WiSense Wireless Water Metering Module

Water Meter With Pulse Output

Model: WPM-103

15mm, Multi Jet Water Meter (up to 50° C) Inferential type, magnetically coupled, having dry dial and hermetically sealed totaliser. Maximum pressure is 16 bar. Max reading is 99999.9999 m³.
SYSTEM ARCHITECTURE
## Specifications

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| **WSN1120L** | ➢ Low-power Sub-Ghz WiSense wireless mesh node.  
➢ Includes CC1120 high performance sub-ghz radio & MSP430G2955 microcontroller.  
➢ Radio board has a PCB antenna as well as a U.FL connector.  
➢ Node is programmed to operate in the 865-867 MHz license free band in India.  
➢ Raw data rate is 10kbps. Default transmit power is +13 dBm. Both parameters can be changed. | ➢ 42mm x 42mm x 10mm  
➢ 4 mounting holes | ➢ U.FL to bulkhead SMA cable assembly supports external antenna (node and associated electronics inside a weatherproof enclosure with just the antenna and meter interface cable outside).  
➢ Default antenna (external half wave dipole omni-directional) Other antenna options possible on request  
➢ Support for full mesh or star only network configurations. |
**Note:** WSN1120L node counts pulses generated by the attached flow sensor. The pulse count is stored in on-board non-volatile memory. WSN1120L can be configured to send the pulse count periodically (interval $\geq 1$ sec) to external entities via network coordinator/gateway. This interval can be changed any time.

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| **WSNFSIB10** | ➢ water flow sensor interface PCB  
➢ 2-wire interface to water flow meter  
➢ 3 wire interface for water flow meter | ➢ 42mm x 42mm with    
➢ 4 mounting holes | Supports both 2 wire and 3 wire pulse output meters. |

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| **WSLIC100** | ➢ Power supply board  
➢ Onboard lithium-ion charger IC facilitating auto switchover when external supply is down. Includes a thermistor (NXFT15XH103) which is used to monitor the temperature of Li-Ion battery | ➢ 42mm x 42mm x 10mm  
➢ 4 mounting holes | ➢ Power input options:  
● Micro USB type B receptacle (supplies 5 volts to the STNS01)  
● Power Jack (Up to 16 Volts). A separate LDO on the board steps down high input voltage to 5 Volts. |
➢ Power output: 3.1 V/100 mA
➢ Comes with modular AC-DC converter
   ● 85 VAC - 305 VAC,
   ● 3 Watts
   ● 5V, 600mA

**Note:** The node can run on battery alone (AA, AAA, or Li-Ion) or on Li-Ion battery with battery backup. This depends on the frequency at which the node is configured to send water consumption data. If the frequency is low (say once a day or less) the node can run on battery alone. Otherwise it should be powered by the WSLIC100 power supply unit.