

# ULTRASONIC WATER METER



DN15-DN40



DN50-DN150

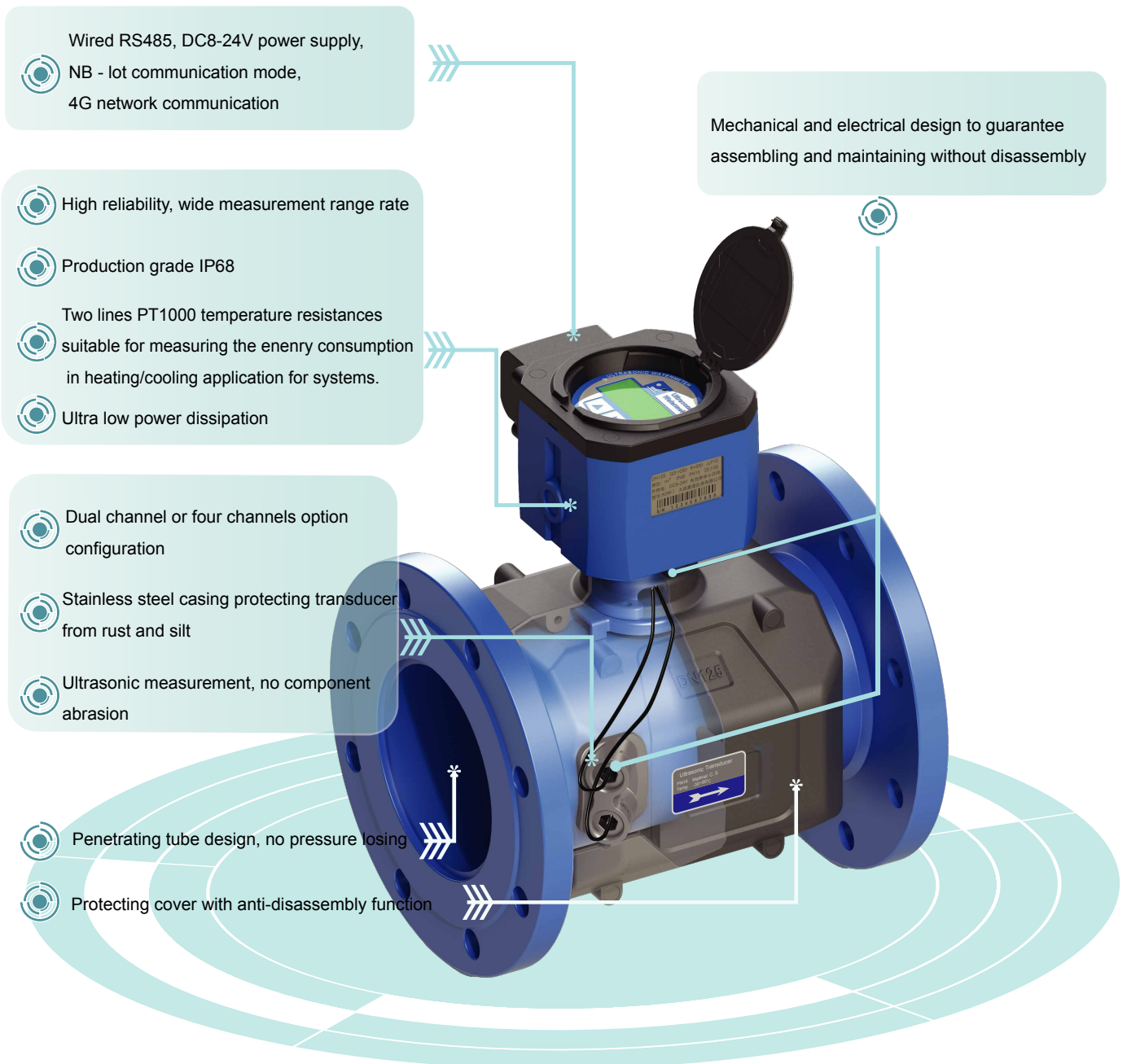


DN200-DN500

# General Introductions

This series ultrasonic water meter is a newly launched dual channels and four channels ultrasonic water meter with high integration.

This series of ultrasonic water meter has many advantages, such as wider measurement range, ultra low power consumption, stable and reliable performance, etc. Every single part of this series ultrasonic water meter reaches IP68 protection grade, which can be used in all kinds of hostile environment, it is extensively used in city water supply, water resources management, agriculture irrigation, landscaping, industry production, etc. It is a great technical innovation in water technical measure areas.



ULTRASONIC WATERMETER

Ultrasonic Watermeter

IRDC

M88 4-20mA Out1Out2

ft³/h GPM AFI yF mL/s KCM P s°C GJ/h

ft³ AF KBTU RTGAL

0.000000 kW/m³ m³/h

0.000000 GJ/m³ kW·h

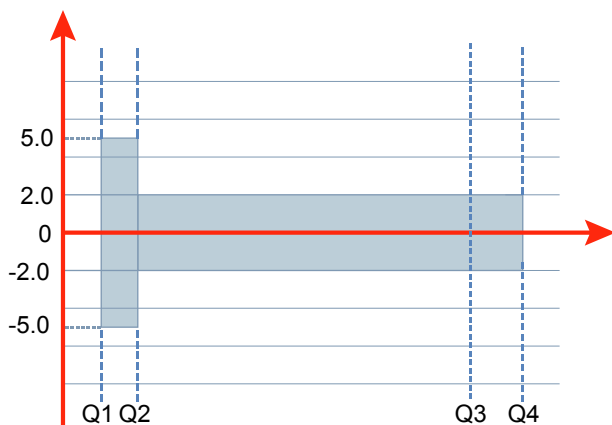
WATER PROOF

- Infrared interface
- Multiple flow units setting
- 6 digital instantaneous flow display
- Multiple condition prompts
- Big viewing screen
- 9digital accumulate flow display
- Touch button

| Items                                | Parameters                                                                                                                                |
|--------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| Executive standard                   | ISO4064-2014、GBT778-2018                                                                                                                  |
| Measurable fluid                     | Water, sewage, seawater (other liquid need be customized), Liquid full of pipeline                                                        |
| Fluid temperature                    | 0.1-30℃                                                                                                                                   |
| Work environment                     | temperature: -30-45℃; humidity:100%( RH )                                                                                                 |
| Bearable pressure                    | 1.6MPa, 2.5MPa alternatives                                                                                                               |
| Pressure loss                        | DN15-DN40 ΔP40;≥DN50 ΔP10                                                                                                                 |
| The sensitivity grade of upstream    | U3                                                                                                                                        |
| The sensitivity grade of downstream  | D0                                                                                                                                        |
| Climate and mechanical environment   | C class                                                                                                                                   |
| Electromagnetism compatibility grade | E2 class                                                                                                                                  |
| Communication interface              | RS485/USART/infrared interface, M-BUS alternatives;NB-Iot wireless transmission                                                           |
| Output signal                        | OCT alternatives                                                                                                                          |
| Power supply                         | 2 built-in lithium batteries/external DC8-24V power supply                                                                                |
| Protection grade                     | IP68                                                                                                                                      |
| Spot display                         | Screen with two rows: 9digital accumulated flow display,6 digital instantaneous flow display, various condition prompt symbols and units. |
| Data storage                         | Ferroelectric storage parameters usage, recording accumulated flow of 32moths and 31days before automatically                             |
| Flow measurement cycle               | Measurement condition: 1time/second(settable); Authentication condition: 4times/second                                                    |
| Power consumption                    | Standard condition < 30uA, working 20 years above constantly                                                                              |
| Materials                            | Measuring pipe: carbon steel(stainless steel for sensor); sensor: PEEK; protection cover:nylon plus glass fiber                           |

# Error Curve

# Pressure Loss



- DN15-40 :  $\Delta P40$
- DN50 above:  $\Delta P10$  (drift diameter)

## Communication and Networking

Equipping waterproof junction box, applicable for both wired and wireless communication.



# Complete Type and Specification

- **Industrial grade small calibre ultrasonic water meter (DN15-DN40)**

Tube materials: copper, available in 304 or 316 stainless steel



DN15-DN40  
copper



DN15-DN40  
304 or 316 stainless steel

- **Dual channel ultrasonic water meter (DN50-DN500)**

Tube materials: carbon steel (304 stainless steel for probes) available in 304 or 316 stainless steel



DN50-DN150



DN200-DN500



DN200-DN500



DN80-DN150

- **Four-channel ultrasonic water meter (DN80-DN500)**

Tube materials: carbon steel (304 stainless steel for probes) available in 304 or 316 stainless steel

# Flow Range

- one channel industrial grade small calibre ultrasonic water meter (R=200)

| Nominal diameter (mm) | Measurement range ratio R | Flow rate (m³/h)  |                    |                          |                      |                      |
|-----------------------|---------------------------|-------------------|--------------------|--------------------------|----------------------|----------------------|
|                       |                           | Starting flowrate | Minimum flowrateQ1 | Transitional flowrate Q2 | Permanent flowrateQ3 | Overload flow rateQ4 |
| DN15                  | 200                       | 0.0031            | 0.0125             | 0.0200                   | 2.5000               | 3.1250               |
| DN20                  | 200                       | 0.0050            | 0.0200             | 0.0320                   | 4.0000               | 5.0000               |
| DN25                  | 200                       | 0.0079            | 0.0315             | 0.0504                   | 6.3000               | 7.8750               |
| DN32                  | 200                       | 0.0200            | 0.0800             | 0.1280                   | 16.0000              | 20.0000              |
| DN40                  | 200                       | 0.0313            | 0.1250             | 0.2000                   | 25.0000              | 31.2500              |

- dual channel big calibre ultrasonic water meter (R=100)

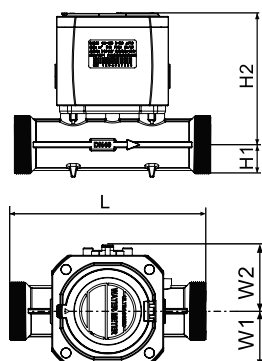
| Nominal diameter (mm) | Measurement range ratio R | Flow rate (m³/h)   |                     |                          |                      |                      |
|-----------------------|---------------------------|--------------------|---------------------|--------------------------|----------------------|----------------------|
|                       |                           | Starting flow rate | Minimum flow rateQ1 | Transitional flowrate Q2 | Permanent flowrateQ3 | Overload flow rateQ4 |
| DN50                  | 100                       | 0.100              | 0.400               | 0.640                    | 40.000               | 50.000               |
| DN65                  | 100                       | 0.158              | 0.630               | 1.008                    | 63.000               | 78.750               |
| DN80                  | 100                       | 0.250              | 1.000               | 1.600                    | 100.000              | 125.000              |
| DN100                 | 100                       | 0.400              | 1.600               | 2.560                    | 160.000              | 200.000              |
| DN125                 | 100                       | 0.625              | 2.500               | 4.000                    | 250.000              | 312.500              |
| DN150                 | 100                       | 1.000              | 4.000               | 6.400                    | 400.000              | 500.000              |
| DN200                 | 100                       | 1.575              | 6.300               | 10.080                   | 630.000              | 787.500              |
| DN250                 | 100                       | 2.500              | 10.000              | 16.000                   | 1000.000             | 1250.000             |
| DN300                 | 100                       | 4.000              | 16.000              | 25.600                   | 1600.000             | 2000.000             |
| DN350                 | 100                       | 4.000              | 16.000              | 25.600                   | 1600.000             | 2000.000             |
| DN400                 | 100                       | 6.250              | 25.000              | 40.000                   | 2500.000             | 3125.000             |
| DN450                 | 100                       | 6.250              | 25.000              | 40.000                   | 2500.000             | 3125.000             |
| DN500                 | 100                       | 10.000             | 40.000              | 64.000                   | 4000.000             | 5000.000             |

- four-channel big calibre ultrasonic water meter (R=200)

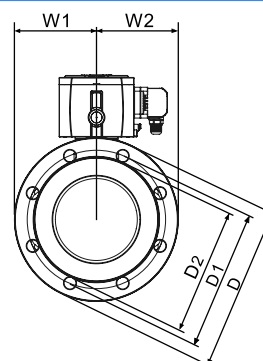
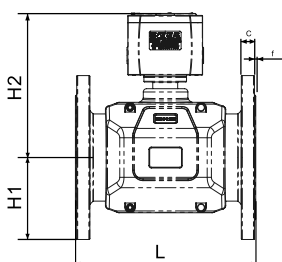
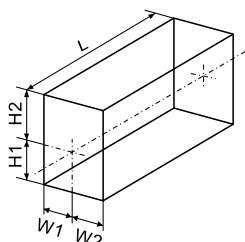
| Nominal diameter (mm) | Measurement range ratio R | Flow rate (m³/h)   |                     |                          |                      |                      |
|-----------------------|---------------------------|--------------------|---------------------|--------------------------|----------------------|----------------------|
|                       |                           | Starting flow rate | Minimum flow rateQ1 | Transitional flowrate Q2 | Permanent flowrateQ3 | Overload flow rateQ4 |
| DN80                  | 200                       | 0.125              | 0.500               | 0.800                    | 100                  | 125.00               |
| DN100                 | 200                       | 0.200              | 0.800               | 1.280                    | 160                  | 200.00               |
| DN125                 | 200                       | 0.313              | 1.250               | 2.000                    | 250                  | 312.50               |
| DN150                 | 200                       | 0.500              | 2.000               | 3.200                    | 400                  | 500.00               |
| DN200                 | 200                       | 0.788              | 3.150               | 5.040                    | 630                  | 787.50               |
| DN250                 | 200                       | 1.250              | 5.000               | 8.000                    | 1000                 | 1250.00              |
| DN300                 | 200                       | 2.000              | 8.000               | 12.800                   | 1600                 | 2000.00              |
| DN350                 | 200                       | 2.000              | 8.000               | 12.800                   | 1600                 | 2000.00              |
| DN400                 | 200                       | 3.125              | 12.500              | 20.000                   | 2500                 | 3125.00              |
| DN450                 | 200                       | 3.125              | 12.500              | 20.000                   | 2500                 | 3125.00              |
| DN500                 | 200                       | 5.000              | 20.000              | 32.000                   | 4000                 | 5000.00              |



# Products Dimension



| Nominal<br>Size<br>(mm) | Dimension (mm) |     |      |      |       |       |    |     | Thread connection      |                                   | Thread length |    | Weight<br>kg | Pressure<br>MPa |
|-------------------------|----------------|-----|------|------|-------|-------|----|-----|------------------------|-----------------------------------|---------------|----|--------------|-----------------|
|                         | L              |     | H1   |      | H2    |       | W1 | W2  | Pipe screw<br>thread A | Connection pipe<br>screw thread B | Cu            | SS |              |                 |
|                         | Cu             | SS  | Cu   | SS   | Cu    | SS    |    |     |                        |                                   |               |    |              |                 |
| DN15                    | 165            | 165 | 14   | 13.5 | 123   | 121   | 57 | 130 | G3/4B                  | G3/4B                             | 10            | 12 | 1.5          | 1.6             |
| DN20                    | 195            | 190 | 18   | 17   | 125   | 124   | 57 | 130 | G1B                    | G1B                               | 12.5          | 18 | 1.5          | 1.6             |
| DN25                    | 160            | 180 | 22   | 21   | 127.5 | 126.5 | 57 | 130 | G1 1/4B                | G1 1/4B                           | 13            | 18 | 1.5          | 1.6             |
| DN32                    | 180            | 180 | 25   | 24   | 130   | 130   | 57 | 130 | G1 1/2B                | G1 1/2B                           | 14.5          | 15 | 2            | 1.6             |
| DN40                    | 200            | 200 | 33.5 | 30   | 134   | 134   | 57 | 130 | G2B                    | G2B                               | 16            | 18 | 2.2          | 1.6             |



| Nominal Size (mm) | Dimension (mm) |       |     |       |       | Flange Dimension (mm) |                     |                                     |                    |   |                    | Pressure MPa | Weight kg |
|-------------------|----------------|-------|-----|-------|-------|-----------------------|---------------------|-------------------------------------|--------------------|---|--------------------|--------------|-----------|
|                   | L              | H1    | H2  | W1    | W2    | Flange Diameter D     | Bolt Hole Center D1 | Bolt hole xQuantity $\phi \times n$ | Sealing surface D2 | f | Flange thickness C |              |           |
| DN50              | 200            | 82.5  | 180 | 82.5  | 108   | 165                   | 125                 | 18*4                                | 102                | 2 | 19                 | 1.6          | 10.0      |
| DN65              | 200            | 92.5  | 189 | 92.5  | 108   | 185                   | 145                 | 18*4                                | 122                | 2 | 20                 | 1.6          | 11.5      |
| DN80              | 225            | 100   | 197 | 100   | 108   | 200                   | 160                 | 18*8                                | 138                | 2 | 20                 | 1.6          | 13.5      |
| DN100             | 250            | 110   | 207 | 110   | 110   | 220                   | 180                 | 18*8                                | 158                | 2 | 22                 | 1.6          | 18.5      |
| DN125             | 275            | 125   | 220 | 125   | 125   | 250                   | 210                 | 18*8                                | 188                | 2 | 22                 | 1.6          | 23.5      |
| DN150             | 300            | 142.5 | 233 | 142.5 | 142.5 | 285                   | 240                 | 22*8                                | 212                | 2 | 24                 | 1.6          | 30.0      |

| Nominal Size (mm) | Dimension (mm) |       |       |       |       | Flange Dimension (mm) |                     |                                     |                    |   |                    | Pressure MPa | Weight kg |
|-------------------|----------------|-------|-------|-------|-------|-----------------------|---------------------|-------------------------------------|--------------------|---|--------------------|--------------|-----------|
|                   | L              | H1    | H2    | W1    | W2    | Flange Diameter D     | Bolt Hole Center D1 | Bolt hole xQuantity $\phi \times n$ | Sealing surface D2 | f | Flange thickness C |              |           |
| DN200             | 350            | 170   | 257   | 170   | 170   | 340                   | 295                 | 22*12                               | 268                | 2 | 26                 | 1.6          | 35.5      |
| DN250             | 450            | 200.5 | 284.5 | 200.5 | 200.5 | 405                   | 355                 | 26*12                               | 320                | 2 | 29                 | 1.6          | 58.0      |
| DN300             | 500            | 230   | 310   | 230   | 230   | 460                   | 410                 | 26*12                               | 378                | 2 | 32                 | 1.6          | 76.0      |
| DN350             | 550            | 260   | 350   | 260   | 260   | 520                   | 470                 | 26*16                               | 438                | 4 | 35                 | 1.6          | 108       |
| DN400             | 600            | 290   | 380   | 290   | 290   | 580                   | 525                 | 30*16                               | 490                | 4 | 38                 | 1.6          | 145       |
| DN450             | 600            | 320   | 410   | 320   | 320   | 640                   | 585                 | 30*20                               | 550                | 4 | 46                 | 1.6          | 185       |
| DN500             | 600            | 357.5 | 447.5 | 357.5 | 357.5 | 715                   | 650                 | 33*20                               | 610                | 4 | 46                 | 1.6          | 232       |

# Typical Application



- Agriculture Irrigation and Landscaping

- intelligence agriculture system  
To provide quantificational irrigation information in order to water saving, time saving, labour saving, scientific irrigation.



- Industrial Water Supply and Drainage Measure

External water supply settlement  
Internal water using accounting  
Drainage expenses settlement



