# **MODBUS Coupler RM 203**



## Safety Instructions

• 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

- 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

Instrument needs no particular maintenance.

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.

### Fuse tripped:

- 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	RM 203-0 RS 485	RM 203-1 RS 232
1	GND	GND
2	В	RxD
3	А	TxD
4	Mass	Mass
5	Mass	Mass
6	+24 V IN	+24 V IN
7		
8	<u>لر     </u>	لر
9		
ArtNo.	9407-738-20301	9407-738-20311



### DIP Switches 4 Bit DIP Switch

Γ	DIP	Baud Rate
0	off	600
		1200
		2400
		4800
		① 9600
		19200
		38400
	4321	Switch No.

Switch 1: Data Format

### 4 Bit and 8 Bit DIP Switches

DIP		Data Format
	off on	<ol> <li>no parity, 1 stop bit no parity, 2 stop bit even parity, 1 stop bit odd parity, 1 stop bit</li> </ol>
1	8	Switch No.

Switch 1: 4 Bit DIP Switch Switch 8: 8 Bit DIP Switch

### 8 Bit DIP Switch



PMA Prozeß- und Maschinen-Automation GmbH + Postfach 310229 + 34058 Kassel + Deutschland http://www.pma-online.de + E-Mail: mailbox@pma-online.de

Baud

Rate

4321

Data

Format

off \_\_\_\_\_

Π0

① Factory settings

MODBUS

87654321

Address

### Technical Data RM 203

Application:	Central unit of a modular Fieldbus system device.	
Power supply:	+24 V DC (±10 %), max. power consumption 1700 mW (only RM 203) The module supplies all I/O modules with the required voltages, those max. current consumption is 1.5 A (depending upon the used I/O modules).	
Microprocessor:	SAB-C505C with 20 MHz	
Memory:	<ul> <li>32 kByte static RAM</li> <li>64 kByte EPROM</li> <li>8 kByte EEPROM</li> </ul>	
Modbus:	<ul> <li>Modbus Protocol in RTU - Mode</li> <li>physical connection with RS 232 interface (Point-to-Point connection) or RS 485 (bus capability, more than 2 participants)</li> <li>data transmission rates: 600, 1200, 2400, 4800, 9600, 19200, and 38000 Baud</li> <li>data format adjustable</li> <li>address range: 1 8 127</li> </ul>	
Protection:	The supply voltage connection is protected against wrong polarity and overvoltage peaks	
Alarm output:	The module is provided with an alarm relay output to cause e.g. emergency stop at defined events. The triggering events can be parameterized via the Modbus.	
	Relay type: change-over contact, maximal working voltage for a safe protective insulation according to EN 61010-1 with overvoltage category II and pollution degree 2: 150 V contact rating AC: Pmax = 750 W, 5 A DC: Pmax = 120 W, 120 V, 5 A	
LED-Display:	<ul> <li>1x 'Transmit' (yellow):</li> <li>1x 'Receive' (yellow):</li> <li>1x 'Receive' (yellow):</li> <li>1x 'Power' (green):</li> <li>1x 'Alarm' (red):</li> </ul>	
Potential separation:	The supply voltage and the logic are galvanically separated from each other (insulation voltage 500 V DC). No separation between logic and interface.	
Ambient temperature:	<ul> <li>Operation: 0 +50 °C</li> <li>Storage: -20 +70 °C</li> </ul>	
Climatic Application class:	KUF DIN 40040 ( $\leq$ 75% rel. humidity, no condensation)	
Shock sensivity:	DIN 40046 IEC68-2-69	
EMC:	DIN EN 50081 part 2, DIN EN 50082 part 2, EN 61326 🥻 🧲	
Electrical connections:	Screw-/plug-in terminals, line cross section max. 2.5 mm <sup>2</sup>	
Class of Protection:	IP 20 of the completely equipped device	
Dimensions:	99 x 17.5 x 114.5 mm (h x w x d)	
Weight:	100 g	
Housing:	Material Polyamid PA 6.6, combustibility class V0 according to UL 94	
Assembly:	Modules plugged and locked from the front of the basic housing	
Operation position:	vertical	