

BIT LINE

STRUMENTAZIONE PER IL MONITORAGGIO AMBIENTALE

SENSORE DI CO2

- ✓ Facile e rapida installazione
- ✓ Misura CO2
- ✓ Uscite in tensione o corrente
- ✓ 0-5 / 0-10 V / 4-20mA
- ✓ Con autocalibrazione
- ✓ Consumo bassissimo
- ✓ Misura ppm



FUNZIONAMENTO

Measuring instruments in green houses or life stock barns are exposed to a very demanding environment: high humidity levels, pollutants like fertilizers, herbicides and high ammonia concentrations are just a few of the many hazards. The robust, functional housing of the sensor with integrated special filter has been designed for such applications. The air diffuses through the filter into the instrument enclosure. Then the air diffuses further through a second membrane filter integrated in the CO2 measuring cell. The CO2 measurement is based on the non-dispersive infrared (NDIR) technology. The patented auto-calibration procedure compensates for aging of the infrared source and guarantees high reliability, long term stability and eliminates the need of periodical recalibration in the field. Measuring ranges of 0...2000/5000/10000ppm correspond to an analogue interface of 0 - 5/10V or 4 - 20mA. The very practical snap-in mounting flange and connector for the supply voltage and outputs allow quick and easy installation of the sensor without ever opening the housing

Caratteristiche tecniche

Technical Data

Measuring Values

Measuring principle	Non-Dispersive Infrared Technology (NDIR)
Sensing element	Dual Source Infrared System
Measuring range	0...2000 / 5000 / 10000ppm
Accuracy at 25°C (77°F) and 1013mbar	0...2000ppm: < ± (50ppm +2% of measuring value) 0...5000ppm: < ± (50ppm +3% of measuring value) 0...10000ppm: < ± (100ppm +5% of measuring value)
Response time τ_{90}	< 195s
Temperature dependence	typ. 2ppm / °C
Long term stability	typ. 20ppm / year
Sample rate	approx. 15s

CARATTERISTICHE TECNICHE

Measured values

Measuring principle	dual wavelength non-dispersive infrared technology (NDIR)	
Measurement range	0...2000 / 5000 / 10000ppm	
Accuracy at 25°C and 1013mbar (77°F...14,7psi)	0...2000ppm:	< ± (50ppm +2% of measured value)
	0...5000ppm:	< ± (50ppm +3% of measured value)
	0...10000ppm:	< ± (100ppm +5% of measured value)
Response time τ_{63}	standard:	typ. 300s
	fast:	typ. 140s (with a forced air circulation module)
Temperature dependency	typ. 1ppm CO ₂ /°C (-20...45°C) (-4...113°F)	
Sample rate	approx. 15s	

Output

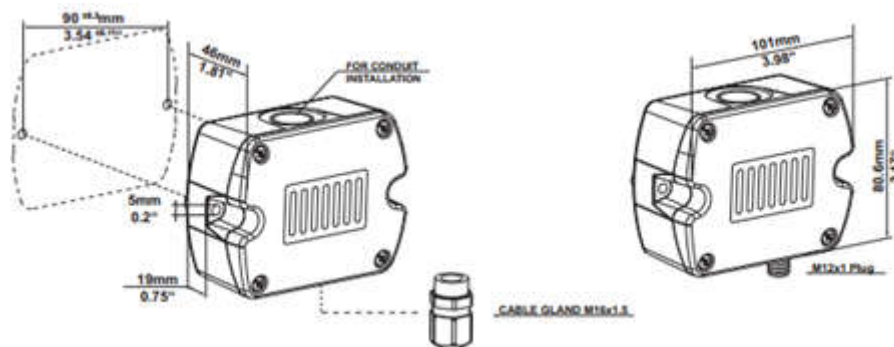
0...2000 / 5000 / 10000ppm	0 - 5 / 0 - 10V	-1mA < I _L < 1mA
	4 - 20mA	R _L < 500 Ohm

General

Supply voltage	24V AC ±20% 15 - 35V DC	
Current consumption	standard:	typ. 15mA + output current
	fast:	typ. 60mA + output current
Current peak	max. 350mA for 0.3s	
Warm up time ¹⁾	< 5 min	
Housing material	Polycarbonate, UL94V-0 approved	
Protection class	IP54	
Electrical connection	Screw terminals 2.5mm ² or M12 plug	
Electromagnetic compatibility	EN61326-1	EN61326-2-3 Industrial Environment
	FCC Part 15	ICES-003 ClassB
Working conditions	-20...60°C (-4...140°F) 0...100% RH (non-condensing)	
Storage conditions	-20...60°C (-4...140°F) 0...95% RH (non-condensing)	

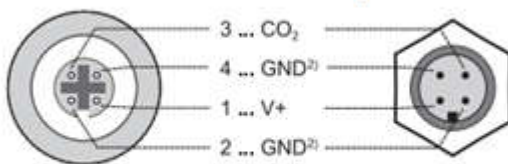


COLLEGAMENTI E DIMENSIONI



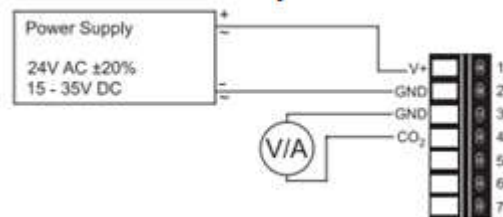
Connection Diagram

Con connettore M12 4 poli



- 1) Mating connector HA010707 is included in the scope of supply
- 2) GND internally connected

Con morsettiera e pressacavo



Ordering Guide

MODEL	OUTPUT	HOUSING	CONNECTION	SCALING	RESPONSE TIME
CO ₂	0-5V (2x) 0-10V (3x) 4-20mA (6x)	standard (P)	cable gland (P) M12 plug (N)	0...2000ppm (002) 0...5000ppm (005) 0...10000ppm (010)	standard (S) fast ¹⁾ (F)

Cod: CO₂-....

1) Includes a forced air circulation module.