

# FAIRBANKS®

## FB 7000 SERIES INSTRUMENT WITH WAVERSAVER® TECHNOLOGY



Fairbanks' FB 7000 Series Instrument was designed to meet the needs of customers who run batching, blending or mixing systems through a PLC, but is versatile enough to handle a variety of process weighing applications.

### PERFECT INSTRUMENT FOR PROCESS CONTROL

The FB 7000 is a compact, multipurpose, microprocessor based weight controller. It is perfect for use in process control applications such as:

- Batching
- Blending
- Mixing
- Check weighing
- Filling/dispensing
- Force measurement
- Level by weight
- Weight rate monitoring

### VERSATILE DISPLAY AND DATA TRANSMISSION

The FB 7000 can transmit data via analog or common PLC communications, such as Allen Bradley Remote I/O or Profibus. Data is displayed alphanumerically on the six-digit, 14 segment, LED display. Weight values can be based on either Net, Gross, Pounds or Kilograms. Commands can be entered into the instrument from the PLC communication port or locally from a tactile feel, 16 button, front panel keypad. A portion of the keys can be locked out, to limit operator access and protect data. A limited number of commands can also be entered through a rear Remote Function connector.

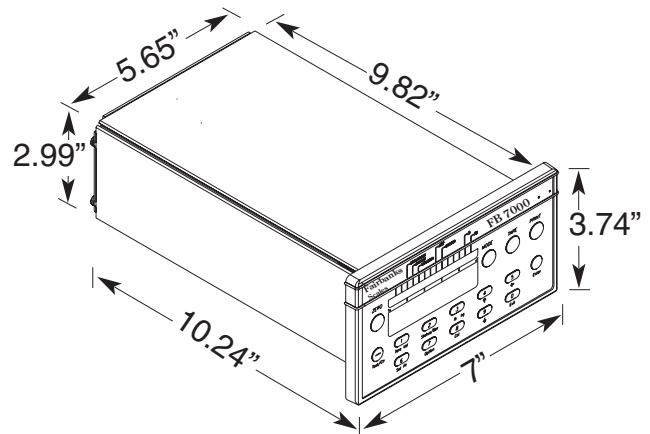
### OPTIONAL ALLEN-BRADLEY REMOTE I/O

RIO port allows bidirectional communications with Allen-Bradley Programmable Logic Controllers (PLC) and Small Logic Controllers (SLC). The FB 7000 represents a quarter rack of discrete I/O to the Logic Controller and supports both discrete and block transfers of data. It can support up to 230.4 Kbaud transfer rates.

### SPECIFICATIONS

|                          |  |
|--------------------------|--|
| Display                  | 6 digit, 14 segment, red LED, 0.6" alphanumeric                                  |
| Display Increments       | 1, 2, 5, 10, 20, 50, 100, 200, 500 user selectable via the front                 |
| Resolution               | Displayed: 1:985,000 (@ 3 mV/V)<br>1:656,000 (@ 2 mV/V)<br>Internal: 1:1,048,576 |
| Conversion Rate          | 20 updates per second  |
| Signal                   | Load Sensors/Cells (5 volt excitation) on one vessel. Voltage Range 0-15mV       |
| Key Pad                  | 16 tactile keys; 6 dedicated functions; 10 dual numeric and function             |
| Excitation Voltage       | 0-5 VDC  |
| Physical Characteristics |  |
| Front Panel Dimensions   | 3.74"H x 7.00"W x 0.42"D<br>(95 mmH x 177.80mmW x 10.67mmD)                      |
| Case Dimensions          |  |
| Panel Mount              | 2.99"H x 5.65"W x 9.82"D<br>(75.9mmH x 143.51mmW x 249.24mmD)                    |
| Case Material            | Aluminum alloy (6063-T5), Chem. Film (MIL-C-541)                                 |
| Weight                   | 4.6 pounds (2.1 Kilograms)   |
| Rating                   | Front Panel NEMA 4 Seal  |

### DIMENSIONS



### QuickFacts™

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**(800) 451-4107**

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## FB 7000 SERIES INDICATOR WITH WAVERSAVER® TECHNOLOGY

### WAVERSAVER® FILTERING TECHNOLOGY

The FB 7000 utilizes a unique filtering method called Waversaver, which eliminates the effects of vibratory forces present in plant environments where virtually all weight control and measurement applications are performed. By eliminating vibratory forces, Waversaver enables the weight controller to distinguish between actual weight data and mechanical noise. Waversaver can be configured from the front panel to ignore noise with frequencies as low as 0.25 Hz. One of four additional cut off frequencies, all in a higher range, may be selected to provide a faster instrument response time. The default factory configuration is 0.50 Hz vibrations frequency immunity.

### REMOTE SWITCH CAPABILITY

Rear panel input of a level or momentary grounding that can Tare the instrument, force the Net mode, toggle between pounds or kilograms and freeze the front panel display or one of the communications ports. This is useful for adding large additional industrialized switches to the control panel.

### SECURE MEMORY MODULE

The Secure Memory Module stores configuration, calibration and setup data that is critical to protecting the FB 7000's information files from corruption. During system operation, when a new parameter is entered, the Secure Memory Module automatically updates that value in its memory. Data stored in one FB 7000 may be restored in another instrument by physically transferring the module to the new instrument. The Secure Memory Module is conveniently accessible from the instrument's rear panel. This is a fantastic solution for speedy instrument replacement. Other instruments require PC hookups and other modification from a laptop.

### SPECIFICATIONS (CONTINUED FROM FRONT)

Waversaver® . . . . . 7.5 Hz; 3.5 Hz; 1.0 Hz; 0.5 Hz; 0.25 Hz

#### Optional Analog Output:

Resolution . . . . . 16,000 counts  
Linearity . . . . . 0.01% (with 1 average selected)  
Response Time . . . . . 1 millisecond after update  
Isolation from Main Board . . . . . 300 VAc or 450 VDC  
Update . . . . . 50 milliseconds (20 times/sec.)

#### Voltage Out:

Range . . . . . 0-5 VDC, 0-10 VCD (or reverse)  
Max. Current . . . . . 5 mA (2 K ohm load @ 10V)  
Temp. Stability . . . . . 10 ppm/C or 4 mV total  
from 30° F to 120° F

#### Current Out:

Range . . . . . 0-20 mA, 4-20 mA (or reverse)  
Max. Voltage . . . . . 12 V allowing 0-600 ohm load at 20 mA  
Mating Connector . . . . . 6 pin Phoenix

#### Optional Allen-Bradley Remote I/O Interface

Resolution . . . . . 986,000 counts  
Represents . . . . . 1/4 Rack of Discrete I/O  
Type Transfers . . . . . Discrete and Block (Read and Write)  
Baud Rate . . . . . 57.6 Kbaud; 1115.2 Kbaud; 234.4 Kbaud

#### Optional Profibus I/O Interface

Protocol . . . . . DP (Decentralized Periphery)  
Data Configuration . . . . . 16 words or 32 bytes  
Standard Reference . . . . . Process Fieldbus - DIN 19 245  
Baud Rate . . . . . 9,600 Kbaud to 12 Mbaud (Auto-selectable)

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