

Emission monitor for SF₆ gas and oxygen Model GA38

WIKA data sheet SP 62.15

O₂/SF₆-IR-Monitor

Applications

Monitoring of the concentration of SF₆ gas and oxygen in the ambient air for guaranteeing operational safety in enclosed spaces

Special features

- Responds only to SF₆ gas and is not sensitive to humidity and the usual volatile organic compounds (VOC)
- Double safety by the use of two sensors
- Fast response time
- Continuous measurement
- Optional temperature and humidity measurement (hygro station)



Emission monitor for SF₆ gas and oxygen
Model GA38, with hygro station

Description

Continuous monitoring

The model GA38 emission monitor has been specifically designed for determining the concentration of SF₆ gas in enclosed rooms.

If SF₆ gas is processed or stored, harmful quantities of SF₆ gas can escape due to improper operation or leakage. The model GA38 makes it possible to monitor areas of up to 250 m².

SF₆ gas is five times heavier than air, therefore breathing air can be displaced in case of higher concentrations of SF₆ gas so that there is a risk of suffocation.

The GA38 checks the room air for SF₆ gas and oxygen continuously using two sensors. Usually, samples are continuously taken close to gas tanks or gas-insulated switchgear, from which large quantities of SF₆ gas can escape within a short period of time.

Reliable warning

Via a loud alarm, there is an immediate warning of any hazardous gas concentrations in the air. Since SF₆ gas sinks due to its high molecular weight compared to the room air, it is useful to mount the sampling box near to the ground.

Particle filters in the sampling box and in the tube connection ensure that the measuring result is not falsified by impurities. To ensure reliable operation, the flow control of the GA38 emits an error alarm in the event of a pump failure or a clogged supply line.

Specifications

Measuring principle

Oxygen: Limiting current sensor from zirconium oxide
SF₆ gas: Two wavelengths, non-dispersive infrared sensor

Measuring ranges

Oxygen: 0.1 ... 25 %
SF₆ gas: 0 ... 2,000 ppm_v
Temperature: -40 ... +120 °C (only with hygro station option)
Humidity: 20 ... 80 % r. h. (only with hygro station option)

Resolution

Oxygen: 0.1 %
SF₆ gas: 5 ppm_v
Temperature: 0.1 °C (only with hygro station option)
Humidity: 0.1 % r. h. (only with hygro station option)

Accuracy

Oxygen: < ±1 %
SF₆ gas: ±5 ppm_v, measured value ≤ 100 ppm_v
±2.0 %, measured value > 100 ppm_v
Temperature: ±0.3 °C (only with hygro station option)
Humidity: 3.0 % r. h. (only with hygro station option)

Response time t₉₀

< 30 s

Warm-up time

Ready for operation after 3 minutes
Meets the specifications after 40 minutes

Voltage supply

Selectable via internal switch.
AC 88 ... 138 V, 50/60 Hz
AC 172 ... 276 V 50/60 Hz

Displays

Oxygen: 4-digit LCD, alarm LED
SF₆ gas: 4-digit LCD, alarm LED 1, alarm LED 2
Temperature: 4-digit LCD (only with hygro station option)
Humidity: 4-digit LCD (only with hygro station option)
Fault: Fault LED, flow fault LED

Controls

3 x control dials for setting the alarm values
1 x button for displaying the alarm value for oxygen
2 x buttons for displaying the alarm values for SF₆ gas
1 x button for testing the display and the buzzer

Electrical output

Output signal selectable via internal switch.
Oxygen: 0 ... 20 mA or 4 ... 20 mA
SF₆ gas: 0 ... 20 mA or 4 ... 20 mA

Relay outputs

4 x potential-free change-over contacts
(1 x oxygen, 2 x SF₆ gas, 1 x fault)
Resistive load at DC 24 V = 8 A
Resistive load at AC 250 V = 8 A

Audible alarm

The buzzer sounds when the set alarm values are exceeded

Maximum hose length

30 m

Monitoring range

≤ 250 m²

Permissible temperature ranges

Operating temperature: 0 ... +45 °C
Storage temperature: -10 ... +60 °C

Dimensions

W x H x D: 395 x 365 x 165 mm

Weight

3.5 kg

Calibration interval

Recommended every 2 years

Options

- Hygro station for optional temperature and humidity measurement

Ordering information

Model / Options

© 2013 WIKA Alexander Wiegand SE & Co. KG, all rights reserved.
The specifications given in this document represent the state of engineering at the time of publishing.
We reserve the right to make modifications to the specifications and materials.



WIKAI Alexander Wiegand SE & Co. KG
Alexander-Wiegand-Straße 30
63911 Klingenberg/Germany
Tel. (+49) 9372/132-0
Fax (+49) 9372/132-406
E-mail info@wika.de
www.wika.de