



**HGS 2-10 v2**

## **Budget CARBON MONOXIDE 0-100ppm 2-10vDC SENSOR**

### **Features**

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- CO cell complies with all relevant standards with international compliance.
- Easy Site Calibration with ZERO and GAIN potentiometers.
- Choice of wire entry: rear, bottom or top.

### **Use**

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The HGS 2-10 is designed as a budget but fully compliant Car park Carbon Monoxide measurement sensor for connection to a CO Controller or BMS system. Hevac manufacture a compatible CO controller model HCP7F which can except 7 of the HGS series sensors, and using expansion modules, up to a total of 42 sensors. The sensor is a 3 wire connection powered by **24vAC or DC** and produces a 2 to 10 volt DC signal over the measurement range of 0 to 100 ppm CO. The sensor is marked with a signed calibration date sticker. HEVAC recommend a 12 month recalibration period.



**100% Australian Owned Company**

## Technical Data

### General Specifications

Operating Voltage	24 Volts AC or DC
Power Consumption 17- 24 AC / DC Volts	10 mA @ 100ppm
Re Calibration Period	12 months

### Environmental Conditions

#### Operation

Ambient Temperature	0...40oC
Humidity	< 95 % RH (Non Condensing)

#### Storage and Transport

Ambient Temperature	1...50oC
Humidity	< 90 % RH (Non Condensing)

### Product Standards

As per Australian standards.

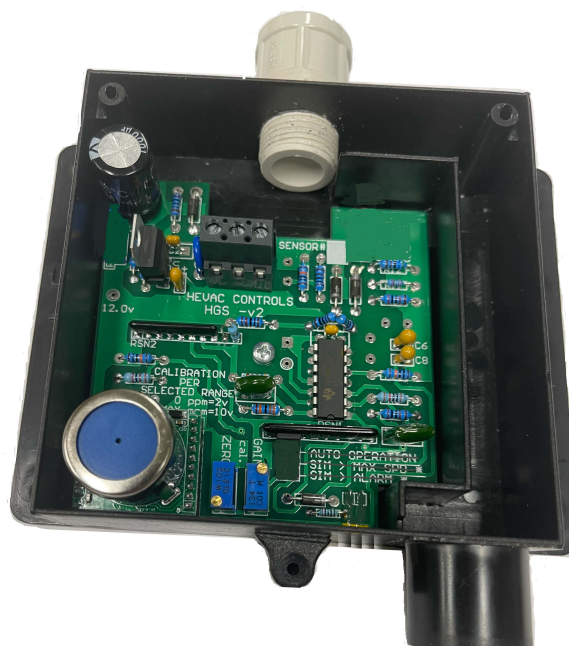
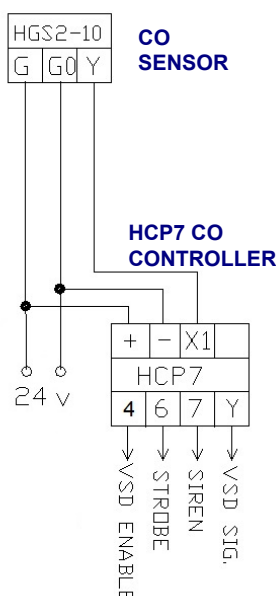
### Weight

Including Packaging	150 grams
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### Housing

Colour	BLACK
Material	ABS POLYCARBONATE
UV Stabilised	YES
Fire Retardant	YES
Size	H122mm x W98mm x D35mm
Mounting Method	Wall mount 4 screw locations

## CONNECTION GUIDE



G	24 Volt Supply Active
G0	24 Volt Neutral (ground)
Y	2-10VDC Signal Out



## **INSTALLATION**

The standards call for the maximum distance between sensor locations not to exceed 25 meters with sensors mounted between 750mm & 1800mm above floor level

## **MAINTAINANCE**

*HEVAC RECOMMEND OUR CO SENSORS BE CALIBRATED EVERY 12 MONTHS FROM THE LAST CALIBRATION DATE BY QUALIFIED PERSONAL USING APPROPRIATE CALIBRATED TEST APPARATUS.*

## **REQUIRED EQUIPMENT:**

- 1 X CARBON MONOXIDE GAS BOTTLE CALIBRATED TO 0 ppm (STILL WITHIN USED BY DATE)
- 1 X CARBON MONOXIDE GAS BOTTLE CALIBRATED TO **100 ppm** (STILL WITHIN USED BY DATE)
- 1 X GAS BOTTLE REGULATOR C/W TUBING & FLOW HEAD TO FIT SENSOR HEAD
- 1 X ELECTRONIC VOLT METER SET TO 20vDC SCALE

## **CALIBRATION STEPS :**

TO CALIBRATE HEVAC HGS 2-10 SENSORS PLEASE FOLLOW THE FOLLOWING PROCEDURE.

- 1.) REMOVE SENSOR COVER AND LOCATE "ZERO" & "GAIN" POTENTIOMETERS ON THE CELL.
- 2.) CONNECT OR HOLD VOLT METER PROBES TO MEASURE THE SENSOR OUTPUT.  
CONNECT THE METER'S BLACK LEAD TO TERMINAL "GO" AND THE RED LEAD TO "Y"
- 3.) USING THE "0ppm" GAS BOTTLE & REGULATOR ATTACH FLOW HEAD SNUGGLY OVER CO SENSOR HEAD, LOCATED PROTRUDING BOTTOM RIGHT OUT OF THE HGS HOUSING.
- 4.) OPEN THE REGULATOR ON THE "0ppm" GAS BOTTLE AND LEAVE TO SETTLE MEASUREMENT FOR 15 SECONDS, NOTE VOLTAGE OUTPUT.
- 5.) ADJUST THE "ZERO" POTENTIOMETER WITH A SMALL SCREW DRIVER UNTILL THE VOLTAGE O/P READS 2.00 +/- 0.02 Volts. ( 2-10vDC O/P =0 to**100 ppm with 0.08 volts per 1ppm**)
- 6.) CLOSE THE REGULATOR ON THE "0ppm" BOTTLE AND CONNECT THE "100ppm" GAS BOTTLE AND REGULATOR.
- 7.) OPEN THE REGULATOR ON THE "**100ppm**" GAS BOTTLE AND LEAVE FOR 2 MINUTES OR UNTIL MEASUREMENT SETTLES, NOTE VOLTAGE OUTPUT.
- 8.) ADJUST "GAIN" POTENTIOMETER SUCH THAT THE O/P VOLTAGE READS 10vDC +/- 0.02 Volts
- 9.) TURN OFF REGULATOR AND REPLACE SENSOR HOUSING LID.
- 10.) ATTACH A NEW CALIBRATION STICKER TO CELL or HOUSING SHOWING NEXT DUE CALIBRATION DATE AND IDENTIFICATION OF THE SERVICE TECHNICIAN & COMPANY.



## **EX FACTORY CALIBRATION CERTIFICATE**

**SENSOR MODEL NUMBER : HGS 2-10 v2**

**THIS IS TO CERTIFY THAT THIS SENSOR HAS BEEN CALIBRATED IN ACCORDANCE WITH AUSTRALIAN STANDARDS AS1668.2 , AND IS REQUIRED TO BE SITE CALIBRATED IN 12 MONTHS FROM THE BELOW TEST DATE BY QUALIFIED PERSONAL AFTER WHICH A NEW DATE STICKER IS REQUIRED TO BE FITTED TO THE EXTERIOR OF THE SENSOR HOUSING DISPLAYING CALIBRATED BY WHOM & WHEN, PLUS THE NEXT DUE CALIBRATION DATE.**

Serial Number:	
Calibration Date:	
Gas Type:	CO (Carbon Monoxide)
TEST Span Gas:	100ppm CO
Cylinder Details:	
Cylinder Valid Until:	
Next Service/Calibration Required:	
Technician Initials:	
Technician Signature:	