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

SIGNALFIRE
— WIRELESS TELEMETRY —

www.signal-fire.com | 140 Locke Drive, Suite B, Marlborough, MA 01752 USA | 978.212.2868

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TECHNICAL SPECIFICATIONS

Operating Temp
-40ºC to 60ºC (-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
Digitial Inputs (2)	Internal Lithium Battery Pack-Modbus	Sentinel-DI-3XBIS
Digitial Inputs (2)	Solar/Battery System	Sentinel-DI-Solar

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