OrionM2M

AUTONOMOUS RADIO MODEM
LoRaWAN for gas meters

ORIONMETER ORN-GMZ-LW868/NB

PURPOSE:

- Remote wireless reading of gas flow meters in the areas of Smart Utilities, Smart City, Industrial IoT, automated gas control systems;
- Monitoring, control and accounting of municipal resources in management systems;
- Wireless data transmission in the LoRaWAN or NB-IoT network.

building
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BATTERYCARE

APPLICATION

Autonomous radio modem is meant for calculating the number of turnovers of the disk of the gas meter. The function of remote control of the gas meter valve is provided. The radio modem independently provides emergency closing of the meter valve in case of a gas leak and sends an operational message to the dispatcher via the LoRaWAN or NB-IoT network.

FEATURES

- The convenience of connecting the radio modem via the standard connector of the gas meter;
- Self-activation of the radio modem by gas flow;
- Activation of the radio modem by magnet;
- The detection of magnetic effects in the process of operation;
- Immediate notification and closing of the valve in the event of a gas leak;
- Remote control of the gas meter check valve;
- EasyTool technology allows you to make a wireless remote connection to a radio modem for configuring, updating software, and reading accumulated data over a secure channel;
- Using of BatteryCare® technology allows you to operate the radio modem for up to 7 years without replacing the power source;
- The non-volatile memory of the radio modem allows you to store data up to 62 days of hourly profile with the ability to remotely request readings.

LoRaWAN	
Class of loRaWAN devices	A
Quantity of LoRa channels	up to 16
Operating frequency, MHz	EU863-870 US902-928 AU915-928 CN779-928 AS923 KR920-923 IN865-867 RU864-870 KZ865-868
Activation method in the operator's network	OTAA
Type of Lora antenna	Embedded
Receiver responsivity, dBm	-137
Transmitter power, dBm (mW)	14 (up 25)
Data transfer rate, kbit/sec	0,3...40
Communication distance in urban areas, km	up to 5
Line-of-sight communication range, km	up to 15
NB-IoT	
Device category	cat-NB1
Radio frequency range	B1/B2/B3/B4/B5/B8/B12/B13 /B17/B18/B19/B20/B25/B28/ B66
Antenna type	PCB
Receiver responsivity, dBm	-129
Transmitter power, dBm (mW)	23 (up to 200)
Data transfer rate, kbit/sec	DL 25,5 / UL 16,7
Communication distance in urban areas, km	up to 3
Line-of-sight communication range, km	up to 15

Parameters	Value
Built-in battery capacity, mAh	9000
Embedded battery voltage, V	3,6
Chemical composition of the battery	Li-SOCl2
Service life without battery replacement, years	up to 10
Warranty period, months	36
Guaranteed number of packets sent by the device, at least pcs.	40 000
Work temperature, °C	- 40° ... + 50°
Number of measuring channels	1
Activation with a magnet	yes
Gas flow activation	yes
Hourly archive, day	62
Notification of the opening	yes
Notification of magnet exposure	yes
Control of the counter check valve	yes
Housing material	Polycarbonate
Overall dimensions, mm	160 x 140 x 30
Weight, kg	≤ 0,25
Degree of ingress protection	IP65
Bracing	front panel of the meter

MODELS OF SUPPORTED METERS

Manufacturer	Model	Manufacturer	Model
Saiman	СГ-G1,6-01-Д	Zenner	Atmos G1,6S
			Atmos G1,6MS
			Atmos G1,6-T
	СГ-G4-01-ДТ		Atmos G2,5S
			Atmos G2,5MS
			Atmos G2,5-T
			Atmos G4S
			Atmos G4-T
	СГ-WG6-01-Д		Atmos G6S
			Atmos G1,6S
			Atmos G1,6MS
			Atmos G1,6-T

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