

D6017-TB

SIL3 3/4-Wire HART® Transmitter Power Supply

The Repeater Power Supply D6017-TB 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
- 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

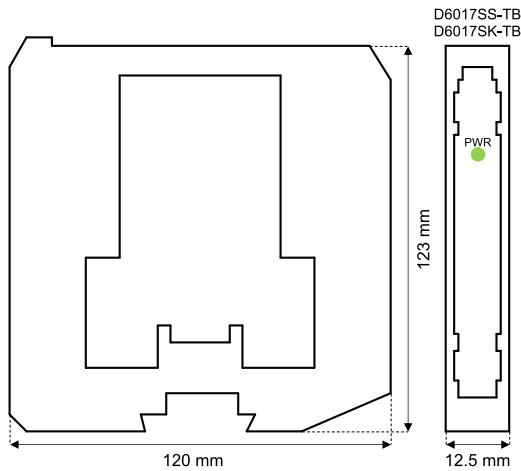
ORDERING INFORMATION

Ordering codes

D6017SS-TB: 1 channel source output

D6017SK-TB: 1 channel sink output

OVERALL DIMENSIONS



TECHNICAL DATA

Supply

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

Current consumption: 270 mA (D6017SS-TB), 255 mA (D6017SK-TB 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-TB), 1.9 W (D6017SK-TB with 24 V sink out voltage), @ 24 Vdc with 200 mA supply and 20 mA output signal on 250 Ω, 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: 10 ms (10 to 90 % step change).

Performance

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

Calibration accuracy: ≤ ± 20 μA.

Linearity accuracy: ≤ ± 20 μA.

Temp. influence: ≤ ± 2 μA/°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

Custom Term. Board.

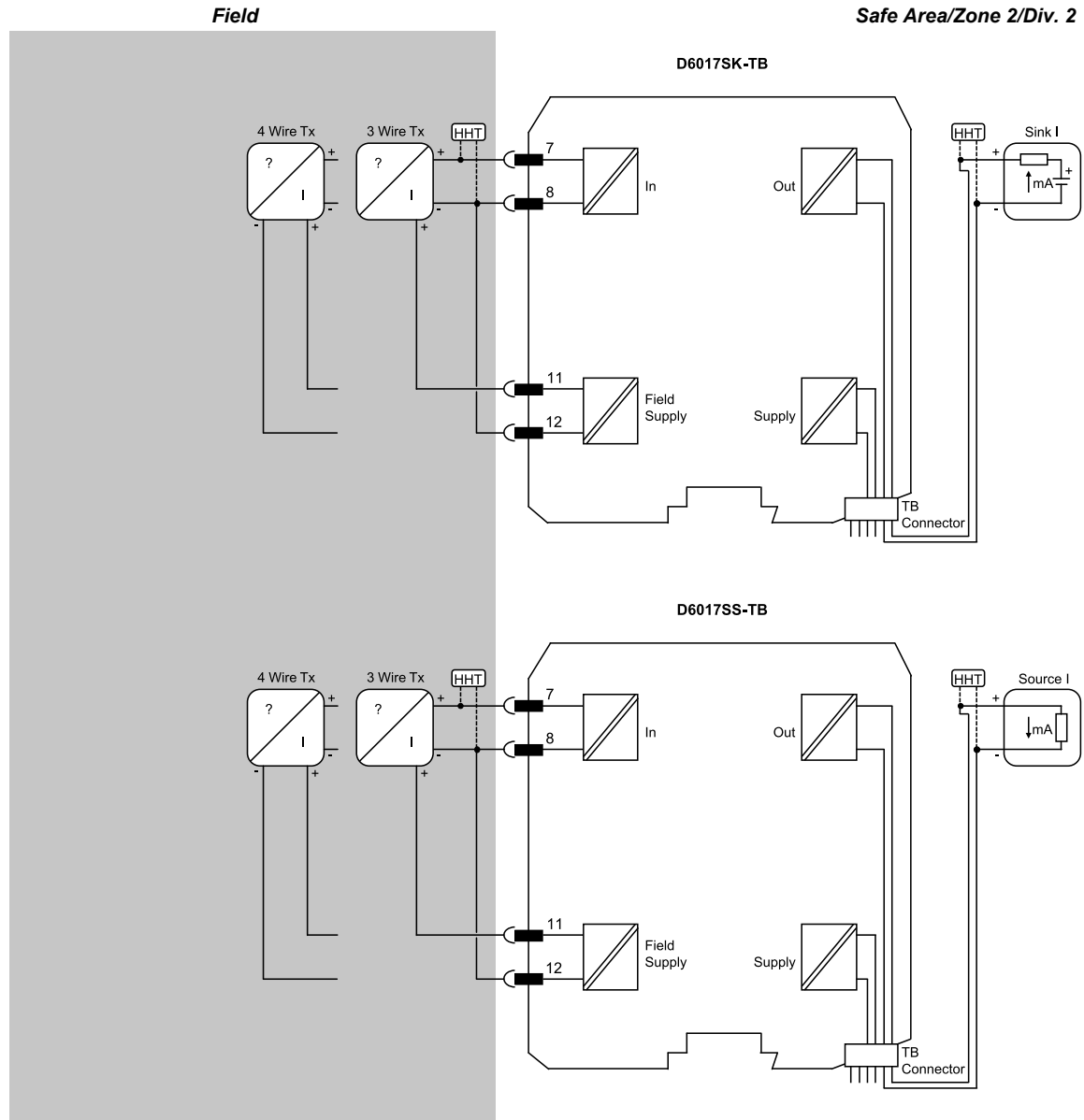
Weight: about 155 g.

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.

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.



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.

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