

WEIGH-TRONIX

Provides a direct feed of weight data to a computer or process controller using serial RS-232 or current loop.



SP-300 Serial Signal Processor

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The signal processor excites the scale's Weigh Bar® transducers and a microprocessor outputs serial RS-232 or current loop data once per second or as solicited by a host computer.

Features and benefits

Low cost— The SP-300 is an economical scale-to-computer interface for batching or similar applications that do not require a stand-alone weight indicator.

Multiple excitation capability— The processor will drive one to four Weigh Bar® transducers.

Sense amplifier— Insures Weigh Bar® measurement accuracy by compensating for temperature induced changes in cable resistance.

Easy set-up— No resistors or dip switches to change for dead load or span adjustment

Installation options— Available as PC board only or in an enclosed NEMA 4 steel cabinet.

Specifications

Data output: Serial RS-232 and 20 mA current loop

Output protocol:

Transmits 1 time per second or host solicited data with ENQ (no ready/busy signal)

Baud rates:

Dip switch selectable to 300, 1200 and 9600 (space parity)

Data format:

Six data characters followed by "CR" or "ETX"
(000000 CR/ETX—under range transmission)
(999999 CR/ETX—over range transmission)

Accuracy: ±0.05% of applied load 0.01% of capacity

***Power input:**

100 to 130 VAC or 200 to 260 VAC, 48 to 62 Hz.
11 to 15 VDC at 65 to 150 mA for one to four Weigh Bars (Add 20 mA if current loop is used)

Excitation: 10 VDC ±0.1 VDC

Excitation load: One to four Weigh Bars or 10 B at 115 mA

Zero offset:

At 0.0mV/V (0mV) output 5000 ±310. Zero adjustment performed by host computer.

Zero temperature coefficient: ±0.20 microvolts/°C

Span:

40,000 ±3,200 per mV/V (10mV) At 3.0 mV/V (30mV), typical output is 125,000 (120,000 ±5,000).
Span adjustment performed by host computer.

Span temperature coefficient: ±10 PPM/°C

Analog to digital conversion rate: 9.68 Hz

Filtering: 1 second average of last 10 conversions

Analog signal limits: -0.2 to 3.1 mV/V (-2 to 31 mV)

Linearity: ±0.01% of capacity ±1 increment

Repeatability: ±0.01% of capacity ±1 increment

Temperature range: -20° to 130°F (-29° to 54°C)

Humidity: 0 to 90%

EMI/RFI rejection:

Operates in the presence of moderate EMI/RFI

Circuit protection:

Internal fuse, ¼ ampere for 115 VAC; ½ ampere for 12 VDC

Dimensions:

6"W x 8"H x 4"D steel cabinet
5½"W x 6⅞"L x 1½"H PC board

Warranty: 24 months

**Specify power input when ordering*

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