

# Manhole NB-IoT Sensor for Manhole Security and Water Level Detection

## MS102-MHWL-NB-BT8

The MS102-MHWL-NB-BT8 NB-IoT manhole detection sensor boasts a high protection IP68 enclosure, making it suitable for installation at the bottom of various manholes. Equipped with a low power ARM32 bit CPU, it can detect manhole position and the water level under up to 4 meters. It is powered by an 8500mAh Lithium battery that can last for up to 8 years with 4 daily uplinks to cloud servers like ThingsMaster OTA through NB-IoT B1/3/5/8/20/28 bands. Due to its adaptability, the manhole sensor is an ideal solution for a wide range of smart city projects designed to improve public safety.



ThingsMaster OTA



### Features & Benefits

Detection Technology	Leveling Detection and Ultrasonic Detection
Water Level Detection Range	4 Meters Vertical
Detection Object	Manhole
Enclosure	IP68
Installation	Bottom side of Manhole Cover
Dimension	Φ115mm Round, 40mm depth
Wireless	NB-IoT (B1/3/5/8/20/28), 1 Micro SIM
Weight	150g
Cloud Protocol	TCP, MQTT
Application Platform	ThingsMaster OTA
Operating Temperature	-20 to 70°C
Power Supply	Non-Chargeable Lithium battery 8500mAh 3.6v
Battery Life	Up to 8 years (4 transactions per day)



## Features & Benefits

### ✓ Real Time OTA Management

- Integrated OTA platform on public Cloud
- Real-time status of manhole
- Auto-assign group IP

设备管理 > 设备列表 > 设备上报历史

上报时间	高度	坐标经度	坐标纬度	温度	设备状态	倾倒角度	满溢	起火	倾倒	电量	信号强度	电池电压	RSRP	SNR	帧计数器
2019-12-26 15:11:11	291			21	0	3	0	0	0	0	1	3.63	-828	-8	14
2019-12-26 15:04:43	241			21	0	22	1	0	0	0	2	3.63	-864	-91	13
2019-12-26 13:07:52	297			21	0	3	0	0	0	0	1	3.63	-695	47	12
2019-12-26 12:21:23	186			21	0	6	1	0	0	0	2	3.63	-795	-32	11
2019-12-26 12:17:42	306			21	0	61	0	0	1	0	1	3.63	-898	48	10

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## Ordering Information

Model	Description
MS102-MHWL-NB-BT8	Manhole Tilt Water Level Sensor NBloT IP68, 8500mAh Battery
ThingsMaster OTA FL-100	Annual Fee- ThingsMaster OTA 100 Nodes on public server
	<b>Package List</b>
	Product Unit x 1 (SIM Card not included)
	QIG