

GB

GENERAL

TR-SC-... is a series of transmitters for measuring concentration of different gases. The transmitters are available in three different models, TR-SC... standard room type, TR-SCK... for duct mounting and TR-SCR... for vent lines (blow out pipes) from safety valves.

The sensor heads are semi conductive type which gives long lifetime and stability but with limited selectivity.

The transmitter gives a non linear output signal (4..20mA or 0..10V DC) proportional to the gas concentration. For long wiring installations it is recommended to use the current output signal to minimize the risk for interference.

Output signal mode is set by jumper **[JP1]** (see PCB layout).

CALIBRATION

"Zero" signal is measured at test terminal **[Test]**.

To adjust "zero";

- Apply clean air for at least 3 minutes.
- Adjust potentiometer **[ZERO]** to the offset value in **[TABLE 1]**.

To adjust "span";

- Apply gas with concentration (ppm) corresponding to the detector's maximum range (airflow 0,5 l/min) until the signal is stable, ~1 minute.

- Adjust potentiometer **[SPAN]** until the output signal is 20mA/10V DC.

If gas with lower concentration than maximal is used for span calibration, the expected output signal must be calculated according to a graph for each sensor type.

Contact technical support for more information.

INSTALLATION

When mounting the transmitter consider target gas specific weight and air circulation in the room or area. See examples on previous page.

Connect the transmitter according to the wiring diagram.

TECHNICAL DATA - Common

Sensor type: Semiconductor
 Response time (T90): <10 seconds
 Output signal: 4..20mA (max 500 ohm) / 0..10V DC

Calibration: "zero / span" ≥ once per year
 Lifetime sensor: >5 years (replacement recommended every 5th year or when unit can not be recalibrated)

Power supply: 12..30V DC
 Housing: PC polycarbonate (IP54)
 Cable gland: 1 x M16

Specification subject to change



PLEASE NOTE

The sensors in the TR-SC-series have limited selectivity for different types of gas. If the detector is placed in the environment in which other gases or fumes may be present, these compounds might generate false alarms.

Examples of substances that can cause false alarms are petrol fumes, solvents, cleaning agents, cigarette smoke, etc.

TR-SC, Splash proof (IP54)

MODEL

TR-SC-HCFC-4000	0-4000ppm / HCFC (R22)
TR-SC-HFC(A)-4000	0-4000ppm / HFC (R404a, R407a, R410a, R507)
TR-SC-HFC(B)-4000	0-4000ppm / (R134)
TR-SC-NH3-1000	0-1000ppm / Ammonia
TR-SC-NH3-4000	0-4000ppm / Ammonia
TR-SC-HC	0-50% LEL / Hydrocarbon
TR-SC-H2	0-50% LEL / Hydrogen

Range / gas

TECHNICAL DATA

Housing:	Polycarbonate / ABS
Operating temperature:	-40..+50°C
Operating humidity:	10-90 % Rh (non condensing)
Dimensions:	130x82x56 mm

TR-SCK, Duct mounting

MODEL

TR-SCK-HCFC-4000	0-4000ppm / HCFC (R22)
TR-SCK-HFC(A)-4000	0-4000ppm / HFC (R404a, R407a, R410a, R507)
TR-SCK-HFC(B)-4000	0-4000ppm / (R134)
TR-SCK-NH3-1000	0-1000ppm / Ammonia
TR-SCK-NH3-4000	0-4000ppm / Ammonia
TR-SCK-HC	0-50% LEL / Hydrocarbon
TR-SCK-H2	0-50% LEL / Hydrogen

Range / gas

TECHNICAL DATA

Transmitter housing:	80 x 82 x 56 mm (IP54)
Duct tube:	Plastic, L 350mm (PVC)
Operating temperature:	0..+50°C
Operating humidity:	10-90 % Rh (non condensing)

MOUNTING

The plastic tube with the sensor head should be mounted through the duct wall. The tube gland holds the plastic tube and seals against the duct. Check locations of the holes in the plastic tube, it is important that they are mounted correctly to get a good airflow through the tube.

The sensor cable is as standard 1,5m but is available as option with 5m or 8m.

A distance of three times the duct diameter should be kept in front of a damper, filter or change of the duct direction, and 5 times the diameter after these devices.

TR-SCR, For Vent lines (blow off pipe)

MODEL

TR-SCR-HFC(B)-4000	0-4000ppm / HFC (R134)
TR-SCR-NH3-4000	0-4000ppm / Ammonia

Range / gas

TECHNICAL DATA

Transmitter housing:	80 x 82 x 56 mm (IP54)
Pipe connection:	70x25 mm HFC - brass 1/2"-flare NH ₃ - steel R1/2"
Operating temperature:	0..+50°C
Operating humidity:	10-90 % Rh (non condensing)

MOUNTING

The brass or steel sensor holder is fitted in to the safety valves outlet tubes using a T-connection. It is important not to install the sensor so it blocks the gas flow if the safety valve opens.