

Features

- SIL 2 / SC 3
- Output to Zone 0
- Installation in Zone 2
- 4-20 mA Input, Output signal
- HART® compatible
- Line & Load short/open circuit detection
- Field fault mirroring to the PLC AO
- In-field programmability by DIP Switch
- High Accuracy
- Three port isolation, Input/Output/Supply

1CH I.S. SIL2 HART® Isolating Driver

RS Stock No.: 329085



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Product Description

This module is a high integrity analogue output interface suitable for applications requiring SIL 2 level in safety related systems for high-risk industries. It isolates and transfers a 4-20 mA signal from a controller located in Safe Area to a load in Hazardous Area. It has a high output capacity combined with a low drop across its input terminals. The circuit allow bi-directional communication signals, for HART® smart positioners. Line and load open/short circuit detection is provided: the fault in the field is directly mirrored to the PLC AO and it is also reported by opening the fault output.

General Specifications

Input	4 to 20 mA with ≤ 2.5 V voltage drop, reverse polarity protected in normal operation, ≥ 5 k Ω impedance (≈ 2 mA sinking from 10 to 30 Vdc) when fault condition detected.
Output	4 to 20 mA. 700 Ω
Response time	25 ms (0 to 100 % step change)
Calibration accuracy	$\leq \pm 0.1$ % FSR
Linearity accuracy	$\leq \pm 0.1$ % FSR
Temp. influence	$\leq \pm 0.01$ % FSR on zero/span for a 1 °C change

Mechanical Specifications

Weight	about 130 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	35 mA, @ 24 Vdc with 20 mA output on 500 Ω load, typical
Power dissipation	0.65 W, @ 24 Vdc with 20 mA output on 500 Ω load, typical
Isolation	I.S. Out/In 2.5 kV; I.S. Out/Supply 2.5 kV; I.S. Out/Fault 2.5 kV; In/Supply 500 V; Fault/In 500 V; Fault/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. $U_o = 25.9$ V, $I_o = 93$ mA, $P_o = 595$ mW at terminals 7-8 $U_m = 250$ Vrms or Vdc, -40 °C $\leq T_a \leq 70$ °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

