

Features

- SIL 3 / SC 3
- Input from Zone 0
- Installation in Zone 2
- 2 fully independent channels
- 4-20 mA Active-Passive Input, Source-Sink Output
- Output current duplication available
- HART® compatible
- Input and Output short circuit proof
- In-field programmability by DIP Switch
- High Accuracy
- Three port isolation, Input/Output/Supply
- High Density, two channels per unit

2CH I.S. SIL3 2/4-Wire HART® Transmitter Power Supply

RS Stock No.: 329084



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Product Description

This module is a high integrity analogue input interface suitable for applications requiring SIL 3 level in safety related systems for high-risk industries. It provides a fully floating dc supply for energizing conventional 2 wires 4-20 mA, active or passive, transmitters located in Hazardous Area, and repeats the current in floating circuit to drive a Safe Area load. The module supports output current duplication, and it allows bi-directional communication signals, for HART® devices.

General Specifications

Input	4 to 20 mA (separately powered input, voltage drop ≤ 0.5 V) or 4 to 20 mA (2 wires Tx current limited ≈ 25 mA), reading range 0 to 24 mA
Transmitter line voltage	15.0 V typical, 14.5 V minimum, @ 20 mA
Output	4 to 20 mA, on max. 550 Ω load in source mode (typical 12 V compliance); V min. 8 V @ 0 Ω load V max. 30 V in sink mode, current limited ≈ 25 mA or 1 to 5 V on internal 250 Ω . Output current duplication available.
Response time	5 ms (0 to 100 % step change)
Calibration accuracy	$\leq \pm 0.1$ % FSR
Linearity accuracy	$\leq \pm 0.05$ % FSR @ 23 °C
Temp. influence	$\leq \pm 0.01$ % FSR on zero/span for a 1 °C change

Mechanical Specifications

Weight	about 155 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 output, typical
Power dissipation	1.35 W, @ 24 Vdc with 20 mA output, typical
Isolation	I.S. In/Out 2.5 kV; I.S. In/Supply 2.5 kV; I.S. In/I.S. In 500 V; Out/Supply 500 V; Out/Out 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. $U_o = 25.9 \text{ V}$, $I_o = 92 \text{ mA}$, $P_o = 594 \text{ mW}$ (terminals 7-8, 9-10) $U_o = 1.1 \text{ V}$, $I_o = 56 \text{ mA}$, $P_o = 16 \text{ mW}$ (terminals 8-11, 10-12) $U_i = 30 \text{ V}$, $I_i = 128 \text{ mA}$, $C_i = 0 \text{ nF}$, $L_i = 0 \text{ nH}$ (terminals 8-11, 10-12) $U_m = 250 \text{ Vrms or Vdc}$, $-40 \text{ °C} \leq T_a \leq 70 \text{ °C}$
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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

