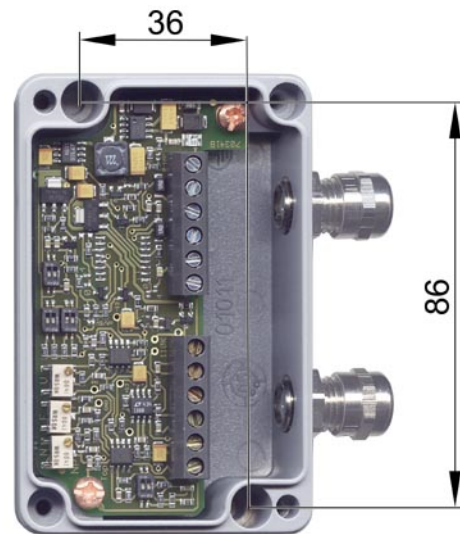




Strain Gauge Sensor-Interface

SI

- High Accuracy
- Voltage or Current Output
- Direct Connection to PLC
- Long Input Lead from SI to Evaluation possible
- Applicable in heavy Industries by robust Aluminum Casting Housing
- High Level of Protection IP66



Housing dimension with front cover
(LxWxH) : 98x64x36mm

Description

The sensor-interface SI is designed for the interface adaption between sensor and evaluation. The interference-prone output signals of strain gauge sensors are raised to a high level. Thus, the measurement safety and the measurement accuracy is crucially increased.

The excitation voltage range of 16 .. 32VDC and the analog outputs of $\pm 10V$, resp. $0/4 .. 20$ mA allow the direct signal processing with a PLC-Control. The sensor is powered with stabilized DC voltage which is generated from unregulated supply (16 .. 32VDC).

The subsequent precision measuring amplifier converts the output signals of the sensor into standardized signals. Serially, the interface is being delivered with PG7 screw connections.

An universal and easy adaptation to different sensors is possible through a wide control range of the zero point and the amplification by determining the coarse adjustment through a switch and by fine adjustment with the potentiometers.

An optional external control signal excitation allows to activate the control signal in the sensor (if available) with a control signal, externally. By this, the adjustment and the subsequent evaluation can be checked at any time.

Furthermore, an input filter is adjustable with a potentiometer (to eliminate interferences, e.g. by frequency converters etc.).

Specifications

Type	SI-U10	SI-U5	SI-I0	SI-I4	SI-I10	SI-I12
Art.-No.	101131	103756	102146	101130	103755	103627

Evaluation Side

Supply	Supply voltage	16 .. 32VDC				
	Ripple	<10%				
	Current consumption	≤ 40 mA	≤ 60 mA			
Signal output	Output signal U/I-out	$\pm 10V$ ≤ 5 mA	$\pm 5V$ ≤ 5 mA	0 .. 20 mA	4 .. 20 mA	10 \pm 10 mA
	Ripple	<20 mV				
	Gain drift	<0.1%/10 K				
	Zero point drift	<0.2%/10 K				
	Linearity	<0,02%				
	Load resistance	>2 k Ω				
	Output resistance	<1 Ω				
General	Cable length SI-evaluation	3 m (max. 10 m)		3 m (max. 100 m)		
	Max. input lead resistance	10 Ω		30 Ω		

Sensor Side

Excitation	Sensor supply	10V (Option 5V) ≤ 150 mA				
	TC excitation voltage	0.1 mV/K				
Signal input	Input voltage	0.25 .. 4 mV/V				
	Input resistance	10^9 Ω				
General	Cable length SI-sensor	1 m (max. 3 m)				

Miscellaneous

Cut-off frequency	1 kHz -3 dB				
Nominal temperature range	10 .. 40°C				
Service temperature range	0 .. 60°C				
Storage temperature range	-10 .. 70°C				
Dimensions (L x W x H)	98 x 64 x 36 mm				
Level of protection	IP66				

Options/ Accessories

Art.-No.	Type	Description
110564	mV/V	mV/V adjusted sensitivity
113517	2.5 \pm 2.5V	Output signal 2.5 \pm 2.5V
110651	5 \pm 5V	Output signal 5 \pm 5V
112711	SI/KS	Control signal excitation external 8 .. 28VDC
103758	SI/EED6	Sensor connection pluggable ED6, incl. mating connector KS6
103759	SI/AES6	Excitation / output pluggable ES6, incl. connector KD6
103757	SI/V8	Excitation voltage 8 .. 16V (not for SI-U10)
103340	SI/2S	Cable input for second sensor
108200	5 kHz -3 dB	Increased dynamic 5kHz -3 dB
108533	10 kHz -3 dB	Increased dynamic 10kHz -3 dB