



FS1309

Measuring device for oxygen, digital output (Modbus RTU)

Measuring size: oxygen O₂

Output: Modbus RTU, Relay

Highlights: O₂ content in the air



Description

The measuring device detects the oxygen level O₂ (0...25/100% vol.) in the ambient air. The transmitter converts the measured value into a standardized, digital output signal Modbus RTU.

As an option, the measuring device has a backlit, rotatable display and potential-free changeover contact. In the version with a backlit LCD display, the measured values and min/max values are displayed. The switching threshold and hysteresis can be set as required using a bus command.

Measured values from other bus users can be shown in the display as special functions. To display measured values from other bus users, these are entered by the bus master in the appropriate registers. The optional changeover contact can also be used for measured values from other bus users.

The address, transmission mode/speed, terminating resistor and master/slave function of the bus devices are conveniently configured using innovative DIP switch technology. This means that the devices can be integrated quickly and easily into the system and later parameterized via the master.

The bus devices can even be reset to factory settings by the master during operation. The basic functionality of the device is restored in a matter of seconds. This can happen with incorrect parameterizations of e.g. Offset, switching threshold, display modes etc. may be necessary.

The housing with innovative hinge locking technology, double PG screw connection, sufficient terminal space and easy-to-connect push-in connection terminals offers maximum installation freedom and speed. The oxygen measuring device is ideal for use in workplaces and medical facilities.



Technical Specifications

Measurement range O2	0...25% vol. optional 0...100% vol
Accuracy O2	± 0,2% vol. + max. ±0,5% FS (@ 20°C, 45% r.H., 1013 mbar)
Temperature dependency	±1% FS / 10 K
Response time (t90)	< 1 s
Long term stability	±0,2% FS/year by auto-calibration ON
Sensor	Electrochemical sensor
Supply voltage	24 V DC (±5%)
Current consumption	15mA; R: 15mA (Peak 35mA at the moment the relay is switched); D (DBL on): 40mA; RD: 40mA (DBL on, Peak 60mA at the moment the relay is switched)
Digital output	Modbus RTU
Alarm output	1 x potential-free change-over contact, 48 V, 1 A
Switching Hysteresis Relay	can be entered in the register
Electrical connection	push-in terminal, no tools required, time-saving
Housing	Polycarbonate PC UL 94 V0 with hinge locks, color signal white similar to RAL 9003
Cable gland	PG11 high-strength cable gland with strain relief
Display	optional LCD display with backlight on/off/auto
Dimensions	Housing: L 89 x W 80 x H 47 mm
Protection type	IP65 (housing/electronic), IP20 (sensor)
Protection class	III
Working range r.H.	0...98% r.H. in contaminant-free, non-condensing air
Working temperature	0...+50°C
Storage temperature	-20...+50°C
Installation	screw fastening
Approvals	CE, RoHS

Variants

Article Number		
Measurement range O2	Output	Equipment
FS1309-MBR-A31-D		
0...25%	Modbus RTU	Display
FS1309-MBR-A31-DR		
0...25%	Modbus RTU	Display, Relay
FS1309-MBR-A31-R		
0...25%	Modbus RTU	Relay
FS1309-MBR-A31-X		
0...25%	Modbus RTU	-
FS1309-MBR-A32-D		
0...100%	Modbus RTU	Display



Article Number		
Measurement range O2	Output	Equipment
FS1309-MBR-A32-DR		
0...100%	Modbus RTU	Display, Relay
FS1309-MBR-A32-R		
0...100%	Modbus RTU	Relay
FS1309-MBR-A32-X		
0...100%	Modbus RTU	-



Dimensional Drawing

