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smartGAS
MIKROSENSORIK

blue performance®

TRANSMITTER^{EVO}

Infrared gas detector SF6 // SULFUR HEXAFLUORIDE // 1500 ppm
smartGAS item number: T4-602155-03000



- Ready to install
- For individual customized design only
- Optimized gas entrance
- Fast response time t90
- IP54 protection
- Easy to use calibration adapter available

The TRANSMITTER^{EVO} series is designed to address the individual requirements of customers who are seeking their own branded product and technical solution. Based on the highly reliable NDIR BASIC^{EVO} technology the TRANSMITTER^{EVO} offers the opportunity for customer specific solutions at reasonable cost.

Non Dispersive Infrared (NDIR) gas sensor for ambient air monitoring using dual wavelength technology. The TRANSMITTER^{EVO} is especially designed for the analysis of SF6 quality and purity inside gas insulated switchgears (GIS) for wall mounting. The TRANSMITTER^{EVO} in numerous laboratory measurements where precision and reliability are of utmost importance for subsequent processing.

Coloured LED lights indicate the device status at any time and the on board pressure compensation allows for precise gas measurement regardless of where the TRANSMITTER^{EVO} is installed. The TRANSMITTER^{EVO} offers IP54 protection as well as a fast gas exchange for reliable and safe operation. A robust design allows for operation even in dirty or challenging environments.

APPLICATION EXAMPLE

SF6 PURITY ANALYSING
SF6 QUALITY CONTROL
LABORATORY MEASUREMENTS
HIGH VOLTAGE CABLES
HIGH VOLTAGE TRANSFORMERS

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General features

Measurement principle:	Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range:	0 .. 1500 ppm Full Scale (FS)
Gas supply:	by diffusion (atmospheric pressure)
Dimensions housing:	151 mm x 80 mm x 60 mm (L x W x H)
Warm-up time:	< 2 minutes (start up time) < 11 minutes (fade in finished) < 30 minutes (full specification)

Measuring response *

Response time (t_{90}):	appr. 60 s
Digital resolution (@ zero):	1 ppm
Detection limit (3σ):	≤ 10 ppm
Repeatability:	$\leq \pm 20$ ppm
Linearity error (straight line deviation):	$\leq \pm 30$ ppm
Long term stability (span):	$\leq \pm 30$ ppm over 12 month period
Long term stability (zero):	$\leq \pm 30$ ppm over 12 month period

Influence of T and P *

Temp. dependence (zero):	$\leq \pm 3$ ppm per °C
Temp. dependence (span):	$\leq \pm 6$ ppm per °C
Pressure dependence:	± 0.100 % of measurement value / hPa

Electrical inputs and outputs

Supply voltage:	12 V .. 28 V DC
Average power consumption:	≤ 1.5 W (without load on pump supply)
Digital output signal:	Modbus ASCII / RTU via RS 485, autobaud, autoframe
Analogue output signal:	0(4) –20 mA, max 500 Ω / 0-2 V / 0-5 V / 0-10 V (DC)
Calibration:	zero and span by software or push buttons
Pressure compensation:	atmospheric

Climatic conditions

Operating temperature:	-20 .. + 40 °C
Storage temperature:	-20 .. + 60 °C
Air pressure:	800 .. 1150 hPa
Ambient humidity:	0 .. 95 % relative humidity (not condensing)

* Typical values related to 1013 hPa and 22 °C for dry (not condensing) and clean sample gas.
 Stated values exclude calibration gas tolerance.

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Please consult smartGAS sales for parts specified with other temperature and measurement ranges.

At first initiation and depending on application and ambient conditions recalibration is recommended. Recurring cycles of recalibration are recommended.