

General Specifications

Models SE100MJ/NJ and SE200MJ/NJ
Integral Type
Magnetic Flowmeter

ADMAG SE

GS 01E10B01-01E

Solution to your profitability

ADMAG SE is the Safe and Easy magnetic flowmeter which makes your job simple and effective. You will increase the productivity and profitability. The installation, operation, and maintenance are all safe and easy.

ADMAG SE is equipped with a dual compartment housing providing ease of wiring while isolating the electronics from the environment. It is also prepared with HART or BRAIN communication as standard and its light weight makes installation easy .

FEATURES

- High Reliability
 - Based on Field Proven Technology
 - Proven Construction
 - Long Term Durability
- Compliance to World Market Requirements
 - General Safety
 - CE mark, C-Tick mark
 - Explosion Proof
 - ISO Standard
- High Accuracy (0.5% of flow rate)
- Easy Operation and Maintenance
 - Parameter Setting with Touch Control
 - Self Diagnostics
 - Light Weight and Easy Installation
 - Face to Face Length conform to ISO Standard (Flange Type)
- Easily Visible Display
 - The Large Visible LCD Panel
- Communication Capability
 - HART or BRAIN as standard
- Cost-effective
 Note: HART is a registered trademark of the HART Communication Foundation.

STANDARD SPECIFICATIONS

Magnetic Flow Converter

- * Note: For models with no setting switches, a hand-held terminal is necessary to set parameters.
- **Note:Pulse output, status output and alarm output use common terminals, therefore, these functions are not available at the same time.

Excitation method: Pulsed DC excitation

Output Signal:

- Current Output: 4 to 20 mA DC (Load resistance 600 ohm maximum).
- Transistor Contact Output: Pulse, alarm or status output selected by parameter setting (Contact rating: 30 V DC(OFF), 200mA (ON))

Communication :

HART or BRAIN (Superimposed on the 4 to 20 mA DC signal)



Conditions of Communication Line:

- Load Resistance: (including cable resistance)
 - HART: 230 to 600 ohm, depending on q'ty of field devices connected to the loop (multidrop mode)
 - BRAIN: 250 to 600 ohm
- Load Capacitance: 0.22 μF maximum
- Load Inductance: 3.3 mH maximum
- Distance from Power Line: 15 cm(0.6 ft) or more (Parallel wiring should be avoided.)
- Input Impedance of Receiver Connected to the Receiving Resistance: 10 kohm or larger (at 2.4 kHz)(only for HART)
- Maximum Cable Length: 2 km(6500 ft) (when polyethylene - insulated PVC - sheathed control cables (CEV cables) are used)

Instantaneous Flow Rate Display Function:

Flow rate can be displayed either in engineering units or in percent of span. (for models with indicator)

Totalizer Display Function:

Totalized volume in engineering units can be displayed by setting a totalizing factor. (for models with indicator)

Span Setting Function:

Volumetric flow setting is available by setting volume unit, time unit, flow rate value and flow tube size.

Volume Unit: gallon(US), m³, l, cm³, barrel (=158.987L)

Velocity Unit: ft, m

Time Unit: sec., min., hour, day

Flow Tube Size: inch, mm

Data Security During Power Failure:

Data storage in EEPROM - no back-up battery required.

Damping Time Constant:

Settable from 0.5 second to 200 seconds. (63% response time)

Pulse Output Function:

Scaled pulse can be outputted by setting a pulse factor.

Pulse Width: Duty 50% or fixed pulse width (0.5, 1, 20, 33, 50, or 100 ms) - user selectable.

Output Rate: 0.0001 to 1000pps (when pulse output function is selected.)

Status Output Function:

One of the followings is selected by parameter setting.

- **Auto 2 Ranges Status Output:**
Indicates the selected range for automatic dual range function.
- **Forward and Reverse Status Output:**
Indicates the flow direction for forward and reverse flow measurement mode.
- **Totalization Status Output:**
Indicates that the internal totalized value exceeds the set value.
- **Low Limit Alarm:**
Indicates that flow rate is under the low limit set value.

Alarm Output Function:

Indicates that an alarm occurs (Normal close Fixed).

Self Diagnostics Function:

Converter failure, flow tube failure, erroneous setting, etc. can be diagnosed and displayed (for models with indicator).

Touch Control:

Parameter setting operation by infrared switches. (for models with indicator and setting switches)

Electrical Connection:

ANSI 1/2NPT female, DIN Pg13.5 female, ISO M20 x 1.5 female, JIS G1/2 female.

Terminal Connection: M4 size screw terminal.**Case Material:** Aluminum alloy.**Coating:** Polyurethane corrosion-resistant coating. Deep sea moss green (Munsell 0.6GY3.1/2.0).**Protection:** IP67, NEMA 4X**■ Magnetic Flow Tube****Protection:** IP67, NEMA 4X.**Size in mm (inch):**

15 (0.5"), 25 (1"), 40 (1.5"), 50 (2"), 80 (3"), 100 (4"), 150 (6"), 200 (8")

Coating: Polyurethane corrosion-resistant coating, Deep sea moss green (Munsell 0.6GY3.1/2.0)

- All sizes of carbon steel flange type
- 150 and 200 mm of wafer type

No coating

- 15 to 100 mm of stainless steel flange type
- 15 to 100 mm of wafer type

Flow Tube Material:

Size 15 to 100 mm (0.5" to 4")

Housing: Stainless steel (15 mm: SCS11, 25 to 100 mm: SUS304)

Flange: Carbon steel or stainless steel (SUS304)

Pipe: Stainless steel (15 to 25 mm: SCS13, 40 to 100 mm: SUS304)

Size 150 to 200 mm(6" to 8")

Housing: Carbon steel

Flange: Carbon steel

Pipe: Stainless steel (SUS304)

Wetted Part Material:

Lining: Fluorocarbon PFA

Electrode: Stainless steel (SUS316L), Hastelloy C (equivalent to Hastelloy C-276), Titanium, Tantalum, Platinum-Iridium, Tungsten Carbide.

Earth Ring: Stainless steel (SUS316), Hastelloy C (equivalent to Hastelloy C-276), Titanium, PFA lining + Earth electrode*.

*Earth Electrode: Tantalum, Platinum-Iridium.

Note: Hastelloy is a registered trademark of Haynes International Inc.

Gasket:

- VALQUA#4010 ; Fluoro rubber, viton (between flow tube body and earth ring; for optional code/FRG)
- Non-asbestos joint sheet sheathed with fluoro resin PTFE (between earth ring and process flange; for optional or /BSF)
- * Other gaskets between flow tube and earth ring;
- VALQUA#4010(Mixing#RCD970) ; Alkali resistance gasket for PVC piping(Fluoro rubber)
- VALQUA#4010(Mixing#RCD470) ; Acid resistance gasket for PVC piping(Fluoro rubber)

Contact YOKOGAWA office. (Refer to TI 1E6A0-06E)

Electrode Construction: External insertion type.**■ HAZARDOUS AREA CLASSIFICATION****CENELEC (KEMA):ATEX Directive**

No. KEMA 98ATEX 3230

EEx dm[ia] II C T6...T3; Group II Category 2 G

Electrode circuit Um: 250 V ac/dc

Excitation Circuit: 41Vmax. 6/6.25 Hz

Temp. Class T6 T5 T4 T3

Process Temp. 70 85 120 130°C

Enclosure : IP67

FM:

Explosion proof for Class I, Division, Groups A, B, C & D.

Dust-ignition proof for Class II/III, Division 1, Groups E, F & G.

Leads factory sealed.

Intrinsically safe (electrodes) for Class I, Division 1, Groups A,B,C&D.

Electrode circuit Vmax.: 250 V ac/dc

Temp. Code : T6 T5 T4 T3

Max. Process Temp.: +70 +85 +120 +150°C

Enclosure: NEMA 4X

- Note: • Installation shall be in accordance with the manufacturer's instructions and the National Electric Code, ANSI/NFPA-70
- There is no need of the conduit seal for both of Division 1 and 2 hazardous locations because this product is sealed at factory.

CSA: (now preparing)
 Explosion proof for Class I, Division 1 and Division 2, Groups B, C & D.
 Dust-ignition proof for Class II/III, Division 1 and Division 2, Groups E, F&G.
 Leads factory sealed.
 Intrinsically safe electrodes for Class I, Division 1, Groups A,B,C&D.
 Electrode circuit Vmax.: 250V ac/dc
 Temp. Class T6 T5 T4 T3
 Process Temp. 70 85 120 130°C
 Enclosure: Type 4
 Note: There is no need of the conduit seal for Division 2 hazardous location because this product is sealed at factory.
SAA: (now preparing)

Safety Requirement Standard:
 IEC 1010, EN61010

EMC Conformity Standard:
 EN55011 Class A, Group 1
 EN50082-2
 AS/NZS 2064

STANDARD PERFORMANCE

Accuracy:

| Size in mm (inch) | Span in m/s (ft/s) | Accuracy |
|----------------------|--------------------|---|
| 15 to 200 (0.5 to 8) | 0.3 to 1 (1 to 3) | 0.5% of span |
| | 1 to 10 (3 to 33) | 0.25% of span (at indications below 50% of span) |
| | | 0.5% of flowrate (at indications 50% of span or more) |

T01.EPS

Repeatability:

0.1% of flowrate (minimum 1 mm/s)

Maximum Power Consumption:

10W (for combination of flow tube and converter)

Insulation Resistance:

- 100M ohm between power terminals and ground terminal at 500 V DC.
- 100M ohm between power terminals and each output terminal at 500 V DC.
- 20M ohm between each output terminal and ground terminal at 100 V DC.

Withstand Voltage:

- 1500 V AC between power terminals and ground terminal for 1 minute. (for -A1/-A2 power supply)
- 500VAC between power terminals and ground terminal for 1 minute. (for -D1 power supply)

CAUTION

When performing the Voltage Breakdown Test, Insulation Resistance Test or any unpowered electrical test, wait 10 seconds after the power supply is turned off before removing the housing cover. Be sure to remove the Short Bar at terminal "G". After testing, return the Short Bar to its correct position. Screw tightening torque should be 12kgf-cm(0.88ft-lb) or more, because the G-terminal is thought as a protective grounding and should conform to the Safety Requirements.

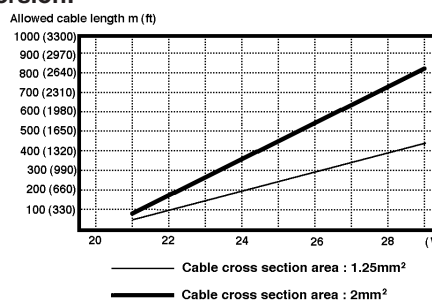
NORMAL OPERATING CONDITION

Ambient Temperature: -20 to 60°C (-4 to 140°F)
Ambient Humidity: 5 to 95%RH (no condensation)
Rated Power Supply Voltage:

100 V AC/DC Version:
 Range 80 to 127 V AC or 90 to 110 V DC
 230 V AC Version:
 Range 180 to 264 V AC
 24 V DC/AC Version:
 Range 20.4 to 28.8 V DC/AC

Power Supply Frequency for AC version:
 47 to 63 Hz

Supplied Power and Max. Cable Length for 24V DC version:



Altitude at installation side: Max.2000m above sea level

Installation category based on IEC1010: II(See Note)

Pollution level based on IEC1010: 2(See Note)

- Note: • The "Installation category" implies the regulation for impulse withstand voltage. It is also called the "Overvoltage category". "II" applies to electrical equipment.
 • "Pollution level" describes the degree to which a solid, liquid or gas which deteriorates dielectric strength is adhering. "2" applies to a normal indoor atmosphere.

Fuse: 2A 250V (Time-Lag type)

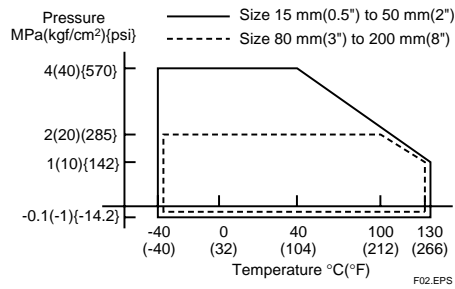
Fluid Conductivity: 5µS/cm or larger

Measurable Flow Rate Range:

| SI Units (Size : mm, Flowrate : m³/h) | | | English Units (Size : inch, Flowrate : GPM) | | |
|---------------------------------------|--------------------|-------------------|---|---------------------|--------------------|
| Size | MIN. Range @0.3m/s | MAX. Range @10m/s | Size | MIN. Range @1.0ft/s | MAX. Range @33ft/s |
| 15 | 0.1909 | 6.361 | 0.5 | 0.6024 | 20.078 |
| 25 | 0.5302 | 17.671 | 1 | 2.4095 | 80.31 |
| 40 | 1.3572 | 45.23 | 1.5 | 5.422 | 180.70 |
| 50 | 2.1206 | 70.68 | 2 | 9.638 | 321.2 |
| 80 | 5.429 | 180.95 | 3 | 21.685 | 722.8 |
| 100 | 8.483 | 282.74 | 4 | 38.56 | 1,285.0 |
| 150 | 19.086 | 636.1 | 6 | 86.74 | 2,891.3 |
| 200 | 33.93 | 1,130.9 | 8 | 154.21 | 5140 |

T02.EPS

Fluid Temperature and Pressure:



NOTE: This limits show maximum allowable fluid pressure for Flow Tube it self. Further fluid pressure should also be limited according to flange rating.

■ ACCESSORIES

- Data sheet 1
- Unit labels 1
- Centering device 1set (in case of wafer type)
- Hexagonal Wrench (Special screw for converter) 1
- Plug 1 (in case of DC power supply version)

■ TERMINAL CONNECTION

| Terminal Symbols | Description |
|---------------------------|---------------------------------|
| G POWER N- POWER L+ | } Ground and power supply |
| CUR+ CUR- | |
| PLS/ALM+ PLS/ALM- | } Current output 4 to 20 mA DC |
| ⊕ | } Pulse, alarm or status output |
| | Protective grounding |

T03.EPS

MODEL AND SUFFIX CODE

Integral Type Magnetic Flowmeter

| Model | Suffix Code | Description |
|---|--|---|
| SE115 | | Nominal size 15 mm (1/2") |
| SE202 | | Nominal size 25 mm (1") |
| SE204 | | Nominal size 40 mm (1 1/2") |
| SE205 | | Nominal size 50 mm (2") |
| SE208 | | Nominal size 80 mm (3") |
| SE210 | | Nominal size 100 mm (4") |
| SE215 | | Nominal size 150 mm (6") |
| SE220 | | Nominal size 200 mm (8") |
| Construction | M | Integral type for General Purpose |
| | N | Integral type for Explosion Proof |
| Aux. Code | J | Always J |
| Output Signal | -D | 4-20 mA and Pulse or Alarm, simultaneous 2-output (BRAIN) |
| | -E | 4-20 mA and Pulse or Alarm, simultaneous 2-output (HART) |
| Lining | A | Fluorocarbon PFA |
| Process Connection | B1S | ANSI 150 Wafer |
| | B2S | ANSI 300 Wafer |
| | E1S | DIN PN10 Wafer only for 200 mm |
| | E2S | DIN PN16 Wafer only for 80 to 200 mm |
| | E4S | DIN PN40 Wafer only for 15 to 50 mm |
| | K1S | JIS 10K Wafer |
| | K2S | JIS 20K Wafer |
| | A1C | ANSI 150 Flange Carbon Steel (SS400) |
| | A2C | ANSI 300 Flange Carbon Steel (SS400) |
| | D1C | DIN PN10 Flange Carbon Steel (SS400), only for 200 mm |
| | D2C | DIN PN16 Flange Carbon Steel (SS400), only for 80 to 200 mm |
| | D4C | DIN PN40 Flange Carbon Steel (SS400), only for 15 to 50 mm |
| | J1C | JIS 10K Flange Carbon Steel (SS400) |
| | J2C | JIS 20K Flange Carbon Steel (SS400) |
| | G1C | JIS F12 Flange Carbon Steel (SS400), only for 80 to 200 mm |
| | A1S | ANSI 150 Flange Stainless Steel (SUS304), only for 15 to 100 mm |
| | A2S | ANSI 300 Flange Stainless Steel (SUS304), only for 15 to 100 mm |
| | D2S | DIN PN16 Flange Stainless Steel (SUS304), only for 80, 100 mm |
| D4S | DIN PN40 Flange Stainless Steel (SUS304), only for 15 to 50 mm | |
| J1S | JIS 10K Flange Stainless Steel (SUS304), only for 15 to 100 mm | |
| J2S | JIS 20K Flange Stainless Steel (SUS304), only for 15 to 100 mm | |
| G1S | JIS F12 Flange Stainless Steel (SUS304), only for 80, 100 mm | |
| Electrode Material | -L | Stainless steel (SUS316L) |
| | -P | Platinum-iridium |
| | -H | Hastelloy C276 equivalent |
| | -T | Tantalum |
| | -V | Titanium |
| | -W | Tungsten Carbide |
| Earth ring and Earth electrode Material | N | Non Earth Ring |
| | S | Stainless steel (SUS316) |
| | P | Platinum-iridium electrode |
| | H | Hastelloy C276 equivalent |
| | T | Tantalum electrode |
| | V | Titanium |
| Electrical Connection (Refer to Note2) | 0 | JIS G1/2 female |
| | 2 | ANSI 1/2NPT female |
| | 3 | DIN Pg13.5 female |
| | 4 | ISO M20X1.5 female |
| Power Supply | -A1 | 80 to 127 V AC/90 to 110 V DC |
| | -A2 | 180 to 264 V AC |
| | -D1 | 20.4 to 28.8 V DC/AC |
| Indicator | NN | Non Indicator |
| | H1 | With Horizontal Indicator |
| | H2 | With Horizontal Indicator and Setting SW |
| | V1 | With Vertical Indicator |
| | V2 | With Vertical Indicator and Setting SW |
| Optional Code | / □ | |

T05.EPS

- Note 1 Select "PN40" when requirement of PN10, PN16, PN25 for 15 to 50 mm and select "PN16" when requirement of PN10 for 80 to 150 mm because of same mating dimensions.
- 2 Select ANSI 1/2NPT(code 2)electrical connection in case of requirement of FM Explosion proof type. Select ANSI 1/2NPT(code 2), DIN Pg 13.5(code 3) or ISO M20X1.5(code 4) electrical connection in case of requirement of CENELEC Explosion proof type.

Optional Specification

| Item | Specification | Code |
|--|---|------|
| Stainless Steel Bolt & Nut Assembly | Bolts(SUS304),nuts(SUS403) and non-asbestos PTFE-wrapped gaskets assembly for wafer type. | /BSF |
| Paint color change | Munsell code; N1.5, Black | /P1 |
| | Munsell code; 7.5BG4/1.5, Jade Green | /P2 |
| | Munsell code; Metallic Silver | /P7 |
| Epoxy Coating | Coating is changed to Epoxy coating | /X1 |
| High Anti-corrosion Coating | Coating is changed to three-layer coating(Urethane coating on two-layer Epoxy coating) | /X2 |
| Oil-Prohibited use | Degreased cleansing treatment. | /K1 |
| Oil-Prohibited use with Dehydrating Treatment | Degreased cleansing treatment ; Packing with desiccant | /K5 |
| Burnout Downward (Refer to Note 1) | The current output will go down (2.4 mA DC or less) when CPU failure | /C1 |
| Material Certificate | Reproduced material certificate for pipe, electrode, earth ring, mini-flange (for wafer type) and flange (for flange type).(Refer to Note2) | /M01 |
| Hydrostatic Test Certificate | Test pressure depends on Process Connection. (Test Duration 10 minutes) | /T01 |
| FM Approval | FM Explosion proof | /FF1 |
| CENELEC Certification ATEX Directive (KEMA) | CENELEC Explosion proof ATEX Directive EEx dm [ia] IIC T6...T3;Group II Category 2 G | /KF2 |
| CSA Certification (now preparing) | CSA Explosion proof | /CF1 |
| SAA Certification (now preparing) | SAA Explosion proof | /SF1 |
| Calibration Certificate | Level 2: Declaration and Calibration Equipment List | /L2 |
| | Level 3: Declaration and Primary Standard List | /L3 |
| | Level 4: Declaration and YOKOGAWA Measuring Instruments Control System | /L4 |
| Gaskets for PVC pipe | Gaskets are attached between earth ring and Flow Tube. | /FRG |
| Lightning Protector | Built-in Lightning Protector | /A |
| Waterproof Gland | Waterproof glands are attached to all wiring ports. For JIS G1/2 only. | /ECG |
| Waterproof Gland with Union Joint | Waterproof glands (union joint) are attached to all wiring ports. For JIS G1/2 only. | /ECU |
| GOST Certificate | Calibration Certificate for GOST(Only for products produced at YFT) | /GOS |
| 180deg. Rotated Converter | 180deg. rotated converter for reversed flow direction | /CRC |

T04.EPS

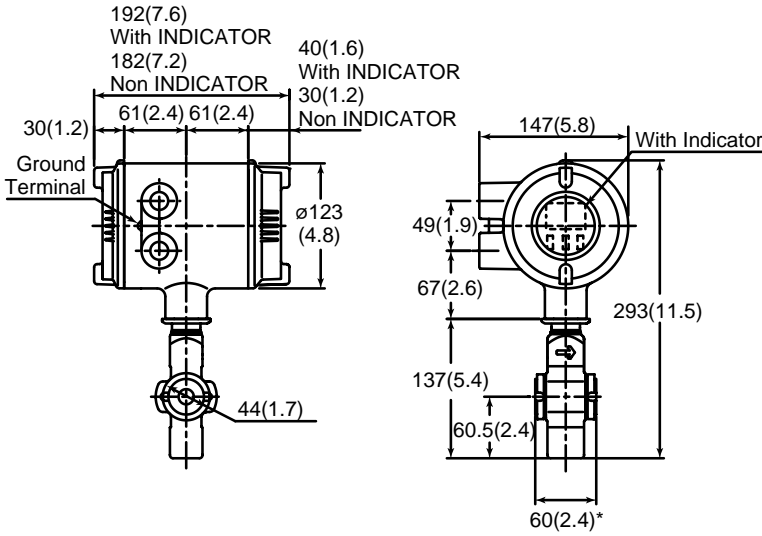
Note1: The standard type (without/C1) : Upward(21.6mA DC or more)

Note2: In case of requirement of EN10204 3.1B for Material Certificate, contact YOKOGAWA office.

EXTERNAL DIMENSIONS

15 mm (0.5 in) Wafer Type

Unit : mm(inch)



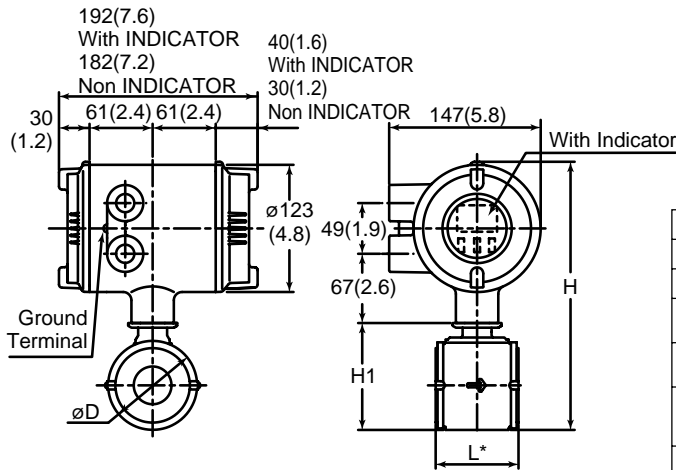
Lining : Fluorocarbon PFA
 Weight: 3.3kg(7.3 lb)
 With Indicator Option: Add 0.22kg(0.49lb)

* When no earth ring is selected the face to face length is shorter by approx. 1.6 mm(0.06 in).

The face to face length is longer by approx. 22 mm(0.87 in) for earth ring(P,T).

The face to face length is longer by approx. 8.4mm(0.33 in) for optional code /FRG.

25 mm (1 in) to 100 mm (4 in) Wafer Type



*1 When no earth ring is selected the face to face length is shorter by approx. 1.6 mm(0.06 in).

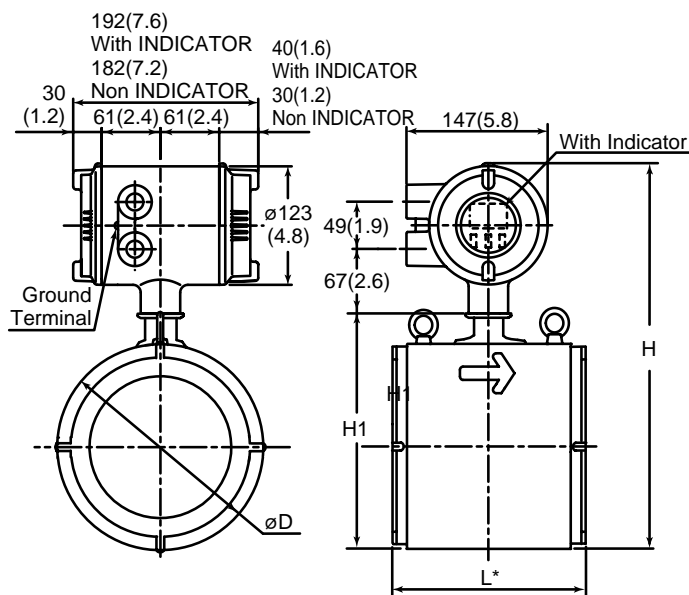
The face to face length is longer by approx. 22 mm (0.87 in) for earth ring(P,T).

The face to face length is longer by approx.8.4mm (0.33 in) for optional code/FRG.

| Model | SE202□J | SE204□J | SE205□J | SE208□J | SE210□J |
|---------------------|------------------|-----------|-----------|-----------|-----------|
| Nominal size | 25(1) | 40(1.5) | 50(2) | 80(3) | 100(4) |
| Lining | Fluorocarbon PFA | | | | |
| Face-to-face length | L*1 60(2.4) | 70(2.8) | 80(3.1) | 120(4.7) | 150(5.9) |
| Outside diameter | ∅D 67.5(2.7) | 86(3.4) | 99(3.9) | 129(5.1) | 155(6.1) |
| Height | H 240(9.4) | 260(10.2) | 285(11.2) | 307(12.1) | 338(13.3) |
| | H1 84(3.3) | 104(4.1) | 129(5.1) | 156(6.1) | 182(7.2) |
| Weight kg(lb)*2 | 3.6(7.9) | 3.8(8.3) | 4.2(9.1) | 6.6(14.6) | 8.6(19.0) |

*2 With Indicator Option: Add 0.22 kg(0.49 lb)

150 mm (6 in) to 200 mm (8 in) Wafer Type



*1 When no earth ring is selected the face to face length is shorter by approx. 2 mm (0.08 in).

The face to face length is longer by approx. 32 mm (1.3 in) for earth ring(P,T).

The face to face length is longer by approx. 10.0mm (0.40in) for optional code/FRG.

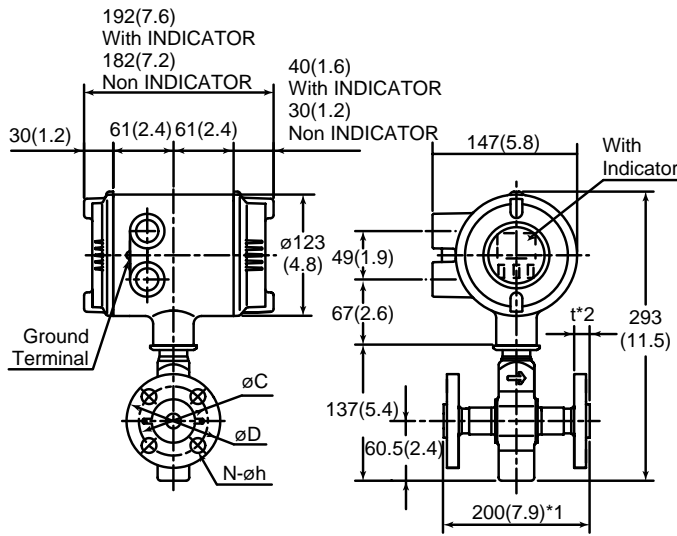
| Model | SE215□J | SE220□J |
|---------------------|------------------|------------|
| Nominal size | 150(6) | 200(8) |
| Lining | Fluorocarbon PFA | |
| Face-to-face length | L*1 200(7.9) | 250(9.8) |
| Outside diameter | ∅D 218(8.6) | 268(10.6) |
| Height | H 407(16.0) | 457(18.0) |
| | H1 248(9.8) | 298(11.7) |
| Weight kg(lb)*2 | 16.1(35.5) | 24.2(53.4) |

*2 With Indicator Option: Add 0.22 kg(0.49 lb)

F03.EPS

15 mm (0.5 in) Flange Type

Unit : mm(inch)



*1 When no earth ring is selected the face to face length is shorter by approx. 1.6 mm(0.06 in).

The face to face length is longer by approx. 22 mm (0.87 in) for earth ring(P,T).

The face to face length is longer by approx. 8.4 mm (0.33 in) for optional code/FRG.

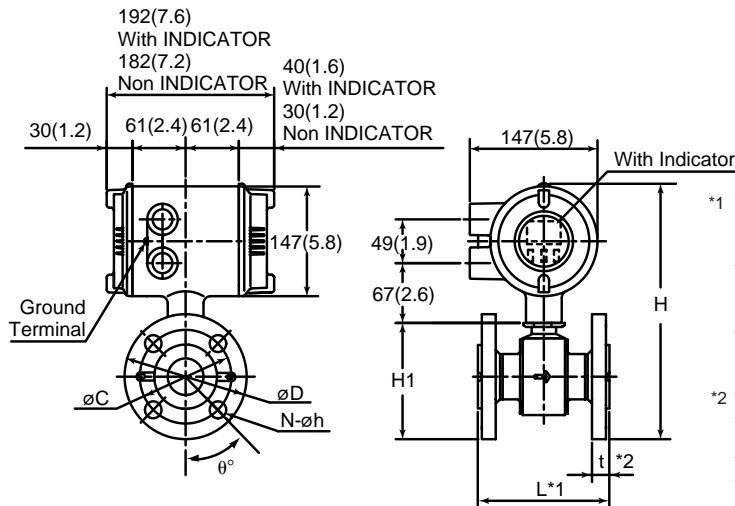
*2 The thickness(t) is longer by approx. 11 mm (0.43 in) for earth ring(P,T).

The thickness(t) is longer by approx. 4.2 mm (0.17 in) for optional code/FRG.

| Model | SE115□J | | | | |
|------------------------------|------------------|---------------|---------------|---------------|---------------|
| Nominal size | 15(0.5) | | | | |
| Flange Type | J1□ | J2□ | A1□ | A2□ | D4□ |
| Lining | Fluorocarbon PFA | | | | |
| Flange outside dia. ϕD | 95 (3.7) | 95 (3.7) | 88.9 (3.5) | 95.3 (3.8) | 95 (3.7) |
| Pitch circle dia. | C (2.8) | 70 (2.8) | 60.5 (2.4) | 66.5 (2.6) | 65 (2.6) |
| Number of holes | N 4 | | | | |
| Dia. of holes h | 15 (0.6) | 15 (0.6) | 15.7 (0.6) | 15.7 (0.6) | 14 (0.6) |
| Thickness t^*2 | 15.8 (0.6) | 17.8 (0.7) | 15 (0.6) | 18 (0.7) | 19.8 (0.8) |
| Weight kg(lb)* 3 | 4.9 (10.7) | 5.0 (11.1) | 4.6 (10.0) | 5.0 (11.0) | 4.5 (9.9) |

*3 With Indicator Option: Add 0.22 kg(0.49 lb)

25 mm (1 in) to 50 mm (2 in) Flange Type



*1 When no earth ring is selected the face to face length is shorter by approx. 1.6 mm(0.06 in).

The face to face length is longer by approx. 22 mm (0.87 in) for earth ring(P,T).

The face to face length is longer by approx. 8.4 mm (0.33 in) for optional code/FRG.

*2 The thickness(t) is longer by approx. 11 mm (0.43 in) for earth ring(P,T).

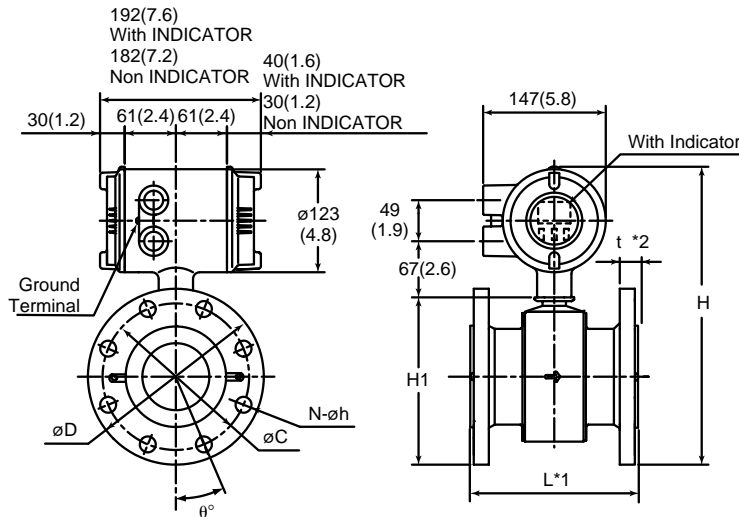
The thickness(t) is longer by approx. 4.2 mm (0.17 in) for optional code/FRG.

| Model | SE202□J | | | | | SE204□J | | | | | SE205□J | | | | | |
|--------------------------------|------------------|---------------|---------------|---------------|---------------|------------------|---------------|---------------|----------------|----------------|------------------|---------------|----------------|----------------|----------------|----------------|
| Nominal size | 25(1) | | | | | 40(1.5) | | | | | 50(2) | | | | | |
| Flange Type | J1□ | J2□ | A1□ | A2□ | D4□ | J1□ | J2□ | A1□ | A2□ | D4□ | J1□ | J2□ | A1□ | A2□ | D4□ | |
| Lining | Fluorocarbon PFA | | | | | Fluorocarbon PFA | | | | | Fluorocarbon PFA | | | | | |
| Face to face length (ISO) | L*1 200(7.9) | | | | | 200(7.9) | | | | | 200(7.9) | | | | | |
| Flange outside dia. ϕD | 125 (4.9) | 125 (4.9) | 108 (4.3) | 124 (4.9) | 115 (4.5) | 140 (5.5) | 140 (5.5) | 127 (5.0) | 155.4 (6.1) | 150 (5.9) | 155 (6.1) | 155 (6.1) | 152.4 (6.0) | 165.1 (6.5) | 165 (6.5) | |
| Height | H | 272 (10.7) | 272 (10.7) | 264 (10.4) | 272 (10.7) | 267 (10.5) | 290 (11.4) | 290 (11.4) | 284 (11.1) | 298 (11.7) | 295 (11.6) | 316 (12.4) | 316 (12.4) | 315 (12.4) | 321 (12.6) | 321 (12.6) |
| | H1 | 113 (4.4) | 113 (4.4) | 105 (4.1) | 113 (4.4) | 108 (4.3) | 131 (5.2) | 131 (5.2) | 125 (4.9) | 139 (5.5) | 136 (5.4) | 157 (6.2) | 157 (6.2) | 156 (6.1) | 162 (6.4) | 162 (6.4) |
| Pitch circle dia. | C | 90 (3.5) | 90 (3.5) | 79.2 (3.1) | 88.9 (3.5) | 85 (3.3) | 105 (4.1) | 105 (4.1) | 98.6 (3.9) | 144.3 (5.7) | 110 (4.3) | 120 (4.7) | 120 (4.7) | 120.7 (4.8) | 127 (5.0) | 125 (4.9) |
| Number of holes | N 4 | | | | | 4 | | | | | 4 | | | | | |
| Dia. of holes h | 19 (0.7) | 19 (0.7) | 15.7 (0.6) | 19.1 (0.7) | 14 (0.6) | 19 (0.7) | 19 (0.7) | 15.7 (0.6) | 22.4 (0.9) | 18 (0.7) | 19 (0.7) | 19 (0.7) | 19.1 (0.7) | 19.1 (0.7) | 18 (0.7) | 18 (0.7) |
| Thickness t^*2 | 17 (0.7) | 19 (0.7) | 17.2 (0.7) | 20.7 (0.8) | 21 (0.8) | 19 (0.8) | 21 (0.8) | 20.5 (0.8) | 23.5 (0.9) | 21 (0.8) | 19 (0.7) | 21 (0.8) | 22.2 (0.9) | 25.2 (1.0) | 23 (0.9) | 23 (0.9) |
| Bolt hole pitch θ° | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 45 | 22.5 | 45 | 22.5 | 45 | 45 |
| Weight kg(lb)*3 | 6.0 (13.0) | 6.3 (13.9) | 5.3 (11.7) | 6.5 (14.3) | 6.3 (13.9) | 7.6 (16.8) | 7.9 (17.4) | 7.2 (15.9) | 9.5 (20.9) | 9.2 (20.3) | 9.0 (19.8) | 9.1 (20.0) | 9.5 (20.9) | 11.1 (24.5) | 10.9 (24.0) | 10.9 (24.0) |

*3 With Indicator Option: Add 0.22 kg(0.49 lb)

F04.EPS

80 mm (3 in) to 100 mm (4 in) Flange Type



Unit : mm(inch)

*1 When no earth ring is selected the face to face length is shorter by approx. 1.6 mm(0.06 in).

The face to face length is longer by approx. 22 mm (0.87 in) for earth ring(P,T).

The face to face length is longer by approx. 0.84mm (0.33 in) for optional code/FRG.

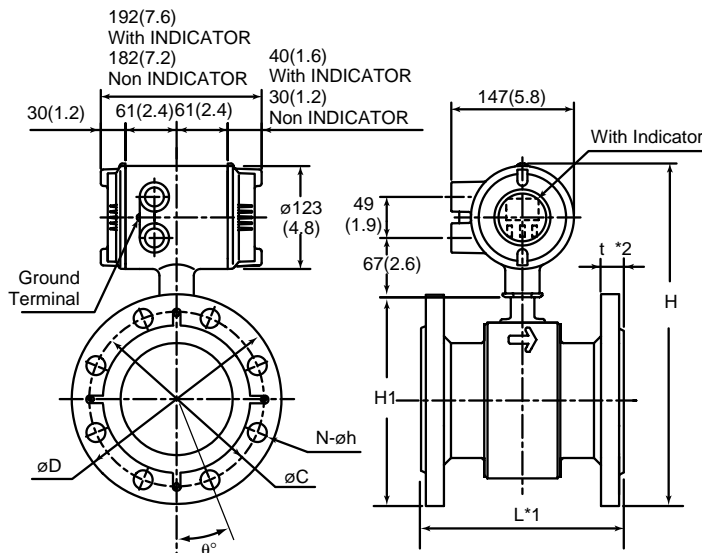
*2 The thickness(t) is longer by approx. 11 mm (0.43 in) for earth ring(P,T).

The thickness(t) is longer by approx. 0.42mm (0.17 in) for optional code/FRG.

| Model | SE208□J | | | | | | | | SE210□J | | | | | | |
|---------------------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|---------------|---|--|
| Nominal size | 80(1) | | | | | | | | 100(4) | | | | | | |
| Flange Type | J1□ | J2□ | A1□ | A2□ | D4□ | G1□ | J1□ | J2□ | A1□ | A2□ | D2□ | G1□ | | | |
| Lining | PFA Lining | | | | | | | | PFA Lining | | | | | | |
| Face to face length (ISO) | L*1 | 200(7.9) | | | | | | | | 250(9.8) | | | | | |
| Flange outside dia. | ϕD | 185 (7.3) | 200 (7.9) | 190.5 (7.5) | 209.6 (8.3) | 200 (7.9) | 211 (8.3) | 210 (8.3) | 255 (8.9) | 228.6 (9.1) | 254 (10.0) | 220 (8.7) | 23.8 (9.4) | | |
| Height | H | 338 (13.3) | 346 (13.6) | 341 (13.4) | 351 (13.8) | 346 (13.6) | 351 (13.8) | 369 (14.5) | 376 (14.8) | 378 (14.9) | 391 (15.4) | 374 (14.7) | 383 (15.1) | | |
| | H1 | 179 (7.0) | 187 (7.4) | 182 (7.2) | 197 (7.8) | 187 (7.4) | 192 (7.6) | 210 (8.3) | 217 (8.5) | 219 (8.6) | 232 (9.1) | 215 (8.5) | 224 (8.8) | | |
| Pitch circle dia. | C | 150 (5.9) | 160 (6.3) | 152.4 (6.0) | 168.1 (6.6) | 160 (6.3) | 168 (6.6) | 175 (6.9) | 185 (7.3) | 190.5 (7.5) | 200.2 (7.9) | 180 (7.1) | 195 (7.7) | | |
| Number of holes | N | 8 | | 4 | | 8 | | 4 | | 8 | | | | 4 | |
| Dia. of holes | h | 19 (0.7) | 23 (0.9) | 19.1 (0.7) | 22.4 (0.9) | 18 (0.7) | 19 (0.7) | 19 (0.7) | 23 (0.9) | 19.1 (0.7) | 22.4 (0.9) | 18 (0.7) | 19 (0.7) | | |
| Thickness | t*2 | 21.8 (0.9) | 25.8 (1.0) | 27.7 (1.1) | 32.2 (1.3) | 23.8 (0.9) | 21.8 (0.9) | 21.8 (0.9) | 27.8 (1.1) | 27.7 (1.1) | 34.8 (1.4) | 23.8 (0.9) | 21.8 (0.9) | | |
| Bolt hole pitch | θ° | 22.5 | 22.5 | 45 | 22.5 | 22.5 | 45 | 22.5 | 22.5 | 22.5 | 22.5 | 22.5 | 45 | | |
| Weight kg(lb)*3 | | 11.7 (25.8) | 15.6 (34.3) | 16.3 (35.9) | 17.6 (38.8) | 13.6 (29.9) | 14.0 (30.9) | 13.7 (30.2) | 17.6 (38.7) | 18.3 (40.3) | 24.8 (54.7) | 15.6 (34.3) | 26 (57.3) | | |

*3 With Indicator Option: Add 0.22 kg(0.49 lb)

150 mm (6 in) to 200 mm (8 in) Flange Type



*1 When no earth ring is selected the face to face length is shorter by approx. 2 mm (0.08 in).

The face to face length is longer by approx. 32 mm (1.3 in) for earth ring(P,T).

The face to face length is longer by approx. 10.0 mm (0.4 in) for optional code/FRG.

*2 The thickness(t) is longer by approx. 16 mm (0.63 in) for earth ring(P,T).

The thickness(t) is longer by approx. 5.0 mm (0.20 in) for optional code/FRG.

F05.EPS

| Model | | SE215□J | | | | | | SE220□J | | | | | | |
|---------------------------|-----|---------------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|---------------|-----------------|-----------------|---------------|---------------|---------------|
| Nominal size | | 150(6) | | | | | | 200(8) | | | | | | |
| Flange Type | | J1□ | J2□ | A1□ | A2□ | D2□ | G1□ | J1□ | J2□ | A1□ | A2□ | D1□ | D2□ | G1□ |
| Lining | | PFA Lining | | | | | | PFA Lining | | | | | | |
| Face to face length (ISO) | | L*1 300(11.8) | | | | | | 350(13.8) | | | | | | |
| Flange outside dia. | ∅D | 280 (11.0) | 305 (12.0) | 279.4 (11.0) | 317.5 (12.5) | 285 (11.2) | 290 (11.4) | 330 (13.0) | 350 (13.8) | 342.5 (13.5) | 381 (15.0) | 220 (8.7) | 340 (13.4) | 342 (13.5) |
| | H | 438 (17.2) | 450.5 (17.8) | 437.7 (17.2) | 450.7 (18.0) | 440.5 (17.4) | 443 (17.4) | 488 (19.2) | 498 (19.6) | 493.4 (19.4) | 513.5 (20.2) | 493 (19.4) | 493 (19.4) | 494 (19.4) |
| Height | H1 | 279 (10.7) | 291.5 (11.5) | 278.7 (11.0) | 297.8 (11.7) | 281.5 (11.1) | 284 (11.2) | 329 (13.0) | 339 (13.3) | 335.5 (13.2) | 354.5 (14.0) | 334 (13.1) | 334 (13.1) | 335 (13.2) |
| | C | 240 (9.4) | 260 (10.2) | 240 (9.5) | 270 (10.6) | 240 (9.4) | 247 (9.7) | 290 (11.4) | 305 (12.0) | 298.4 (11.7) | 330.2 (13.0) | 295 (11.6) | 295 (11.6) | 299 (11.8) |
| Number of holes | N | 8 | 12 | 8 | 12 | 8 | 8 | 12 | 12 | 8 | 12 | 8 | 12 | 12 |
| Dia. of holes | h | 23 (0.9) | 25 (1.0) | 22.3 (0.9) | 22.3 (0.9) | 22 (0.9) | 19 (0.7) | 23 (0.9) | 25 (1.0) | 22.3 (0.9) | 25.4 (1.0) | 22 (0.9) | 22 (0.9) | 19 (0.7) |
| Thickness | t*2 | 27 (1.1) | 33 (1.3) | 30.4 (1.2) | 41.5 (1.2) | 27 (1.1) | 27 (1.1) | 27 (1.1) | 35 (1.4) | 49.4 (1.9) | 46.1 (1.8) | 29 (1.1) | 29 (1.1) | 29 (1.1) |
| Bolt hole pitch | θ° | 22.5 | 15 | 22.5 | 15 | 22.5 | 30 | 15 | 15 | 22.5 | 15 | 22.5 | 15 | 22.5 |
| Weight kg(lb)*3 | | 28 (64.7) | 35 (77.2) | 30 (66.1) | 45 (99.2) | 30 (66.1) | 29 (64.0) | 39 (86) | 49 (108) | 46 (101) | 68 (149.9) | 43 (94.8) | 44 (97.0) | 45 (99.3) |

*3 With Indicator Option: Add 0.22 kg(0.49 lb)

T06.EPS

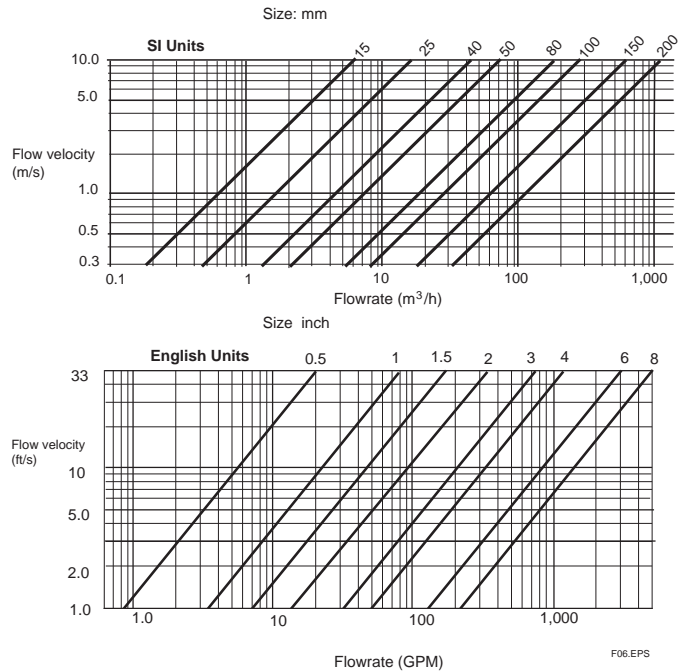
■ EARTH RING INSIDE DIAMETER

Earth Ring inside diameter Unit:mm(inch)

| Size | Earth Ring inside diameter |
|---------|----------------------------|
| 15(0.5) | 15 (0.59) |
| 25(1) | 28 (1.10) |
| 40(1.5) | 41 (1.61) |
| 50(2) | 53 (2.09) |
| 80(3) | 81 (3.19) |
| 100(4) | 102 (4.02) |
| 150(6) | 146.1 (5.75) |
| 200(8) | 193.6 (7.62) |

* Please ensure that the I.D. of the gasket does not protrude into the I.D. of the Earth Ring.
(This dimension is also applied to when no earth ring is used.) T07.EPS

■ SIZING DATA



■ GASKET

Please use compressed non-asbestos fiber gasket, PTFE gasket or the gasket which has equal elasticity.
In case of /FRG, please use rubber gasket or others which has equal elasticity.

=== ORDERING INFORMATION ===

1. Model, specification and optional codes.
2. Fluid name.
3. Parameter setting.(Only when necessary)
 - (1) Flow rate span (at 100% output)
Example: Volume/Time unit
 - (2) Totalizing pulse units
Example: Volume/Pulse, Pulse/Time unit
 - (3) Transmission pulse units
Example: Volume/Pulse, Pulse/Time unit
4. Tag number (Only when necessary)
16 characters maximum for name plate and certificate

=== RELATED INSTRUMENTS ===

Related Product
 Calibrator for magnetic flowmeter
 (AM012) GS 01E06K02-00E
 BT200 Brain Terminal GS 1C0A11-E