



SCR100

Carbon dioxide Transmitter 0–10 V and
Temperature Sensor NTC 1.8/10 kohm

D-70-22

10 Mar 2005

SCR100 is an infrared and maintenance-free carbon dioxide transmitter for installation on indoor walls.

SCR100 measures the carbon dioxide concentration in the ambient air, up to 2 000 ppm, and transforms the data into a 0-10 V or 0 - 5 V output signal.

SCR100 is also equipped with passive temperature elements selectable 1.8 kohm for TAC Vista® products, 10 kohm for I/NET® products and 10 kohm for Continuum® products.

SCR100 helps you save money by decreasing the energy consumption, while creating a healthier indoor climate.



TECHNICAL DATA

Part number:
SCR100 0-046-3000-0

Carbon dioxide Sensor

Response Time <3 min
Operation non-dispersive, infrared (NDIR)
Sampling diffusion
Range 0 – 2000 ppm
Accuracy
... ± 1% of measurement range ± 5 % of measured value
Annual drift ±10 ppm (nominal)
CO₂ Pressure dependence
1.6% change in reading per 1 kPa deviation from 100 kPa

Temperature Sensor

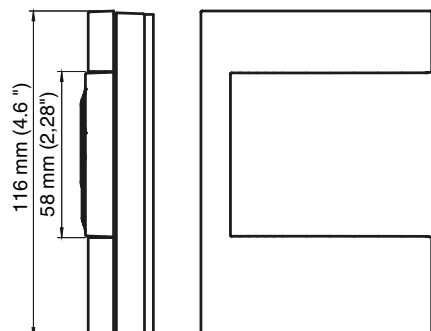
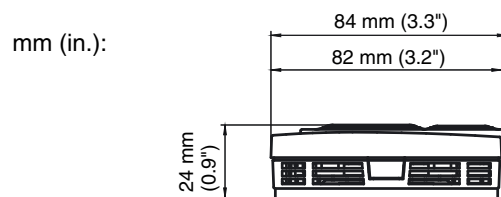
Operating 0 – 50 °C (32 – 122 °F)
Storage -40 – +70 °C (-40 – 158 °F)
Operating humidity range 0 – 95% RH (non-condensing)
Output signal 0 – 10 V or 0 – 5 V
Load > 5000 ohm
Temperature Sensor element for
– TAC Vista® NTC 1.8 kohm at +25 °C (77 °F)
Accuracy ¹⁾ ±0.8 °C at 25 °C (±1.4 °F at 77 °F)
– I/NET® NTC 10 kohm at +25 °C (77 °F)
Accuracy ¹⁾ ±0.8 °C at 25 °C (±1.4 °F at 77 °F)
– Continuum® NTC 10 kohm at +25 °C (77 °F)
Accuracy ¹⁾ ±0.8 °C at 25 °C (±1.4 °F at 77 °F)

¹⁾ If higher accuracy is required, use a separate temperature sensor STR.

Power Supply 24 Vac ±20 %, 50/60 Hz (Class 2)
Peak power consumption, first 25 ms 5 W
Average power consumption < 1 W
Materials:

Enclosure PC/ABS plastic
Enclosure rating IP 20 / NEMA1
Dimensions according to figure
Weight 85 g (0.187 lb.)
Standards:

EMC EN 50081-1, EN 50082-1



FUNCTION

The SCR100 sensor measures the carbon dioxide concentration and the temperature.

The CO₂ output signal can be either 0 – 10 V or 0 – 5 V, selected by wiring.

The temperature signal can be selected for any of

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

Please refer to Wiring below.

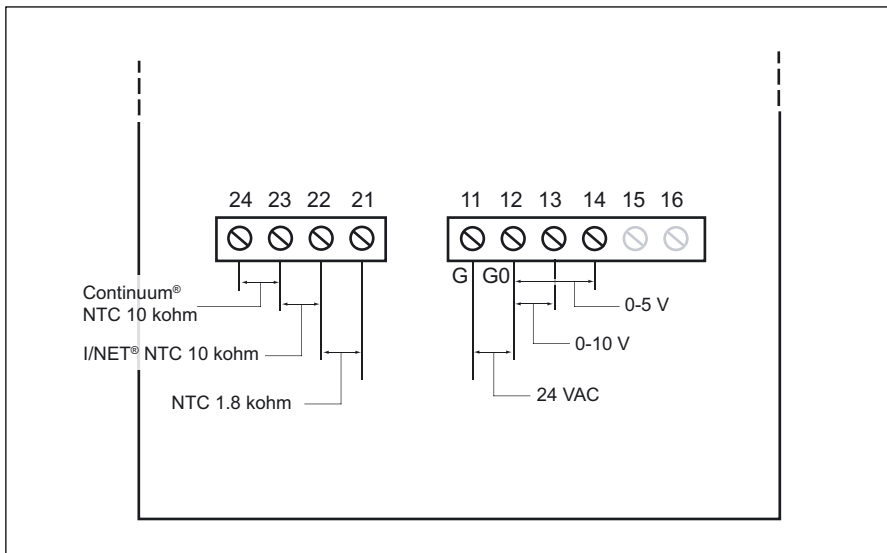
Gold-plated sensors provide long-term calibration stability. Additionally, automatic background calibration based on long-term evaluation makes the sensor maintenance-free.

The sensor is calibrated from the factory.

INSTALLATION

Make sure there is no air leakage from the conduit.

WIRING



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