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 refrigeration leak detection in small concentration ranges (ppm range) for wall mounting. The TRANSMITTER EVO can be utilised as a Freon detector in industrial refrigeration facilities but can also be used for ambient air monitoring in the field of air conditioning devices. Other scopes of applications comprise continuous gas monitoring in controlled environment chambers and food storage rooms as well as usage for various areas of scientific research.

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.
TRANSMITTER
EVO
Infrared gas detector R410a // REFRIGERANT // 2000 ppm
smartGAS item number: T4-762205-03000

General features
Measurement principle: Non Dispersive Infra-Red (NDIR), dual wavelength
Measurement range: 0 .. 2000 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 (t₉₀): appr. 60 s
Digital resolution (@ zero): 1 ppm
Detection limit (3 σ): ≤ 10 ppm
Repeatability: ≤ ± 20 ppm
Linearity error (straight line deviation): ≤ ± 30 ppm
Long term stability (span): ≤ ± 40 ppm over 12 month period
Long term stability (zero): ≤ ± 30 ppm over 12 month period

Influence of T and P *
Temp. dependence (zero): ≤ ± 3 ppm per °C
Temp. dependence (span): ≤ ± 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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For more information, please visit www.smartGAS.eu or contact us at sales@smartgas.eu
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.