



STS Prepaid Water Meter USER MANUAL



Prepaid Water meter (STS) is manufactured by Futurise with high quality. The meter is with advanced measuring chip with high reliable CPU, and manufactured with advanced SMT Process.

It consists of two parts, i.e. Water Meter and Customer Interface Unit (CIU). The communication between MCU and CIU is using RF communication. The customer can complete operations such as credit charging and metering data inquiry With CIU in house.

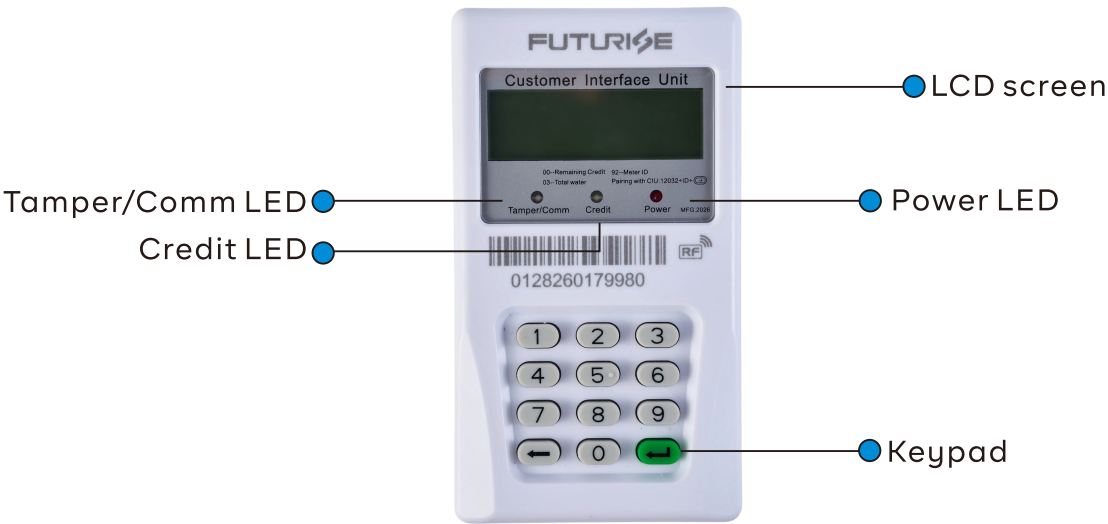


Meter Description

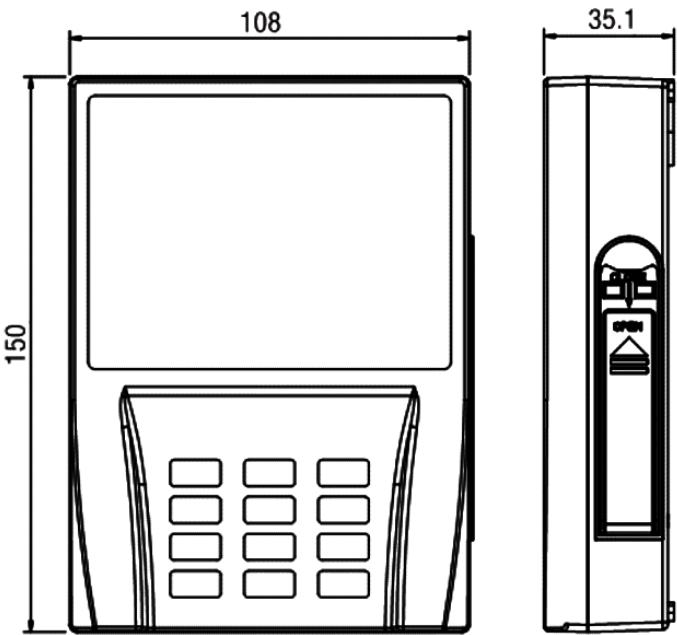
Technical Parameters

Nominal diameter(DN-mm)	DN15			DN20			DN25		
Ratio Q3/Q1	R80	R100	R125	R80	R100	R125	R80	R100	R125
Q4(m³/h)	3.125	3.125	3.125	5.0	5.0	5.0	7.875	7.875	7.875
Q3(m³/h)	2.5	2.5	2.5	4.0	4.0	4.0	6.3	6.3	6.3
Q2(L/h)	50	40	32	80	64	51.2	126	100.8	80.64
Q1(L/h)	31.25	25	20	50	40	32	78.75	63	50.4
Accuracy class	2								
The MPE for the upper flow rate zone	±2 % for temperatures from 0,1°C to 30° C; ±3 % for temperatures greater than 30 C								
The MPE for the lower flow rate zone	±5 %								
Temperature class	T30 and T50								
Maximum admissible pressure(MAP)	1MPa/1.6MPa								
Pressure loss	Δp63								
Minimum reading	0.0001m³								
Maximum reading	99999.9999m³								
Orientation limitation	HORIZONTAL								
Size(mm)	DN15			DN20			DN25		
L(mm)	165			190			260		
L+unions(mm)	255			286			372		
H(mm)	155			155			165		
W(mm)	100			100			100		
D(mm)	¾"			1"			1 ¼"		
Connection Thread	G¾B			G1 B			G1 ¼B		
Power mode	High-performance lithium battery-powered, easy to replace the battery								
Battery Service Life	Lithium battery: ≥6 years								

CIU(Customerinterface Unit)



Installation dimensions (CIU)



Functions

1. Close the valve in case of no balance
2. Close the valve in case of Magnetic field interference
3. Close the valve in case of low battery
4. Alarm in case of low water balance
5. Purchase water using CIU
6. Read data from water using system by RF
7. Remote prepaid function

How to pair CIU with water meter ?

Step 1:

Keep the CIU Energized;

Step 2:

Input by keypad: "12032---Water meter number---"; After successful configuration, the meter number will be displayed in two separate digital display;

Step 3 :

Then, UIU will automatically communicate with water meter(the indicator light is on). When communicating,  will flicker, but will be off after communication success. If  remains on, it means communication fails.

Step 4:

Input by keypad: "06—", check if the input meter number is right. If something wrong with the number, please repeat the above Step 2.

Purchase water / Purchase energy

1. When you need to purchase water, please go to vending station, inform your ID information such as meter ID, property address or registered name etc. to the water sales staff.
2. Inform the amount you intend to purchase to water sales staff. After making payment, the staff will give you a voucher containing with 20 digits Token .
3. Enter the 20 digits Token through the keypad on your CIU, press  , charging will be completed.
4. Note: if wrong digit is entered, press  to delete the wrong number one by one

Charging Tips

After you entering the Token and press 

1. If the LCD shows  , it means Token is accept.
- 2.If the LCD shows  , it means Token is wrong and it is rejected.
3. If the LCD shows  , it means Token is used and it is rejected.
4. If the LCD shows  , it means Token is expired and it is rejected.
5. If the LCD shows  , it means the balance credit is more than 999999.99m³ and it is rejected.
6. If the LCD shows  , it means the communication between the CIU and MCU is not good, you can try the token later.

CIU display

	LCD self-checking		Balance credit indication bar,When less than 75% or empty, please recharge.
	The ciu can not connect to the water meter. If it flashes, it means the CIU is communicating with water meter.		valve opened valve closed
M	Magnetic		Smile face: meter is working normally Sad face: meter is abnormal

1. Normally the Lcd displays the balance credit as :



2. If you want to inquiry the data in the meter , you can input 2-digit code or 3-digit code on CIU keypad and press. Examples as follows: 

Short code index

Code	Display Contents
00	Balance credit
02	Full Display
03	Total water
04	Key version
05	Tariff index
06	Meter ID
08	Water meter Status: 8- valve error 7- reserve 6- magnetic 5- battery removed 4- data error 3- valve status: valve closed metering circuit fault 1- reserve
09	Water meter battery voltage
10	UIU battery voltage
11	Software version
13	UIU time
14	UIU date
15	EA
16	KCN
17	KEN
18	Alarm time(minute)
19	Re-alarm time(minute)
20	Negative water
50~59	Previous 10 times tech token
60~69	Previous 10 times magnetic event
70~79	Previous 10 times credit token
81~92	Previous 12 month water
93	Magnetic times
94	Credit token times
95	Tech token times
101~131	Last 31 days water
140~169	Previous 30 times credit token

Led Indication

1. Tamper/com led

Tamper led is red color, it will be light on tamper conditions.

Com led is green color, it will flash when the CIU communicates with MCU.

2. Credit led

Credit led is green and red color. When the balance credit is full the credit led is green. It will turn to red and flash when the balance credit is low. It will stay on red when the credit runs out.

Led Indication

- Credit LED is green when the balance credit is sufficient
- It will turn to red and flash when the balance credit is low with audible alarm.
- It will stay on red when the credit runs out.

Cautions on Installation

1. Before installing the water meter, it shall firstly flush debris like stones, sediments and hemp threads, etc. out of the newly-installed pipeline to avoid breakdown of the meter;
2. It is advisable to choose a meter with a specification of common flow. Diameter of the water meter shall not be determined merely with caliber of pipeline. The water meter shall not be connected with corrosive liquid; Moreover, cold-water meter is prohibited to connect with hot water.

3. The water meter must be installed level with character surface upwards; Direction of the arrow on the meter case should be consistent with that of water flow; The water meter should be installed in a position that should be not only convenient assembly and disassembly as well as meter reading, but also out of sunshine exposure. Insulation measure should be taken in winter.
4. Check valve must be installed on the inlet end of boiler during the installation of water meter for fear of water meter damaged by backflow of hot water and steam.
5. It's prohibited to shelve any items above the water meter. The meter should be kept against moisture. Water drip is strictly prohibited to prevent damaging control system inside the controller of the meter, affecting normal use.
6. It shall pay attention to connection length of the water meter when installing the water meter. Gap of both ends of pipelines should be modified if it exceeds the connection length of the water meter to satisfy the connection length of the water meter. Or if it's installed on the excessive gap, connection threaded end or coupling will be broken or the connecting nut will be damaged; Both ends of pipelines of the water meter should be modified to be in the same axis by other approaches to satisfy the installation size of the water meter, if both ends are in different axes.
7. The facet should be installed higher than the water meter for accurate measurement.
8. The water meter should be connected to the pipeline with a movable joint (coupling, coupling nut, seal washer connecting with the pipeline). Don't force to disassemble the water meter for fear of case damage;
9. Dedicated coupling must be adopted in the inlet of the water meter when installing a water meter of water and energy conservation, so as to reduce the fluctuation of water pressure caused by water meter's automatic rotation.
10. All losses should be borne by the user if damage of water meter or its fitting is caused by installing not in strict accordance with the ins