



iskraemeco
BY ELSEWEDY ELECTRIC

MW5XX ULTRASONIC SMART WATER METER



SUMMARY

Ultrasonic measurement is suitable for cold Potable water up to 50°C. It is a multi-jet water meter with ratio up to R160. The water meter can measure and display total water consumption, forward water consumption, reversed water consumption, instantaneous flow rate, water temperature. Supports a contactless card usage ensures isolation against external effects. It meets the OIMLR49 / ISO4064/ EN14154 and other international standards.

RF Card matches ISO/IEC14443A standard, and optional supported NFC CPU card, JAVA card and third-party card integration.

The meter comes with a long life non-rechargeable lithium battery change by utility. There is a complete isolation IP68 for electronic circuit and mechanical register.

Hardware Specification:

BASE METER

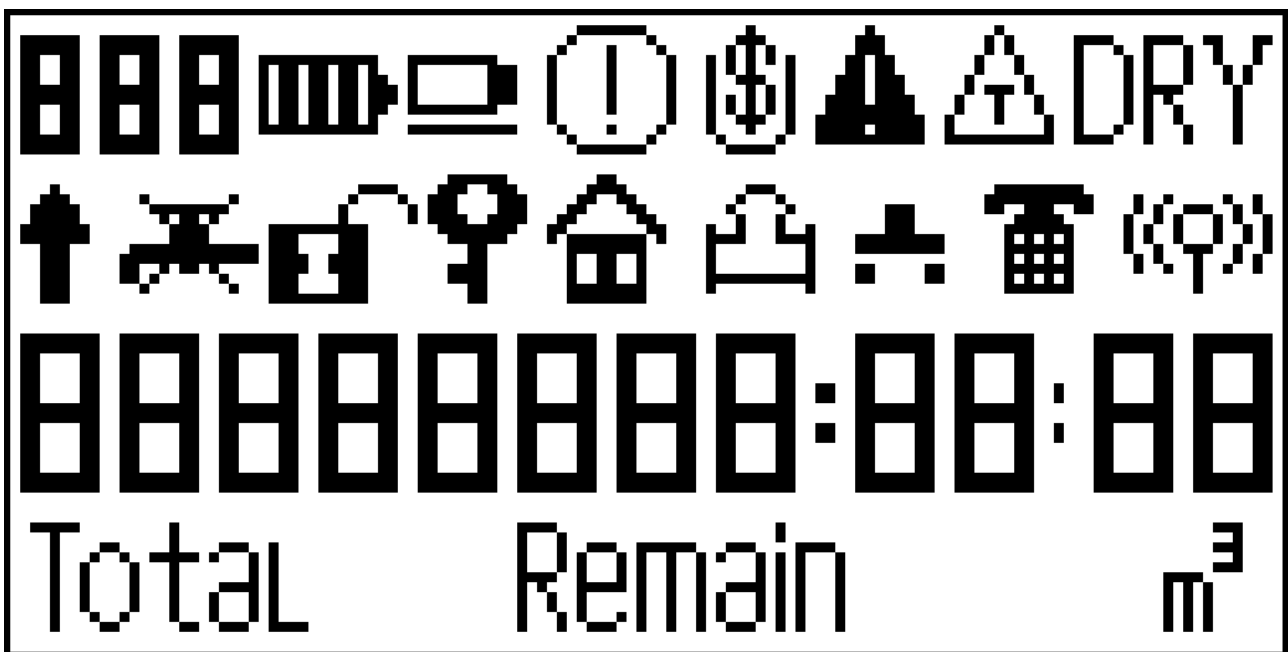
- Ultrasonic Water Meter and Integrated with a Built-in Valve
- Very high Accuracy Specially in Low Flowrates
- Very Low Starting Flow Reach to 1 l/h for DN20

METROLOGICAL CHARACTERISTIC

Item	Parameter		
Standard	ISO4064/OIML R49		
Meter Type	Ultrasonic Water Meter		
Installation position	Horizontal/Vertical/Any direction		
Nominal diameter (mm)	15	20	25
Length (mm)	165	190	260
Overload flow rate Q4 (L /h)	3125	5000	7875
Permanent flow rate Q3 (L /h)	2500	4000	6300
Start flow rate :Q1 (L/h)	1	1	3
Q3/Q1	R400 / R250		
Accuracy class	Class 2		
Water pressure class	MAP16		
Temperature class	T30, T50, T70		
Pressure-loss class	Δp_{63} (0.063MPa/0.63bar)		
The installation sensitivity class	U3/D3		
Material	Copper		
Valve lifetime	≥ 10000 times (typical)		
Protection class (IP code)	IP68		

LCD DISPLAY

- LCD Display Segment Type 72x29 mm
- Can choose from 175 display to show all water meter data and parameters
- Can roll 34 displays automatically and another 34 by Touch button
- Contain Arabic signs to show the meter status



METER CASING

- The housing structure is used to provide physical protection to the controller circuit, valve, and drive mechanism, and to increase the aesthetics of the product.
- The Shell Structure is IP68 to ensure that all Meter Parts is Protected.

Meter Function:

BASIC FUNCTIONS

- Measure all consumption values
- Historical consumption data stored:
 1. Supports the last 120 months' monthly water consumption data
 2. Supports the last 90 days' daily water consumption data
 3. Supports the last 30 days' hourly water consumption data
- Battery monitor and alarm
- reverse flow detection
- Parameters preset function
- Credit Superimposed function
- Data reading back function
- Valve close when remain credit use out
- Remain credit alarm limit.
- Overdraft function
- Real Time Clock
- Money Deduction:
 1. Step Tariff up to 16 Steps
 2. Monthly Fee
 3. Sewage Fee
 4. Fees per Cubic Meter
 5. Monthly Limit Usage
 6. Overdraft
 7. Installation Fees



ADVANCED FUNCTIONS

- Each water meter has its own serial number in electronic unit.
- Clock Adjust Manually
- Enable Meter Function
- Disable Meter Function
- Friendly Time Function
- Holidays and Weekend up to 50 Day
- Data reading back function
- Automatic valve Maintenance
- Change faulty Meter to another New one
- Read Multi-meter up to 250 Meter through RF - CPU Card
- Test Mode
- Long Pressing Function:
 1. Activate optical function in non-operation mode.
 2. trigger push data
 3. Enter/Quit test mode
 4. Activate optical function in operation mode.
 5. Wireless module reset processing

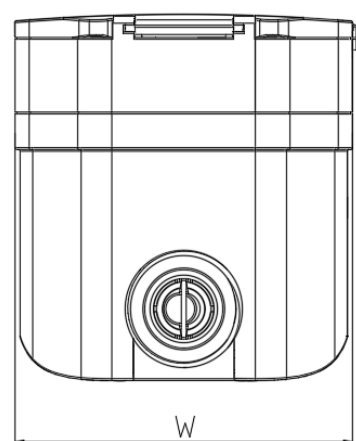
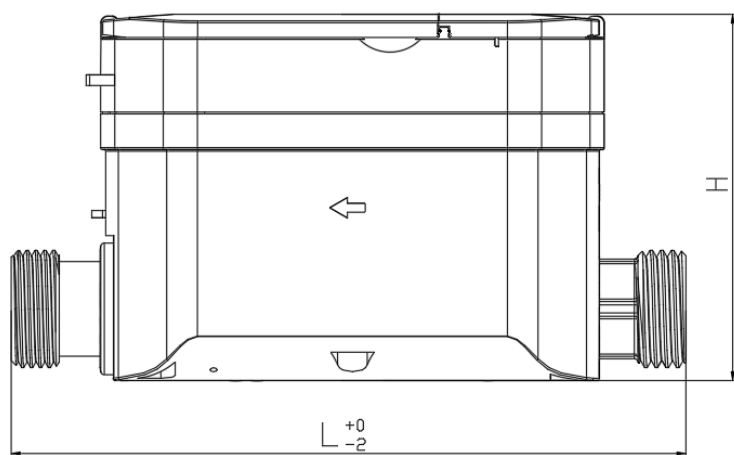


ALARMS & TAMPERS DETECTION

- Battery remove detection
- Meter cover remove detection
- Mechanical Sensor remove detection
- Valve remove detection
- reverse flow detection
- Valve leakage detection
- Valve malfunction detection
- Battery cover remove detection
- Many days without Consumption detection
- Leakage detection in pipeline network (after meter)
- Credit alarm
- Meter tilt detection and alarm
- Meter position displacement detection and alarm
- Overload water flow detection and alarm
- Fast leakage detection and alarm
- Water temperature detection and alarm
- Dry pipe detection and alarm:
- Temperature sensor failure detection and alarm
- Module cover remove detection and alarm
- Communication module mismatch
- High temperature alarm
- Low temperature alarm
- Open module cover
- Exceeds monthly water consumption limit

DIMENSIONS

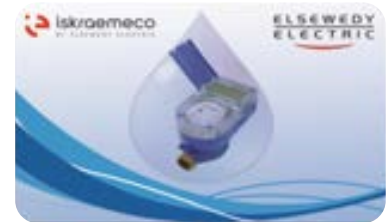
Size	L (m)	W (m)	H (m)	Thread
DN15	165	95	103	G3/4"
DN20	190	95	103	G1"
DN25	260	95	103	G1-1/4"



Meter Accessories:

SMART CARD

- Every water meter has a unique assigned card
- contactless cards conforming the ISO 14443A standards
- The smart cards have 100.000 times of read-write ability
- 3 levels of encrypted communication abilities.



HHU 'HAND HELD UNIT'

- Updating Meter Firmware
- Collecting Meter Data up to 1000 Meter
- Used as a Client interface with the meter
- Change Meter Function
- Communication through NFC port or LORA



CIU 'CUSTOMER INTERFACE UNIT'

- Supports 20 Digits STS TOKEN Input with keyboard
- Display credit and water volume information
- Display instantaneous voltage and current
- RF or Lora communication
- Read meter data from Meter by input short code on keyboard
- LCD display with white backlight
- Low credit alarm



WS-18 3G MODEM

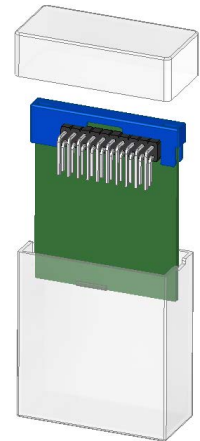
- Complying DLMS/COSEM and ANSI standards
- Bi-directional communication
- Supporting IPv4 and IPv6
- FOTA (Firmware Update over the Air)
- Firmware Update Via USB Port
- Supports TCP/UDP/FTP/DNS protocol
- Remote SMS configuration
- RS-485 to 4G Conversion



PLUG AND PLAY MODULES

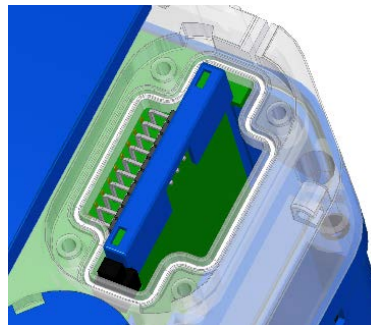
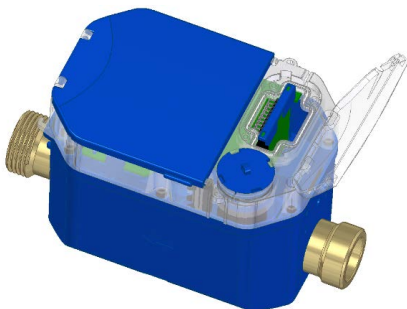
Replaceable module

- M-Bus
- RS485
- Wireless- Mbus
- LoRa WAN
- NB-IoT
- Wireless- Mbus + LoRaWAN
- Wireless- Mbus+ NB-IoT



Dual module design (local + remotely)

- Wireless - Mbus + LoRaWAN (Walk-by/Driver-by + Fixed network)
- Wireless - Mbus+ NB-IoT (Walk-by/Driver-by + Public network)

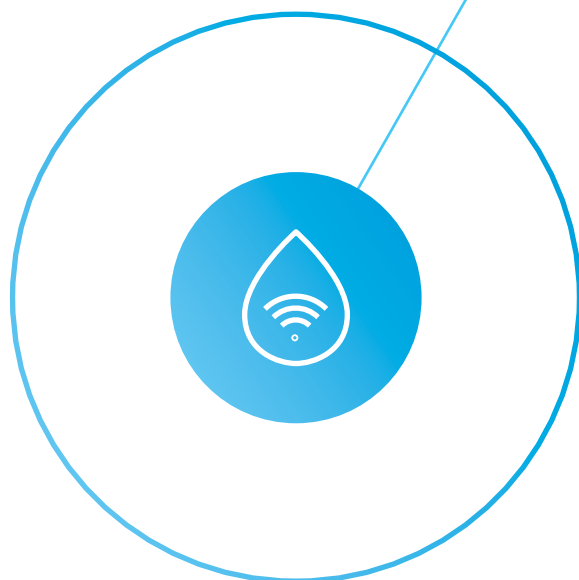




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SMART WATER.

Every drop of water is precious for the planet and for the future life as we know it.



ISKRAEMECO GROUP

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