GS-CO2-W-LED

Wall Mount CO_2 Transmitter with LED Indication

Features:

- LED indication on CO_2 levels
- Optional Override switch
- CO_2 Self-calibration algorithm
- Real-time detecting CO_2 levels

Benefits:

- Visual CO_2 levels
- High and long term stability
- 4-20mA and 0-10Vdc outputs for compatibility with a wide range of controllers

Technical Overview

The GS-C02-W-LED is a non-dispersive infrared sensor for measuring CO_2 concentrations, utilising microprocessor based electronics and a unique self-calibration algorithm to improve long-term stability and accuracy.

The sensor can be used to ensure adequate ventilation while maximizing energy savings by ventilating at the optimum level.

Tel: +44 (0)1732 861200. - E-mail: sales@sontay.com. - Web: www.sontay.com.

Specification:

Range	0 to 2000ppm
Output signals (jumper selectable depending on version):	
0-10Vdc	
4-20mA	
Modbus RS485	19200bps, 15KV antistatic protection
Power supply:	
Voltage output	24Vac/dc, ±10%
Current output	24Vdc only, ±10%
Consumption	1.6W max. / 0.8W avg.
Accuracy	±40ppm +3% of reading @ 25°C (77°F)
Stability	<2% of FS over sensor life
Non-linearity	<1% of FS
Sensor life	15 years, typical
Response time	<2 min, for 90% step change
Stabilization time:	
First time	48 Hours
Operational	10 Minutes
LED's	See page 3 for information
Environmental:	
Operational:	
Temp	0 to + 50°C (32 to 122°F)
RH	0 to 95% non-condensing
Storage:	
Temp	-40 to +70°C (-40 to 158°F)
CE Conformity	CE Marked
Housing:	
Material	ABS
Dimensions	100 x 80 x 28mm (3.94 x 3.15 x 1.97")
Protection	IP30
Country of origin	China

CE

The products referred to in this data sheet meet the requirements of EU Directive 2004/108/EC

Part Codes:

GS-CO2-W-LED

Wall mount Carbon Dioxide transmitter with current or voltage selectable outputs and LED indication

GS-CO2-W-LED-M

Wall mount Carbon Dioxide transmitter with current or voltage selectable outputs and Modbus output and LED indication

GS-CO2-W-LED-B

Wall mount Carbon Dioxide transmitter with current or voltage selectable outputs, override and LED indication (see notes on page 4)

Please Note:

Current versions are NOT loop powered and will require a common 0V connection.

Installation:

Antistatic precautions must be observed when handling these sensors. The PCB contains circuitry that can be damaged by static discharge.

1. Select a location on a wall of the controlled space which will give a representative sample of the prevailing room condition.
   Avoid sitting the sensor in direct sunlight, near diffusers and steam sources.

2. Gently remove the front cover from the back plate. The front plate is removed by pressing the tabs at the top of the sensor with a flat bladed screwdriver. Gently slant the screwdriver and this will separate the front cover from the back plate.

3. Using the base as a template mark the hole centres and fix to the wall with suitable screws. Alternatively the base plate can be mounted on to a conduit box or a standard recessed back box.

4. Feed cable through the knockout in the base of the housing and terminate the cores at the terminal block. Install wiring into terminal blocks as required, and push excess wire back into wall or junction box.

5. Select output type, 4-20mA or 0-10Vdc. Do **not** adjust any potentiometers as this will void warranty.

6. Ensure that the supply voltage is within the specified tolerances.

7. Replace the front cover to the base plate until a click is heard.

8. Power the unit, pre-commissioning checks can be made after 10 minutes. Full commissioning should not be carried out for at least 48 hours. This will enable the ABC Logic self-calibration procedure to complete.

9. It is recommended that screened cable be used and that the screen should be earthed at the controller only. Care should be taken not to lay control signal wiring in close proximity to power or other cables which may produce significant electromagnetic noise.

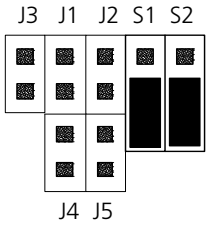
LED Indication & ABC Logic Self-Calibration:

- 1st Green LED <600ppm
- 1st & 2nd Green LED's 600 to 800ppm
- 1st Yellow LED 800 to 1200ppm
- 1st & 2nd Yellow LED's 1200 to 1400ppm
- 1st Red LED 1400 to 1600ppm
- 1st & 2nd Red LED >1600ppm

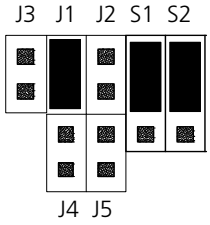
When first powering the transmitter, it needs to be powered continuously for at least 2 days. This will allow the CO_2 sensors ABC Logic self-calibration system operates correctly.

Jumper Settings:

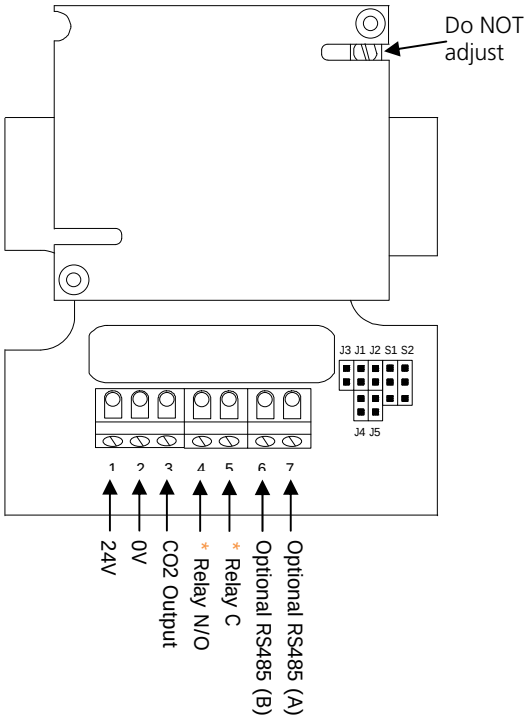
0-10Vdc (default):



4-20mA:



Connections & PCB Layout:



Please Note:
If using in current output mode, the sensor must only be used with a 24Vdc supply. The sensor may be damaged if supplied with AC.
When using current output mode they are **NOT** loop powered and will require a common 0V connection.

* The relay output is only available on the GS-CO2-W-LED-B, and activates via the touch button to operate a fan or similar device. The relay does not operate automatically on CO_2 levels.

Tel: +44 (0)1732 861200. - E-mail: sales@sontay.com. - Web: www.sontay.com.