

D6017

SIL3 3/4-Wire HART® Transmitter Power Supply

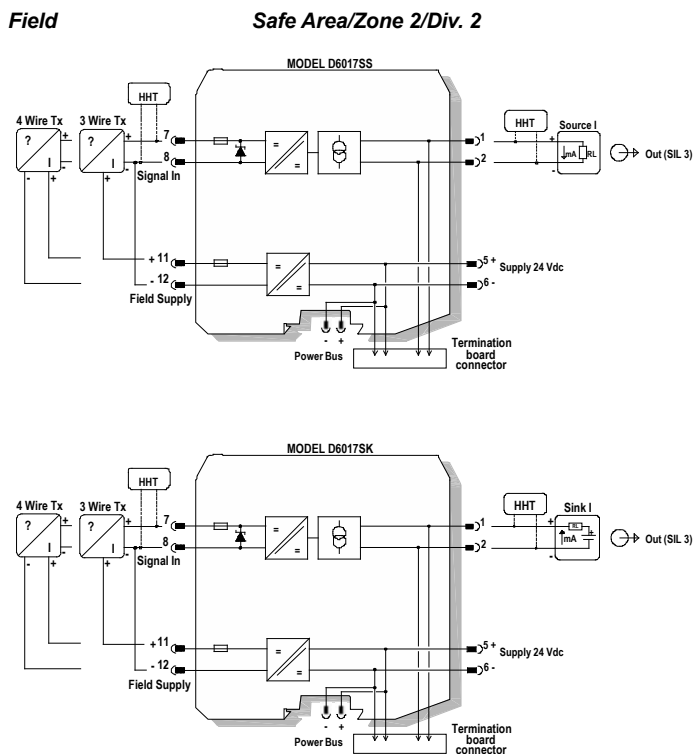
The Repeater Power Supply D6017 module is a high integrity analog input interface suitable for applications requiring SIL 3 level in safety related systems for high risk industries. It provides a fully floating dc supply for energizing 3 & 4 wires 4-20 mA transmitters, and repeats the current in floating circuit to drive a load. The circuit allows bi-directional communication signals, for HART® devices.

FEATURES

- SIL 3 / SC 3 (pending)
- 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

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.



TECHNICAL DATA

Supply

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

Current consumption: 260 mA (D6017SS), @ 24 Vdc with 200 mA supply and 20 mA output signal, typical.

Power dissipation: 1.35 W (D6017SS), @ 24 Vdc with 200 mA supply and 20 mA output signal, typical.

Input

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.

Output

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: 250 Ω nom (150 to 500 Ω).

Response time: 5 ms (0 to 100 % step change).

Performance

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

Calibration accuracy: $\leq \pm 20$ μ A.

Linearity accuracy: $\leq \pm 20$ μ A.

Temp. influence: $\leq \pm 2$ μ A/°C.

Isolation

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.

Mounting

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.

ORDERING INFORMATION

D6017SS: 1 channel source output

D6017SK: 1 channel sink output

Accessories

Bus Connector JDFT049, Bus Mounting Kit OPT5096.