

# H-Guard™

## CO2 Transmitter



The H-Guard is a CO2 transmitter series designed to be installed in HVAC applications. The CO<sub>2</sub> 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.

### Key Features:

- Real-time detecting CO2 level.
- NDIR infrared CO2 module inside with four CO2 detection range selectable.
- CO2 sensor has Self-Calibration Algorithm and 15 years lifetime
- Wall-mounting
- Providing one analog output with voltage or current selectable
- 0~10VDC/4~20mA selectable easily via jumpers
- Provide a special model with a on/off relay output with a touch button to operate a fan control.
- Design for HVAC, ventilation systems, offices, or other public places.
- Modbus RS485 communication interface optional: 15KV antistatic protection, independent address setting
- CE-Approval

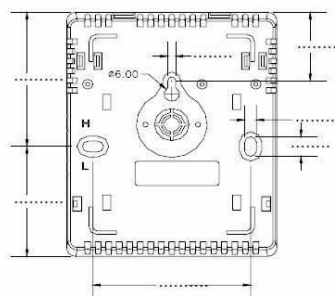
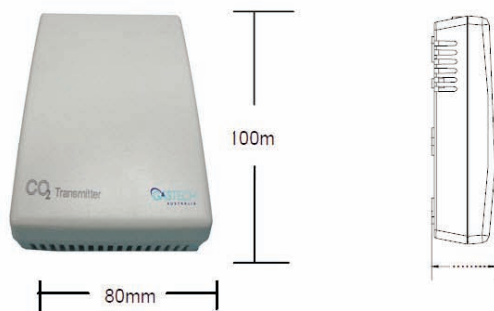
### Typical Applications:

Building management for office  
areas and residential

Ventilation control system

## Sensor & Transmitter Specifications

<b>Gas detected</b>	Carbon Dioxide (CO <sub>2</sub> )
<b>Sensing element</b>	Non-Dispersive Infrared Detector (NDIR)
<b>Accuracy@25(77),2000ppm</b>	±40ppm + 3% reading
<b>Stability</b>	<2% of FS over life of sensor (15 yr typical)
<b>Calibration interval</b>	ABC Logic Self Calibration System
<b>Response time</b>	<2 minutes for 90% step change
<b>Warm up time</b>	2 hours (first time) 2 minutes (operation)
<b>CO<sub>2</sub> measuring range</b>	0-2,000ppm / 0-5,000ppm selectable in orders 0-20,000ppm / 0-50,000ppm just for TSM-CO <sub>2</sub> -S series
<b>Sensor life</b>	Up to 15 years
<b>Power supply</b>	24VAC/24VDC
<b>Consumption</b>	1.5 W max. ; 0.8 W avg.
<b>Analog outputs</b>	0~10VAC or 4~20mA selectable by jumpers
<b>Relay output</b>	1X3A switch load Four set points selectable by jumpers
<b>Modbus interface</b>	Modbus RS485 interface 9600/14400/19200(default)/28800 or 38400bps (programmable selection), 15KV antistatic protection.
<b>Operation conditions</b>	0~50(32~122); 0~95%RH, non condensing
<b>Storage conditions</b>	-40~70(-40~158)
<b>Net weight</b>	180g
<b>Dimension</b>	100mm×80mm×28mm
<b>Installation standard</b>	65mm×65mm or 2"×4" wire box
<b>Approval</b>	CE-Approval
<b>Ordering information</b>	65-9080 H-Guard CO <sub>2</sub> Transmitter, 1x4-20mA output 1 x Relay output0-2000ppm standard range 49-9998-01Plug pack 240VAC/24Vdc 450mA



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