

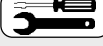



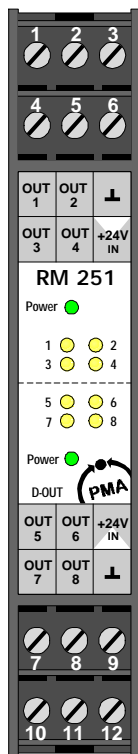


Digital Output Module RM 251

Safety Instructions

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|---|---|---|
|  ESD ! <ul style="list-style-type: none"> contains electrostatically sensitive components Original packing protects against electrostatic discharge (ESD) Transporting only in the original packing during mounting rules for protection against ESD must be followed |  Connections <ul style="list-style-type: none"> Wiring must be conform to local standards (e.g. VDE 0100 in Germany) ! Input leads must be kept separate from signal and mains leads ! The protective earth must be connected to the relevant terminal (in the instrument carrier) ! The cable screening must be connected to the terminal for grounded measurement ! Usage of twisted and screened input leads prevent stray electric interference ! Connections must be made according to the connecting diagrams ! |  Maintenance / Repair <p>Instrument needs no particular maintenance.</p>  <p>When opening the instrument live parts or terminals can be exposed. Before carrying out the instrument must be disconnected from all voltage sources. The instrument contains electrostatically sensitive components. The following work may be carried out only by trained, authorized persons.</p> <p>Fuse tripped:</p> <ul style="list-style-type: none"> Cause must be determined and removed ! Only fuses of the same type and current rating as the original fuse must be used. Using repaired fuses or short-circuiting the fuse socket is inadmissible ! |
|---|---|---|

Pin Assignment



| Pin | Assignment | |
|----------|----------------|-------------------------|
| 1 | OUT 1 | Output 1 |
| 2 | OUT 2 | Output 2 |
| 3 | GND | Supply ground A |
| 4 | OUT 3 | Output 3 |
| 5 | OUT 4 | Output 4 |
| 6 | +24 V IN | Supply voltage A |
| 7 | OUT 5 | Output 5 |
| 8 | OUT 6 | Output 6 |
| 9 | +24 V IN | Supply voltage B |
| 10 | OUT 7 | Output 7 |
| 11 | OUT 8 | Output 8 |
| 12 | GND | Supply ground B |
| Art.-No. | 9407-738-25101 | |

Explanatory Note on the Status-LEDs:

The 8 yellow LEDs serve to indicate the output-states:

- LED illuminated: output is switched
- LED flashing: error-state

Short-circuits or open-circuits are detected for two neighbouring outputs.


The following errors can be detected:

- open-circuit: not applied output-supply and outputs on low
- short-circuit: not applied output-supply and outputs on high
- open-circuit: open-circuit on at least one output and outputs on low
- short-circuit: short-circuit on at least one output and outputs on high

So that the setted error-flags can be cleared automatically after the failure, the outputs have to take on the status which they had at the detection of the failure.

The minimal load that would not be interpreted as an open-circuit has to be less than 50 kOhm (with the supply-voltage 24 V DC and the ambient temperature of 25° C).

Technical Data RM 251

| | |
|--------------------------------|--|
| Application: | 8-channel output module, 24 V DC, high side driver, e.g. for direct connection of 24 V valves |
| Power supply: | The module is supplied with the necessary voltages via the bus board. |
| Power consumption: | max. 850 mW (all channels on) |
| Output voltage: | The output voltages (12 V DC and 24 V DC systems) to be switched are applied for a group of 4 outputs to the module. A max. operating range from 8 V to 34 V is permissible for the output voltage. |
| Output current: | <ul style="list-style-type: none">• 1.5 A per output• 3 A per group of 4 outputs• 6 A per module Condition: an output voltage of 24 V DC and an ambient temperature of 25°C At max. ambient temperature (50°C) a current of 1 A per output and a total current of 2 A per group of 4 outputs is permissible. In the powered state, the resistance of an output driver is max. 400 mΩ (typically 200 mΩ). |
| Protection: | <ul style="list-style-type: none">• outputs: protected against short-circuits, overvoltage, overcurrent, excess temperature and reverse polarity• inductive load: external protective network necessary |
| Cycle times: | The maximum write cycle time of the 8 outputs is 10 ms. |
| Diagnostics: | The software checks automatically whether a short-circuit, line breakage or excess temperature has occurred. Any defect or error can be displayed for two outputs at a time via the status LEDs and can be processed according to the protocol. |
| LED displays: | <ul style="list-style-type: none">• 8x LEDs (yellow): status for each output• 2x LEDs (green): states of the output voltages applied externally |
| Galvanic isolation: | The logic part is galvanic isolated from the two output areas of the module. In addition, the two output groups with each 4 outputs are also galvanic isolated from each other (testing voltage 2 kV DC, isolation voltage 500 V DC). |
| Ambient temperature: | <ul style="list-style-type: none">• Storage temperature: -20 ... +70 °C• Operation temperature: 0 ... +50 °C |
| Humidity: | ≤ 75% rel. humidity, no condensation |
| Shock sensitivity: | DIN 40046 IEC68-2-69 |
| EMC: | <ul style="list-style-type: none">• DIN EN 50081 Part 2• DIN EN 50082 Part 2  |
| Electrical connections: | screw-/plug-in-terminals, line cross-section max. 2.5 mm ² |
| Class of protection: | IP 20 |
| Dimensions: | 99 x 17.5 x 114.5 mm (h x w x d) |
| Weight: | 76 g |
| Housing: | Material: Polyamid PA 6.6, combustibility class V0 according to UL 94 |
| Assembly: | plugged-in and locked in from the front of the base module |
| Usage position: | vertical |

Subject to technical alterations!