

D6014

SIL3 2/4-Wire HART® Transmitter Power Supply

The Repeater Power Supply D6014 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 conventional 2 wires 4-20 mA, active or passive, transmitters, and repeats the current in floating circuit to drive a load. The module supports output current duplication and it allows bi-directional communication signals, for HART® devices.

FEATURES

- SIL 3 / SC 3
- 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

TECHNICAL DATA

Supply

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

Current consumption: 90 mA (D6014D), 45 mA (D6014S), @ 24 Vdc with 20 mA output, typical.

Power dissipation: 1.35 W (D6014D), 0.68 W (D6014S), @ 24 Vdc with 20 mA output, typical.

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 shunt (or 2 to 10 V on internal 500 Ω shunt on request). Output current duplication available (D6014D).

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

Performance

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

Calibration accuracy: $\leq \pm 0.1$ % FSR.

Linearity accuracy: $\leq \pm 0.05$ % FSR.

Temp. influence: $\leq \pm 0.01$ % FSR on zero/span for a 1 °C change.

Isolation

In/Out 2.5 kV; In/Supply 2.5 kV; In/In 500 V; Out/Supply 500 V; Out/Out 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.

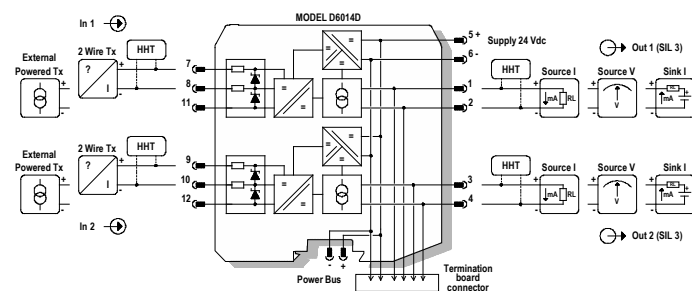
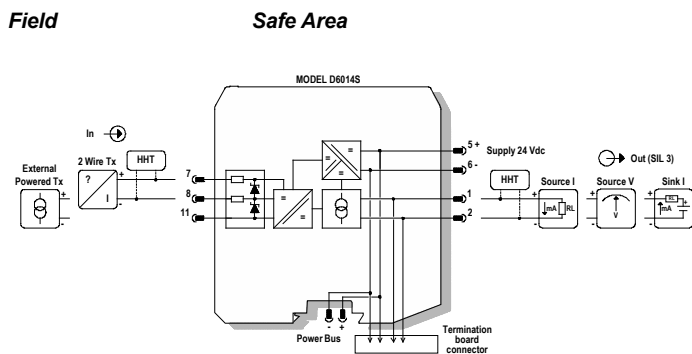
Weight: about 155 g (D6014D), 130 g (D6014S).

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.

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.



ORDERING INFORMATION

D6014S: 1 channel

D6014D: 2 channels

Accessories

Bus Connector JDFT049, Bus Mounting Kit OPT5096.