

SC-100 Series High Reliability AC LVDT Signal Conditioner



AC-LVDT Signal Conditioner with 2 Point Calibration

The Alliance Sensors SC-100 DIN rail module was designed for the industrial AC-LVDT, RVDT, and half-bridge applications. Highly reliable with a two year limited warranty. With ease of setup in mind, the SC-100 uses pushbuttons for zero and full scale calibration replacing standard trim pots found on older signal conditioners.

The SC-100 offers four industry standard excitation frequencies, a built-in null indicator, and a wide variety of analog voltage and current output options. An RS-485 digital bus allows the customer to communicate with the device for remote setup and to derive information for data acquisition purposes. In addition, the SC-100 is CE approved for use worldwide. All these features make the SC-100 the easiest LVDT signal conditioner to use.

Features:

- Smart setup with 2 front panel push buttons --- NO POTS
- Built-in null indicator: LEDs and separate DC null voltage output
- Choice of 2.5, 5, 7.5 or 10 kHz nominal excitation frequencies
- Use with 3-, 4-, 5-, or 6-wire LVDTs and inductive half-bridges including 3-wire GE LVDTs
- Choice of 6 DC voltage outputs and 2 current loop outputs
- 40 dB range of FS outputs from LVDT: 50 mV rms to 5 Volts rms
- 15 - 30 Volts DC operation, 80 mA Max Current
- Self-diagnostic for LVDT winding failures or cable disconnection
- Independent failure warning flag via open collector output
- Digital communications link via RS-485 multi-drop bus with up to 16 individual module addresses
- Fail-safe master/slave syncing eliminates beat frequencies
- TWO (2) YEAR warranty instead of industry standard (1) year

Specifications:

Operating power +15 to +30 V DC (+24 V DC nominal), 60 mA max. at 24 V DC;
+15 V DC and -15 V DC for -10 V to +10 V DC bipolar output

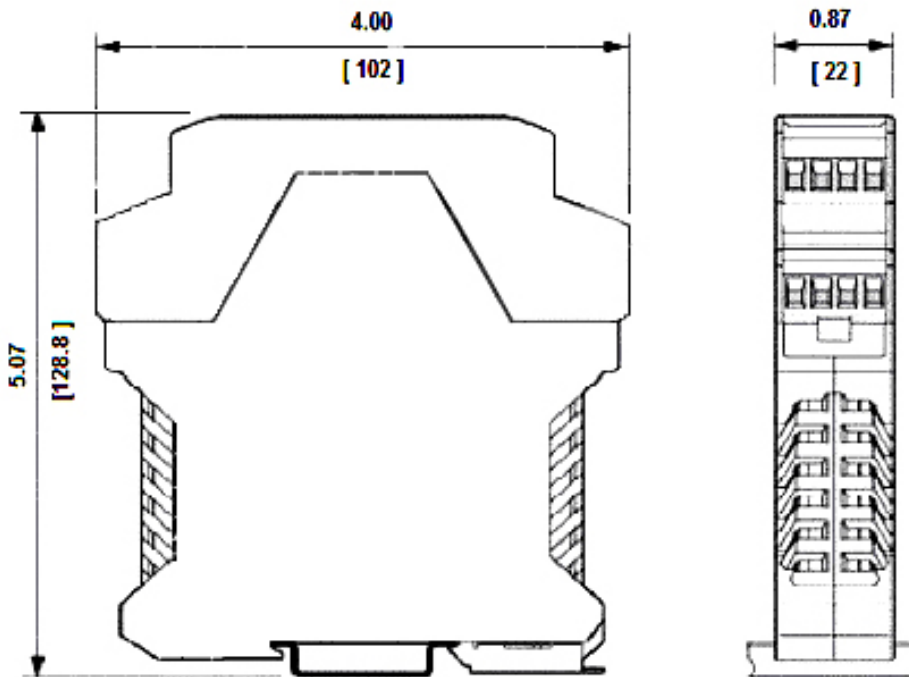
Excitation voltage 3.0 Vrms nominal 4.5 Vrms 1.5 Vrms for low impedance primary (100 -150 Ω)

Excitation frequencies 2.5, 5, 7.5, 10 kHz (nominal)

SC-100 Series

Specifications (cont.):

<i>Master/slave syncing</i>	Master output couples up to fifteen slave inputs; if original master fails, new master is automatically generated for fail-safe excitation control.
<i>LVDT AC Output Signal</i>	50 mVrms to 5000 mVrms at LVDT's full scale position
<i>Analog DC Outputs</i>	0 - 5 V, 1 - 5 V, 0.5 - 4.5 V, 0 -10 V, -10 to +10 V, 0.5 - 9.5 V, 0 -20 mA sourcing, 4 -20 mA sourcing
<i>Loop resistance</i>	850 Ω max (current loop output mode, 24 V DC supply)
<i>Output non-linearity</i>	$\leq 0.025\%$ of Full Span Output (FSO)
<i>Frequency response</i>	-3 dB at 10% of excitation frequency (minimum) -3 dB at 10 Hz (nominal) (low noise setting)
<i>Noise and ripple</i>	≤ 3 mVrms (nominal), or ≤ 6 μ Arms
<i>Null detection</i>	Front panel LEDs
<i>Operating Temperature</i>	-20 C to +75 C
<i>Temperature coefficient</i>	-0.002% of FSO/C (combined zero and span shift)
<i>Zero set</i>	Front panel push button or RS-485 command
<i>Full Scale set</i>	Front panel push button or RS-485 com-mand
<i>Digital interface</i>	RS-485 2-wire multi-drop network, 16 addresses



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