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
SEN T I N E L
Intrinsically Safe Modules for Hazardous Areas

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

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