

STS Prepaid Ultrasonic Water Meter

Split-type prepaid metering with CIU keypad · DN15 – DN25

The UtilityPal STS Prepaid Ultrasonic Water Meter is a split-type prepaid meter for cold and hot potable water. Measurement is by ultrasonic time-difference, giving stable accuracy across a wide flow range with no moving parts in the water path.

The meter pairs with a wall-mounted CIU keypad, so credit is loaded by 20-digit STS token from your vending system while the meter itself stays in the meter box or below ground.

An optical interface allows on-site handheld reading, and optional NB-IoT, 4G or LoRaWAN modules turn the same meter into a fully remote-read IoT meter.



Key Features

- Ultrasonic measurement, accuracy Class 2.0, $R(Q3/Q1) = 250$ turndown
- STS-compliant prepayment using 20-digit tokens from your vending system
- Brass body, PN16, IP68 — suitable for meter boxes and below-ground installation
- Multi-layer waterproofing: structural sealing plus adhesive filling protection
- Self-diagnosis for flow and temperature sensor faults, over-range, low battery and valve alarm
- Separate power supplies for the metering and communication modules
- Optical interface for on-site handheld infrared meter reading
- LoRa communication as standard; optional NB-IoT, 4G LTE or LoRaWAN modules
- Approximately 500 m radio range in open areas
- Disposable 3.6 V lithium batteries, 8500 mAh + 4000 mAh
- Patented flow measurement method with intelligent data error correction

Applications

Municipal and utility prepaid water supply · residential estates and complexes · student and staff accommodation · backyard dwellings and sub-metered tenants · farms and smallholdings · retrofit of existing meter boxes where the meter must remain below ground.

Technical Specifications

Measurable medium	Drinking water, cold or hot, full pipe section
Accuracy class	Class 2.0
Maximum working pressure	1.6 MPa (PN16)
Pressure loss	Δp 40
Working environment	-20 °C to 55 °C
Flow field sensitivity	U5/D3, U0/D0
Climate and mechanical class	Level O
Ingress protection	IP68
Body material	Brass
Power supply	Disposable lithium batteries, 3.6 V (8500 mAh + 4000 mAh)
Data communication	LoRa standard; optional NB-IoT, 4G LTE or LoRaWAN
Communication distance	Approximately 500 m in open areas
Electromagnetic environment	Level E1
Media temperature rating	0 – 50 °C / 90 °C
LCD display	6-digit integer, 3-digit decimal

Flow Parameters

Size	Q3	Turndown	Minimum reading	Maximum reading
DN15	2.5 m³/h	Q3/Q1 = 250	0.001 m³	999 999.999 m³
DN20	4.0 m³/h	Q3/Q1 = 250	0.001 m³	999 999.999 m³
DN25	6.3 m³/h	Q3/Q1 = 250	0.001 m³	999 999.999 m³

Dimensions and Connections

Size	L (mm)	L1 (mm)	W (mm)	H (mm)	Thread d	Thread D
DN15	259	165	90 – 110	140	R1/2	G3/4B
DN20	300	195	90 – 110	140	R3/4	G1B
DN25	344	225	90 – 110	140	R1	G1 1/4B

Ordering

DN15 and DN20 are stocked sizes on an 8 - 10 day lead time. DN25 is available on request. Each meter is supplied with its CIU keypad unit. Tokens are generated from your own STS vending system using the 20-digit token format.