Introduction

AutoLog® WSN-868 Wireless Sensor Network products are especially designed for taking measurements from remote industrial sites and objects. It uses 868 MHz EU license-free radio band. Compact and cost effective solution for monitoring and controlling premises even without mains power.

Flexible architecture allows to create multi-purposed tree-shaped networks with centralized control. Standard Modbus RTU interface can be used to connect WSN-868 network directly to almost any device / HMI / SCADA.

Wireless Sensor Module SPECIFICATIONS

- Frequency Band: 868 MHz License-free sub-band
- Powering: 5-28VDC with optional adapter, define when ordering!
- Battery operation (3,6VDC LiSOCl₂ battery)
- Lifetime: Up to 5 years battery life (1 Hour Heartbeat) 0.5 µA – Sleep mode 35 mA – Tx mode current
- Range: up to 200 m hop distance (Depends on obstacles) Range Extenders available
- Programmable measuring periods
- SCADA: AutoLog® ControlMan™ or Indusoft Web Studio SCADA
- Various sensors and measurement signal ranges

<table>
<thead>
<tr>
<th>I/O models</th>
<th>Three alternative I/O models:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1 x Analog input OR 1-4 x Digital inputs OR 2 x Digital outputs</td>
</tr>
<tr>
<td>Analog Input</td>
<td>(0)-1 input, level, pressure, temperature, voltage, current etc.</td>
</tr>
<tr>
<td>Digital Inputs</td>
<td>(0)-4 inputs with pulse counting 24VDC, max 8mA, PNP</td>
</tr>
<tr>
<td>Digital outputs</td>
<td>(0)-2 outputs, 24VDC, 0.5A</td>
</tr>
<tr>
<td>Battery voltage</td>
<td>Battery voltage measurement and monitoring</td>
</tr>
</tbody>
</table>

- Storage temperature: -40°C…+85°C
- Operating temperature: -40°C…+75°C
- Relative humidity: 95%, non-condensing
- EMC: Immunity according to EN50082-1,2. Emissions according to EN50081-1,2
- Enclosure: IP65 / 66 plastic enclosure. Optionally: ATEX or Halogen-free
- Dim. (W x H x D): 110 x 75 x 56 mm
- Weight: About 0.2 kg (depends on options)
How does it work?

Meters and counters
Devices which generate pulses according to measured values:
- Power meters (kWh)
- Flow meters (liquid, gas)

Liquid level at tanks and storages
Sensors with electrical analogue signal output:
- Submercible pressure sensors
- Rochester Dial level sensors
- Float level sensors
- Ultrasonic level sensors

Environmental measurements
- Temperature measurements (Additional modules Pt100, Pt1000, KTY, NTC are available)
- Water quality sensors (salinity, conductivity, etc.)
- Groundwater level measurements, e.g. dump areas

Equipment and machines
- Can be integrated into equipment directly
- Oil temperature, fuel level, consumption, remote start / stop
- Start / Stop times, working periods, reports,
MEASUREMENT INSTRUMENTS

- **Common Temperature Sensor** (Accuracy ±1°C @ 0°C, -40°C .. +125°C)
- **RTD High Temperature Sensor** (Accuracy ±0.3°C @ 0°C, -58°C .. +370°C)
- **RTD Low Temperature Sensor** (Accuracy ±0.3°C @ 0°C, -200°C .. +162°C)
- **Humidity Sensor** (Accurate to ± 2% under normal conditions 10% - 90% RH)
- **Water Temperature Sensor** (Accuracy ±1°C -40°C to +125°C)
- **Water Sensor** (Senses immediate presence or non-presence of water)
- **Asset Sensor** (Outputs an RF signal at set intervals to determine if object is removed)
- **Dry Contact Sensor** (Senses immediate contact between wires)
- **Pulse Counter** (Counts number of pulses in given time frame. Available with 1 - 4 inputs)
- **Light Sensor** (Sense the presence or non-presence of light)
- **Open/Closed Sensor** (Sense if a door, window, drawer has been left open)
- **Activity Sensor** (Detects movement or non-movement of a given device or surface)
- **Activity Timer Sensor** (Detects operating vibration of a machine or vehicle and starts a timer)
- **4..20mA (0..20 mA) Sensor** (Interfaces with sensors or devices with 0/4..20mA output)
- **Analog Voltage Sensor** (Interfaces with other devices up to 1.25 VDC)
- **AC Voltage Detection Sensor** (Interfaces with other devices or power lines from 24 - 500 VAC)
- **Voltage Measurement Sensor** (Interfaces with other devices up to 500 VAC/VDC)
- **Button Sensor** (Manually triggered push button with LED response indicator)
- **Liquid Level Sensor** (Level pressure transmitter sensor, Rochester, ultrasonic, etc.)
- **Pressure Sensor** (Gas, liquid or vapour pressures)
- **Control Outputs** (24VDC/0.5A, ON/OFF controls)