**WaveData® Radio Frequency Modems**

<table>
<thead>
<tr>
<th><strong>GENERAL</strong></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Enclosure Material</td>
<td>Polycarbonate (IP67)</td>
</tr>
<tr>
<td>Enclosure Dimensions</td>
<td>7.1&quot; x 5.1&quot; x 3.0&quot;</td>
</tr>
<tr>
<td>Temperature Range</td>
<td>-40° C to 85° C</td>
</tr>
<tr>
<td>Humidity</td>
<td>0 - 99% RH</td>
</tr>
<tr>
<td>RS485 Baud Rate</td>
<td>Selectable, 1200 to 57.6K bps</td>
</tr>
<tr>
<td>Data Throughput</td>
<td>9600 or 19,200 bps</td>
</tr>
</tbody>
</table>

**INPUT/OUTPUTS**

- 1-Digital Input: From AquiStar® Smart Sensors
- 1-Auxiliary Power Out: 100 mA, max 16 VDC, for use by AquiStar® Smart Sensors
- 2-Switched Power Out: (Relays) 9 - 24 VDC (6 amps)

**RADIO TRANSMITTER**

- Frequency Ranges: 902 - 928 MHz, 2.4000 - 2.4835 MHz
- Type: Frequency Hopping Spread Spectrum
- Frequency Control: Direct FM
- Transmit Power Output: 100 mW
- Rx Sensitivity: -110 / -107 dBm
- Range - Indoor: 300' to 1500'
- Range - Outdoor: Up to 5 miles
- Interference Rejection: 70 dB at 888 MHz/1900 MHz
- FCC: Part 15.247 certification

**POWER SUPPLY**

- Supply Voltage
  - Battery: 4.5 VDC
  - Auxiliary: 10.8 - 24 VDC
- Current Consumption
  - Transmit: 150 mA
  - Receive: 50 mA
  - Standby: 26 microamps

Information in this document is subject to change without notice.
WaveData Wireless Data Collection Systems combine INW’s patented AquiStar® Smart Sensor/Dataloggers with radio frequency modems to create powerful data collection and monitoring systems.

AquiStar® Smart Sensors communicate using industry standard digital RS485 interfaces and MODBUS® communication protocols. They store thousands of records, operate on low power, and feature easy to use software with powerful features, including the ability to create complex test sequences and display uploaded data in tables and graphs.

Operating on the 900 MHz or 2.4 GHz radio bands, the radio frequency modems are license free. Consuming very little power, they run for months on alkaline batteries or virtually forever on solar systems. Communication range varies from 300 feet to 5 miles, depending on line-of-sight obstructions, height and type of antennas, and additional repeaters.

Easily expand from single site monitoring to multi-site or nationwide monitoring by adding cellular or landline modems and TCP/IP Internet connectivity.

**Technical Benefits:**
- Real-time information on demand
- Accurate, coordinated data across entire sites and projects
- Reach relatively inaccessible sites
  - Across roads or rivers
  - On pilings in rivers or tide-lands
- Greater safety – less need to enter hazardous areas
  - Contaminated zones
  - Rugged terrain
  - Dangerous areas

**Features:**
- Low Power
- Compact – easy to install
- Weather proof (IP67)
- Easy to use software
- Battery or solar power

**Applications:**
- Connecting sites together
- Site monitoring with radios
- Drive-by monitoring

**Economic Benefits:**
- Less expensive than cabling
- Fewer trips to each location means better focusing of staff on areas of concern
- Early detection of problems means:
  - Less cleanup cost
  - Less environmental damage
  - Less down time
- Better information = better business decisions

INNW
Instrumentation Northwest, Inc.
1-800-PRO-WELL
www.inwusa.com