Sentry IT DS – Sentry NEMA Retrofit Kit

Sentry NEMA → RETROFIT → Sentry IT NEMA

Overview

The Sentry Gas Risk Management System was ahead of its time from the very beginning. Sentry was first to have digital two-way communication between the controller and the sensor, first to offer multiplexing capability to reduce installation costs, first to incorporate Modbus output to interface to plant-wide systems, first to offer a browser based interface and more. However modern technology has resulted in smarter sensors and greater demand for extensive data management and alarming. While that trustworthy controller has been protecting your plant and personnel for many years, it is time to consider an upgrade.

The new Sentry IT Controller meets the needs of today's demanding instrumentation and systems engineer, providing such features as:

✓ Simultaneous interface via analog 4-20 mA, RS-485 Modbus RTU, Relay contact and PSG/SentryBus

✓ Scalability with space to add additional I/O blocks to expand capability

✓ Intuitive operator interface with the color touch panel display with menu-driven prompts to reduce the learning curve

✓ Multiple power options of AC, DC, or AC with DC backup

✓ User configurable alarm logic including menu driven configuration and integral Commander Logic to allow the user to develop comprehensive alarm logic schemes

✓ Easy interface to plant-wide systems utilizing various protocols including Modbus TCP, EtherNet/IP, Profibus, BACnet, LonWorks or more

Sierra Monitor offers Sentry NEMA systems to easily upgrade to a Sentry IT System, enhancing your gas safety with modern technology. You get to keep your installed sensors and there is no need to run new wires. This provides you with additional functionality not found in your current system including additional sensor capability (while maintaining same compact design), Modbus communications, additional outputs and web browser interface. The retrofit only takes a few simple tools and about an hour or two of time.

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,
            configuration screens
Other Indicators: Integral long-life, high-intensity LED
            lights for Safe, Warning, Alarm and Trouble

Connectivity to external controls and systems

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

Connectivity to modules

Channels: Up to 32 module addresses
Channel power: 24VDC
Communication:

   Analog 4-20 mA: 2, 3, or 4-wire per ISA specs
   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

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

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. 5000-08-IT-5-2-D08-9). Please note that the Sentry NEMA Retrofit kit can only have two stacks.

Model	Points/Series	Enclosure	Stacks	Power	HMI
5000 Series	↓	↓	↓	↓	↓
	- 08 - IT	- 1 = STD NEMA 1	- 0 = None	- A32 = AC 100/220 32/16/8ch	- 0 = Modbus RTU
	- 16 - IT	- 2 = NEMA4 SS	- 1 = Analog (16)	- D00 = DC 24V	- 1 = Sentry View (WebServer)
	- 32 - IT	- 3 = NEMA4X GRP	- 2 = PSG (16)	- D08 = DC 24V w/ 8Hr BBU	- 3 = ModbusTCP/EtherNetIP/
		- 4 = RACK Chassis	- 3 = Modbus RTU (32)	- D24 = DC 24V w/ 24Hr BBU	BACnetIP
		- 5 = 5383-00 Retrofit	- 4 = RELAY (8A) (8)		- 9 = Integrated Bridge (Custom)
		- 6 = 5383-01 Retrofit	- 5 = Analog Output (16)		
		- 9 = CUSTOM	- 6 = Digital Input (8)		
			- 7 = Carrier Only (8)		