

H-Guard-D™

CO2 Transmitter



The H-Guard-D is a CO2 transmitter series designed to be installed in HVAC return air ducts. The CO₂ 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 life time. TG9 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. TG9 offers simplicity in design and installation with the special demountable and replaceable filter to avoid pollution and influence of measurement.

Typical Applications:

Building management for office areas and residential

Ventilation control system

Key Features:

- Special used to real-time detect CO2 level in air ducts.
- NDIR infrared CO2 sensor inside with Self-Calibration and up to 15 years lifetime
- Humidity and temperature detection optional
- Combined temperature and humidity sensor provide the highest accuracy in full range
- Backlit LCD display option can display CO2 measurement and temperature+ RH measurements
- Providing one or three 0~10VDC or 4~20mA or 0~5VDC analog outputs
- Modbus RS485 communication interface makes usage and test more convenient
- Smart structure and attractive housing provide you a unique operation feeling
- Simple and skillful design and installation with a demountable and replaceable filter to provides dust-proof protection
- Special a 180° rotatable fastness position for the probe can change the direction of air detection.
- All housing and probe are IP54 class
- CE-Approval

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Sensor & Transmitter Specifications

Gas detected	Carbon Dioxide (CO ₂)
Sensing element	Non-Dispersive Infrared Detector (NDIR)
Accuracy@25(77),2000ppm	±40ppm + 3% reading
Stability	<2% of FS over life of sensor (15 yr typical)
Calibration interval	ABC Logic Self Calibration System
Response time	<2 minutes for 90% step change
Warm up time	2 hours (first time) 2 minutes (operation)
CO₂ measuring range	0-2,000ppm / 0-5,000ppm selectable in orders
Sensor life	Up to 15 years
Power supply	24VAC/24VDC
Consumption	1.5 W max. ; 0.8 W avg.
Analog outputs	0~10VAC or 4~20mA selectable by jumpers
Relay output	1X3A switch load
Modbus interface	Four set points selectable by jumpers Modbus RS485 interface 9600/14400/19200(default)/28800 or 38400bps (programmable selection), 15KV antistatic protection.
Operation conditions	0~50(32~122); 0~95%RH, non condensing
Storage conditions	-40~70(-40~158)
Net weight	240g
Dimension	Junction box 100mm×85mm×50mm Probe 124.5mm x 40mm
Approval	CE-Approval
Ordering information	65-9081 H-Guard-D CO ₂ Transmitter, 1x4-20mA output 1 x Relay output 0-2000ppm standard range 49-998-01Plug pack 240VAC/24Vdc 450mA

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