Eliminates “Smart” Sensor Communication Wiring & Reduces Installation Costs

Overcomes Physical Obstacles to Wiring

High Reliability with Frequency-Hopping Spread-Spectrum Technology

Superior 900MHz Band

Affordable Technology & Design

Single or Multiple Networks
The SiloPatrol® inventory monitor "smart" sensors (Refer to Bulletin 343A) can be used in conjunction with the SiloTrack™ Inventory Management PC-Based Software (Refer to Bulletin 343B). Communication between the Model SMU "smart" sensors and the SiloTrack software is accomplished via 2-wire RS-485 communication format. The SiloPatrol Wireless Communication Interface can be used to replace the RS-485 wiring between the “smart” sensors and the PC. The SiloPatrol Wireless Communication Interface can be used to lower the cost of installation and to overcome obstacles that make hardwiring impractical or impossible.

The SiloPatrol Wireless Communication Interface uses proven frequency-hopping spread-spectrum technology, operating in the 900MHz band, to communicate between your PC running SiloTrack Server software and individual or groups of SiloPatrol "smart" sensors. The 900MHz band is a FCC license-free band and offers greater transmission distances, better signal transmission through obstructions and lower signal loss than other possible frequency bands.

Frequency-hopping spread-spectrum radio technology utilizes a band of frequencies between 900-928MHz and continuously "hops" or switches frequencies during radio transmission enhancing reliability and minimizing disruption of the telecommunications. The spread-spectrum enables a signal to be transmitted across a frequency band that is much wider than the minimum bandwidth required by the information signal. This reduces interference and allows for increased data communication.

The SiloPatrol Wireless Communication Interface can be utilized in numerous applications, even with multiple sensor networks and over 100 sensors. Each sensor network will require a wireless transceiver at the PC. A wireless transceiver is also required at the sensor location. Up to 16 sensors can be connected with one wireless transceiver pair.

**Single Network/Point-to-Point**: One transceiver is located at the PC and one at a group of sensors or at a single sensor. If used with a grouping of sensors located in close proximity, the sensors would be wired together with the transceiver.

**Single Network/Multiple-Point**: One transceiver is located at the PC and one transceiver at each of multiple groups of sensors within a single network or one transceiver at each sensor.

**Multiple Networks/Point-to-Point**: One transceiver for each network of sensors at the PC and one transceiver at each network group of sensors.

**Multiple Networks/Multiple-Point**: One transceiver is located at the PC for each network and one transceiver at each of multiple groups of sensors within a single network or one transceiver at each sensor.

The SiloPatrol® Wireless Communication Interface is enclosed in a NEMA 4 enclosure and is provided with a mounting bracket that can be used for mounting on a flat surface or pipe/railing. Each transceiver includes both RS-485 and RS-232 interfaces. A choice of antenna is provided (standard or high gain) along with a choice of power supply options.
**MECHANICALS**

**DIMENSIONS ARE SHOWN IN INCHES WITH MILLIMETER EQUIVALENT IN BRACKETS**

<table>
<thead>
<tr>
<th>Dimension</th>
<th>Inch</th>
<th>Millimeter</th>
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</thead>
<tbody>
<tr>
<td>3.50</td>
<td>88.9</td>
<td>225</td>
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<tr>
<td>1.75</td>
<td>44.4</td>
<td>113</td>
</tr>
<tr>
<td>.40</td>
<td>10.2</td>
<td>26</td>
</tr>
<tr>
<td>2.55</td>
<td>64.8</td>
<td>63</td>
</tr>
<tr>
<td>6.25</td>
<td>158.8</td>
<td>161</td>
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<tr>
<td>4.75</td>
<td>120.6</td>
<td>121</td>
</tr>
</tbody>
</table>

**ANTENNA CONNECTOR 2.55 [64.8]**

**(2) 1/2" CORD CONNECTORS (PROVIDED)**

**OPTION— 1/2" CONDUIT FITTINGS (NOT PROVIDED)**

**UNITS UNLESS SPECIFIED XX” [XXmm]**

**LEFT: STANDARD RANGE ANTENNA, 900MHz, 2.5db**

**MOUNTING BRACKET 6.75 [171.4] 28.56 [725.4]**

**“N” CONNECTOR, FEMALE (5/8–24 THREAD)**

**“N” CONNECTOR, FEMALE (5/8–24 THREAD)**

**RIGHT ANGLE**

**REVERSE POLARITY SMA CONNECTOR, MALE (1/4–36 THREAD)**

**UNIT UNLESS SPECIFIED XX” [XXmm]**

**ORDERING INFORMATION**

**OPERATING BAND FREQUENCY**

1 = 900MHz (North America)

**OPERATING VOLTAGE**

1 = 115/12 VAC

2 = 230/12 VAC

1 Antenna and interconnecting cable are sold separately.

(require cable accessory)

**ANTENNA SELECTION**

6-8071 Standard Range Antenna, 900MHz, 2.5db

(mounts directly to Interface box)

6-8072 Extended Range Antenna, 900MHz, 7.2db

(requires cable accessory)

6-8073 Yagi Antenna, 900MHz, 9.0db

(requires cable accessory)

**ACCESSORIES**

6-8082 Cable, 3ft length, for use with 7.2 db extended range and Yagi antenna

6-8083 Cable, 10ft length, for use with 7.2db extended range and Yagi antenna

**SPECIFICATIONS**

- **Power Requirements:** 115/12 VAC (±15%); 7VA; 50/60Hz
- **230/12 VAC (±15%); 7VA; 50/60Hz**
- **Ambient Operating Temp:** -40° to +150° F (-40° to +65° C)
- **Data Input Signal:** RS-485 half-duplex, isolated, proprietary protocol
- **Alt. Data Input Signal:** RS-232
- **Wiring Distance:** 4,000 ft. (1,220 m)
- **Radio Output:** 900MHz (North America); 100mw
- **Radio Sensitivity:** -110dBm
- **Conduit Entry:** Two (2) 0.88in (22.4mm) dia. holes
- **Indicators:** Red LEDs: Query, Reply and Error
- **Green LED: Power**
- **Housing:** Powder coated die cast aluminum, IP66 NEMA 4
- **Mounting:** Desk, wall or pipe/rail

**WARRANTY**

Monitor Technologies LLC warrants each *SiloPatrol®* Wireless Interface it manufactures to be free from defects in material and workmanship under normal use and service for two (2) years from the date of purchase within North America, and one (1) year from the date of purchase outside of North America. The purchaser must notify Monitor of any defects within the warranty period, return the product intact, and prepay transportation charges. The obligation of Monitor Technologies LLC under this warranty is limited to repair or replacement at its factory. This warranty does not apply to any product which is repaired or altered outside of Monitor Technologies’ factory, or which has been subject to misuse, negligence, accident, incorrect wiring by others, or improper installation. Monitor Technologies LLC reserves the right to change the design and/or specifications without prior notice.