SenSmart 1200 CB, 1300 IR, 1400 IR CO2, 1500 PID

Installation Guide

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RC SYSTEMS

Flammable & Toxic Gas Detectors
Smart Alarm Controllers
Fire & Gas System Engineering
Technical Service & Support

⚠ Warning: Read & understand contents of this manual prior to operation. Failure to do so could result in serious injury or death.

## *Gas Detector Installation and Power-up*

The SenSmart 1200 CB and SenSmart 1300 IR, 1400 IR CO2, 1500 PID are 3-wire Bridge-type, blind, sensor transmitters. These instructions will provide you with guidance on the installation and calibration of your SenSmart 1200 CB and SenSmart 1300 IR, 1400 IR CO2, 1500 PID gas detector during initial setup and installation.
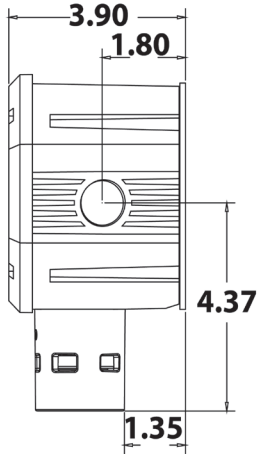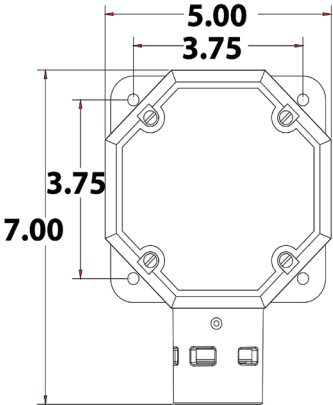
1 **Installation of Gas Detector**

A. Mount the Gas Detector in desired location.
(see figure 1 for mounting dimensions.)

B. Remove windowed lid from unit.
1. AL Enclosure unscrew lid to access terminals
2. PY Enclosure - unscrew (4) lid screws to access
   terminals

Figure 1- Mounting Dimensions
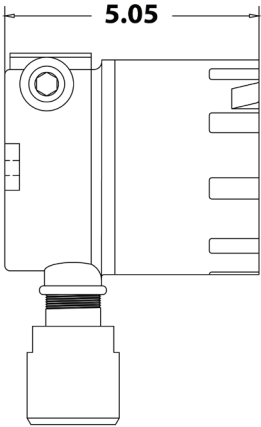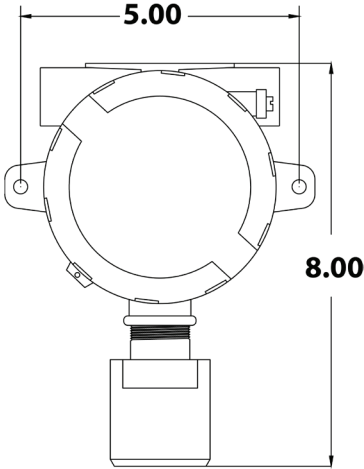
Aluminium

Polycarbonate

POWER AND WIRING SETUP

1

R.C. Systems' sensors have the below power requirements:

Sensor	Power
Catbead	2 volts @ 300 mA
Smart IR	3.2 volts @ 60 mA
Low Range PID	3.7 volts @ 100 mW
High Range PID	3.3 volts @ 90 mW

2 **Perform Prior to Connecting wires to your SenSmart 1200 CB, SenSmart 1300 IR, 1400 IR CO2 or 1500 PID**

A. Apply power to your system.

B. Measure the voltage between the Active and Reference cables at the location where the detector is to be installed.

C. Adjust the voltage to the rated sensor voltage.

D. Remove power prior to connecting the wires to the detector.

3 **Wiring the Detector**

A. Connect the REFERENCE wire to terminal **TB2.2** R terminal (*see figure 2*)

B. Connect the COMMON wire to terminal **TB2.3** C terminal (*see figure 2*)

C. Connect the ACTIVE wire to terminal **TB2.4** A terminal (*see figure 2*)
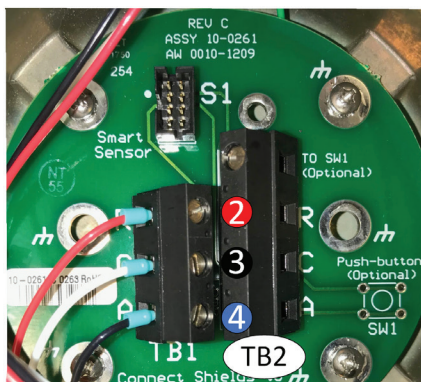
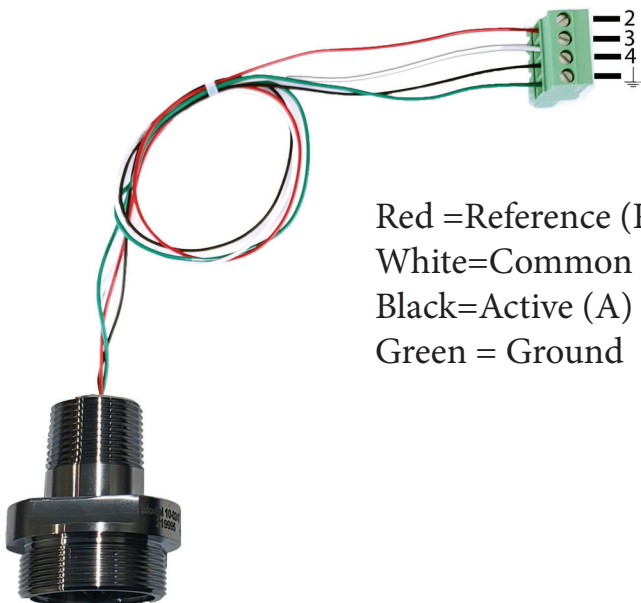## *Figure 2- Wiring Instructions*

With Junction Box

TB2.② - REFERENCE (R) Terminal

TB2.❸ - COMMON (C) Terminal

TB2.④ - ACTIVE (A) Terminal

Without Junction Box

Red =Reference (R)
White=Common (C)
Black=Active (A)
Green = Ground

INITIAL SETUP AND CALIBRATION

Calibration may vary depending on the control device the detector is connected to. For detailed instructions for your particular device, refer to the appropriate User Manual.

1

A. **Initial Sensor Balance**
- With zero gas applied, adjust the sensor balance on your control device such that the display reads zero for the channel being calibrated.

B. **Initial Span Calibration**
- Apply span gas to the sensor (R.C. Systems recommends calibration span gas be 50% of the full scale reading).
- After sensor has stabalized, adjust the sensor gain on your control device such that the display reads the value of the span gas applied.
- Remove span gas, and allow sensor to return to zero reading.

C. **Final Calibration**
- Initial setup is now complete and normally only requires repeating if a sensor is replaced. Final calibration of the detector can now be performed according to the normal calibration procedure of the control device you are using.

SPECIFICATIONS

Power Supply	2-7.5VDC @ 300mA
Accuracy	+/- 1% of full scale range (typical)
Standard Output	3 wire bridge output
Temp	Less than .1% per degree C over ambient temperature range
Approval	Division 1 and 2 Group A,B,C,D Exia. Suitable for Explosion Proof

SenSmart 1200 CB, 1300 IR,1400 IR CO2,1500 PID

R.C. Systems provides 24/7 superior technical support from experts right here in our local facility.

If you are in need of any assistance during the setup of this product, you may contact our main office and your call will be directed appropriately.

At R.C. Systems we are proud to supply quality products and are happy to help if you have any questions or concerns.

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RC SYSTEMS
"The Art of Gas Detection"