



The Series I-500-10 Analog Transmitter is a 4-20mA current converter. It is normally used as a loop-powered device for use with non-magnetic flow sensors. The transmitter is equipped with an on-board calibration frequency source. This source allows the unit to be field calibrated. It has two frequency span ranges (high and low) to provide for high resolution of the 4-20mA signal to a specific flow range.

Applications

The Series I-500-10 is intended for use with any device that requires a 4-20mA input signal; to log or display flow rate; or as the input to a flow based process control system, PLC or CPU.

Typical examples of the kinds of systems and equipment requiring a flow signal proportional to 4-20mA are:

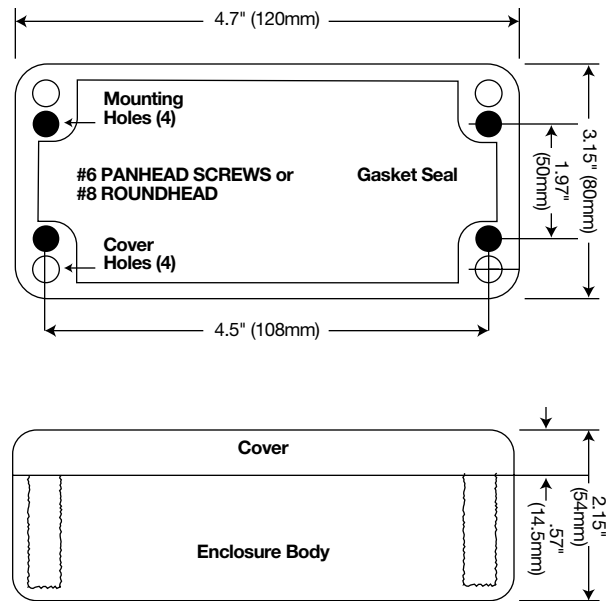
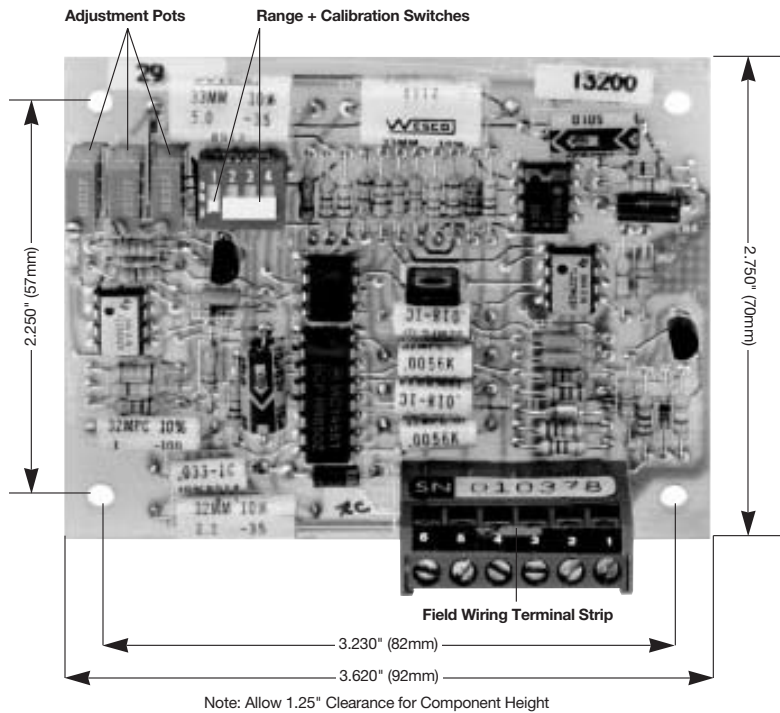
- Chemical Feed Systems
- Batch Control Systems
- Mixing/Blending Systems
- Data Logger Systems
- SCADA & Recorder Systems
- Energy Management Systems
- BTU Measuring Systems
- Irrigation Control Systems
- Heat Exchanger Systems

Product Features

1. **User Adjustable Scale** - The user can select the resolution of the 4-20mA signal from the ranges of the various pipe size configurations.
2. **Maximum Signal Resolution** - To maximize the resolution of the 4-20mA signal the 4mA value can be set to values other than Zero. The 20mA value can also be adjusted to reflect the minimum or maximum range of flow required to interface to other equipment with the analog signal.
3. **Power Supply Options** - The Series I-500-10 is normally loop-powered, drawing the necessary power from the loop itself. If there is no loop power available, an independent power supply is available.
4. **Mounting Options** - The Series I-500-10 is enclosed in a NEMA 4X, waterproof enclosure. The Model I-550 is available as an open-chassis circuit board for mounting inside another panel or enclosure.
5. **Optional Display** - The Model I-510-10 features a 3½ digit LCD display visible through a clear cover. The display is equipped with adjustable span and offsets for field calibration.



Not a controlled document.



Series I-500-10 Watertight Enclosure

Specifications

Operating Range:

- 4-20mA Loop output, 0-110Hz square-wave frequency input.

Loop Voltage:

- 10V minimum, 35V maximum.

Linearity:

- Better than 1%.

Electrical:

- Meets ISA requirements, Classes L, H, and U. Non-isolated.

Load Resistance:

- Max. 650 Ω @ 23 Volts.

Power Requirements:

- 4-20mA loop voltage or 10VDC min. 35VDC max.

Device Output Ripple:

- Less than 0.25% of full scale for a fully stable sensor input.

Output Response Time:

- Six seconds (typ.), 10-90% step response.

Operating Temperature Range

- I-500-10/I-550-10:** — -20°F to $+150^{\circ}\text{F}$ (-29°C to $+65^{\circ}\text{C}$)

I-510-10:

- -32°F to $+122^{\circ}\text{F}$ (0°C to $+50^{\circ}\text{C}$)

Storage Temperature Range

- I-500-10/I-550-10:** — -40°F to $+185^{\circ}\text{F}$ (-40°C to $+85^{\circ}\text{C}$)

I-510-10:

- -14°F to $+140^{\circ}\text{F}$ (-10°C to $+60^{\circ}\text{C}$)

Conformal Coating:

- Circuits are coated with a clear colorless coating meeting Mil-spec Mil-146058C, Type AR, for humidity, moisture and fungus resistance.

Enclosure:

- Polycarbonate with tongue/groove neoprene sealed cover. Meets NEMA 1, 2, 3, 4, 4X, 5, 12, and 13 specifications.

Ordering Information

I-500-10

- Transmitter in NEMA-4 housing

I-510-10

- Transmitter in NEMA-4 housing with LCD display

I-550-10

- Unhoused Circuit Board Only

I-A-501-10

- Plug-in Power Supply
120VAC/24VDC

I-A-502-10

- Barrier Strip Power Supply
120VAC/24VDC

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