



Technical Specifications

SVS 2000 Single Vessel Weight Indicator

A full-featured, high performance weight indicator for in-process weighing and batching or inventory weighing applications.

The SVS 2000 accepts input signals from half- or full-bridge strain gage load cells through a high resolution (up to 21-bit) 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 SVS 2000 to provide auxiliary controls.

The SVS 2000 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.

Using **Quick Config**, the SVS 2000 is easy to setup and calibrate without test weights or special load cells. Responses to simple **Quick Config** questions provides the SVS 2000 with the information needed to set up and calibrate the system for your application. Within minutes, the SVS 2000 provides usable weight information. Later, when convenient, a more accurate calibration is easily obtained by moving a known quantity of material.

The SVS 2000 provides easy system configuration and expansion to meet future requirements. Optional digital interfaces include A-B Remote I/O and DeviceNet®.



Features & Benefits

Quick Config

Adjusts system parameters and pre-calibrates unit without special load cells.

Sentry™ DSP Filter

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

High-speed, High-resolution Weight Conversion

Performance for demanding applications with up to 21-bit resolution.

Alphanumeric Backlit LCD Display

Simple, understandable operator messages eliminates special coding/decoding, cryptic setup and diagnostic messages. Display the weight as a bar graph or digital readout.

NEMA-4X Enclosure

ABS or optional stainless steel offers the right protection for your environment.

Specifications:

Integral Display and Operator Interface

Display: Backlit alphanumeric liquid crystal; one line of 16 characters; selectable bar graph or engineering units format

Data Entry: Integral 19-key alphanumeric sealed membrane tactile keypad

Setup: Menu-driven prompts

Memory: NVRAM (non-volatile RAM)

Transducer/Sensor Input

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

Excitation: Programmable between 5 and 13 volts at 400 mA

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

Conversion Speed: 16 bit-(17 mSec), 17 bit-(20 mSec), 18 bit-(25 mSec), 19 bit-(34 mSec), 20 bit-(50 mSec), 21 bit-(100 mSec)

Span: Programmable between ± 3.0 V at 12 V excitation, Gain = 1; ± 19.5 mV at 10V Excitation, Gain = 128

Temperature Stability: Zero 1 ppm/ $^{\circ}$ C;

Span 5 ppm/ $^{\circ}$ C

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

Normal Mode Rejection: 100 db min at 60 Hz

Inputs/Outputs/Communications

Standard:

Remote Tare (or Remote Totalizer) Input
Relay Output: 2 relay outputs; Form 'C' SPDT, programmable, 10 A 110 VAC, 8 A 230 VAC non-inductive; for motors and other large inductive loads, contactors rated for the load are required
Digital Output: 6 TTL level outputs — sink 25 mA, source 300 μ A at 5V

Optional PCBs:

Serial RS-422 or RS-485: optical isolated; baud rate 1200, 2400, 4800, 9600 or 19200
PLC Interfaces: Allen-Bradley Remote I/O (discrete or block transfer) DeviceNet (polled slave)

Optional PCBs: (continued)

Analog Output: 0-20 or 4-20 mA, 14 bit resolution, 500 VAC isolation, maximum load 600 ohms with internal loop supply

Electrical

AC Power: 115 VAC $\pm 10\%$ 50/60 Hz; 230 VAC $\pm 10\%$ 50/60 Hz 30 VA

Environmental

Operating Temperature: -4° to 122° F (-20° to 50° C)

Enclosures: Designed to meet NEMA 4X ABS or NEMA 4X 304L stainless steel

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

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

Physical

Overall Dimensions:

ABS version: 6.375 inches H x 11 inches W x 5.68 inches D (161.91mm x 279.4mm x 144.27mm)

SS version: 7.87 inches H x 9.84 inches W x 5.91 inches D (199.9mm x 249.94mm x 150.11mm)

Mounting Hole Pattern

ABS version: 2.5 inches H x 10.4 inches W (63.5mm x 264.16mm)

SS version: 5.31 inches H x 9.13 inches W (134.87mm x 231.90mm)

Weight:

ABS version: 6 lbs (2.6kg)

SS version: 11.3 lbs (5.1kg)

Approvals: CE Mark, UL Approved (stainless steel only)



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Specifications subject to change without notice.
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