



# Technical Specifications

## *Weigh II Multi-Vessel Weight Indicator*

A flexible four vessel weight indicator for inventory monitoring or single vessel in-process weighing applications.

Weigh II electronics acquire input signals from half or full bridge strain gage transducers through a high resolution (up to 21-bits) analog to digital converter. Resolution and gain are adjustable for optimal system performance. Weight is displayed at the indicator and the data can be serially polled from a master device. Analog and digital outputs can be generated from the inputs to the Weigh II to provide auxiliary controls.

Unit includes setpoint preact, digital interfaces and KM's **Sentry™** DSP filter which provides stable, accurate readings under a variety of mixing conditions or plant vibrations. **Sentry™** digitally separates the vessel weight changes from the vibrations and dynamic conditions often experienced on vessels with mixers. This provides stable and accurate weight readings. Its flexibility allows you to optimize system performance so it won't be fooled by sudden weight changes like other filter systems.

KM's Weigh II is Allen-Bradley Enabled™ for simplified interconnection with the A-B Remote I/O network. This eliminates the use of costly and time consuming third party bridging techniques. Also, the Weigh II's modular design provides easy system configuration and expansion for meeting future requirements.

Calibration of the Weigh II may be easily performed by moving a known quantity of material or by manually entering calibration parameters without material movement.



## Features & Benefits

### **One to Four Vessel Indicator**

Multi-vessel indicator for local display.

### **Sentry™ DSP Filter**

Separates mixer and plant vibrations from weight changes. This provides accurate and reliable weight readings.

### **Modular Design**

Configurable for number of sensors, relays, current loops, and PLC interfaces.

### **High-Resolution Weight Conversion**

Up to 21-bit resolution for high accuracy needs.

### **Backlit LCD Display and Sealed Keyboard**

Easy access to data and operating parameters to match the unit to your measuring situation.

### **NEMA-4X Enclosure**

In fiberglass reinforced polyester (FRP) or optional stainless steel; offers the right protection for your environment.

### **Built-in Serial Port**

Versatile interfacing for data collection, servicing and building large multi-vessel communications systems.

## Specifications

### Integral Display and Operator Interface

Display: Large, back lit alphanumeric liquid crystal, two lines of 16 characters, 0.38 in. (9.66 mm) high, user programmable IDs, selectable bar graph or engineering units format

Programming and Parameter Entry: Integral 24-key sealed membrane tactile keypad

Setup: Menu-driven prompts

Memory: Non-volatile RAM, common isolation parameter storage

### Transducer/Sensor Input

Transducers/Sensors: All KM half-bridge, full-bridge foil gage

Excitation (per system): Programmable between 5 and 12.5 volts @ 232 mA

Resolution (per system): Selectable 16-bits (1 part in 65,536) to 21-bits (1 part in 2,097,152) in 1-bit increments

Conversion Speed:

*Single Vessel System:* 16-bits - 25 mSec, 19-bits - 125 mSec, 21-bits - 512 mSec

*Optional Multi-Vessel Scanner Card (per channel):* 16-bits - 76 mSec, 19-bits - 376 mSec, 21-bits - 1.535 seconds

Span (per system): Programmable between +/-3.0V @ 12V Excitation, Gain = 1; +/-19.5 mV @ 10V Excitation, Gain = 128

Temperature Stability: Zero 1 ppm/°C; Span 5 ppm/°C

Common Mode Rejection: 92db min @ DC; 150db min @ 60 Hz

Normal Mode Rejection: 100db min @ 60Hz

### Serial Communication- Built-in

RS-422, RS-485 (optical isolation standard), TTL, 300, 1200, 2400, 4800, 9600 or 19.2 K baud for multi-drop single cable connection. RS-232 compatible for single point connection

### Serial Communications - Option Cards\*

Scanner Option: For up to 4 vessel expansion; must be installed in first option slot

PLC Interface Option: Allen-Bradley™ Remote I/O; 4 channel block transfer; 3 channel discreet transfer

Multi-Vessel Remote Tare

Relay Output Option: Form "C" SPDT, programmable, 10 A 110 VAC, 8 A 230 VAC non-inductive, 10 A 30 VDC. Available as plug in modules of 2, 4, 5 and 8 relays each

Current Output (4-20/0-20) mA Option: For AC unit only; isolated 600 ohms maximum with internal supply or externally powered to 1000 ohms with a 24 VDC supply, 12-bit resolution; available as plug in modules of 1, 2, 4 and 8 outputs with common isolation; must be installed in third option slot

Combi-Cards: One Combi-card per unit; combinations are 2 relays, 1 current; 4 relays, 1 current; 2 relays, 2 currents; or 4 relays, 2 currents

\*A maximum of three plug-in option cards can be added

### Electrical

DC Power: 24 V ± 10% 2A

AC Power: 100 VAC +/-10% 50/60 Hz 56 VA; 115 VAC +/-10% 50/60 Hz 56 VA; 230 VAC +/-10% 50/60 Hz 56 VA

### Environmental

Operating Temperature: -5° to 122° F (-20° to 50° C)

Enclosure: NEMA 4X fiberglass reinforced polyester (FRP); NEMA 4X stainless steel

Humidity: 1% to 95% (non-condensing)

Storage: -40° to 140° F (-40° to 60° C)

Approvals: CE Mark, UL

### Physical

Dimensions: FRP: 12.0 in. (305 mm) x 10.75 in. (273 mm) x 5.62 in (143 mm)

Weight: 20 pounds (9 kg)

P/N 97-7003

Specifications subject to change without notice.  
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