

D6016

SIL3 2-Wire Active HART® Tx Current Repeater

The Current Repeater D6016 module is a high integrity analog input interface suitable for applications requiring SIL 3 level in safety related systems for high risk industries. It repeats a 2-wire active 4-20 mA current signal input in floating circuit to drive a Safe Area load. The module allows bi-directional communication signals, for HART® devices.

FEATURES

- SIL 3 / SC 3
- 2 fully independent channels
- 4-20 mA Source-Sink Output
- HART® compatible
- High Accuracy
- Three port isolation, Input/Output/Supply
- High Density, two channels per unit

ORDERING INFORMATION

Ordering codes

D6016xy

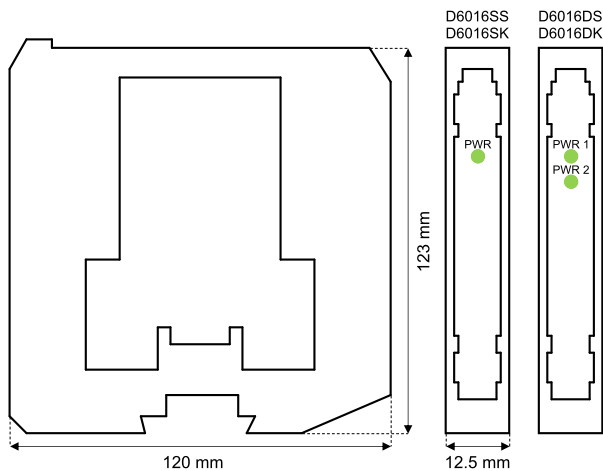
x: S → 1 channel; D → 2 channels

y: S → source current output; K → sink current 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: 33 mA (D6016SS), 20 mA (D6016SK), 57 mA (D6016DS), 31 mA (D6016DK) @ 24 Vdc with 20 mA output, typical.

Power dissipation: 0.90 W (D6016SS), 1.00 W (D6016SK), 1.50 W (D6016DS), 1.80 W (D6016DK) @ 24 Vdc with 20 mA output on 250 Ω load and 24 Vdc output supply for sink models, typical.

Input

4 to 20 mA (separately powered input, voltage drop ≤ 7 V), reading range 0 to 22 mA.

HART Impedance: 225 Ω, typical.

Output

4 to 20 mA.

Sink out voltage range: 2 to 30 V.

Load range: 0 to 500 Ω, with conventional Tx input

250 Ω nom (160 to 500 Ω), with smart Tx input.

Current limitation: 24 mA (up to 450 Ω load) ≤ max current ≤ 26 mA.

Response time: 20 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

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 135 g (D6016DS and D6016DK), 115 g (D6016SS and D6016SK).

Connection: by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm² (13 AWG).

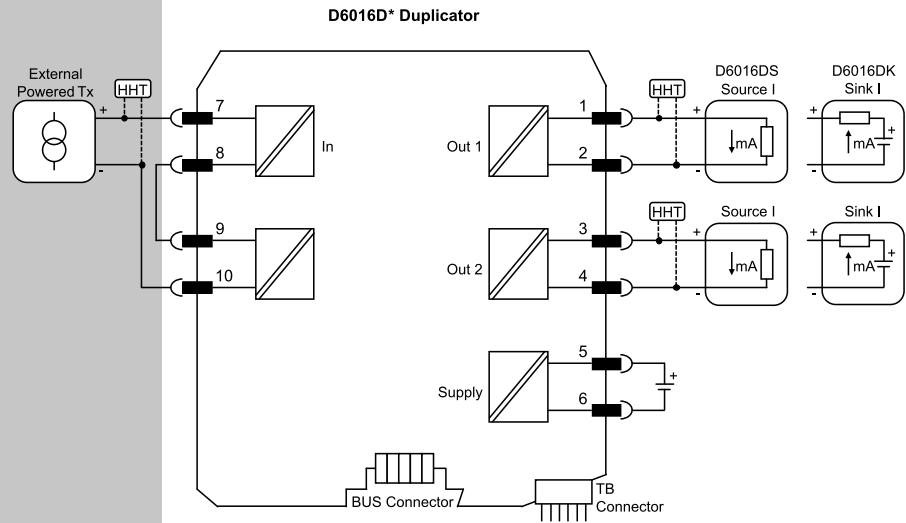
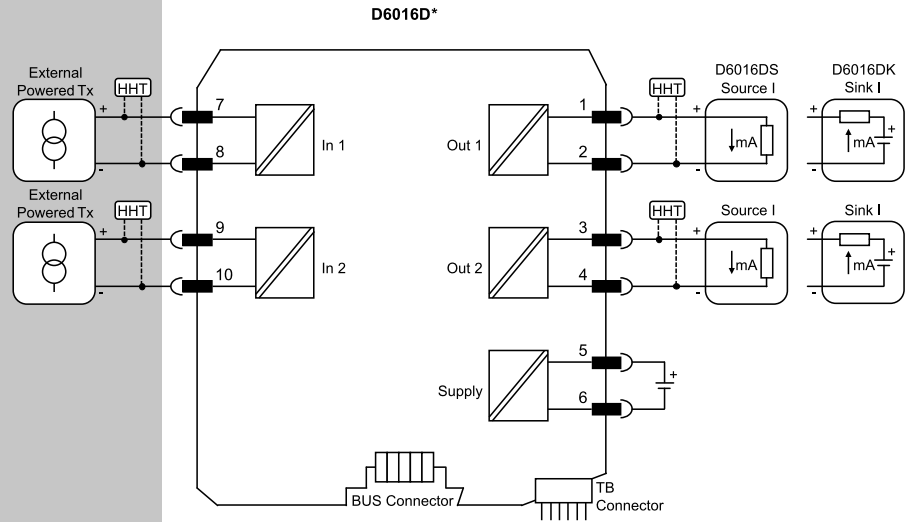
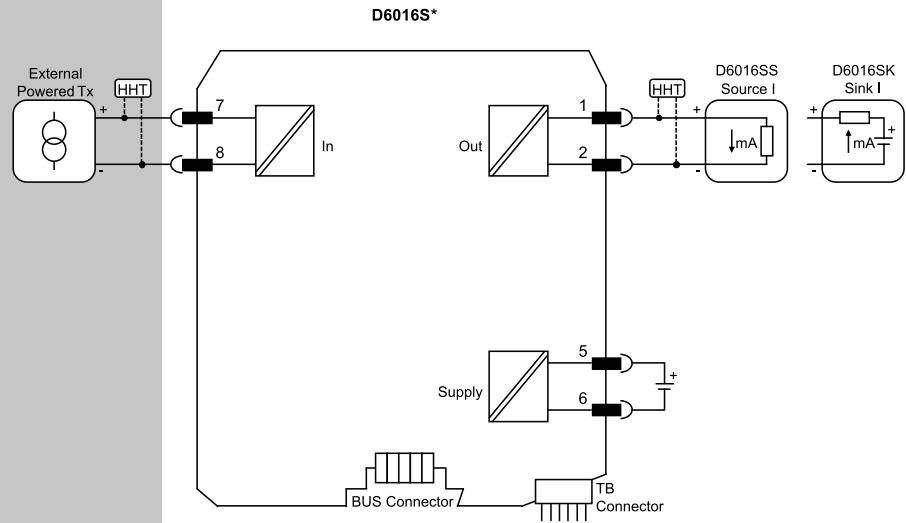
Dimensions: Width 12.5 mm, Depth 123 mm, Height 120 mm.

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

Field

Safe Area



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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