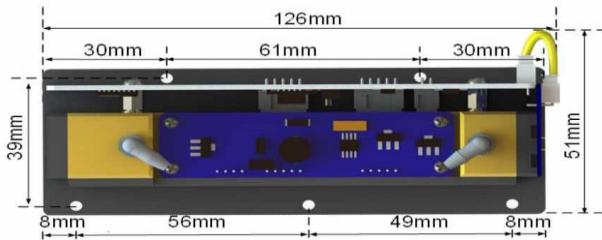


Senovol NDIR-CO2-50%VOL sensor is designed using Non-dispersive Infrared (NDIR) technology for the continuous detection of Carbon dioxide (CO₂) up to 50% in volume. It is a high-performance, industrial-grade and long-life CO₂-specific sensor with minimized cross-sensitivities from other gases.



Product Dimensions



Top View



Side View

All dimensions in mm

Performance

Sensor principle	non-dispersive infrared (NDIR)
Measurement range	0 ~ 50%vol CO ₂
Sampling Mode	Pumping (300~800ml/min)
Response time	< 3 seconds @500 ml/min
Recovery time	< 3 seconds @500 ml/min
Long-term stability	< ±0.01%vol/month
Resolution	0.01%vol/sec @ 0-5%vol 0.05%vol/sec @ 5-20%vol 0.2%vol/sec @ 20-50%vol
Accuracy	0.01%vol ± 3%True Value (Full Temperature)
Zero Temp. Drift	±500 ppm
Detection Limit	0.001%vol

Electrical

Supply voltage	9 ~ 24 VDC
Working current	< 150 mA at 9 VDC
Power consumption	< 1.0 W Average < 1.5 W @ peak
Warm-up time	3 min (±0.1%vol ±5%True Value) 60 min (±0.1%vol±3%True Value)
Output voltage	0.4 ~ 2.0 VDC (#2 pin) (0.3~0.4 V for negative reading)

Mechanical

Optical path	stainless steel
Solder	Sn, Ag, Cu
Weight	208 grams

Environmental

Temperature range	0°C ~ 40°C
Pressure range	0.5 ~2 atm
Humidity range	0 % ~ 85 % RH non-condensing

Lifetime

Storage temperature	-40 °C ~ 50 °C
Operating lifetime	> 5 years
Storage life	> 5 years
Warranty	18 months

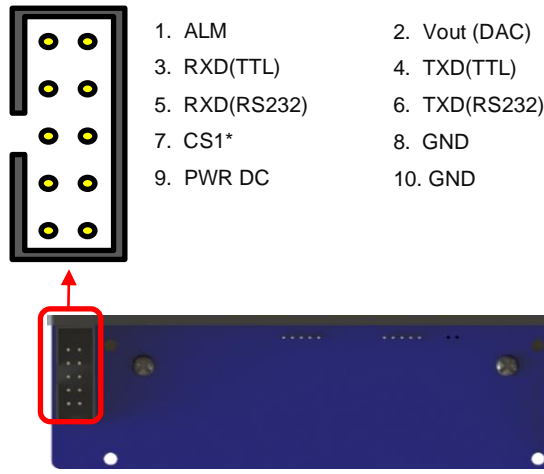
Approvals

Pending

Caution

The presence of condensed water and dust has the potential to harm the sensor, so adding filters to keep them out is highly recommended. Additionally, sensor damage can result from mechanical shock and electrical overload.

Pinout Details



*Note: CS1: 0~3.3 VDC output, RS485 read and write.

Accessories Included

Tygon Tube: Polyethylene (Transparent), Length 50 mm × 2, Diameter 3.2 mm × 6.4 mm
Ribbon Cable: Length 400 mm, 10-pin, 28 AWG, Gray, Female Connector (2 × 5), 2.54 mm pitch

Safety Note

If the sensor is used in certain instruments for life critical applications, it is required to read the instrument user's guide carefully and comply with the calibration procedures by using the certified target calibration gas before each use. Failure to do so may cause serious injury and/or fatality. It is highly recommended for customers to validate the sensor performance using this document as a reference for their product designs or applications.