OrionM2M

AUTONOMOUS RADIO MODEM
LoRaWAN
ORIONMETER ORN-CWG-LW868/NB

PURPOSE:

- Remote wireless reading of indications from water and gas meters in the areas of housing and communal services, Smart City, Industrial IoT;
- Monitoring, control and accounting of utility resources in management systems;
- Wireless data transmission to the LoRaWAN network;
- Fixation of the effect of an external magnetic field;
- Fixation of leakage and breakthrough;
- Registering the reverse flow of the provided resource.

building
connected future

BATTERYCARE

LoRa Alliance® Member

APPLICATION | ORIONMETER ORN-CWG-LW868/NB

An autonomous radio modem is designed to count the number of revolutions of the disk of a water and gas metering device that supports reading using CYBLE technology, with the subsequent transfer of current and accumulated data via radio communication to the LoRaWAN or NB-IoT network. The degree of protection of the radio modem's case is IP68, which allows it to be used in extreme conditions.

ADVANTAGES | ORIONMETER ORN-CWG-LW868/NB

- Simplicity and ease of installation of the radio modem on the meter;
- Self-activation of the radio modem with a duct (provided resource);
- Magnetic activation of the radio modem;
- Alarm messages about exposure to a magnet, opening a radio modem, reverse;
- EasyTool technology allows wireless remote connection to a radio modem for configuration, software updates, reading accumulated data via a secure channel;
- Application of BatteryCare® technology allows operating the radio modem for up to 7 years without replacing the power source;
- The non-volatile memory of the radio modem allows to store data for up to 62 days of the hourly profile with the ability to remotely request readings.

RADIO FREQUENCY CHARACTERISTICS

Options	Value
LoRaWAN	
Device class LoRaWAN	A
Number of channels LoRa	up to 16
Working frequency, MHz	EU863-870, US902-928 AU915-928, CN779-928 AS923, KR920-923 IN865-867, RU864-870 KZ865-868
Method of activation in the operator's network	OTAA
Antenna type LoRa	Internal
Receiver sensitivity, dBm	-137
Transmitter power, dBm (mW)	14 (up to 25)
Baud rate, kbit/s	0,3...40
Communication range in urban areas, km	up to 5
Communication range in line of sight, km	up to 15
NB-IoT	
Device category	cat-NB1
Operating frequency ranges	B1/B2/B3/B4/B5/B8/B12/B13 /B17/B18/B19/B20/B25/B28/ B66
Antenna type	PCB
Receiver sensitivity, dBm	-129
Transmitter power, dBm (mW)	23 (up to 200)
Data transfer rate, kbit/s	DL 25,5 / UL 16,7
Communication range in urban areas, km	up to 3
Communication range in building conditions, km	up to 15

SPECIFICATIONS

Options	Value
Body material	Polycarbonate
Working temperature, °C	-20...+65
Battery voltage, V	3,6
Battery nominal capacity, mA*h	3650
Battery chemistry	Li-SOCl2
Service life without battery replacement, years	up to 7
Autopsy Notice	Yes
Magnet exposure notification	Yes
Determining the direction of water flow	Yes
Magnet activation	Yes
Duct activation	Yes
Hourly archive, days	62
Weight (without meter), g	≤200
Overall dimensions, mm	67 x 88 x 40

SUPPORTED METER MODELS

Manufacturer	Model
ITRON	Aquadis+
	Flodis
	Flostar M
	Flostar S
	Itron Delta gas meters
	Itron RF1 meter
	Medis Cyble
	MSD & MC Cyble
	Multimag Cyble
	Multimag+

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