



The AST-IS Industrial Transmitters contain a non-dispersive, infrared sensor for the accurate and reliable detection of carbon dioxide (CO₂). There are 4 models available with different options. All models are low maintenance and a key component for climate control of buildings and other processes.

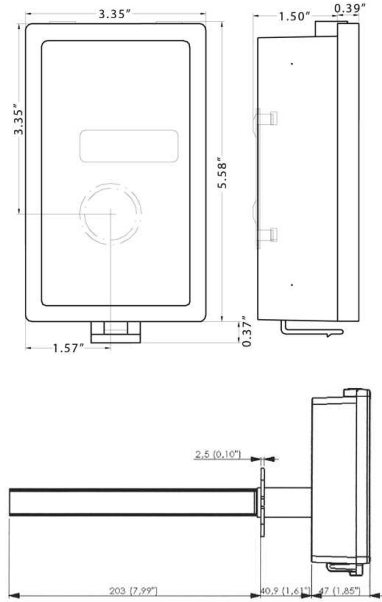
AST-IS3 is a duct mount, IP54 rated enclosure for installation in the ventilation duct. Standard 0 - 2,000 ppm range.

AST-IS12 is a duct mount, IP54 rated enclosure for installation in the ventilation duct, includes a display, relay and Modbus® output. Standard 0 - 2,000 ppm range.

AST-IS18 is a wall mount, IP65 rated enclosure that is specially coated PCB with an extra dust/water protection filter suited for greenhouses, wineries and similar environments. It offers a 0 - 4% vol range, two relays (unless the optional temperature sensor is installed) and a display.

The **AST-IS18-M** transmitter is the same as the AST-IS18 but with Modbus® output for communicating with a Controller or a Business Automation System (BAS).

TECHNICAL DRAWING



KEY FEATURES

- » Operating power 24 VDC or 24 VAC nominal
- » 4 - 20 mA or 0 - 10 VDC linear output signal
- » Relay output (AST-IS12 and AST-IS18 only)
- » Single internal infrared CO₂ sensor
- » LCD digital display (AST-IS12 and AST-IS18 only)
- » 0 - 2,000 ppm standard range (AST, IS3 and AST-IS12)
- » 0 - 4% volume measurement range (AST-IS18 for winery applications)
- » Low maintenance, easy calibration

APPLICATIONS

- » Commercial Buildings
- » Greenhouses
- » Schools / Educational Institutions
- » Wineries
- » Office Buildings
- » ... and many more



ANALOG OR DIGITAL GAS DETECTORS DATASHEET

AST-IS Industrial CO₂ Transmitter

TECHNICAL SPECIFICATIONS

GAS TYPE

Carbon Dioxide (CO₂)

MECHANICAL

AST-IS3 Enclosure	Industrial Housing PVC, IP54 rated
Size	151.3 mm x 84 mm x 46 mm (5.96" x 3.31" x 1.81")
Probe Length	246 mm (9.68")
AST-IS12 Enclosure	Industrial Housing, PVC, IP54 rated
Size	151.8 mm x 84.7 mm x 47 mm (5.98" x 3.33" x 1.85")
Probe Length	243.9 mm (9.6")
AST-IS18 & AST-IS-M Enclosure	Industrial Housing PVC, IP65 rated
Size	177 mm x 85 mm x 38 mm (7.0" x 3.35" x 1.5")

USER INTERFACE

Display	LCD, 4 digits, 7 segments with ppm indicator
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INPUT / OUTPUT

Linear Outputs	Linear 4 - 20 mA or 0 - 10 VDC signal
Relay Output (contact free) (AST-IS12, AST-IS18 & AST-IS18-M)	min load: 1 mA / 5V rated load: 0.5 A / 125 VAC; 1 A / 24 VDC
Communication (AST-IS12 & AST-IS18-M)	RS-485 Modbus®

ELECTRICAL

Power Requirement	24 VDC or VAC, 50/60 Hz (half-wave rectifier input)
Power Consumption	1W to 3W average

SENSORS

Infrared CO ₂ Sensor	
Sampling Method	Non-dispersive infrared
Monitoring Method	Diffusion
Range	0 - 2,000 ppm 0 - 4% volume (AST-IS18 & AST-IS18-M)
Accuracy	± 30 ppm, ± 3% of reading
Life Expectancy	> 15 years
Temperature Sensor Range (standard with AST-IS12, optional for AST-IS18 & AST-IS18-M)	
	0°C to 50°C (32°F to 122°F) range

TECHNICAL SPECIFICATIONS... continued

ENVIRONMENTAL

Operating Temperature	0°C to 50°C (32°F to 122°F)
Humidity	0 - 85% RH non-condensing

CERTIFICATION

CE and compliance with ISO 9001:2008
EMC 2004/108EC directive, EN 61326-1:2006, Class B equipment
RoHS directive 2011/65/EU

PRODUCT CODES

AST-IS3 (analog)	Carbon dioxide (CO ₂), duct mount with mounting kit, IP54 industrial enclosure, no display, 0 - 2,000 ppm measurement range
AST-IS12 (digital)	Carbon dioxide (CO ₂), duct mount with mounting kit, IP54 industrial enclosure, LCD digital display, relay, temperature sensor, Modbus output, 0 - 2,000 ppm measurement range
AST-IS18 (analog)	Carbon dioxide (CO ₂), wall mount with bracket, IP65 industrial enclosure, LCD digital display, two relays (unless optional temperature sensor is installed), 0 - 4% volume measurement range
AST-IS18-M (digital)	Carbon dioxide (CO ₂), wall mount with bracket, IP65 industrial enclosure, LCD digital display, two relays (unless optional temperature sensor is installed), Modbus® output, 0 - 4% volume measurement range, optional temperature sensor

ACCESSORIES

CET-715A-CK1	Calibration Kit for 17 - 100 L cylinders, 0.5 LPM flow regulator & adapter to fit 17 L cylinder
SCS-8000-RSG	Small galvanized metal, 16 gauge protective guard