

CARBONDIO – CO₂ gas sensor module

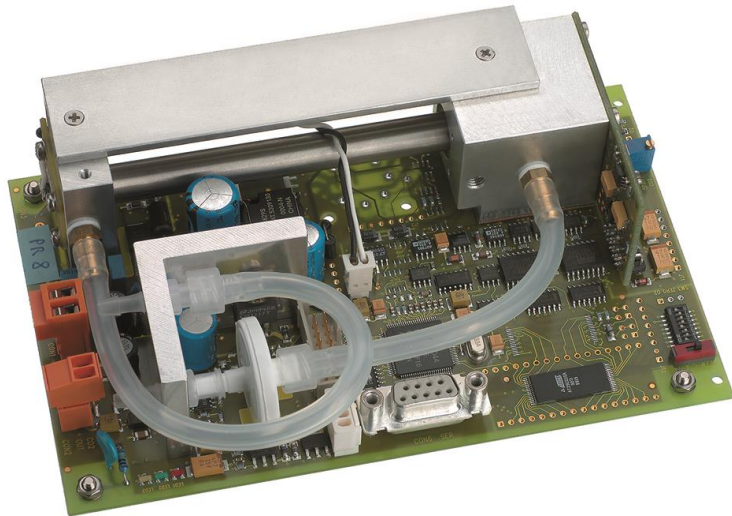
The Pewatron **CARBONDIO** module is a complete carbon dioxide (CO₂) NDIR sensor integrated on a euro-size PCB board for easy integration and installation. For the accurate and selective measurement of CO₂ concentrations in between 500 ppm and 30 Vol% the single beam, dual wavelength infrared technology (NDIR) is being used. DIP-switches on the PCB board enable the response time to be set to either 1 second or 30 seconds and span/zero point adjustment can be made. The microcontroller is constantly monitoring the status of the sensor and signal the current state via LED's. With more severe errors the output signal is immediately blocked. The power consumption of the sensor module is maximum 3W, and the sensor module is therefore suitable also for portable gas measurement devices. The electronics meet the latest EMC-regulations.

Features

- Gas specific
- No reference gas is needed
- Low drift
- Long expected operational lifetime
- Compact
- Low power consumption

Typical applications

- Fruit & vegetable storage
- Emission control
- Food Packaging
- Medical
- Biogas
- Greenhouse farming
- Mushroom farming
- Brewing
- Animal breeding



Specifications

Messprinzip	NDIR	Principle of operation
Messbereiche	0...500, 1000, 2000, 5000 ppm, 0...1, 5, 10, 30 %	Measurement ranges
Genauigkeit	<±2 %FS	Accuracy
Stabilität	<±2%FS/year	Stability
Wiederholgenauigkeit	Nullpunkt <±0.5 %FS	Zero Repeatability
	Endwert <±2 %FS	Full Scale
Ansprechzeit T ₉₀	30 s standard (1 s full response by software)	Response time T ₉₀
Betriebstemperatur	-10...+45 °C	Operating temp.
Aufwärmzeit	2 min	Warm-up time
Feuchte	0...98% RH (non-condensing)	Humidity
Speisespannung	11,5...30 VDC	Supply
Leistungsaufnahme	3 W	Power consumption
Ausgangssignale	0/4...20 mA, 0/2...10 VDC, RS232/19'200Baud	Outputs
Durchflussrate	0,5...1 l/min	Flow rate
Abmessungen	160 x 100 x 40 mm	Dimensions
Gewicht	300 g	Weight

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