

D5202

SIL3 24 Vdc 4 A Power Distribution with Diagnostics

The D5202 is used to protect the power system by limiting the maximum supply current for a set of D5000 modules connected via Power Bus. This is particularly useful when the source Power supply provides currents that are higher than the ones required from the modules. It is also capable of repeating the common fault signal from the Power Bus via a SPDT relay. For single power supply, 3 LEDs are present to monitor line presence, supply fault (supply voltage out of 25% variation), common bus fault and a replaceable 5x20, 6 A fuse. For redundant power supply, 5 LEDs are present to monitor line presence, supply fault (supply voltage out of 25% variation for each supply source), common bus fault and 2 replaceable 5x20, 6 A fuses. 2 SPDT relay contacts provide remote alarming for the above mentioned failures. In case of fault of one supply source the D5202S exchanges to the working one using a circuit (ideal diodes) with just a few mW dissipation, thus increasing reliability and greatly reducing internal power dissipation.

FEATURES

- SIL 3 / SC 3
- Installation in Zone 2
- Separate single or redundant 24 Vdc supply
- Supply current to approx. 40-50 D5000 modules
- Replaceable fuses
- Very low internal dissipation (ideal diode circuits)

ORDERING INFORMATION

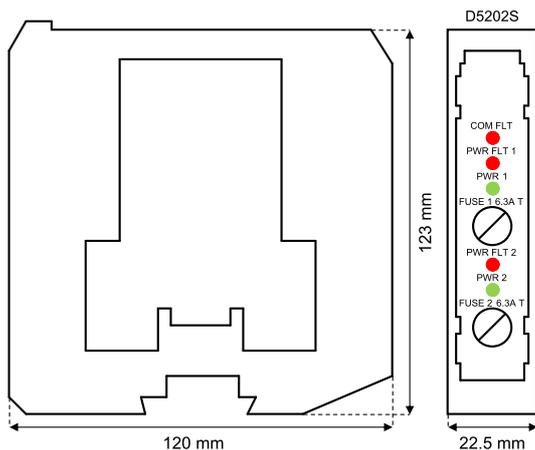
Ordering codes

D5202S: 1 channel

Accessories

Bus Connector JDFT050, Bus Mounting Kit OPT5096.

OVERALL DIMENSIONS



TECHNICAL DATA

Supply

From power Inputs 24 Vdc nom (18 to 30 Vdc), reverse polarity protected, double terminal blocks for redundant power supply, with OR ideal diodes to mix supply voltages.

Current consumption: 40 mA @ 24 Vdc with both relays energized, typical.

Power dissipation: 1.0 W @ 24 Vdc with both relays energized, typical.

LEDs: common fault (red), fault supply 1 and 2 (red), power supply 1 and 2 (green).

Protection fuse: 5x20 6.3 A time lag (slow blow).

Fault

Supply 1 or supply 2 is < 18 Vdc (Under Voltage, UV) or > 30 Vdc (Over Voltage, OV).

Preventive - abnormal supply voltage: supply 1 or supply 2 is < 18 Vdc (Under Voltage, UV) or > 30 Vdc (Over Voltage, OV).

Cumulative fault: cumulative fault indication (about presence of short or open field circuit for any module on the Bus).

Fault signaling: two voltage free NE SPDT relay contacts (de-energized in fault condition).

Contact material: Ag Alloy (Cd free).

Contact rating: 4 A 250 Vac 1000 VA, 4 A 250 Vdc 120 W (resistive load).

DC and AC load breaking capacity: refer to Instruction Manual.

Mechanical / electrical life: $5 * 10^6 / 3 * 10^4$ operations, typical.

Operate / release time: 8 / 4 ms, typical.

Isolation

Relay contact groups/Inputs 1.5 kV.

Environmental conditions

Operating temperature: temperature limits -40 to +70 °C.

Storage temperature: temperature limits -45 to +80 °C.

Mounting

DIN-Rail 35 mm with Power Bus.

Weight: about 170 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.

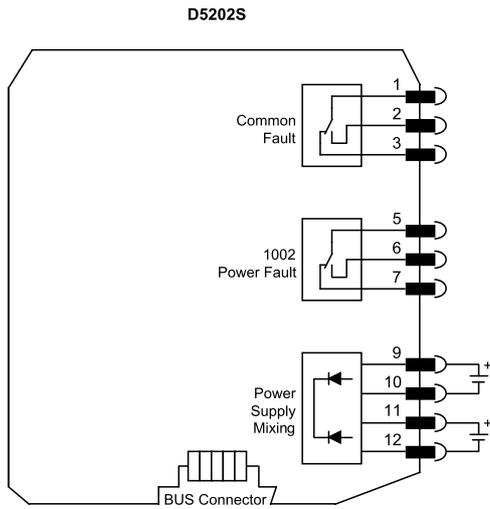
FUNCTION DIAGRAM

Additional installation diagrams may be found in Instruction Manual.

Field



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.

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