

AirScan™ iCO₂

Carbon Dioxide Sensor

SensorCheck™
equipped



Using the latest infrared technology, Manning Systems new industrial quality AirScan™ iCO₂ gas sensor is very selective to carbon dioxide and, because of its stabilized design platform, will provide years of service and maintain the highest level of accuracy and reliability. Manning Systems new SensorCheck™ technology gives the advantage of continually monitoring sensor performance parameters. The AirScan™ iCO₂ senses and rapidly responds to carbon dioxide over the range of 0-1% or 0-5% and provides a linear output of 4/20 mA as a function of CO₂ concentration.

The AirScan™ iCO₂ is a true “diffusion” design sensor that does not require either pumps or filters and allows all points of detection to be monitored continuously, unlike sample draw systems. The unique features of its internal reference channel compensate for dust particles, source degradation, humidity and temperature fluctuation, food odors, chemical cleaners, etc. This means that years of use will not diminish the performance of Manning Systems new AirScan™ iCO₂ carbon dioxide sensor.

A solid high-mass metal bench provides structural and thermal stability, greater immunity to vibration, as well as superior EMI/RFI shielding of the detector and source. Manning Systems patented ATMOS equipped® enclosures allow the AirScan™ iCO₂ to automatically adapt to harsh environments,

including extreme temperature and humidity changes.

The rugged industrial design in a NEMA 4 steel enclosure outputs a linear 4/20 mA signal that can be monitored either by Manning Systems readout/alarm units or a PLC with analog input.

SensorCheck™ Manning Systems introduces the latest in its new family of gas sensing instruments with micro-processor-based SensorCheck™ technology. Every two seconds SensorCheck™ technology monitors the AirScan™ iCO₂ source and ensures that the dual channels are functioning properly. A notification signal will be transmitted if any of several performance parameters is not met. SensorCheck™ also monitors the incoming signal level from the source, as well as incoming voltage to ensure full signal strength.

Applications

- Wineries
- Refrigeration Systems
- Food Processing
- Chemical Manufacturing
- Gas Bottling Plants
- Greenhouses
- Beverage Plants
- Industrial Hygiene
- Indoor Air Quality

Key Features

- Highly specific to CO₂
- SensorCheck™ diagnostics
- Rapid response to target gas
- Long-term maintenance-free operation
- No moving parts
- No pump or dust filter required
- Modular electronics for ease of installation
- Linear 4/20 mA output
- LED sensor status indicators
- Auto zero function
- Internal compensation for environmental changes
- Superior EMI/RFI shielding
- Industrial NEMA 4 enclosure
- CSA approval pending

Carbon Dioxide Sensor

AirScan™ iCO₂

System Specifications

Electrical Power:

24 Volts DC regulated, 1.0 amp

Output:

Linear 4/20 mA output into a load resistor of 500 ohm maximum

Cable Recommendation:

<200', use #18/3 shielded cable

(Belden #8770)

200'-1,000', use #16/3 shielded cable

(Belden #8618 or equivalent)

Cable Length to Sensor:

1,000' maximum

Unit Enclosure:

16 gauge steel, wall-mounted NEMA 4 rated

NOTE: The standard AirScan™ iCO₂ is for use in non-classified areas only.

Sensor Specifications

Type:

Carbon dioxide selective infrared gas sensor/transmitter AirScan™ iCO₂

Method of Detection:

Dual-channel Infrared energy absorption (N.D.I.R. Non-dispersive Infrared)

Gas Monitored:

Carbon Dioxide

Ranges Available:

0-1%

0-5%

SensorCheck™ Features:

Dual channel functionality test

Source strength evaluation

Incoming voltage monitor

IR source integrity check

Accuracy:

± 3% of full scale

Repeatability:

± 1% of full scale

Cross Sensitivity:

Not affected by moisture, food odors, floor cleaners, temperature changes, etc.

Operating Humidity:

0-100% RH (condensing)

Operating Temperature:

-50°F to +140°F (ATMOS equipped® enviro-adaptive technology option required for refrigerated areas or outdoors)

Storage Temperature:

-20°F to +140°F

Gas Sampling:

Diffusion method with no moving parts

Sampling Frequency:

Real time continuous monitoring of all points

Response Time:

T⁹⁰ in 10 seconds with full-scale target calibration gas

Weight:

5 lbs.

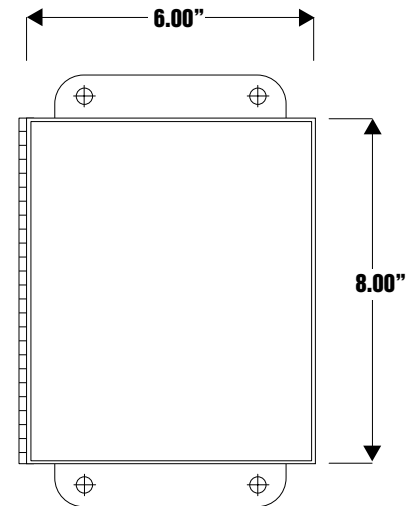
Dimensions:

8" H x 6" W x 4.5" D

Specifications subject to change without notice.

Sold per Manning Systems standard Limited Warranty.

Dimensions



Microprocessor-based AirScan™ infrared technology with SensorCheck™ and ATMOS equipped® enclosures also available for refrigerants in the range of 0-3,000 ppm but can be scaled as low as 0-500 ppm. Applications include: refrigeration systems, food processing, supermarkets, rack houses, chemical manufacturing, gas bottling plants, ice rinks, banana and produce rooms, beverage plants and confined spaces. Refrigerants monitored: R-22, R-134a, R-404a and R-507.

Calibration Gas Kits are always available from Manning Systems to maintain and verify the highest level of total system performance.

BW Technologies

1-888-749-8878

USA

1-800-663-4164

Canada

+44 (0) 1869 233004

Europe

+971-4-8871766

Middle East

+61-7-3818-8244

Australia

+852-2974-1783

China

+1-403-248-9226

Other Countries

Corporate Headquarters

2840 - 2 Avenue S.E.

Calgary, AB, Canada T2A 7X9

Phone: +1-403-248-9226

Fax: +1-403-273-3708

E-mail: info@bwt.net.com

www.gasmonitors.com