

# Meta

## SMART WATER METERS



**UM-15B**



**CM-15B**



**UM-15C**

META smart water meters are equipped with electronic counter and built-in radio module, enabling accurate water consumption measurement and wireless data transmission to the available LoRaWAN network.

### FEATURES AND BENEFITS

- Electronic counter
- High accuracy class
- Water flow activation
- Long-life battery
- Compact design
- Easy installation
- Built-in LoRaWAN module
- Long range wireless data transmission
- Transmission within unlicensed RF bands
- Backflow detection
- Magnetic impact protection and notification
- Flexible messaging schedule

### WORKING PRINCIPLE

META is single jet vane-wheel water meter. The principle of operation of META is based on measuring the number of impeller turns, which rotates under water flow. Electronic counter converts the impeller turns into the volume of measured water. META determines water flow direction and registers the backflow. An anti-magnetic ring protects the magnetic connection of the impeller and the electronic counter from the external magnetic field. In case of magnetic impact module will send an alarm event message.

Volume of consumed water is easy to read on META's electronic display. Data loss prevented by the electronic counter, which archives data in the non-volatile memory (EEPROM). The hourly archive of EEPROM contains data for last 62 days. At specified schedule built-in radio module transmits regular and archive data. Installation of META is simple as the installation of ordinary water meters.

## Technical and metrological characteristics

Parameter	UM-15B	CM-15B	UM-15C
Nominal diameter (DN), mm		15	
Accuracy class	B (R50)	B (R50)	C (R100)
Flowrates, m <sup>3</sup> /h:			
Minimum flowrate (Q <sub>1</sub> )	0,03	0,03	0,015
Transitional flowrate (Q <sub>2</sub> )	0,12	0,12	0,0225
Permanent flowrate (Q <sub>3</sub> )	1,5	1,5	1,5
Overload flowrate (Q <sub>4</sub> )	3,0	3,0	3,0
Sensitivity threshold, m <sup>3</sup> /h, max		Q <sub>1</sub> × 1/2	
Maximum permissible error values, %:			
Q <sub>1</sub> to Q <sub>2</sub> (excluding)		± 5	
Q <sub>2</sub> to Q <sub>4</sub> (including)		± 2	
Maximum working pressure, bar		16	
Pressure loss at Q <sub>4</sub> , bar, max		1	
LCD screen capacity		9 digits	
The smallest division value, m <sup>3</sup>		0,0001	
Water temperature range, °C	+5...+90	+5 ...+30	+5...+90
LoRaWAN device, class		A	
Operating frequency, MHz		863-870	
Battery voltage, V		3,6	
Service life without battery replacement, years		7	
Operating temperature, °C		+5 ... +50	
Overall dimensions (length, width, height) max, mm		110 × 75 × 84	
Weight, kg, max		0,5	
Connector thread		G <sup>3</sup> / <sub>4</sub>	
Warranty operating period, years		3	

\*Water meters can be additionally equipped with brass connectors and check valve.

META water meters are suitable for work in various AMR water supply systems and widely used for utility management by service companies.

META is more energy efficient at larger distances, compared to other wireless technologies. It ensures 100% readings acquisition and allows eliminating human mistake factor.

Thus, META is a beneficial and reliable solution for wireless water metering systems.



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