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SC-1300 Signal Conditioners

AMETEK

POWER INSTRUMENTS

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



Available Models:

SC-1300 DC current transmitter
 SC-1300L/U AC current/voltage transmitter
 SC-1300R Slidewire/potentiometer transmitter
 SC-1302 DC current/voltage isolating transmitter
 SC-1302 4 input hi-lo selector
 SC-1324 Median selector
 SC-1326 Isolated millivolt transmitter
 SC-1326W Isolated thermocouple transmitter
 SC-1330 Square root extractor
 SC-1350 Frequency transmitter
 SC-1352 Multiplier/divider
 SC-1354 4 input adder-subtractor
 SC-1356 Linear integrator
 SC-1358 Square root integrator
 SC-1362 Signal limiter
 SC-1364 Lead/lag transmitter
 SC-1372 Isolated RTD transmitter
 SC-1364 RTD Transmitter
 SC-1380 Pulse duration transmitter
 SC-1382 Pulse duration receiver
 SC-1396 Rate-limited signal transmitter
 SC-1398 Ratio/bias transmitter

SC-1300 Specifications

Inputs:

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

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)
 ±0.01%/°F (±0.018%/°C) maximum
 ±0.004%/°F (±0.007%/°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

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-1302 Specifications

Inputs:

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

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 MΩ

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)

±0.02%/°F (±0.036%/°C) maximum

±0.01%/°F (±0.018%/°C) typical

Isolation:

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

Signal Conditioning

Output Signals:

mA	Output Drive Capability
10-50 mA	3200
4-20 mA	8000
2-10 mA	16000
1-5 mA	32000
0.2-1 mA	16,0000
VDC	Output Impedance
2-10 VDC	5000
1-5 VDC	2500
0.2-1 VDC	500
0-100 mVDC	50

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

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

Repeatability: $\pm 0.1\%$ of span, maximum error

Ambient Temperature Range:

0° to 140°F (-18° to 60°C)

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

Common Mode Rejection:

130 dB at 60 Hz

Power Supplies:

- 115 VAC $\pm 20\%$, 50/60 Hz, 5 watts (standard)
- 24 VDC $\pm 20\%$, 3.5 watts (H suffix; non-isolated)
- 230 VAC $\pm 20\%$, 50/60 Hz, 5 watts (H2 suffix)
- 115 VAC $\pm 10\%$, 60 Hz, 5 watts, (H3 suffix; P-11 or A-12 option)
- 115 VAC $\pm 10\%$, 50/60 Hz, 5 watts (H4 suffix; P-11 or A-12 option)
- 230 VAC $\pm 10\%$, 50/60 Hz, 5 watts (H5 suffix; P-11 or A-12 option)
- 24 VDC $\pm 20\%$, 4.5 watts (I suffix; isolated)
- 48 VDC $\pm 20\%$, 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	6000
4-20 mA	16000
2-10 mA	32000
1-5 mA	64000
0.2-1 mA	32,0000

Note: any analog output may also be zero based

True Voltage Output Option (VO):

VDC Minimum Drive Impedance

0-10 VDC 3000

0-5 VDC 1500

Agency Approvals: FM approved for ordinary locations and hazardous locations Divisions 1 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.

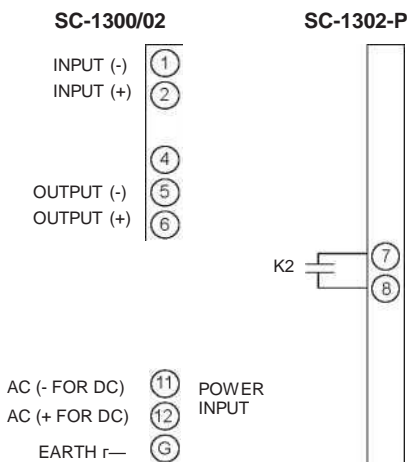
Ordering

Information:

see page 7.56, 7.57

Dimensions:

see page 7.58



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