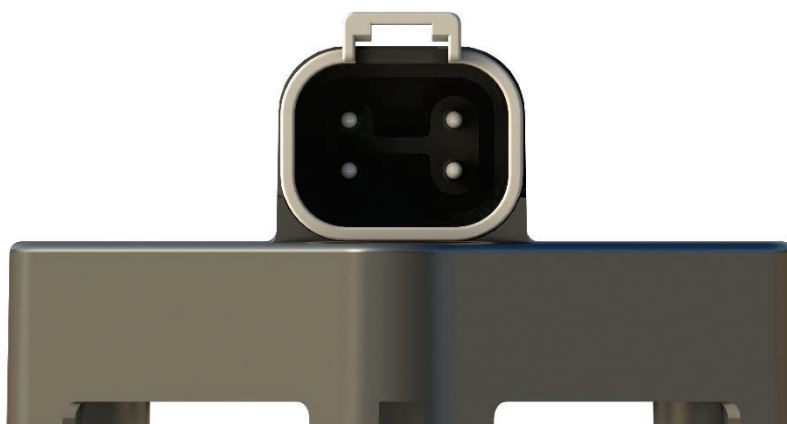


CO₂-SENSOR

Measurement specifications:

Description	Specification
Range	0-20 Vol% CO ₂
Resolution	14 bits
Accuracy (including repeatability, non-linearity and calibration uncertainty) Factory calibrated @ 13°C and 1013.25 hPa in 2 points, ZERO @ 100% N ₂ and SPAN @ 10% CO ₂ in 80% N ₂	± (1.5% of range +3% of reading), applies for readings >2% of full scale Temperature dependence, typical < ±0.2% of reading /°C @ -5°C ... 30°C, corrected by internal temperature sensor. Long-term stability < ±4.5% FS/2years. Calibration is normalized to standard pressure, by internal barometer. Readings are displayed in Vol%, reflecting the partial pressure of CO₂
Warm up time	< 1 min from power on to operational, < 20 min to specified performance
Response time, T 63%	< 5 min
Recommended recalibration interval	1-year intervals. Baseline level calibration, ZERO in ambient air @13°C. Stabilization period > 45 min. Can be executed during reefer PTI.
Operating temperature and humidity	-5°C ... 30°C at full accuracy, 0-100%RH. -20°C ... 60°C @ reduced accuracy, 0.100%RH Resistant to condensing environment
Storage temperature	-40°C ... 80°C
Measuring principle	NDIR, dual wavelength: 4,26 µm for CO ₂ sensing and 3.91 µm for reference



SPECIFICATIONS

Specification, electrical:

Description	Specification
Supply voltage	12VDC (8V ... 15V), protected against overvoltage and reverse polarity
Current consumption @12VDC	Peak < 60mA, average <10mA
RS485 driver and circuit	60V max protected.
Miss wiring	No damage

Serial communication:

Name	Type	Description	Specification
2-wire	RS485	RS 485 communication channel	9600, 19200 or 115000 bit/sec
Modbus RTU		Modbus communication protocol	SW selectable

Electrical connection:

Name	Function
Integrated Deutsch DT04-receptacle. DT06-plug and cable/wire pins: (www.deutsch.net)	1: 12V 2: 0V / GND 3: com A 4: com B

Mechanical specs:

Description	Specification
Mounting	Two holes (diameter 6 mm) with 54 mm from center to center for rivet or screw
Mechanical external dimensions	See the pictures / drawings for dimensional indication. W, L, H: 52.5 x 52.5 x 36.5 mm
IP class	67, measuring cuvettes protected by 1µm pore PTFE hydrophobic and oleophobic filter membrane

EMC

Description
EN61000-6-3 Emission, Domestic
EN61000-6-2 Immunity, Industrial: HF 10 Veff, FT ± 4 kV, ESD ± 8 kV air, ± 4 kV contact
CE component declaration will be signed.

Vibration and chock

Description	
IEC 60068-2-64	Test Fc 18Hz to 1kHz 3g rms 3 x 2 hours in each direct x-y-z
Description	
IEC 60068-2-27	6 directions (X-Y-Z both ways): Half sine wave 11ms with peak at 6g, 30 shocks each direction. Vertical: 5 shocks half sine wave 11ms peak at 70g

Salt spray

Description	
ASTM B117	Test time 168 hours No visible corrosions after test

Disclaimer

Description	
Exposure to aggressive gases	Exposure to VOC's and other aggressive gases, like SO ₂ , NH ₃ , HCl and alcohol, especially in combination with condensing environment, may adversely influence the sensors' measuring accuracy and reduce the lifetime. https://www.sensirion.com , Humidity_Sensors_Handling_Instructions.pdf

