

# H-GUARD-L

CO<sup>2</sup> Transmitter

The H-Guard-L is a CO<sup>2</sup> transmitter series designed to be installed in HVAC applications.

The CO<sup>2</sup> sensing element uses the Non-Dispersive Infrared Technology (NDIR) with the patented self-calibration system to guarantee the long-term stability and up to 15 years.

H-Guard-L duct probe transmitter offers temperature and humidity option. The high accuracy temperature and humidity combined sensor provide a digital interface and outstanding full range linearity.

The one or three analog 0-10V or 4°20mA outputs are selectable by jumpers. Modbus RS485 communication interface is provided. Optional backlit LCD can display all measurements and is usable easily in more applications.

H-Guard-L offers simplicity in design and installation with the special demountable and replaceable filter to avoid pollution and influence of measurement.

## **KEY FEATURES**

- Used to real-time detect CO<sup>2</sup>
  levels in air ducts
- NDIR infrared CO<sup>2</sup> sensor featuring self-calibration
- Humidity and temperature detection optional
- Modbus RS485 communication
  interface
- Backlit LCD display option enables display of CO<sup>2</sup> measurement and temperature and RH measurements
- Smart structure with demountable replaceable filter provides dust-proof protection
- A 180° rotatable fastness position for the probe can change direction of the air detection
- IP54 (housing and probe)
- CE Approval

## H-GUARD-L

Gas detected	Carbon Dioxide (CO <sup>2</sup> ) *Temperature and Relative humidity optional
Sensing element	Non-Dispersive Infrared Detector (NDIR)
	*Temperature – Band-gap sensor
	*Humidity – Capacitive humidity sensor
Accuracy	±40ppm + 3% reading
Stability	<2% of FS over life of sensor
Calibration interval	ABC Logic Self Calibration System
Response time	<2 minutes for 90% step change
Warm up time	2 hours (initial star-up) / 2 minutes (operation)
CO <sup>2</sup> measuring range	0-2000ppm or 0-5000ppm
	0-20,000ppm or 0-50,000ppm for TSM-CO <sup>2</sup> -S series
Sensor life	Up to 15 years
Power supply	24VAC/24VDC
Consumption	1.8 W max; 10 W average
Analog outputs	0~10VAC or 4~20mA selectable by jumpers
Relay output	1 x 3A switch load – 4 set points selectable by jumpers
Modbus interface	Modbus RS485 interface
	9600/14400/19200(default)/28800 or 38400bps
	15KV antistatic protection
Temperature	0-50°C / 32-122°F
Humidity	0-95% RH, non-condensing
Storage	-40- 70°C / -40- 158°F
Net weight	320g
Dimensions	12.4 x 16.9 x 5cm
Approvals	CE approval
Part numbers	665-9082 (H-Guard-L CO <sup>2</sup> transmitter with 1 x 4-20mA output for CO2)
	65-9082-10 (H-Guard-L CO² transmitter with 3 x 4-20mA outputs for CO2, temperature & humidity)
Optional	49-9998-01 (Plug pack 240VAC/24Vdc 450mA)



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