

Voltage/Current Transmitters

SC-1300 SC-1302

- mV, V, mA inputs
- Current/voltage outputs
- Input/output isolation (SC-1302)
- Optional pulse duration output
- Surface or rack mount
- High load output option



The SC-1300 and SC-1302 accept voltage or current inputs and provide a current or voltage output.

The SC-1302 provides isolation between the input, output and power for AC or isolated DC powered units.

SC-1300 Specifications

Inputs:

| Input | Input Impedance |
|---------------|-----------------|
| 0-1 VDC | 2 M Ω |
| 0.25-1.25 VDC | 2 M Ω |
| 1-5 VDC | 5 M Ω |
| 0-1 mA | 5000 Ω |
| 1-5 mA | 1000 Ω |
| 2-10 mA | 500 Ω |
| 4-20 mA | 250 Ω |
| 10-50 mA | 100 Ω |

Note: Any of the above ranges can also be zero based.

Ambient Temperature Effect:

For 25°F to 125°F (-4°C to 52°C)
 $\pm 0.01\%/^{\circ}\text{F}$ ($\pm 0.018\%/^{\circ}\text{C}$) maximum
 $\pm 0.004\%/^{\circ}\text{F}$ ($\pm 0.007\%/^{\circ}\text{C}$) typical

Response Time:

Less than 50 milliseconds (10-90%)

Isolation:

600 VAC or 1000 VDC input/power isolation for AC or isolated DC powered units

SC-1302 Specifications

Inputs:

| Voltage Inputs | Current Inputs | Current Input Impedance* |
|----------------|----------------|--------------------------|
| 0-100 mVDC | 0, 0.2-1 mA DC | 5k Ω |
| 0-200 mVDC | 0, 1-5 mA DC | 1k Ω |
| 0-500 mVDC | 0, 2-10 mA DC | 500 Ω |
| 0-1 VDC | 0, 4-20 mA DC | 250 Ω |
| 0.25-1.25 VDC | 0, 10-50 mA DC | 100 Ω |
| 0, 1-5 VDC | | |
| 0, 2-10 VDC | | |

*For low input impedance, use SC-1326 Linear inverter available for all ranges.

Voltage Input Impedance:

Greater than 5 M Ω

Response Time:

Less than 400 mS (10-90%)

Ambient Temperature Effect:

(1-5 V input)
 For 25°F to 125°F (-4°C to 52°C)
 $\pm 0.02\%/^{\circ}\text{F}$ ($\pm 0.036\%/^{\circ}\text{C}$) maximum
 $\pm 0.01\%/^{\circ}\text{F}$ ($\pm 0.018\%/^{\circ}\text{C}$) typical

Isolation:

Input/output/power is 600 VAC or 1000 VDC for AC or isolated DC powered units.

AMETEK

Signal Conditioning

Output Signals:

| mA | Output Drive Capability |
|----------|-------------------------|
| 10-50 mA | 320Ω |
| 4-20 mA | 800Ω |
| 2-10 mA | 1600Ω |
| 1-5 mA | 3200Ω |
| 0.2-1 mA | 16,000Ω |

| VDC | Output Impedance |
|------------|------------------|
| 2-10 VDC | 500Ω |
| 1-5 VDC | 250Ω |
| 0.2-1 VDC | 50Ω |
| 0-100 mVDC | 5Ω |
| 0-10 mVDC | 0.5Ω |

Note: Any of the above ranges can also be zero based

Linearity: ±0.1% of span, maximum error; except SC-1300L and SC-1300U

Repeatability: ±0.1% of span, maximum error

Ambient Temperature Range: 0° to 140°F (-18° to 60°C)

Power Supply Effect: ±0.15% for a ±20% power variation maximum with 800 ohm load and 4-20 mA output (H3, H4, H5 options ±10%)

Common Mode Rejection: 130 dB at 60 Hz

Power Supplies:

- 115 VAC ±20%, 50/60 Hz, 5 watts (standard)
- 24 VDC ±20%, 3.5 watts (H suffix; non-isolated)
- 230 VAC ±20%, 50/60 Hz, 5 watts (H2 suffix)
- 115 VAC ±10%, 60 Hz, 5 watts, (H3 suffix; P-11 or A-12 option)
- 115 VAC ±10%, 50/60 Hz, 5 watts (H4 suffix; P-11 or A-12 option)
- 230 VAC ±10%, 50/60 Hz, 5 watts (H5 suffix; P-1 or A-12 option)
- 24 VDC ±20%, 4.5 watts (I suffix; isolated)
- 48 VDC ±20%, 5 watts, (I1 suffix; isolated)

Controls: Multiturn zero and span potentiometers

Net Weight (Approximate): 3.4 lbs. (1.54 kg)

Enclosures:

- single unit surface mount (standard)
- P-11, high density, 19" rack mount (with rear access terminal blocks)
- A-12, high density, 19" rack and surface mount (with front access terminal blocks)
- NEMA 4 and 12 (from one to 24 units)
- explosion-proof single unit, FM approved for Class 1, Division 1, Groups C and D

High Load Drive Option (HO):

| mA | Output Drive Capability |
|----------|-------------------------|
| 10-50 mA | 600Ω |
| 4-20 mA | 1600Ω |
| 2-10 mA | 3200Ω |
| 1-5 mA | 6400Ω |
| 0.2-1 mA | 32,000Ω |

Note: any analog output may also be zero based

True Voltage Output Option (VO):

| VDC | Minimum Drive Impedance |
|----------|-------------------------|
| 0-10 VDC | 300Ω |
| 0-5 VDC | 150Ω |

Agency Approvals: FM approved for ordinary locations and hazardous locations Divisions I and 2, Class 1, Groups C & D; Class II, Groups E, F & G. Explosion-proof housing required for hazardous locations.

CSA approved for ordinary locations for SC-1300 and SC-1302 with either 117 VAC, 24 VDC isolated or 24 VDC non-isolated power versions.

Ordering Information: see page 7.56, 7.57

Dimensions: see page 7.58

