SC 104 – CO2 SENSORS TO THE INTERIOR WITH CAN PROTOCOL (CANopen) OUTPUT

H10.01en

DESCRIPTION AND APPLICATION

The SC 104 - CO_2 sensor is designed to measure the carbon dioxide concentration of the air in spaces protected against water. This CO_2 sensor consists of a plastic ribbing head where a printed circuit board with the sensor and a converter is placed to establish a communication via the CAN bus. The CO_2 value is measured by a NDIR module whose digital signal is also converted to an output signal of CAN / CANopen - CiA DS 301. For the CO_2 concentration sensor, there is an autocalibration function available to set the sensor at the minimum CO_2 value corresponding to the outside concentration level. The SC 104 - CO_2 sensor meets the ingress protection of IP 30 according to EN 60529, as amended. Suitable design and high-quality material ensure that the sensor does not feel disturbing even in the interiors with high aesthetic requirements.

The SC 104 - CO_2 sensor is designed to be operated in a chemically non-aggressive environment; its use must be chosen with regard to temperature and chemical resistance of the head and of the individual sensors.

The operating conditions to establish the correct function are:

- ambient temperature in the vicinity of the sensor: 0 to 45 °C
- relative ambient humidity: 0 to 95% (non-condensing humidity)
- atmospheric pressure: 87 to 106 kPa

DECLARATION, CERTIFICATES, CALIBRATION

Manufacturer provides **EU Declaration of Conformity**.

Calibration – The final metrological inspection – comparison with standards or working instruments – is carried out for all the products. Continuity of the standards and working measuring instruments is ensured within the meaning of the Section 5 of Act no.505/1990 on metrology. The manufacturer offers a possibility to supply the sensors calibrated in SENSIT s.r.o.'s laboratory (according to requirements of the EN ISO/IEC 17025 standard, as amended) or in an Accredited laboratory.

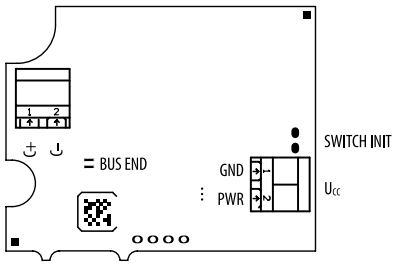
SPECIFICATIONS

Sensor type	SC 104
CO_2 measuring range *	400 to 5000 ppm
CO_2 measuring accuracy *	± 100 ppm *
Time response CO_2 (90%)	90 s
Output signal	CAN / CANopen - CiA DS 301
Galvanicaly separated	no, possible on request
Supply voltage U	15 to 30 VDC
Rated supply voltage Un	24 VDC
Consumption	maximum: 500 mW typical: 300 mW
Ingress protection	IP 30 acc. to EN 60529, as amended
Dimension of the head	71.9 x 59 x 27 mm
Material of the head	LEXAN
Weight	min 35 g
Recommended wire cross section	0.14 to 1 mm^2

** The stated measurement ranges and accuracies for the individual sensors refer to operating conditions when the supply voltage is connected.*

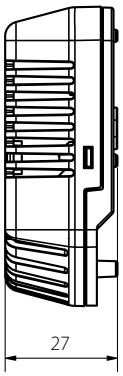
WIRING DIAGRAM

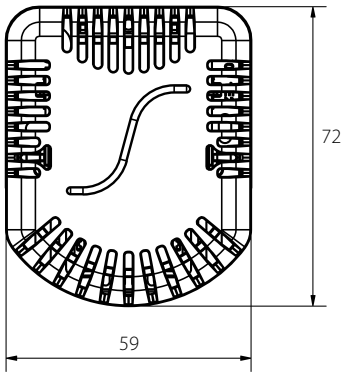
RS 485



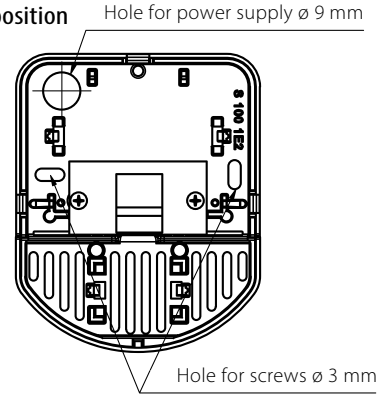
GND, PWR – Ucc supply voltage
C+/C- – communication line

DIMENSIONAL DRAFT





Operating position



Cover dismantling