

D5040

I.S. SIL3 Loop-Powered Digital Output Driver

The Loop-Powered Digital Output Driver D5040 is a module suitable for applications requiring SIL 3 level in safety related systems for high risk industries. It can drive solenoid valves, visual or audible alarms to alert a plant operator, or other process control devices in Hazardous Area from control signals located in Safe Area. They can also be used as switchable supplies to power measuring or process control equipments. For each channel two basic output circuits are selectable, with different safety parameters, to interface the majority of devices on the market.

FEATURES

- SIL 3 / SC 3
- Output to Zone 0/Div. 1
- Installation in Zone 2/Div. 2
- 2 fully independent channels
- Loop powered for NE loads
- Output short circuit proof
- Two port isolation, Input/Output
- High Density, two channels per unit

ORDERING INFORMATION

Ordering codes

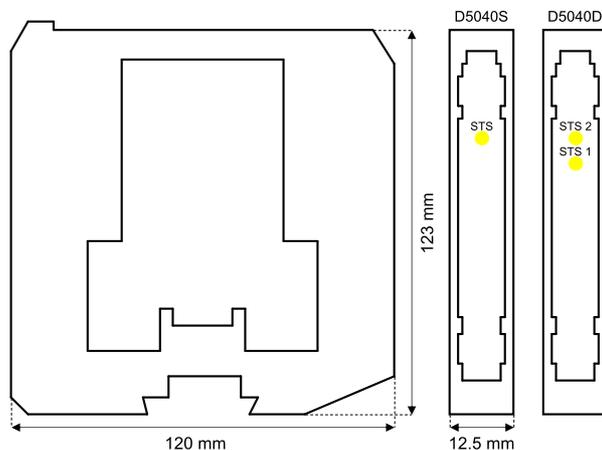
D5040S: 1 channel

D5040D: 2 channels

Accessories

DIN-Rail stopper MCHP196.

OVERALL DIMENSIONS



TECHNICAL DATA

Input

Loop powered control signal.

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

Current consumption: 45 mA (D5040D) @ 24 Vdc with 30 mA outputs, 55 mA (D5040S) @ 24 Vdc with 40 mA output, typical.

Power dissipation: 0.75 W (D5040D) @ 24 Vdc with 35 mA outputs, 0.85 W (D5040S) @ 24 Vdc with 45 mA output, typical.

Output

Short circuit current: ≥ 45 mA (D5040S); ≥ 35 mA/channel (D5040D); ≥ 70 mA two outputs in parallel (D5040D).

Response time: ≤ 75 ms.

Output diagram: refer to Instruction Manual.

Isolation

I.S. Out/In 1.5 kV; Out/Out 500 V; In/In 500 V.

Safety description

Associated apparatus and non-sparking electrical equipment.

$U_o = 25.2$ V, $I_o = 146$ mA, $P_o = 916$ mW at terminals 7-8, 10-11.

$U_o = 25.2$ V, $I_o = 108$ mA, $P_o = 676$ mW at terminals 7-9, 10-12.

Refer to Instruction Manual for more details.

$U_m = 250$ Vrms or Vdc, -40 °C $\leq T_a \leq 70$ °C.

Mounting

DIN-Rail 35 mm, or on custom Term. Board.

Weight: about 110 g.

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

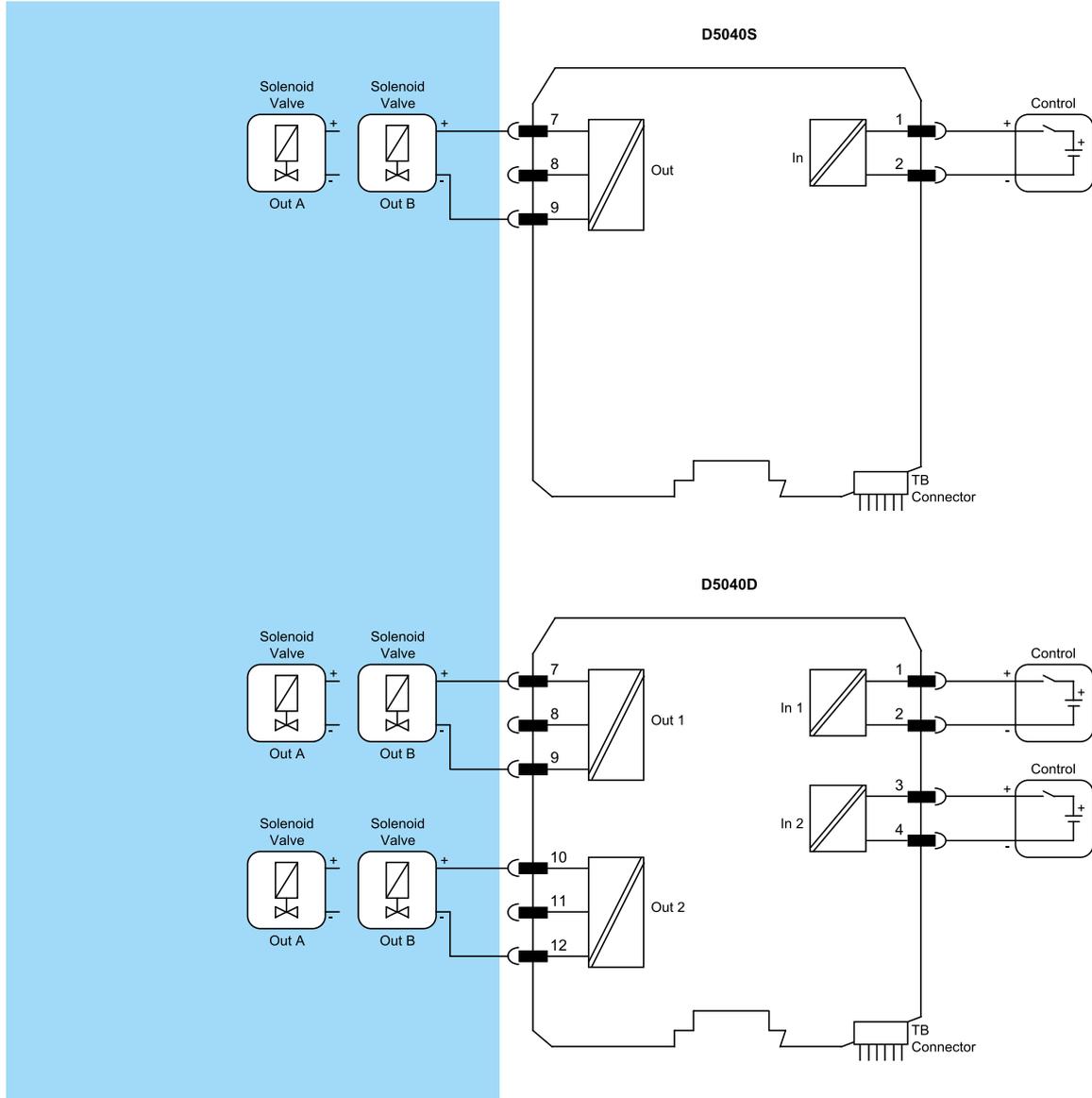
Dimensions: Width 12.5 mm, Depth 123 mm, Height 120 mm.

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

Hazardous Area

Safe Area/Zone 2/Div. 2



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.

Data specified in this document are merely descriptive of the products and should be integrated with relevant technical specifications. Our products are in constant development and the information presented herein refers to the time of document issue. No statements concerning a certain condition or suitability for a certain application can be derived from our information. The information given does not release the user from the obligation of own judgment and verification. Terms & Conditions can be found at our website. For more information refer to instruction manual.