

D5240

I.S. SIL2 Bus-Powered Digital Output Driver

The Bus-Powered Digital Output Isolator D5240 is a module suitable for applications requiring SIL 2 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 three basic output circuits are selectable, with different safety parameters, to interface the majority of devices on the market. Output remote (de-)activation is possible through Modbus.

FEATURES

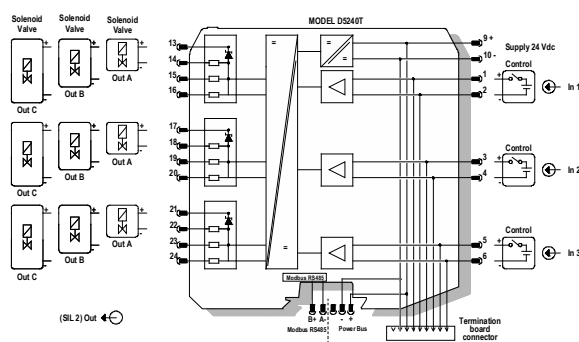
- SIL 2 (pending)
- Output to Zone 0
- Installation in Zone 2
- Bus powered for NE loads
- Output short circuit proof
- Modbus RTU RS-485 for monitor & configuration
- Fully programmable operating parameters
- Three port isolation, Input/Output/Supply
- High Density, three channels per unit

FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

Hazardous Area

Safe Area/Zone 2



TECHNICAL DATA

Supply

24 Vdc nom (21.5 to 30 Vdc), reverse polarity protected.

Current consumption: 200 mA @ 24 Vdc with 35 mA output, typical.

Power dissipation: 3.3 W @ 24 Vdc with 35 mA output, typical.

Input

Logic level reverse polarity protected.

Voltage range: 0 V ≤ OFF ≤ 5 V, 18 V ≤ ON ≤ 30 V.

Current consumption: 5 mA @ 24 Vdc, typical.

Output diagram

refer to Instruction Manual.

Short circuit current: ≥ 35 mA/channel, 40 mA/channel typical.

Response time: ≤ 50 ms.

Modbus interface

Modbus RTU RS-485 up to 115.2 kbps for monitor/configuration/control.

Isolation

I.S. Out/In 1.5 kV; I.S. Out/Supply 1.5 kV; Out/Modbus 1.5 kV; In/Supply 500 V, In/In 500 V, In/Modbus 500V.

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.

U_o = 25.2 V, I_o = 146 mA, P_o = 916 mW at terminals 13-14, 17-18, 21-22.

U_o = 25.2 V, I_o = 108 mA, P_o = 676 mW at terminals 13-15, 17-19, 21-23.

U_o = 25.2 V, I_o = 93 mA, P_o = 580 mW at terminals 13-16, 17-20, 21-24.

Refer to Instruction Manual for more details.

U_m = 250 Vrms or Vdc, -40 °C ≤ T_a ≤ 70 °C.

Mounting

DIN-Rail 35 mm, with or without Power Bus or on custom Term. Board.

Weight: about 175 g.

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

Dimensions: Width 22.5 mm, Depth 123 mm, Height 120 mm.

ORDERING INFORMATION

D5240T: 3 channels

Accessories

Bus Connector JDFT050, Bus Mounting Kit OPT5096.

Programmable USB serial line Kit PPC5092 + SWC5090.