![gmi technology for safety]

D5072-096
I.S. SIL2 Thermocouple/mV Repeater

The Thermocouple/mV Repeater D5072-096 accepts a low level dc signal from millivolt or thermocouple sensor, located in Hazardous Area, and repeats, with isolation, the signal to Safe Area, suitable for applications requiring SIL 2 level in safety related systems for high risk industries. For D5072D-096 module: duplicator function provides two independent outputs from one single input.

FEATURES

- SIL 2 / SC 3
- Input from Zone 0/Div. 1
- Installation in Zone 2/Div. 2
- mV or thermocouple input
- Output duplication
- Fully programmable operating parameters
- High Accuracy, µP controlled A/D converter
- Three port isolation, Input/Output/Supply
- High Density, two channels per unit

ORDERING INFORMATION

Ordering codes
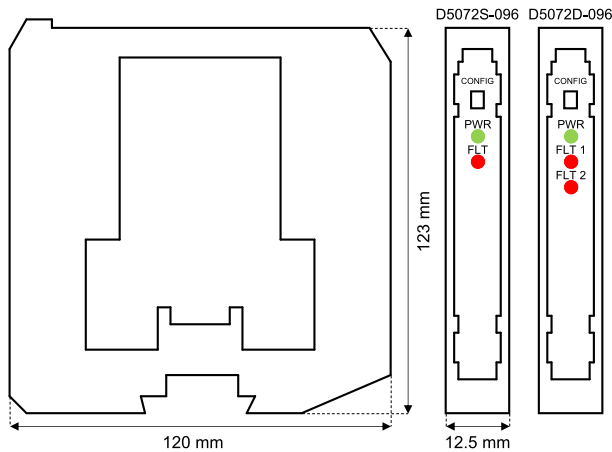D5072S-096: 1 channel
D5072D-096: 2 channels

Accessories
Bus Connector JDFT049, Bus Mounting Kit OPT5096.
Programmable USB serial line Kit PPC5092 + SWC5090.

OVERALL DIMENSIONS

TECHNICAL DATA

Supply
24 Vdc nom (18 to 30 Vdc), reverse polarity protected.
Current consumption: 35 mA @ 24 Vdc, typical.
Power dissipation: 0.85 W @ 24 Vdc, typical.

Input
Millivolt or any type of thermocouple within Input Range.
Integration time: 75 ms (fast), 375 ms (slow), user selectable.
Input range: -10 to +100 mV.
Thermocouple burnout current: ≤ 50 µA.

Output
Millivolt.
Transfer characteristic: linear.
Response time: ≤ 20 ms (10 to 90 % step).
Output range: -10 to +100 mV.

Fault
Output reflects burnout/internal fault condition via highscale (+110 mV) value forcing. Fault condition is also signaled via BUS and red LED on front panel.

Performance
Ref. Conditions: 24 V supply, 23 ± 1 °C ambient temperature, slow integration mode.
Input:
    Calibration & linearity accuracy: ≤ ± 10 µV.
    Temp. influence: ≤ ± 3 µV/°C, typical.
Output:
    Calibration & linearity accuracy: ≤ ± 10 µV.
    Temp. influence: ≤ ± 3 µV/°C, typical.

Isolation
I.S. In/Out 2.5 kV; I.S. In/Supply 2.5 kV; I.S. In/I.S. 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.

Safety description
Associated apparatus and non-sparking electrical equipment.
D5072S-096: U_o = 7.2 V, I_o = 23 mA, P_o = 40 mW, U_i = 12.8 V, C_i = 0 nF, L_i = 0 nH at terminals 7-8.
D5072D-096: U_o = 7.2 V, I_o = 16 mA, P_o = 27 mW, U_i = 12.8 V, C_i = 0 nF, L_i = 0 nH at terminals 7-8, 11-12.
U_m = 250 Vrms or Vdc, -40 °C ≤ Ta ≤ 70 °C.

Mounting
DIN-Rail 35 mm, with or without Power Bus.
Weight: about 135 g (D5072D-096), 130 g (D5072S-096).
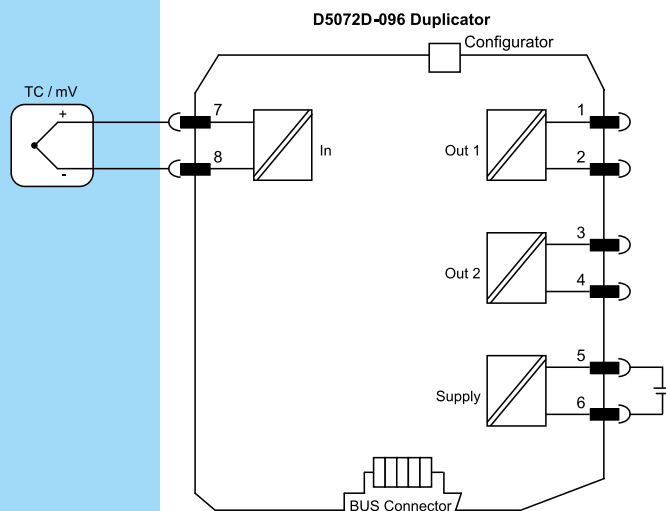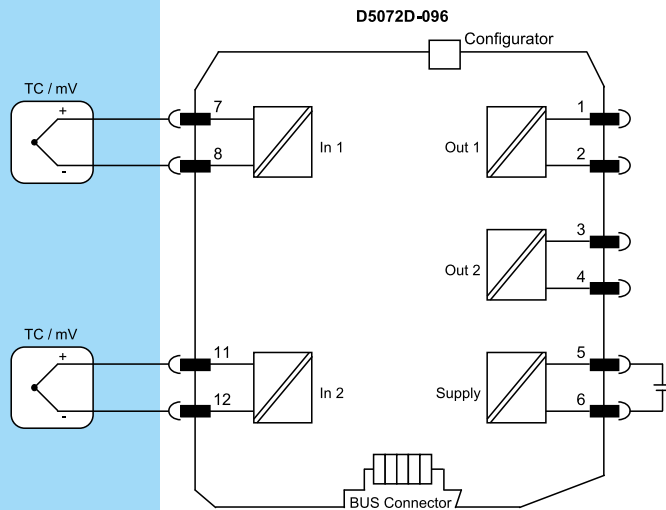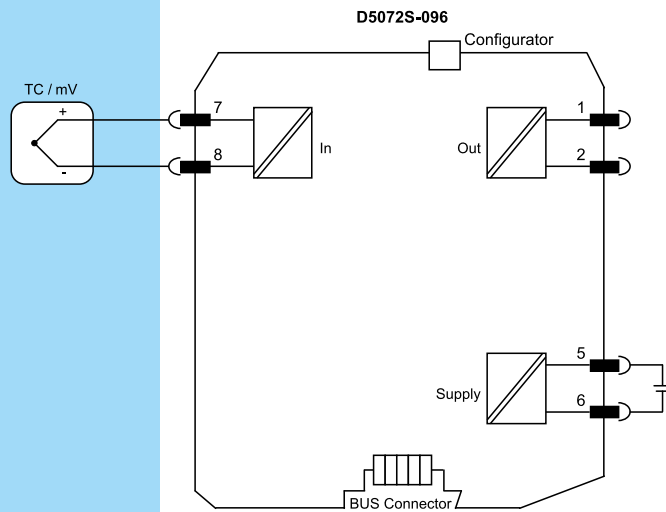**Connection:** by polarized plug-in disconnect screw terminal blocks to accommodate terminations up to 2.5 mm² (13 AWG).
Dimensions: Width 12.5 mm, Depth 123 mm, Height 120 mm.

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

Hazardous Area   *Safe Area/Zone 2/Div. 2*

D5072S-096

D5072D-096

D5072D-096 Duplicator