

SF₆-IR-Monitor



Monitoring of ambient Air in indoor GIS

SF₆-IR-Monitor

Sensitive and fast Air Monitoring for indoor GIS

Your ideal tool to protect your staff, the environment and reduce SF₆-emissions

Main Advantages

- Non-radioactive source
- Low maintenance (calibration every 5 years) and no wear parts
- No cross sensitivity to moisture
- Unaffected by background contamination
- No consumables
- High sensitivity
- 2 independent adjustable Alarms (high and low)
- 2 switchable relay contacts
- Analogue output 0-20 mA or 4-20 mA

About Sulphur Hexafluoride SF₆

SF₆ is an artificial, inert and generally non-toxic gas (Maximum Allowable Concentration (MAC) of 1,000 ppm_v). It is a well-known greenhouse gas (GWP of 22,200 times higher than CO₂), with an atmospheric lifetime of 3,200 years. Because of its environmental unfriendly attributes SF₆ was included in the Kyoto Protocol with the aim of emission reduction.

Due to its excellent insulating and arc quenching properties it is globally used as insulating gas in high and medium voltage equipment like substations, switchgears, circuit breakers, transformers etc.

The SF₆-IR-Monitor is particularly developed to detect leakages in indoor GIS and to monitor the MAC. With its 2 adjustable alarms and the possibility to connect it to an existing Monitoring / Control system it is an ideal tool to protect your staff as well as reduce environmental unfriendly and costly SF₆-emissions.



TECHNICAL SPECIFICATION
Measurement Principle
Dual wavelength non-dispersive Infrared Spectrometer (NDIR)
Sensitivity
1 ppm _v No cross sensitivity to other gases Moisture: unaffected from 0 – 100 % rh, non condensating No symptoms of poisoning
Response
T90 = 30 sec.
Measurement Units
Measures in ppm _v , Range: 0 – 2,000 ppm _v Accuracy: 0 - 100 ppm _v ± 5 % of value 100 - 2,000 ppm _v ± 2 % of range
Repeatability
< 0.3 %
Warm-up Time
3 minutes (initial), 40 minutes (full specifications)
Power Requirements
88V – 138V AC or 172V – 276V AC (switch selectable) CE marked
Alarm
Audio and visual
Controls Fitted
Setpoint 1 and Setpoint 2 adjustment, View Setpoint 1 button, View Setpoint 2 button, Indicator LED and display test button
Bitswitch Parameters
Analogue (current) output: 0 - 20 mA or 4 - 20 mA, Linear or non-linear output Alarm settings: alarm 1 high/low, alarm 2 high/low, alarm 1 normal/latch, alarm 2 normal/latch, Buzzer sounds on both alarms or only on alarm 2, Low flow warning (flashing lamp) or low flow alarm (audible alarm)
Visual Display
Four-digit LCD, Alarm 1 LED, Alarm 2 LED, Fault LED, Low flow/flow fail LED
Relay Contacts
Volt-free changeover contacts Resistive load @ 24V DC = 8A Resistive load @ 250V AC = 8A
Pump Characteristics
Typical flow rate: 1 L/min, Maximum sampling distance: = 30 m
Calibration
Every 5 years
Temperature
Storage: -10 to 60 °C, Operating: 0 to 40 °C
Dimension
SF ₆ -IR-Monitor: 267 x 258 x 148 mm
Weight
SF ₆ -IR-Monitor: 2.5 kg