# WESDOM FLOWMETER

## WESDOM


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# Electromagnetic Flowmeter

- Accuracy:±0.2% of the measurement value +0.3m/s;
- Excellent small flow measurement accuracy,can measure duplex flow;
- Underground sensor(IP68) installed without building measuring well;
- Pipe connection:JIS 10K、JIS 20K、ANSI 150、ANSI 300、DIN PN10、DIN PN16;
- Cold,heat measure function;
- Double frequency excitation,stable zero point;
- Self-diagnosis ,intelligent work;
- Build-in ground electrode,no need the grounding ring;





# Electromagnetic Flowmeter Code Table

Selection

| QTLD | XXX | X | X | X | X | X | X | X | X |
|---|---|---|---|---|---|---|---|---|---|
| Caliber | DN10~DN3000 3-digital code seeing caliber code table 13 | | | | | | | | |
| Nominal pressure | 0.6MPa | 1 | | | | | | | |
| | 1.0MPa | 2 | | | | | | | |
| | 1.6MPa | 3 | | | | | | | |
| | 4.0MPa | 4 | | | | | | | |
| | Other | 5 | | | | | | | |
| Connection mode | Flange connection | | 1 | | | | | | |
| | Clamp connection | | 2 | | | | | | |
| | Sanitary connection | | 3 | | | | | | |
| Liner material | PTFE | | | 1 | | | | | |
| | PFA | | | 2 | | | | | |
| | Neoprene | | | 3 | | | | | |
| | Polyurethane | | | 4 | | | | | |
| | Ceramic | | | 5 | | | | | |
| Electrode material | 316L | | | | 1 | | | | |
| | Hastelloy B | | | | 2 | | | | |
| | Hastelloy C | | | | 3 | | | | |
| | Titanium | | | | 4 | | | | |
| | Platinum-iridium | | | | 5 | | | | |
| | Tantalum | | | | 6 | | | | |
| | Stainless steel covered with tungsten carbide | | | | 7 | | | | |
| Structure type | Integral type | | | | | 1 | | | |
| | Remote type | | | | | 2 | | | |
| | Remote type immerse | | | | | 3 | | | |
| | Integral type Ex-proof | | | | | 4 | | | |
| | Remote type Ex-proof | | | | | 5 | | | |
| Power | 220VAC 50Hz | | | | | | E | | |
| | 24VDC | | | | | | G | | |
| Output/ communication | Flow volume4 ~ 20mADC/pulse | | | | | | | A | |
| | Flow volume4 ~ 20mADC/RS232C communication | | | | | | | B | |
| | Flow volume4 ~ 20mADC/RS485 communication | | | | | | | C | |
| | Flow volume HART output/with communication | | | | | | | D | |
| Converter figure | Square | | | | | | | | A |
| | Circular | | | | | | | | B |

Optional selection

| X | |
|---|---|
| 1 | Grounding electrode |
| 2 | Coupled flange |
| 3 | Entrance protection flange |
| 4 | Scraper type electrode |
| 5 | Other |

table 13

Caliber code table

| Caliber | code |
|---|---|
| 10 | 100 |
| 15 | 150 |
| 20 | 200 |
| 25 | 250 |
| 32 | 320 |
| 40 | 400 |
| 50 | 500 |
| 65 | 650 |
| 80 | 800 |
| 100 | 101 |
| 125 | 125 |
| 150 | 151 |
| 200 | 201 |
| 250 | 251 |
| 300 | 301 |
| 350 | 351 |
| 400 | 401 |
| 450 | 451 |
| 500 | 501 |
| 600 | 601 |
| 700 | 701 |
| 800 | 801 |
| 900 | 901 |
| 1000 | 102 |
| 1100 | 112 |
| 1200 | 122 |
| 1400 | 142 |
| 1500 | 152 |
| 1600 | 162 |
| 1800 | 182 |
| 2000 | 202 |
| 2200 | 222 |
| 2400 | 242 |
| 2600 | 262 |
| 2800 | 282 |
| 3000 | 302 |

# Clamped/sanitary electromagnetic flow meter

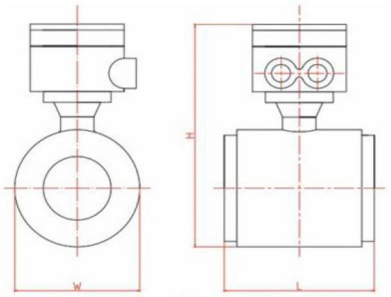
- Best accuracy: ±0.5%, ±0.2%;
- Excellent measuring accuracy to low velocity,could measure double direction flows;
- Buried sensor(IP68), no need to build measure well while installation;
- Precision coil winding technology, makes magnetic field more uniform;
- Build-in reference electrodes, no need to connect ground ring;
- Dual frequency excitation, and stable zero point;
- Self-diagnostic function, and intelligent operation;



WESDOM FLOWMETER

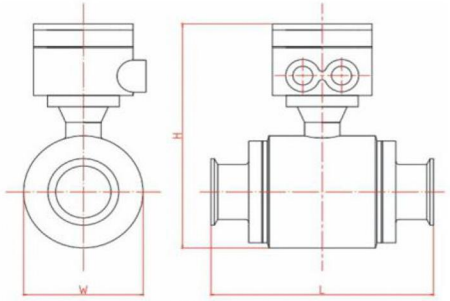
Clamped/sanitary electromagnetic flow meter

| Main Specification | |
|---|---|
| Structure type | Integral type, remote type |
| Caliber | DN25-DN200mm |
| Body material | CS,304,316L |
| Accuracy | 0.5% of the value displayed |
| Application | General type, Ex-proof type |
| Liner material | PTFE,PFA |
| Electrode material | SUS316L,HC,HB |
| Ground ring | SUS316L,HC,HB,Ti |
| Pipe connection | flange,clamp and tri-clamp |
| Min electrical conductivity | 5 μs/cm |
| Medium temperature | -20℃~+150℃ |
| Power supply | AC100~240V,DC12~36V |
| Output signal | 4~20mA,HART, MODBUS ,RS485,PROFIBUS |




Figuration of clamped type
Electromagnetic flow sensor

| Diameter | H(mm) | L(mm) | W(mm) |
|---|---|---|---|
| DN25 | 177 | 98 | 69 |
| DN32 | 186 | 98 | 78 |
| DN40 | 197 | 98 | 89 |
| DN50 | 210 | 98 | 102 |
| DN65 | 228 | 146 | 120 |
| DN80 | 240 | 146 | 132 |
| DN100 | 265 | 146 | 157 |
| DN125 | 291 | 196 | 183 |
| DN150 | 327 | 196 | 219 |
| DN200 | 369 | 220 | 261 |




Figuration of sanitary type
Electromagnetic flow sensor

| Diameter | H(mm) | L(mm) | W(mm) |
|---|---|---|---|
| DN25 | 191 | 200 | 83 |
| DN32 | 202 | 200 | 94 |
| DN40 | 202 | 200 | 94 |
| DN50 | 216 | 200 | 108 |
| DN65 | 223 | 250 | 115 |
| DN80 | 243 | 250 | 135 |
| DN100 | 267 | 250 | 159 |
| DN125 | 291 | 300 | 183 |
| DN150 | 327 | 300 | 219 |
| DN200 | 369 | 300 | 261 |

# LUGB Series Vortex Flow Meter

- Brand new digital processing calculation, enjoy excellent anti-vibration & anti-interference performance;
- Adopt built-in sensor structure,better protect the flow sensor;
- Flow sensor embedded temperature sensor, reduce the leakage point;
- Main body adopt precision casting technology, stronger swirl generating body;
- -40℃~350℃ to choose;
- Flange DIN, ANSI, JIS standard selectable;
- HART, RS485 communication to choose;
- Main body SS304, SS316 material selectable;



WESDOM FLOWMETER

LUGB Series Vortex Flow Meter

## Flow Range

Liquid and working condition gas flow range

| Nominal Diameter (mm) | Water | Normal pressure and temperature air(NPT air) |
|---|---|---|
| | Standard Measuring Range($m^3$/h) | Standard Measuring Range($m^3$/h) |
| 25 | 1.3-15 | 8-100 |
| 32 | 1.5-16 | 14-350 |
| 40 | 3-33 | 18-450 |
| 50 | 4-44 | 30-750 |
| 65 | 6-66 | 50-1250 |
| 80 | 13-140 | 70-1750 |
| 100 | 20-220 | 100-2500 |
| 125 | 36-400 | 200-5000 |
| 150 | 50-600 | 400-10000 |
| 200 | 100-1200 | 600-15000 |
| 250 | 150-1800 | 1000-25000 |
| 300 | 200-2400 | |

## Flow Sensor Model Selection

Vortex flow meter sensor model describe as: LUGB-2-X X XX-X

- Special Mark(Table 1)
- Nominal Diameter(Table 2)
- Measured Medium(Table 3)
- Connection Mode(Table 4)

Table 1: Special Mark

| Format | Common | Standard Signal Output | Intrinsically Safe Explosion-proof | On Site Display | High Temperature (350℃) | Temperature Compensation | Pressure Compensation | Temperature&Pressure Compensation |
|---|---|---|---|---|---|---|---|---|
| Mark No. | None | M | B | X | G | W | Y | Z |

Table 2: Nominal Diameter
Flange /Wafer Type

| Size | 15 | 20 | 25 | 32 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mark No. | 150 | 200 | 250 | 320 | 400 | 500 | 650 | 800 | 101 | 125 | 151 | 201 | 251 | 301 |

Insertion Type

| Size | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Mark No. | 100 | 125 | 151 | 201 | 251 | 301 | 351 | 401 | 501 | 601 | 701 | 801 | 901 | 102 | 122 | 142 | 162 | 182 | 202 |

Table 3: Measured Medium

| Measured Medium | Liquid | Common Gas | Saturated Steam | Superheated Steam | Others |
|---|---|---|---|---|---|
| Mark No. | 1 | 2 | 3 | 4 | 5 |

Table 4: Connection Mode

| Connection Mode | Flange Connection | Wafer Connection | Insertion Type | Others |
|---|---|---|---|---|
| Mark No. | 1 | 2 | 3 | 4 |

# LWGY Turbine Flow Meter

- This model turbine flow meter adopt new type sensor with lower pressure loss, starting flow is small, anti-corrosion, and with long term work life. It also have good performance on anti-seismic and surging flow;
- High accuracy, 0.5% normally, 0.2% in option;
- High repeatability, its repeatability could reach 0.05%-0.2% in short-term. So this flow meter is a good choice in trade settlement;
- This type flow meter use micro-power technology, power consumption is low. It could be powered by battery or outside power;



WESDOM FLOWMETER

LWGY Turbine Flow Meter

## Specification

| | |
|---|---|
| Carried Standard | Turbine flow sensor (JB/T9246-1999) |
| Diameter And Connection | 4, 6,10,15,20,25,32,40,50,65,80 Thread connection |
| Accuracy | ±1%R, ±0.5%R, ±0.2%R(Customized) |
| Measure Ratio | 1：10； 1：15； 1：20 |
| Sensor Material | Stainless steel 304,Stainless steel 316L,etc |
| Work Condition | Medium temperature：-20℃~+120℃ Ambient temperature：-20℃~+60℃<br>Relative humidity：5%~90% Atmosphere：86Kpa~106Kpa |
| Signal Output | Pulse,4-20mA |
| Communication | RS485,HART |
| Power Supply | Outside power supply: +24VDC±15% Ripple ≤ ± 5%,apply to 4-20mA output, pulse,RS485 communication.<br>Internal power supply: 3.0V 10AH Lithium battery,regular work when the voltage in the range of 2V-3V. |
| Cable Entry | Basic model: Houseman joint or three core cable. Explosion proof model: Internal thread M20*1.5 |
| Explosion Proof Class | ExiaIICT4 or EXDIIBT6 |
| IP Grade | IP65 or higher grade for option. |

## Measure range and work pressure

| Diameter mm | Normal Measure Range $m^3/h$ | Extended Measure Range $m^3/h$ | Acquiescent Installation Method And Stress Levels | Optional Installation Method And Stress Level | Designated Stress Level MPa |
|---|---|---|---|---|---|
| DN4 | 0.04~0.25 | 0.04~0.4 | Thread，6.3Mpa | Flange、2.5Mpa | 12、16、25 |
| DN6 | 0.1~0.6 | 0.06~0.6 | Thread，6.3Mpa | Flange、2.5Mpa | 12、16、25 |
| DN10 | 0.2~1.2 | 0.15~1.5 | Thread，6.3Mpa | Flange、2.5Mpa | 4.0、6.3、12、16、25 |
| DN15 | 0.6~6 | 0.4~8 | Thread，6.3Mpa | Flange、2.5Mpa | 4.0、6.3、12、16、25 |
| DN20 | 0.8~8 | 0.45~9 | Thread，6.3Mpa | Flange、2.5Mpa | 4.0、6.3、12、16、25 |
| DN25 | 1~10 | 0.5~10 | Thread，6.3Mpa | Flange、2.5Mpa | 4.0、6.3、12、16、25 |
| DN32 | 1.5~15 | 0.8~15 | Thread，6.3Mpa | Flange、2.5Mpa | 4.0、6.3、12、16、25 |
| DN40 | 2~20 | 1~20 | Thread，6.3Mpa | Flange、2.5Mpa | 4.0、6.3、12、16、25 |
| DN50 | 4~40 | 2~40 | Flange，2.5Mpa | Thread、6.3Mpa | 4.0、6.3、12、16、25 |
| DN65 | 7~70 | 4~70 | Flange，1.6Mpa | Thread、6.3Mpa | 4.0、6.3、12、16、25 |
| DN80 | 10~100 | 5~100 | Flange，1.6Mpa | Thread、6.3Mpa | 4.0、6.3、12、16、25 |
| DN100 | 20~200 | 10~200 | Flange，1.6Mpa | | 4.0、6.3、12、16、25 |
| DN125 | 25~250 | 13~250 | Flange，1.6Mpa | | 2.5、4.0、6.3、12、16 |
| DN150 | 30~300 | 15~300 | Flange，1.6Mpa | | 2.5、4.0、6.3、12、16 |
| DN200 | 80~800 | 40~800 | Flange，1.6Mpa | | 2.5、4.0、6.3、12、16 |

# Thermal Gas Mass Flowmeter


- Easily installation,Simple maintenance,Bidirection testing,Anti Vibration;
- Wide flow ratio 100:1;
- Large diameter small flow rate measurement,can be used for leak detection;
- Can measure the mass flow directly,no need temperature and pressure compensation;





# Thermal Gas Mass Flowmeter

| Description | Specifications |
|---|---|
| Measuring Medium | Various of gases (Except the acetylene) |
| Pipe Size | DN10~DN4000mm |
| Velocity | 0.1~100 Nm/s |
| Accuracy | ±1~2.5% |
| Working Temperature | Sensor: -40℃~+220℃ Transmitter: -20℃~+45℃ |
| Working Pressure | Insertion Sensor: medium pressure≤ 1.6MPa<br>Flanged Sensor: medium pressure≤ 1.6MPa<br>Special pressure please contact us |
| Power Supply | Compact type: 24VDC or 220VAC, Power consumption ≤18W<br>Remote type: 220VAC, Power consumption ≤19W |
| Response Time | 1s |
| Output | 4-20mA (optoelectronic isolation, maximum load 500Ω), Pulse, RS485 (optoelectronic isolation) and HART |
| Alarm Output | 1-2 line Relay, Normally Open state, 10A/220V/AC or 5A/30V/DC |
| Sensor Type | Standard Insertion, Hot-tapped Insertion and Flanged |
| Construction | Compact and Remote |
| Pipe Material | Carbon steel, stainless steel, plastic, etc |
| Display | 4 lines LCD<br>Mass flow, Volume flow in standard condition, Flow totalizer, Date and Time, Working time, and Velocity, etc. |
| Protection Class | IP65 |
| Sensor Housing Material | Stainless steel (316) |

# Handheld Ultrasonic Flow Meter

- Humanized operation interface with full keyboard;
- Support RS232 to transmit data to computer fast and easily;
- Transducer:Firmly,quick install,high performance;
- Battery powered last for over 14 hours continuous operation;
- Thickness gauge optional,thickness measurement achievable;



WESDOM FLOWMETER

Handheld Ultrasonic Flow Meter

QTDS-100H Handheld Ultrasonic Flow Meter is mainly used for industrial liquid online calibration and regular inspection measurement. With the features of high accuracy, good consistency, battery powered, easy operating and easy to carry etc. It is the real portable ultrasonic flow meter with minimum volume and light weight. Widely exported to Japan, Korea, Australia, USA etc, and received widespread praise.

- Accuracy:Better than 1%
- Repeatability:Better than 0.2%
- Power Supply:90-230VAC (built-in Ni-MH rechargeable battery lasts for over 14 hours continuous operation)
- Transducer Installation:Clamp-on,easy and convenience operating
- Display: 4 lines LCD display instantaneous flow, flow rate, accumulative flow, signal condition etc.
- Output signal: Non-isolation RS232 (FUJI extended protocol)
- Data Storage: Built-in data logger can record accumulative flow,instantaneous flow,signal condition, date etc. Use specialized software can transmit record data to computer.
- Other Function: Support self-diagnosis can indicate current working status is normal or not

## Transducer Parameter

| Parameter | Standard HS | Standard HM | Standard S2 | Standard M2 | Standard L2 |
|---|---|---|---|---|---|
| Pipe Size (mm) | 15~100 | 50~700 | 15~100 | 50~700 | 300~6000 |
| Material | Aluminum alloy | | Plastic alloy | | |
| Working frequency | 1MHz | | | | |
| Installation Method | V(N,W) | V,Z | V(N,W) | V,Z | Z |
| Calibration | Complete set actual process liquid flow calibration | | | | |
| Magnet | Built-in magnet in transducers | | | | |
| Applicable Temperature | 0℃~160℃ | | | | |
| Protection | IP65 | | | | |
| Dimension(mm) | 200x25x25 | 280x40x40 | 45x30x30 | 71x37x40 | 91x52x44 |
| Weight(g) | 250 | 1080 | 75 | 259 | 535 |
| Medium | Water, salt water, sewage water, alcohol, various oil and other single, uniform, stable liquid which can transmit ultrasonic wave | | | | |
| Medium Turbidity | ≤20000ppm and with less air bubbles | | | | |
| Applicable Pipeline | Carbon steel, stainless steel, cast iron, copper, aluminum, FRP and other uniform pipeline ,liner is allowable | | | | |
| Liner Material | Epoxy asphalt, rubber, mortar, polypropylene, polystyrene, bakelite, PTFE etc. | | | | |
| Signal Cable | Standard:5m *2 (Optional:10m*2 or 15m*2) | | | | |

# Fixed Type Ultrasonic Flow Meter

- Dynamic response speed:0.004s;
- DPS digital signal processing technology, high anti-interference ability;
- Time resolution 10ts;
- High accuracy flow measurement, accuracy can be 0.5% class;
- Flexible English display transmitter, diversified transducers can achieve different industrial sites;
- Heat and cold measurement;
- Circuit board welding adopt international advanced SMD automatic welding process;
- CNC precision machining aluminium alloy housing material;





# Fixed Type Ultrasonic Flow Meter

QTDS-100 Series Fixed Type Ultrasonic Flow Meter is widely used for online flow measurement of various industrial liquid. Transmitter type: wall mounted A type, wall mounted B type, wall mounted explosion type, Panel type, local display type (F4 type transmitter) and module type; Transducer type: clamp-on, insertion and pipeline type.

- Accuracy:Better than 1%;Repeatability:better than 0.2%
- Measurement period:500ms(2 times/second,every period collect 128 group data)
- Max Flow Velocity: 64m/s (velocity resolution 0.001m/s)
- Display: 2*10 English backlight LCD can display instantaneous flow and positive, negative, net accumulative flow, flow velocity etc
- Operation: 4*4 touch keyboard operation (F4 transmitter magnetic buttons)
- Input Signal: Three way 4-20mA analog input,accuracy up to 0.1%
  Can input pressure,level,temperature and other signal
  Two way three-wire PT100 temperature sensor
- Data Storage: Optional built-in data logger (SD card) can record date, instantaneous flow, accumulative flow, signal condition etc. Can import data by special software to computer which is convenient for statistics and management
- Communication Protocol: MODBUS, M-BUS, FUJI Extension Protocol, and compatible with some other similar products, protocol made by other China manufacturers
- Other Function:
  - ♦ Automatically record positive/negative/net accumulative flow of the past 512 days, the past 128months and the past 10years
  - ♦ Automatically record on/off power and flow rate of the last 30times and can achieve add the flow rate automatically or manually, read by MODBUS protocol
  - ♦ Can program batch (quantitative) controller,with self-diagnosis function
  - ♦ Can achieve software update by code file sent via Email

## Sensor introduction

- Medium:Water, sea water, sewage, alcohol, all kinds of oil and other single, uniform, stable liquid which can transmit ultrasonic wave
- Viscosity: ⩽20000ppm with less bubble
- Pipe Material:Carbon steel, stainless steel, cast iron, copper, PVC, aluminum, FRP and other uniform pipeline, liner is allowable
- Pipe Liner Material: Epoxyasphalt ,rubber, slurry, polypropylene, polystyrene, bakdlite, ptfe etc
- Signal Cable: SEYV75-2 type special shielded cable, single line can be lengthened to 500m, metal sleeve is needed when cabling to increase anti-interference performance, please noted cable shouldn't parallel with the high tension line, and should avoid the frequency converter or other interference sources.

# QTCMF Mass Flow Meter

- Matching QTCMF intelligent sensor,HART,MODBUS,RS485 output are optional;
- New double bend Coriolis mass flow meter, suitable for liquid and gas;
- High temperature:200℃/380° F;
- Material of measuring pipe:SS316;
- Material of shell:SS304;



WESDOM FLOWMETER

QTCMF Mass Flow Meter

## QTCMF series Mass flow sensor catalog selection

QTCMF-□□□-□-□□-□□□-□

- Flange specification(thread specification) converter connection method
- Flange standard:JB(thread standard:M, G, NPT etc.)
- Series: B standard type, J economic type, T special type,JIS DIN ANSI
- Caliber:DN10-DN200mm
- Qingtian instrument Coriolis mass flow sensor

## Technical parameter of sensor

| Model | Caliber (mm) | Flow Range (kg/h) |
|---|---|---|
| QTCMF-006 | 6 | 0~900~1000 |
| QTCMF-010 | 10 | 0~1800~2100 |
| QTCMF-015 | 15 | 0~3600~4500 |
| QTCMF-020 | 20 | 0~6000~7200 |
| QTCMF-025 | 25 | 0~9600~12000 |
| QTCMF-032 | 32 | 0~18000~21000 |
| QTCMF-040 | 40 | 0~30000~36000 |
| QTCMF-050 | 50 | 0~48000~60000 |
| QTCMF-080 | 80 | 0~150000~180000 |
| QTCMF-100 | 100 | 0~240000~280000 |
| QTCMF-150 | 150 | 0~480000~600000 |
| QTCMF-200 | 200 | 0~900000~1200000 |

# 26GHZ RADAR LEVEL METER

**901**

Application： All kinds of corrosive liquid
Measuring Range：10 meters
Process Connection： Thread, Flange
Medium Temperature： –40℃ ~ 130℃
Process Pressure： –0.1~0.3 MPa
Accuracy： ± 5mm
Protection Grade：IP67
Frequency Range： 26GHz
Signal Output：4... 20mA/HART (Two–wire / Four)
RS485/ Modbus
Explosion–proof Grade： Exia Ⅱ C T6 Ga
Exd ia Ⅱ C T6 Gb

**902**

Application：Liquid
Measuring Range：30 meters
Process Connection：Thread, Flange
Medium Temperature：–40℃ ~ 250℃
Process Pressure：–0.1 ~ 4.0 MPa
Accuracy： ± 3mm
Protection Grade：IP67
Frequency Range： 26GHz
Signal Output：4... 20mA/HART (Two–wire / Four)
RS485/ Modbus
Explosion–proof Grade： Exia Ⅱ C T6 Ga
Exd ia Ⅱ C T6 Gb





26GHZ RADAR LEVEL METER

**903**

Application：Solid material, Strong dust
easy to crystallize, condensation occasion
Measuring Range： 70 meters
Process Connection：Universal Flange
Medium Temperature： –40℃ ~ 250℃
Process Pressure： –0.1 ~ 0.1 MPa
Protection Grade： IP67
Accuracy： ± 15mm
Frequency Range：26GHz
Signal Output：4... 20mA/HART (Two–wire / Four)
RS485/ Modbus
Explosion–proof Grade：Exia Ⅱ C T6 Ga
Exd ia Ⅱ C T6 Gb

**904**

Application：Solid material, Strong dust,
easy to crystallize, condensation occasion
Measuring Range：80 meters
Process Connection：Universal Flange
Medium Temperature： –40℃ ~ 250℃
Process Pressure：–0.1 ~ 0.1MPa
Accuracy： ± 15mm
Protection Grade：IP67
Frequency Range：26GHz
Signal Output：4... 20mA/HART (Two–wire / Four)
RS485/ Modbus
Explosion–proof Grade：Exia Ⅱ C T6 Ga
Exd ia Ⅱ C T6 Gb

# 26GHZ RADAR LEVEL METER

**905**

Application：Solid particles, Powder
Measuring Range：30 meters
Process Connection：Thread, Flange
Medium Temperature：-40℃ ~ 250℃
Process Pressure：-0.1 ~ 4.0MPa (Flat flange)
-0.1 ~ 0.1MPa (Universal Flange)
Accuracy：± 10mm
Protection Grade：IP67
Frequency Range：26GHz
Signal Output：4... 20mA/HART (Two-wire / Four)
RS485/ Modbus
Explosion-proof Grade：Exia Ⅱ C T6 Ga
Exd ia Ⅱ C T6 Gb

**906**

Application：Hygienic liquid storage,
Corrosive container
Measuring Range：20 meters
Process Connection：Flange
Medium Temperature：-40℃ ~ 150℃
Process Pressure：-0.1 ~ 0.1MPa
Accuracy：± 3mm
Protection Grade：IP67
Frequency Range：26GHz
Signal Output：4... 20mA/HART (Two-wire / Four)
RS485/ Modbus
Explosion-proof Grade：Exia Ⅱ C T6 Ga
Exd ia Ⅱ C T6 Gb





26GHZ RADAR LEVEL METER

**908**

Application：River,Lake,Shallow water
Measuring Range：30 meters
Frequency Range：26GHz
Process Temperature ( -40 ~ 100 ) ℃
Measurement Precision：±3mm
Process Pressure：Normal Pressures
The signal Output：RS485/MODBUS
The Scene Display：Four LCD/can be
programmed(Optional)
Power source：DC(6-24V) Four wire
Shell：Aluminum/Plastic
Process Connection：Thread G1 1/2"A/Bracket/Flange
Protection Grade：IP67 / IP65

**909**

Application：River,Lake,Shallow water
Measuring Range：70 meters
Frequency Range：26GHz
Process Temperature：( -40 ~ 100 ) ℃
Measurement Precision：±3mm
Process Pressure：Normal Pressures
The signal Output：RS485/MODBUS
The Scene Display：Four LCD/can be
programmed(Optional)
Power source：DC(6-24V) Four wire
Shell：Aluminum/Plastic
Process Connection：Thread G1 1/2"A/Bracket/Flange
Protection Grade：IP67 / IP65

# COMPACT VERSION ULTRASONIC LEVEL METER

Summary:

Integrated ultrasonic level meter electronics unit and the ultrasonic probe integrated in one, usually installed in the upper container, compact structure,easy to install and maintain. Its probe can customize ABS or PTFE or PVC material,and applying patented smart echo processing technology, can effectivelyand reliably deal with a echo, widely used in various industrial fields.

QTUL series integrated ultrasonic level meter is fully functional.

Advantages

1. Ease of installation, operation and maintenance
2. The ultrasonic probe with PVC or PTFE material, adapt to a variety ofcorrosive conditions, sanitary optional.
3. The patented smart echo processing technology to ensure accuracy and stability
4. The patented ultrasonic probe acoustically transparent structure, low blind, high-sensitivity built-in full range of automatic temperature compensation
5. Continuous level measurement, the maximum range of up to 40 meters
6. Hart, MODBUS protocol communication optional
7. Hart agreement in line with V7.1 version and has been approved by laboratory tests hart foundation
8. Can be customized according to customers' demands





# TWO-WIRE ULTRASONIC L EVEL METER

QTUL Two-wire ultrasonic level meter supply (DC24V) and signal output (DC4-20mA) share a circuit with only two cores can be, as the standard form of the transmitter, which provides digital communications protocol standard conform HART7.1, and has been leading technology through HART Foundation approved laboratory tests.

Technical parameters

| | | |
|---|---|---|
| Range QTULR–4: | 0.00 ~ 4.00m | Blind 0.20m |
| QTULR–6: | 0.00 ~ 6.00m | Blind 0.25m |
| QTULR–8: | 0.00 ~ 8.00m | Blind 0.30m |
| QTULR–12: | 0.00 ~ 12.00m | Blind 0.50m |
| QTULR–20: | 0.00 ~ 20.00m | Blind 0.80m |
| QTULR–30: | 0.00 ~ 30.00m | Blind 1.20m |

Note: the above for level gauge range, effective range of solid material level for 50% of the liquid level

Accuracy: 0.2% FS air, calm surface, standard signal strength.

Output current: DC4-20mA (HART, optional)

Output: DC4-20mA proportional or inverse ratio

Output load: 0-500 Ω

The output resolution: 0.03% of the actual range

Display mode: Four LCD

Display resolution: QTULR-4, QTULR-6, QTULR-8 1mm
QTULR-12, QTULR-20, QTULR-30,QTULR-40 1cm

Input power: DC24-32V, 30 mA

Temperature compensation: Full range of auto

Medium temperature: - 40~+75℃ (LCD: -20~+70℃)

Pressure range: Plus or minus 0.1 MPa

The sound beam Angle: 8 °

Testing cycle: 1.5 S adjustable

Parameter Settings: Three inductive buttons

Electrical interface: PG13.5/M20*1.5/ 1/2 NPT

Cable diameter: ϕ6 ~ 12mm

Shell material: ABS/ Die Cast Aluminum

Sensor material: ABS/PVC/PTFE

Protection level: IP67

Installation method: Thread / Flange / Bracket

# REMOTE VERSION ULTRASONIC LEVEL METER

## Summary

The main unit and the sensor are separated,and the ultrasonic level meter is usually installed on the upper part of the container,and installation position for the main unit is according to the actual requirement for setting and scan.

## Advantage

1.The sensor is easy to be installed,and the installation position of the main unit is flexible.
2.The main unit can realize the multi-point measurement,multi-point alarm,multiple communication.
3.Patented intelligent echo processing technology to ensure accuracy and stability.
4.Patented sensor technology make the sonic pass through sensor easily,provide the min blind zone and high sensitivity.
5.The sensor could equip with PTFE or PVC material which could apply to a variety of working conditions, health optional.
6.The length of the wire between sensor and main unit could be 1000 meters,anti-interference.
7.Eelctronic-heat sensor could be choosed to resist low temperature.
8.Solar power supply,signal wireless transmission scheme.(optional)
9.It also can be customized according to customers' demands.






# STANDARD TYPE ULTRASONIC LEVEL METER

QTUL–F type ultrasonic level meter
Technical parameters
Range:0 ~ 40m
Accuracy:0.2%FS
Display resolution:1mm/1cm
Display:4 bit LCD or 6 bit LCD
Output current: DC4-20 mA

Output load: 0-500 Ω
Switch output:high point and low point relay
Relay specification:5A250VAC/30VDC
Serial communication:RS485 standard,modbus optional
Baud rate:19200/9600/4800
Medium temperature:–40℃ ~ +75℃
Detection cycle:.5S adjustable
Power supply:DC21–27V,0.1A
AC85–265V,0.05A
Parameter Settings:three inductive buttons
Electrical interface:PG13.5/M20*1.5
Shell material:ABS
Protection class:IP67
Dimension:170*100*70mm
Installation method:wall–mounted type

# ULTRASONIC SENSOR

Small range

Large range

Electric heating

QTUL ultrasonic sensor has been granted lots of patents, a variety of measurement range, a variety of materials available,can provide the the cold area with electric heating sensor, adapt to different application environment,can be customized according to customers's special requirements. The sensor allows max cable length is 1000 meters,super-strong anti-interference.

Technical parameters

| | | |
|---|---|---|
| Range | QTULR-4:0.00 ~ 4.00m | Blind zone 0.20m |
| | QTULR-6:0.00 ~ 6.00m | Blind zone 0.25m |
| | QTULR-8:0.00 ~ 8.00m | Blind zone 0.30m |
| | QTULR-12:0.00 ~ 12.00m | Blind zone 0.50m |
| | QTULR-20:0.00 ~ 20.00m | Blind zone 0.80m |
| | QTULR-30:0.00 ~ 30.00m | Blind zone 1.20m |
| | QTULR-40:0.00 ~ 40.00m | Blind zone 1.50m |

Note: The above for the liquid level range, the effective range of solid level is 50% of the liquid level.

Accuracy: 0.2% FS air, still surface, standard signal strength.
Medium temperature: -40℃ ~ +75℃
Temperature compensation: automatic
Pressure range: ±0.1 MPa
The sound wave angle: 8 °
Testing cycle: 1.0 S adjustable
Sensor material: ABS/PVC/PTFE
Protection class: IP68
Corrosion resistance: anticorrosive
The sensor with cable length: 10 meters standard,
can be lengthened to 1000 meters
Installation of cold regions: sensor prolonged or electric heating.
Installation method: thread / flange / bracket





# ULTRASONIC LIQUID LEVEL GAUGE QTUL

**QTUL** Model

| | |
|---|---|
| A | 2-wire series,compact version |
| B | 3-wire series,compact version |
| C | RS485 series,compact version |
| D | 4-wire series,compact version |
| E | ExiaIICT6 2-wire series,intrinsically safe explosion-proof,ExiaIICT6 |
| F | Standard series,remote version |
| G | Multi-functional series,remote version |
| H | Difference-level meter series,remote version |

Housing material

| | |
|---|---|
| L | Aluminum |
| J | Plastic |

Range

| | |
|---|---|
| 4 | 0-4m |
| 6 | 0-6m |
| 8 | 0-8m |
| 12 | 0-12m |
| 20 | 0-20m |
| 30 | 0-30m |
| 40 | 0-40m |

Sensor material

| | |
|---|---|
| K | ABS&PVC |
| L | PTFE |

Process connection

| | | |
|---|---|---|
| 1 | G1$^{1/2}$Thread | Only range 6 meters optional |
| 2 | G2 Thread | Only range 8meters optional |
| 3 | DN50Flange | Only range 6 meters optional |
| 4 | DN65Flange | Only range 8 meters optional |
| 5 | DN80Flange | Only range 12 meters optional |
| 6 | DN100Flange | All range |
| 7 | DN150Flange | All range |
| 8 | DN200Flange | All range |

Output signal and communication

DC4-20mA current
Two DC4-20mA electric current, liquid level difference and double point liquid level gauge
C1 RS485-Hilevel
C2 RS485-Modbus
C3 Profibus-DP
C4 Hart

Switch output

| | |
|---|---|
| 2 | 2 SPDT |
| 4 | 4 SPDT |
| 6 | 6 SPDT |

Power supply

| | |
|---|---|
| D | DC24V |
| A | AC220V |

Complete product designation

# OPEN CHANNEL ULTRASONIC FL ow METER

**Main Unit Technical Parameter**

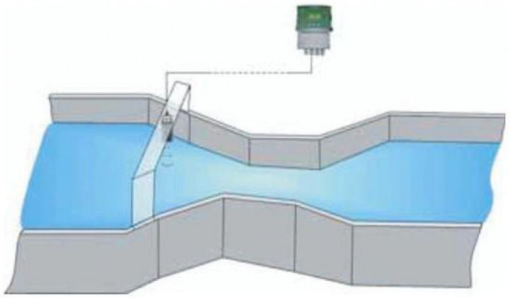
Weir Type: Parshall Flume, Rectangular weir,Triangular weir(30 degrees,45 degrees,60 degrees,90 degrees)
Liquid Level Resolution:1 mm
Level Deviation:1mm or 0.2% of full range (peaceful water surface)
Display Mode: Two lines with 14 digit LCD display
Parameter Setting Mode:3 digit button (Handheld Operator optional)
Instantaneous Flow Display Range:0.000~99999 L/S or m3/h
Accumulative Flow Display Max Value: 9999999.9 m3/h
Analog Signal Output: One channel DC4–20mA current output,correspond to instantaneous flow
Load Resistance:0–500 Ohm
Digital Communication: RS485 serial communication, Standard MODBUS–RTU protocol
Relay Output: Upper limit, Lower limit alarm and control (instantaneous flow and level)
Accumulative Flow Pulse Output
Can set high/low level and error alarm etc.
Relay Mode:Open/Close (can be set)
Relay Number: max 6
Relay Specification:5A 250VAC/30VDC
Power Supply:DC24V (+/–5%) 0.2A
AC220V (+/–20%) 0.1A
Measurement Cycle:1 second (adjustable)
Ambient Temperature: –40~+70 deg C
Housing Material:ABS
Housing Protection: IP67
Cable Entry:PG9/PG11/PG13.5
Installation: wall mounted
Dimension:250*185*125mm

Ultrasonic Level Sensor Technical Parameter
Range:0.00–4.00m (liquid level)
Blind zone: 0.20m
Ambient temperature :–40~+70 deg C
Housing Protection:IP68
Housing Material:ABS/PVC/PTFE

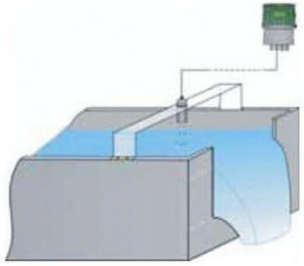




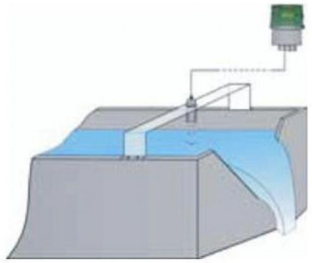
# INSTALL ATION DIA GRAM



Parshall flume



Rectangular weir



Triangular weir

## SELECTION DATA TABLE

**QTUF**

Power supply

a AC220V(±5%)
b DC24V(±20%)
c Other

Signal Output

1 4–20mA
2 RS485–MODBUS Protocol
3 4–20mA & RS485–MODBUS Protocol

Relay output

RO None
RX X stands for the number of Relay,max number is 6

Main protective box

0 None
1 With Protected Box

# GUIDED WAVE RADARL EVEL METER

701

| | |
|---|---|
| Suitable for Medium | Liquid, solid powder |
| Application | Liquid and solid powder measure, complicated process conditions |
| Explosion–proof Grade | Exia IIC T6 Ga/Exd ia IIC T6 Gb |
| Measuring Range | 30 meters |
| Frequency | 500MHz–1.8GHz |
| Antenna | Single cable or single rod antenna |
| Process Temperature | (–40 ~ 250 ) ℃ |
| Measurement Precision | ± 10mm |
| Process Pressure | (–0.1 ~ 4)MPa |
| The signal Output | (4 ~ 20) mA/HART |
| The Scene Display | Four LCD/can be programmed |
| Power Source | Two wire(DC24V)<br>Four wire(DC24V/AC220V) |
| Shell | Aluminum/Plastic |
| Connection | Flange(optional)/Thread |

702

| | |
|---|---|
| Suitable for Medium | Liquid, especially corrosive liquids |
| Application | Acids, bases or other corrosive media |
| Explosion–proof Grade | Exia IIC T6 Ga/Exd ia IIC T6 Gb |
| Measuring Range | 20 meters |
| Frequency | 500MHz–1.8GHz |
| Antenna | Full PTFE sealing cable type or rod antenna |
| Process Temperature | (–40 ~ 200 ) ℃ |
| Measurement Precision | ± 10mm |
| Process Pressure | (–0.1 ~ 4)MPa |
| The signal Output | (4 ~ 20) mA/HART |
| The Scene Display | Four LCD/can be programmed |
| Power Source | Two wire(DC24V)<br>Four wire(DC24V/AC220V) |
| Shell | Aluminum/Plastic |
| Connection | Flange(optional)/Thread |





GUIDED WAVE RADARL EVEL METER

703

| | |
|---|---|
| Suitable for Medium | Solid powder |
| Application | Cement silo powder measure; Ash powder measure |
| Explosion–proof Grade | Exia IIC T6 Ga/Exd ia IIC T6 Gb |
| Measuring Range | 30 meters |
| Frequency | 500MHz–1.8GHz |
| Antenna | Double cable type antenna |
| Process Temperature | (–40 ~ 150 ) ℃ |
| Measurement Precision | ± 10mm |
| Process Pressure | (–0.1 ~ 4)MPa |
| The signal Output | (4 ~ 20) mA/HART |
| The Scene Display | Four LCD/can be programmed |
| Power Source | Two wire(DC24V)<br>Four wire(DC24V/AC220V) |
| Shell | Aluminum/Plastic |
| Connection | Flange(optional)/Thread |

704

| | |
|---|---|
| Suitable for Medium | Liquids,particularly low dielectric constant liquid |
| Application | Measuring deionized water,deoxygenated water and other liquids |
| Explosion–proof Grade | Exia IIC T6 Ga/Exd ia IIC T6 Gb |
| Measuring Range | 6 meters |
| Frequency | 500MHz–1.8GHz |
| Antenna | Coaxial tube type antenna |
| Process Temperature | (–40 ~ 250 ) ℃ |
| Measurement Precision | ± 5mm |
| Process Pressure | (–0.1 ~ 4)MPa |
| The signal Output | (4 ~ 20) mA/HART |
| The Scene Display | Four LCD/can be programmed |
| Power Source | Two wire(DC24V)<br>Four wire(DC24V/AC220V) |
| Shell | Aluminum/Plastic |
| Connection | Flange(optional)/Thread |