

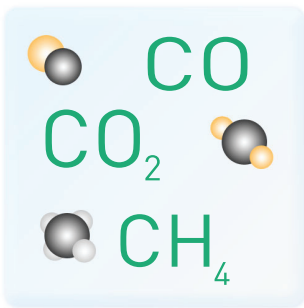
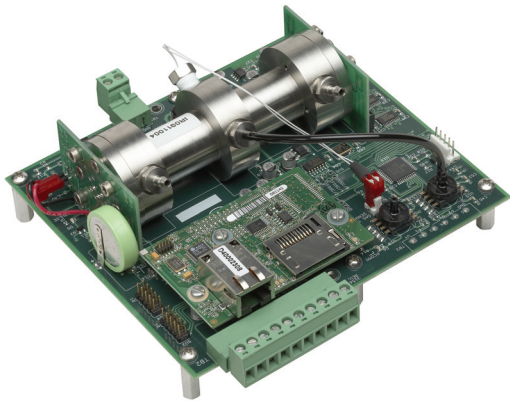
## NDIR Sensor

Designed for the accurate measurement of gas ranges using the latest technology.

### Gas Measurement Sensor

The sensor is designed for specific ranges to ensure accurate readings and long term stability. The system is designed to use a highly selective method with a unique design to ensure no interference.

The design includes components and materials to resist corrosion and promote cell life. A single IR cell can support single or multiple gases.



#### Features

- Measures CO, CO<sub>2</sub>, and CH<sub>4</sub>
- Reference channel for excellent stability
- Two RS-232 ports with Modbus RTU protocol
- Two RS-485 ports with Modbus RTU protocol
- Wide power supply input range (9 to 30VDC)
- Eight relay driver outputs
- Ethernet

#### CO measurement (0 - 30%):

Range: 0 to 30%  
Accuracy: +/- 0.1% of full scale  
Repeatability: +/- 0.1% of full scale  
Resolution: +/- 0.01%

#### CO<sub>2</sub> measurement (0 - 25%):

Range: 0 to 5%  
Accuracy: +/- 0.1% of full scale  
Repeatability: +/- 0.1% of full scale  
Resolution: +/- 0.001%

Range: 5 to 25%  
Accuracy: +/- 1% of full scale  
Repeatability: +/- 1% of full scale  
Resolution: +/- 0.01%

#### CH<sub>4</sub> measurement (0 - 20%):

Range: 0 to 20%  
Accuracy: +/- 0.1% of full scale  
Repeatability: +/- 0.1% of full scale  
Resolution: +/- 0.01%

#### Temperature and Humidity

Electronics operating: 0 to 50 °C, RH 0 to 90% non-condensing  
Sample gas: 0 to 70 °C, RH 0 to 90% non-condensing  
Storage: -20 to 70 °C, RH 0 to 90% non-condensing

#### Sample flow rate:

1.5 - 2 cfh

#### Weight:

625g

#### Auxiliary sensors:

Ambient temperature  
Sample gas temperature  
Absolute pressure

#### Power requirement:

9 to 30 volts DC @ 10 watts

#### RS-485 Serial Communications:

Protocol: Modbus RTU master or slave

#### RS-232 Serial Communications:

Protocol: Modbus RTU master or slave

#### Dimensions:

5.75"W x 5.025"H x 2.23"D  
14.6cm W x 12.76cm H x 5.66cm D

The sensor is designed with a reference cell that measures the intensity of the IR beam unabsorbed at the detector. This provides a real-time, zero absorption value to reference the other calculations.

The NDIR sensor is designed to be easily integrated into specific applications with open architecture and flexible outputs and communication methods.

\*Additional Gas Ranges Available Upon Request

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