YAMATAKE Specification

SMT3000 EX Electromagnetic Flowmeter
Model : SMT35/55
Two-wire Integral style JIS Explosion-Protected Apparatus

OVERVIEW

The SMT3000 EX Series of Smart Two-wire Electromagnetic Flowmeters are JIS Explosion-proof type electromagnetic flowmeters utilizing Two-wire loop powered technology.
The SMT3000 EX Series offers a full line of 4 to 20mA DC models and high powered models to serve a wide range of user needs in flow rate measurement.

Integral type

FEATURES

- Applicable to maximum 125°C of process fluid temperature.
- A built-in zener barrier eliminates preparation of it at customer side.
- Since the field location and the instrument room are connected by Two-wire instrumentation, you can substantially reduce wiring costs.
- The detector case is made of stainless steel SUS304 for improved durability (diameters from 2.5 to 100mm).
- You can change data settings by remote communication using the SFC(SFC Rom Ver. 5.0 or later)
- You can choose either the flange type or wafer type for piping connections.
- Numerous options are available to meet a wide variety of needs (including gaskets for resin pipes, oil-proof treatment, waterproof treatment, tropical climate treatment, air purge holes, traceability certificates, and mill sheets). Choose your option according to your specific requirements.
- This series of flowmeters is provided with a new low-flow cutoff function that enables a fixed zero digital display when there is no flow or when the flow rate is low. They feature lets you eliminate insignificant display changes.
- Lightning protection provided as a standard feature(12kV/1000A)

APPLICATIONS

- Measurement of water supply and drainage flow rates
- Measurement of industrial and agricultural water flow rates
- Measurement of sea water flow rates
- Measurement of corrosive liquid flow rates
- Measurement of the flow rates of medical fluids
- Measurement of the flow rates of drainage and waste liquids
- Measurement of the flow rates of human wastes

For Detector

FUNCTIONAL SPECIFICATIONS

Type of protection

JIS C 0920 watertight model

NEMA TYPE 4X

IEC IP67

JIS Explosion-proof approval

Ex de [ia] IIC T4

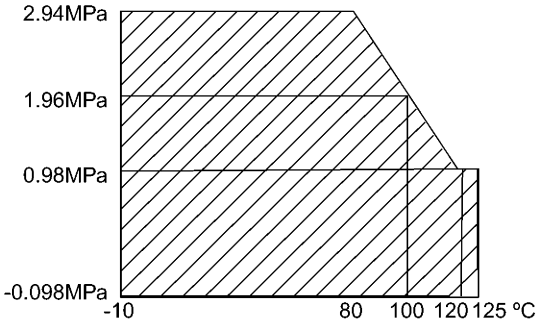
Aprroval numbers

Size (mm)	SMT35A	SMT55A
2.5	-	C14153
5	-	C14153
10	-	C14153
15	-	C14153
25	C14164	C14164
40	C14165	C14165
50	C14166	C14166
80	C14167	C14167
100	C14168	C14168
150	-	C14169
200	-	C14170

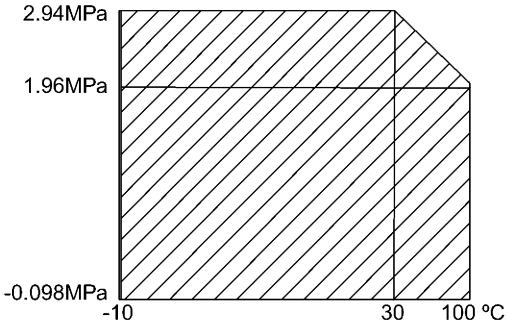
Temperature range of liquid to be measured

Size (mm)	Temperature	
	Integral type	Remote type
2.5 to 10	+10 to +100	-40 to +100
15 to 200	-10 to +130	-40 to +160

SIZE: 15 to 200mm



SIZE: 2.5 to 10mm



Measurable electrical conductivity

Standard model ; 50μ S/cm or greater

High powered model ; 10 μ S/cm or greater

Measurement flow range

High powered model

Size (mm)	Minimum range(m³/h) (Minimum flow velocity range is 0 to 0.3m/s	Maximum range(m³/h) (Maximum flow velocity range is 0 to 10m/s)	Conversion factor K
2.5	0 to 0.00531	0 to 0.176	56.59
5	0 to 0.02121	0 to 0.706	14.14
10	0 to 0.0849	0 to 2.83	3.537
15	0 to 0.1909	0 to 6.36	1.572
25	0 to 0.531	0 to 17.67	0.5659
40	0 to 1.3572	0 to 45.2	0.2210
50	0 to 2.121	0 to 70.6	0.1415
80	0 to 5.43	0 to 180.9	0.05526
100	0 to 8.49	0 to 282.7	0.03537
150	0 to 19.09	0 to 636	0.01572
200	0 to 39.93	0 to 1,130.9	0.008842

Standard model

Size (mm)	Minimum range(m³/h) (Minimum flow velocity range is 0 to 0.5m/s	Maximum range(m³/h) (Maximum flow velocity range is 0 to 10m/s)	Conversion factor K
25	0 to 0.884	0 to 17.6	0.5659
40	0 to 2.262	0 to 45.2	0.2210
50	0 to 3.534	0 to 70.6	0.1415
80	0 to 9.048	0 to 180.9	0.05526
100	0 to 14.14	0 to 282.7	0.03537

Velocity V(m/s) = K x Q

K = Flow conversion factor = $1/3600 \times 4/(\pi D^2)$

Q = Flow rate (m^3/h)

Flange rating

JIS 10K, JIS 20K, JIS 30K, JPI 150, JPI 300, ANSI 150, ANSI 300 (size 2.5 to 200mm)

Ambient temperature

-10 to +50℃

Ambient humidity

10 to 90%RH

Optional specifications

Test report

Calibration certificate, withstand voltage test, insulation resistant, hydrostatic pressure test, physical inspection are included.

Traceability certificate

The following three documents are included.

- Traceability System Chart
- Traceability Certificate
- Test Report

Material certificate

Material certificate for electrode / grounding ring

Water free treatment

Condensation is removed from process wetted materials surface.

Oil free treatment

Oil is removed from process wetted materials surface.

Gasket for plastic piping

When the detector is being mounted on plastic pipe, attach this gasket between the lining and the grounding ring, and between the grounding ring and the plastic pipe flange.

Attaching the tag number

Stamp the tag with the specified number and attach to the flowmeter. The maximum number of characters of the tag number is 8.

PHYSICAL SPECIFICATIONS

Finish

Corrosion-preventive acrylic resin
(size 150mm and 200mm : case)

Color

Light beige (Munsell 4Y7.2/1.3)

Materials

Measuring pipe : stainless steel SUS304
Flange
stainless steel SUS304
(size : 2.5 to 100mm)
carbon steel with rust resistant coating
(size : 150 and 200mm)
Case
Stainless steel SCS13
(size : 2.5 to 15mm)
stainless steel SUS304
(size : 25 to 100mm)
carbon steel SS400
(size : 150 and 200mm)

Wetted Parts Materials

Lining
PFA (size : 2.5 to 200mm)
Electrode
SUS316L, hastelloy C, titanium, tantalum, platinum-iridium, tungsten carbide, zirconium, nickel
Grounding ring
SUS316, hastelloy C, titanium, tantalum, platinum, zirconium
Gasket
PTFE (attached to grounding ring other than SUS316)

Electrode Structure

External insertion type

INSTALLATION

Electrical conduit connection

Wired to the converter

Pipe connection

Wafer (size : 25 to 100mm)
Flange (size : 2.5 to 200mm)

Nuts and bolts (for the wafer type)

Carbon steel S20C, stainless steel SUS304

Mounting position

Electrodes need to be mounted in a horizontal position.

Grounding

Grounding resistance : less than 100 Ω

Straight pipe length

Upstream side
A minimum five straight pipe diameters
A minimum 10 straight pipe diameters is required if a diffuser/value/pump is installed.
Downstream side
Two straight pipe diameters is recommended.

For Converter

FUNCTIONAL SPECIFICATIONS

Type of protection

JIS C 0920 waterproof model

NEMA TYPE 4X

IEC IP67

JIS Explosion-proof approval

Ex de [ia] IIC T4

Power supply

High powered model

Driven by DC voltage from a dedicated power supply unit SMP210 (DC 60V)

Standard model

DC 16 to 45V

Power consumption

High powered model : 8 W

Standard model : 0.1 W

Input signal

Flow signal

Electromotive force from the detector

Output signal

Analog output

High powered model

24 to 40mA DC to a dedicated power supply unit SMP210

Standard model

4 to 20mA DC

Digital output

DE (standard model only)

Analog or digital output is selectable.

Load resistance in SFC communication

Standard model

External power source for SFC communication

DC 16 to 45 V

Load resistance (Ω)=(Voltage of external power source for communication-16V)/0.0218

Display: LCD display

Main display

Seven segment, six digit display

Display contents

- Flow volume in percentage
- Actual flow rate

Status display

Seven states

DISPLAY, DAMPING, AUTO ZERO, OUTPUT MODE, BAD XMTR STATUS, %, RATE

Unit of flow indication

Volume flow

m^3, l, cm^3, B(barrel), KG(kilo-gallon), G(gallon), mG(mili-gallon)

Mass flow

t, kg, g, lb(pound)

Time

d, h, min, s

Damping time constant

1, 2, 3, 4, 5, 10, 50, 100s (response time reaches at 63.2% of the setting range)

Low-flow cutoff

Adjustable between 0 to 10% of setting range. Below selected value, output is driven to the zero flow rate signal level.

Lightning protection

12kV, 1000A

Equipped with the lightning arrester in the output terminal. (not built-in the dedicated power supply unit SMP210)

Ambient temperature

-10 to +50℃

Ambient humidity

10 to 90%RH

PHYSICAL SPECIFICATIONS

Finish

Standard

Corrosion-preventive acrylic resin.

Corrosion-proof

Epoxy resin

Color

Light beige (Munsell color.4Y7.2/1.3)

Housing material

Aluminum alloy

Display cover

Tempered glass, 10mm thickness

INSTALLATION

Electrical conduit connection

G1/2(PF1/2) internal thread

Mounting

Integral detector / converter model

Grounding

Grounding resistance : less than 100Ω

For dedicated power supply unit SMP210

FUNCTIONAL SPECIFICATIONS

Type of protection

For indoor mounting

Power supply

AC 100, 110, 120, 200, 220, 240V ±10%
Power supply frequency : 50/60Hz

Input signal

Flow signal
24 to 40mA DC signal proportional to the flow rate from the high powered type converter (SMT55A)

Output signal

Analog output
4 to 20mA DC
(load resistance : 0 to 600Ω)
Pulse output
Open collector
Contact Capacity : DC 30V max., 100mA max.
Pulse frequency : 1700Hz max
Pulse width : 0.3 ms or 30 ms

Pulse output setting by SMP210

Pulse scale depends on the flow range and pulse width. Refer to the following table

Pulse width : 30mS

Pulse scale setting plug / Flow range [m^3/h]	1	2	3	4	5	6
0.001 to 0.006	-	-	0.1 cc/p	1 cc/p	10 cc/p	100 cc/p
0.00601 to 0.00999	-	-	-	1 cc/p	10 cc/p	100 cc/p
0.01 to 0.06	-	-	1 cc/p	10 cc/p	100 cc/p	1 l/p
0.0601 to 0.0999	-	-	-	10 cc/p	100 cc/p	1 l/p
0.1 to 0.6	-	-	10 cc/p	100 cc/p	1 l/p	10 l/p
0.601 to 0.999	-	-	-	100 cc/p	1 l/p	10 l/p
1 to 6	-	-	100 cc/p	1 l/p	10 l/p	100 l/p
6.01 to 9.99	-	-	-	1 l/p	10 l/p	100 l/p
10 to 60	-	-	1 l/p	10 l/p	100 l/p	1 m^3/p
60.1 to 99.9*	-	-	-	10 l/p	100 l/p	1 m^3/p
100 to 600	-	-	10 l/p	100 l/p	1 m^3/p	10 m^3/p
601 to 999	-	-	-	100 l/p	1 m^3/p	10 m^3/p
1000 to 1130	-	-	100 l/p	1 m	10 m^3/p	100 m^3/p

Pulse width 0.3ms

Pulse scale setting plug / Flow range [m^3/h]	1	2	3	4	5	6
0.001 to 0.006	0.001 cc/p	0.01 cc/p-	0.1 cc/p	1 cc/p	10 cc/p	100 cc/p
0.00601 to 0.00999	-	0.01 cc/p-	0.1 cc/p-	1 cc/p	10 cc/p	100 cc/p
0.01 to 0.06	0.01 cc/p	0.1 cc/p	1 cc/p	10 cc/p	100 cc/p	1 l/p
0.0601 to 0.0999	-	0.1 cc/p	1 cc/p	10 cc/p	100 cc/p	1 l/p
0.1 to 0.6	0.1 cc[	1 cc/p	10 cc/p	100 cc/p	1 l/p	10 l/p
0.601 to 0.999	-	1 cc/p	10 cc/p	100 cc/p	1 l/p	10 l/p
1 to 6	1 cc/p	10 cc/p	100 cc/p	1 l/p	10 l/p	100 l/p
6.01 to 9.99	-	10 cc/p	100 cc/p	1 l/p	10 l/p	100 l/p
10 to 60	10 cc/p	100 cc/p	1 l/p	10 l/p	100 l/p	1 m^3/p
60.1 to 99.9*	-	100 cc/p	1 l/p	10 l/p	100 l/p	1 m^3/p
100 to 600	100 cc/p	1 l/p	10 l/p	100 l/p	1 m^3/p	10 m^3/p
601 to 999	-	1 l/p	10 l/p	100 l/p	1 m^3/p	10 m^3/p
1000 to 1130	1 l/p	10 l/p	100 l/p	1 m	10 m^3/p	100 m^3/p

Dropout

Adjustable between 0 to 10% of setting range. Below selected value, pulse output is cut.

Ambient temperature

+5 to +45℃

Ambient humidity

10 to 90% RH

INSTALLATION

Mounting

Wall mounting, Panel mounting, DIN rail mounting

Installation precautions

For full display of the performance of this product, select the most suitable location for installation in accordance with the following criteria.

Installation environment

- Do not install your electromagnetic flowmeter in a location close to large-current cables, motors, or transformers that may subject it to induction. Installation in such locations may cause machine failure or output error.
- Avoid a location with strong vibrations (100Hz, 2G {19.6m/S²} or over) or a highly corrosive atmosphere. Installation in such locations may break the neck of the detector or cause other machine failures.
- Avoid a location exposed to direct sunlight, wind, or rain Installation in such locations may cause output error.

Fluids measured

Mount your electromagnetic flowmeter at a point where the conditions mentioned below are met with respect to the fluid to be measured. Failure to meet these requirements may cause output errors or output fluctuations.

- A point where the fluid to be measured has the electrical conductivity required for measurement (this depends on the converter used in combination with the meter) and where the distribution of conductivity is considered to be nearly uniform
- A point where the fluid to be measured is considered to be nearly uniform electromagnetically; e.g., if two liquids are mixed together in the upstream pipe, a point where the two liquids are considered to be uniformly mixed.
- If there is a substance that is mixed in, a point where the distribution of the mixture is considered to be nearly uniform.
- Do not use this electromagnetic flowmeter for the following fluids because measurement problems may arise even if their electrical conductivity, temperature, pressure, etc. are within the specifications for this device (refer to the "Standard Specifications" and "Model Number Configuration Table")
- Fluids that have sufficient electrical conductivity at high temperatures but do not have sufficient conductivity at room temperatures (approx. 20℃) (Examples: fatty acid and soap)
- Certain fluids into which a surfactant is mixed (Example: rinses, shampoos, and CWM)
- Insulating adherents (Examples: oil, kaorinite, kaolin, and +calcium stearate)

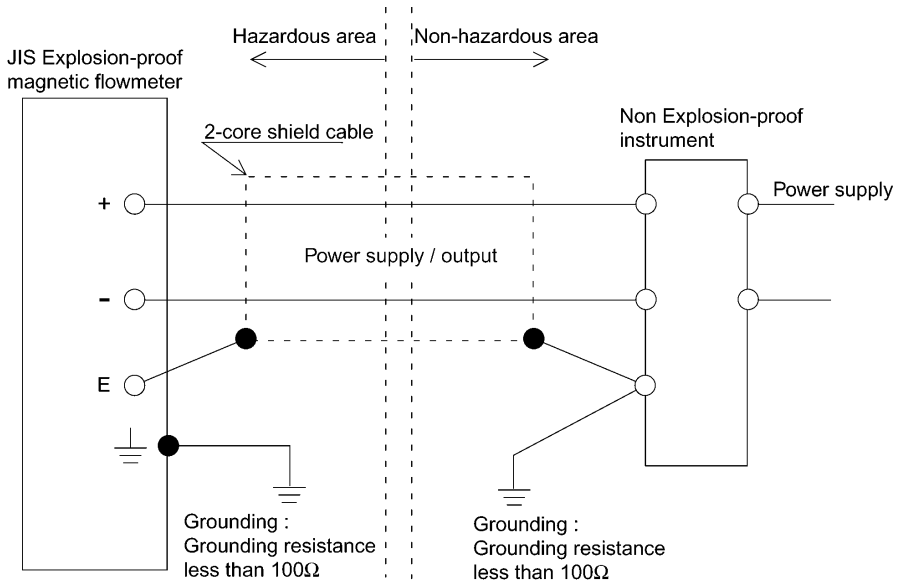


Figure 1. JIS Explosion-proof integral style magnetic flowmeter

⚠ Warning

Explosions could result in death or serious injury.

1. Make sure that the vltage of the New Explosion-proof instrument does not exceed AC250V, 50/60Hz, DC250V.
2. 1) Ambient temperature around magnetic flowmeter should be 50°C maximum.
   2) Process fluid should be 125°C maximum.
   3)Make sure to use Yamatake flame-proof cable gland.
   4)Do not open the cover while circuit alive.
3. Verify that the operating atmosphere of the flowmeter is consistent with the appropriate hazardous locations.

MODEL SELECTION

SMT3000 EX Standard model 25 to 100mm (Integral type)

Basic model No.	SMT35A-	Selections										Options		
		-	I	II	III	IV	V	VI	VII	VIII	IX	-	X	XI	-			

I	Diameter	25mm	025
		40mm	040
		50mm	050
		80mm	080
		100mm	010

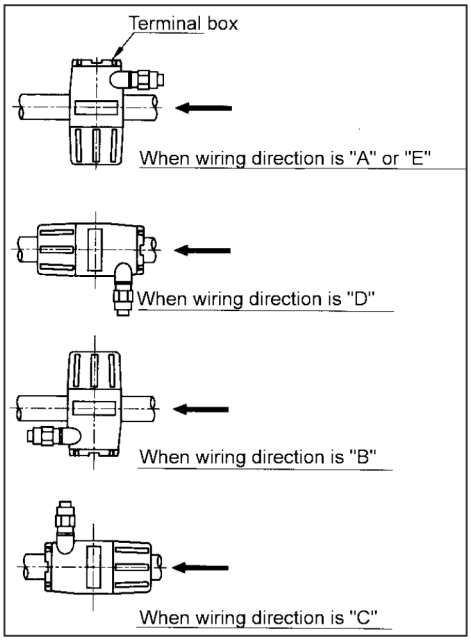
II	Lining	PFA	P
III	Piping connections	Wafer JIS10K	11
		Wafer JIS16/20K	12
		Wafer JIS30K	13
		Wafer ANSI150	21
		Wafer ANSI300	22
		Wafer JPI150	61
		Wafer JPI300	62
		Flange JIS10K	J1
		Flange JIS20K	J2
		Flange ANSI150	A1
		Flange ANSI300	A2
		Flange JPI150	P1
		Flange JPI300	P2
IV	Electrodes	SUS316L	L
		Haistelloy C	C
		Titanium	K
		Zirconium	H
		Tantalum	T
		Nickel	N
		Tungsten carbide	W
		Platinum iridium	P
V	Grounding rings	SUS316	S
		Hastelloy C	C
		Titanium	K
		Zirconium	H
		Tantalum	T
		Platinum	P
VI	Wiring connection	G1/2 internal thread with flame-proof cable gland.	D
VII	Display	With display card	A
VIII	Installation/ Wiring direction * Refer to right Fig.2	Upstream side(Horizontal piping mounting)	A
		Downstream side (Horizontal piping mounting)	B
		Horinzontal piping mounting/right side viewed from upstream	C
		Horizontal piping mounting/left side viewed from upstream	D
		Upstream side(Vertical piping mounting)	E
IX	Calibration	Standard	A
			-
X	Finish	Standard	X
		Corrosion-resistant	2
XI	Bolt/nuts	None	X
		Carbon steel	1
		SUS304	2

Option	X	No option
	A	Calibration certificate
	B	Traceability certicate for detector
	C	Material sheet (only for electrodes and grounding rings)
	E	Water-free treatment
	F	Oil-free treatment
	G	With Gasket for plastic piping
	H	Non SI unit
	K	Attachment of the TAG number to the terminal box for detector

Table of gasket for plastic piping

Diameter (mm)	25	40	50	80
gasket for plastic piping	10	14	19	35

Figure 2. Wiring Direction



SMT3000 EX High powered model 2.5 to 200mm (Integral type)

Basic model No.	**SMT55A-**	Selections									-			-	Options		
		-	I	II	III	IV	V	VI	VII	VIII	IX	-	X	XI	-		

I	Diameter	2.5mm (For Flange type)	002
		5.mm (For Flange type)	005
		10.mm (For Flange type)	010
		15.mm (For Flange type)	015
		25.mm	025
		40.mm	040
		50.mm	050
		80.mm	080
		100.mm	100
		150.mm (For Flange type)	150
		200.mm (For Flange type)	200

Option	X	No option
	A	Calibration certificate
	B	Traceability certicate for detector
	C	Material sheet (only for electrodes and grounding ring
	E	Water-free treatment
	F	Oil-free treatment
	G	With Gasket for plastic piping
	H	Non SI unit
	K	Attachment of the TAG number to the terminal box for detector

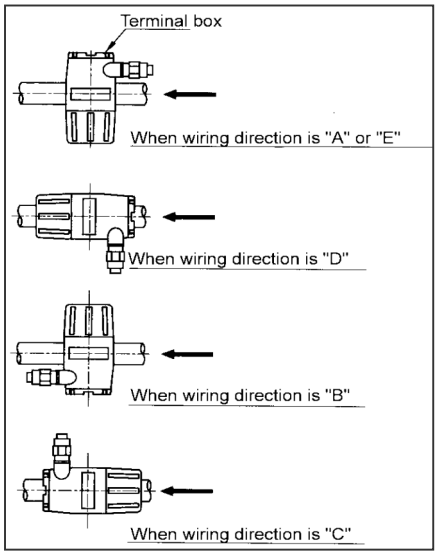
Table of gasket for plastic piping

Diameter (mm)	2.5 to 15	25	40	50	80	100	150	200
gasket for plastic p	10	10	14	19	35	45	80	120

II	Lining	PFA		P
III	Piping connection	Wafer JIS10K		11
		Wafer JIS16/20K		12
		Wafer JIS30K		13
		Wafer ANSI150		21
		Wafer ANSI300		22
		Wafer JPI150		61
		Wafer JPI300		62
		Flange JIS10K		J1
		Flange JIS20K		J2
		Flange JIS10K	For 10mm flange	J4
		Flange JIS20K	For 10mm flange	J5
		Flange ANSI150		A1
		Flange ANSI300		A2
		Flange JPI150		P1
		Flange JPI300		P2
IV	Electrodes	SUS316L		L
		Haistelloy C		C
		Titanium		K
		Zirconium		H
		Tantalum		T
		Nickel		N
		Tungsten carbide (larger than 15mm)		W
		Platinum iridium		P
V	Grounding rings	SUS316		S
		Hastelloy C		C
		Titanium		K
		Zirconium		H
		Tantalum		T
		Platinum		P
VI	Wiring connection	G1/2 internal thread with flame-proof cable gland		D
VII	Display	With display card		A
VIII	Installation/ Wiring direction * Refer to right fig.3	Upstream side(Horizontal piping mounting)		A
		Downstream side (Horizontal piping mounting)		B
		Horinzontal piping mounting/right side viewed from upstream		C
		Horizontal piping mounting/left side viewed from upstream		D
		Upstream side(Vertical piping mounting)		E
IX	Calibration	Standard		A
				-
X	Finish	Standard		X
		Corrosion-resistant		2
XI	Bolt/nuts	None		X
		Carbon steel for wafer type only		1
		SUS304 for wafer type only		2

* Be sure to use dedicated power supply unit SMT210 for high powered models SMT55A

Figure 3. Wiring direction



Dedicated power supply unit for SMT55A

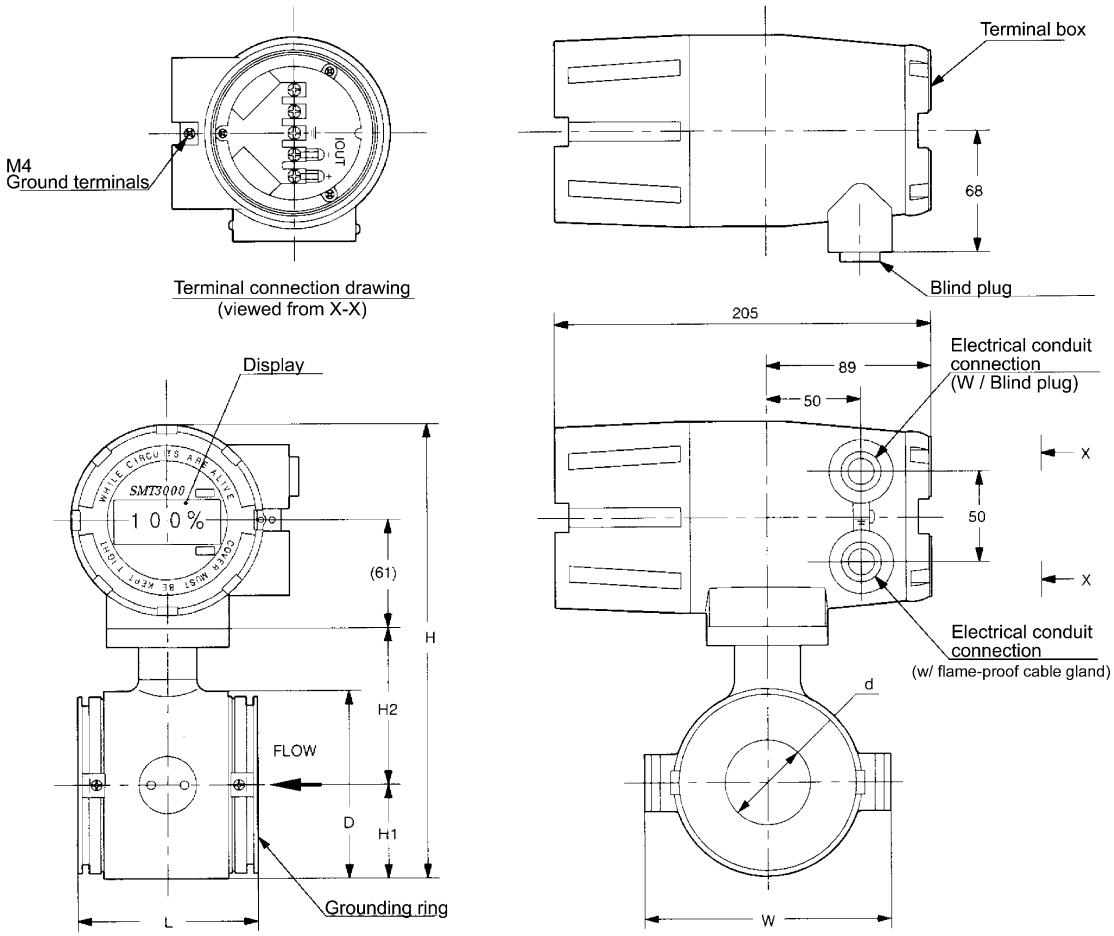
Basic model No.	SMP210-	-	Selections I	II	III	-	Options X

I	Power supply	AC100V 50/60Hz	A			
		AC110V 50/60Hz	C			
		AC120V 50/60Hz	E			
		AC200V 50/60Hz	G			
		AC220V 50/60Hz	I			
		AC240V 50/60Hz	K			
II	Output	4 20mADC With open collector pulse		B		
		1 5VDC With open collector pulse		D		
III	Status output	None			X	
						-
Options	Options	None				X

*For SMT55A, this power unit is essential.

DIMENSIONS

Integral type, Wafer style (SMT35A, SMT55A)



Terminal connection table

Symbol		Description
I out	+	Analog output
	-	
⏚		Ground

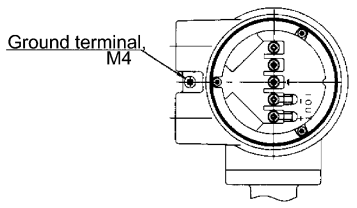
Nominal size		25	40	50	80	100
Face-to-face	L	94	98	104	130	150
Height	H	215.5	234.5	251.5	281.5	315.5
	H1	34	43.5	52	67	79.5
	H2	69	78.5	87	102	123.5
Case width	W	98	117	134	164	189
Real size	d	23	36	47.5	75	94
Case outer diameter	D	68	87	104	134	159
Weight (kg)		4.4	5.1	6.0	7.7	10.9

Integral type, Flange style

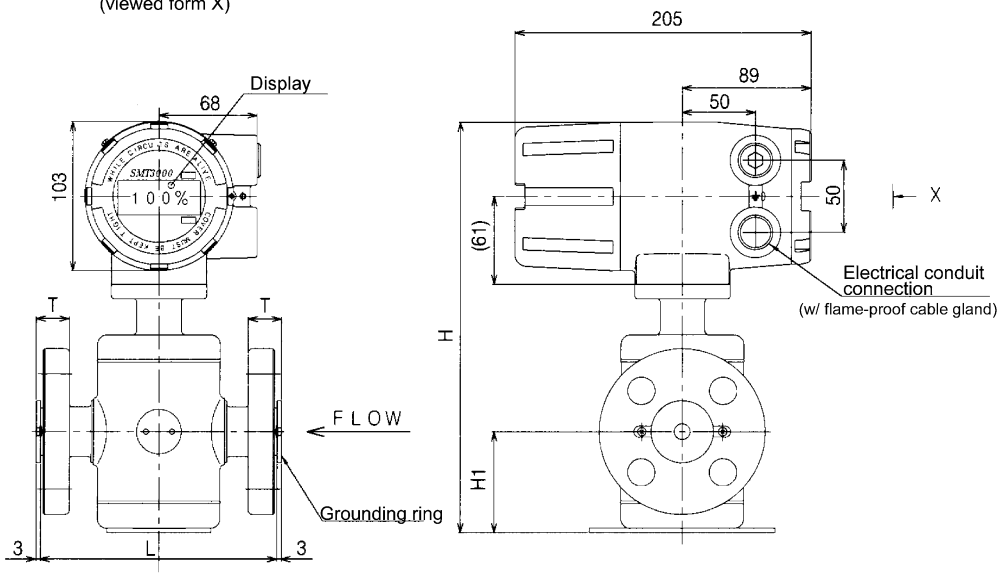
2.5 to 15mm (SMT55A)

Terminal connection table

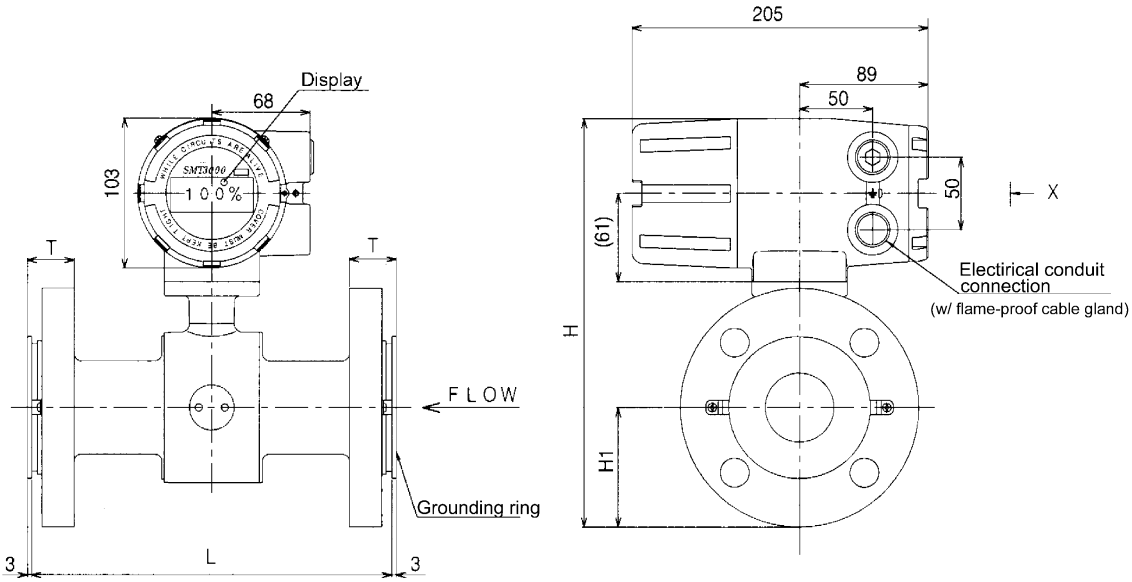
Symbol		Description
I OUT	+	Analog output
	-	
⏚		Ground



Terminal connection drawing
(viewed form X)



25mm (SMT35A, SMT55A)



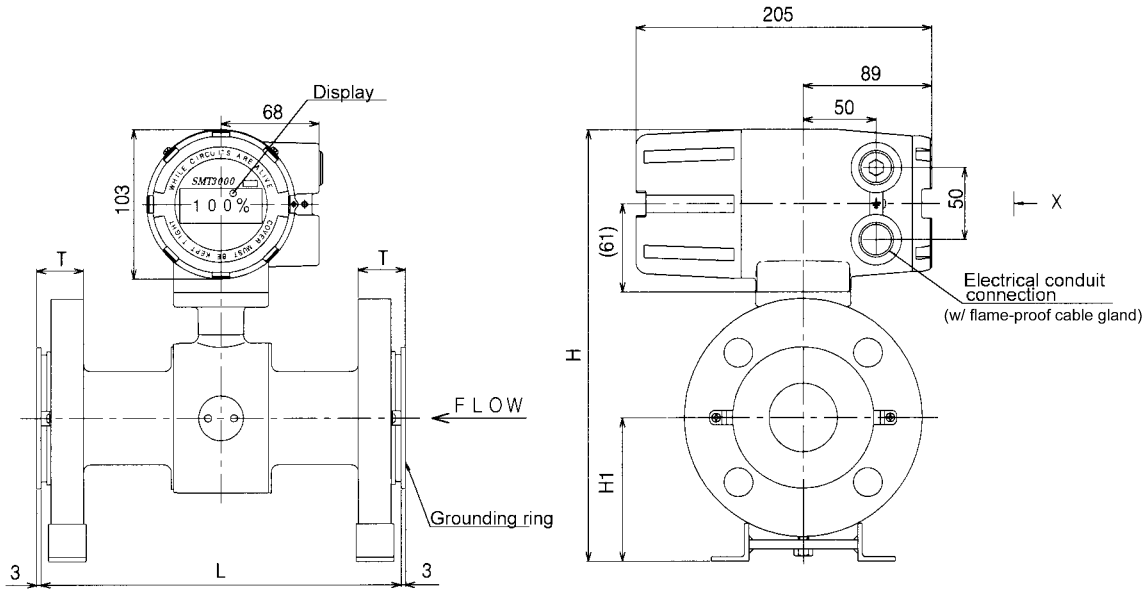
Weight for 10mm flange (kg)

Flange \ Diameter	2.5mm	5mm	10mm
JIS 10K	7.4	7.4	7.4
JIS20K	7.5	7.5	7.5

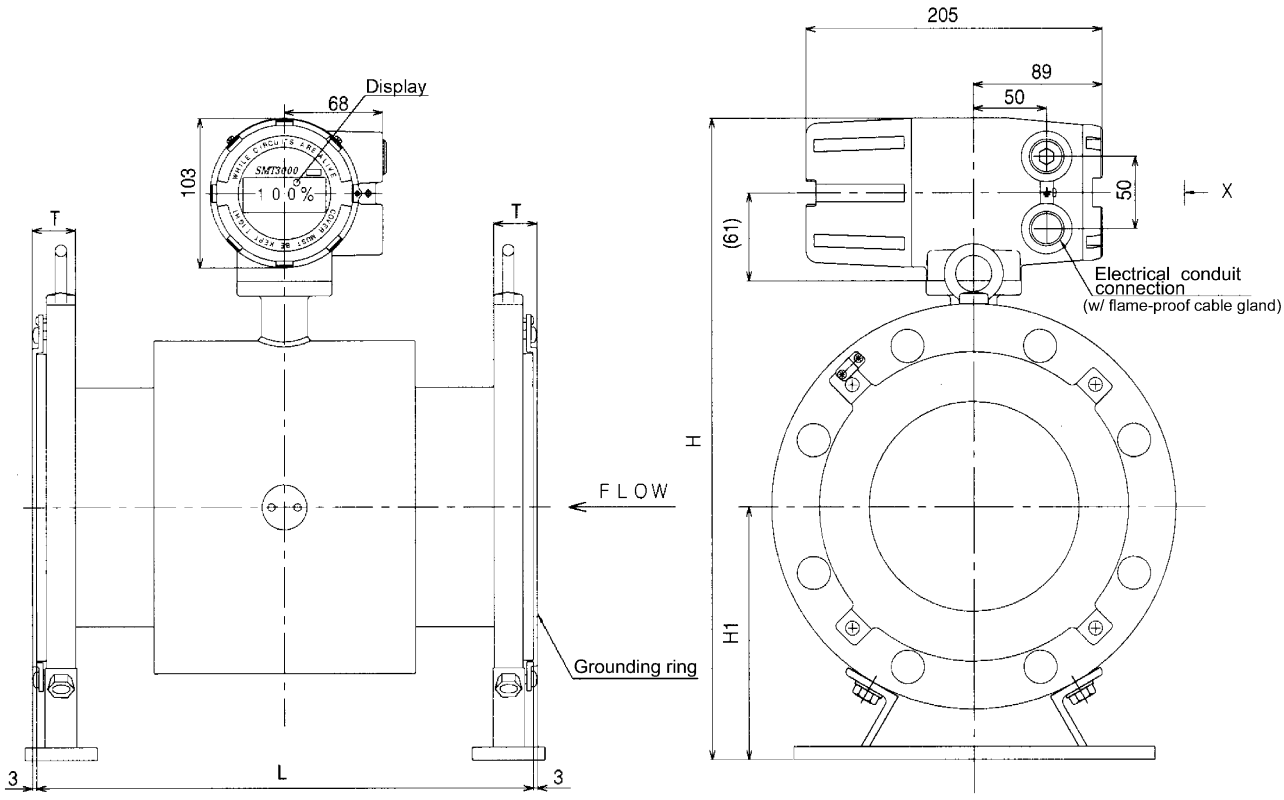
Weight (kg)

Flange \ Diameter	2.5mm	5mm	10mm	15mm	25mm
JIS 10K	7.4	7.4	7.4	7.4	6.9
JIS20K	7.5	7.5	7.5	7.5	7.2
ANSI 150	7.6	7.6	7.6	7.6	6.1
ANSI 300	7.6	7.6	7.6	7.6	7.2
JPI 150	7.6	7.6	7.6	7.6	6.1
JPI 300	7.6	7.6	7.6	7.6	7.2

Integral type, Flange style (SMT35A, SMT55A)
40 to 100mm



150, 200mm (SMT55A)



Weight (kg)

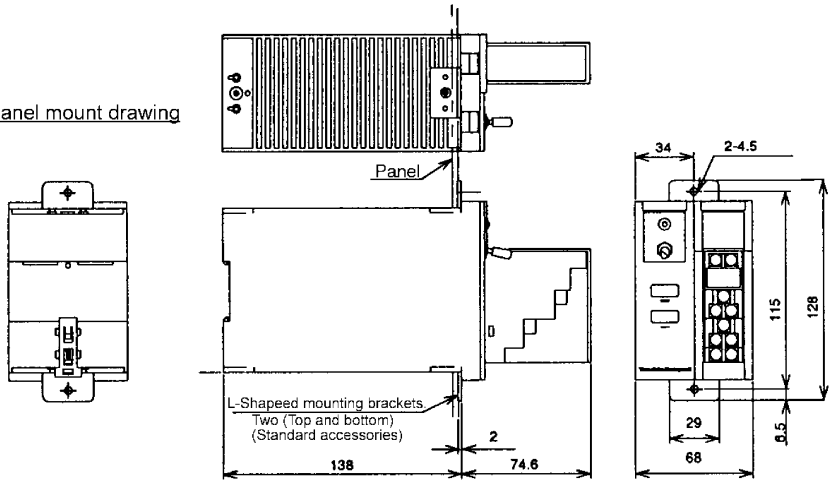
Flange \ Diameter	40mm	50mm	80mm	100mm	150mm	200mm
JIS 10K	8.1	10.1	14.2	20.4	34.2	50.0
JIS20K	8.4	10.2	16.5	23.9	41.5	60.0
ANSI 150	7.6	10.5	17.1	25.3	37.0	62.0
ANSI 300	9.9	12.0	21.1	34.4	56.0	91.0
JPI 150	7.6	10.5	17.1	25.3	37.0	62.0
JPI 300	9.9	12.0	21.1	34.4	56.0	91.0

Integral type, Flange style dimensions

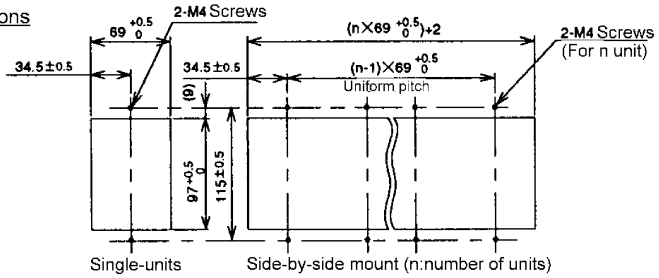
Flange rating	Dime-nsion	Diameter										
		2.5mm	5mm	10mm	15mm	25mm	40mm	50mm	80mm	100mm	150mm	200mm
JIS 10K	L	160	160	160	200	200	200	200	200	250	300	350
	T	19.5	19.5	19.5	19.5	23.5	25.5	25.5	27.5	27.5	30	30
	H	290	290	290	290	245	276	290	325	356	441	486
	H1	70	70	70	70	63	85	90	110	120	175	196
	H2	108	108	108	108	69	79	87	102	124	156	181
JIS 20K	L	160	160	160	200	200	200	200	200	250	300	350
	T	21.5	21.5	21.5	21.5	25.5	27.5	27.5	31.5	33.5	36	38
	H	290	290	290	290	245	276	290	334	365	455	498
	H1	70	70	70	70	63	85	90	119	129	189	208
	H2	108	108	108	108	69	79	87	102	124	156	181
ANSI 150	L	160	160	160	200	200	200	200	200	250	300	350
	T	17.5	17.5	17.5	17.5	23.5	26	27.5	32	32	33.5	36.5
	H	290	290	290	290	236	268	288	328	367	440	494
	H1	70	70	70	70	54	77	88	113	131	174	204
	H2	108	108	108	108	69	79	87	102	124	156	181
ANSI300	L	160	160	160	200	200	200	200	200	250	300	350
	T	20.5	20.5	20.5	20.5	26	29	30.5	36.5	40	45	49.5
	H	290	290	290	290	244	285	296	339	381	463	516
	H1	70	70	70	70	62	94	96	124	145	197	226
	H2	108	108	108	108	69	79	87	102	124	156	181
JPI 150	L	160	160	160	200	200	200	200	200	250	300	350
	T	17.5	17.5	17.5	17.5	23.5	26	27.5	32	32	33.5	36.5
	H	290	290	290	290	236	268	288	328	367	440	494
	H1	70	70	70	70	54	77	88	113	131	174	204
	H2	108	108	108	108	69	79	87	102	124	156	181
JPI 300	L	160	160	160	200	200	200	200	200	250	300	350
	T	20.5	20.5	20.5	20.5	26	29	30.5	36.5	40	45	49.5
	H	290	290	290	290	244	285	296	339	381	463	516
	H1	70	70	70	70	62	94	96	124	145	197	226
	H2	108	108	108	108	69	79	87	102	124	156	181

Dimensions of the dedicated power supply unit (SMP210)

Panel mount drawing



Panel cutout dimensions

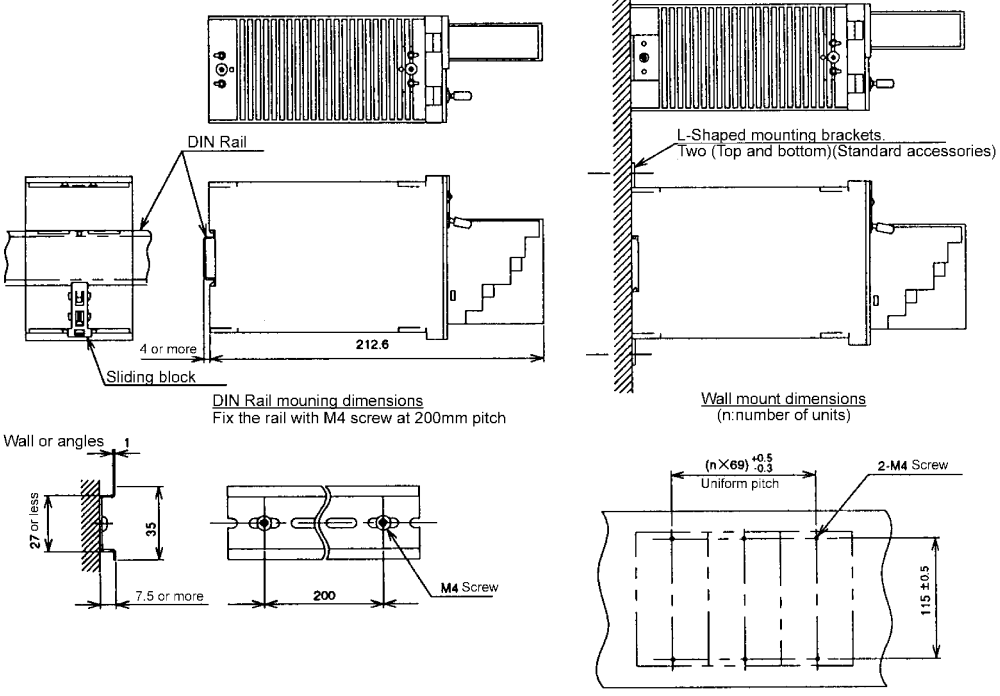


Terminal	Connection
1	Input “+” line
2	Input “-” line
3	—
4	Analog output, “+” line
5	Analog output, “-” line
6	Pulse output, “+” line
7	Pulse output, “-” line
8	Power H
9	GND
10	Power N

1	2
	3
4	5
	6
7	8
9	10

Terminal layout

DIN Rail mount drawing



Combination with attachments

SMT3000 EX

4 –20mA DC or pulse

Multi-panel meter PCM13

- Preset counter function
- Momentary/integrated flow rate display
- Alarm issuing function
- Distributor function
- Isolation output, etc.

4-20mA DC

Universal indicating alarm PCA13

- Alarm output function
- Input/Output scaling function
- Isolation output

4 –20mA DC or pulse

Integrating report printer TPG/TPM

- Automatic printing of daily, monthly, and annual reports
- Calendar and clock function
- Alarm output function
- Resetting function
- Distributor function

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