OrionM2M

LORAWAN RADIO MODEM FOR WATER METERS

ORN-TWM-LW868

OrionMeter · LoRaWAN 1.0.3 + wM-Bus T1/T2 · OTAA · remote configuration · IP65



01 FEATURES

- LoRaWAN 1.0.3 and wM-Bus T1/T2 simultaneously — firmware 3.x
- Optical readout: volume and flow direction
- 64-day hourly archive in non-volatile memory
- Magnet and removal alarms
- Li-$SOCl_2$ 2500 mAh, BatteryCare® — 7+ years
- 4-latch snap-on mounting, IP65

APPLICATIONS

- Water metering in apartments and houses
- Smart buildings, non-residential premises
- Remote reading for water utilities
- Retrofit of already installed meters

02 GENERAL

Mounting on meter	**4 latches**	+ O-ring
Readout (disc 180° / 240°)	**optical**	
Flow direction, backflow	**yes**	
Hourly archive	**64**	days
Alarms	**magnet · removal**	
Leak · burst · no consumption	**alarms**	firmware 3.x
Activation	**magnet / flow**	≥ 10 L
Operating temp.	**+5 … +85**	°C
Housing	**polycarbonate**	IP65
Dimensions · weight	**Ø65 × 35 · ≤ 40**	mm · g
Warranty	**36**	months

03 POWER

Battery	**Li-$SOCl_2$**	3.6 V
Capacity	**2500**	mAh
Battery service life	**≥ 7**	years
Guaranteed packets transmitted	**≥ 40 000**	pcs
BatteryCare® energy buffer	**supercapacitor**	

04 RADIO: LORAWAN · WM-BUS

Specification · activation	**LoRaWAN 1.0.3 · OTAA**	Class A
Frequency plans	**RU864 · KZ865 · EU863**	863–870 MHz
Transmitter power	**up to 14**	dBm (25 mW)
Receiver sensitivity	**–137**	dBm
Antenna	**internal**	
Data transfer rate	**0.3 … 40**	kbps · ADR
Range: urban / line of sight	**up to 5 / 15**	km
wM-Bus — firmware 3.x	**T1/T2 · 868.95**	MHz · AES-128
wM-Bus: period (10 s … 42 min)	**60**	s default

05 COMPATIBLE WATER METERS

SERIES · CLASS	DN	MODELS
Apator SMART C+	**15**	JS 1,6-02 · JS90-1,6-02 · JS2,5-02 · JS90-2,5-02
R160 H · R63 V	**20**	JS2,5-G1-02 · JS90-2,5-G1-02 · JS4-02 · JS90-4-02
Apator SMART+	**15**	JS 1,6-02 · JS90 1,6-02 · JS 2,5-02 · JS90 2,5-02
R100 H · R50 V	**20**	JS 2,5-G1-02 · JS90 2,5-G1-02 · JS 4-02 · JS90 4-02
Teplovodomer	**15**	ВСХ-15-02 · ВСГ-15-02 **(B)** · ВСХН-15 · ВСГН-15 **(C)**
class B / C	**20**	ВСХН-20 · ВСГН-20 **(C)**
riza	**15**	RW 15-2.5-R160 **(RIZA GLOBAL)**
R160 / R100	**20**	Q3 4.0 m³/h

06 ORDER INFO

SKU	DESCRIPTION
ORN-TWM-LW868/[F] F — frequency plan	**OrionMeter LoRaWAN radio modem for water meters**

F — FREQUENCY PLAN, SELECT

- RU — RU864-870 MHz
- KZ — KZ865-868 MHz
- EU — EU863-870 MHz

PACKAGE CONTENT

- ORN-TWM-LW868 radio modem
- O-ring
- datasheet / specification (per batch)