SMART LORA RF PREPAID SPLIT KEYPAD GAS METER

User Manual

Original manufacturer: VERYCO™



① External Components

-The Shell is made of environmental protection materials, materials pollution-free, safe and reliable. The strong structure protects the LCD and PCBA inside.

-The mechanical part is made of aluminum alloy, which can effectively prevent the long-term corrosion to improve the service life. The gas flow direction is marked on the top to guide the right way for installation.

-All the fixed screws of the shell are plated with colored lead screws to ensure that it will not rust during long-term use.

② Internal Components

-The battery is replaceable and ER18505 high capacity, which is easily changed by users.

-The LCD has a dynamic display function; users could check current water consumption and other data easily.

-The valve is rubber piston type, which is durable with the long-term switch on and off, flexible and good air tightness.

-The internal cavity sealing process make the gas meter has IP67 level of protection.

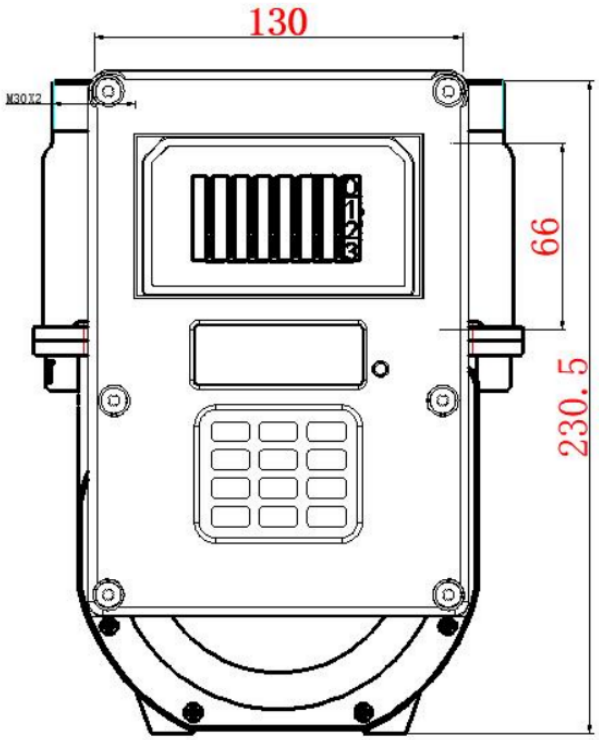
③ Other Parameters

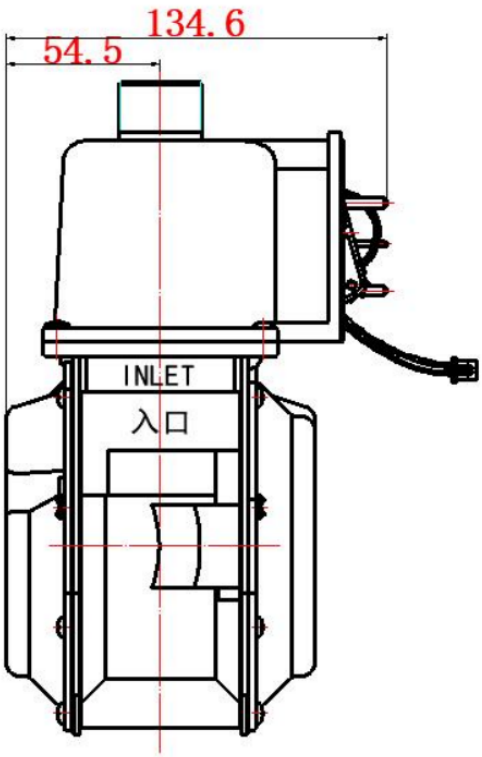
-The gas meter qualified with STS, IS09001 and ISO14001 standards to ensure the reliability and stability.

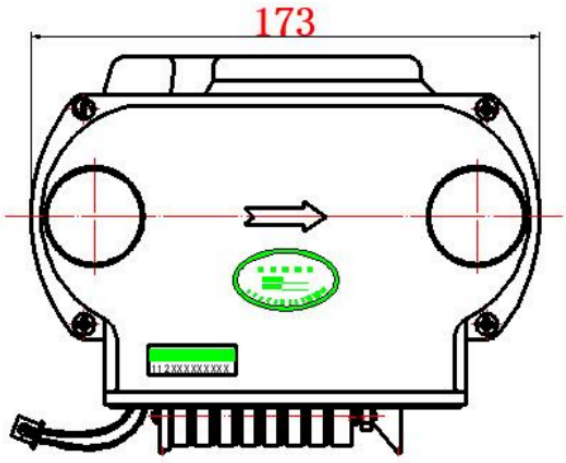
-The gas meter is installed vertically, and the measurement accuracy is 0.01m³.

--There are 2 sizes (G1.6/G2.5) for users to choose, it equips with pipe joints and other installation accessories. Other bigger size for industrial should be customized in some time.

2. Dimensions







-Dimensions:230.5mm*173mm*134.6mm

(length×width×height)

-Installation: Vertical installation

3. Technical Parameters

Product Name	Smart Lora RF Prepaid Split Keypad Gas Meter	
Sizes	G1.6	G2.5
Nominal Flow Rate	1.6 m3/h	2.5 m3/h
Maximum Flow Rate	2.5 m3/h	4 m3/h
Minimum Flow Rate	0.016 m3/h	0.025 m3/h
Minimum measurement accuracy	0.01m³	
Maximum Reading	9999.999m³	
Measurement Accuracy	Class 1.5	
Maximum Working Pressure	50 KPa	
Working Temperature	-10℃ ~ +40℃	
Display Mode	LCD, Digital	
Battery	3.6V Lithium Battery	
Communication	433MHz LORA-RF	
Communication Distance with CIU/DCU	350m / 1000m	
Current in Working/Sleeping State	≤1.1mA / ≤12uA	
Total Length (including joints)	277±0.5mm	
Total Length (excluding joints)	235±0.5mm	
Inlet/Outlet Internal Diameter	21.4±0.2mm	
Dimensions of shell	192*133*43.5mm	
Gas Flow Direction	Left to Right	

4. Functions and Operations

4.1 Functions:

a. The gas meter is compliance with STS standard, users need to input the 20 digits token to recharge, clear credit and clear tamper for the meter.

b. It supports LORA-RF wireless meter reading by CIU/Handheld Unit and DCU, the c ommunication distance is about 350m/1000m.

c. A high-capacity battery inside meter is integrated with a low power program, whic h makes the battery can be used for 6-8 years under normal use.

d. The gas meter can be monitored and recharged remotely by AMI system, with the API integrated with local payment platform, users could use their mobile phone t o get the tokens.

e. It supports prepaid and postpaid mode switching. The overdraft amount can be set as request.

f. The step tariff' s function supports 7 steps of different time and price to measure gas consumption.

g. The LCD will show the error and the meter will close the valve automatically when the signal distracted by the magnetic field or the battery was removed illegally.

4.2 Operations:

a. Before using the gas meter, the anti-tamper token should be input to make the meter in the working state.

b. Input "00+Enter" with coupled CIU to read the current data from gas meter, the CIU residual amount is 0.0m³, same with the gas meter and the valve is closed.

c. Generating a recharge token as request on vending software, then input the token by CIU or meter keypad. The LCD shows "ACCEPT" , it means the meter accept the token, check it by inputting "07+Enter" .

d. Now the gas meter open the valve and starts to measure the gas consumption.

5. LCD Operation Guidance

No.	Description	LCD
1	"ACCEPT": It means that the Token could be accepted by gas meter.	
2	"REJECT": It means that the Token refused by gas meter, the Token may not for the meter ID or the Token has at least one input errors.	
3	"USED": It means that the input Token has been used before and cannot be reused.	
4	"OLD": It means that the input Token is expired and need to generate new token.	
5	"NULL": It means the input command is not defined.	

6	It means the meter battery is low power or the battery is disconnected.	
7	It means the meter valve is in the open state currently.	
8	It means the meter valve is closed currently.	

6. Short Codes and Error Warnings

Display number	Item	Display number	Item
00	Update the reading data(01.06.07) from water meter（m^3）	01	Cumulative water consumption（m^3）
06	Cumulative purchased amount（m^3）	07	Residual amount（m^3）
65	The first 6 digits of meter or CIU ID number	66	The last 6 digits of meter or CIU ID number
98	Current program version V2.9		
Errors			
CIU display: “Err—01”		It means the communication between meter and CIU is failure.	
CIU display: “Err—02”		It means there’s distraction from same frequency, influenced the communication between meter and CIU.	
CIU display: “Err—03”		It means there’s multiple meters with the same meter number are communicating with CIU in this range.	
Water meter display: “Err—06”		It means the entered token is missed one or more digits.	
Water meter display “ACTErr1”		It means there’s a measurement error or the signal distracted by the magnetic field.	
Water meter display “ACTErr2”		The battery is removed or there is no battery.	
Water meter display “ACTErr5”		The valve is abnormal.	