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Electromagnetic Flow Meter



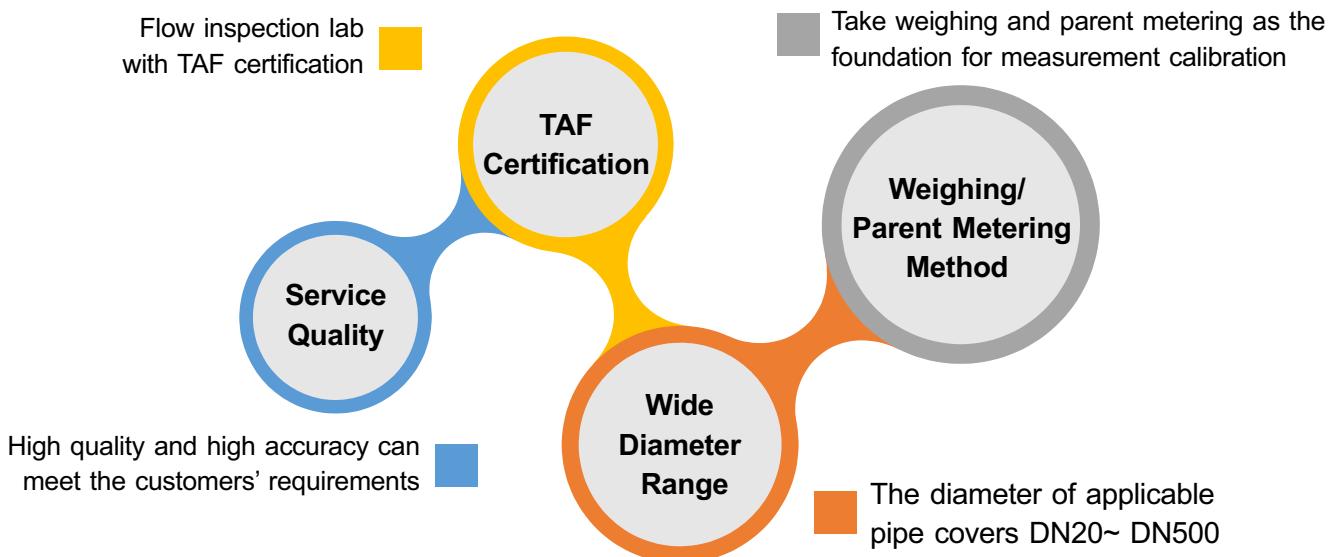
 FineTek

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FLOW MEASUREMENT FIELD

FineTek is the only inspection institution that owns a Class 2 flow test laboratory in Taiwan. With the most professional R&D and Design Team, it can design and develop high-accuracy electromagnetic flow meters. Moreover, it conducts calibration in Class 1 Flow Laboratory of the National Measurement Laboratory (ITRI Measurement Center), so as to guarantee the flow accuracy on the measurement field.

FineTek's flow laboratory has received certification from the Taiwan Accreditation Foundation and conforms to the regulations of international organizations such as ILAC and APALC. It has the complete ability of uncertainty testing and rating for flow test.



FLOW MEASUREMENT FIELD



PUMP equipment
(The maximum horsepower
is 110KW per unit)



Weighing equipment



Control room & Graphical HMI



Piping system I
(Max capacity for four meters calibration
simultaneously in above system.)



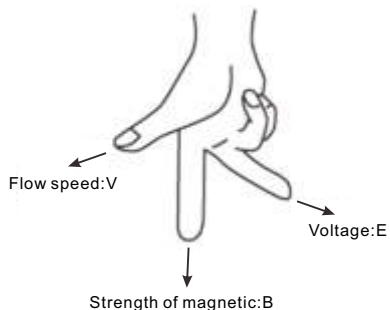
Piping system II
(Maximum diameter is 500mm)



The exclusive report
(Each flow meter has its
own calibration report)

ELECTROMAGNETIC FLOW METER

EPD electromagnetic flow meter is a high-accuracy flow meter manufactured based on the latest international technology. It is widely applied in papermaking, chemical industry, metallurgical industry, drainage, waste water treatment, liquid high-pressure metering, medical care, food, and environmental protection industries. It is used to measure the non-magnetic liquid and plasma in the enclosed pipe.



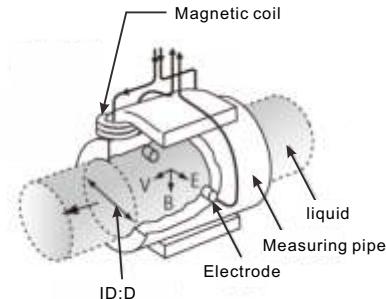
WORKING PRINCIPLE

The working principle of the electromagnetic flow meter is based on the Faraday law of electromagnetic induction. When the conducting liquid flows in the orthogonal direction of the magnetic line direction, it will cut the magnetic lines and generate induced voltage, which shows linear relationship with the flowing speed. Thus, the fluidic volume flow can be calculated.

EPD electromagnetic flow meter is mainly composed of the sensor and transmitter. The measuring tube of the sensor is equipped with the excitation coils upward and downward. The transmitter supplies the excitation current, which generates the magnetic field which goes through the measuring tube once it is powered on. A pair of induction electrodes installed on the inner side of the measuring tube comes in contact with the liquid to guide the induced voltage to the sensor.

APPLICATIONS

- Waste water treatment
- Tapped water purification
- Sewerage
- Sea water desalination module
- Dyeing machines
- Solar energy and PCB wet processing
- Food manufacturing
- Pharmaceutical machines



FEATURES

Low impact on environmental matter

- The measurement results are not affected by the change in liquid density, viscosity, temperature, pressure and conductivity.
- It can be widely applied in the conducting liquids that may contain fiber, solid granules and suspended matters.
- Enclosure protection rating: IP67/NEMA 4X

Wide measurement range & high efficiency

- The wide measurement turndown ratio can be reach 1:100, which can be set randomly and achieve high accuracy for small flow measurement.
- Highly-integrated backlit display of two rows, dual isolation, parameter setting, menu-type operation, memory function, reliable programming, password lock and access, small signal elimination, non-linear correction and two-way measurement.
- Various outputs: Current output 4~20mA, frequency output 2~8KHz and RS485 communication.

Multiple self-diagnosis function

- Power-saving and low fault rate: The measuring tube is without baffle and movable parts, so it won't cause pressure loss and jam.
- Smart self-detection and self-diagnosis function, as well as various alarms

The low installation cost

- It is easy-to-install with low requirements for the straight tube section (Front 5D and rear 2D)
- 2-wire analog output

Available for records for parameter modifications, boot/ shut down device(Option)

Authority management is available in menu (Option)

SPECIFICATION

| Item | EPD30 Standard type | EPD34 Remote type |
|--------------------------------|--|--|
| Display | LCM 128*64 pixel backlit type | |
| Buttons | Tri-button operation | |
| Communication interface | RS-485 (Modbus) (Optional support for ZigBee Pro wireless transmission) | |
| Accuracy | ±0.5% of reading@1m/s(0.2% optional) | |
| Medium temperature | -20 ~ 120 °C(PTFE Lining) | |
| Ambient temperature | -40 ~ 70 °C* | |
| Fluidic conductivity | > 5 uS/cm | |
| Measuring scope | 0.1m/s ~ 10m/s | |
| Current output accuracy | 0.1% of Pulse Output Accuracy Temperature coefficient (100ppm/°C) | |
| Operating pressure | 10Kg/cm ² | |
| Current output mode | Proactive | |
| Analog output | 4 ~ 20mA | |
| Maximum load of current output | < 700Ω | |
| Alarming current | 3.6mA or 22 mA | |
| Frequency output scope | 2 ~ 8 KHz | |
| Pulse width | Automatic (pulse width 50%) | |
| Pulse mode | NPN transistor output 32vdc/200mA | |
| Time constant | 1~100 s | |
| Control output (DO) | NPN transistor output 32vdc/200mA ; 1-CH(EPD30),2-CH(EPD34) | |
| Control input (DI) | Dry contact ON< 200Ω ; 1,000Ω< OFF ; 1-CH | |
| Data logger(Option) | 500 items. With calendar (Internal battery: Lift time>6 month) | |
| Baud rate | 1200 ~ 57600 bps | |
| Protection rating | IP67 / NEMA 4X | IP68** (Transducer) IP67 / NEMA 4X (Transmitter) |
| Enclosure material | Aluminum alloy | |
| Input power | AC 100~240V or DC 24V | |
| Power consumption | < 10W | |
| Wire inlet specification | M20 x 1.5 x 2 | 1/2"NPT x 2(Transducer), M20 x 1.5 x 4(Transmitter) |
| Excitation mode | Pulse DC | |
| Vibration regulation | IEC 60068-2-3 | |
| EMC regulation | IEC/EN 61326-1 Class A table2 | |

*It can't display when LCM is lower than -20°C.

**Continuous immersion in 6 meters of water for up to 48 hours, IP68 protection, optional function.

MATERIAL SELECTION

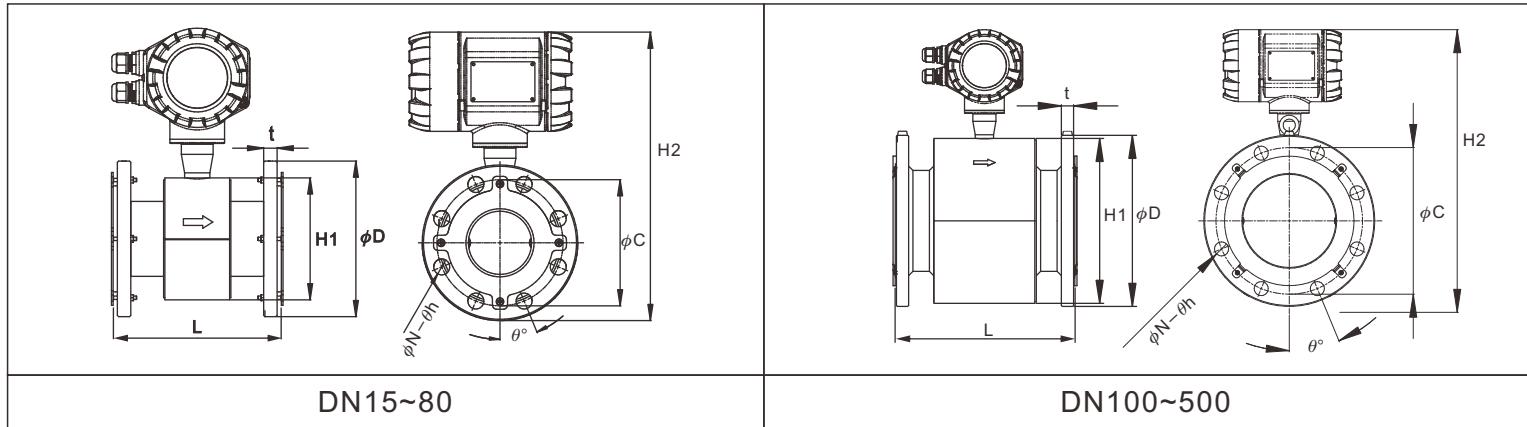
Electrode material

| Electrode material | Anti-corrosion property |
|------------------------|---|
| Stainless steel (316L) | It is applied in water, sewage and organic and non-organic corrosive medium. |
| Hastelloy alloy | It is resistant to the corrosion of the medium mixture of oxidizing acid such as Nitric acid, mixed acid or Sulfuric acid. Moreover, it is resistant to the corrosion of the oxidizing salt such as Fe^{2+} 、 Cu^{2+} or other substances containing oxidants such as the salt solution of hypochlorous acid above the ambient temperature and sea water. |
| Titanium | It is resistant to the corrosion of sea water, various oxides, salt solution of hypochlorous acid, oxidizing acid (including fuming Nitric acid) and organic acid and alkane. It is not resistant to the corrosion of pure reducing acid (such as Sulfuric acid and Hydrochloric acid). However, the anti-corrosion property will be greatly degraded if the acid contains some oxidants. |
| Tantalum | It has excellent corrosion resistance. Its characteristic is similar to glass. In addition to hydrofluoric acid , nitric acid , alkali, it could resist almost all chemical medium (including boiling hydrochloric acid, nitric acid and sulfuric acid below 175 °C). It could not resist corrosion in alkali. |

Lining material

| Lining material | Main properties | Application scope |
|-----------------|--|--|
| PTFE | 1. Stable chemical properties, resistant to various acid, alkane, and salt solutions and various organic solvents. It is not tolerant to the corrosion of ClF_3 , high-temperature OF_3 and high-speed liquid oxygen and ozone. 2. The anti-abrasion property is average. | 1. -20~120°C 2. Strong corrosive medium such as concentrated acid and alkane. |
| NBR | 1. Excellent flexibility, highly tearing force capability, good wear resistance 2. It is resistant to low concentrations of acid, alkali, salt solution;It is not tolerant the corrosion of oxidizing mediums. | 1. < 80°C 2. Neutral-strong wearing mineral pulp, coal slurry and mud slurry |
| Neoprene | 1. Neutral wearing capability 2. It is resistant to low concentrations of acid, alkali, acid corrosion. | 1. < 80°C 2. Water, Industrial water , Seawater |

APPEARANCE AND DIMENSION AND FLANGE CONNECTION DIMENSION STANDARD TYPE



DN15~80

DN100~500

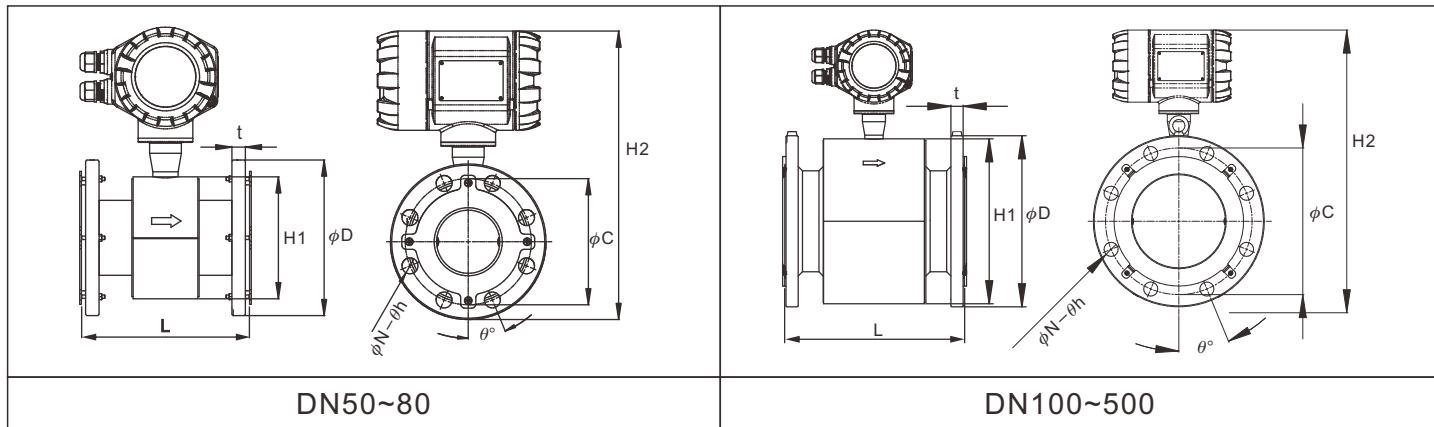
| Connection specification | | JIS 10K | | | | | | | | | | | | | | | | | | |
|------------------------------|---------------|---------|-----|-----|-----|-----|------|------|------|------|------|-----|-------|-------|-------|-----|-----|-----|-----|-----|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 |
| Lining material | | PTFE | | | | | | | | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 | 600 | 600 | |
| External diameter | phiD | 95 | 125 | 140 | 155 | 175 | 185 | 210 | 250 | 280 | 330 | 400 | 445 | 490 | 560 | 620 | 675 | | | |
| PCD | phiC | 70 | 90 | 105 | 120 | 140 | 150 | 175 | 210 | 240 | 290 | 355 | 400 | 445 | 510 | 565 | 620 | | | |
| Flange thickness | t | 12 | 14 | 16 | 16 | 18 | 18 | 18 | 20 | 22 | 22 | 24 | 24 | 26 | 28 | 30 | 30 | 30 | 30 | |
| Inclined angle of screw hole | theta degrees | 45 | 45 | 45 | 45 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 15 | 15 | 11.25 | 11.25 | 11.25 | 9 | 9 | | | |
| Diameter of screw hole | theta h | 15 | 19 | 19 | 19 | 19 | 19 | 19 | 23 | 23 | 23 | 25 | 25 | 25 | 27 | 27 | 27 | 27 | 27 | |
| Quantity of screw holes | N | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 12 | 12 | 16 | 16 | 16 | 20 | 20 | 20 | 20 | 20 | |
| Height of sensor casing | H1 | 75 | 88 | 125 | 125 | 145 | 145 | 195 | 195 | 270 | 305 | 365 | 406 | 470 | 530 | 580 | 630 | | | |
| Total height | H2 | 267 | 289 | 315 | 322 | 342 | 347 | 385 | 405 | 467 | 506 | 572 | 616 | 675 | 737 | 769 | 818 | | | |
| Weight (kg) | | 5 | 6.8 | 6.8 | 7.7 | 9 | 9.9 | 12.9 | 17.5 | 23.5 | 33.2 | 54 | 69.6 | 88.4 | 109.3 | -- | -- | -- | -- | |

| Connection specification | | JIS 20K | | | | | | | | | | | | |
|------------------------------|---------------|---------|-----|-----|------|------|------|------|------|-----|------|------|-------|--|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | |
| Lining material | | PTFE | | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 | 400 | 500 | |
| External diameter | phiD | 95 | 125 | 140 | 155 | 175 | 200 | 225 | 270 | 305 | 350 | 430 | 480 | |
| PCD | phiC | 70 | 90 | 105 | 120 | 140 | 160 | 185 | 225 | 260 | 305 | 380 | 430 | |
| Flange thickness | t | 14 | 16 | 18 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 34 | 36 | |
| Inclined angle of screw hole | theta degrees | 45 | 45 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 15 | 15 | 15 | 11.25 | |
| Diameter of screw hole | theta h | 15 | 19 | 19 | 19 | 23 | 23 | 23 | 25 | 25 | 25 | 27 | 27 | |
| Quantity of screw holes | N | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | 12 | 12 | 12 | 16 | |
| Height of sensor casing | H1 | 75 | 88 | 125 | 125 | 145 | 145 | 195 | 195 | 270 | 305 | 365 | 406 | |
| Total height | H2 | 267 | 289 | 315 | 322 | 342 | 355 | 392 | 415 | 478 | 514 | 585 | 632 | |
| Weight (kg) | | 5.3 | 7 | 7.1 | 7.7 | 9 | 12.3 | 16.4 | 23.6 | 31 | 43.4 | 74.2 | 94.2 | |

Remarks:

For DN15~DN80、DN350~DN500, the lining protective ring is 2mm, so the total length of the flow meter shall be increased by L+4mm. For DN100~DN300, the lining protective ring is 0.5mm, so the total length of the flow meter shall be increased by L+1mm; total length (L) tolerance is $\pm 3\text{mm}$, total height (H2) tolerance is $\pm 5\text{mm}$

APPEARANCE AND DIMENSION AND FLANGE CONNECTION DIMENSION STANDARD TYPE

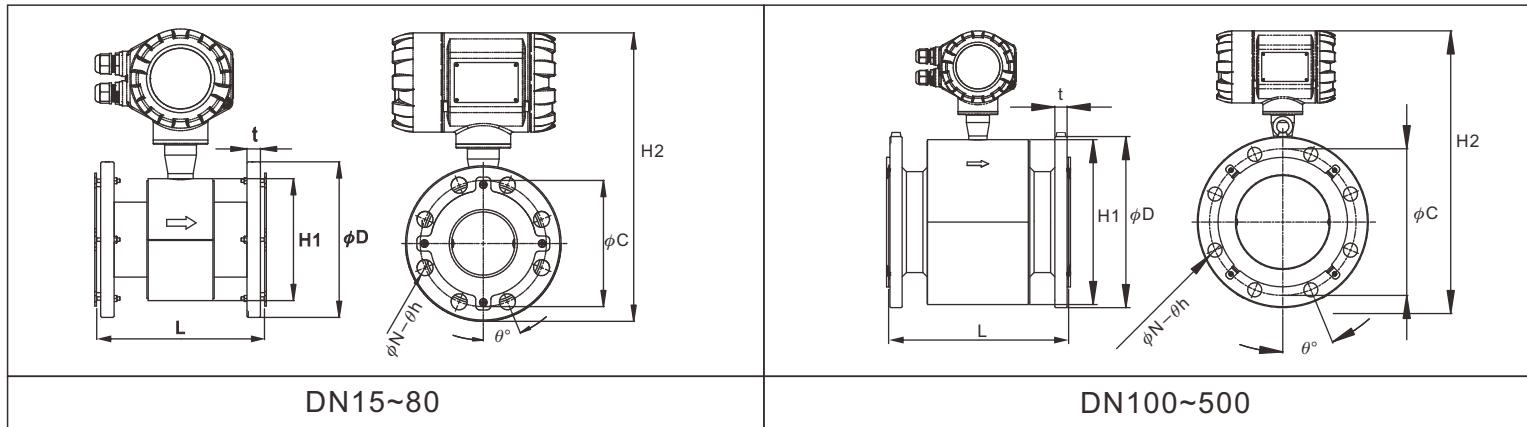


| Connection specification | | JIS 7.5K | | | | | | | | | | | |
|------------------------------|---------|----------|--------|------|------|------|------|-----|-----|-----|-----|-----|-----|
| Nominal diameter(mm) | | 50 | 80(75) | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 500 | 600 | 600 |
| Lining material | | PTFE | | | | | | | | | | | |
| Length | L | 200 | 200 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 | |
| External diameter | phiD | 186 | 211 | 238 | 290 | 342 | 410 | 464 | 530 | 582 | 652 | 706 | |
| PCD | phiC | 143 | 168 | 195 | 247 | 299 | 360 | 414 | 472 | 524 | 585 | 639 | |
| Flange thickness | t | 16 | 18 | 18 | 20 | 21 | 23 | 26 | 26 | 26 | 28 | 28 | |
| Inclined angle of screw hole | theta | 45 | 45 | 45 | 30 | 22.5 | 22.5 | 18 | 18 | 15 | 15 | 15 | |
| Diameter of screw hole | theta_h | 19 | 19 | 19 | 19 | 19 | 23 | 23 | 24 | 24 | 28 | 28 | |
| Quantity of screw holes | N | 4 | 4 | 4 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 12 | |
| Height of sensor casing | H1 | 125 | 145 | 195 | 270 | 305 | 365 | 406 | 470 | 530 | 580 | 630 | |
| Total height | H2 | 338 | 360 | 399 | 472 | 511 | 577 | 625 | 693 | 747 | 783 | 832 | |
| Weight (kg) | | 7.7 | 12.5 | 15.8 | 25.6 | 36.8 | 55.6 | 75 | -- | -- | -- | -- | |

Remarks:

For DN15~DN80、DN350~DN500, the lining protective ring is 2mm, so the total length of the flow meter shall be increased by L+4mm. For DN100~DN300, the lining protective ring is 0.5mm, so the total length of the flow meter shall be increased by L+1mm; total length (L) tolerance is $\pm 3\text{mm}$, total height (H2) tolerance is $\pm 5\text{mm}$

APPEARANCE AND DIMENSION AND FLANGE CONNECTION DIMENSION STANDARD TYPE



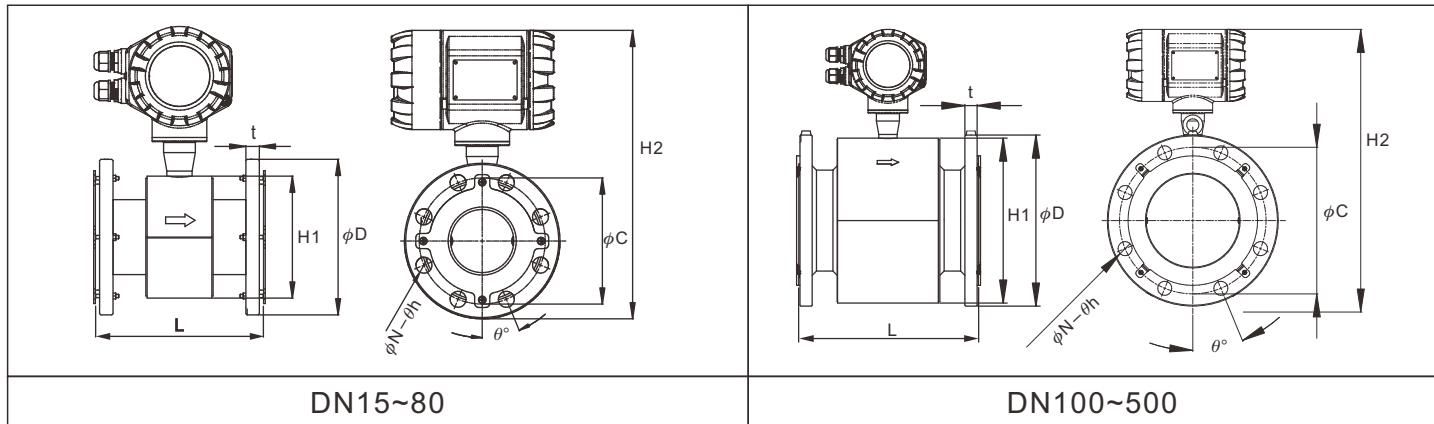
| Connection specification | | ANSI 150Lbs | | | | | | | | | | | | | | | |
|------------------------------|----|-------------|-----|-----|-----|------|------|------|------|------|------|------|------|-------|-------|-------|-----|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| Lining material | | PTFE | | | | | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 |
| External diameter | φD | 89 | 108 | 127 | 152 | 178 | 190 | 229 | 254 | 279 | 343 | 406 | 483 | 533 | 597 | 635 | 699 |
| PCD | φC | 60 | 79 | 98 | 121 | 140 | 152 | 191 | 216 | 241 | 298 | 362 | 432 | 476 | 540 | 578 | 635 |
| Flange thickness | t | 10 | 13 | 16 | 17 | 21 | 22 | 22 | 22 | 24 | 27 | 29 | 30 | 33 | 35 | 38 | 41 |
| Inclined angle of screw hole | θ° | 45 | 45 | 45 | 45 | 45 | 45 | 22.5 | 22.5 | 22.5 | 15 | 15 | 15 | 15 | 11.25 | 11.25 | 9.0 |
| Diameter of screw hole | θh | 16 | 16 | 16 | 19 | 19 | 19 | 19 | 22 | 22 | 22 | 25 | 25 | 29 | 32 | 32 | 32 |
| Quantity of screw holes | N | 4 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | 12 | 12 | 16 | 16 | 20 |
| Height of sensor casing | H1 | 75 | 89 | 125 | 125 | 145 | 145 | 195 | 195 | 265 | 305 | 365 | 406 | 470 | 530 | 580 | 630 |
| Total height | H2 | 264 | 281 | 308 | 321 | 344 | 350 | 394 | 407 | 464 | 511 | 575 | 633 | 695 | 754 | 797 | 851 |
| Weight (kg) | | 4.6 | 6.1 | 6.5 | 8.3 | 10.8 | 12.3 | 17.8 | 21 | 27 | 44.2 | 67.2 | 99.6 | 124.8 | 152.9 | -- | -- |

| Connection specification | | ANSI 300Lbs | | | | | | | | | | | | | | | |
|------------------------------|----|-------------|-----|-----|------|------|------|------|------|------|------|-------|-------|-----|-----|-----|-----|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| Lining material | | PTFE | | | | | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 |
| External diameter | φD | 98 | 124 | 156 | 165 | 190 | 210 | 254 | 279 | 318 | 381 | 445 | 521 | 584 | 648 | 711 | 775 |
| PCD | φC | 67 | 89 | 114 | 127 | 149 | 168 | 200 | 235 | 270 | 330 | 387 | 451 | 514 | 572 | 629 | 686 |
| Flange thickness | t | 13 | 16 | 19 | 21 | 24 | 27 | 30 | 33 | 35 | 40 | 46 | 49 | 52 | 56 | 59 | 62 |
| Inclined angle of screw hole | θ° | 45 | 45 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 15 | 15 | 11.25 | 11.25 | 9.0 | 9.0 | 7.5 | 7.5 |
| Diameter of screw hole | θh | 16 | 19 | 22 | 19 | 22 | 22 | 22 | 22 | 22 | 25 | 29 | 32 | 32 | 35 | 35 | 35 |
| Quantity of screw holes | N | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | 12 | 16 | 16 | 20 | 20 | 24 | 24 | 24 |
| Height of sensor casing | H1 | 75 | 88 | 125 | 125 | 145 | 145 | 195 | 195 | 265 | 305 | 365 | 406 | 470 | 530 | 580 | 630 |
| Total height | H2 | 269 | 288 | 323 | 327 | 350 | 360 | 407 | 419 | 481 | 528 | 592 | 650 | 718 | 778 | 832 | 886 |
| Weight (kg) | | 5.1 | 7.3 | 9.1 | 10.3 | 12.8 | 16.5 | 26.6 | 33 | 43.8 | 69.2 | 100.4 | 146.6 | -- | -- | -- | -- |

Remarks:

For DN15~DN80、DN350~DN500, the lining protective ring is 2mm, so the total length of the flow meter shall be increased by L+4mm. For DN100~DN300, the lining protective ring is 0.5mm, so the total length of the flow meter shall be increased by L+1mm; total length (L) tolerance is ±3mm, total height (H2) tolerance is ±5mm

APPEARANCE AND DIMENSION AND FLANGE CONNECTION DIMENSION STANDARD TYPE



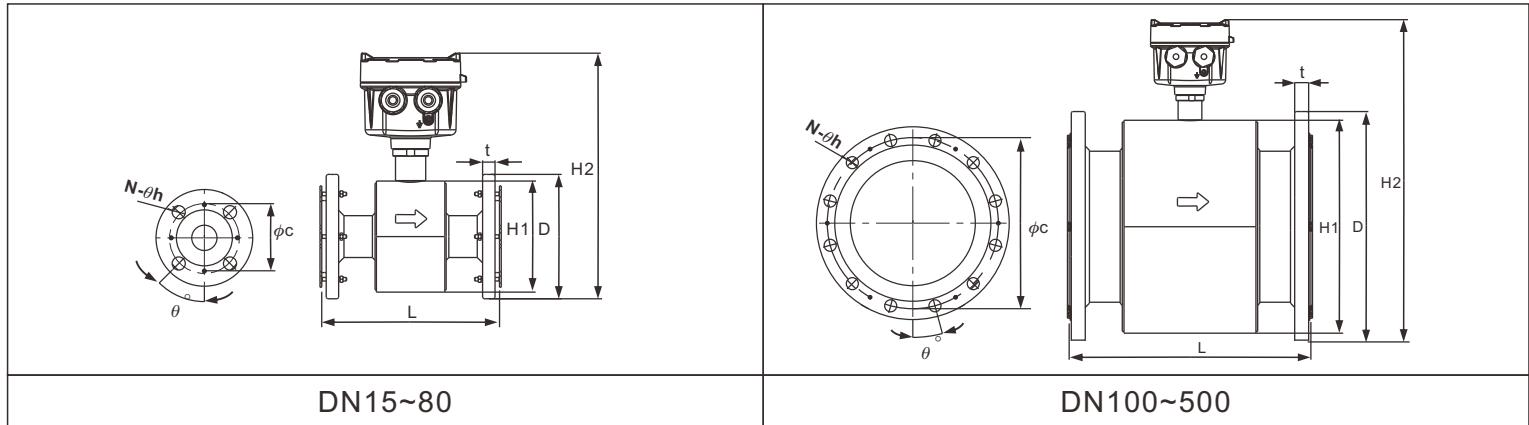
| Connection specification | | DIN PN40 | | | | | | DIN PN16 | | | | | |
|------------------------------|---------|----------|-----|-----|-----|------|------|----------|------|------|------|------|-----|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 65 | 80 | 100 | 125 | 150 | 200 |
| PTFE | | | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 |
| External diameter | phiD | 95 | 115 | 150 | 165 | 185 | 200 | 185 | 200 | 220 | 250 | 285 | 340 |
| PCD | phiC | 65 | 85 | 110 | 125 | 145 | 160 | 145 | 160 | 180 | 210 | 240 | 295 |
| Flange thickness | t | 18 | 18 | 18 | 20 | 22 | 24 | 18 | 20 | 20 | 22 | 22 | 24 |
| Inclined angle of screw hole | theta | 45 | 45 | 45 | 45 | 22.5 | 22.5 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 15 |
| Diameter of screw hole | theta_h | 14 | 14 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 22 | 22 |
| Quantity of screw holes | N | 4 | 4 | 4 | 4 | 8 | 8 | 4 | 8 | 8 | 8 | 8 | 12 |
| Height of sensor casing | H1 | 76 | 89 | 125 | 125 | 145 | 145 | 145 | 145 | 195 | 195 | 265 | 265 |
| Total height | H2 | 268 | 284 | 320 | 327 | 347 | 355 | 347 | 355 | 390 | 405 | 467 | 490 |
| Weight (kg) | | 5.2 | 7.1 | 7.1 | 7.7 | 9 | 12.3 | 8.6 | 11.7 | 15.6 | 21 | 28.2 | 40 |

| Connection specification | | DIN PN10 | | | | | | |
|------------------------------|---------|----------|-----|------|-------|-------|-----|-----|
| Nominal diameter(mm) | | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| PTFE | | | | | | | | |
| Length | L | 350 | 400 | 500 | 500 | 600 | 600 | 600 |
| External diameter | phiD | 340 | 395 | 445 | 490 | 565 | 615 | 670 |
| PCD | phiC | 295 | 350 | 400 | 460 | 515 | 565 | 620 |
| Flange thickness | t | 24 | 26 | 26 | 28 | 32 | 38 | 38 |
| Inclined angle of screw hole | theta | 22.5 | 15 | 15 | 11.25 | 11.25 | 9 | 9 |
| Diameter of screw hole | theta_h | 22 | 22 | 22 | 22 | 26 | 26 | 26 |
| Quantity of screw holes | N | 8 | 12 | 12 | 16 | 16 | 20 | 20 |
| Height of sensor casing | H1 | 305 | 365 | 406 | 470 | 530 | 580 | 630 |
| Total height | H2 | 516 | 570 | 616 | 675 | 740 | 788 | 838 |
| Weight (kg) | | 33.2 | 54 | 69.6 | 88.4 | 109.3 | -- | -- |

Remarks:

For DN15~DN80、DN350~DN500, the lining protective ring is 2mm, so the total length of the flow meter shall be increased by L+4mm. For DN100~DN300, the lining protective ring is 0.5mm, so the total length of the flow meter shall be increased by L+1mm; total length (L) tolerance is ± 3 mm, total height (H2) tolerance is ± 5 mm

APPEARANCE AND DIMENSION AND FLANGE CONNECTION DIMENSION REMOTE TYPE



| Connection specification | | JIS 10K | | | | | | | | | | | | | | | | | |
|------------------------------|----------------|---------|-----|-----|-----|-----|------|------|------|------|------|------|-------|-------|-------|-----|-----|-----|-----|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 |
| Lining material | | PTFE | | | | | | | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 | 600 | |
| External diameter | ϕD | 95 | 125 | 140 | 155 | 175 | 185 | 210 | 250 | 280 | 330 | 400 | 445 | 490 | 560 | 620 | 675 | | |
| PCD | ϕC | 70 | 90 | 105 | 120 | 140 | 150 | 175 | 210 | 240 | 290 | 355 | 400 | 445 | 510 | 565 | 620 | | |
| Flange thickness | t | 12 | 14 | 16 | 16 | 18 | 18 | 18 | 20 | 22 | 22 | 24 | 24 | 26 | 28 | 30 | 30 | 30 | |
| Inclined angle of screw hole | θ° | 45 | 45 | 45 | 45 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 15 | 15 | 11.25 | 11.25 | 11.25 | 9 | 9 | | |
| Diameter of screw hole | θh | 15 | 19 | 19 | 19 | 19 | 19 | 19 | 23 | 23 | 23 | 25 | 25 | 25 | 27 | 27 | 27 | 27 | |
| Quantity of screw holes | N | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | 12 | 16 | 16 | 16 | 20 | 20 | 20 | |
| Height of sensor casing | H1 | 75 | 88 | 125 | 125 | 145 | 145 | 195 | 195 | 270 | 305 | 365 | 406 | 470 | 530 | 580 | 630 | | |
| Total height*1 | H2 | 229 | 250 | 276 | 284 | 304 | 309 | 346 | 366 | 429 | 468 | 534 | 578 | 637 | 699 | 752 | 802 | | |
| Weight (kg)*2 | | 3.4 | 5.3 | 5.3 | 6.1 | 7.4 | 8.3 | 11.4 | 16 | 22 | 31.7 | 52.5 | 68 | 86.8 | 107.7 | -- | -- | | |

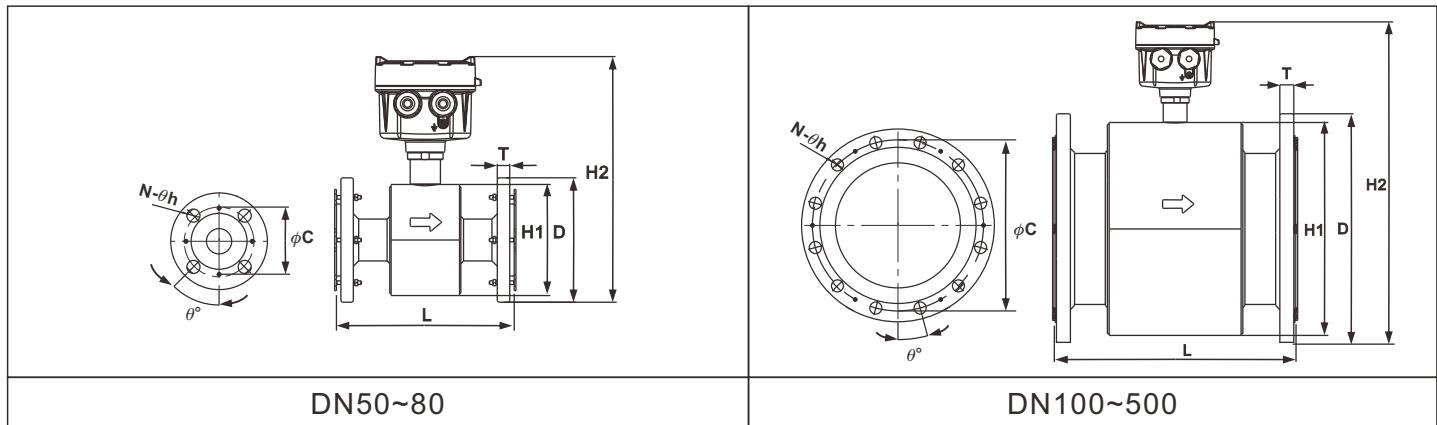
| Connection specification | | JIS 20K | | | | | | | | | | | | | | | | |
|------------------------------|----------------|---------|-----|-----|------|------|------|------|------|------|------|------|-------|-----|-----|-----|-----|-----|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 500 | | |
| Lining material | | PTFE | | | | | | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 | 600 |
| External diameter | ϕD | 95 | 125 | 140 | 155 | 175 | 200 | 225 | 270 | 305 | 350 | 430 | 480 | | | | | |
| PCD | ϕC | 70 | 90 | 105 | 120 | 140 | 160 | 185 | 225 | 260 | 305 | 380 | 430 | | | | | |
| Flange thickness | t | 14 | 16 | 18 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 34 | 36 | | | | | |
| Inclined angle of screw hole | θ° | 45 | 45 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 15 | 15 | 15 | 11.25 | | | | | |
| Diameter of screw hole | θh | 15 | 19 | 19 | 19 | 23 | 23 | 23 | 25 | 25 | 25 | 27 | 27 | | | | | |
| Quantity of screw holes | N | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 8 | 12 | 12 | 12 | 12 | | | | | |
| Height of sensor casing | H1 | 75 | 88 | 125 | 125 | 145 | 145 | 195 | 195 | 270 | 305 | 365 | 406 | | | | | |
| Total height*1 | H2 | 229 | 250 | 276 | 284 | 304 | 316 | 354 | 376 | 440 | 476 | 547 | 594 | | | | | |
| Weight (kg)*2 | | 3.8 | 5.5 | 5.5 | 6.2 | 7.4 | 10.7 | 14.9 | 22 | 29.5 | 41.8 | 72.7 | 92.6 | | | | | |

Remarks:

*1: For DN15~DN80、DN350~DN500, the lining protective ring is 2mm, so the total length of the flow meter shall be increased by L+4mm. For DN100~DN300, the lining protective ring is 0.5mm, so the total length of the flow meter shall be increased by L+1mm; total length (L) tolerance is $\pm 3\text{mm}$, total height (H2) tolerance is $\pm 5\text{mm}$

*2: To shows the weight of transducer only. Not include the weight of transmitter 2.06kg

APPEARANCE AND DIMENSION AND FLANGE CONNECTION DIMENSION REMOTE TYPE



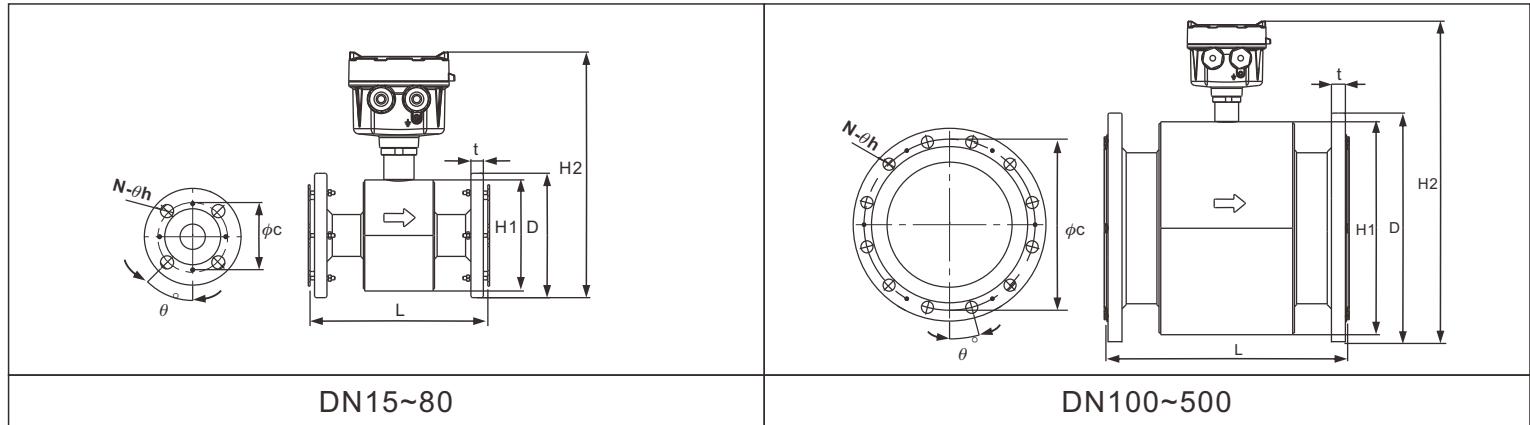
| Connection specification | | JIS 7.5K | | | | | | | | | | |
|------------------------------|---------------|----------|--------|------|------|------|------|------|-----|-----|-----|-----|
| Nominal diameter(mm) | | 50 | 80(75) | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| Lining material | | PTFE | | | | | | | | | | |
| Length | L | 200 | 200 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 |
| External diameter | phi D | 185 | 211 | 238 | 290 | 342 | 410 | 464 | 530 | 582 | 652 | 706 |
| PCD | phi C | 143 | 168 | 195 | 247 | 299 | 360 | 414 | 472 | 524 | 585 | 639 |
| Flange thickness | t | 16 | 18 | 18 | 20 | 21 | 23 | 26 | 26 | 26 | 28 | 28 |
| Inclined angle of screw hole | theta degrees | 45 | 45 | 45 | 30 | 22.5 | 22.5 | 18 | 18 | 15 | 15 | 15 |
| Diameter of screw hole | theta h | 19 | 19 | 19 | 19 | 19 | 23 | 23 | 24 | 24 | 28 | 28 |
| Quantity of screw holes | N | 4 | 4 | 4 | 6 | 8 | 8 | 10 | 10 | 12 | 12 | 12 |
| Height of sensor casing | H1 | 125 | 145 | 195 | 270 | 305 | 365 | 406 | 470 | 530 | 580 | 630 |
| Total height*1 | H2 | 299 | 322 | 360 | 433 | 473 | 538 | 587 | 655 | 709 | 767 | 817 |
| Weight (kg)*2 | | 7.7 | 10.9 | 14.3 | 24.1 | 35.3 | 54.1 | 73.4 | -- | -- | -- | -- |

Remarks:

*1: For DN15~DN80、DN350~DN500, the lining protective ring is 2mm, so the total length of the flow meter shall be increased by L+4mm. For DN100~DN300, the lining protective ring is 0.5mm, so the total length of the flow meter shall be increased by L+1mm; total length (L) tolerance is $\pm 3\text{mm}$, total height (H2) tolerance is $\pm 5\text{mm}$

*2: To shows the weight of transducer only. Not include the weight of transmitter 2.06kg

APPEARANCE AND DIMENSION AND FLANGE CONNECTION DIMENSION REMOTE TYPE



| Connection specification | | ANSI 150 Lbs | | | | | | | | | | | | | | | |
|------------------------------|----|--------------|-----|-----|-----|-----|------|------|------|------|------|------|-----|-------|-------|-------|-----|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| Lining material | | PTFE | | | | | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 |
| External diameter | φD | 89 | 108 | 127 | 152 | 178 | 190 | 229 | 254 | 279 | 343 | 406 | 483 | 533 | 597 | 635 | 699 |
| PCD | φC | 60 | 79 | 99 | 121 | 140 | 152 | 191 | 216 | 241 | 298 | 362 | 432 | 476 | 540 | 578 | 635 |
| Flange thickness | t | 10 | 13 | 16 | 17 | 21 | 22 | 22 | 24 | 27 | 29 | 30 | 33 | 35 | 38 | 41 | |
| Inclined angle of screw hole | θ° | 45 | 45 | 45 | 45 | 45 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 15 | 15 | 15 | 11.25 | 11.25 | 9 |
| Diameter of screw hole | θh | 16 | 16 | 16 | 19 | 19 | 19 | 19 | 22 | 22 | 22 | 25 | 25 | 29 | 29 | 32 | 32 |
| Quantity of screw holes | N | 4 | 4 | 4 | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | 12 | 12 | 16 | 16 | 20 |
| Height of sensor casing | H1 | 76 | 89 | 125 | 125 | 145 | 145 | 195 | 195 | 265 | 305 | 365 | 406 | 470 | 530 | 580 | 630 |
| Total height*1 | H2 | 227 | 242 | 270 | 282 | 305 | 311 | 356 | 368 | 426 | 473 | 537 | 595 | 657 | 716 | 759 | 851 |
| Weight(kg)*2 | | 4.6 | 6.1 | 4.9 | 6.8 | 9.2 | 10.7 | 16.3 | 19.4 | 25.5 | 42.6 | 65.7 | 98 | 123.2 | 151.3 | -- | -- |

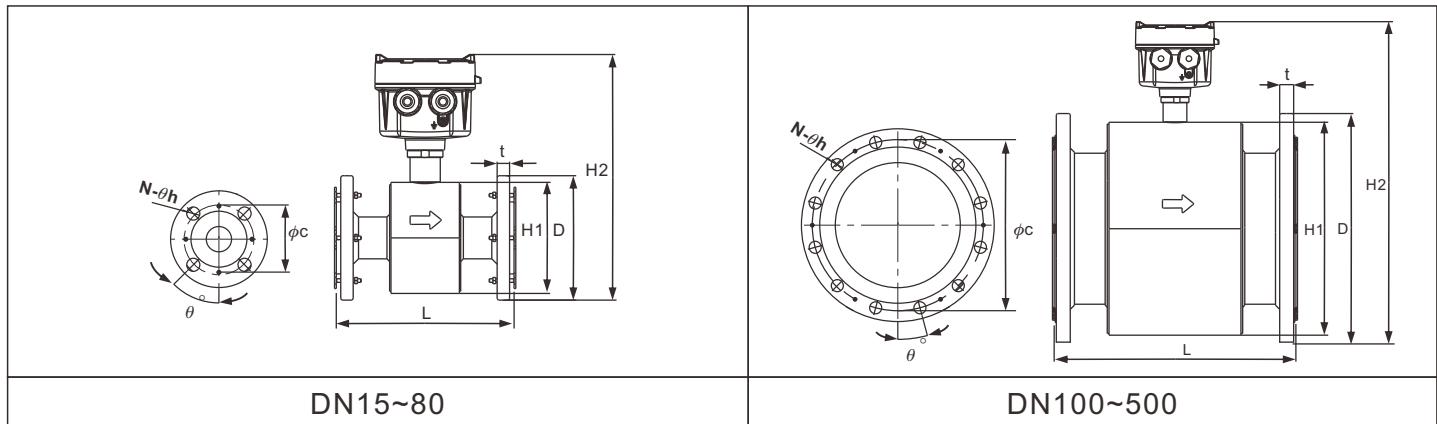
| Connection specification | | ANSI 300 Lbs | | | | | | | | | | | | | | | |
|------------------------------|----|--------------|-----|-----|------|------|------|------|------|------|------|-------|-------|-----|-----|-----|-----|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 100 | 125 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| Lining material | | PTFE | | | | | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 | 400 | 500 | 500 | 600 | 600 | 600 |
| External diameter | φD | 98 | 124 | 156 | 165 | 190 | 210 | 254 | 279 | 318 | 381 | 445 | 521 | 584 | 648 | 711 | 775 |
| PCD | φC | 67 | 89 | 114 | 127 | 149 | 168 | 200 | 235 | 270 | 330 | 387 | 451 | 514 | 572 | 629 | 686 |
| Flange thickness | t | 13 | 16 | 19 | 21 | 24 | 27 | 30 | 33 | 35 | 40 | 46 | 49 | 52 | 56 | 59 | 62 |
| Inclined angle of screw hole | θ° | 45 | 45 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 15 | 15 | 11.25 | 11.25 | 9 | 9 | 7.5 | 7.5 |
| Diameter of screw hole | θh | 16 | 19 | 22 | 19 | 22 | 22 | 22 | 22 | 22 | 25 | 29 | 32 | 32 | 35 | 35 | 35 |
| Quantity of screw holes | N | 4 | 4 | 4 | 8 | 8 | 8 | 8 | 12 | 12 | 16 | 16 | 20 | 20 | 24 | 24 | |
| Height of sensor casing | H1 | 76 | 89 | 125 | 125 | 145 | 145 | 195 | 195 | 265 | 305 | 365 | 406 | 470 | 530 | 580 | 630 |
| Total height*1 | H2 | 231 | 250 | 284 | 289 | 311 | 321 | 368 | 381 | 443 | 490 | 553 | 612 | 680 | 740 | 794 | 886 |
| Weight(kg)*2 | | 5.1 | 7.3 | 9.1 | 10.3 | 12.8 | 16.5 | 26.6 | 33 | 42.3 | 67.6 | 98.9 | 145 | -- | -- | -- | -- |

Remarks:

*1: For DN15~DN80、DN350~DN500, the lining protective ring is 2mm, so the total length of the flow meter shall be increased by L+4mm. For DN100~DN300, the lining protective ring is 0.5mm, so the total length of the flow meter shall be increased by L+1mm; total length (L) tolerance is ±3mm, total height (H2) tolerance is ±5mm

*2: To shows the weight of transducer only. Not include the weight of transmitter 2.06kg

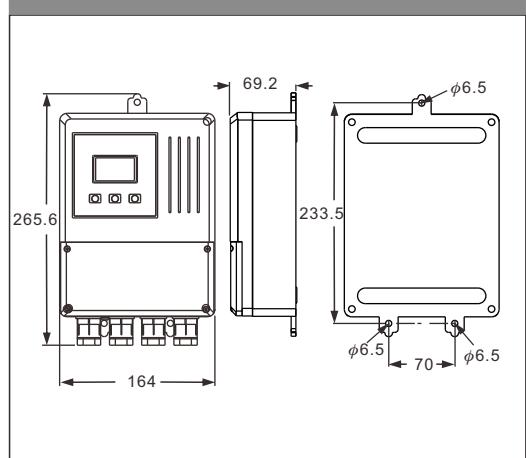
APPEARANCE AND DIMENSION AND FLANGE CONNECTION DIMENSION REMOTE TYPE



| Connection specification | | DIN PN40 | | | | | | DIN PN16 | | | | | |
|------------------------------|----|----------|-----|-----|-----|------|------|----------|------|------|------|------|------|
| Nominal diameter(mm) | | 15 | 25 | 40 | 50 | 65 | 80 | 65 | 80 | 100 | 125 | 150 | 200 |
| Lining material | | PTFE | | | | | | | | | | | |
| Length | L | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 200 | 250 | 250 | 300 | 350 |
| External diameter | φD | 95 | 115 | 150 | 165 | 185 | 200 | 185 | 200 | 220 | 250 | 285 | 340 |
| PCD | φC | 65 | 85 | 110 | 125 | 145 | 160 | 145 | 160 | 180 | 210 | 240 | 295 |
| Flange thickness | t | 18 | 18 | 18 | 20 | 22 | 24 | 18 | 20 | 20 | 22 | 22 | 24 |
| Inclined angle of screw hole | θ° | 45 | 45 | 45 | 45 | 22.5 | 22.5 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 15 |
| Diameter of screw hole | θh | 14 | 14 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 18 | 22 | 22 |
| Quantity of screw holes | N | 4 | 4 | 4 | 4 | 8 | 8 | 4 | 8 | 8 | 8 | 8 | 12 |
| Height of sensor casing | H1 | 76 | 89 | 125 | 125 | 145 | 145 | 145 | 145 | 195 | 195 | 265 | 305 |
| Total height*1 | H2 | 230 | 246 | 281 | 289 | 309 | 316 | 309 | 316 | 351 | 366 | 435 | 476 |
| Weight (kg)*2 | | 5.2 | 7.2 | 5.5 | 6.2 | 7.4 | 10.7 | 7 | 10.1 | 14.1 | 19.4 | 26.7 | 38.4 |

| Connection specification | | DIN PN10 | | | | | | |
|------------------------------|----|----------|------|-----|-------|-------|-----|-----|
| Nominal diameter(mm) | | 200 | 250 | 300 | 350 | 400 | 450 | 500 |
| Lining material | | PTFE | | | | | | |
| Length | L | 350 | 400 | 500 | 500 | 600 | 600 | 600 |
| External diameter | φD | 340 | 395 | 445 | 490 | 565 | 615 | 670 |
| PCD | φC | 295 | 350 | 400 | 460 | 515 | 565 | 620 |
| Flange thickness | t | 24 | 26 | 26 | 28 | 32 | 38 | 38 |
| Inclined angle of screw hole | θ° | 22.5 | 15 | 15 | 11.25 | 11.25 | 9 | 9 |
| Diameter of screw hole | θh | 22 | 22 | 22 | 22 | 26 | 26 | 26 |
| Quantity of screw holes | N | 8 | 12 | 12 | 16 | 16 | 20 | 20 |
| Height of sensor casing | H1 | 305 | 365 | 406 | 470 | 530 | 580 | 630 |
| Total height*1 | H2 | 476 | 534 | 603 | 637 | 701 | 750 | 800 |
| Weight (kg)*2 | | 31.7 | 52.5 | 68 | 86.8 | 107.7 | -- | -- |

Transmitter Dimension



Remarks:

*1: For DN15~DN80、DN350~DN500, the lining protective ring is 2mm, so the total length of the flow meter shall be increased by L+4mm. For DN100~DN300, the lining protective ring is 0.5mm, so the total length of the flow meter shall be increased by L+1mm; total length (L) tolerance is ±3mm, total height (H2) tolerance is ±5mm

*2: To shows the weight of transducer only. Not include the weight of transmitter 2.06kg

PIPE DIAMETER, FLOW RANGE AND ACCURACY SELECTION

| Pipe diameter (mm) | Flow range (m³/h) | |
|--------------------|--------------------------|-------------------------|
| | Flowing speed 0.1~1.0m/s | Flowing speed 1.0~10m/s |
| 15 | 0.06~0.64 | 0.64~6.4 |
| 25 | 0.17~1.77 | 1.77~17.7 |
| 40 | 0.45~4.5 | 4.5~45.2 |
| 50 | 0.71~7.1 | 7.1~71 |
| 65 | 1.19~11.9 | 11.9~119 |
| 80 | 1.81~18.1 | 18.1~181 |
| 100 | 2.83~28.3 | 28.3~283 |
| 125 | 4.42~44.2 | 44.2~442 |
| 150 | 6.36~63.6 | 63.6~636 |
| 200 | 11.3~113 | 113~1130 |
| 250 | 17.7~177 | 177~1770 |
| 300 | 25.4~254 | 254~2540 |
| 350 | 34.6~346 | 346~3460 |
| 400 | 45.2~452 | 452~4520 |
| 450 | 57.2~572 | 572~5720 |
| 500 | 70.7~707 | 707~7070 |

| DN | Q4 | Q3 | Q2 | Q1 |
|------|--------------------|--------------------|--------------------|--------------------|
| (mm) | (m³/h) | (m³/h) | (m³/h) | (m³/h) |
| 15 | 8 | 6.3 | 0.06 ^{*1} | 0.04 ^{*1} |
| 25 | 20 | 16 | 0.16 | 0.10 ^{*1} |
| 40 | 50 | 40 | 0.40 | 0.25 |
| 50 | 78.75 | 63 | 0.63 | 0.394 |
| 65 | 125 | 100 | 1.01 | 0.63 |
| 80 | 200 ^{*2} | 160 | 1.60 | 1.00 |
| 100 | 313 ^{*2} | 250 ^{*2} | 2.52 | 1.57 |
| 125 | 500 | 400 | 4.00 ^{*3} | 2.50 ^{*3} |
| 150 | 788 | 630 | 6.31 | 3.94 ^{*3} |
| 200 | 1250 | 1000 | 10.00 | 6.25 |
| 250 | 2000 ^{*4} | 1600 ^{*4} | 16.00 | 10.00 |
| 300 | 3125 ^{*4} | 2500 ^{*4} | 25.01 | 15.63 |
| 350 | 5000 ^{*4} | 4000 ^{*4} | 40.00 | 25.00 |
| 400 | 5000 ^{*4} | 4000 ^{*4} | 40.00 | 25.00 |
| 450 | 7875 ^{*4} | 6300 ^{*4} | 63.00 | 39.38 |
| 500 | 7875 ^{*4} | 6300 ^{*4} | 63.00 | 39.38 |

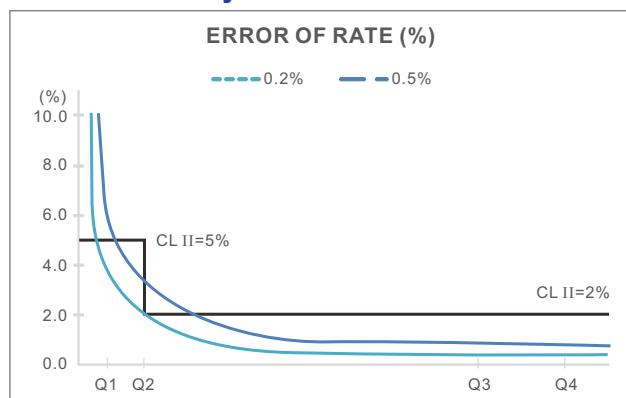
*1: Result is tested under flow rate 0.11 m³/h

*2: Result is tested under flow rate 190 m³/h

*3: Result is tested under flow rate 4.4 m³/h

*4: Result is tested under flow rate 1530 m³/h

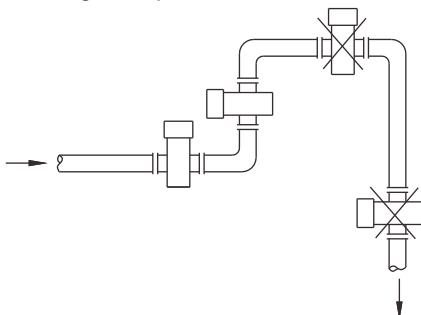
OIML Accuracy class & tolerance



| Type | EPD 3x |
|----------------------------------|--------|
| Nominal diameter(DN) | 50 |
| Q ₃ /Q ₁ * | 160 |
| Q ₂ /Q ₁ | 1.6 |
| Q ₁ (m³/h) | 0.394 |
| Q ₂ (m³/h) | 0.63 |
| Q ₃ (m³/h) | 63 |
| Q ₄ (m³/h) | 78.75 |

INSTALLATION INSTRUCTIONS

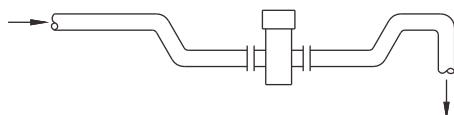
1. The flow meter must be free from strong electromagnetic field. The magnetic intensity of the flow meter installation site must be smaller than 400A/m (It should not be installed near large motors or transformers).
2. It should be installed at the lower point and the vertically upward point of the horizontal pipe. Don't install it at the highest point and the vertically downward point of the pipe.



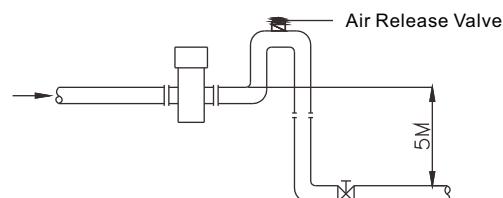
3. It should be installed at the rising point of the pipe.



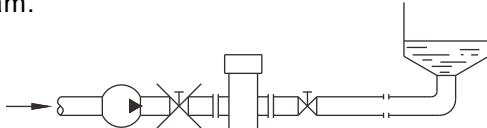
4. It should be installed at the lower point of the pipe when it is installed on the pipe with opening for drainage.



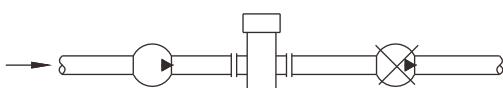
5. If the pipe gap exceeds 5m, the air release valve should be installed at the downstream of the sensor. The downstream of the sensor should have some back pressure.



6. The control valve and cut valve should be installed at the downstream of the sensor rather than the upstream.



7. The sensor should be installed at the pump outlet rather than the inlet.



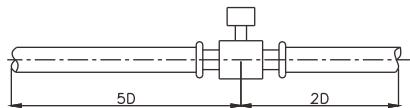
8. The fluidic must flow towards the arrow direction of the flow meter.

9. The axial line of the measuring electrode must be approximate to the horizontal direction (The angle of α from the horizontal direction).

10. The measuring pipe must be completely filled with liquid.

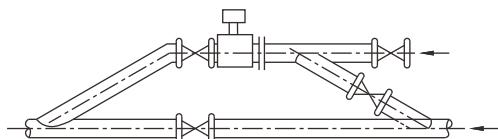
INSTALLATION INSTRUCTIONS

11. The straight tube section is required to be at least 5D (internal diameter of the flow meter) on the front side, and at least 2D on the rear side.



12. When measuring the mixture of different media, the distance between the mixing point and the flow meter must be 30D at least.

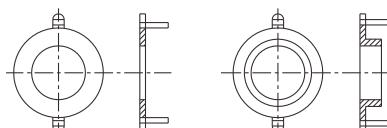
13. For convenient cleaning and maintenance of the flow meter, a bypass pipe must be installed.



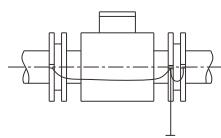
14. When installing the sensor, it should ensure that the measuring pipe and the process pipe must be on the same axial line. For the flow meter with the pipe meter of 50mm or below, the axial line deviation should not exceed 2mm. For those of DN65~DN150, the axial line deviation should not exceed 3mm. For those of \geq DN200, the axial line deviation should not exceed 4mm.

15. The shim installed between the flanges should have excellent anti-corrosion property. The shim should not intrude in the pipe, which will affect the fluidic in the pipe.

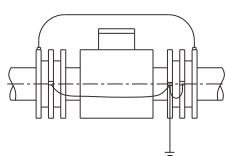
16. The sensor and transmitter should be equipped with high-quality independent grounding wire (The section area of the copper core is 1.6mm²). The grounding resistance should be $<10\Omega$. If the grounding is poor, it won't work normally. The grounding ring is needed if the pipe connecting with the sensor is insulating, and the material of the grounding ring should be the same as that of the electrode. If the test medium is abrasive, the neck grounding ring should be selected.



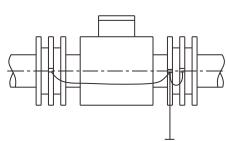
- 16.1 It is for installing the flow meter on the metal pipe not coated with insulating layer internally.



- 16.2 When installing the flow meter on the protective pipe of the cathode, the pipe with the protection of electrolytic corrosion generally has insulating walls and protruding sides. Thus, during installation, the grounding ring and the flanges on the pipe should be insulating.



- 16.3 When installing the flow meter on the plastic pipe or the pipe with insulating coating material, paints or lining, grounding rings on both ends of the sensor should be installed.



MODEL NUMBER / ORDER CODE COMPARISON TABLE

ORDERING INFORMATION

| Model Number | Order Code |
|--------------|------------|
| EPD30 | EPD10000-A |
| EPD34 | EPD10400-A |



⑤ ⑥ Type —

| ⑩⑪⑫ Pipe diameter | | |
|--------------------------|------------|------------|
| 015: 15mm | 100: 100mm | 350: 350mm |
| 025: 25mm | 125: 125mm | 400: 400mm |
| 040: 40mm | 150: 150mm | 450: 450mm |
| 050: 50mm | 200: 200mm | 500: 500mm |
| 065: 65mm | 250: 250mm | |
| 080: 80mm | 300: 300mm | |

(Next page)

⑯⑰⑱⑲ Connection specification

- C48: ANSI B16.5 Class 150
- C49: ANSI B16.5 Class 300
- A41: JIS B2220 7.5K
- A42: JIS B2220 10K
- A45: JIS B2220 20K
- D57: DIN 2501 PN10
- D58: DIN 2501 PN16
- D60: DIN 2501 PN40

(16) (17) Casing and flange -
MD: Carbon steel
MA: SUS304
MC: SUS316L

(18) (19) Lining material -

ORDERING INFORMATION

⑤ ⑥ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮ ⑯ ⑰ ⑱ ⑲ ⑳ ㉑ ㉓ ㉔ ㉕ ㉖ ㉗ ㉘
EPD1 0 0 -A A

㉐㉑ **Electrode material** _____

MC: SUS316L

MF: Titanium

MK: Tantalum

MJ: Hastelloy alloy(C-276)

㉒ **Power supply** _____

A: 100~240Vac, 50/60Hz

D: 24Vdc

N: 100~240Vac, 50/60Hz with date logger

R: 24Vdc with date logger

㉓ **Accuracy** _____

F: 0.5%

G: 0.3%

H: 0.2%

㉔㉕ **Grounding material** _____

00: None

MA: SUS304

MC: SUS316L

MF: Titanium

MK: Tantalum

MJ: Hastelloy alloy(C-276)

㉖㉗ **Cable length** _____

00: None(Only available for standard type)

10: 10 M(Remote type standard)

15: 15 M

20: 20 M

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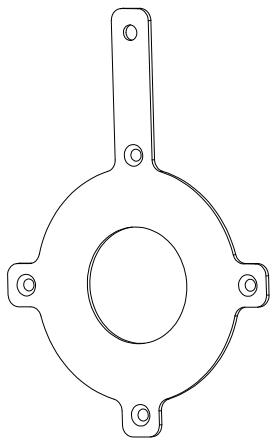
95: 95 M

A0: 100 M

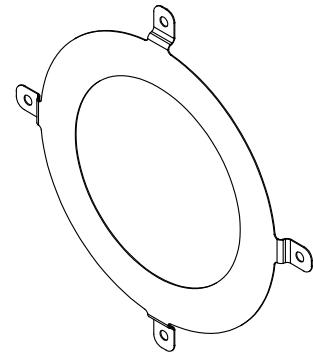
ACCESSORY-GROUNDING RING

| New Order Number | Old Order Number | Specification |
|--------------------|------------------|----------------------------------|
| EPDAM1P-MA03A00001 | EPA-1007-100-4 | SUS304 0.5T, DN100 |
| EPDAM1P-MA03A20001 | EPA-1007-125-4 | SUS304 0.5T, DN125 |
| EPDAM1P-MA03A50001 | EPA-1007-150-4 | SUS304 0.5T, DN150 |
| EPDAM1P-MA03B00001 | EPA-1007-200-4 | SUS304 0.5T, DN200 |
| EPDAM1P-MA03B50001 | EPA-1007-250-4 | SUS304 0.5T, DN250 |
| EPDAM1P-MA03C00001 | EPA-1007-300-4 | SUS304 0.5T, DN300 |
| EPDAM1P-MC03400001 | EPA-1007-40-L | SUS316L 2.0T, DN40 |
| EPDAM1P-MC03500001 | EPA-1007-50-L | SUS316L 2.0T, DN50 |
| EPDAM1P-MC03650001 | EPA-1007-65-L | SUS316L 2.0T, DN65 |
| EPDAM1P-MC03800001 | EPA-1007-80-L | SUS316L 2.0T, DN80 |
| EPDAM1P-MC03A00001 | EPA-1007-100-L | SUS316L 0.5T, DN100 |
| EPDAM1P-MC03A20001 | EPA-1007-125-L | SUS316L 0.5T, DN125 |
| EPDAM1P-MC03A50001 | EPA-1007-150-L | SUS316L 0.5T, DN150 |
| EPDAM1P-MC03B00001 | EPA-1007-200-L | SUS316L 0.5T, DN200 |
| EPDAM1P-MC03B50001 | EPA-1007-250-L | SUS316L 0.5T, DN250 |
| EPDAM1P-MC03C00001 | EPA-1007-300-L | SUS316L 0.5T, DN300 |
| EPDAM1P-MF03400001 | EPA-1007-40-T | Titanium 2.0T, DN40 |
| EPDAM1P-MF03500001 | EPA-1007-50-T | Titanium 2.0T, DN50 |
| EPDAM1P-MF03650001 | EPA-1007-65-T | Titanium 2.0T, DN65 |
| EPDAM1P-MF03800001 | EPA-1007-80-T | Titanium 2.0T, DN80 |
| EPDAM1P-MF03A00001 | EPA-1007-100-T | Titanium 0.5T, DN100 |
| EPDAM1P-MF03A20001 | EPA-1007-125-T | Titanium 0.5T, DN125 |
| EPDAM1P-MF03A50001 | EPA-1007-150-T | Titanium 0.5T, DN150 |
| EPDAM1P-MF03B00001 | EPA-1007-200-T | Titanium 0.5T, DN200 |
| EPDAM1P-MJ03400001 | EPA-1007-40-H | Hastelloy alloy -C276 2.0T, DN40 |
| EPDAM1P-MJ03500001 | EPA-1007-50-H | Hastelloy alloy-C276 2.0T, DN50 |
| EPDAM1P-MJ03650001 | EPA-1007-65-H | Hastelloy alloy-C276 2.0T, DN65 |
| EPDAM1P-MJ03800001 | EPA-1007-80-H | Hastelloy alloy-C276 2.0T, DN80 |
| EPDAM1P-MJ03A00001 | EPA-1007-100-H | Hastelloy alloy-C276 0.5T, DN100 |
| EPDAM1P-MJ03A20001 | EPA-1007-125-H | Hastelloy alloy-C276 0.5T, DN125 |
| EPDAM1P-MJ03A50001 | EPA-1007-150-H | Hastelloy alloy-C276 0.5T, DN150 |
| EPDAM1P-MJ03B00001 | EPA-1007-200-H | Hastelloy alloy-C276 0.5T, DN200 |
| EPDAM1P-MJ03B50001 | EPA-1007-250-H | Hastelloy alloy-C276 0.5T, DN250 |
| EPDAM1P-MJ03C00001 | EPA-1007-300-H | Hastelloy alloy-C276 0.5T, DN300 |
| EPDAM1P-MK03800001 | EPA-1007-80-A | Tantalum 2.0T, DN80 |

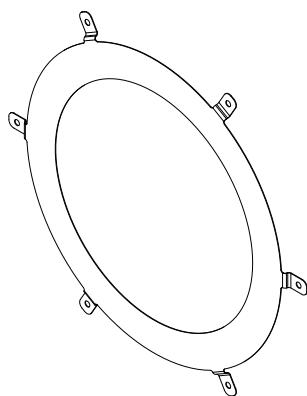
ACCESSORY-GROUNDING RING



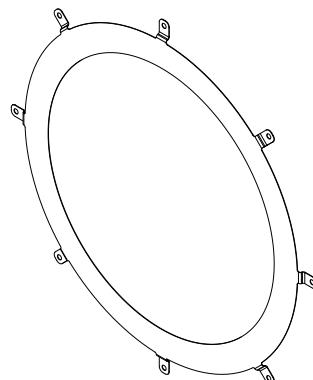
DN40~80



DN100~150



DN200



DN250~300

SETTING VALUES

| Main Menu | Sub Menu | Unit | Default | Setting Range |
|-------------|----------------------|------|---------|---|
| Fast Set(0) | Device Tag Num (1.1) | | | |
| | Zero Adj. (2.1) | | | |
| | Flow Span (1.5) | | | |
| | Flow Unit (1.4) | | | The parameter is linking from standard menu |
| | Low cutoff (2.4) | | | |
| | Damping Time (3.1) | | | |
| | Pulse Out Unit (3.3) | | | |
| | Total Reset (1.9) | | | |

| Main Menu | Sub Menu | Unit | Default | Setting Range |
|---------------|----------------------|-----------------|---|---|
| Basic Set (1) | Device Tag Num (1.1) | none | 00001 | 00001~65535 |
| | Measure Type (1.2) | - | Water | Water |
| | Tube Size (1.3) | mm | actual | 10,15,25,32,40,50,65,80,100 125,150,200,250,300,350,400,450,500 |
| | Flow Unit (1.4) | - | m³/h | L/(s,min,h), m³/(s,min,h), gal/(s,min,h), kg(s,min,h), Ton(s,min,h) (Flow rate* Liquid density = weight) "L/s", "L/m", "L/h", "m³/s", "m³/m", "m³/h", "gal/s", "gal/m", "gal/h", "kg/s", "kg/m", "kg/h", "Ton/s", "Ton/m", "Ton/h", "m³/d" |
| | Flow Span (1.5) | =Flow Rate Unit | $\frac{(5m/s) \times (\text{Diameter}/2)^2}{\pi}$ | (0.1 ~ 10.0m/s) x (Diametermm/2) ² x pi x Unit of Flow Forward |
| | Direction (1.6) | dir | Forward | Forward,Reverse |
| | Total Unit (1.7) | - | m³ | Liter,gal,m³,kg,Ton |
| | Total Mode (1.8) | none | Forward | Forward,Reverse,Bi-direction |
| | Total Reset (1.9) | none | Cancel | Cancel,Accept |

| Main Menu | Sub Menu | Unit | Default | Setting Range |
|------------------|------------------|-------------|---------|-----------------|
| Advanced Set (2) | Zero Adj. (2.1) | m/s | actual | -0.5000~+0.5000 |
| | K-Factor (2.2) | none | 1.000 | 0.000~3.000 |
| | Density (2.3) | g/cm³ | 1.0000 | 0.0001~9.9999 |
| | Low cutoff (2.4) | % | 0.5 | 0.00~100.00 |
| | Fwd. Init. (2.5) | =Total Unit | 0 | 0~9999999999 |
| | Rev. Init.(2.6) | =Total Unit | 0 | 0~9999999999 |

SETTING VALUES

| Main Menu | Sub Menu | Unit | Default | Setting Range |
|--------------------|-------------------------|------------|----------|---|
| | Damping Time (3.1) | second(s) | 3 | 0~100 |
| | Pulse Out Mode (3.2) | none | Pulse NO | Pulse NO, Pulse NC, Frequency |
| | Pulse Out Unit (3.3) | Unit/pulse | 0.1 L | 0.001~100(L,gal,m³,g/kg,Ton) m³/pulse,gal/pulse,m³/pulse g/pulse,kg/pulse,Ton/pulse |
| | Max. Freq. (3.4) | Hz,kHz | 2K | 1~8K (00.000) |
| I/O Signal Set (3) | Curr. Mode (3.5) | none | 4-20 | 4-20,0-20 |
| | 4mA Fine-Tune (3.6) | count | 0 | -5000~5000 |
| | 20mA Fine-Tune (3.7) | count | 0 | -5000~5000 |
| | Input1 Func. (3.8) | N/A | None | None, Total Reset |
| | Input1 Type (3.9) | N/A | NO | NO,NC |
| | Filter Variation (3.10) | m/s | 1 | 0.000~10.000 |
| | Filter Weight (3.11) | % | 10 | 0~100 |
| | Median Filter(3.12) | % | Enable | Disable,Enable |

| Main Menu | Sub Menu | Unit | Default | Setting Range |
|---------------|----------------------|----------------|----------------|--|
| | Max. Flow (4.1) | Flow Rate Unit | Max. | Max. Flow Rate |
| | Min. Flow (4.2) | Flow Rate Unit | Min. | Min. Flow Rate |
| | Empty Tube Set (4.3) | N/A | Disable | Enable, Disable |
| | Output 1 Func. (4.4) | N/A | Max. Flow Rate | Max. Flow Rate, Min. Flow Rate, Empty Tube, System Alarm |
| Alarm Set (4) | Output 1 Type (4.5) | N/A | No | NO,NC |
| | Output 2 Func. (4.6) | N/A | Min. Flow Rate | Max. Flow Rate, Min. Flow Rate, Empty Tube, System Alarm |
| | Output 2 Type (4.7) | N/A | No | NO,NC |
| | Curr. Func. (4.8) | N/A | None | Empty Tube, System Alarm |
| | Alarm Curr. (4.9) | mA | 3.6 | 3.6,3.8,20.5,22 |
| | Temp. Alarm. (4.10) | N/A | 1 | 0:OFF, 1:ON |

SETTING VALUES

| Main Menu | Sub Menu | Unit | Default | Setting Range |
|-------------------|------------------------------|---|---------|--|
| | Language (5.1) | N/A | N/A | English English, 繁中, 简中 |
| System Info.(5.2) | Tube Status | N/A | Actual | (Normal, Empty) |
| | Act. Flow Speed | m/s | Actual | N/A |
| | Resistance | kΩ | Actual | N/A |
| | Status Code | N/A | Actual | 0000 0000 ~ FFFF FFFF |
| System Set (5) | Self-Test (5.3) | N/A | N/A | Cancel Normal, Circuit Fail ,Excitation Fail, Amb. Temp, Electrode Coating |
| | Analogy Input (5.4) | 4mA Display | N/A | 0000 0~9999 |
| | | 20mA Display. | N/A | 1000 0~9999 |
| | | 4-20mA Unit | N/A | Kpa None, Kpa, Mpa, Psi, Bar, °C, °F |
| | | Dot | N/A | 1 0~3 |
| | ModBus Comm. (5.5) | Modbus ID(2.13.1) | N/A | 1 1~255 |
| | | BaudRate(2.13.2) | BPS | 9600 1200,2400,4800,9600,19200 38400,57600 |
| | | Data bit(2.13.3) | N/A | 8 8 |
| | | Parity(2.13.4) | N/A | none none,odd,even |
| | | Stop bit(2.13.5) | N/A | 1 1,2 |
| | Recovery Default (5.6) | N/A | N/A | Cancel, Accept |
| | Mains Frequency (5.7) | N/A | Hz | 50 50, 60 |
| | LCM Contrast Brightness(5.8) | N/A | % | 50 10~100 |
| | Manu Password (5.9) | User Password(5.9.1) Admin Password(5.9.2) | N/A | 00000 0~99999 |

| Main Menu | Sub Menu | Unit | Default | Setting Range |
|----------------|----------------------|----------------|---------|---------------|
| Simulation (6) | Flow Speed (6.1) | m/s | 0 | -10 ~ 10 |
| | Flow Rate (6.2) | Flow Rate Unit | 0 | 0~max. |
| | Output Curr. (6.3) | mA | 4mA | 3.6~22 |
| | Output Freq. (6.4) | Hz(pulse/sec) | 2 | 8000 |
| | Output1 Status (6.5) | N/A | OFF | ON/OFF |
| | Output2 Status (6.6) | N/A | OFF | ON/OFF |
| | Input1 Status (6.7) | N/A | Actual | ON/OFF |
| | Input Curr. (6.8) | N/A | Actual | 0~24mA |

| Main Menu | Sub Menu | Unit | Default | Setting Range |
|----------------|-----------------------|------|---------|---|
| System Log (7) | Date Set (7.1) | N/A | actual | year : 17~99, month : 01~12, day : 01~31 |
| | Time Set (7.2) | N/A | actual | hour : 00~23, minute : 00~59, sec : 00~59 |
| | Log data clear (7.3) | N/A | Cancel | Cancel, Accept |
| | System Log Info (7.4) | N/A | actual | N/A |

| Main Menu | Sub Menu | Unit | Default | Setting Range |
|----------------|-------------------|------|---------|---------------|
| Infomation (8) | F.W. Version(8.1) | | actual | |

※Sub menu 1.3、1.9、2.2、2.5、2.6、5.6、5.9、7.3, only the admin can change.

APPLICATION DEMO



Pharmaceutical



Pharmacy



Beverage



Electronics



Food & Beverage



Incinerator



Mining



Plastic

TUCHENG PLANT/YILAN PLANT



EPD APPLICATION / ORDER FORM

Company Profile

Company Name: _____ Contact Person: _____
E-mail: _____ Phone: _____ Tax: _____

Application

Medium: _____ Temperature: _____ Sanitary Degree Request: Yes NO

Conductivity: _____ Viscosity: _____

Diameter of Tube (DN): _____ Accuracy Request(%): _____ Ambient Temp.: _____

Normal Flow Rate(m³/h): _____ Max. Flow Rate(m³/h): _____ Min. Flow Rate(m³/h): _____

Connection Spec: _____ Connection Material**: _____

Pressure (Kg/cm²): _____ Max. Static Pressure (Kg/cm²): _____ **SUS304, SUS316, SUS316L

Lining Material*: _____ Electrode Material***: _____

* PTFE · NBR · Neoprene

***SUS316 · Hastelloy Alloy · Titanium · Tantalum

Power: 110Vac 220Vac 24Vdc

Output: 4-20mA/Pulse(ferq) RS-485/Modbus

Grounding: NO YES

Installation Direction: Horizontal Vertical

Vibration Inside Tube: NO YES

Strong Magnetic Nearby: NO YES

Explosion Proof: NO YES

Explosion Proof Code: _____

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