

SenSmart 2000/3000

Installation Guide



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.

GETTING STARTED

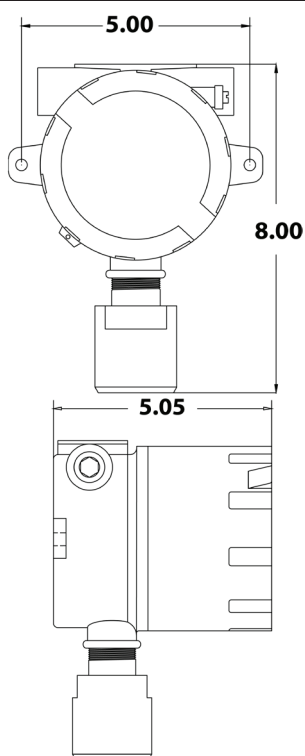
Gas Detector Installation and Power-up

1

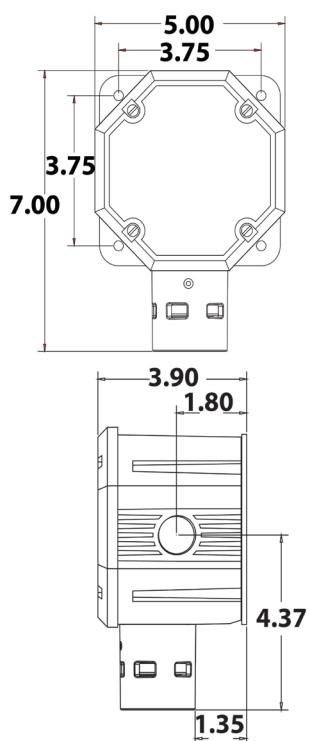
Installation of Gas Detector

- 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 and remove thumbscrew to access terminals
 - 2. PY Enclosure - unscrew (4) lid screws to access terminals
- C. Remove thumb screws and pull display to the side.
(Aluminum Enclosure)

Figure 1 - mounting dimensions



Aluminium



Polycarbonate

GETTING STARTED

Power Up/Standard Output Installation

2

SenSmart 2000

- A. Connect the +10-30VDC/4-20mA loop wires to terminals TB1.1 and TB1.2 *(See Figure 2)*

3

SenSmart 3000

- A. Connect 10-30VDC power lead to TB2.1 *(See Figure 3)*
- B. Connect Common lead to TB2.4 *(See Figure 3)*
- C. Connect signal lead to TB2.2 (Channel 1 4-20mA Out) and/or TB2.3 (Channel 2 4-20mA Out) *(See Figure 3)*

Figure 2 - SenSmart 2000 wiring

**TB1.① - +10-30VDC/4-20mA
(non-polar)**

**TB1.② - +10-30VDC/4-20mA
(non-polar)**

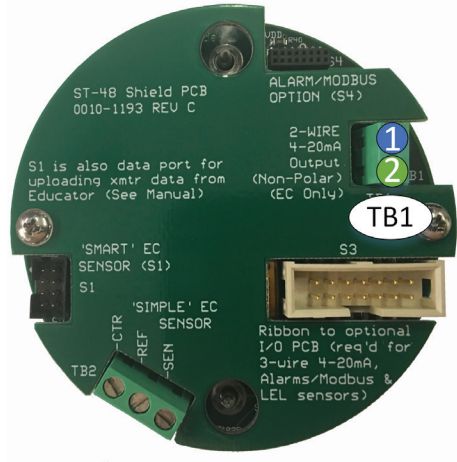


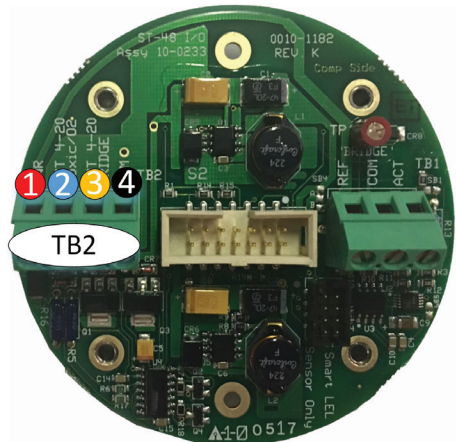
Figure 3 - SenSmart 3000 wiring

**TB2.① - 10 to 30VDC
Positive (+)**

**TB2.② - 4-20mA Toxic
Output**

**TB2.③ - 4-20mA Bridge
Output**

**TB2.④ - 10 to 30VDC
Common (-)**



FINALIZE INSTALLATION

1

- A.** Replace display and tighten screws.
- B.** Apply power to unit and observe power up screen.
- C.** After the warm up period, observe gas type and gas concentration on screen.
- D.** Using appropriate magnet, swipe Down Key on the display. Follow on-screen prompts to perform calibration check.

OPTION INSTALLATION

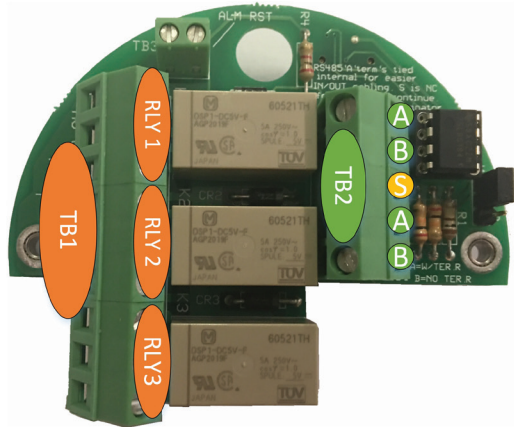
1 10-0234 SenSmart 3000 RS485 Modbus/Relay Option

- A. RS485 Modbus Master Port – TB2 provides a Modbus Master/ Slave Port, which is programmable from the gas detector. Please refer to the SenSmart 3000 Manual for Communication Port setup.
- B. Relay Outputs - 3 programmable 5A SPDT Relays (RLY1, RLY2 and RLY3) **(see Figure 4)**. (Refer to the SenSmart 3000 Manual for Communication Port Setup)

Figure 4 - SenSmart 3000 Relay/Modbus Option wiring

TB1 – Relay Terminals

TB2 – RS485 Modbus Master/
Slave Port



GENERAL INFORMATION

SenSmart 2000

Low-power, 4-20mA loop powered gas detector for toxic and oxygen detection. Includes a 4-20mA output

SenSmart 3000

10-30VDC powered gas detector for toxic, oxygen, combustible, VOC and CO2 detection. This model adds a backlit LCD display, and has Modbus and/or 4-20mA communications and relays available.



SenSmart 2000



SenSmart 3000

SPECIFICATIONS

Power Supply	SenSmart 2000	Loop Powered 10-30 VDC at <.75 watt
	SenSmart 3000	Power Input 10-30VDC at < 6.5 watts with relay board (all relay energized)
4-20mA Output	SenSmart 2000	Standard 2-wire 4-20mA current sink . Max loop Resistance is 600 ohms with nominal 24VDC power supply
	SenSmart 3000	3-wire 4-20mA current source. Max loop R is 750 ohms with nominal 24VDC power supply
Output	SenSmart 2000	Standard 2-wire 4-20mA current sink . Max loop Resistance is 600 ohms with nominal 24VDC power supply
	SenSmart 3000	Dual 3-wire 4-20mA current source. Max loop R is 750 ohms with nominal 24VDC power supply Optional Output: Dual isolated 4-20mA current source. Max loop Resistance is 650 ohms with nominal 24VDC; MODBUS slave ports; 3x programmable alarm relays with 5A capability
Envirnmental	ALL	Electronics -40°C to +60°C. See Electrochemical Sensor Manual for additional information
Approvals	SenSmart 2000	CSA Certified Div 1 & 2 Groups B, C, D. Suitable for explosion-proof installations CSA Certified Div 1 & 2 Groups A, B, C, D for Intrinsically safe installations
	SenSmart 3000	Cast Aluminum Enclosure: Explosion-Proof Cl 1 Div 1 Gr ABCD with 10-0247 (includes sinter) Non-Incendive Cl 1 Div 2 Gr ABCD with 10-0247 or 10-0247IS UL94 Poly Black Plastic Enclosure: Non-Incendive Cl 1 Div 2 Gr ABCD
Warranty	ALL	5 year limited warranty For sensor warranty see sensor specifications sheet.



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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