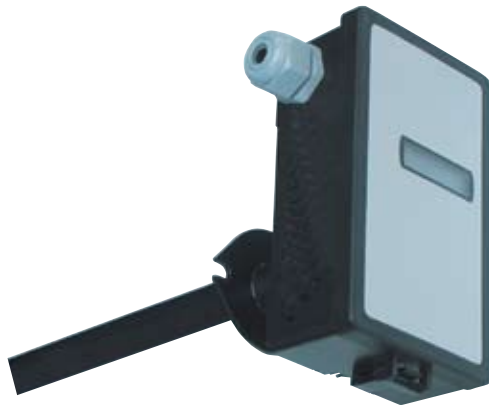


SCD100



Duct CO2 Transmitter 0 - 10 V and Temperature Sensor NTC 1.8/10 Kohm

SCD100 is an infrared and maintenance-free carbon dioxide transmitter for installation in ventilation ducts.

SCD100 measures the carbon dioxide concentration in the ambient air up to 2 000 ppm and transforms the data into a 0-10 V output signal. SCD100 is also equipped with passive temperature elements selectable for

- Vista® products, NTC 1.8 kohm
- I/NET® products, NTC 10 kohm
- Continuum® products, NTC 10 kohm

SCD100-D has a LCD display, showing the CO₂ in ppm.

SCD100 helps you save money by decreasing your energy consumption while creating a healthier indoor climate!

SPECIFICATIONS

Part number

SCD100	0-046-3010-0
SCD100-D	0-046-3011-0

Carbon Dioxide Sensor

Response Time	<3 min
Operation	Non-dispersive infrared (NDIR)
Sampling	Diffusion
Range.	0 to 2000 ppm
Accuracy	± 1% of measurement range ± 5 % of measured value
Annual Drift.	±10 ppm (nominal)
CO ₂ Pressure dependence	1.6% change in reading per 1 kPa (0.15 PSI) deviation from 100 kPa (14.5 PSI)

Temperature

Operating	0 – 50 °C (32 – 122 °F)
Storage	–40 – 70 °C (–40 – 158 °F)
with display.	–20 – 70 °C (–4 – 158 °F)
Operating humidity range	0 – 95% RH (non-condensing)
Out put signal	0 – 10 V or 2 – 10 V

Load.	> 5000 ohm
Power Supply	24 Vac ±20%, 50/60 Hz (Class 2)
Peak power consumption first 25 ms	5 W
Average power consumption	< 1 W

Temperature Sensor element for

Vista® NTC	1.8 kohm at +25 °C (77 °F)
Accuracy	±0.3 °C at 25 °C (±0.5 °F at 77 °F)
I/NET® NTC	10 kohm at +25 °C (77 °F)
Accuracy	±0.2 °C at 25 °C (±0.4 °F at 77 °F)
Continuum® NTC	10 kohm at +25 °C (77 °F)
Accuracy	±0.2 °C at 25 °C (±0.4 °F at 77 °F)

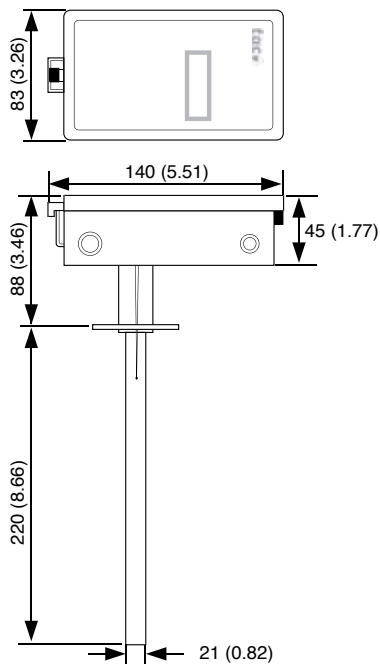
Materials

Conn. box and tube	PC+ABS-plastic: Bayblend FR 90
Enclosure rating	IP 65 / NEMA3
Dimensions.	according to figure
Weight	275 g (0.61 lb)

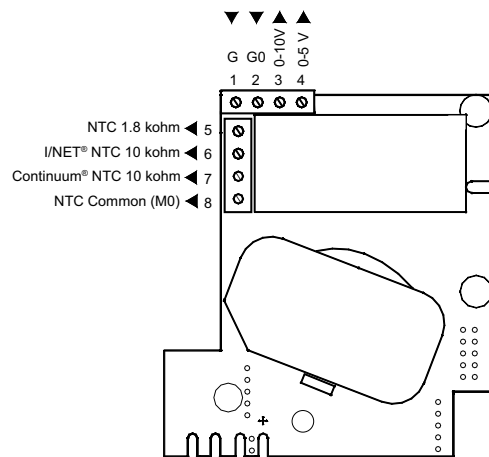
Standards

EMC.	EN 50081-1, EN 50082-1
Underwriters Lab Inc. Listed .File No. E204905 cUL	
Flammability Rating.	UL94-5V

DIMENSIONS mm (in)



WIRING



FUNCTION

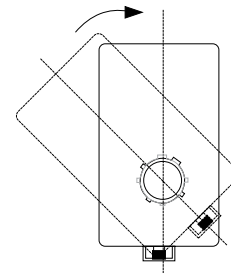
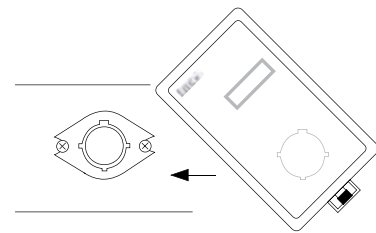
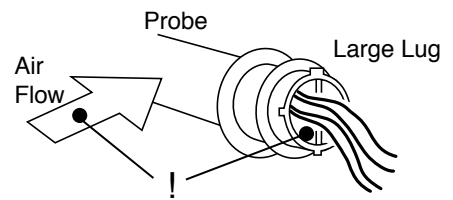
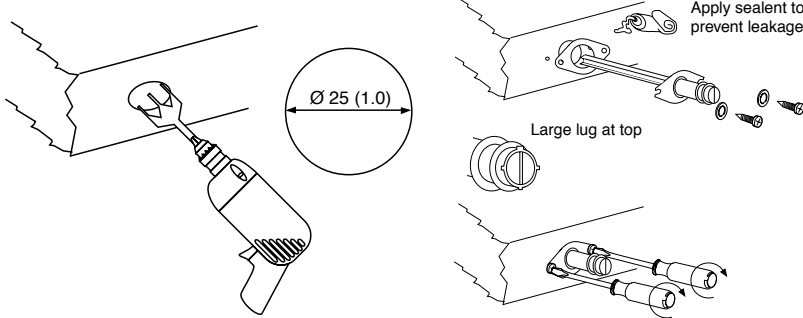
The SDC100 sensors measure the carbon dioxide concentration and the temperature. The CO₂ output signal can be 0 – 10 V or 2 – 10 V selected by wiring. The temperature signal is a NTC 1.8 kohm or 10 kohm. See wiring.

The SCD100-D has a LCD display showing the CO₂ concentration in ppm .

Gold-plated sensor provides long-term calibration stability and automatic background calibration based on long-term evaluation makes the sensor maintenance free. The sensor is calibrated from factory.

INSTALLATION

Drill Holes in Duct, mm (in)



1. Place gasket on aspiration tube.

IMPORTANT

Ensure largest tab at tube control end is at the top.

2. Insert tube into the duct, attach using screws and washers.

IMPORTANT

Leakage into the duct or the SCD100 box cover from the room will skew the sensor readings.

Ensure the box cover and duct seal completely.

3. Insert the NTC sensors on the upstream side.