



AUTOLOG® Wireless Sensor Network (869 MHz)

WIRELESS SENSOR NETWORK

Wireless sensor Network developed by FF-Automation can transfer various data to PLC, control room SCADA, database or other systems. The data is sent wirelessly and bi-directionally to/from the AutoLog Master Unit, from which it can be polled using standard Modbus RTU protocol.

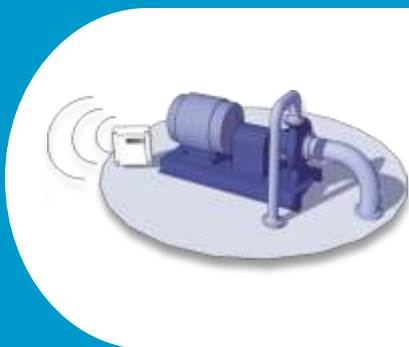


**AutoLog
Wireless Sensor
Network Module:**

- 3 AI
- 2 DI (norm./pulse)
- 2 DO
- + Battery Monitor
- + Temperature
- + Humidity

ZigBee 869 MHz
Automatic Routing

Modbus RTU interface
to Coordinator
Unit



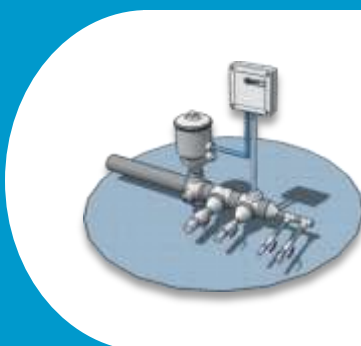
Pump stations

- Voltage
- Current
- Temperature
- Pressure
- Humidity
- Vibration



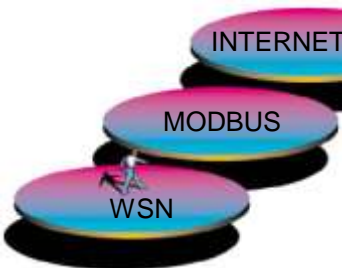
Water processing measurements:

- Water flow
- Water quality
- Underground water level
- pH, turbidity, conductivity,
- Surface level monitoring



Pipelines and valves:

- Flow measurements & control
- Leakage detection
- Temperature
- Pressure
- Valves On/Off



**Wireless
M2M**

FF-Automation's Wireless Sensor System can be used with any automation system on the market which support Modbus RTU protocol. (>95% of all automation systems support this).

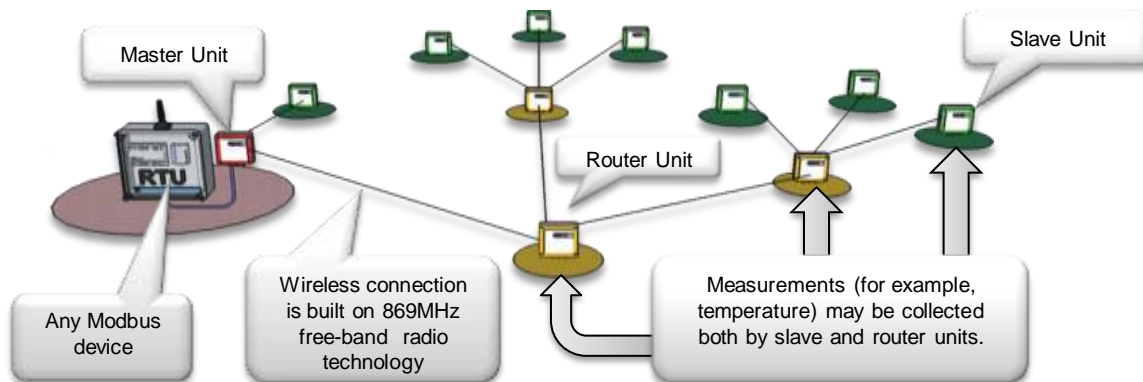
Wireless Sensor Network



THE AUTOLOG® FAMILY
 AUTOLOG®PLC AUTOLOG®GSM AUTOLOG®OEM
 AUTOLOG®RTU AUTOLOG®TETRA AUTOLOG®HMI



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Wireless Sensor Network Module (WSN-869)		
I/O	Value	Description
Analog inputs	3 + Build-in temperature and humidity sensors	When ordering define the analog input type
Analog input type	4...20mA / Temperature / Current / Voltage Flow / Level / Pressure / etc.	When ordering define the analog input type
Digital inputs	2	operates as normal DI or pulse counter
Digital outputs	2	24VDC/0.3A
Network	Value	Description
Standard	IEEE 802.15.4	ZigBee compatible
Frequency	869 MHz, Tx power 10mW	License free frequency in Europe and several other countries
Network topology	Tree topology. master-, router- and sensor units.	max. 30 nodes in 1 network. 1 master / network.
Routing	Best route is selected automatically based on signal quality. Allows max. 9 "jumps" between routers.	Slave nodes can connect to any router or directly to master. Route is changing dynamically if low signal quality.
Max. distance	Over 300m between routers (line of sight.) About 30-50m between routers (indoor)	Max distance can be increased using routers.
Interfaces	Value	Description
Modbus	Master unit has Modbus RTU interface (RS-232)	Speed 9600 bps, 8 data bits, parity none
USB	Devices have USB interface for configuration	Graphical configuration tool for Windows
General	Value	Description
Powering	7-15 VDC (Wired) / 3.6 VDC (Battery)	Define the used power source when ordering
Power consumption	Powering: 12V 3.6V Sleep mode : 30mA 7uA Measur. mode: 55mA 25mA	In measurement mode the total power consumption depends on meas. interval and used sensors. Sensors were not included to calculation. Battery life-time with build-in sensors can be 10 years. Ask more!
Operating temperature	-20...+65°C	IP protection class: IP65 (default)



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