

Operation Manual

DN15 ~ DN25 ULTRASONIC WATER METER

Model :DN20, DN15, DN25

1. Implementation standards:

China national standard GB/T778.1-2007/ISO4064-1:2005

Water flowrate measurements of drinking cold water meters and hot water meters in Closed full pipelines

2. Main technical parameters

Item	Parameters		
Model	PWM	PWM2	PWM2
Diameter	DN15	DN20	DN25
Overload	3.125	5.0	5.0

Permanent flow rate $Q_3(\text{m}^3/\text{h})$	2.5	4.0	4.0
Transition flow rate $Q_2(\text{m}^3/\text{h})$	0.025	0.04	0.04
Minimum flow rate $Q_1(\text{m}^3/\text{h})$	0.015	0.025	0.025
Q_3 / Q_1	R160		
Accuracy class	2		
Medium temperature range	T50 (0.1℃~50℃)		
Sensitivity class of flow profile	U5, D3		
Pressure loss at Q_3	ΔP_{63}		
Hydraulic pressure class	MAP16		
Ambient class	Class C		
Protection class	IP68		
Compatibility class of electromagnetism	E1		
Measurement cycle	Once/250ms		

Battery lifespan	6/10/15 years (Optional)
Display content	Accumulative flow:m ³ Instantaneous flow: m ³ /h
Display range	Accumulative flow: 0~999999.999 m ³

3 Instructions

3.1 LCD display instructions (shown on below)

1. put the manget touch the magnetic control key above the date of the water meter panel, The display menu will scroll between A0-A1-A2-A2-A3-A4; the short-track magnetically controlled key will scroll within the same menu.
2. Main display menuA0: Accumulated flow (m³), negative cumulative flow(m³), instantaneous flow (m³/h) Three items Display cycle switch.
- 3.Main display menuA1: Accumulated flow (m³), instantaneous flow (m³/h), water temperature (°C), cumulative running time (h), fault cumulative time (h)。 This is the test interface, the cumulative flow display range: 999.99999, instantaneous flow for 10 seconds for 0,then shows the instantaneous flow again,then the cumulative flow is automatically cleared to facilitate the testing.
4. Main display menu A2: factory number, current date, real time, caliber / battery voltage, baud rate / program version number.
5. Main display menu A3: The first 24 months of monthly traffic values, month and monthly cumulative flow between the automatic display.
6. Main display menu A4 (alarm and event log):
LOSS-BATT: low battery voltage or battery power-down information record;
EMPTY: empty pipe information record;
-: Negative traffic is recorded;
MAX: maximum flow is greater than Q4 record;
MIN: minimum flow rate is less than Q1 record;
MAX: Temperature record with a maximum temperature exceeding 30 °

The main menu shows A0

2683

Positive cumulative flow

- 0002

Negative cumulative flow

0891

Instantaneous flow

The main menu shows A1

005009

cumulative flow

1258

Instantaneous flow

2137

Water temperature

2584

Cumulative run time

0

Accumulated time

The main menu shows A2

86062008

Serial number

20160206

Current date

12-00-00

Real time

6020 363

Caliber / battery voltage

2400 6215

Baud rate / program version number

The main menu shows A3

2016-02

Month date display

0369

cumulative flow in February 2016

2015-01

Last month date display

2314

cumulative flow in January 2016

2014-02

The first 24 months of the date display

0000

cumulative flow in February 2014

The main menu shows A4

LOSS-BATT

Battery power down logo

160209-07

Battery power outage occurs

EMPTY 0

Empty tube logo

160203-08

Empty tube time

-

Negative flow time

160201-11

Negative flow time

MAX 3692

Maximum temperature record

160125-14

Maximum temperature time

MIN 0003

Minimum traffic record

160202-11

Minimum flow time






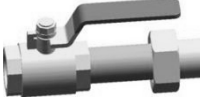
MAX 6347

Maximum traffic record

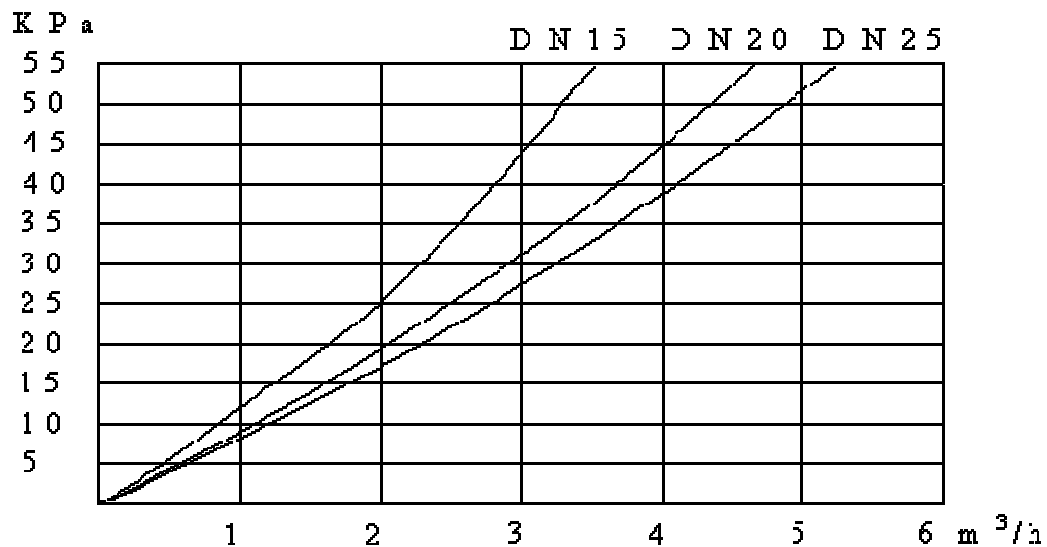
160202-09

Maximum flow record time

3.2 Sketch map of installation process

	<p>Step 1: Install the ball valve in the water inlet end</p>		<p>Step 2 : Install the internal thread coupling ,filter successively</p>
	<p>Step 3: Install appropriate union swivel</p>		<p>Step4: Install the Seal gland inside the inner joint.</p>
	<p>Step 5: Install the water meter; install the seal gland at the water outlet end, appropriate union swivel.</p>		<p>Step 6: Install the ball valve in the water outlet end.</p>

4. The characteristic curvegraph of pressure loss



5 Precautions

- (1) The water meter installation must meet the GB / T 778.2 installation requirements, the copper inline pipe should be 5 times-diameter distance to the upstream and 3 times-diameter distance to the downstream.
- (2) The piping flow should be in the same direction as the logo arrow on the water meter
- (3) Wired communication of the ultrasonic water meter M-BUS wiring without polarity requirements, but must ensure that the wiring is solid and reliable, and pay attention to do waterproof moisture treatment. Line joints do not bear the tension, or easily to pull off joints caused by communication disconnect.
- (4) Wireless communication of ultrasonic water meters should not be installed in strong lines and other high electromagnetic radiation near the source, otherwise it will affect the reliability of wireless signal transmission.
- (5) Ultrasonic water meter is a measuring instrument, must be in accordance with national standards for ultrasonic water meter for regular verification, and replace the battery before lifespan ran out.
- (6) Without the permission of manufacturer, no one shall dismantle the maintenance ultrasonic water meter, otherwise the warranty service shall be discharged.

6 After-sales service

Free warranty: 2 years

The warranty start time is based on the order contract time or the date of manufacture of the product. Original seal damage is not warranty. Due to improper use and maintenance of the product caused by failure or damage is not warranty. Damage caused by force majeure, such as war and natural disasters. won't warranty.

FCC Warning

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment. This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

The device has been evaluated to meet general RF exposure requirement. The device can be used in portable exposure condition without restriction.

FCC ID: 2ANQO-DN20