

Features

- SIL 2 / SC 3
- Input from Zone 0
- Installation in Zone 2
- 0 to -20 V
- Input/Output signal
- Wide band signal transfer
- Input and Output short circuit proof
- In-field programmability by DIP Switch
- High Accuracy
- Three port isolation, Input/Output/Supply

1CH I.S. SIL2 Vibration Transducer Interface

RS Stock No.: 329094



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Product Description

This module is a high integrity analogue input interface suitable for applications requiring SIL 2 level in safety related systems for high-risk industries. It provides a fully floating dc supply for energizing vibration transducers, accelerometers or 2-3 wires sensors located in Hazardous Area, and repeats the sensor input voltage in a totally isolated circuit located in Safe Area to drive vibration monitors or analyzers for rotating machinery control and supervision purposes.

General Specifications

Input	0 to -20 V (10 k Ω impedance at terminals 7-8 or 8-9)
3 wires sensor supply voltage	More than -22 V@ 0 mA supply, more than -17 V @ 15 mA supply (current limited @ \approx 23 mA)
2 wires sensor supply voltage	more than -17 V with constant current supply
2 wires sensor supply current	selectable @ 4 mA, 6 mA or 10 mA via internal DIP-Switch
Output	0 to -20 V on 10 k Ω load, with 10 Ω output resistance
Response time	\leq 10 μ s (10 to 90 % step change)
Frequency response	DC to 20 kHz within 1 dB maximum

Mechanical Specifications

Weight	about 125 g
Connection	by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm ² (13 AWG)
Dimensions	Width 12.5 mm, Depth 123 mm, Height 120 mm
Mounting	DIN-Rail 35 mm, with/without Power Bus

Electrical Specifications

Supply	24 Vdc nom (18 to 30 Vdc), reverse polarity protected
Current consumption	90 mA, @ 24 Vdc with 20 mA transducer consumption and 2 mA output load, typical
Power dissipation	2 W, @ 24 Vdc with 20 mA transducer consumption and 2 mA output load, typical, typical
Isolation	I.S. In/Out 1.5 kV; I.S. In/Supply 1.5 kV; Out/Supply 500 V

Operation Environment Specifications

Operating temperature	temperature limits -40 to +70 °C
Storage temperature	temperature limits -45 to +80 °C

Intrinsic Safety Data

IS Description	Associated apparatus and non-sparking electrical equipment. Uo = 27 V, Io = 90 mA, Po = 576 mW (terminals 7-8-9-10) Ui = 30 V, Ci = 0 nF, Li = 0 nH (terminals 7-8-9) Um = 250 Vrms or Vdc, -40 °C ≤ Ta ≤ 70 °C
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Approvals

Declarations	EU Declaration of Conformity
Hazardous Area Certification	ATEX / IECEx
Functional Safety	SIL Manufacturer Declaration

Accessories

325642	Bus Connector
329103	Bus Mounting Kit

