

SENTINEL

Intrinsically Safe Modules for Hazardous Areas

CLASS 1 DIVISION 1 CERTIFIED

RUGGED OIL FIELD PROVEN

WIRELESS PACTWARE™ AND RADARMATER™ SUPPORT

TRUE WIRELESS - POWERS SENSOR AND RADIO

WIRELESS CONFIGURATION



FEATURES

- Powers sensor and radio for years with an internal battery
- Class 1 Division 1 Intrinsically safe system
- Optional Class 1 Division 1 solar module with integrated charger, battery panel, and mounting bracket
- Costs less than 60ft of installed conduit
- Rugged design for demanding outdoor environments
- Up to 1/2 mile range
- Sensor independent
- 1/2" NPT conduit interface
- Automatically configures as a star or mesh network
- Simple to install and maintain



MODELS

Sentinel HART

Connects to a single HART sensor

Sentinel Analog

Connects to a single 4-20 mA/1-5v sensor

Sentinel Digital

2 digital inputs
2 KHz frequency response

Sentinel Modbus

RS-485 Modbus interface

Sentinel Turbine

Connects directly to the Magnetic Pickup of the Turbine Sensor

Sentinel Thermocouple

Connects directly to Thermocouple sensors (J, K other)

Sentinel RTD

Connects directly to P100 RTD sensors

HART Model supports wireless PACTware, IDT compliant and Wireless RadarMaster

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TECHNICAL SPECIFICATIONS

Operating Temp

-40°C to 60°C (-40°F to 140°F)

Humidity

0% – 100% condensing

Power

3 X D Lithium battery pack. Field replaceable. Class 1 Division 1 certified when used with SignalFire system. In situ replacement does not require a work ticket. Optional Class1 Division 1 solar/battery module

Sensor Power

Powers both the radio system and the sensor/transmitter. User configurable 1-5 Vdc or 4-20 mA mode.

4-20 mA mode: 18 Vdc @ 4 mA, 13 Vdc at 20 mA.

Barriers and external power not required.

Battery Life

1-10 years depending on the type of sensor and reporting frequency

Data Interface

Wireless – available as Modbus registers at Gateway

Data Update Rates

User-selectable. 5 seconds to 1 hour, typical.

Supported Sensor Interfaces

HART™, 4-20 mA current loop, 1-5 Vdc, Digital input (state, counter, totals, frequency), RS-485/Modbus, Thermocouple and RTD temperature sensors.

Radio Power

40 mW

Receive Sensitivity

-109 dB

Security

128 AES Encryption

Radio Frequency

902–928 MHz, FHSS, license-free ISM Band Compliant with FCC Part 15

Range

Up to 1/2 mile

Networks

Up to 65,520 separate networks

Intrinsically Safe

Class 1 Division 1, Temp Code T3, Groups C&D. Conforms to UL Std. 913, Certified to Can/CSA Std C22.2 No. 157

Internal Diagnostics

Battery voltage, signal strength, error conditions

Potentiometer Input

Variable resistance

STANDARD CONFIGURATION ORDER CODES

| SENSOR TYPE | POWER SOURCE | ORDER CODE |
|--------------------------|--------------------------------------|-----------------------|
| HART | Internal Lithium Battery Pack | Sentinel-Hart-3BIS |
| HART | Solar/Battery System | Sentinel-Hart-Solar |
| Analog (1-5V or 4-20 mA) | Internal Lithium Battery Pack | Sentinel-Analog-3BIS |
| Analog (1-5V or 4-20 mA) | Solar/Battery System | Sentinel-Analog-Solar |
| Modbus | Internal Lithium Battery Pack-Modbus | Sentinel-485-3BIS |
| Modbus | Solar/Battery System | Sentinel-485-Solar |
| Digital Inputs (2) | Internal Lithium Battery Pack-Modbus | Sentinel-DI-3XBIS |
| Digital Inputs (2) | Solar/Battery System | Sentinel-DI-Solar |