

MemoRail Modbus A1405N

Compact, cost-efficient Memosens digital transmitter/analyzer with Modbus RTU

MemoRail Modbus is a compact, digital analyzer available as 1-channel (A-1405N-P2-110) or 2-channel version (A-1405N-P2-210) for connection and operation of digital Memosens sensors for the process variables pH, ORP, conductivity and oxygen, as well as for use with optical oxygen sensor. Up to 31 devices can be operated in parallel on the Modbus RTU. Bus address, link parameters and data rate are selectable.

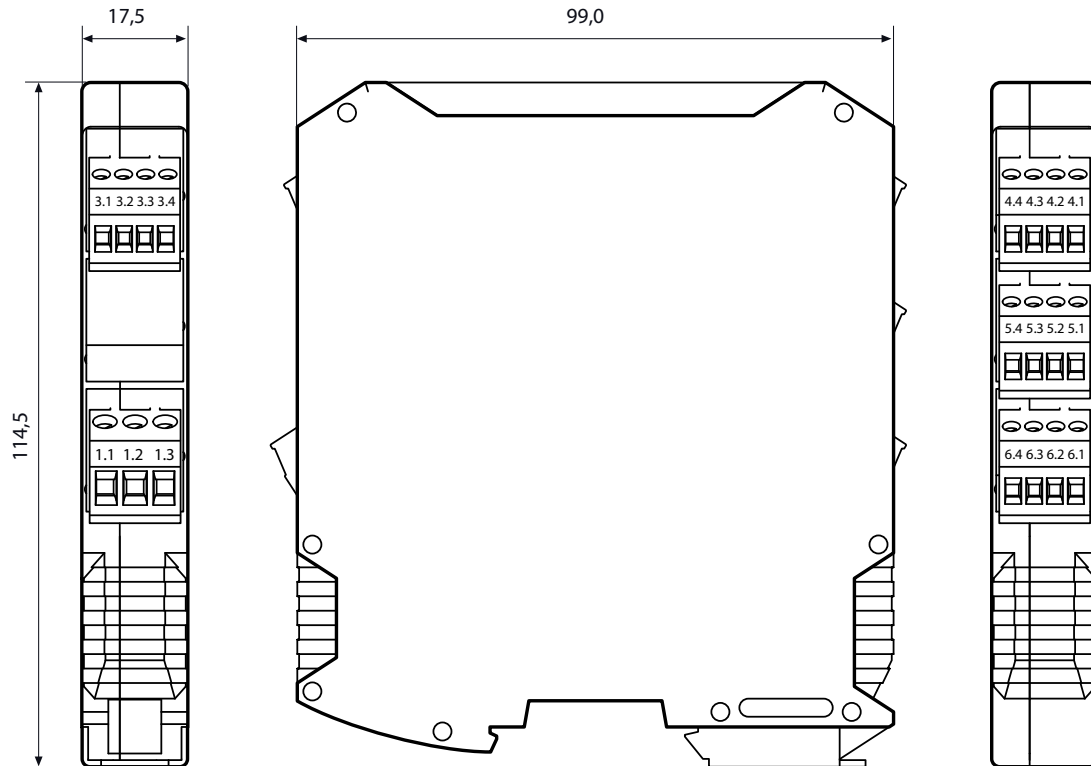
Facts:

- Low cost
- Compact, space saving, modular housing, DIN rail mount
- Operation of Memosens sensors in single channel or dual channel version
- Calibration from PLC/HMI
- Sensor diagnostics can be pulled along with process variables through Modbus

Specifications

Channel 1	For connection of Memosens or SE 740 optical oxygen sensor
Power supply Memosens	$U_0 = 3.05 \dots 3.15 \text{ V} / R_i < 5 \text{ ohms} / I > 8 \text{ mA}$
Power supply SE 740	$U_0 = 10.5 \dots 13.5 \text{ V} / R_i < 10 \text{ ohms} / I > 100 \text{ mA}$
Interface	RS 485
Baud rate	9600/19200 Bd
Max. cable length	Memosens: 100 m/328.1 ft SE 740: 30 m/98.4 ft
Channel 2	For connection of Memosens sensors
Power supply Memosens	$U_0 = 3.05 \dots 3.15 \text{ V} / R_i < 5 \text{ ohms} / I > 8 \text{ mA}$
Interface	RS 485
Baud rate	9600 Bd
Max. cable length	100 m/328.1 ft (30 m/98.4 ft if SE 740 optical oxygen sensor is connected to channel 1)
Power supply:	24 ($\pm 25\%$) V DC, < 2 W Terminals: 1.1 (24 V) and 1.2 (0 V) Supply via TBUS: 24 ($\pm 25\%$) V DC, < 2 W
Outputs:	Modbus RTU Terminals 3.1 ... 3.4 and TBUS Interface RS 485, max. 32 devices Baud rate 4800 ... 115200 Bd (19200 Bd) Bus address 1 ... 31 selected by DIP switches on device front data format selected by DIP switches on device front Max. cable length 100 m (depending on baud rate), TBUS < 30 m
Ambient temp. range:	-14 ... 149°F (-10 ... 65°C)
Dimensions:	4.5" X 3.9" X 0.5" (114.5 X 99.0 X 12.5 mm)
Weight:	0.26 lb (120 g)
Isolation	3-port isolation between: Sensor inputs (Sensor I / Sensor II), Modbus RTU, Power supply
EMC	EN 61326 Emitted interference, Industrial environment Immunity to interference, Industrial environment
Data retention	> 10 years
RoHS conformity	According to EU directive 2011/65/EU

Dimensional Drawing



1.1	Power Supply +	1.2	Power Supply -	1.3	not connected		
2.1	not connected	2.2	not connected	2.3	not connected	2.4	not connected
3.1	Modbus RTU (Shield)	3.2	Modbus RTU (RS 485 A)	3.3	Modbus RTU (RS 485 B)	3.4	GND
4.1	3 V (Sensor I)	4.2	RS 485 A (Sensor I)	4.3	RS 485 B (Sensor I)	4.4	GND (Sensor I)
5.1	12 V (Sensor I)	5.2	12 V (Sensor II)	5.3	Shield	5.4	Shield
6.1	3 V (Sensor II)	6.2	RS 485 A (Sensor II)	6.3	RS 485 B (Sensor II)	6.4	GND (Sensor II)

Product Line

Order No.

MemoRail Modbus

A1405



Explosion protection	Without		1		
Inputs	1-channel: 1 x MS / 1 x LDO			1	
	2-channel: 2 x MS / 1 x MS, 1 x LDO			2	
Outputs	Modbus RTU (RS485)				1
Power supply	24 V AC (connection via terminals or bus connector)				0