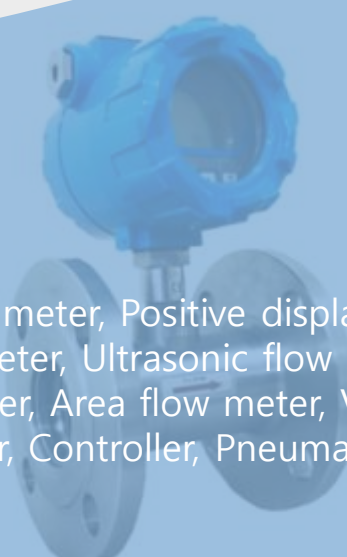


fine **flow**

FLOWMETERS ALL YOU NEED



Digital turbine flow meter, Positive displacement flow meter, Electromagnetic flow meter, Ultrasonic flow meter, Mass flow meter, Coriolis mass flow meter, Area flow meter, Vortex flow meter, Oval gear flow meter, Controller, Pneumatic valve, Pump

H&L GLOBAL GROUP

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| 3~10 | Digital turbine flowmeters |
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| 17~22 | Positive displacement flow meter |
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H2 SERIES DIGITAL TURBINE FLOW METERS



Model No. : H2S-E
Model Type : Stainless steel



Model No. : H2S-E
Model Type : Stainless steel



Model No. : H2S-E
Model Type : Stainless steel



Model No. : H2S-E
Model Type : Stainless steel



Model No. : H2S-E
Model Type : Stainless steel



Model No. : H2S-E
Model Type : Stainless steel



Model No. : H2S-E
Model Type : Stainless steel

H2 SERIES DIGITAL TURBINE FLOW METERS



H2S stainless steel meters are available in a variety of materials, fitting sizes, and flow ranges. Applications include most chemicals, ammonium, plating solutions and fuel products.

Model No. : H2S-E

Model Type : Stainless steel

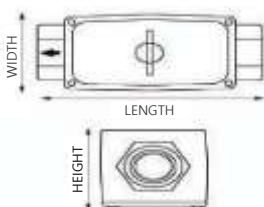
Features :

- Measurement for Chemical Industries.
- High accuracy & repeatability
- Easy to read LCD Back-light.
- Specific Gravity Correction (0.01-2.00)
- Display: Accumulated amount reset, accumulated flow display, instantaneous flow rate display, gallon or liter unit change, automatic integration
- Compact & Light weight
- Battery life: 4-5 years
- LCD auto on and off function

GENERAL SPECIFICATIONS

| | | |
|------------------------------------|---------------------------------|--------------------------------|
| Housing Material | Stainless steel 316 or Aluminum | |
| Meter Size Available | 1/2", 3/4", 1", 1-1/2", 2" | |
| Flow Range | 1.2" | 3.8 ~ 56.8 LPM (1 ~ 10 GPM) |
| | 3/4" | 7.6 ~ 113.6 LPM (2 ~ 20GPM) |
| | 1" | 18.9 ~ 284 LPM (5 ~ 50 GPM) |
| | 1-1/2" | 38.0 ~ 568 LPM (10 ~ 100 GPM) |
| | 2" | 76.0 ~ 1,136 LPM (2 ~ 200 GPM) |
| Accuracy | ±0.5% | |
| Repeatability | ±0.1% | |
| Pressure Rating | Stainless steel | 102 bar (1,500 psi) |
| | Aluminum | 21 bar (300 psi) |
| Operating Temperature | -40°C ~ +121°C | |
| Operating Temperature with Display | -10°C ~ +60°C | |
| Materials | Housing | Stainless steel or Aluminum |
| | Bearing | Ceramic |
| | Shaft | Tungsten Carbide |
| | Rotor | PVDF |
| | Rings | Stainless steel 316 |

Dimensions (mm / inches)



| Sizes | Length | Height | Width |
|--------|-----------|----------|----------|
| 1/2" | 107 / 4.2 | 46 / 1.8 | 51 / 2.0 |
| 3/4" | 109 / 4.3 | 51 / 2.0 | 51 / 2.0 |
| 1" | 114 / 4.5 | 56 / 2.2 | 51 / 2.0 |
| 1-1/2" | 135 / 5.3 | 71 / 2.8 | 68 / 2.7 |
| 2" | 160 / 3.6 | 81 / 3.2 | 84 / 3.3 |

H2 SERIES DIGITAL TURBINE FLOW METERS



The H2 Stainless Steel meters with sanitary clamp type can be used in in preprocess applications in food and beverage industries.

Model No. : H2S-SC

Model Type : Sanitary Clamp Type

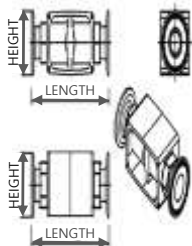
Features :

- Sanitary clamp type stainless steel
- High accuracy & repeatability
- Easy-to-read LCD Back-light.
- Specific Gravity Correction (0.01~2.00)
- Display: Accumulated amount reset, accumulated flow display, instantaneous flow rate display, gallon or liter unit change, automatic integration
- Compact & Light weight
- Battery life: 4-5 years
- LCD auto on and off function

GENERAL SPECIFICATIONS

| | | |
|------------------------------------|----------------------------|---------------------|
| Fitting Type | Sanitary Clamp | |
| Housing Material | Stainless steel 316 | |
| Meter Size Available | 1/2", 3/4", 1", 1-1/2", 2" | |
| Repeatability | ±0.1% | |
| Pressure Rating | 102 bar (1,500 psi) | |
| Operating Temperature | -40°C ~ +121°C | |
| Operating Temperature with Display | -10°C ~ +60°C | |
| Materials | Housing | Stainless steel 316 |
| | Bearing | Ceramic |
| | Shaft | Tungsten Carbide |
| | Rotor | PVDF |
| | Rings | Stainless steel 316 |

Dimensions (mm / inches)



| Model | Length | Height | Width |
|----------|-----------|----------|----------|
| H2S-05SC | 107 / 4.2 | 46 / 1.8 | 51 / 2/0 |
| H2S-07SC | 109 / 4.3 | 51 / 2.0 | 51 / 2.0 |
| H2S-10SC | 114 / 4.5 | 56 / 2.2 | 51 / 2.0 |
| H2S-15SC | 135 / 5.3 | 71 / 2.8 | 68 / 2.7 |
| H2S-20SC | 160 / 3.6 | 81 / 3.2 | 84 / 3.3 |

H2 SERIES DIGITAL TURBINE FLOW METERS



H2 stainless steel meter available with a variety of flanges can be quickly installed in-line. Choose Flange ANSI#150,300, JIS 10K, 20K, 40K, DIN PN 16bar, 25bar, 40bar.

Model No. : H2S-F
Model Type : Flange Type

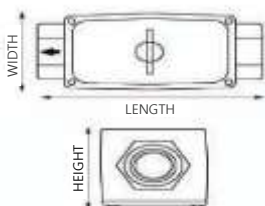
Features :

- Measurement for Chemical Industries
- High accuracy & repeatability
- Easy-to-read LCD Back-light.
- Specific Gravity Correction (0.01~2.00)
- Display: Accumulated amount reset, accumulated flow display, instantaneous flow rate display, gallon or liter unit change, automatic integration
- Compact & Light weight
- Battery life: 4-5 years
- LCD auto on and off function

GENERAL SPECIFICATIONS

| | | |
|------------------------------------|---|---------------------|
| Fitting Type | ANSI#150,300, JIS 10K, 20K, 40K, PN 16bar, 40bar. | |
| Housing Material | Stainless steel 316 | |
| Meter Size Available | 1/2", 3/4", 1", 1-1/2", 2" | |
| Repeatability | ±0.1% | |
| Pressure Rating | 102 bar (1,500 psi) | |
| Operating Temperature | -40°C ~ +121°C | |
| Operating Temperature with Display | -18°C ~ +60°C | |
| Materials | Housing | Stainless steel 316 |
| | Bearing | Ceramic |
| | Shaft | Tungsten Carbide |
| | Rotor | PVDF |
| | Rings | Stainless steel 316 |

Dimensions (mm / inches)



| Model | Length | Height | Width |
|---------|-----------|----------|----------|
| H2S-05F | 107 / 4.2 | 46 / 1.8 | 51 / 2.0 |
| H2S-07F | 109 / 4.3 | 51 / 2.0 | 51 / 2.0 |
| H2S-10F | 114 / 4.5 | 56 / 2.2 | 51 / 2.0 |
| H2S-15F | 135 / 5.3 | 71 / 2.8 | 68 / 2.7 |
| S20F | 160 / 3.6 | 81 / 3.2 | 84 / 3.3 |

H1 SERIES (Economy type) DIGITAL TURBINE FLOW METERS



H2 stainless steel meter available with a variety of flanges can be quickly installed in-line. Choose Flange ANSI#150,300, JIS 10K, 20K, 40K, DIN PN 16bar, 25bar, 40bar.

Model No. : H1

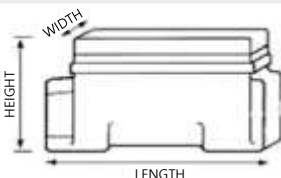
Model Type : Economy Aluminum Type

Features :

- A unique package that combines a turbine and LCD into a compact meter independently and economically
- Light and compact design, easy to install
- Easy-to-read LCD Back-light.
- Specific Gravity Correction (0.01~2.00)
- Display: Accumulated amount reset, accumulated flow display, instantaneous flow rate display, gallon or liter unit change, automatic integration
- Battery life: 4-5 years
- LCD auto on and off function

GENERAL SPECIFICATIONS

| | | |
|------------------------------------|---------------------------|---------------------|
| Design Type | Turbine | |
| Housing Material | Aluminum | |
| Fitting Size | 1 inch | |
| Fitting Type | NPT | |
| Accuracy | ±0.5 of reading | |
| Repeatability | ±0.2% | |
| Flow Range (LPM) | 11~190 LPM (Max. 250 LPM) | |
| Flow Range (GPM) | 3~50 GPM (Max. 66 GPM) | |
| Pressure Rating | 21 bar (300 psi) | |
| Operating Temperature | -40°C ~ +121°C | |
| Operating Temperature with Display | -18°C ~ +60°C | |
| Materials | Housing | Stainless steel 316 |
| | Bearing | Ceramic |
| | Shaft | Tungsten Carbide |
| | Rotor | PVDF |
| | Rings | Stainless steel 316 |
| Wrench Flat Size | 28 mesh | |
| Weight | 0.61 Kg (1.35 lbs) | |
| Dimensions (mm / inches) | | |



| | |
|--------|---------------------|
| Model | H100 |
| Length | 102 mm (4.0 inches) |
| Height | 63 mm (2.5 inches) |
| Width | 51 mm (2.0 inches) |

H2 SERIES DIGITAL TURBINE FLOW METERS



H2A Aluminum Meters are designed to be compact & light weight. Applications are best suitable for petroleum based products. F2A Series are available to ISP or NPT fittings.

Model No. : H2A-E

Model Type : Aluminum Type

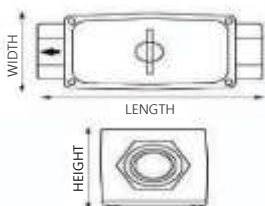
Features :

- Small turbine flow meter with strong durability by high pressure
- Easy-to-read LCD Back-light.
- Specific Gravity Correction (0.01~2.00)
- Display: Accumulated amount reset, accumulated flow display, instantaneous flow rate display, gallon or liter unit change, automatic integration
- Compact & Light weight
- Battery life: 4-5 years
- LCD auto on and off function

GENERAL SPECIFICATIONS

| | | |
|------------------------------------|----------------------------|---------------------|
| Fitting Type | NPT or ISO)Female) | |
| Housing Material | Aluminum | |
| Meter Size Available | 1/2", 3/4", 1", 1-1/2", 2" | |
| Repeatability | ±0.1% | |
| Pressure Rating | 21 bar (300 psi) | |
| Operating Temperature | -40°C ~ +121°C | |
| Operating Temperature with Display | -18°C ~ +60°C | |
| Materials | Housing | Stainless steel 316 |
| | Bearing | Ceramic |
| | Shaft | Tungsten Carbide |
| | Rotor | PVDF |
| | Rings | Stainless steel 316 |

Dimensions (mm / inches)



| Model | Length | Height | Width |
|--------|-----------|----------|----------|
| H2A-05 | 107 / 4.2 | 46 / 1.8 | 51 / 2.0 |
| H2A-07 | 109 / 4.3 | 51 / 2.0 | 51 / 2.0 |
| H2A-10 | 114 / 4.5 | 56 / 2.2 | 51 / 2.0 |
| H2A-15 | 135 / 5.3 | 71 / 2.8 | 68 / 2.7 |
| H2A-20 | 160 / 3.6 | 81 / 3.2 | 84 / 3.3 |

H2 SERIES DIGITAL TURBINE FLOW METERS



Model No. : H2S-SE
Model Type : Separation Type
Features :

- Connector : Hubble PG7
- Signal Type: Open Collector (NPN)
- Power : External 9 to 36 Vdc, approx. 1mA
- Connection: Three wires or two
- Frequency: 0 to 750 Hz
- Cable: 3m (10ft), Belden#9636

Module provides unscaled, amplified, digital signal capable of transmission up to 5,000 ft. There is no need for additional signal conditioning or amplification devices to achieve the desired digital signal. Use on F2 "Turbine Only" model.

This Module is factory assembled or Open Collector signal output and operates from an external 9 to 35 volts power source. By changing terminal connections and adding a battery kit, the module provides a self-powered 6-volt Square Wave Signal.

GENERAL SPECIFICATIONS

| | | |
|------------------------------------|---------------------------------|--------------------------------|
| Housing Material | Stainless steel 316 or Aluminum | |
| Meter Size Available | 1/2", 3/4", 1", 1-1/2", 2" | |
| Flow Range | 1/2" | 3.8 ~ 56.8 LPM (1 ~ 10 GPM) |
| | 3/4" | 7.6 ~ 113.6 LPM (2 ~ 20GPM) |
| | 1" | 18.9 ~ 284 LPM (5 ~ 50 GPM) |
| | 1-1/2" | 38.0 ~ 568 LPM (10 ~ 100 GPM) |
| | 2" | 76.0 ~ 1,136 LPM (2 ~ 200 GPM) |
| Accuracy | ±0.5% | |
| Pressure Rating | 21 bar (300 psi) | |
| Operating Temperature | -40°C ~ +121°C | |
| Operating Temperature with Display | -18°C ~ +60°C | |
| Materials | Housing | Stainless steel 316 |
| | Bearing | Ceramic |
| | Shaft | Tungsten Carbide |
| | Rotor | PVDF |
| | Rings | Stainless steel 316 |
| Repeatability | ±0.1% | |

H2 SERIES SENSOR TURBINE FLOW METERS



Model No. : H2S-S
Model Type : Sensor Type
Features :

- Measurement for Chemical Industries
- High accuracy & repeatability
- Signal Type: Open Collector (NPN)
- Power supply : 12~24 VDC
- Connection: Three wires
- Frequency: 0 to 750 Hz
- Cable: 1m, 2m, 3m Belden#9636

H2S stainless steel meters are available in a variety of materials, fitting sizes, and flow ranges. Applications include most chemicals, ammonium, plating solutions and fuel products.

GENERAL SPECIFICATIONS

| | | |
|------------------------------------|---------------------------------|--------------------------------|
| Housing Material | Stainless steel 316 or Aluminum | |
| Meter Size Available | 1/2", 3/4", 1", 1-1/2", 2" | |
| Flow Range | 1/2" | 3.8 ~ 56.8 LPM (1 ~ 10 GPM) |
| | 3/4" | 7.6 ~ 113.6 LPM (2 ~ 20GPM) |
| | 1" | 18.9 ~ 284 LPM (5 ~ 50 GPM) |
| | 1-1/2" | 38.0 ~ 568 LPM (10 ~ 100 GPM) |
| | 2" | 76.0 ~ 1,136 LPM (2 ~ 200 GPM) |
| Accuracy | ±0.5% | |
| Pressure Rating | 21 bar (300 psi) | |
| Operating Temperature | -40°C ~ +121°C | |
| Operating Temperature with Display | -18°C ~ +60°C | |
| Materials | Housing | Stainless steel 316 |
| | Bearing | Ceramic |
| | Shaft | Tungsten Carbide |
| | Rotor | PVDF |
| | Rings | Stainless steel 316 |
| Repeatability | ±0.1% | |

HT SERIES DIGITAL TURBINE FLOW METERS



Model No. : HT-F
Model Type : Flange Type



Model No. : HT-M
Model Type : Male Type



Model No. : HT-E
Model Type : Female Type

HT SERIES DIGITAL TURBINE FLOW METERS



Model No. : HT Series

Model Type : Flange, Male & Female Type

Features :

- Wide range of liquid measurement
- High accuracy and excellent repeatability
- Easy installation and energy saving
- Easy-to-read LCD Back-light.
- Specific Gravity Correction (0.01~2.00)
- Display: Accumulated amount reset, accumulated flow display, instantaneous flow rate display, gallon or liter unit change, automatic integration
- Lamp indication
- Flow display
- Battery life: 4-5 years
- Auto on and off

HT Turbine Flow Meters which have advantages of simple structure, light weight, high accuracy and easy installation, measure liquid which has no impurities and no chemical corrosive reaction with stainless steel. The measureable liquids include water, diesel and methanol, etc.



※ The flow board used when selecting the communication option.

GENERAL SPECIFICATIONS

| | | |
|---------------|--------|--|
| Diameter (mm) | Thread | 4, 6, 10, 15, 20, 25 |
| | Flange | 10, 15, 20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 300, 400 |
| Accuracy | | ±0.1% or ±0.5% (option) |
| Material | | Stainless steel 304 or 316 |
| Temperature | | -20°C ~ +120°C |
| Pressure | | 16 bar, 20 bar or 40 bar (option) |
| Output | | 2 wires, 3 wires, pulse frequency, 4~20mA DC current signal |
| Power supply | | 12CVD, 24VDC, Lithium battery AC 90~230V power supply |
| Protection | | IP 65 |
| Connection | | Thread, Flange (JIS 10K, 20K, PN16, 25 bar, ANSI# 150, 300) |

RANGE CHART (m³/h)

| Diameter (mm) | Normal Range | Extended Range |
|---------------|--------------|----------------|
| DN4 | 0.04~0.25 | 0.04~0.4 |
| DN6 | 0.1~0.6 | 0.06~0.6 |
| DN10 | 0.2~1.2 | 0.15~1.5 |
| DN15 | 0.6~6 | 0.4~8 |
| DN20 | 0.8~8 | 0.45~9 |
| DN25 | 1~10 | 0.5~10 |
| DN32 | 1.5~15 | 0.8~15 |
| DN40 | 2~20 | 1~20 |
| DN50 | 4~40 | 2~40 |
| DN65 | 7~70 | 4~70 |
| DN80 | 10~100 | 5~100 |
| DN100 | 20~200 | 10~200 |
| DN123 | 25~250 | 13~250 |
| DN150 | 30~300 | 15~300 |
| DN200 | 80~800 | 40~800 |
| DN300 | 100~1200 | 80~1200 |
| DN350 | 125~1500 | 120~1500 |
| DN400 | 150~2000 | 150~2000 |

HTC SERIES DIGITAL TURBINE FLOW METERS



It is the latest model of the HT series with a compact design, lower weight and better convenience. As with the existing HT models, male type, female type, and flange type are all compatible. HTC turbine flow meter is simple in structure, light in weight, high in accuracy and easy to install and measure.

Model No. : HTC

Model Type : Compact Type

Features :

- Wide range of liquid measurement (Applicable in non-corrosive liquids such as water, diesel and methanol)
- High accuracy and excellent repeatability
- Easy installation and energy saving
- Easy-to-read LCD Back-light.
- Specific Gravity Correction (0.01~2.00)
- Display: Accumulated amount reset, accumulated flow display, instantaneous flow rate display, gallon or liter unit change, automatic integration
- Lamp indication
- Flow rate display (LPM, GPM, m³/h)
- Battery life: 4-5 years
- LCD auto on and off function

| GENERAL SPECIFICATIONS | | |
|------------------------|---|--|
| Diameter (mm) | Thread | 4, 6, 10, 15, 20, 25 |
| | Flange | 10, 15, 20, 25, 32, 40, 50, 65, 80, 100, 125, 150, 200, 300, 400 |
| Accuracy | ±0.1% or ±0.5% (option) | |
| Material | Stainless steel 304 or 316 | |
| Temperature | -20°C ~ +120°C | |
| Pressure | 16 bar, 20 bar or 40 bar (option) | |
| Output | 2 wires, 3 wires, pulse frequency, 4~20mA DC current signal | |
| Power supply | 12CVD, 24VDC, Lithium battery AC 90~230V power supply | |
| Protection | IP 65 | |
| Connection | Thread, Flange (JIS 10K, 20K, PN16, 25 bar, ANSI# 150, 300) | |

| RANGE CHART (m ³ /h) | | |
|---------------------------------|--------------|----------------|
| Diameter (mm) | Normal Range | Extended Range |
| DN4 | 0.04~0.25 | 0.04~0.4 |
| DN6 | 0.1~0.6 | 0.06~0.6 |
| DN10 | 0.2~1.2 | 0.15~1.5 |
| DN15 | 0.6~6 | 0.4~8 |
| DN20 | 0.8~8 | 0.45~9 |
| DN25 | 1~10 | 0.5~10 |
| DN32 | 1.5~15 | 0.8~15 |
| DN40 | 2~20 | 1~20 |
| DN50 | 4~40 | 2~40 |
| DN65 | 7~70 | 4~70 |
| DN80 | 10~100 | 5~100 |
| DN100 | 20~200 | 10~200 |
| DN123 | 25~250 | 13~250 |
| DN150 | 30~300 | 15~300 |
| DN200 | 80~800 | 40~800 |
| DN300 | 100~1200 | 80~1200 |
| DN350 | 125~1500 | 120~1500 |
| DN400 | 150~2000 | 150~2000 |

PROPELLER WATER METERS DIGITAL TURBINE FLOW METERS



Model No. : HS-WN

Model Type : Cold (50°C), Hot (130°C)

Features :

- Can be mounted on horizontal, vertical and inclined pipelines with counters set in top, side or mid-position H-V
- Wide measuring range and low starting flow rate
- Rotor axis parallel to the pipe axis
- Roller pointer counter mounted in sealed case
- Freely adjustable rotary counter – convenient
- Magnetic clutch
- Pulse output signal available (Option)
- Materials approved for contact with drinking water
- Complies with ISO4064, BS5728, ISO / DIS-10385 standards.

GENERAL SPECIFICATIONS

| Nominal Flow Rate (ISO 4064) | Qq | m ³ | 15 | 15 | 25 | 25 | 50 | 40 | 60 | 100 | 150 | 250 | 400 | 600 |
|------------------------------|----|----------------|-----|-----|------|---------|------|------|------|------|------|-------|-----|-----|
| Nominal Diameter | DN | mm | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 200 | | |
| | L | mm | 200 | 200 | 200 | 225*200 | 250 | 250 | 300 | 350 | 450 | 500 | | |
| | H | mm | 65 | 72 | 83 | 95 | 105 | 120 | 135 | 160 | 193 | 230 | | |
| | H | mm | 177 | 187 | 197 | 219 | 229 | 257 | 357 | 382 | 427 | 497 | | |
| | H1 | mm | 277 | 287 | 297 | 339 | 349 | 377 | 582 | 607 | 652 | 722 | | |
| | Dz | mm | 150 | 165 | 185 | 200 | 220 | 250 | 285 | 340 | 400 | 460 | | |
| Weight | - | Kg | 7.9 | 9.9 | 10.6 | 13.3 | 15.6 | 18.1 | 40.1 | 51.1 | 75.1 | 103.1 | | |

PRODUCER'S PARAMETERS FOR COLD WATER UP TO 50°C

| Nominal Flow Rate (ISO 4064) | Qq | m ³ /h | 15 | 15 | 25 | 25 | 50 | 40 | 60 | 100 | 150 | 250 | 400 | 600 |
|------------------------------|------|-------------------|------|------|------|------|------|-----|-----|------|------|------|-----|-----|
| Nominal Diameter | DN | m ³ /h | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 200 | | |
| Maximum Flow Rate | Qs | m ³ /h | 60 | 90 | 120 | 200 | 300 | 350 | 600 | 1000 | 1600 | 2000 | | |
| Maximum Flow Rate | - | m ³ /h | 30 | 50 | 60 | 120 | 230 | 250 | 400 | 750 | 1100 | 1400 | | |
| Transitional Flow Rate | Qt | m ³ /h | 0.9 | 0.9 | 1.2 | 0.8 | 1.8 | 2 | 4 | 6 | 11 | 15 | | |
| Minimum Flow Rate | Qmin | m ³ /h | 0.35 | 0.35 | 0.45 | 0.5 | 0.6 | 1.5 | 1.8 | 4 | 6 | 12 | | |
| Nominal Diameter | - | m ³ /h | 0.15 | 0.15 | 0.2 | 0.25 | 0.25 | 0.5 | 1.0 | 1.5 | 3 | 8 | | |

PRODUCER'S PARAMETERS FOR HOT WATER UP TO 130°C

| Nominal Flow Rate (ISO 4064) | Qq | m ³ /h | 15 | 15 | 25 | 25 | 50 | 40 | 60 | 100 | 150 | 250 | 400 | 600 |
|------------------------------------|------|-------------------|-----------------|------|-----|------|-----|-----|-----------------|-----|------|------|-----|-----|
| Nominal Diameter | DN | m ³ /h | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 200 | | |
| Maximum Flow Rate | Qs | m ³ /h | 30 | 30 | 60 | 90 | 140 | 200 | 300 | 500 | 1000 | 1200 | | |
| Maximum Working Flow Rate | - | m ³ /h | 15 | 15 | 25 | 45 | 70 | 100 | 150 | 250 | 400 | 600 | | |
| Transitional Flow Rate | Qt | m ³ /h | 1.5 | 1.5 | 2 | 3.2 | 4.8 | 8 | 12 | 20 | 40 | 50 | | |
| Minimum Flow Rate | Qmin | m ³ /h | 0.6 | 0.6 | 0.8 | 1.4 | 1.8 | 3.5 | 5.5 | 10 | 20 | 35 | | |
| Starting Flow Rate | - | m ³ /h | 0.25 | 0.25 | 0.3 | 0.35 | 0.6 | 1.1 | 2 | 4 | 8 | 15 | | |
| Flow Rate at 0.1 bar pressure loss | - | m ³ /h | 26 | 38 | 40 | 100 | 128 | 170 | 310 | 550 | 800 | 1250 | | |
| Counter Range | - | m ³ | 10 ⁶ | | | | | | 10 ⁷ | | | | | |
| Scale Interval | - | m ³ | 0.00005 | | | | | | 0.005 | | | | | |

H24 SERIES TURBINE FLOW METERS



Model No. : H24-M
Model Type : Male Type



Model No. : H24-E
Model Type : Female Type



Features :

- Control panel with module design
- Simple function & convenient operation
- Design focused only on instantaneous integration function
- Simple fastening of male and female screw connections using gaskets
- Applicable in wide range of industries such as petroleum, chemical, pharmaceutical, transportation, food industry, etc.

SPECIFICATIONS

| | |
|-----------------|-------------|
| Diameter (mm) | 25A |
| Accuracy | ±1.0% |
| Repeatability | ±0.5% |
| Material | PTFE |
| Max. Pressure | 20 bar |
| Working Voltage | 2.3~3.3 V |
| Flow Range | 1~120 L/mim |
| Single Count | 0.00~999.9 |

LXSC SERIES TURBINE FLOW METERS



Model No. : LXSCR
Model Type : Hot Type



Model No. : LXSC
Model Type : Cold Type



Features :

- Single injection tachometer, magnetic drive, low penetration resistance
- Brass body, inlet strainer, low weight, vacuum sealing of devices, freeze prevention, 360 degree rotation, simple structure, long-term cleanliness
- 90 degree hot water meter for choice
- Read switch or remote transmitter with hall element can be added
- Pulse output: 1 liter, 10 liters or 100 liters per pulse, Cable length 1.2m (optional)
- The water meter LXSC series is an impeller flow meter with magnetic transmission function and is used to measure the total water consumed by households or resident units.

MAIN TECHNICAL PARAMETERS

| Nominal Size DN (mm) | Class of measurement | Overload Flow- rate qs (m ³ /h) Q4 | Permanent Flow- rate qp (m ³ /h) Q3 | Transitional Flow-rate qt (l/h) Q2 | Minimum Flow- rate qmin(l/h) Q1 |
|-------------------------|-------------------------|---|--|--|---------------------------------------|
| 15 | Class C/R 160 | 3/3.1 | 1.5/2.5 | 22.5/25 | 15/15.625 |
| 20 | Class C/R 160 | 5/5 | 2.5/4 | 37.5/32 | 25/20 |
| 25 | Class C/R 160 | 7/7.9 | 3.5/6.3 | 52.5/50 | 35/30 |
| 32 | Class C/R 160 | 12/12.5 | 6/10 | 90/80 | 60/50 |

WORKING CONDITION

| | |
|-------------------------------|----------------|
| Cold type working temperature | +0.1°C ~ +50°C |
| Hot type working temperature | +0.1°C ~ +90°C |
| Head loss | Δ P63 |
| Working pressure | ≤ 1.0 Mpa |

MAXIMUM PERMISSIBLE ERROR

| | |
|----------------------------|-----------------|
| Accuracy between Q1 and Q2 | ±5% |
| Accuracy between A2 and Q4 | ±2% (Hot : ±3%) |

HM SERIES TANK TRUCK POSITIVE DISPLACEMENT FLOW METERS



Applications :

- Petroleum products
- Gasoline and jet fuels
- Treat water
- Acid PH Liquids
- Crude Oil, viscous liquids
- Liquefied Petroleum Gas(LPG)
- Most of industries (water, oil, solvent, etc)
- Chemical & Pharmaceutical
- Automotive, Agriculture
- Animal feeds, Food & Beverage

HM Tank Truck Positive Displacement Flow Meter provides high accuracy and repeatability in a wide range, and is applicable for LPG, Gasoline, Jet Fuel, Crude Oil, Acid pH Liquid and Petroleum products.

| Model | HM40-1 | HM50-1 | HM50H-1 | HM80-1 | HM80H-1 | HM100-1 | HM100H-1 | HM150-1 | HM150H-1 |
|---------------|---|-----------|---------|-----------|----------|------------|----------|------------|----------|
| Size | 40mm | 50mm (2") | | 80mm (3") | | 100mm (4") | | 150mm (6") | |
| Flow Range | 25~250 | 38~380 | 55~550 | 75~750 | 115~1150 | 130~1300 | 170~1700 | 225~2250 | 300~3000 |
| Volume per | 0.309L | 0.681L | | 1.839L | | 5.102L | | 9.507L | |
| Max. Pressure | 10 bar / 150 psi | | | | | | | | |
| Accuracy | ±0.2% | | | | | | | | |
| Repeatability | ≤0.05% | | | | | | | | |
| Unit | Liter, US Gallon or Imp Gallon | | | | | | | | |
| Body Material | Aluminum, Cast Iron, Steel, Stainless Steel | | | | | | | | |
| Seal & Gasket | Buna N, Vitron, Tefron | | | | | | | | |
| Connection | NPT, BSPT, ANSI Flange, Slip Weld | | | | | | | | |
| Strainer Mesh | Diesel – 80, Gasoline – 40 | | | | | | | | |
| Viscosity | 30SSU ~ 1,500,000 SSU | | | | | | | | |

HH SERIES OVAL GEAR FLOW METERS



Model No. : HH-I
Model Type : Inside Type



Model No. : HH-E
Model Type : Female Type



Model No. : HH-O
Model Type : Outside Type



Model No. : HH-H
Model Type : High Temperature Type



Model No. : HH-J
Model Type : Jacket Type

HH SERIES OVAL GEAR FLOW METERS



Model No. : HH-I/E/O/H/J

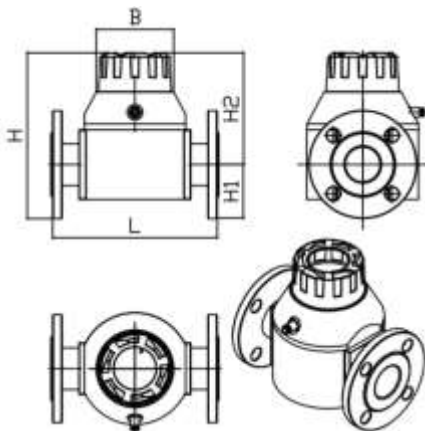
Specifications :

- Meter size: DN 15 ~ 50
- Accuracy: $\pm 0.5\%$
- Body Material: Aluminum, Cast Steel, Stainless Steel 304, 316L
- Rotor: PPS, Stainless Steel 304, 316L, Aluminum
- Display: 2 Total (1 Resettable, 1 Cumulative Flow Rate), Factory Calibration in gallons and liter. 2 User Calibrations.
- Temperature 120°C, 180°C (Option)
- Pressure: 10 bar, 16, 24, 40bar (Option)
- Output: Pulse
- Power : Lithium Battery (4~5 years)
- Automatic On & Off
- Specific Gravity Compensation (0.01~2.00)

The HH positive displacement flow meter, which is a flow meter like an oval gear with high competitiveness, measures the flow rate by engaging gears, and provides accurate measurement values and repeatability, and it is possible to measure the flow rate even at high temperature and high viscosity. It is applicable for a wide range of industries and various fluids such as foods (water, edible oil, syrup, and milk) and chemical fluids (gasoline, kerosene, diesel, heavy oil, etc.)

DIMENSIONS

| Model | Thread Type (mm) | | | | | Flange Type (mm) | | | | | Analog Type (mm) | | | | | Digital Type (mm) | | | | |
|-------|------------------|-----|-----|----|-----|------------------|-----|-------|------|-----|------------------|-----|-------|------|-----|-------------------|-------|------|------|-----|
| | L | B | H | H1 | H2 | L | B | H | H1 | H2 | L | B | H | H1 | H2 | L | B | H | H1 | H2 |
| HH15 | 106 | 100 | 130 | 20 | 110 | 160 | 100 | 157.5 | 47.6 | 110 | 160 | 100 | 247.5 | 47.5 | 200 | 160 | 237.5 | 47.5 | 47.5 | 180 |
| HH20 | 106 | 100 | 130 | 20 | 110 | 160 | 100 | 160 | 50 | 110 | 160 | 100 | 250 | 50 | 200 | 160 | 230 | 50 | 50 | 180 |
| HH25 | 106 | 100 | 130 | 20 | 110 | 170 | 100 | 172.5 | 62.5 | 110 | 170 | 100 | 262.5 | 62.5 | 200 | 170 | 242.5 | 62.5 | 62.5 | 180 |
| HH40 | 106 | 100 | 140 | 25 | 115 | 200 | 100 | 185 | 70 | 115 | 200 | 100 | 270 | 70 | 200 | 200 | 250 | 70 | 70 | 180 |
| HH50 | 240 | 100 | 260 | 75 | 185 | 240 | 100 | 260 | 75 | 185 | 240 | 100 | 260 | 75 | 185 | 240 | 260 | 75 | 75 | 185 |



| Model | Size | FLOW RANGE |
|-------|----------------|----------------|
| HH15 | DN 15 (1/2") | 10~700 LPH |
| HH20 | DN 20 (3/4") | 20~1300 LPH |
| HH25 | DN 25 (1") | 50~3500 LPH |
| HH32 | DN 32 (1-1/4") | 180~4800 LPH |
| HH40 | DN 40 (1-1/2") | 600~1500 LPH |
| HH50 | DN 50 (2") | 1000~35000 LPH |

HH SERIES – Sensor Type OVAL GEAR FLOW METERS



Model No. : HH-S

Model Type : Sensor Type

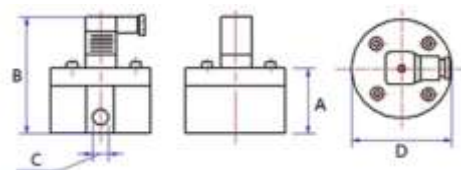
The HH positive displacement flow meter, which is a flow meter like an oval gear with high competitiveness, measures the flow rate by engaging gears, and provides accurate measurement values and repeatability, and it is possible to measure the flow rate even at high temperature and high viscosity. It is applicable for a wide range of industries and various fluids such as foods (water, edible oil, syrup, and milk) and chemical fluids (gasoline, kerosene, diesel, heavy oil, etc.)

GENERAL SPECIFICATIONS

| | | | |
|--------------|--|----------|---|
| Accuracy | Standard type : $\pm 0.5\%$ Some special medium : $\pm 0.2\%$ | | |
| Pressure | 30 bar (Max. pressure 1000 bar) | | |
| Temperature | -30 °C ~ +80 °C (Max. temperature 150 °C) | | |
| Power Supply | 4 ~ 26 VDC | | |
| Output | Pulse output | | |
| Model | -SS Series | Material | Chamber (SS316), Gear (SS316L), Shaft (SS316L) |
| | | Medium | Suitable for various chemical liquid |
| | -Al Series | Material | Chamber (Aluminum), Gear (Aluminum), Shaft (SS316L) |
| | | Medium | Suitable for non-various chemical liquid |

| Model | Flow Range | Connection |
|-----------------------|----------------|-------------------------|
| HH-M2-SS/AL | 0.5~150 ml/min | H/NPT 1/8 Female thread |
| HH-M3-SS/AL | 3~300 ml/min | G/NPT 1/8 Female thread |
| HH-M5-SS/AL | 5~1,000 ml/min | G/NPT 1/8 Female thread |
| HH-M6-SS/AL | 0.5~100 L/H | G/NPT 1/4 Female thread |
| HH-M9-SS/AL | 6~600 L/H | G/NPT 1/4 Female thread |
| HH-M12-SS/AL | 0.3~30 L/min | G/NPT 1/2 Female thread |
| HH-M25-SS/AL | 0.5~100 L/min | G/NPT 1/2 Female thread |
| Test Bench Flow Meter | 1~800 ml/min | G/NPT 1/8 Female thread |

| Model/ Size | M2, M3, M5 | M2, M3, M5 (High pre) | M6 | M9 | M12 | M25 |
|----------------|---------------|-----------------------------|-------|-------|-------|-------|
| A | 30 | 30 | 40 | 47 | 44 | 56 |
| B | 62 | 62 | 72 | 79 | 79 | 91 |
| C | G1/8" | G1/8" | G1/4" | G1/4" | G1/2" | G1" |
| D | 40 | 40 | 50 | 60 | 85 | 100 |
| E | M5*31 | M5*31 | M5*42 | M5*72 | M5*72 | M6*61 |



E : Bottom thread x Pore distance

HR SERIES ROOTS FLOW METERS



Model No. : HR Series
Model Type : Series Type
Applications :

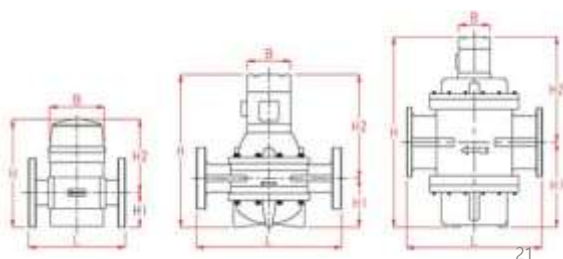
FR Roots Flow Meter are suitable for Chemical solution such as Soda, Acid, Alcohol, Salt Solution, Solvent, Petroleum, LPG, Fat, Oil, Cold water, Hot water in variety industries.

GENERAL SPECIFICATIONS

| | |
|-------------------------------|--|
| Meter Size | DN 25 - 200 |
| Accuracy | ±0.5% |
| Body Material | FC, Stainless Steel |
| Rotor | Aluminum, Stainless Steel 304, 316L |
| Display | 2 Total Rate), Factory Calibration in gallons and liter. 2-user Calibrations |
| Temperature | 120 °C, 180 °C (Option) |
| Pressure | 10 bar, 16, 24, 40 bar (Option) |
| Output | Pulse |
| Power | Lithium Battery (4-5 years) |
| Power on/off | Automatic |
| Specific Gravity compensation | 0.01~2.00 |

| Model | Size | Flow Range |
|---------|----------------|----------------------------|
| HR-25 | DN 25 (1") | 0.5 ~ 8 m ³ /h |
| HR-32 | DN 32 (1-1/4") | |
| HR-40 | DN 40 (1-1/2") | 0.8 ~ 13 m ³ /h |
| HR-50 | DN 50 (2") | 1 ~ 30 m ³ /h |
| HR-80 | DN 80 (3") | 2 ~ 55 m ³ /h |
| HR-100 | DN 100 (4") | 2 ~ 120 m ³ /h |
| HR-100L | DN 100 (4") | 4 ~ 130 m ³ /h |
| HR-125 | DN 125 (5") | 5 ~ 160 m ³ /h |
| HR-150 | DN 150 (6") | 5 ~ 200 m ³ /h |
| HY-200 | DN 200 (8") | 10 ~ 300 m ³ /h |

| Model | | Size | | Flow Range | |
|---------|-----|------|-----|------------|-----|
| HR-25 | 200 | 114 | 202 | 62.5 | 110 |
| HR-40 | 200 | 114 | 225 | 70 | 110 |
| HR-50 | 370 | 115 | 386 | 124 | 262 |
| HR-80 | 300 | 115 | 470 | 155 | 315 |
| HR-100 | 370 | 115 | 550 | 168 | 332 |
| HR-100L | 430 | 115 | 624 | 275 | 349 |
| HR-125 | 500 | 115 | 688 | 307 | 381 |
| HR-150 | 500 | 115 | 754 | 340 | 414 |
| HR-200 | 600 | 115 | 928 | 427 | 501 |



LYO – DP Flange Type OVAL GEAR FLOW METER



Model No. : LYO-DP
Model Type : Flange Type
Features :

The digital nozzle positive displacement meter, LYO-DP integrates with the nozzle to provide oil supply and management. It is widely used in fuel guns and consists of a metric body made of aluminum that can withstand high pressure, and is compatible with both the flange type and the screw type.

GENERAL SPECIFICATIONS

| | |
|-------------------|-----------------------|
| Power | Standaard AAA battery |
| Bursting Pressure | 200 bar |
| Working Pressure | 70 bar |
| Flow Rate | 30 L/min |
| Accuracy | ±0.5% |
| Repeatability | 0.2% |
| Viscosity | 2~2000 |

HG SERIES ELECTROMAGNETIC FLOWMETERS



Model No. : HG4000-W
Model Type : Wafer Type



Model No. : HG4000-SC
Model Type : Sanitary Type



Model No. : HG4000-F
Model Type : Flange Type



Model No. : HG4000-SE
Model Type : Separation Type
(Thread)

HG SERIES ELECTROMAGNETIC FLOWMETERS



Model No. : HG4000-W/SC/F/SE

The HG 4000 is designed for a wide range of industrial applications and electromagnetic inductance is used to measure the flow of liquids through the meter. It is a highly reliable instrument that can accurately measure the flow of liquids with little pressure drop and long-term stability with mechanical parts within the weighing section. It can be used in a wide variety of fluids, allowing the instrument to be used under the most stringent conditions as well as strong chemistries.

Features :

- Applicable to chemical and food industry and potable water treatment (stainless steel pipe)
- Operation settings with membrane (flow conversion factor, communication type and transmission rate, measurement dynamics, etc.) or application software
- Flow tube interchangeability (each flow tube has its own calibration constant)
- Accessories : installation sets (iron, stainless steel or to customer specifications)
- Latest application software
- Bidirectional flow measurement (separate counters for each direction)
- Self-diagnosis : Display instrument status
- Volume monitoring for up to 5 resettable flow totalizers (counters)
- Monitoring the maximum flow reached within the time interval

GENERAL SPECIFICATIONS

| | |
|-----------------------------|--|
| Measuring range | 1:40 ($\pm 0.5\%$ for MPE standard), 1:500 ($Q_0=0.2\% Q_{max}$) |
| Accuracy | $\pm 0.5\%$ ($\pm 0.003\text{m/s}$) in range from Q_{min} to Q_{max} |
| Minimum Liquid Conductivity | $> 5\mu\text{S/cm}$ (common liquid), $\geq 20\mu\text{S/cm}$ (demineralized water) |
| Power Supply | 230VAC (+10, -15%), 50~60Hz, optionally 120VAC, 24VAC, 24VDC |
| Power Demand | 10 VA |
| IEC 536 Protection Class | I |
| Ingress Protection Rating | IP67 |
| Meter Finish | Powder paint (RAL 8023) |
| Ambient temperature range | 0~70 °C, recommended 15~55°C |
| Pulse Output 1 | In range 0.0001~1600 p/dm ³ (maximum value depends on flowtube inner diameter) |
| Pulse Output 2 | State – Signalization of the negative flow, Pulse – Negative volume (Bidirectional flow) |
| Pulse Inputs | 2 x range (0.0001~1000 p/dm ³) to display flow and/or volume measure by external |
| Empty Pipe Detection | Yes (optional) |
| Communication Modules | RS485, RS422, RS232, M-Bus, etc (optional) |
| Communication Protocols | SIMPLE, ModBUS, BitBUS, ASCII, MBUS |
| Analog Outputs | 4~20mA, 0~10V (optional) |
| Archive | Hourly, monthly, etc (optional) |

WAFFER FLOWTUBE SPECIFICATIONS

| | |
|---------------------------|--|
| Nominal Inner Diameter | DN10 ~ DN150 |
| Flowtube Liner | PTFE |
| Electrodes | Stainless steel 316L (1.4571), hastelloy C, platinum, tantalum, titanium |
| Nominal Pressure | PN25 |
| Flowtube Design | Compact , split – 4m cabling (optionally up to 40m) |
| Flowtube Finish | Powder paint (RAL 7043) |
| Range of Measure Liquid | 0~150 °C (PTFE) |
| Ingress Production Rating | IP67 |

HG SERIES ELECTROMAGNETIC FLOWMETERS



Model No. : HS-TLD-F
Model Type : Flange Type

Features :

- Flow speed range: 0.1 ~ 15m/s
- Flow speed resolution: 0.5mm/s
- AC high frequency switching power, voltage range: 85VAC ~ 250VAC
- DC 24V switching power supply, voltage range: 20VDC ~ 36VDC
- Output function: 4 ~ 20mA, Pulse
- Network function: MODBUS, GPRS, PROFIBUS, HART communication (optional)



Model No. : HS-TLD-SE
Model Type : Separation Type

The HS-TLD electromagnetic flowmeter is a next-generation supply flowmeter based on the Faraday electromagnetic induction principle. The measurement accuracy is not affected by the temperature, density, viscosity and conductivity (> 5 s/cm) of the measured medium and maintains a constant accuracy. The electromagnetic flow meters can be used to measure general water, wastewater, strong acids and strong alkalis and other corrosive liquids and muds.

SPECIFICATIONS

| | |
|---------------------|---|
| Size | DN10~DN2800 |
| Medium | Conductive liquid, surry |
| Medium temperature | E grade < 60°C, H grade < 180°C |
| Conductivity | ≥5 u S/cm |
| Accuracy | ±01%, ±0.17% |
| Rated pressure | 0.6, 1.0, 1.6, 2.5, 4.0, 6.4 Mpa (or specified by customer) |
| Display | Flow, rate, totalizer, velocity, flow rate ratio |
| Signal output | 4~20mA current output, pulse output, RS-485 Hart |
| Power supply | AC : 85V ~ 265V, DC : 18V ~ 38V |
| Converter type | Integral, remote |
| Protection grade | IP65 . IP68 |
| Explosion proof | Ex deibmb IIC T3~6 |
| Velocity | 0.05~12m/s (0.1 ~ 15m/s as required) |
| Liner | CR/F4(PTFE) / 46(FEP) / PFA |
| Flowing direction | Forward, Reverse |
| Electrode material | 316L, Pt, Ta, Ti, HB, HC, WC |
| Electrode number | 3~6 pcs |
| Flange material | SS/CS |
| Alarm (normal open) | Empty, excitation, upper/lower limit |
| Ambient | -30 ~ +60°C, Humidity : < 90% |
| Protocol | RS-485 / Hart |

HS-FWM Series ULTRASONIC WATERMETERS



Model No. : HS-FWM

Model Type : Ultrasonic Watermeter

Features :

- Adopting dynamic zero and time compensation for accurate measurement
- Provides stable and more accurate flow measurement
- Wide measuring range. Lifespan of up to 15 years
- Protection class IP686. SS304 Body (Option SS316 or SS316L)

The HS-FWM ultrasonic flowmeter uses a transducer to send and receive signals. It is the principle that the transducer signal travels, and the downstream is faster than the upstream. The average flow rate can be maintained by measuring the moving time, and the volumetric flow rate can be calculated from the flow rate and the pipe cross-sectional area. It is a flow meter with built-in battery power supply for flow measurement.

GENERAL SPECIFICATIONS

| | |
|-------------------------------------|--|
| Max. Working Pressure | 1.6 Mpa |
| Temperature | T30, T50, T70, T90 (Default T30) |
| Accuracy | ISO 4064, Accuracy Class 2 |
| Body Material | Stainless Steel 304 (option: SS316, 316L) |
| Batter Life | Up to 10 years (Consumption ≤0.5mW) |
| Protection Class | IP68 |
| Environmental Temperature | -40 °C ~ 70 °C , ≤100% RH |
| Pressure Loss | △P10, △P16, (Based on different dynamic flow) |
| Climatic and Mechanical Environment | Class 0 |
| Electromagnetic Class | E2 |
| Communication Output | RS485 (Baud rate adjustable) Pulse (Default 2ml/pulse, changeable) Option, NB-IOT, GPRS |
| Display | 9 digit LCD display volume, flow rate, pressure, error alarm, flow direction, low battery power alarm, output |
| RS485 | Baud rate 2400bps, 4800bps, 9600bps, 19200bps (Default 9600 bps, Modbus-RTU) |
| Connection | Flange or Clip |
| Flow Profile Sensitivity Class | U3/D0 or U0/D0 |
| Data Logger | Store the latest 10 year's data including Day, Month and Year. The date can be permanently saved even after the loss of power. |
| Frequency | 1~4 times/second |

| | | FLOW PARAMETERS | | | | | | | | |
|----------------------|--------|-----------------|-------|-------|-------|-------|-------|-------|-------|-------|
| Nominal Size | (mm) | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 |
| | (inch) | 2 | 2.5 | 3 | 4 | 5 | 6 | 8 | 10 | 12 |
| Overload Flow Q4 | | 78.75 | 125 | 200 | 312.5 | 312.5 | 500 | 787.5 | 1250 | 2000 |
| Permanent Flow Q3 | | 63 | 100 | 160 | 250 | 250 | 400 | 630 | 1000 | 1600 |
| Transitional Flow Q2 | | 0.101 | 0.160 | 0.256 | 0.400 | 0.400 | 0.640 | 1.008 | 1.600 | 2.560 |
| Minimum Flow Q1 | | 0.063 | 0.1 | 0.16 | 0.25 | 0.25 | 0.4 | 0.63 | 1 | 1.6 |
| R=Q3/Q1 | | 1000 | | | | | | | | |
| Q2/Q1 | | 1.6 | | | | | | | | |

HU Series ULTRASONIC WATERMETERS



The ultrasonic flowmeter HU is practically applicable to a wide range of measurements. Applicable to various liquids such as ultrapure liquid, drinking water, chemicals, sewage, recycled water, cooling water, river water, plant effluent, etc.

Model No. : HU

Model Type : Ultrasonic Watermeter

Features :

- High precision measurement : accuracy $\pm 1\%$, linearity: 0.5%, repeatability: 0.2%
- Wide measuring range : several types of transducers for selection, pipe size form DN25mm to DN6000mm
- Large capacity battery : Built-in rechargeable Ni-MH battery, provides more than 12 hours of continuous operation
- Multilingual menu support - English, customizable
- Large LCD screen - Displays instantaneous flow, accumulated flow (positive, negative, net), speed, work status, etc.
- Built-in data logger - stores more than 2000 lines of measuring data

GENERAL SPECIFICATIONS

| | |
|-------------------------|---|
| Linearity | 0.5% |
| Repeatability | 0.2% |
| Accuracy | Better than $\pm 1\%$ for velocity above 0.03m/s |
| Response Time | 0~999 second, user-configurable |
| Flow Range | $\pm 12\text{m/s}$ |
| Measuring Pipe Size | 24mm ~ 6000mm |
| Language | Chines-English, English-Italian, English-French |
| Totalizer | 7-digit totalizer for net, positive and negative flow respectively |
| Liquid Type | Any single uniform liquid which can transmit ultrasonic |
| Security | Setup values Modifications Lockout. Access code unlocking |
| Display | 4 x 16 letter |
| Communication Interface | RS-232 interface, 75~58600bps, compatible with full ultrasonic flowmeter and other UFM on enquiry |
| Transducers | Model TM-1 for standard, other 4 models for option |
| Transducer Cable | Standard 5mx2 or can be extended to 10mx2 |
| Power Supply | 3AAA built-in batteries (for over 12 hours of operation), 100V~240VDC adaptor |
| Data Logger | Built-in data logger can store over 2000 lines of data |
| Manual Totalizer | 7-digit, calibrating by key |
| Housing Material | ABS |

OPTIONAL TRANSDUCER

| Type | Picture | Spec. | Model | Measure. Range | Temperature | Dimension |
|--|---------|-------------|---------|----------------|-------------|------------------|
| Clamp on | | Small Size | TG-2 | DN25-DN100 | -30~90°C | 45 × 25 × 32mm |
| | | Medium Size | TM-1 | DN50-DN700 | -30~90°C | 64 × 39 × 44mm |
| | | Large Size | TL-1 | DN300-DN6000 | -30~90°C | 97 × 54 × 53mm |
| High Temperature Clamp on | | Small Size | TG-2-HT | DN25-DN100 | -30~160°C | 45 × 25 × 32mm |
| | | Medium Size | TM-1-HT | DN50-DN700 | -30~160°C | 64 × 39 × 44mm |
| | | Large Size | TL-1-HT | DN300-DN6000 | -30~160°C | 97 × 54 × 53mm |
| Mounting Bracket Clamp on | | Small Size | HS | DN25-DN100 | -30~90°C | 318 × 59 × 85mm |
| | | Medium Size | HM | DN50-DN300 | -30~90°C | 568 × 59 × 85mm |
| | | Extended | EB-1 | DN300-DN700 | -30~90°C | 188 × 59 × 49mm |
| High Temperature Mounting Bracket Clamp on | | Small Size | HS-HT | DN25-DN100 | -30~160°C | 318 × 59 × 110mm |
| | | Medium Size | HM-HT | DN50-DN300 | -30~160°C | 568 × 59 × 110mm |
| | | Extended | EB-1-HT | DN300-DN700 | -30~160°C | 188 × 59 × 49mm |

HU Series ULTRASONIC WATERMETERS



GENERAL SPECIFICATIONS

| | | |
|-----------------------------|---|---|
| Converter | Principle | Transit-time ultrasonic flowmeter |
| | Accuracy | ±1% |
| | Display | 4x16 character LCD with backlight, support the language of Chinese, English and Italian |
| | Signal Output | 1 way OCT pulse output (Pulse width 6~1000ms, default is 200ms) |
| | Data Interface | Insulate RS232 serial interface, upgrade the flowmeter software by computer |
| Pipe Installation Condition | Pipe material | Steel, Stainless steel, Cast Iron, Copper, Cement pipe, PVC, Aluminum, Glass steel product, liner is allowed |
| | Pipe Diameter | 25~6000mm |
| | Straight Pipe | Transducer installation should be satisfied : upstream 10D, downstream 5D, 30D from the pump |
| Measuring Medium | Type of liquid | Single liquid can transmit sound wave, such as water (hot water, chilled water, city water, sea water, waste water, etc.), sewage with small particle contents, oil (crude oil, lubricating oil, diesel oil, fuel oil, etc.), chemicals (alcohol, etc.), plant effluent, beverage, ultrapure liquid, etc. |
| | Temperature | -30~160°C |
| | Turbidity | No more than 10,000ppm and less bubble |
| | Flowrate | 0~±10m/s |
| Working Environment | Temperature | Converter (-20~60°C), Flow transducer (-30~160°C) |
| | Humidity | Converter (85%RH) Flow transducer (Ip67) |
| Power Supply | 3AAA built-in NI-MH batteries 1.2V (for over 12 hours of operation), 90V~260VAC adaptor | |
| Power Consumption | 1.5W | |
| Case Material | ABS | |
| Dimension | 200x93x32mm (converter) | |

STANDARD PHYSICAL MAP



HU Series ULTRASONIC WATERMETERS



The portable ultrasonic flowmeter HU-H is a state-of-the-art general purpose travel time flowmeter designed using FPGA chip and low voltage broadband pulse transmission.

Model No. : HU-H

Model Type : Ultrasonic Watermeter

Features :

- Easy to carry, compact and lightweight design
- Calculate positive and negative flows and cumulative measurements
- Add the SD card data auto-save function so your data will never be lost again.
- Rechargeable battery and universal power supply design
- Advanced modular integrated design, independent menu operation, large screen LCD backlit 4-line display
- Particularly suitable for on-site flow sensing for different pressure requirements
- Transmitter protection level: IP54
- Sensor protection level: IP68

GENERAL SPECIFICATIONS

| | |
|---------------|--|
| Flow Range | ± 0.03 ft/s ~ ± 20 ft/s (± 0.01 m/s ~ ± 6 m/s, 12 m/s optional) |
| Accuracy | $\pm 1\%$ of measured value |
| Pipe Size | Clamp-on (25mm ~ 1200mm) |
| Pipe Material | Carbon steel, stainless steel, PVC |
| SD Card | Storage 1 GB |
| | Max 512 files |
| | Interval 5~60 seconds |
| Output | Analog output, 4~20mA, Max load 750 Ω |
| Power Supply | 11.1V Rechargeable Lithium Battery |
| Keypad | Tactile Keys |
| Displays | 64x128 alphanumeric, Backlit LCD |
| Humidity | Up to 99% RH, Non-condensing |
| Temperature | Transmitter : -10°C ~ $+50^{\circ}\text{C}$ |
| | Transducer : 0°C ~ $+80^{\circ}\text{C}$ |
| Protection | NEMA 13, IP54 Encapsulated design, IP68 |
| Weight | Transmitter : approx. 1.0 Kg (1 full set with package : 10 Kg) |



HS Series ULTRASONIC FLOWMETERS



The ultrasonic flowmeter HS-SWU801 can be applied to a wide range of measurement. Applicable to various liquids such as ultrapure liquid, drinking water, chemicals, sewage, recycled water, cooling water, river water, plant effluent, etc.

Model No. : HS-SWU801

Model Type : Ultrasonic Flowmeter

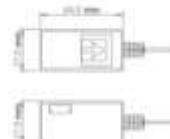
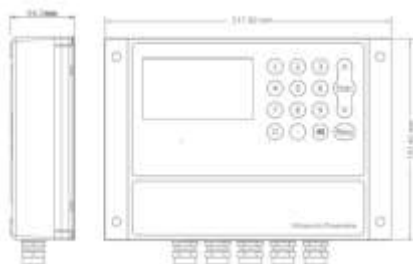
Features :

- High precision measurement - accuracy $\pm 1\%$, linearity: 0.5%, repeatability: 0.2%
- Wide measuring range - several types of transducers for selection, pipe size form DN25mm to DN6000mm
- Large capacity battery - Built-in rechargeable Ni-MH battery, provide more than 12 hours of continuous operation
- Menu support – English
- Large LCD screen - Displays instantaneous flow, accumulated flow (positive, negative, net), speed, work status, etc.
- Built-in data logger - stores more than 2000 lines of measuring data

GENERAL SPECIFICATIONS

| | |
|---------------|--|
| Flow Range | ± 0.09 ft/s ~ ± 16 ft/s (± 0.02 m/s ~ ± 5 m/s) |
| Accuracy | $\pm 1\%$ of measured value |
| Repeatability | 0.2% of measured value |
| Linearity | $\pm 1\%$ |
| Pipe Size | 1" ~ 48" (25mm ~ 1200mm), Pipe size under 1" is an option. |
| Fluid | Water |
| Outputs | Analog output : 4~20mA, max. load 750 Ω Pulse output : 0~10kHz |
| Communication | RS232/RS485 Modbus |
| Power Supply | 10~36VDC, 1A |
| Display | 240x128 backlit LCD |
| Temperature | Transmitter : -14°F ~ 140°F (-20°C ~ +60°C) Transducer : -40°F ~ 176°F (-40°C ~ +80°C, standard) |
| Humidity | Up to 99% RH, non-condensing |
| Transmitter | PC/ABS, IP65 |
| Transducer | ABS, IP68 Encapsulated design Double-shield transducer cable Standard/maximum cable length : 30ft/900ft (9m/274m) |

PRODUCTS DIMENSIONS



HS Series ULTRASONIC FLOWMETERS



Model No. : HS-SWU901

Model Type : Ultrasonic Flowmeter

Features :

- Transmitter protection IP65, sensor protection IP68
- Positive and negative flow measurement, cumulative flow
- 50000 hours test without problems
- Traffic statistics by period
- Keyboard key life over 200,000 cycles
- RS485 communication interface, 4-20mA current signal, pulse output, MODBUS protocol

The wall-mounted ultrasonic flow meter HS-SWU901 is a state-of-the-art general purpose travel time flow meter designed using FPGA chip and low voltage broadband pulse transmission. Suitable for application in ultrapure liquid, drinking water, chemical products, raw sewage, recycled water, cooling water, river water, plant wastewater.

GENERAL SPECIFICATIONS

| | |
|-------------------------|--|
| Flow Range | ± 0.03 ft/s ~ ± 20 ft/s (± 0.01 m/s ~ ± 6 m/s) |
| Accuracy | $\pm 1\%$ of measured value |
| Pipe Size | Clamp-on (25mm ~ 1200mm) |
| Pipe Material | Carbon steel, stainless steel, PVC |
| Output | OCT Pulse output : 0~5000Hz Analog output : 4~20mA, max. load 750 Ω |
| Communication Interface | RS485, Modbus |
| Power Supply | 10~36V DC, 1A |
| K Pad | 16(4x4) key with tactile action |
| Display | 20x2 lattice alphanumeric, backlit LCD |
| Humidity | Up to 99% RH, Non-condensing |
| Temperature | Transmitter : 14°F ~ 122°F (10°C ~ +50°C) Transducer : 32°F ~ 176°F (0°C ~ +80°C) |
| Protection | Transmitter : PC / ABS, IP65 |
| Transducer cable | Standard cable length : 30ft (9m) |
| Weight | Transmitter : approx. 0.7Kg Transducer : approx. 0.4Kg (A full set with the package : 7Kg) |



LEVEL METER ULTRASONIC LEVEL METER



Model Type : Ultrasonic Level Meter

Features :

- Smart sensor, RS485 communication
- Use of special anti-corrosion materials
- Blank and threshold voltage adjustable
- Built-in automatic temperature compensation
- Advanced echo analysis algorithms allow the sensor to adapt to different applications.

The ultrasonic level meter is designed to measure the depth of liquids. It is suitable for application in chemical, metallurgy, electricity, oil and water treatment.

GENERAL SPECIFICATIONS

Maximum Measurable Distance
(Depending on the model)

(1) 5m, (2) 10m, (3) 15m, (4) 20m, (5) 25m, (6) 30m, (7) 40m, (8) 50m, (9) 60m

| | |
|---------------------|---|
| Accuracy | ±0.5% of rate |
| Resolution | (1) Range < 10mL 5m (2) Range > 10m: 10m |
| Frequency | 40 kHz |
| Signal Output | 4~20mA |
| Communication | RS485 (Optional) |
| Power Supply | 220V AC / 24V DC |
| Case Material | PA6 / ABS |
| Blind Area | 0.2~0.9m |
| Maximum Load | 750 Ω |
| Ambient Temperature | -20°C ~ +55°C |
| Protection | Transmitter : IP65 Probe : IP68 |

HVM60 SERIES VORTEX FLOWMETERS



Model No. : HVM60-MV-F
Model Type : Flange Type



Model No. : HVM60-MV-W
Model Type : Wafer Type



Model No. : HVM60-N-F
Model Type : Flange Type



Model No. : HVM60-N-W
Model Type : Wafer Type

HVM60 SERIES VORTEX FLOWMETERS



Model No. : HVM60 series

HVM60 series is vortex flow meters that can meet the flow measurement requirements of various fluids such as gas, vapor and liquid. It uses transmitter technology that provides superior signal processing and takes eddy current measurement technology to a new level, lowering measurement limits and improving stability and accuracy. The unique dual-sensor design and special signal processing method eliminate vibration signals, providing more stable performance and lower measurement limits, improving anti-vibration performance.

Features :

- Maintenance-free sensor design
- Own density calculation function (optional) density and mass flow calculation without mass flow computer
- Can work with separate RTD and pressure transmitters to output mass flow, temperature and pressure
- Unit selectable function
- 304SS, 316SS, insulation, wafer, flange, various compensation options, various output signal options.
- Bluetooth function option, display remote control possible with smart phone

GENERAL SPECIFICATIONS

| | |
|----------------------|---|
| Process Fluids | Used in liquid, gas and steam applications. Fluids must be homogeneous and single-phase. |
| Line Sizes | The wafer and flanged type cover line size as below 1", 1.5", 2", 2.5", 3", 4", 5" 6", 8", 10" and 12" (DN25, DN40, DN50, DN65, DN80, DN100, DN125, DN150, DN200 and DN300) The insertion type covers DN200~1000. Any requirements on other sizes, please check with us. |
| Process Connection | Flanged, wafer, insertion, DN, ANSI, JIS, DIN standard flanges are optional |
| Displayer | Integral or remote, 3 buttons control, 2 lines LCD displayer 1. line has 5 digits to display velocity, or mass flow or volume flow or frequency or temperature or pressure 2. line has 8 digits to display total flow. A small extra line above 1 line will indicate what parameter being displayed in 1 line. Note: The display can only display metric units, so when customer select Britain or US units. The display will show number only but will not show the units. |
| Measurable Parameter | Standard version : Volume flow rate in pipe, velocity (Can measure mass flow rate, temperature and pressure if wired to separate RTD and pressure transmitter.) Multi-variable version : Mass flow rate, volume flow rate in standard condition, temperature, pressure, volume flow rate in pipe and velocity. |
| Fluid Temperature | Standard : -40~150 °C High temperature version : -40~250 °C (Not for insertion type version) |
| Pressure Rating | Standard pressure rating is 1.6Mpa. Optional pressure rating includes 2.5Mpa, 4Mpa, 6.4Mpa and 10Mpa. For higher pressure, please contact us to check the availability) |
| Output | Pulse, 4~20mA, HART@4~20mA (The HART signal is on 4~20mA) |
| Explosive Proof | Ex-proof version is optional. (Ex dII C T3 Gb from NPL) |
| COMATE APP | Blue tooth function is optional to all COMAT products. Customers can read all data of the meter in COMATE APP on an telephone or pad. The signal is valid within about 5 meter in front of the meter. |

HVM60 SERIES VORTEX FLOWMETERS



WAFER FLOWTUBE SPECIFICATIONS

| | Min. Limit | Max. Limit |
|--------|-------------------|------------|
| Gas | 6 m/s, DN15, DN20 | 60 m/s |
| | 4 m/s, DN25, DN32 | |
| | 2 m/s, DN40~DN300 | |
| Steam | 6 m/s, DN15, DN20 | 70 m/s |
| | 4 m/s, DN25, DN32 | |
| | 2 m/s, DN40~DN300 | |
| Liquid | 0.3 m/s | 7 m/s |

ACCURACY

| Variables | For gas and steam | Liquid |
|--|--|--|
| Flow Rate (m ³ /h) | ±1%RD (Re ≥ 20000) ±2%RD (10000 < Re < 20000) | ±0.75%RD (Re ≥ 20000) ±2%RD (10000 < Re < 20000) |
| Mass Flow (Kg/h) | ±1.5%RD (Re ≥ 20000) ±2.5%RD (10000 < Re < 20000) | ±1.0%RD (Re ≥ 20000) ±2.5%RD (10000 < Re < 20000) |
| Temperature (°C)(For multi-variable version) | ±1°C | ±1°C |
| Pressure (Mpa) (For multi-variable version) | ±0.75% FS | ±0.75% FS |

HK60 & 62 SERIES VORTEX FLOWMETERS



Model No. : HK60-F
Model Type : Flange Type



Model No. : HK60-W
Model Type : Wafer Type



Model No. : HK62-F
Model Type : Flange Type

HK60 & 62 SERIES VORTEX FLOWMETERS



Model No. : HK60 & HK62 series

HK60 and HK62 series are the vortex flow meters that can meet the flow measurement requirements of various fluids such as gas, vapor and liquid. It provides signal processing capabilities, presents eddy current measurement techniques, lowers measurement limits, and provides stability and accuracy. It provides lower flow rates by providing lower measurement limits.

Features :

- Liquid, dry gas, wet gas, wet steam, saturated steam, superheated steam application
- Flange and body: SS304 material composition
- Flow transducer: modular design, easy operation
- Triangular prism with built-in advanced sensor
- Temperature sensor can measure the maximum temperature around 350 °C -40 ~ 250 °C

※ HK60 series : temperature and pressure compensation type

GENERAL SPECIFICATIONS

| | |
|---------------------|---|
| Size | DN15~DN300mm (flanges and wafer) DN100~DN2000mm (Insertion) |
| Medium Temperature | Liquid, Gas, Steam |
| Accuracy | ±0.75% of read (liquid), ±1.0% of read (gas and steam) |
| Nominal Pressure | 1.6Mpa, 2.5Mpa, 4.0Mpa |
| Protection Grade | IP65 |
| Ex-proof Class | ExdIIB T6 Gb |
| Body Material | SS304, SS316 |
| Medium Temperature | -20°C~+100°C, -20°C~+250°C, -20°C~+350°C, |
| Signal Output | 4~20 mA (two wires), pulse (three wires) |
| Power Supply | 24VDC, 3.6V Lithium |
| Ambient Temperature | -25°C ~ +55°C |
| Humidity | 5~90% RH |
| Pressure Loss | Resistance coefficient CD ≤2.4 |
| Connection | Flange : DN15 ~ DN300 Wafer : DN15 ~ DN300 Insertion : DN100 ~ DN2000 |
| Communication | RS485 |

HTM SERIES CORIOLIS MASS FLOWMETERS



Model No. : HTM-U
Model Type : U Type



Model No. : HTM-V
Model Type : V Type



Model No. : HTM-UT
Model Type : UT Type

HTM SERIES CORIOLIS MASS FLOWMETERS



Model No. : HTM-U / V / UT

The Coriolis Mass flowmeter directly measures the "mass" of a medium with high accuracy, based on the Coriolis force. Accuracy is not affected by factors such as temperature, pressure, density, viscosity, etc. and requires no calibration calculations. The HTM Coriolis mass flow meter can be applied to gas, liquid, custom transfer, reactor feed ratio, density measurement, and batch control.

Features :

- U-shaped design - provides excellent stability and repeatability
- Dedicated ASIC with Digital Closed Loop Control (DLC) improves gas-liquid flow measurement performance.
- DVB (Dynamic Vibration Balance) technology improves system stability
- Temperature compensation and process pressure compensation
- Special configuration for demanding applications (eg. high temperature)

GENERAL SPECIFICATIONS

| | |
|------------------------------|--|
| Measuring Tube | SS316L, Hastelloy C |
| Medium Temperature | -50°C ~ +130°C -50°C ~ +180°C -50°C ~ +250°C -50°C ~ +350°C |
| Ambient Temperature | -50°C ~ +60°C (with LCD), -40°C ~ +85°C (without LCD) |
| Flow Rate Accuracy | ±0.1%, ±0.2%, ±0.5%, |
| Density Measurement Accuracy | Error, 0.0005g/m ³ |
| Repeatability | Liquid : ≤0.05% Gas : ≤0.17% |
| Uncertainty | Liquid : ±0.10%, Gas : ±0.35%, |
| Output | 4~20mA, Pulse |
| Communication | RS485, HART, Profibus DP, FF |
| Explosion Proof | Exdib II CT6Gb |
| Protection | IP67 |

HTM SERIES CORIOLIS MASS FLOWMETERS



| U-TYPE | | | |
|------------|---------|--------------------------|-------------------|
| Model | DN (mm) | Liquid Flow Range (Kg/h) | K-Gas Coefficient |
| HTM-U-001N | 1 | 20 | 60 |
| HTM-U-002N | 2 | 60 | 60 |
| HTM-U-005N | 5 | 300 | 70 |
| HTM-U-010N | 10 | 1000 | 80 |
| HTM-U-015N | 15 | 6000 | 90 |
| HTM-U-025N | 25 | 10000 | 140 |
| HTM-U-040N | 40 | 20000 | 140 |
| HTM-U-040H | 40 | 30000 | 140 |
| HTM-U-050N | 50 | 30000 | 140 |
| HTM-U-050H | 50 | 60000 | 160 |
| HTM-U-080N | 80 | 60000 | 160 |
| HTM-U-080H | 80 | 180000 | 215 |
| HTM-U-100N | 100 | 100000 | 200 |
| HTM-U-100H | 100 | 280000 | 230 |
| HTM-U-150N | 150 | 300000 | 230 |
| HTM-U-150H | 150 | 640000 | 240 |
| HTM-U-200N | 200 | 1100000 | 250 |
| HTM-U-250N | 250 | 1800000 | 300 |

Note : 3mm, 6mm, 8mm could be customized.

| V-TYPE | | | |
|-----------|--------|-------|-------------------|
| Model | Liquid | | K-Gas Coefficient |
| | lb/min | Kg/h | |
| HTM-V-005 | 22 | 600 | 60 |
| HTM-V-015 | 220 | 6000 | 60 |
| HTM-V-025 | 660 | 18000 | 70 |
| HTM-V-040 | 1100 | 30000 | 70 |
| HTM-V-050 | 1480 | 40000 | 80 |
| HTM-V-080 | 2200 | 60000 | 100 |

Note : Gas flow range = Liquid flow range x Gas process density / K.

HCM SERIES CORIOLIS MASS FLOWMETERS



Model No. : HCM-U
Model Type : U Type



Model No. : HCM-M
Model Type : Microbend Type



Model No. : HCM-SC
Model Type : Sanitary Type

HCM SERIES CORIOLIS MASS FLOWMETERS



Model No. : HCM-U / M / SC

The HCM series, Coriolis mass flow meters are designed according to the Coriolis principle. It is used in many industries such as petroleum, petrochemical industry, pharmacy, paper, food and energy, etc., and can be widely used in the production of pharmaceuticals, paper, food and products. As the most up-to-date flow measurement equipment, it has attracted attention in the measurement field, and is accepted by many customers at home and abroad.

Features :

- Direct measurement of mass of fluid in pipeline – Prevention of measurement error of intermediate conversion
- Wider flow range, high accuracy and good repeatability
- Measured fluids can be broader, such as regular viscous fluids, highly viscous fluids, non-Newtonian fluids, sludge containing some solid components, and constant uniform flow of liquids containing some trace gases.
- Stability and improved lifespan due to less vibration
- In addition to mass flow measurement, density and temperature measurement and output are possible
- Accurately measure the moisture content of oil
- Multiple parameter display and output possible

GENERAL SPECIFICATIONS

| | |
|---------------------------|--|
| Medium | Liquid, Gas |
| Structure & Medium | Integrate type : -50 ~ +125 °C Separate type : -50 ~ +200 °C |
| Temperature Range Sensor | Low temperature type : -50 ~ +125 °C U series, Micro-bend series, Super micro-bend series |
| Transmitter | Digital type |
| Explosion-proof | Explosion-proof type |
| Power Supply | DC 18 ~36V, AC 85~265V |
| PN (MPa) | 1.6, 2.5, 4.0, 6.3 (higher PN like 10.0, 16.0, 26.0 MPa is available for some sizes) |
| Output Signal | Pulse output, 4~20mA |
| Communication | RS-485 Modbus, HART |
| Accuracy | 0.1%, 0.15%, 0.2%, 0.5% |
| Ingress Protection Rating | IP67 |
| EMI | Conform to IEC 61326 (Industrial) EMC Directive |
| Hygeian Type | Customized |
| Thermal Jacket Type | Customized |
| Process Connection | GB/T 9115-2010 as default standard, other standards can be customized |
| Flange Standard | JID, DIN, ANSI |

FLOW RANGE FOR LIQUID (Triangle and U-shaped type DSP Transmitter)

| DN (mm) | Measurable Flow Range (Kg/h) | Normal Flow Range for Accuracy 0.1% (Kg/h) | Normal Flow Range for Accuracy 0.2% (Kg/h) | Normal Flow Range for Accuracy 0.5% (Kg/h) | Stability of Zero Point (Kg/h) |
|---------|------------------------------|--|--|--|--------------------------------|
| 10 | 10~1000 | 70~1000 | 60~1000 | 50~1000 | 0.04 |
| 15 | 30~3000 | 150~3000 | 100~3000 | 80~3000 | 0.12 |
| 25 | 80~8000 | 400~8000 | 300~8000 | 280~8000 | 0.32 |
| 40 | 320~32000 | 2000~32000 | 1500~32000 | 1300~32000 | 1.2 |
| 50 | 500~50000 | 3500~50000 | 2500~50000 | 2000~50000 | 2 |
| 80 | 1400~140000 | 8000~140000 | 7000~140000 | 6000~140000 | 6 |
| 100 | 2000~200000 | 15000~200000 | 12000~200000 | 10000~200000 | 8 |
| 150 | 5000~500000 | 35000~500000 | 30000~500000 | 25000~500000 | 20 |
| 200 | 10000~1000000 | 100000~1000000 | 70000~1000000 | 50000~1000000 | 40 |

FLOW RANGE FOR GAS (DSP Transmitter)

| DN (mm) | Measurable Flow Range (Kg/h) | Normal Flow Range for Accuracy 0.2% (Kg/h) | Normal Flow Range for Accuracy 0.5% (Kg/h) | Stability of Zero Point (Kg/h) |
|---------|------------------------------|--|--|--------------------------------|
| 10 | 50~1000 | 50~1000 | 25~1000 | 0.13 |
| 15 | 15~3000 | 150~3000 | 75~3000 | 0.38 |
| 25 | 40~8000 | 400~8000 | 200~8000 | 1.00 |
| 40 | 160~32000 | 1600~32000 | 800~24000 | 4.00 |
| 50 | 250~50000 | 2500~50000 | 1250~40000 | 6.25 |
| 80 | 700~120000 | 7000~140000 | 3500~120000 | 17.5 |
| 100 | 1000~200000 | 10000~200000 | 5000~200000 | 25.0 |
| 150 | 2500~500000 | 25000~500000 | 12500~500000 | 62.5 |
| 200 | 5000~1000000 | 50000~1000000 | 25000~1000000 | 125 |

HCM-LNG & CNG Series CORIOLIS MASS FLOWMETERS



Model No. : HCM-LNG

Model Type : LNG Type

Features :

- Reduced size, direct connection technology
- Wider flow range, high accuracy
- Can be used in gas filling machines such as automobiles and heavy-duty automobiles.

The HCM-LNG, Coriolis mass flow meter is specifically designed to measure the mass flow of cryogenic media such as LNG. It can work normally at temperature -162 with an accuracy of up to 0.1%..

FLOW RANGE

| DN (mm) | Measurable Flow Range (Kg/h) | Normal Flow Range for Accuracy 0.1% (Kg/h) | Normal Flow Range for Accuracy 0.2% (Kg/h) | Stability of Zero Point (Kg/h) |
|---------|------------------------------|--|--|--------------------------------|
| 15 | 30~3000 | 150~3000 | 100~3000 | 0.38 |
| 25 | 80~81111000 | 400~8000 | 300~8000 | 1.00 |

ACCURACY & REPEATABILITY

| | | |
|---------------|-------|-------|
| Accuracy | 0.20% | 0.10% |
| Repeatability | 0.10% | 0.05% |



Model No. : HCM-CNG

Model Type : CNG Type

Features :

- Reduced size, direct connection technology
- Wider flow range, high accuracy
- Can be used in gas filling machines such as automobiles and heavy-duty automobiles.

HCM-CNG, mass flow meter is specially designed for CNG industry and can meet your CNG flow measurement requirements. Coriolis mass flow meter capable of high-precision measurement of compressed natural gas (CNG) and automobile fuel to reduce pollution caused by automobile exhaust.

FLOW RANGE

| DN (mm) | Measurable Flow Range (Kg/h) | Normal Flow Range for Accuracy 0.1% (Kg/h) | Normal Flow Range for Accuracy 0.2% (Kg/h) | Stability of Zero Point (Kg/h) |
|---------|------------------------------|--|--|--------------------------------|
| 15 | 30~3000 | 150~3000 | 100~3000 | 0.38 |
| 25 | 80~81111000 | 400~8000 | 300~8000 | 1.00 |

ACCURACY & REPEATABILITY

| | | |
|---------------|-------|-------|
| Accuracy | 0.20% | 0.10% |
| Repeatability | 0.10% | 0.05% |

MA550 MASS FLOW METER FOR GAS



Model Type : Insertion with explosion-proof type Features :

- Robust shock-resistant aluminum die-cast housing
- All medium touch parts made of stainless steel 1,4571
- Suitable as insert version from 3/4" to DN 1000
- ATEX II 2G Ex d IIC T4 (up to 120°C) upon request for ATEX approval
- Request for DVGW approval for natural gas (up to 16 bar)
- Pressures up to 50 bar (Up to 100 bar for special versions)
- Temperature range up to 180°C
- No moving parts, no wear
- Extremely powerful and easy-to-clean sensor tip
- Easy installation and pressure relief via 1/2" ball valve
- Safety ring for installation and removal under pressure
- Depth scale for accurate installation

The MA series is a mass flow meter designed specifically for gas flow measurement. It is the most modern flow meter that can be used even for gases with low specific gravity and is equipped with the most technology among flow meters to realize higher precision and boast an error rate of 0.1%. It can be applied to a wide range of industries such as power plants..

Specifications

| | |
|--|--|
| Measuring range | Up to 50 Nm/s, Low speed version Up to 92.7 Nm/s, Standard version Up to 185 Nm/s, Max version Up to 224 Nm/s, High speed version |
| Accuracy : accuracy class (m.v.: of meas. Value) (f.s.: of full scale) | ±1.5% of m.v. ±0.3% of f.s. On request, ±1.0% of m.v. ±0.3% of f.s. |
| Accuracy indications | Referred to ambient temperature 22°C ±2°C, System pressure 6 bar |
| Repeatability | 0.25% of m.v. in case of correct mounting (mounting aid, position, inlet section) |
| Measuring principle | Thermal mass flow sensor |
| Response time | t90 < 3 s |
| Operating temperature range probe tube/display unit | -40...180 °C probe tube / -40...70°C display unit / -40...120°C for ATEX version |
| Adjustment possibilities via display, external hand-held meter PI 500, PC Service Software, remote diagnosis | Nm ³ /h, Nm ³ /min, NI/min, l/s, ft/min, cfm, kg/h, kg/min, inner diameter, reference conditions °C/°F, mbar/hPa, zero-point correction, leak flow volume suppression, scaling of analogue output 4...20 mA, pulse/alarm, error codes and so on. scaling of analogue output 4...20 mA, pulse/alarm, error codes and so on |
| Adjustment possibilities via external device DS 400, DS 500 | Gas type |
| Outputs | Standard: Modbus RTU, 4...20 mA activ (not galv. isolated), galvanically isolated pulse (pulse weight freely selectable), alarm relais (max. 48 VDC, 0.5A) Optional: 2 x 4...20 mA outputs galvanically isolated Ethernet Interface (Modbus/TCP) Profibus DP Profinet 2 x 4...20 mA outputs passive M-Bus |
| Burden | 500 Ohm |
| Additional average value calculation: | for all parameters freely adjustable from 1 minute up to 1 day, e. g. 1/2 hours average value, average day value |
| Protection class | IP 67 |
| Material | Housing aluminum die cast, probe tube stainless steel 1,4571 |

MA570 MASS FLOW METER FOR GAS



Model Type : Flange & Thread with explosion-proof type Features :

- MA570 comes with an integrated measurement section
- Measurement section available in Flange version or R resp
- NPT threads. Detachable measuring head
- Measuring section allows quick and easy removal of the measuring device for calibration or cleaning purposes, during which time the measuring section is sealed with a closing cap (accessory)
- Screwing with a centering device ensures that the sensor is accurately centered when screwing the sensor into the measuring section and gives a precise position to the flow cut-off, avoiding unnecessary measurement glitches

The MA series is a mass flow meter designed specifically for gas flow measurement. It is the most modern flow meter that can be used even for gases with low specific gravity and is equipped with the most technology among flow meters to realize higher precision and boast an error rate of 0.1%. It can be applied to a wide range of industries such as power plants..

Specifications

| | |
|--|---|
| Measuring range | Up to 50 Nm/s, Low speed version Up to 92.7 Nm/s, Standard version Up to 185 Nm/s, Max version Up to 224 Nm/s, High speed version |
| Accuracy : accuracy class (m.v.: of meas. Value) (f.s.: of full scale) | ±1.5% of m.v. ±0.3% of f.s. On request, ±1.0% of m.v. ±0.3% of f.s. |
| Accuracy indications | Referred to ambient temperature 22°C ±2°C, System pressure 6 bar |
| Repeatability | 0.25% of m.v. in case of correct mounting (mounting aid, position, inlet section) |
| Measuring principle | Thermal mass flow sensor |
| Response time | t90 < 3 s |
| Operating temperature range probe tube/display unit | -40...180 °C probe tube / -40...70°C display unit / -40...120°C for ATEX version |
| Adjustment possibilities via display, external hand-held meter PI 500, PC Service Software, remote diagnosis | Nm³/h, Nm³/min, NI/min, l/s, ft/min, cfm, kg/h, kg/min, inner diameter, reference conditions °C/°F, mbar/hPa, zero-point correction, leak flow volume suppression, scaling of analogue output 4...20 mA, pulse/alarm, error codes and so on. scaling of analogue output 4...20 mA, pulse/alarm, error codes and so on |
| Adjustment possibilities via external device DS 400, DS 500 | Gas type |
| Outputs | Standard: Modbus RTU, 4...20 mA activ (not galv. isolated), galvanically isolated pulse (pulse weight freely selectable), alarm relais (max. 48 VDC, 0.5A) Optional: 2 x 4...20 mA outputs galvanically isolated Ethernet Interface (Modbus/TCP) Profibus DP Profinet 2 x 4...20 mA outputs passive M-Bus |
| Burden | 500 Ohm |
| Additional average value calculation: | for all parameters freely adjustable from 1 minute up to 1 day, e. g. 1/2 hours average value, average day value |
| Protection class | IP 67 |
| Material | Housing aluminum die cast, probe tube stainless steel 1,4571 |

MA520 MASS FLOW METER FOR GAS



Model Type : Flange & Thread type

Features :

- Digital interface enables connection to advanced systems such as energy management systems, building management systems, SPS, etc.
- Easy and inexpensive installation
- Units freely selectable via key on display m³/h, m³/min, l/min, l/s, kg/h, kg/min, kg/s, cfm
- Compressed air counter up to 1.999.999.999 m³. Resettable to "0" via keypad
- Analog output 4 ... 20 mA, pulse output (galvanically separated)
- High measurement accuracy even at low measuring ranges (ideal for leak measurements)
- Very small pressure loss
- Calorimetry principle, no additional pressure and temperature measurement required, no mechanically moving parts

The MA series is a mass flow meter designed specifically for gas flow measurement. It is the most modern flow meter that can be used even for gases with low specific gravity and is equipped with the most technology among flow meters to realize higher precision and boast an error rate of 0.1%. It can be applied to a wide range of industries such as power plants.

Specifications

| | | |
|---|--|---|
| Parameters | m ³ /h, l/min (1000 mbar, 20°C) in case of compressed air resp. Nm ³ /h, NI/min (1013mbar, 0°C) in case of gases | |
| Units adjustable via keys at display | m ³ /h, m ³ /min, l/min, l/s, ft/min, cfm, m/s, kg/h, kg/min | |
| Measuring principle | Calorimetric measurement | |
| Sensor | Thermal mass flow sensor | |
| Measuring medium | Air, gases | |
| Gas types adjustable via external device DS 400, DS 500, PI 500 | air, nitrogen, argon, nitrous oxide, CO ₂ , oxygen | |
| Accuracy: (m.v.: of meas. value) (f.s.: of full scale) | ± 1.5 % of m.v. ± 0.3 % of f.s. on request ± 1.0 % of m.v. ± 0.3 % of f.s. | |
| Operating temperature | -30...80 °C | |
| Operating pressure | up to 16 bar / optional up to PN 40 | |
| Digital output | RS 485 interface, Modbus-RTU, M-Bus (optionally) | |
| Analogue output | 4...20 mA for m ³ /h resp. l/min | |
| Pulse output | 1 pulse per m ³ resp. per liter galvanically separated | |
| Power supply | 18...36 VDC, 5 W | |
| Burden | <500Ω | |
| Housing | Thread type | Polycarbonate |
| | Flange type | Polycarbonate (IP 65) |
| Measurement section | Thread type | Stainless steel, 1.4301 or 1.4571 |
| | Flange type | Stainless steel, 1.4571 |
| Mounting section | Thread type | : R 1/4", R 1/2", R 3/4", R 1", R 1 1/4", R 1 1/2", R 2" external thread. |
| | Flange type | Weld neck flange according to DIN EN 1092-1, Groove-faced and tongue-faced on request |

MA500 MASS FLOW METER FOR GAS



Model Type : Insertion type

Features :

- RS 485 interface, standard Modbus-RTU
- Included temperature measurement
- Integrated display for m³/h and m³
- Available from 1/2" to DN 1000
- Easy installation under pressure
- 4..20mA analog output for m³/h resp. m³/min
- Pulse output for m³ or M-Bus (optional)
- Adjustable inside diameter via keypad
- Consumption counter can be reset
- Grounding possible via key on display: reference condition, °C and mbar, 4 ... 20 mA scaling, pulse weight

The MA series is a mass flow meter designed specifically for gas flow measurement. It is the most modern flow meter that can be used even for gases with low specific gravity and is equipped with the most technology among flow meters to realize higher precision and boast an error rate of 0.1%. It can be applied to a wide range of industries such as power plants.

| Specifications | |
|---|--|
| Parameters | m ³ /h, l/min (1000 mbar, 20°C) in case of compressed air resp. Nm ³ /h, NI/min (1013mbar, 0°C) in case of gases |
| Units adjustable via keys at display | m ³ /h, m ³ /min, l/min, l/s, ft/min, cfm, m/s, kg/h, kg/min, g/s, lb/min, lb/h |
| Adjustable via keypad | Diameter for volume flow calculation, counter resettable |
| Sensor | Thermal mass flow sensor |
| Measuring medium | Air, gases |
| Gas types are adjustable over cs service software or CS data logger | air, nitrogen, argon, helium, CO ₂ , oxygen, vacuum |
| Accuracy: (m.v.: of meas. value) (f.s.: of full scale) | ± 1.5 % of m.v. ± 0.3 % of f.s. on request ± 1.0 % of m.v. ± 0.3 % of f.s. |
| Operating temperature | -30...110 °C probe tube -30...80 °C housing |
| Operating pressure | -1~50 bar |
| Digital output | RS 485 interface, Modbus-RTU (Optional; Ethernet-interface PoE, M-Bus) |
| Analogue output | 4...20 mA for m ³ /h resp. l/min |
| Pulse output | 1 pulse per m ³ or per liter galvanically separated. Pulse value can be set on the display, Alternatively the pulse output can be used as an alarm relay. |
| Power supply | 18...36 VDC, 5 W |
| Burden | <500Ω |
| Housing | Polycarbonate (IP 65) |
| Probe tube | Stainless steel, 1.4571 Mounting length 220mm, Ø 10mm |
| Mounting thread | G 1/2" |
| Ø Casing | 65mm |
| Mounting position | Any |

DS400 FLOW MONITOR CONTROLLER



Model Type : Flow Monitor Controller

Features :

- 3.5" graphic display – easy to use with touch screen
- Plug-in system: all wired and ready
- 2 alarm contacts (230VAC, 3A)
- Freely adjustable pre-alarm main alarm
- Alarm delay can be set for each alarm
- 4 ... 20 mA analog output
- Optional: Ethernet and RS 485 interface (Modbus protocol)
- Option: Web Server

The DS 400 controller is a mass flow meter controller specifically designed to externally display the local flow display in which the MA series mass flow meter is installed.

Specifications

| | |
|----------------------------|--|
| Dimensions | 118 x 115 x 98 mm IP 54 (wall housing) 92 x 92 x 75 mm (panel mounting) |
| Inputs | 2 digital inputs for HA 510 resp. MA 500/520 |
| Interface | USB interface |
| Power supply | 100...240 VAC, 50~60 Hz |
| Accuracy | Please see MA500 |
| Alarm outputs | 2 relays, (pot. – free) |
| Data logger | 100 million measuring values start/stop time, measuring rate freely adjustable |
| 2 additional sensor inputs | For connection of pressure sensors, temperature sensors, clamp-on ammeters, third-party sensors with 4...20 mA 0 to 10V, Pt 100, Pt 1000 |

Flow MA500 for compressed air (ISO 1217: 1000 mbar, 20°C)

| Inner diameter of pipe | | | MA500 Standard (92.7 m/s) | MA500 Max. (185.0 m/s) | MA500 High Speed (224.0 m/s) |
|------------------------|-------|-------|--|--|--|
| Inch | mm | | Measuring range m ³ /h (cfm) | Measuring range m ³ /h (cfm) | Measuring range m ³ /h (cfm) |
| ½" | 16.1 | DN15 | 759 l/m | 1516 l/m | 1836 l/m |
| ¾" | 21.7 | DN20 | 89 m ³ /h | 177 m ³ /h | 215 m ³ /h |
| 1" | 27.3 | DN25 | 148 m ³ /h | 294 m ³ /h | 356 m ³ /h |
| 1 ¼" | 36.0 | DN32 | 266 m ³ /h | 531 m ³ /h | 643 m ³ /h |
| 1 ½" | 41.9 | DN40 | 366 m ³ /h | 732 m ³ /h | 886 m ³ /h |
| 2" | 53.1 | DN50 | 600 m ³ /h | 1197 m ³ /h | 1450 m ³ /h |
| 2 ½" | 68.9 | DN65 | 1028 m ³ /h | 2051 m ³ /h | 2484 m ³ /h |
| 3" | 80.9 | DN80 | 1424 m ³ /h | 2842 m ³ /h | 3441 m ³ /h |
| 4" | 110.0 | DN100 | 2644 m ³ /h | 5279 m ³ /h | 6391 m ³ /h |
| 5" | 133.7 | DN125 | 3912 m ³ /h | 7808 m ³ /h | 9453 m ³ /h |
| 6" | 159.3 | DN150 | 5560 m ³ /h | 11096 m ³ /h | 13436 m ³ /h |
| 8" | 200.0 | DN200 | 8785 m ³ /h | 17533 m ³ /h | 21229 m ³ /h |
| 10" | 250.0 | DN250 | 13744 m ³ /h | 27428 m ³ /h | 33211 m ³ /h |
| 12" | 300.0 | DN300 | 19814 m ³ /h | 39544 m ³ /h | 47880 m ³ /h |

H57 SERIES VARIABLE AREA FLOWMETERS



Model No. : H57
Model Type : Digital Type



Model No. : H57
Model Type : Analog Type



Model No. : H57
Model Type : Stainless Steel Type

H57 SERIES VARIABLE AREA FLOWMETERS



Model No. : H57

The most common design of variable area meter is the cone-and-float type, which is also known as a rotameter

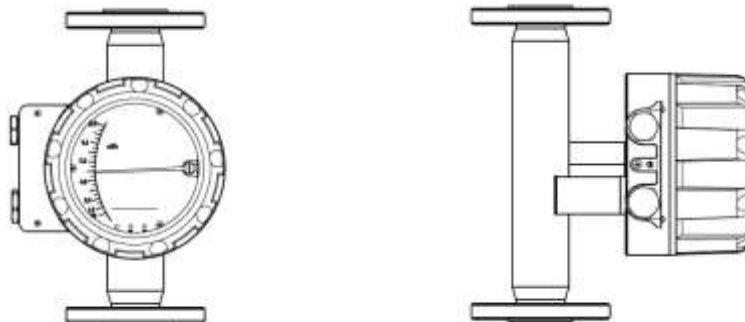
It is applied to gas supply facilities, electricity-related, petroleum, chemical-related, metallurgy, pharmaceutical industry, etc., and the type can be selected according to the use and requirements. Variable area flowmeter H57 has three types: Digital Type, Mechanical Type, and Stainless Steel Type.

Features :

- Mechanical display and LCD display
- Short-stroke design can measure high flow rates using relatively short metering tubes.
- Special applications with hazardous or aggressive fluids, high temperatures and high pressure velocities.
- All stainless steel design provides safe measurement of a wide variety of liquids, gases and vapors. The measuring section can be equipped with a heating jacket.
- Support vertical installation

GENERAL SPECIFICATIONS

| | | |
|----------------------|---|--|
| Measuring range | 0.03 m ³ /h ~ 3000 m ³ /h | |
| Accuracy | ±1.5% of rate, ±1.0% of rate | |
| Pressure rating | DN15~DN50 < 4.0Mpa, DN80~DN200 < 1.6Mpa (Common) DN15~DN50 < 32Mpa, DN80~DN200 < 16Mpa (Special) | |
| Pressure loss | 7kPa ~ 70mPa | |
| Medium temperature | SS304 (-40°C~+100°C), PTFE (0°C~+100°C), High temp. (+110°C~+450°C) | |
| Viscosity | DN15 : <5mPa.s, <30mPa.s | |
| | DN25 : 250mPa.s | |
| | DN50~DN150 : <300mPa.s | |
| Ambient temperature | Pointer type | -40°C~+100°C |
| | Remote type : | -40°C~+85°C (liquid crystal is not damage) -30°C~+80°C (liquid type is able to operate) |
| Electrical interface | Cable piping : 1/2 NPT, M2x1.5 | |
| Power supply | 4~20mA, 24V DC (12V DC~32V DC) 2 wires system | |
| | Alarm type : 4~20mA, 24V DC (18V DC~28V DC) 4 wires system) | |
| | 85~265V AC 50Hz Battery : 3.6V @7.5AH | |
| Protection | IP65 | |
| Explosion proof | ExiallCT1-6, ExdIIBT1-6 | |



H57 SERIES VARIABLE AREA FLOWMETERS



| FLOW RANGE | | | | | |
|------------|--------------|---------------------------------|-----------------------------|-------------------------|---------------------|
| Diameter | Flow Segment | Water (L/H) | | Air (m ³ /h) | Pressure Loss (kPa) |
| | | Material (SS304, SS316, SS316L) | Material (PTFE) | 20°C @1atm (Standard) | 60/66 |
| DN15 | 1A | 1.0 ~ 10 | * | 0.03 ~ 0.3 | 6.8 |
| | 1B | 1.6 ~ 16 | * | 0.05 ~ 0.5 | 6.8 |
| | 1C | 2.5 ~ 25 | 1.6 ~ 16 | 0.07 ~ 0.7 | 6.8 |
| | 1D | 4.0 ~ 40 | 2.5 ~ 25 | 0.12 ~ 1.2 | 6.8 |
| | 1E | 6.3 ~ 63 | 4.0 ~ 40 | 0.18 ~ 1.8 | 7 |
| | 1F | 10 ~ 100 | 6.0 ~ 60 | 0.3 ~ 3 | 7.2 |
| | 1G | 16 ~ 160 | 10 ~ 100 | 0.48 ~ 4.8 | 7.8 |
| | 1H | 25 ~ 250 | 16 ~ 160 | 0.7 ~ 7 | 9 |
| | 1I | 40 ~ 400 | 25 ~ 250 | 1.2 ~ 12 | 12 |
| | 1J | 63 ~ 630 | 40 ~ 400 | 1.8 ~ 18 | 13 |
| | 1K | 100 ~ 1000 | * | 3 ~ 30 | 16 |
| DN25 | 2A | 30 ~ 300 | * | 1.4 ~ 14 | 3.8 |
| | 2B | 63 ~ 630 | 400 | 2.1 ~ 21 | 3.8 |
| | 2C | 100 ~ 1000 | 630 | 3 ~ 30 | 4.2 |
| | 2D | 160 ~ 1600 | 1000 | 4.8 ~ 48 | 5.7 |
| | 2E | 250 ~ 2500 | 1600 | 7 ~ 70 | 6 |
| | 2F | 320 ~ 3200 | * | 10 ~ 100 | 6.6 |
| | 2G | 400 ~ 4000 | 2000 | 13 ~ 130 | 7.8 |
| | 2H | 500 ~ 5000 | 2500 | 15 ~ 150 | 8.8 |
| | 2I | 620 ~ 6300 | 3200 | 18 ~ 180 | 10.3 |
| | 2J | 1000 ~ 10000 | * | * | 16 |
| DN50 | 3A | 400 ~ 4000 | * | 13 ~ 130 | 4.2 |
| | 3B | 630 ~ 6300 | 400 ~ 4000 | 18 ~ 180 | 4.7 |
| | 3C | 1000 ~ 10000 | 630 ~ 6300 | 30 ~ 300 | 6 |
| | 3D | 1600 ~ 16000 | 1000 ~ 10000 | 50 ~ 500 | 6 |
| | 3E | 2000 ~ 20000 | 1600 ~ 16000 | 60 ~ 600 | 6.5 |
| | 3F | 2500 ~ 25000 | * | 70 ~ 700 | 7 |
| DN80 | 4A | 1000 ~ 10000 | * | * | 6 |
| | 4B | 1600 ~ 16000 | 1600 ~ 16000 | 50 ~ 500 | 6.8 |
| | 4C | 2500 ~ 25000 | 2500 ~ 25000 | 70 ~ 700 | 7 |
| | 4D | 4000 ~ 40000 | 4000 ~ 40000 | 180 ~ 1800 | 13 |
| | 4E | 6300 ~ 63000 | * | 120 ~ 1200 | 15 |
| DN150 | 6A | 8000 ~ 80000 | * | 250 ~ 2500 | 22 |
| | 6B | 10000 ~ 100000 | * | 300 ~ 3000 | 50 |
| | 6C | 15000 ~ 150000 | * | * | 60 |
| DN200 | 7A | 15000 ~ 150000 | * Contact for customization | | 50 |
| | 7B | 20000 ~ 200000 | | | 70 |

H56 SERIES VARIABLE AREA FLOWMETERS



Model No. : H56
Model Type : Battery Type

- Digital LCD display (flow and total flow)
- Powered by 3.6V lithium battery



Model No. : H56
Model Type : Explosion-proof Type

- Digital mechanical indicator with explosion-proof housing
- One or two limit switches selectable.
 - ① KG22 limit switch (K1, K2)
 - ② KG23 limit switch (KR1, KR2).



Model No. : H56
Model Type : 4-20mA Type

- Explosion-proof modular design
 - ① Intrinsically safe type
 - ② Explosion-proof type
- Digital LCD display indicator
- 2-wire electrical signal output (4-20) mA / hart communication test plan.
- One or two limit switches selectable
 - ① Limit switch KG22 (K1, K2);
 - ② Limit switch KG2

H56 SERIES VARIABLE AREA FLOWMETERS



The area-type flowmeters H56 series are metal cone variable-area flowmeters used for instantaneous and cumulative flow measurement. It is suitable for liquid, gas and vapor metering in closed pipelines, and the principle of measuring the flow value in the field or electronic remote control is based on the hydrodynamic effect. This moves the float from bottom to top in a vertical pipe. Since the displacement of the float is related to the flow rate, it is read from the indicator by means of a magnetic drive system. The flow meter also outputs an electrical signal. Area flow meter H56 series can be configured with a wide range of (4-20)mA / HART communication protocol warning switch / integrated flow PCB depending on the type.

GENERAL SPECIFICATIONS

| | | |
|---|---|--|
| Medium | Liquids, gases, vapors | |
| Range (conversion to 100% value of reference fluid) | Water : 20°C | (10~3000000)L/h, on request |
| | Air : 0.1013MPa, 20°C | (0.7~3000)Nm ³ /h, on request |
| The turn-down ratio | 10 : 1 | |
| Accuracy class | Mechanical indicator | 1.0, 1.5, 2.0, 2.5 |
| | Mechanical indicator with LCD (battery powered, 2 years service life) | 1.0, 1.5, 2.0, 2.5 |
| | Mechanical indicator with two-wire single output (4~20)mA/hart communication | 1.0, 1.5, 2.0, 2.5 |
| Medium temperature | Machinery indicator | -80°C~+300°C (PTFE: 0~80°C) High temperature 400°C |
| | Mechanical indicator with LCD (battery powered, 2 years service life) | -80°C~+120°C (PTFE: 0~80°C) High temperature 400°C |
| | Mechanical indicator with two-wire single output (4~20)mA/hart communication protocol | -80°C~+120°C (PTFE: 0~80°C) High temperature 400°C |
| Ambient temperature | Mechanical indicator | -40°C~+120°C |
| | Mechanical indicator with LCD (battery powered, 2 years service life) | -20°C~+60°C |
| | Mechanical indicator with two-wire single output (4~20)mA/hart communication | -20°C~+60°C |
| Viscosity of fluid | DN15: F15.00~F15.03 $n < 5$ mPa.s, F15.04~15.30 $n < 30$ mPa.s DN25: $n < 250$ mPa.s DN50~250: $n < 300$ mPa.s | |
| Nominal pressure | DN15~DN50 | 4.0MPa (Max DN15: 42MPa, DN25: 42MPa, DN50: 32MPa) |
| | DN80~DN250 | 1.6MPa (Max DN80: 10MPa, DN100: 6.5MPa, DN125: 4.0MPa, DN200: 2.5MPa, DN250: 2.5MPa) |
| Process connection | Flange connection, Standard: DIN2501, ANSI, JIS | |
| | Hygiene clamp, screw joint are selected in the order | |
| Electrical connection | M20x1.5 1/2"G 1/2"NPT 3/4"G 3/4"NPT | |
| Installation | Vertical mounting (bottom in up out and up in bottom out), Horizontal mounting (left in right out and right in left out) bottom in side out, side in side out | |
| Straight unimpeded inlet run | ≥50 | |
| Straight unimpeded outlet run | ≥250mm | |
| Degree of protection | IP67 (Others need specify in the order) | |
| Ex marking | EEx ia II CT5 | |
| | EEx d II CT6 | |
| Ex electrical data | Ui = 28V li = 93mA Pi = 0,65W Ci ≤ 5nF Li = 0mH | |
| Safety barrier data | Uo ≤ 28V lo ≤ 93mA Po ≤ 0.65W Co ≥ Ci+Cc Lo ≥ Li+Lc | |
| Carried standard | JB/T 6844-93 | |



Model No. : HM2016 / Flow Controller

- Display: 16 channels x 4 line LCD, flow rate (LPM, m3/h)
- Ramp: Auto check overrun
- Input frequency: 0 to 1 KHz
- Input: 4-20mA, pulse
- Power: AC90V to 250V
- Pulse output: 1cc, 10cc, 100cc, 1L, 10L, 100L, 1000L
- Size: 144 x 72 x 134 mm

Model No. : HM2011 / Flow Controller

- Display: 16 channels x 4 line LCD, flow rate (LPM, m3/h)
 - Ramp: Auto check overrun
 - Input frequency: 0 to 1 KHz
 - Output: 4-20mA, pulse
 - Power: AC90V to 250V
- Pulse output: 1cc, 10cc, 100cc, 1L, 10L, 100L, 1000L
 - Size: 144 x 72 x 131 mm



Model No. : DY-BT8 / Batch Counter

- Display: 7 compartments
- Power: AC 90V ~ 250V
- Scale range: 0.00001 ~ 999.00000
- Measure range: 99,999,999 ~ 99,999.99
- Output : Pulse, two SPDT Relays
- Size: 144 x 72 x 129 mm

Model No. : DYB-6 / Controller

- AC power: AC90 ~ 250V (about 10VA)
 - Counting speed: 30HZ, 2000HZ
 - Input method: contact OR NPN, PNP
- Control output: RELAY STDT 1C (DC30V/100MA)
 - Ambient temperature: -10 ~ 55°C
 - storage temperature: -25 ~ 65 ° c
 - Ambient humidity: 35 to 85%RH
 - Size: 71 x 71 x 112 mm



Model No. : DY-T8 / Total Counter

- Power supply voltage: AC90 - 240V
- Input method: using PNP
- SCALE range: 0.00001 to 999.0000
- Measurement range: 99999999-999999.999 (8DIGIT COUNTER)
- DISPLAY method: 7-Segment
- Input speed: 2KCPS/30CPS selection
- Size: 72 x 36 x 96 mm



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