FS4309

Measuring device for oxygen, active output (0-10 V)

Measuring size: oxygen O2
Output: 0-10 V, Relay
Highlights: O2 content in the air

MADE IN GERMANY

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, analog output signal 0-10 V.

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 and much more are displayed. The switching threshold and hysteresis can be set as required.

The measuring device carries out an automatic calibration at regular intervals, whereby a long-term stable measurement is guaranteed. This can be deactivated if necessary or performed manually on the device at any time.

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

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	U operating: 50 mA (basic current); R: Peak 35 mA at the moment the relay is switched; D (DBL off): +3mA in addition to the basic current; D (DBL on): +15mA in addition to the basic current
Analogue output 0-10 V	3-wire connection
Alarm output	1 x potential-free change-over contact, 48 V, 1 A
Switching Hysteresis Relay	2% of the selected scaling (without display), 0,5...5% of the selected scaling adjustable (with display)
Electrical connection	screw/plug terminals max. 1,5 mm²
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
Automatic calibration	The automatic calibration takes place every 7 days, this compensates for any drifts and achieves excellent long-term stability. To ensure this function, the device must be supplied with power for at least 7 days without interruption and ventilated with fresh air once for approx. 10 minutes within this period. The automatic calibration can be deactivated if necessary and performed manually.
Manual calibration	If automatic calibration is deactivated, manual calibration is recommended every 6-12 months. To do this, DIP switch 2 must be switched ON for 5 seconds with fresh air (desired zero point) and then OFF again.
Installation	screw fastening
Approvals	CE, RoHS

Variants

Article Number		
Measurement range O2	Output O2	Equipment
FS4309-U-A31-D		
0...25%	0-10 V	Display
FS4309-U-A31-DR		
0...25%	0-10 V	Display, Relay
FS4309-U-A31-R		
0...25%	0-10 V	Relay
FS4309-U-A31-X		
0...25%	0-10 V	-
FS4309-U-A32-D		
0...100%	0-10 V	Display
FS4309-U-A32-DR		
0...100%	0-10 V	Display, Relay
FS4309-U-A32-R		
0...100%	0-10 V	Relay
FS4309-U-A32-X		
0...100%	0-10 V	-

Dimensional Drawing