

NDIR CO₂ Sensor



IR sensors for measurement of carbon dioxide (Co₂) in one channel configuration. Available for many measuring ranges from 10 % to 100 % for a variety of industrial applications.

Technical data

Parameter	madIR-D01
Measuring method	infra-red absorption, 1 channel with light modulation
Light source	T1 lamp, 5 V/40 mA
Modulation frequency	10.0 Hz
Detector	1 channel with filter
Wavelength / band width	4.24 µm /180 nm
Housing	IP 54 ABS
Sampling	flow
Operating temperature	0 + +50°C
Storage temperature	-20 + +70°C
Humidity	5 + 90%, non-condensing
Voltage supply	13...30 VDC or 9...24 VAC
Power	approx. 1 W
Analogue outputs	Begin and end can be user-configured within the range Current: 0 - 20 mA, linear; Voltage: 0 - 10 V, linear
Interface	RS 232C
Use in Network	no
Averaging time	2 + 32 s user-configured
T90	< 15 s
Range	Range
Accuracy	+/- (3 % of reading + 1.5 % of range)
Calibration	10 point calibration stored in EEPROM
Recalibration	not necessary
Size CO ₂	120 x 80 x 55 mm
Weight	220 g

Standard configuration

- 1 channel systems
- Flow measurement
- Temperature compensated
- Using microprocessor technology, all on one board
- High resolution precision measuring technology
- Measuring range - active range (begin and end) may be user-configured within the nominal range (see Range)
- Linear voltage output - active range (begin and end) may be user-configured within the nominal range 0....10 V.
- Linear current output - active range (begin and end) may be user-configured within the nominal range 0....20 mA
- Voltage supply 13...30 VDC or 9...24 VAC
- Interface RS232C
- PC programme for changing the sensor settings and for data-logging
- Optical path of the CO₂ sensor is protected by a hydrophobic filter
- The CH₄ Sensor uses a gold-plated optical path, closed by CaF₂ windows

Optional equipment

- Display module
- Membrane pump SP 550 EC 4
- IP54 ABS housing with all connections

Measuring ranges

Range	Resolution	High resolution lower range	Resolution of lower range
0...10 %	0,1%	3%	0,01%
0...25 %	0,1%	7,5%	0,01%
0...50%	1%	15%	0,1%
0...100%	1%	30%	0,1%

Other ranges possible on request

