

D6017

SIL3 3/4-Wire HART® Transmitter Power Supply

The Repeater Power Supply D6017 module is a high integrity analog 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 3 & 4 wires 4-20 mA transmitters, and repeats the current in floating circuit to drive a load. The circuit allows bidirectional communication signals, for HART® devices.

FEATURES

- SIL 3 / SC 3
- Installation in Zone 2/Div. 2
- Field isolated power supply for 3/4-wire Tx
- 4-20 mA Active Input, Source-Sink Output
- HART® compatible
- · Input and Output short circuit proof
- High Accuracy
- Three port isolation, Input/Output/Supply

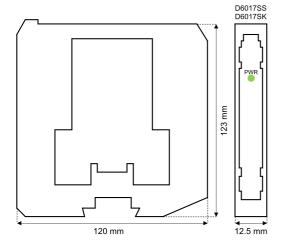
ORDERING INFORMATION

Ordering codes
D6017SS: 1 channel source output D6017SK: 1 channel sink output

Accessories

Bus Connector JDFT049, Bus Mounting Kit OPT5096.

OVERALL DIMENSIONS



TECHNICAL DATA

Supply

24 Vdc nom (18 to 30 Vdc), reverse polarity protected.

Current consumption: 270 mA (D6017SS), 255 mA (D6017SK with 24 V sink out voltage), @ 24 Vdc with 200 mA supply and 20 mA output signal on 250 Ω, typical.

Power dissipation: 1.75 W (D6017SS), 1.9 W (D6017SK with 24 V sink out voltage), @ 24 Vdc with 200 mA supply and 20 mA output signal on 250 Ω, typical.

4 to 20 mA (voltage drop ≤ 6 V), reading range 0 to 24 mA.

Transmitter line voltage: 24 V nominal, 23 V minimum @ 200 mA. Current rating: 200 mA (resettable fuse protected), with linear derating down to 150 mA, from 50 to 70°C.

HART impedance: 225 Ω , typical.

Current range: 4 to 20 mA, limited at 25 mA. Sink out voltage range: 2 to 30 V. Conventional Tx load: 0 to 550 Ω. Smart Tx load: 250Ω nom (150 to 500Ω). Response time: 10 ms (10 to 90 % step change).

Ref. Conditions: 24 V supply, 250 Ω load, 23 ± 1 °C ambient temperature.

Calibration accuracy: ≤ ± 20 µA. Linearity accuracy: ≤ ± 20 µA. Temp. influence: $\leq \pm 2 \mu A/^{\circ}C$.

Supply/In 500 V; Supply/Out 500 V; In/Out 500 V; Field Supply/In 500 V; Field Supply/Out 500 V; Field Supply/Supply 500 V.

Environmental conditions

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

DIN-Rail 35 mm, with or without Power Bus or on custom Term. Board.

Weight: about 155 g.

Connection: by polarized plug-in disconnect screw terminal blocks to

accommodate terminations up to 2.5 mm² (13 AWG)

Dimensions: Width 12.5 mm, Depth 123 mm, Height 120 mm.

Functional Safety Management Certification:

GM International is certified to conform to IEC61508:2010 part 1 clauses 5-6 for safety related systems up to and included SIL3. In addition, GM International products have been granted I.S. certificates from the most credited Notified Bodies in the world.

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

