

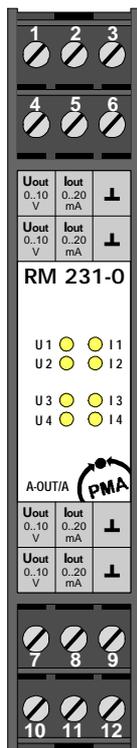


Analog Output Module RM 231

Safety Instructions

 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 !
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Anschlußbelegung



Pin	RM 231-0	RM 231-1	RM 231-2	
1	0...10 V	0...10 V	-10...10 V	Output 1
2	0...20 mA	0...20 mA	0...20 mA	
3	GND	GND	GND	
4	0...10 V	0...10 V	-10...10 V	Output 2
5	0...20 mA	0...20 mA	0...20 mA	
6	GND	GND	GND	
7	0...10 V	-10...10 V	-10...10 V	Output 3
8	0...20 mA	0...20 mA	0...20 mA	
9	GND	GND	GND	
10	0...10 V	-10...10 V	-10...10 V	Output 4
11	0...20 mA	0...20 mA	0...20 mA	
12	GND	GND	GND	
Art.-No.	9407-738-23101	9407-738-23111	9407-738-23121	

Remark: The outputs -10...+10 V can be switched to the range 0...+10 V via software.

The outputs 0...20 mA can be switched to the range 4...20 mA via software.

Technical Data RM 231

Application: 4 analog norm-signal outputs with 0(4)...20 mA and 0...10 V or -10...10 V

Standard versions:

	RM 231-0	RM 231-1	RM 231-2
0(4)...20 mA	4x	4x	4x
0...10 V	4x	2x	--
-10...10 V	--	2x	4x

Resolution: The used DA-converters have a resolution of 12 bit.

Scaling:

- Starting-value: 0 mA = 0 / 4 mA = 4000 / 0 V = 0 / -10 V = -10000
- End-value: 20 mA = 20000 / 10 V = 10000

Configuration: The desired output signal can be modified by the used fieldbus.
The non active output signal (current or voltage) may not be used.

Power supply: The module is supplied with the necessary voltages via the bus board.

Power consumption: max. 3310 mW

Output impedance:

- Current output: working resistance max. 500 Ω
- Voltage output: max. current delivery 10 mA

Cycle times: The maximum cycle time for description of the 4 outputs is 50 ms.

Total error:

- 0...10 V = 0.25% full scale
- 10...10 V = 0.6% f. s.
- 0...20 mA = 0.63% f. s.

Protection: All outputs are short-circuit proof.

LED-Display: Each of the 4 output channels is provided with 1 yellow LED for the current output and 1 yellow LED for the voltage output.
These LEDs display the selection (current or voltage) for each output.
Errors are displayed by blinking LEDs.

Galvanic isolation: The logic part is galvanic isolated from the outputs. Additional there is a galvanic isolation between the power supply and the outputs.
(Testing voltage 2 kV DC, Isolation voltage 500 V DC)
The outputs are not isolated from each other.

Temperature range:

- Ambient temperature: 0 ... +50 $^{\circ}\text{C}$
- Storage temperature: -20 ... +70 $^{\circ}\text{C}$

Humidity: \leq 75% humidity, no condensation

Shock sensitivity: DIN 40046 IEC68-2-69

Influence factors:

- Temperature: 0.01 % / 10 K
- Burden: 0...10 V = 0.01% / mA
-10...10 V = 0.025% / mA
0...20 mA = 0.1% / 100 Ohm
- Auxiliary energy: negligible 24 V DC \pm 10%

EMC:

- DIN EN 50081 part 2
- DIN EN 50082 part 2



Electrical connection: screw-/plug-in-terminals, line cross-section max. 2.5 mm²

Class of protection: IP 20

Dimensions: 99 x 17.5 x 114.5 mm (h x w x d)

Weight: 88 g

Housing: Polyamid PA 6.6, combustibility class V0 according to UL 94

Assembly: plugged-in and locked in front of base module

Usage position: vertical

Subject to technical alterations!