

# 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

### ORDERING INFORMATION

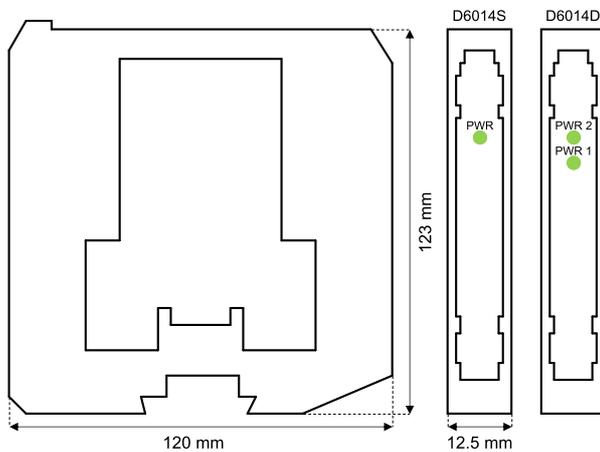
#### Ordering codes

D6014S: 1 channel  
D6014D: 2 channels

#### 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:** 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  $\leq 0.5$  V) or 4 to 20 mA (2 wires Tx current limited  $\approx 25$  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  $\Omega$  load in source mode (typical 12 V compliance); V min. 8 V @ 0  $\Omega$  load V max. 30 V in sink mode, current limited  $\approx 25$  mA or 1 to 5 V on internal 250  $\Omega$  shunt (or 2 to 10 V on internal 500  $\Omega$  shunt on request). Output current duplication available (D6014D).

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

#### Performance

**Ref. Conditions:** 24 V supply, 250  $\Omega$  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 mm<sup>2</sup> (13 AWG).

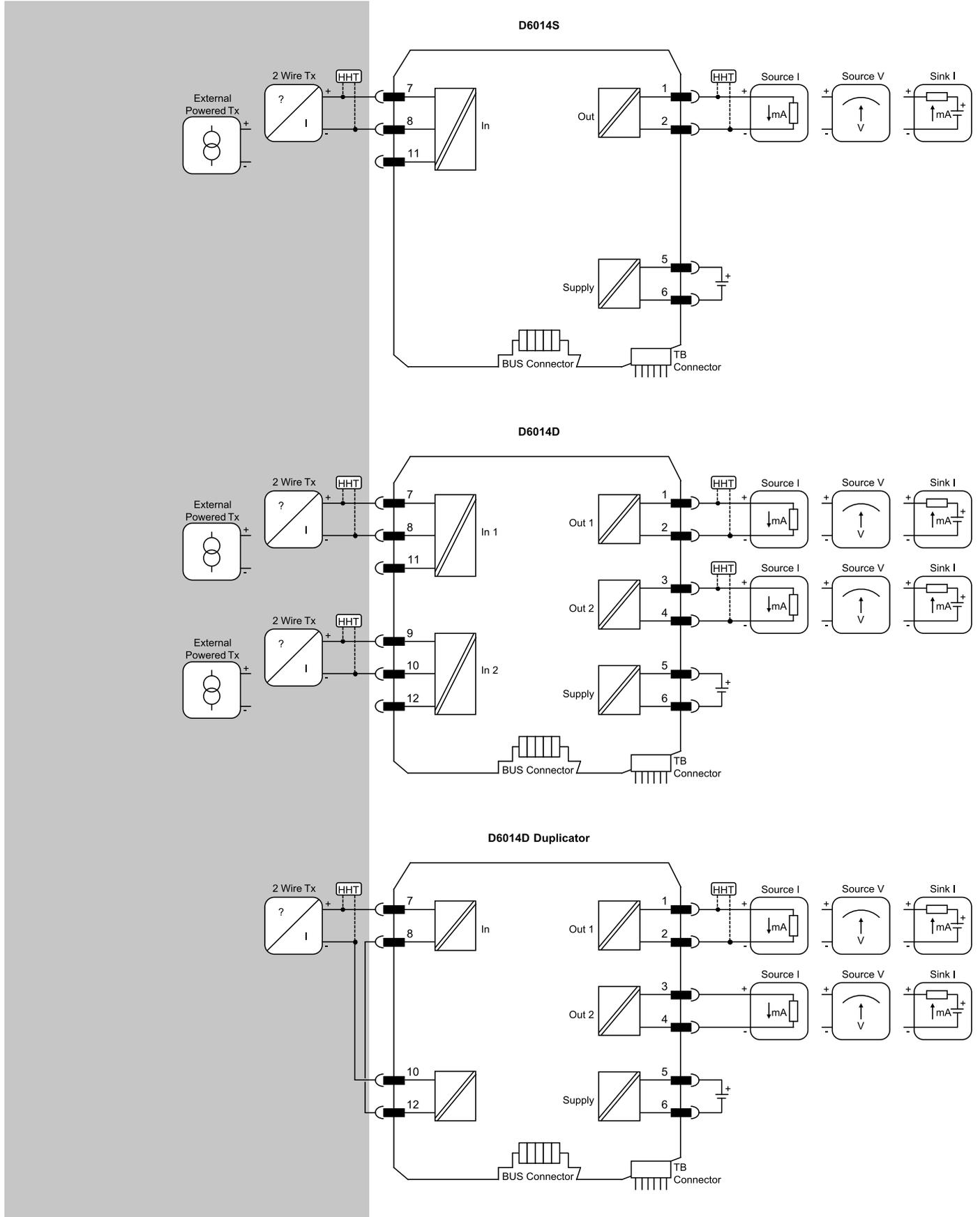
**Dimensions:** Width 12.5 mm, Depth 123 mm, Height 120 mm.

# 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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