NB-IoT and LTE Cat M1 Data Logger for Water Network

Smart Utility, Smart City

SKU: WSNBM-AQUA

Safe Zone

Hazardous Zones

The WSNBM-AQUA is a cutting-edge NB-IoT and LTE Cat M1 data logger tailored for comprehensive water pipeline network monitoring. It includes pulse inputs, an RS485 Modbus RTU Master Node, and built-in pressure sensors. Designed for long-term performance, the device operates efficiently on one or two batteries, offering a lifespan of 5 to 10 years. With support for global frequency bands, it is an ideal solution for city water networks, industrial parks, smart utility systems, and various other applications.

Applications

Water Pressure Pipeline Monitoring

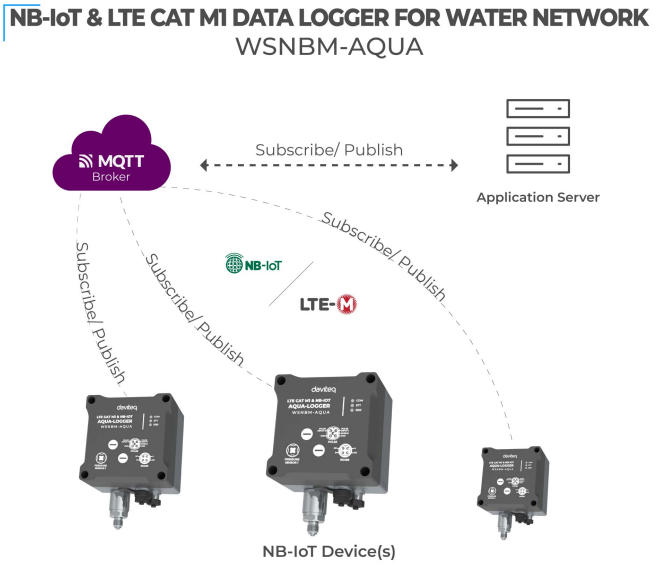
Notes For Applications

Global Bands NB-IoT and LTE Cat M1
Easy connect to any NB-IoT and LTE Cat M1 Network over the Wolrd

10-Year battery
Ultra-low power sensing technology from Daviteq with Ultra-low power wireless technology allow the device can last up to 10 years

Multiple IO and Sensors
Pulse Input, Integrated Pressure Sensors, RS485 ModbusRTU Master Node

IP68
IP68 design for complete device



SYSTEM ARCHITECTURE

DAVITEQ TECHNOLOGIES INC
Ho Chi Minh City, VN | Koblenz, DE | Melbourne, AU | Zurich, CH
+84.28.6268.2523 / 6268.2524
info@daviteq.com **www.iot.daviteq.com**

Created date: Jul-16-2024 | Updated date: Dec-16-2025

Specification

Standard Inputs	02 x Pulses, 1 x RS485 ModbusRTU Master
Optional Input	1 or 2 Pressure Sensors
Digital Inputs	2-Digital channel inputs with dry-contact or voltage input (max 3.3VDC)
	DI Functions: Logic Detecting or Pulse Counting
	Logic Detecting: 2 channels, recommended minimum interval time between 02 statuses is 5 seconds.
	Pulse Counting: 2 channels, max frequency 100Hz, minimum Pulse width (low or high) is 200µS, counter is uint32 type.
RS485 Input port	1 x RS485 master port
	Protocol: Modbus RTU
Pressure Sensor	Advanced Piezo technology
	Measurement range: Select 0-10 barg, 0-16 barg, 0-20 barg
	Over pressure protection: 1.5 x span
	Accuracy & Stability: 0.25% or 0.5% of span, < 0.2% span/ year
	Wetted parts: 304SS/316SS
	Measuring Fluids: Any fluid which is workable with materials 304SS/316SS
	Working temperature: -20~80℃
	Compensation temperature: -10~50℃
	Process connection: Standard G 1/4 or Others (consult factory)
COMMUNICATION	
Connectivity	LTE Cat NB1 for B1, B2, B3, B4, B5, B8, B9, B10, B12, B13, B17, B18, B19, B20, B25, B26, B27, B28, B66
LTE Cat M1	LTE HD-FDD B1/B2/B3/B4/B5/B8/B12/B13/B18/B19/B20/B25/B26/B27/B28/B66
LTE Cat NB1/NB2	LTE HD-FDD B1/B2/B3/B4/B5/B8/B12/B13/B17/B18/B19/B20/B25/B28/B66
RF Power	Class 3, 23 dBm ±2.7 dB
Antenna	Internal Antenna 2.0 dbi
Battery	01 or 02 x D size 3.6VDC $LiSOCl_2$ Battery type, battery not included
Working temperature	-40~85℃ (with SAFT LS33600 batteries)
Dimensions/ Netweight	H170xW192xD97, 190g
Housing	Anodized Aluminum + Engineering plastic, IP68.

APPLICATION IN
WATER NETWORK MANAGEMENT

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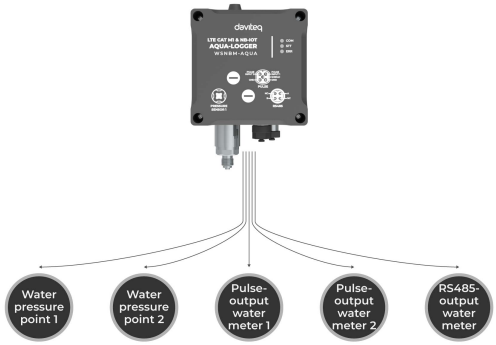
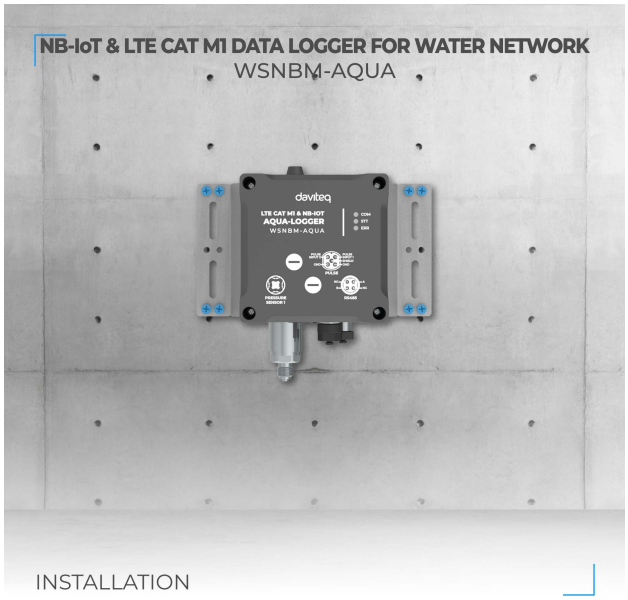
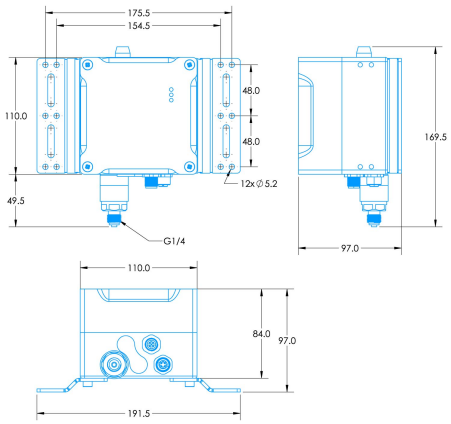


CONNECTIONS TO
EXTERNAL DEVICE(S)



INSTALLATION

NB-IoT & LTE CAT M1 DATA LOGGER FOR WATER NETWORK
WSNBM-AQUA



DIMENSION DRAWING OF
WIRELESS NODE (Unit: mm)

NB-IoT & LTE CAT M1 DATA LOGGER FOR WATER NETWORK
WSNBM-AQUA

LS 33600
Lithium battery

-60~85°C working temperature
Low self-discharge rate
17000 mAH capacity

RECOMMENDED BATTERIES

NB-IoT & LTE CAT M1 DATA LOGGER FOR WATER NETWORK
WSNBM-AQUA

PRODUCT PACKAGE

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Ordering Information

ITEM CODES	DESCRIPTIONS
WSNBM-AQUA-1G10-IA	LTE Cat M1 and NBIoT Aqua-Logger Data Logger for Water Network, 2 x Pulse Inputs, 1 x RS485 ModbusRTU Master, 1 x Pressure Sensor 10 barg, Internal Antenna, IP68
WSNBM-AQUA-2G10-IA	LTE Cat M1 and NBIoT Aqua-Logger Data Logger for Water Network, 2 x Pulse Inputs, 1 x RS485 ModbusRTU Master, 2 x Pressure Sensors 10 barg, Internal Antenna, IP68

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