: NEMA 4 painted mild steel

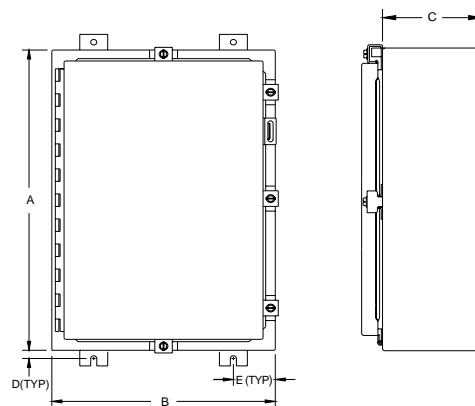
Weight: Approximately 100 lb (45.3 kg)

APPROVALS:

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

WARRANTY:

One year limited warranty



DIMENSIONS

A = 30.00" (762mm)

B = 24.00" (610mm)

C = 12.00" (305mm)

D = 0.62" (16mm)

E = 3.0" (76mm)

PC Specifications (minimum):

PROCESSOR:

Intel 166 mHz Pentium with MMX technology

MEMORY:

32 MB SDRAM

HARD DRIVE:

2 GB 11mS Ultra ATA

CD ROM:

12x min, 24x max

MONITOR:

15" (13.9" viewable)

GRAPHICS ADAPTER:

2 MB 3-D 64-bit PCI

PC PACKAGE CONTAINS:

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

WARRANTY:

PC warranty is through PC manufacturer

Windows is a trademark of Microsoft Corporation

IMC-1 In-motion Checkweighing System

DEMO CD
Available
Upon Request



Complete system includes: controller, scale, and conveyor.



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

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

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

Applications

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

Standard Features

Controller:

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

Conveyor:

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

Scale:

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

Options/Accessories

Consult factory for these additional options:

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

CONTROLLER:**DISPLAY:**

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

KEYBOARD:

Full alphanumeric keypad

VOLTAGE:

115 VAC

FREQUENCY:

50/60 Hz

RELAY OUTPUT:

24 VDC to 115 VAC

REAL TIME CLOCK:

Time and date are standard

CAPACITY:

10 lb to 120 lb

DISPLAYED RESOLUTION:

0.02 lb, 0.01 kg

TYPICAL ACCURACY:

± 0.05 lb, 0.03 kg (@ 2 Sigma)

TYPICAL REPEATABILITY:

± 0.03 lb (@ 2 Sigma)

RELAY OUTPUT:

Five-zone

OVERALL DIMENSIONS:

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

SHIPPING WEIGHT:

25 lb (11.34 kg)

WARRANTY:

Two year limited warranty

CONVEYOR:**SPEED:**

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

PRODUCTION RATES:

0 to 350 units per minute
0 to 60 units per minute

VOLTAGE:

115 or 230 VAC

OVERALL DIMENSIONS:

Application dependent

SHIPPING WEIGHT:

Application dependent

WARRANTY:

Two year limited warranty

SCALE:**CAPACITY:**

Up to 500 lb

LOAD CELL:

High-alloy tool steel, double chrome over nickel

OVERALL DIMENSIONS:

Application dependent

APPROVALS:

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

SHIPPING WEIGHT:

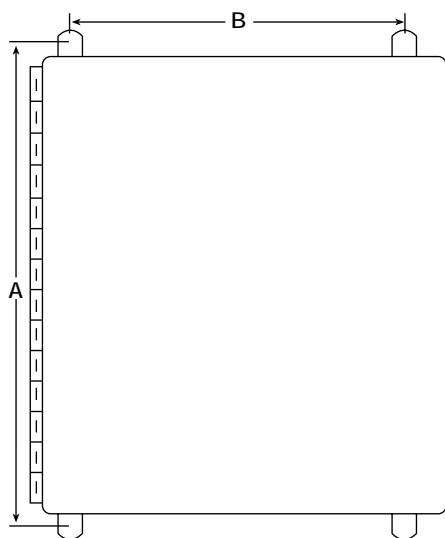
Application dependent

WARRANTY:

Two year limited warranty

CONTROLLER DIMENSIONS

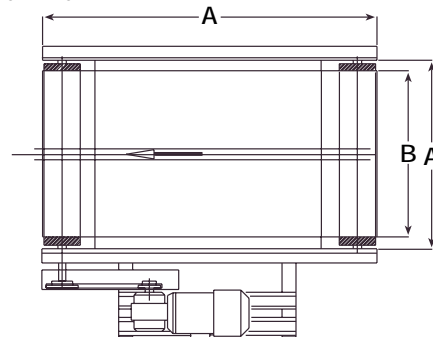
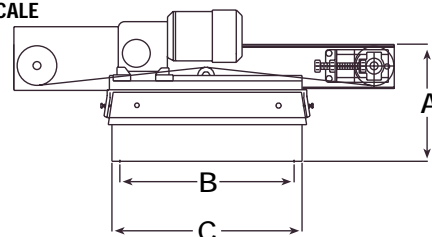
A = 12" (304mm) B = 19.9" (429mm)

**CONVEYOR & SCALE DIMENSIONS****Conveyor:**

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

Scale:

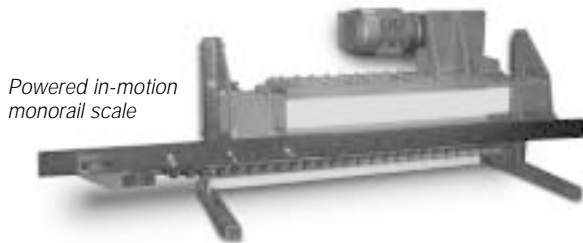
A = 15.4" (391mm) B = 22" (558mm)
C = 24" (609mm)

CONVEYOR**SCALE**

Sortation/Classifier Systems



Sortation/classifier system



Powered in-motion monorail scale

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

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

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

Applications

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

Standard Features

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

Options/Accessories

Consult factory for these additional options:

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

CONTROLLER:

KEYBOARD:

Full alphanumeric keypad

VOLTAGE:

115 or 230 VAC

FREQUENCY:

50/60 Hz

RELAY OUTPUT:

24 VDC to 230 VAC

REAL TIME CLOCK:

Time and date are standard

CAPACITY:

10 lb to 120 lb

DISPLAYED RESOLUTION:

0.01 lb, 0.05 kg

TYPICAL ACCURACY:

± 0.05 lb, 0.03 kg (@ 2 Sigma)

TYPICAL REPEATABILITY:

± 0.03 lb (@ 2 Sigma)

RELAY OUTPUT:

Up to 28 zones

OVERALL DIMENSIONS:

application dependant

WARRANTY:

One year limited warranty

CONVEYOR:

SPEED:

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

PRODUCTION RATES:

0 to 120 units per minute

VOLTAGE:

115 or 230 VAC

OVERALL DIMENSIONS:

Application dependent

SHIPPING WEIGHT:

Application dependent

WARRANTY:

One year limited warranty

SCALE:

CAPACITY:

Up to 120 lb

LOAD CELL:

Aluminum single point

OVERALL DIMENSIONS:

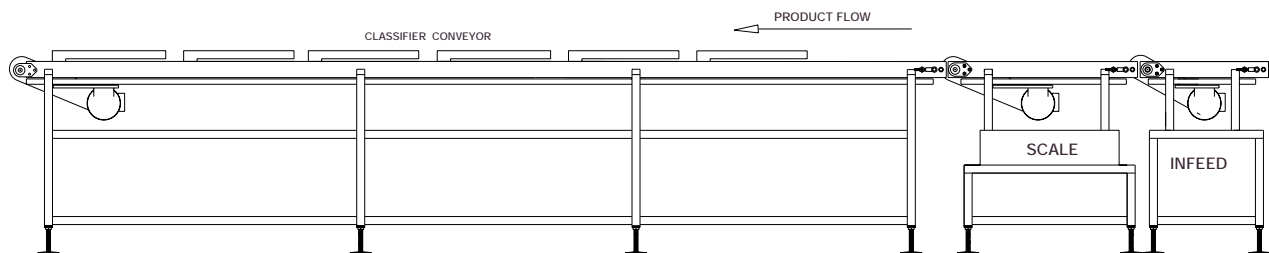
Application dependent

SHIPPING WEIGHT:

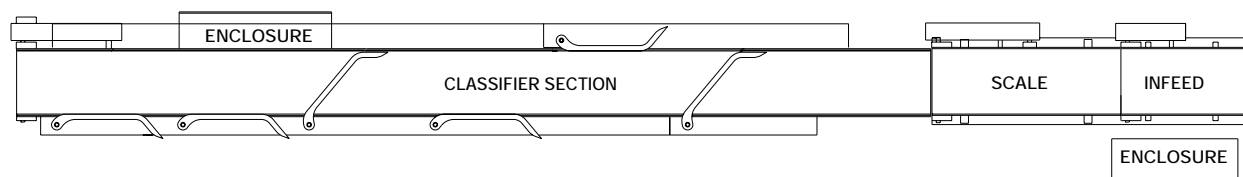
Application dependant

WARRANTY:

One year limited warranty



Sortation/Classifier Side View



Sortation/Classifier Top View

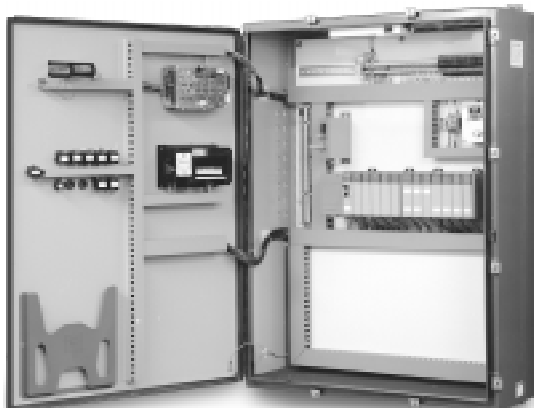
Allen-Bradley Components



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

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

The SLC 5/03 processors allow modular configuration of up to 960 I/O (discrete digital and analog I/O modules, and intelligent I/O modules) and a 12K instruction



Example of Rice Lake-manufactured Allen-Bradley controller system

memory capacity. With bit execution times of less than 0.5 μ s, they set the pace for speed in small programmable controllers. In addition to DF1 and DH-485 serial communication capabilities, the SLC 5/03 processor also supports reading and writing ASCII strings.

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

Applications

- Packaging
- Bottling
- Canning
- Material handling
- SCADA



Standard Features

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

Options/Accessories

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



PanelView 600 color display

For Use With:

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

Controllers Specifications:**I/O CAPACITY:**

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

I/O MODULE TYPES:

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

MEMORY CAPACITY:

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

MEMORY TYPE:

Battery-backed RAM, EPROM, or EEPROM

POWER-SUPPLY LOADING:

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

WARRANTY:

One year limited warranty

Power Supply Specifications:**LINE VOLTAGE:**

85-132/170-265 VAC, 47-63 Hz

LINE POWER REQUIREMENT:

165 VA @ 120 VAC, 180 VA @ 240 VAC

MAXIMUM INRUSH CURRENT:

20A

INTERNAL CURRENT CAPACITY:

5A @ 5 VDC, 0.96A @ 24 VDC

FUSE PROTECTION:

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

24 VDC USER POWER CURRENT CAPACITY:

200 mA

24 VDC USER POWER VOLTAGE RANGE:

18-30 VDC

AMBIENT OPERATING TEMPERATURE RANGE:

32 to 140°F (0 to 60°C)
(Current capacity derated 5% above 55°C)

STORAGE TEMPERATURE:

-40 to 185°F (-40 to 85°C)

HUMIDITY RATING:

5-95% non-condensing

WIRING:

2 #14 AWG wires per terminal, max

APPROVALS:

UL, CSA

WARRANTY:

One year limited warranty

Solar Power Systems

NEW!
Product



DESCRIPTION

- Solar Power System

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

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

Applications

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

Standard Features

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

Options/Accessories

Consult factory for these additional options:

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

SOLAR MODULE:**MAXIMUM POWER:**

20 Watts

VOLTAGE AT PEAK POWER:

17.1 Volts

CURRENT AT PEAK POWER:

1.17 Amps

GUARANTEED MINIMUM POWER:

18 Watts

MODULE DIMENSIONS:

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

WARRANTY:

Five year limited warranty

ATS Options



DESCRIPTION

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



DESCRIPTION

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

DESCRIPTION

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



DESCRIPTION

- Model G-89 barrier gate



DESCRIPTION

- 9" diagonal B/W video monitor



DESCRIPTION

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



DESCRIPTION

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



DESCRIPTION

- Microprocessor-based intercom system

DESCRIPTION

- VHS time-lapse recorder/player



Intercom Systems

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

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



TAP-1R-CM



TAP-4R-CM



K-C-20 Horn Speaker



TAP-200C
Amplifier/Power Supply



Futaba Industrial 3-Channel Radio Control System

Specifications

FREQUENCY:

304 MHz, single frequency

FREQUENCY CONTROL:

Surface-Acoustic-Resonator (SAW)

WAVE FORM:

AM ASK

BASEBAND DATA FORMAT:

Direct Sequence Encoded

COMMUNICATION MODE:

Omni-directional, simplex

ERROR CHECKING:

CRC-CCIT

DATA CHANNELS:

3 discrete channels

SECURITY:

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

OPERATING DISTANCE:

More than 65 ft, greater with line-of-sight

RESPONSE TIME:

150 ms average

STORAGE TEMPERATURE:

-4° to + 140° F (-20° C to + 60° C)

HUMIDITY:

Up to 90% RH, non-condensing

VIBRATION TEST CONDITION:

4.4 G

SHOCK TEST CONDITION:

20 G

WARRANTY:

One year limited warranty

Futaba Industrial 6-Channel Radio Control System

Specifications

FREQUENCY:

3.15.95 to 319.05 MHz

FREQUENCY CONTROL:

Crystal-controlled frequency synthesizer

COMMUNICATIONS:

Simplex

OPERATING DISTANCE:

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

OPERATING TEMPERATURE:

-4° to 146°F (-20° to 60°C)

HUMIDITY:

Up to 90% RH, non condensing

VIBRATION TEST:

4.4 G

SHOCK TEST:

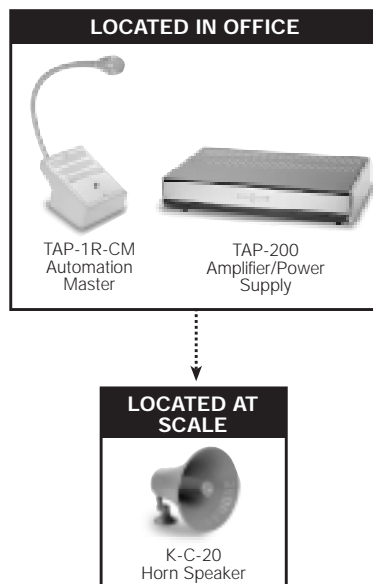
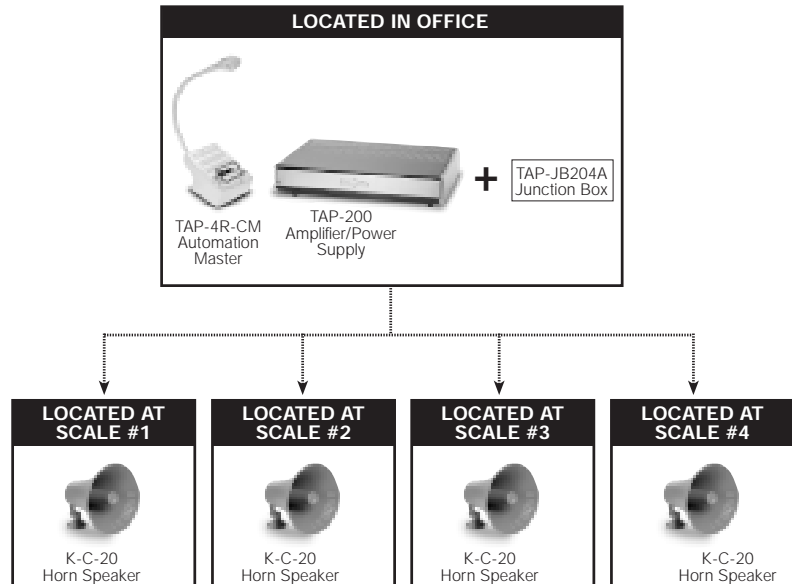
20 G

WARRANTY

One year limited warranty

Intercom Systems

System Diagram

SYSTEM EXAMPLE 1:**SYSTEM EXAMPLE 2:**

Keypads



PART # DESCRIPTION

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



PART # DESCRIPTION

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



PART # DESCRIPTION

22478 Waterproof alpha and numeric keypads* (panel mount)

*RS-232 requires Part #38472

For Use With:

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



PART # DESCRIPTION

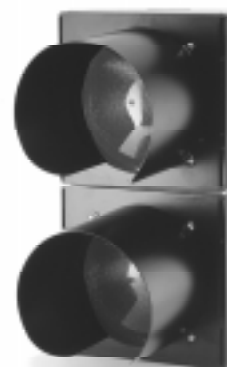
36914 Vandal-proof cast aluminum keypad*

*RS-232 requires Part #38472

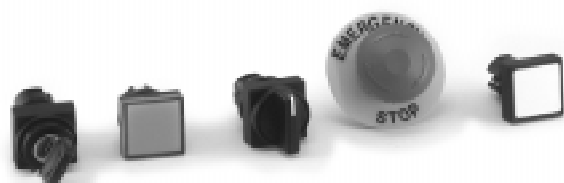
Traffic Light Kits

DESCRIPTION

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



Manual Overrides



DESCRIPTION

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

Alarms



PART # DESCRIPTION

22838 Buzzer, 80 dB, steady

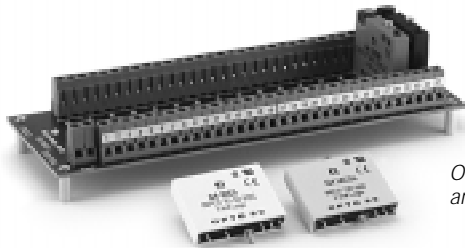
22839 Buzzer, 80 dB, pulse

43931 Strobe lights, red

43930 Strobe lights, amber

43929 Strobe lights, blue

Input/Output Components



*OPTO 22 G4 Relays
and Relay Board*

OPTO 22 COMPONENTS:

PART #	DESCRIPTION
--------	-------------

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

OTHER RELAYS:

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



PART #	DESCRIPTION
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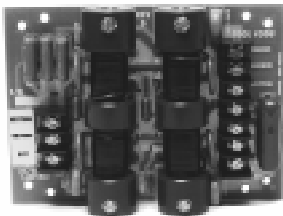
43942	Allen-Bradley multi-function relay with digital display
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PART #	DESCRIPTION
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29616	Dayton multi-function relay
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EL226 Transient Protection Board



PART #	DESCRIPTION
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21159	EL226 AC Transient Protection Board
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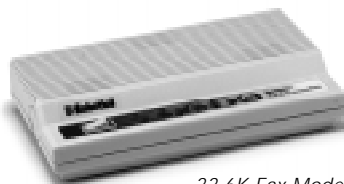
Applications

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

Standard Features

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

Modem



33.6K Fax Modem

PART #	DESCRIPTION
--------	-------------

43928	33.6K Fax modem
-------	-----------------

Applications

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

Standard Features

Fax modems:

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

EZ-Com Wireless LAN Transceiver



PART #	DESCRIPTION
43798	WL9D-MOD EZ-Com Wireless LAN Transceiver*

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

Applications

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

Standard Features

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

Options/Accessories

43797 Directional Yagi antenna

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

Trilithic Transceiver



PART #	DESCRIPTION
52378	Transceiver*
63110	Transceiver kit**

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

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

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

Consult factory for application limitations.

Applications

- Wireless serial communications
- Remote displays, printers, computers

Standard Features

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

Options/Accessories

52376 Yagi antenna

52377 Patch antenna

52375 Omni antenna

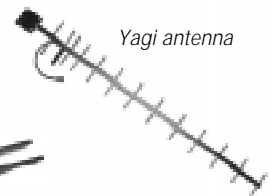
65414 Window antenna



Patch antenna



Omni antennas



Yagi antenna



Window antennas

SUPPLY VOLTAGE:

11 to 25 VDC

CURRENT CONSUMPTION:

500 mA receive, 1.2A transmit

INTERFACE TYPE:

RS-232 (EIA/TIA-232-E)

LINES SUPPORTED:

Tx, Rx, Gnd, CTS

WAVEFORM:

Direct sequence spread spectrum

RF FREQUENCY BAND:

902 to 928 MHz

MODULATION TYPE:

Differential QPSK

COMMUNICATION MODE:

Half duplex

CHIP RATE:

10.0 Meps

CHANNEL BURST DATA RATE:

Programmable to 317.5, 645.2, 1818.2 kbps

PROCESSING GAIN:

10 dBm minimum

RECEIVER SENSITIVITY AT 10-6 BER:

-104 dBm

MAXIMUM TRANSMITTER OUTPUT POWER:

1.0 W

MAXIMUM EFFECTIVE RADIATED POWER:

4 W (36 dBm)

SPURIOUS OUTPUT:

FCC Part 15; meets 15.245 & 15.247

INDICATORS:

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

OPERATING TEMPERATURE RANGE:

-40 to 70°C

HUMIDITY:

0 to 90%

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

8 lb (3.6 kg)

WARRANTY:

One year limited warranty

Trilithic Transceiver

Specifications

INDOOR RANGE:

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

OUTDOOR RANGE:

Line of sight up to 2 miles (3.2 km) standard antenna

Line of sight up to 12 miles (19.3 km) optional antenna

DATA RATE:

9.6 KB full duplex per channel

CHANNELS:

1 channel with access to 550 independent frequencies

CONNECTIVITY:

Standard serial (RS-232)

FREQUENCY BAND:2.4 GHz license-free industrial, scientific, and medical (ISM)
band**RADIO TYPE:**

Frequency-hopping spread-spectrum (FHSS)

RADIO POWER OUTPUT:

10mW to 500mW

RADIO ANTENNAS:

Standard omni-directional (optional types available)

RADIO WEIGHT:

1 lb (.45 kg)

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

-4° F to 140° F (-20° C to 60°C)

CERTIFICATIONS:

FCC Part 15

RADIO INPUT VOLTAGE:

115 Volt wall-former

7.2 Volt battery pack

WARRANTY:

One year parts and labor

Ethernet Thin Server



PART #	DESCRIPTION
65383	Ethernet Thin Server

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

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

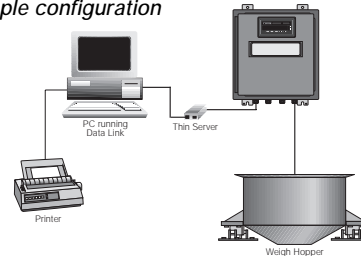
Applications

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

Standard Features

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

Sample configuration



Model 8555 Load Cell to Frequency Converter



PART #	DESCRIPTION
65415	Model 8555 Converter

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

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

Applications

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

Standard Features

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

PROTOCOLS SUPPORTED:

ARP, UDP, TCP, Telnet, ICMP, SNMP, DHCP, TFTP and HTTP

DEVICE SUPPORT:

Supports any asynchronous serial device with 7- or 8-bit data, with or without parity requiring Ethernet access

NETWORK INTERFACE:

RJ45 (10BASE-T) Ethernet

SERIAL INTERFACE:

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

DATA RATES:

Serial speeds 300 bps to 115Kbps

MODEM CONTROLS:

RTS, CTS, DSR, DCD and DTR

FLOW CONTROL:

Software: XON/XOFF

Hardware: CTS/RTS

MANAGEMENT:

Internal HTTP server

SNMP (read only)

Serial login

Telnet login

FIRMWARE:

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

LEDs:

Good link: green

Network transmit/receive data: yellow

Collisions: red

Diagnostic: red

Status: green

POWER REQUIREMENTS:

External adapter included as 115 VAC

Required input power or 6.0 - 9 VDC @ 250 mA maximum

OPERATING TEMPERATURE:

41° F to 122° F (5° C to 50° C)

STORAGE TEMPERATURE:

-40° F to 151° F (-40° C to 66° C)

WEIGHT:

0.8 lb (0.35 kg)

DIMENSIONS:

0.9" H x 2.5" W x 3.5" D

APPROVALS:

CE marked, FCC B, TUV, CUL listed

WARRANTY:

One year limited warranty

Model 8555

Specifications

INPUT:

0 to 50 mV differential signal from full bridge strain gauge

RESISTANCE:

1000 mega-ohm Ω

CURRENT:

10 nA

COMMON MODE:

0 to +5 volts

OUTPUT:

0 to 5 kHz, floating optocoupler transistor, 7 mA pulse - 50 μ Sec width

RESOLUTION:

10 microvolts - 12 bits

BRIDGE EXCITATION:

10 volts for one 350 Ω bridge

POWER REQUIREMENTS:

24 VDC @ 45 mA

DIMENSIONS:

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

WARRANTY:

430 Bridgesensor 4-20 mA Load Cell Signal Conditioner



Applications

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

Standard Features

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

PART # DESCRIPTION

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

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

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

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

EXCITATION:

4-15 VDC adjustable

LOAD CURRENT:

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

TRANSDUCER CABLING:

6-wire with remote sensing, 4-wire with sense jumpers

ANALOG SIGNAL INPUT RANGE:

10-50 mV

LINEARITY:

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

TEMPERATURE STABILITY:

59°F to 93°F (15°C to 35°C)

.02% F.S.O./°C @ 320 mA/V maximum

.02% F.S.O./°C @ 1600 mA/V maximum

Hysteresis 0.1% maximum

OUTPUT CURRENT:

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

OUTPUT LOOP RESISTANCE:

0-500 ohms

OUTPUT RESPONSE TIME:

To 1% of final value—200 mS, typical

To 0.1% of final value—300 mS, typical

POWER INPUT:

115 VAC, ±10% 50/60 Hz @ 6.5 VA maximum

Optional: 100, 220 or 240 VAC

OPERATING TEMPERATURE RANGE:

32°F to 131°F (0°C to 55°C)

PACKAGING:

Epoxy potted plastic enclosure with exposed screw terminal connections

WEIGHT:

18 oz (510 g)

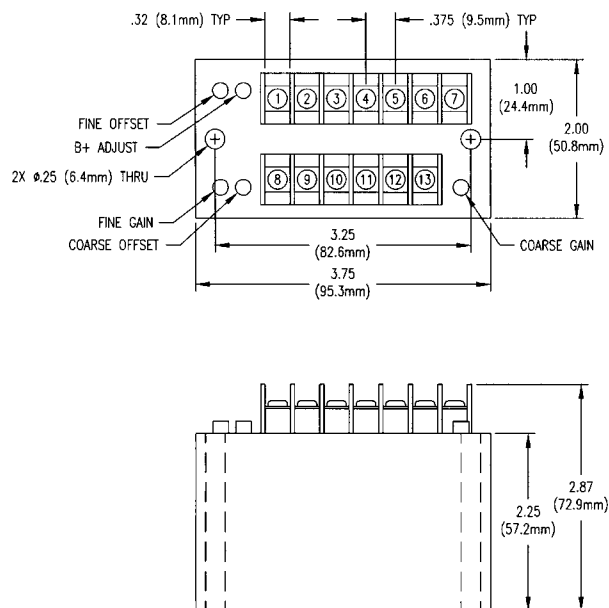
WARRANTY:

One year limited warranty

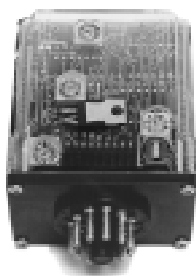
430 ELECTRICAL CONNECTIONS

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

CASE DIMENSIONS:



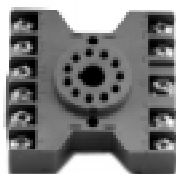
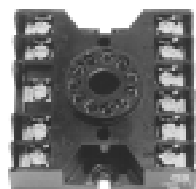
API 4058G - 441/442 Bridgesensors Load Cell Signal Conditioners



API 4058G Bridgesensor



441/442 Bridgesensor



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

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

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

Applications

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

Standard Features

API 4058G Bridgesensor:

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

441/442 Bridgesensor:

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

API 4058G Bridgesensor Specifications:**INPUT/OUTPUT RANGES:**

See table. Other switch-selectable ranges possible. See calibration instructions for more complete information, or consult factory.

INPUT IMPEDANCE:

1 Megohm minimum

OUTPUT CAPABILITY:

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

ZERO/SPAN CONTROLS:

Top-accessible, multi-turn
Range: $\pm 15\%$ of span typical

EXCITATION:

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

EXCITATION STABILITY:

$\pm 0.1\%$ per degree Celsius

RESPONSE TIME:

70 mS standard

COMMON MODE REJECTION:

Better than .02% of span per degree Celsius

OPERATING TEMPERATURE RANGE:

14 to 140°F (-10 to 60°C)

POWER:

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

APPROVALS:

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

WEIGHT:

Approximately 2 lb (0.9 kg)

WARRANTY:

One year limited warranty

API 4058G INPUT/OUTPUT RANGES:

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

Bridgesensor 441/442 Specifications:**INPUT/OUTPUT RANGES:**

See table below. Other switch-selectable ranges possible.

INPUT IMPEDANCE:

200K ohm typical

OUTPUT CAPABILITY:

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

ZERO/SPAN CONTROLS:

Top-accessible, multi-turn, non-interactive
Range: $\pm 15\%$ of span typical

EXCITATION:

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

EXCITATION CURRENT CAPABILITY:

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

EXCITATION STABILITY:

$\pm 0.1\%$ per degree Celsius

RESPONSE TIME:

70 mS standard; faster responses available

SENSE LEAD COMPENSATION:

Better than 0.01% per 1 ohm change in leadwire resistance

LEADWIRE RESISTANCE:

10 ohm max for 10 VDC excitation/350-ohm bridge

COMMON MODE REJECTION:

100 dB minimum

ISOLATION:

2000 V RMS minimum

OPERATING TEMPERATURE RANGE:

14 to 140°F (-10 to 60°C)

POWER:

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

WARRANTY:

Lifetime

441/442 INPUT/OUTPUT RANGES:

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

X-Purge Components



DESCRIPTION

- X-Purge system components

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

Call a Rice Lake EPD Sales Engineer for more information.

Applications

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

Options/Accessories

X- & Z-Purge:

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

X-Purge Only:

- Operational bypass switch
- Rapid Exchange® purging technology

Z-Purge Components



DESCRIPTION

- Z-Purge system components



Vent



Explosion-proof audible alarm



Explosion-proof strobe light

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

Custom Systems Financial Terms/Custom Software Warranty Statement

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

FINANCIAL TERMS:

USA AND CANADA:

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

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

Orders greater than \$5,000:

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

INTERNATIONAL:

Cash In Advance

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

OR

Letter of Credit

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

DISCOUNTS AND SELLING PRICE:

All custom system prices quoted are Net.

CANCELLATIONS AND RETURNS:

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

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

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

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

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

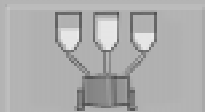
- Upon discovery by Buyer of such non-conformity, RLWS will be given prompt written notice with a detailed explanation of the alleged deficiencies.
- Examination of software by RLWS confirms that the non-conformity exists, and was not caused by accident, misuse, neglect, alteration, improper installation,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

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

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

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

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



Batch Control



Bulk Inventory Management



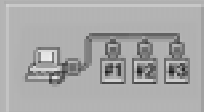
Flow Rate Control



Motion/Weighing



Feedback Control



Controller Networking

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



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

THE RICE LAKE ADVANTAGE

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

COMPREHENSIVE SOLUTIONS

Our experience has taught us that there is no such thing as a "preliminary quote." We provide comprehensive solutions. However, in order to provide comprehensive solutions, we have to understand your customer's application. To help you get the most out of every application, call or fax us and we will provide you with a

questionnaire. Please use this as a guide when talking to your customer. Then send or fax it to us and one of our sales engineers will call you to discuss any remaining questions.

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



WE'LL MAKE IT YOUR WAY

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

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





4 EASY STEPS TO CUSTOM CONTROLLERS...

START

1

COMPLETING A SYSTEM SPECIFICATION

Contact our Engineered Product Development (EPD) Sales Engineers by phone or fax to outline your custom application. We will respond with a easy to use systems questionnaire. Return the questionnaire and we will prepare a detailed Project Specification. You will then receive the Project Specification including a quote and a tentative lead time for your review and approval. Return the Project Specification to Rice Lake Weighing Systems with any changes and the approval signature of both key contacts.

2

ESTABLISHING AN ORDER

Three items are required to move your order into production:

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

3

SYSTEM DEVELOPMENT

During the development process, teleconferences will be scheduled to review project components. These communications give you a real-time opportunity to review the project for accuracy in meeting the project specification, and allow time for any requested modifications. Project modifications are handled much more efficiently when made early in the development process. All modifications based on teleconferences are documented by your Sales Engineer and promptly communicated to you. Remember, extensive changes to system functionality can be expensive. Be certain to gain a complete understanding of your system during system specification and sign off.

4

SYSTEM INSTALLATION AND START UP

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

\$1000.00 per work day (not to exceed 8 work hours). Additional daily hours prorated at \$150.00/hour. An additional 50% charge will be added for Saturday and Sunday services performed. Customer is responsible for travel expenses between Rice Lake, Wisconsin and job location, regardless of mode of transportation. Travel time is included in the per-day charge. Meals, lodging, and shipment of special equipment to and from the on-site location will be billed at cost. Discounts do not apply to on-site support service rates.

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

Controller Platform Comparative Matrix/Price Ranges

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

* Man-Machine Interface

Rice Lake Weighing Systems PC Programming Services

Custom PC programs for:

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

Industries Supported

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

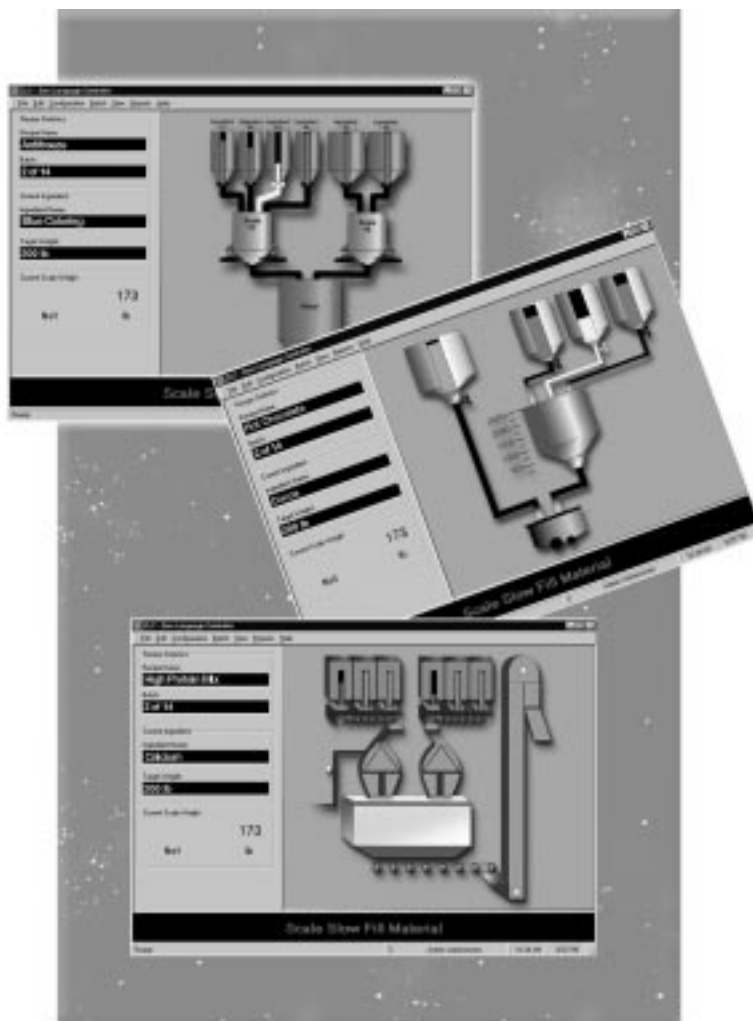
Operating Environment

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

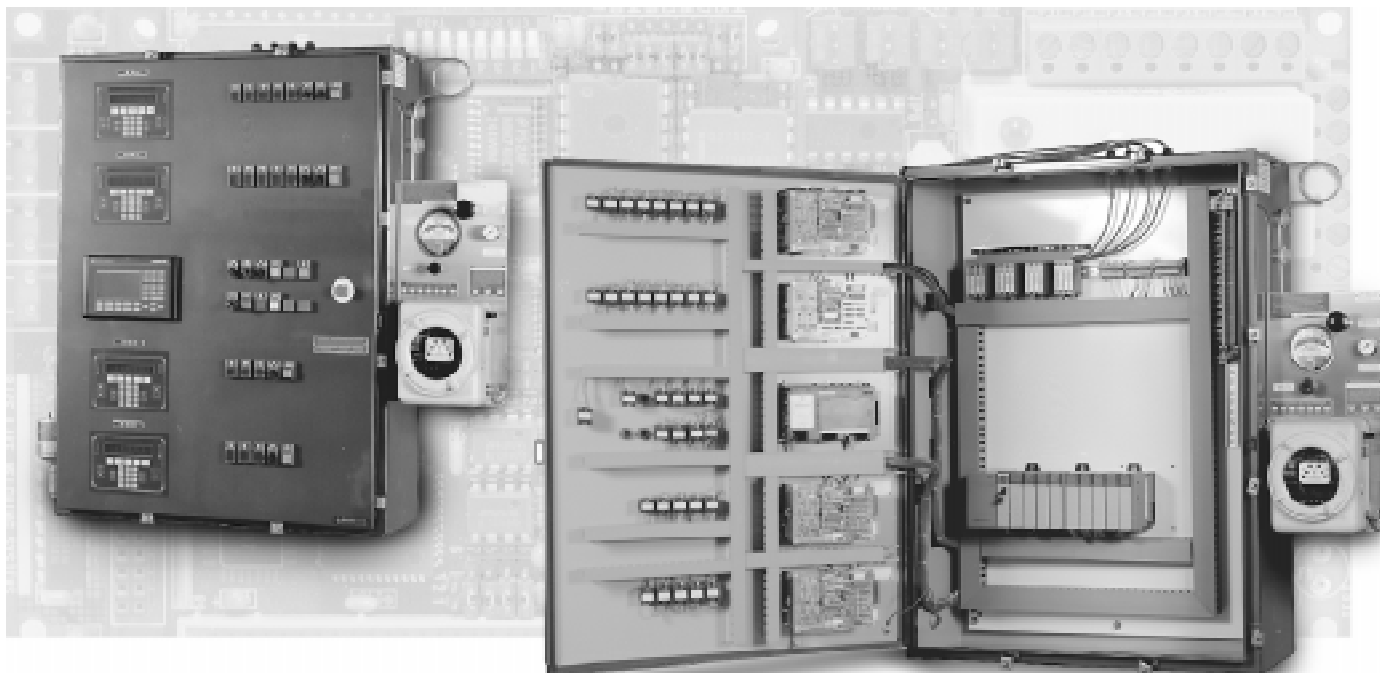
Tools & Technologies

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

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

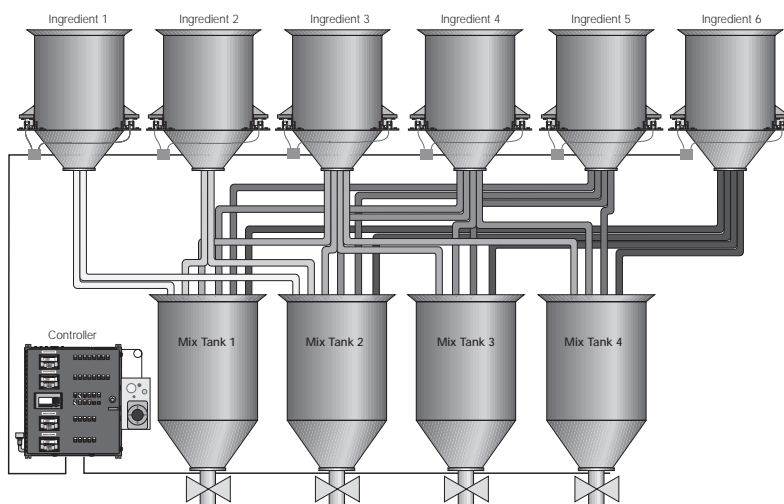


Multi-Scale Process Control System



System Attributes:

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



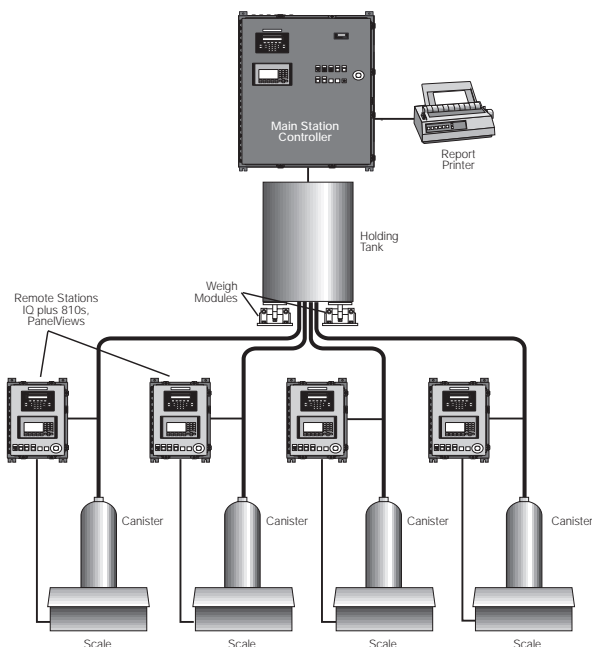
This multi-scale process control system includes controls for automating the sequential dispensing the mixing of ingredients into four mix tanks. The system prompts the operator through the programming and editing of the stored formulas. The controller also incorporates interlocks and system checks to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

Material Filling System



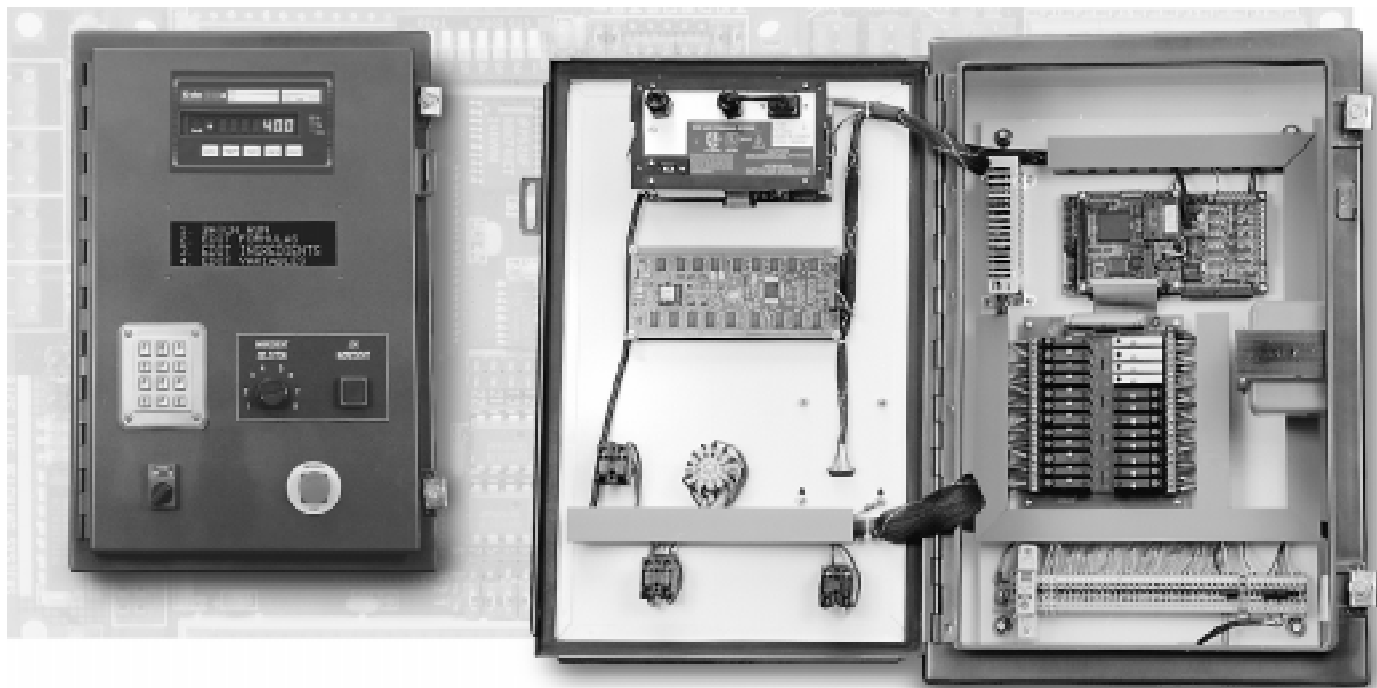
System Attributes:

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



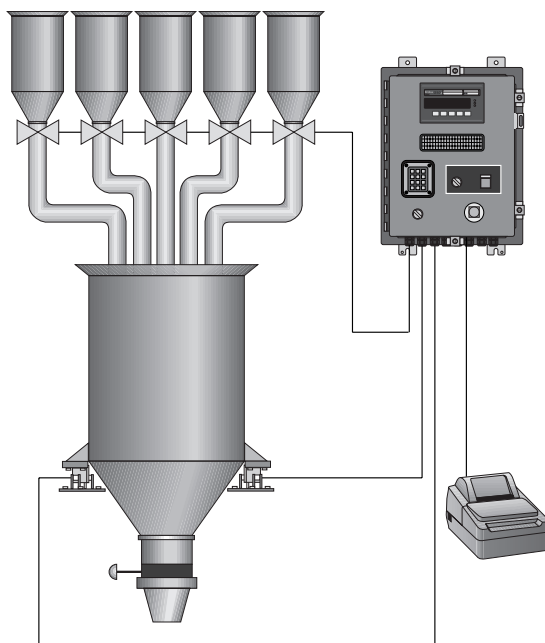
This material filling and storage tank monitoring system consists of four remote fill stations that operate independently of one another, and a main tank station that monitors pressure, temperature, and weight. All panels include a PanelView 550 graphic display for operator interface, and an IQ plus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

Multi-Ingredient Batching System



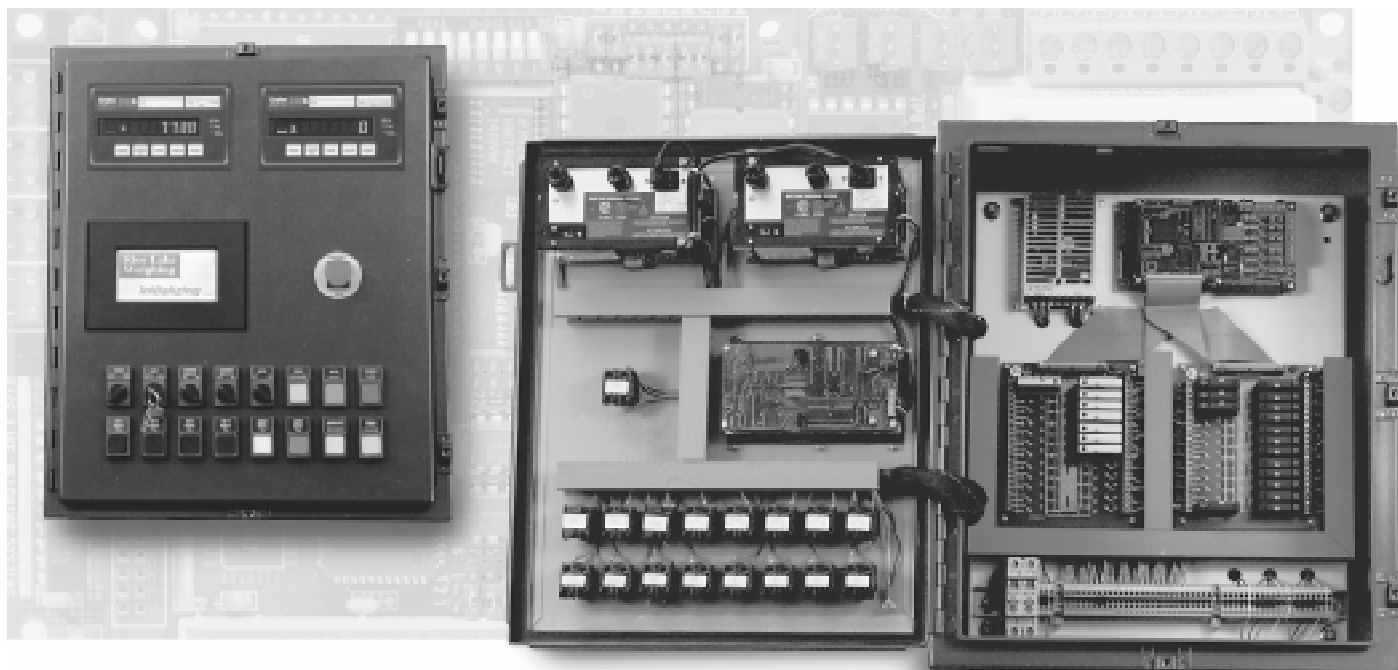
System Attributes:

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



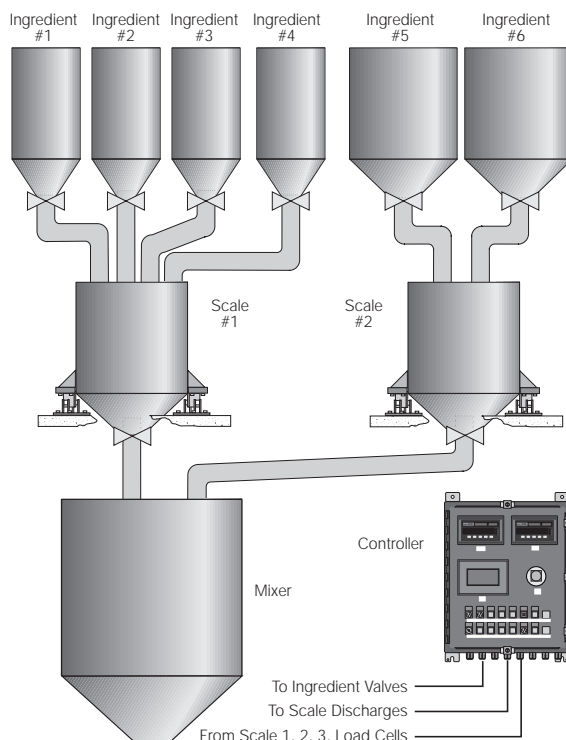
This multi-ingredient batching system provides sequential batch control and two-speed fill control for up to eight ingredients into a hopper scale. The system features multiple formula storage with full editing capability, data collection, reporting, and full manual overrides in case of system faults.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

Multi-Ingredient Process Control System



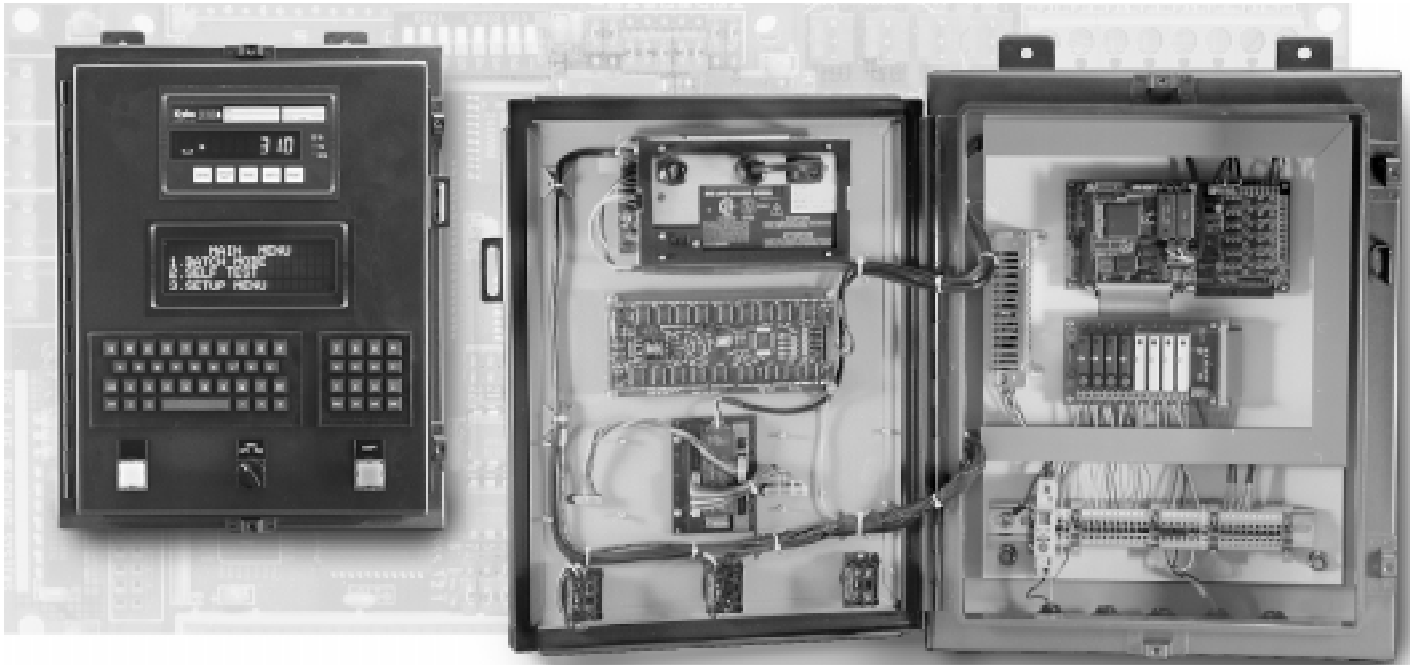
System Attributes:

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



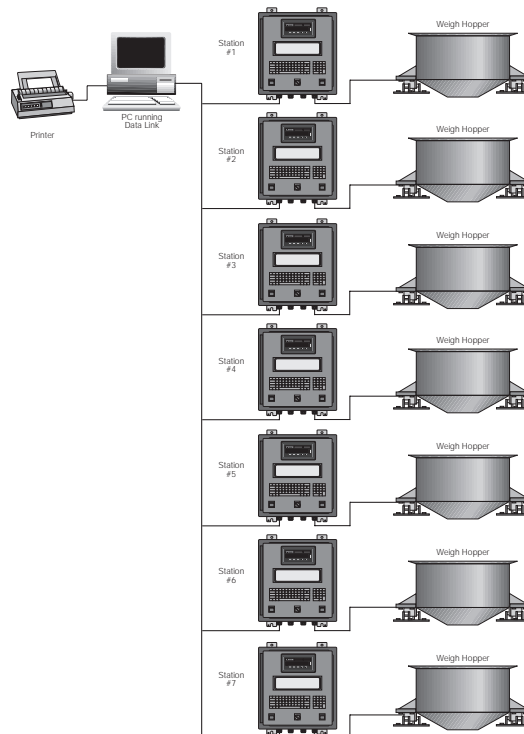
This process control system features simultaneous batching of ingredients into two independent hopper scales. It provides an easy-to-use touchscreen operator interface, and two panel-mounted IQ plus 310A digital indicators for weight data. In case of faults, the V400 controller provides full manual overrides,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

PC-Controlled Batching System



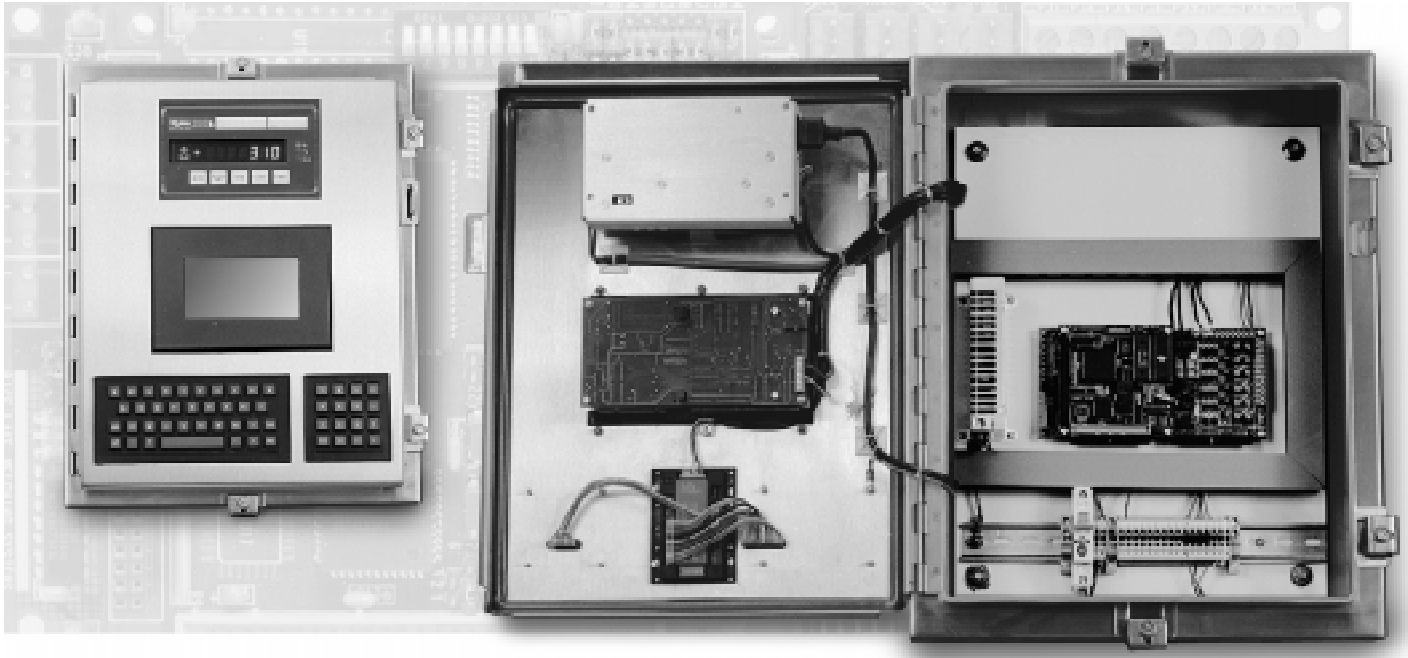
System Attributes:

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



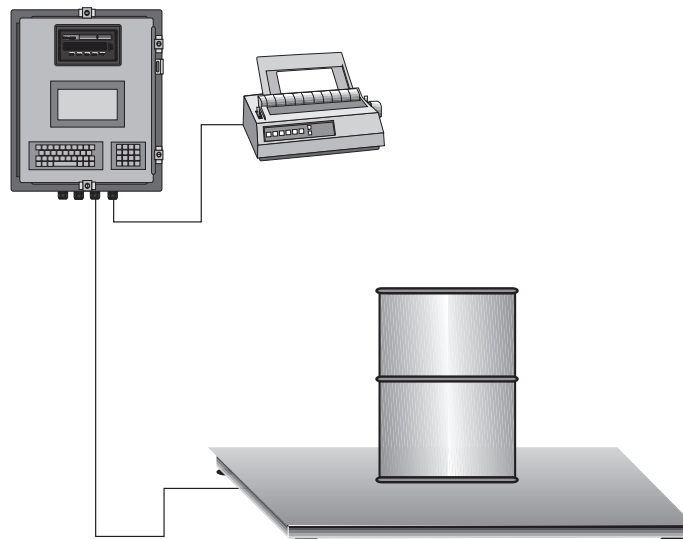
This PC-controlled batching system includes DataLink, a Windows-based PC program, that provides supervisory control of production scheduling of various stored formulas to be run on a network of seven V400-based operator terminals. The PC program also provides detailed production reports, material usage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

Material Handling/Data Collection System



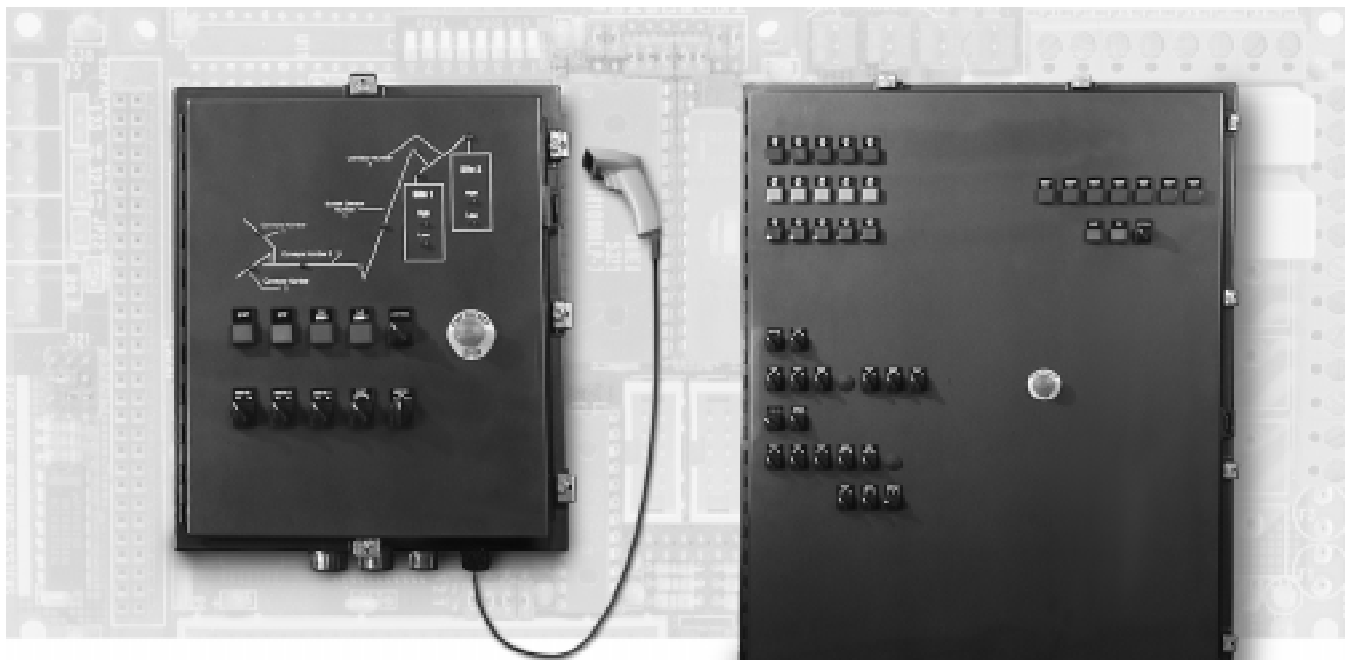
System Attributes:

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



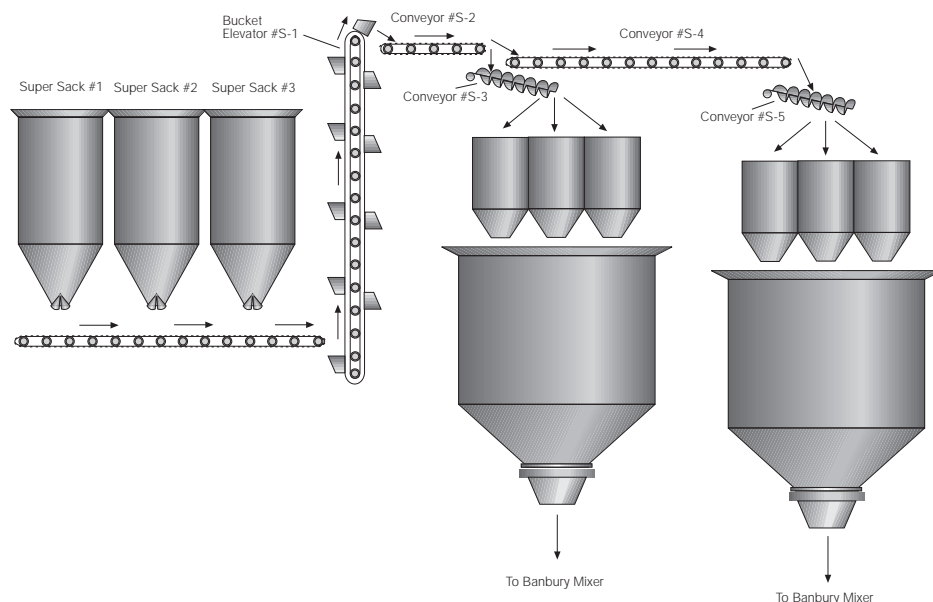
This material handling/data collection system weighs containers of material for reporting purposes. The reports include information about daily usage, previous daily usages, and total monthly usage as well as location and material information. Using a full keyboard, the operator can enter alphanumeric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

Conveyor Control System



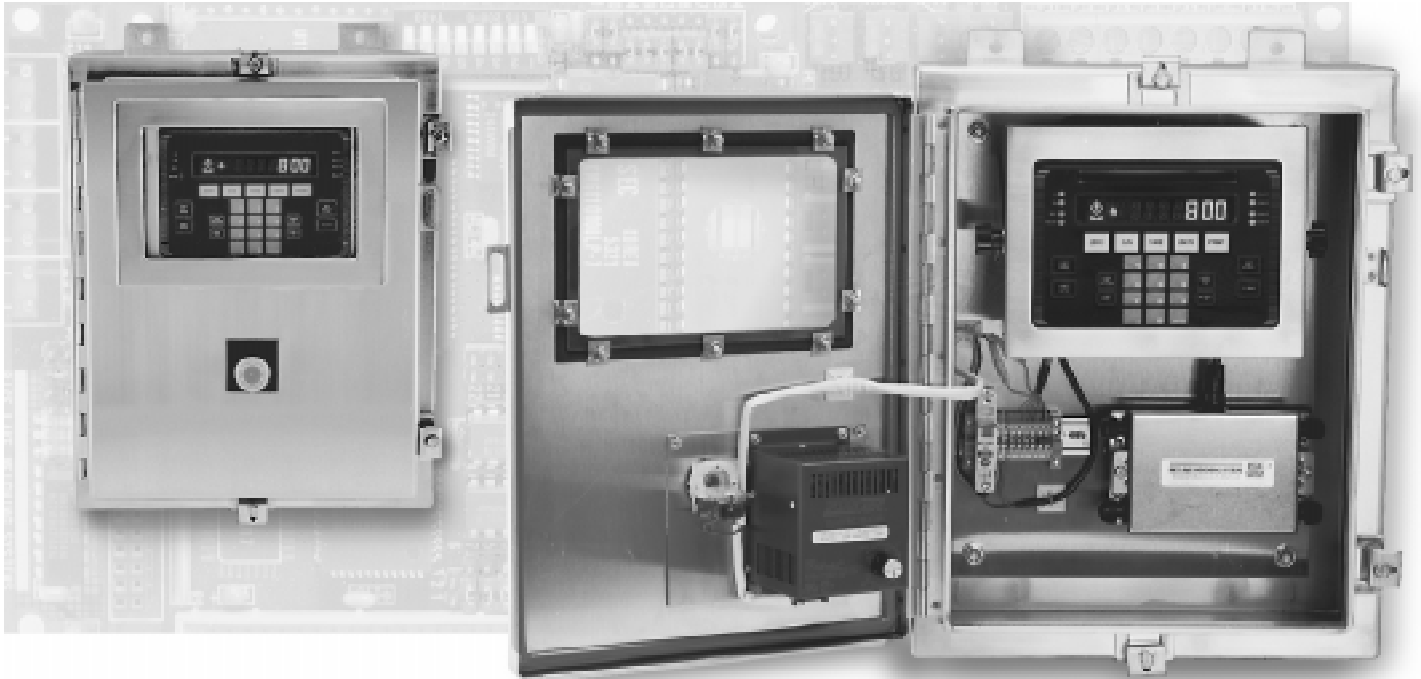
System Attributes:

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



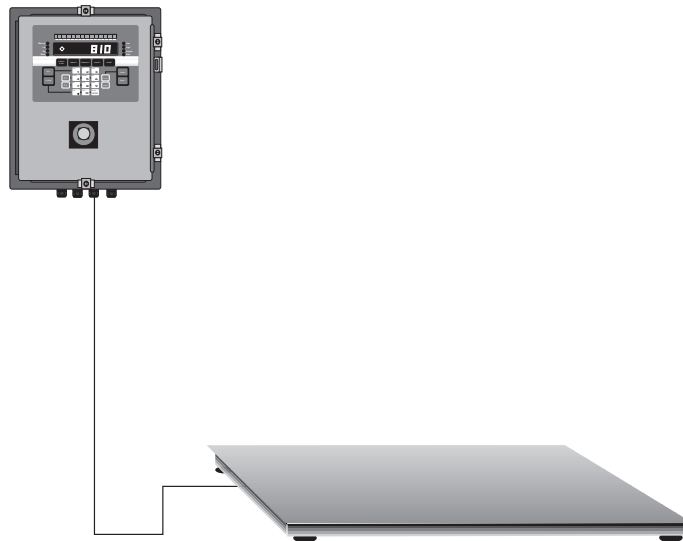
This system controls the unloading and distribution of material received from railroad cars (in this example). It utilizes Allen-Bradley SLC 5/04-based controllers to control the various conveyors, diverters and gates in the system. It also contains full manual overrides in case of system faults.

Double-Enclosed Controller



System Attributes:

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



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