

## Overview

The Sentry IT Controller is a comprehensive hazardous gas detection monitoring system born with the flexibility and features that meet your specific applications. Sierra Monitor Corporation has been a leader in hazardous gas detection technology for over 30 years and this latest generation of controller is designed for today's detection environments requiring intelligent network interface, minimal maintenance, comprehensive diagnostic information, smart sensor communications and easy to install interconnections.

The internal modular design of the Sentry IT Controller allows the user to select the various inputs and outputs necessary to meet their specific application requirements. For instance, the user can select RS-485 Modbus RTU communication to the sensor modules, or 4-20 mA Analog, or SentryBus PSG. Output selections include re-transmitted 4-20 mA, 5 Amp relays or 8 Amp relays.

## Features

- Ability to interface to a wide variety of sensor communications, including Modbus RTU, 4-20 mA, SentryBus, and conventional dry contact
- Simple menu-driven configuration and operation via a large, touch sensitive, easy-to-read color touch-panel computer
- Modular internal design enabling the user to select those components needed for the application without adding multiple external boxes, yet still offer seamless interface to the system controls
- Interface capability to Sentry IT sensors and other third party sensors and devices
- Super bright LEDs indicating Safe, Alarm, Warning or Trouble conditions and external alarm reset switch
- Outputs to other control devices via re-transmit of 4-20 mA signal, 5 Amp or 8 Amp relays.
- USB flash drive interface capability for fast configuration
- Easy interface of necessary data to plantwide control systems, PC, external touch-screen panel, or more
- Retrofit option to upgrade Sentry NEMA classic to Sentry IT
- Universal gateway to external control systems using Modbus TCP, Allen Bradley EtherNet/IP, and other commonly used open protocols are available
- Third-party NRTL approvals UL 2017, CE Mark, ABS, and SIL-2
- Battery backup capable, providing the desired stand-by power in the event of power outage
- Choice of AC or DC power interface providing power for up to 32 sensor modules



**Power**

**AC Version:** 120/240 VAC +/- 10%, 50/60 Hz  
**DC Version:** 24VDC Nominal (18-30 VDC)  
**Power consumption:** Controller 50W,  
 Typical max system 200W  
**Battery Backup capability:** External option

**Environmental**

**Operating Temperature:** -14 to 131°F (-10 to 55°C) \*  
 Check with factory for applications  
 outside of 32 to 122°F (0 to 50°C)  
**Storage Temperature:** -4 to 140°F (-20 to 60°C)  
**Relative Humidity:** 0-95% Non-condensing

**Display**

**Type:** 5.7" color, backlit touch-screen  
**Environmental rating:** NEMA 4  
**Views:** Bar charts, text data screens, alarm view,  
 and zone screen configuration screens  
**Other Indicators:** Integral long-life, high-intensity LED  
 lights for Safe, Warning, Alarm and Trouble

**Connectivity to modules**

**Channels:** Up to 32 module addresses  
**Channel power:** 24VDC  
**Communication:**  
**Analog 4-20 mA** 2, 3, or 4-wire per ISA specifications  
**Modbus RTU (Sentry IT):** RS-485 (half-duplex)  
 Baud: 38400 baud (adjustable 2400 – 38400)  
 Parity: None  
 Stop bit: 1  
 Data bits: 8  
 Flow control: None  
**SentryBus:** Proprietary Power, Signal, Ground (PSG)  
**Binary Input:** Supervised or Digital Input

**Connectivity to external controls and**

**Controller to Ethernet:** Modbus TCP or AllenBradley  
 Ethernet/IP (other protocols available)  
**Optional - Remote management:** Sentry InSite  
 Web browser interface  
**Optional - Mass storage:** Flash Drive via USB port

**Output**

**4-20 mA:** Variable retransmission 3-wire or 4-wire  
**Relay:** Programmable, SPDT (multiples of 8)  
**Standard:** 5 Amps  
**Optional:** 8 Amps  
**Trouble:** 5 Amps, Fail-safe

**Enclosure**

**Design:** Wall-mount  
**Material:** Painted mild Steel, 316SS, or GRP  
**Dimensions (HXWxD)**  
 NEMA1: 18.0 x 14.0 x 6.0 in (45.7 x 35.6 x 15.2cm)  
 NEMA4 SS: 20.5 x 14.4 x 8.2 in (52.1 x 36.6 x 20.8 cm)  
**Weight:**  
 NEMA1: 30.0 Lbs, (13.6 Kg) Typical  
 NEMA4 SS: 35.0 Lbs, (15.9 Kg) Typical  
**Rating:** NEMA 1 Standard  
 (NEMA 4 or optional NEMA 4X)  
**Warranty:** 2 years

\*Specifications subject to change without notice

**Ordering Information:** The following part number is essential in selection of the correct product. Please build up the desired part by inserting the code for each element into the appropriate space (ie. 5000-32-25-1-3460-A32-0).

Model	Points/ Series -XX	Enclosure -X	Stacks -W, X, Y, O	Power -XXX	HMI -X
5000	↓ - 08 - 16 - 32	↓ - 1 = STD NEMA 1 - 2 = NEMA4 SS - 3 = NEMA4X GRP - 4 = RACK Chassis - 5 = 5383-00 Retrofit - 6 = 5383-01 Retrofit - 9 = CUSTOM	↓ - 0 = None - 1 = Analog (16) - 2 = PSG (16) - 3 = Modbus RTU (32) - 4 = RELAY (8A) (8) - 5 = Analog Output (16) - 6 = Digital Input (8) - 7 = Carrier Only (8)	↓ - A32 = AC 100/220 32/16/8ch - D00 = DC 24V - D08 = DC 24V w/ 8Hr BBU	↓ - 0 = InSite + Modbus TCP - 1 = Sentry View (WebServer) - 3 = Allen Bradley EtherNet/IP - 9 = Integrated Bridge (Custom)