

PTG series

Pressure Transmitter Bravolight

Model PTG60□

OVERVIEW

The Smart Pressure Transmitter model PTG60□ is a high-performance, highly reliable gauge pressure transmitter. Based on Azbil Corporation's proven Smart Transmitter technologies, the model PTG60□ offers improved performance and reliability with size, weight and cost advantages. An optional, built-in digital indicator allows the pressure transmitter to be used in a wide variety of applications.

FEATURES**Compact and lightweight**

- Approx. 0.9 kg (Screw connection type)

Broad range setting

- Range from -100 kPa to +50 MPa.
- Span from 2.0 kPa to 50 MPa.

Note) Screw connection type. Covered with five ranges.

Remote communication (Optional)

Any range can be set using the SFC.

This further increases range flexibility and keeps inventory down.

Built-in digital indicator (Optional)

The built-in digital indicator option effectively checks output on site.

Type of protection

- Water and dust proof for IEC IP67, NEMA3 and 4X



CE mark

Model PTG60G screw connection

External views of the PTG series

Model PTG60G
(Screw type)



Model PTG60B
(Flush diaphragm type)



Model PTG60F
(Flange type)



Model PTG60S
(Ferrule clamp type)



Model PTG60S
(Ferrule cap nut type)



Model PTG60K
(Ferrule clamp type
with cooling tower)



Model PTG60K
(Ferrule cap nut type
with cooling tower)



Model PTG60T
(Remote seal with ferrule type)



Model PTG60T
(Remote seal with ferrule cap nut type)

COMMON SPECIFICATIONS

Type of protection

JIS C0920 watertight, JIS F8001 class 2 water or equivalent, NEMA 3 and 4X, IEC IP67

Supply voltage and load resistance

Refer to Figure 1.

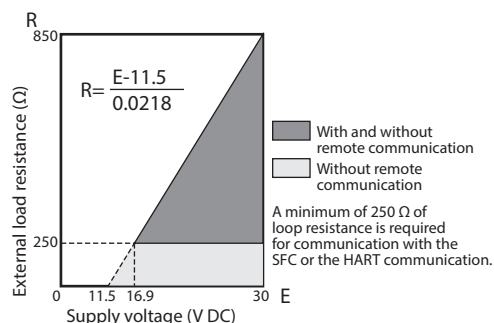


Figure 1. Supply voltage vs. load resistance characteristics

Power supply and voltage effect

0.005% F.S./V

Output / Communication

Analog output (4 to 20 mA DC) two-wire

PED Conformity (2014/68/EU)

The maximum pressures applicable under the Sound Engineering Practice (SEP) section of the Pressure Equipment Directive depend on the type of fluid measured, as shown in the table below.

Measured fluid	Group*	Pressure	Applicable models
Gas	1	200bar (20MPa)	All models except PTG__G-_7
	2	1000bar (100MPa)	All models
Liquid	1	500bar (50MPa)	All models
	2	1000bar (100MPa)	All models

Note) Group1 comprises fluids defines as: explosive, extremely flammable, highly flammable, flammable, very toxic, toxic and oxidizing.

Group2 comprises all other fluids not refer to group1

Any model having a maximum working pressure that is higher than the pressure corresponding to its group does not conform to SEP.

Models PTG__G-_7 conform to PED according to Module A.

Response speed

Approx. 400 ms

Vibration Tolerance

Less than 100 Hz : 2 G

100 to 2000 Hz : 1 G

Zero adjustment

Internal zero adjustment function

CE conformity

- EN61326-1: 2013, Electrical equipment for measurement, control and laboratory use-EMC requirements- Part 1: General requirements
- EN61326-2-3: 2013, Electrical equipment for measurement, control and laboratory use- EMC requirements - Part 2-3: Particular requirements - Test configuration, operational conditions and performance criteria for transducers with integrated or remote signal conditioning
- EN IEC 63000: 2018

Finish

Baked acrylic paint, metallic green (Munsell 5G7/8)

Electrical connection

1/2 NPT internal thread

Mounting

- Direct mounting on a pipe (line mount)
- 2-inch pipe mounting
- Wall mounting

When mounting a PTG transmitter, consider its characteristics against vibration and overall vibration including piping. Use an optional mounting bracket when mounting it onto 2-inch pipe or wall.

Optional specifications

Built-in indicating meter

The digital LCD indicator (optional) displays engineering units and can be set freely between -1999 and 1999 (3.5 digits).

Mounting bracket

Bracket for 2-inch pipe or wall mounting (For thread connection type and ferrule remote sealed type)

Oil free finish

Oil is removed from the wetted parts before shipment.

Oil and water free finish

Oil and water are removed from the wetted parts before shipment.

Electrolytic grinding (For ferrule type only)

The surface of the wetted parts is smoothed by electrolytic grinding.

Passive state finish (For ferrule type only)

The surface of the wetted parts is treated with a passive state finish to form a protective film to increase resistance to corrosion.

Corrosion-resistant finish

Corrosion-proof paint (Baked epoxy paint), fungus-proof finish

Working range of negative pressure

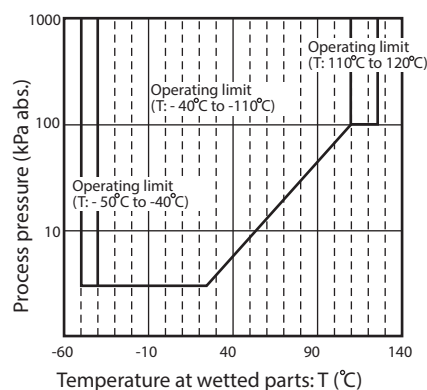


Figure 2. Minimum working pressure for model PTG60G

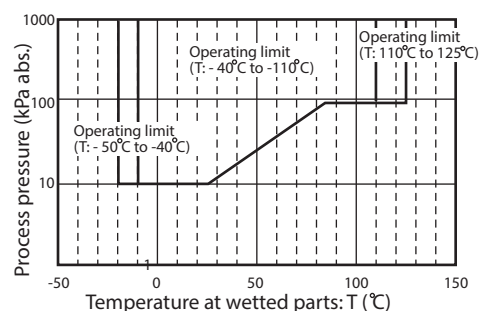


Figure 3. Minimum working pressure for model PTG60S, model PTG60T Minimum working pressure combination of model PTG60F and propylene glycol.

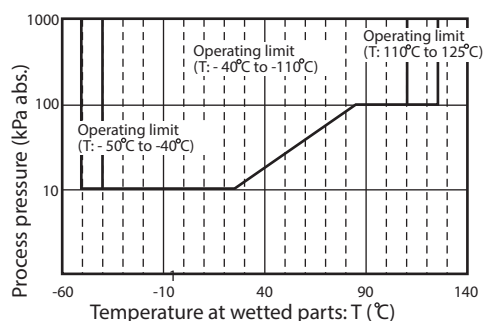


Figure 4. Minimum working pressure for combination of model PTG60B or model PTG60F

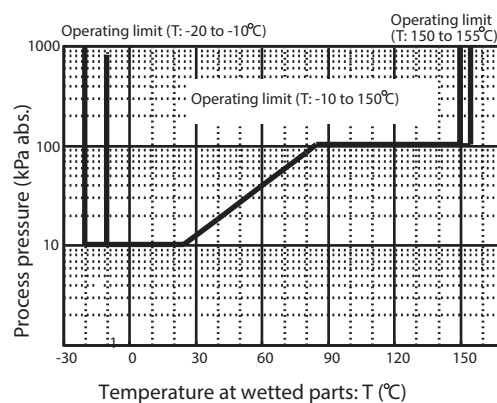


Figure 5. Minimum working pressure for model PTG60K

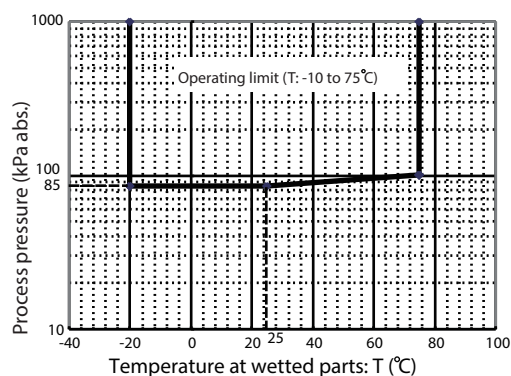
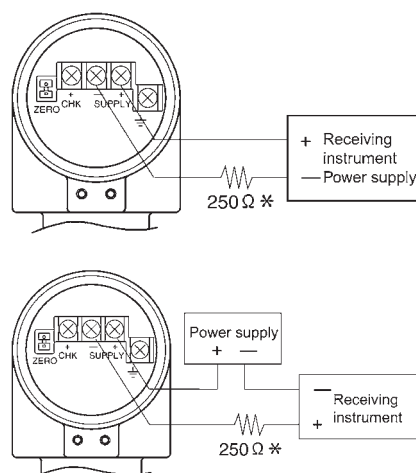


Figure 6. Minimum working pressure for model PTG60B or model PTG60G (Fluorine oil for Oxygen and chlorine models).



Note) *A minimum of 250 Ω of loop resistance is required for communication with the SFC

Index of detailed specifications for process connection types

Process connection	Process connection style	Measurement span		Reference page
Screw type Model PTG60G	G3/8 external thread G1/2 external thread Rc3/8 internal thread Rc1/2 internal thread 1/2NPT internal thread M20 × 1.5 external thread	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa 1 to 10 MPa	{0.021 to 1.019 kgf/cm ² } {0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² } {10.20 to 101.9 kgf/cm ² }	6 to 11
	Rc1/4 internal thread G1/2 external thread 1/4NPT internal thread M20 × 1.5 external thread	5 to 50 MPa	{51.0 to 509 kgf/cm ² }	
Flush diaphragm type Model PTG60B	G2-inch external thread	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa 1 to 10 MPa	{0.021 to 1.019 kgf/cm ² } {0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² } {10.20 to 101.9 kgf/cm ² }	12 to 14
	G1/2-inch external thread	0.2 to 2 MPa 1 to 10 MPa	{2.04 to 20.3 kgf/cm ² } {10.20 to 101.9 kgf/cm ² }	
Flange type Model PTG60F	JIS 10K 50 mm JIS 30K 50 mm JIS 10K 15 mm JIS 30K 15 mm	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa 1 to 10 MPa	{0.021 to 1.019 kgf/cm ² } {0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² } {10.20 to 101.9 kgf/cm ² }	15 to 18
Ferrule type (Direct mount) Model PTG60S	IDF 2S clamp IDF 1-1/2S clamp IDF 1S clamp	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm ² } {0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² }	19 to 21
	IDF 2S cap nut IDF 1-1/2S cap nut	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm ² } {0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² }	22 to 24
Ferrule type with cooling tower Model PTG60K	IDF 2S clamp IDF 1-1/2S clamp	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm ² } {0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² }	25 to 27
	IDF 1S clamp	40 to 400 kPa 0.2 to 2 MPa	{0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² }	
	IDF 2S cap nut IDF 1-1/2 inch cap nut	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm ² } {0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² }	28 to 30
Remote seal with ferrule type (Capillary 1, 3, 5 m) Model PTG60T	IDF 2S clamp	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm ² } {0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² }	31 to 33
	IDF 1-1/2S clamp	40 to 400 kPa 0.2 to 2 MPa	{0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² }	
	IDF 2S cap nut	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm ² } {0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² }	34 to 36
	IDF 1-1/2S cap nut	40 to 400 kPa 0.2 to 2 MPa	{0.408 to 4.07 kgf/cm ² } {2.04 to 20.3 kgf/cm ² }	

Screw type



Measuring span / Setting range / Max. working pressure

Model no.	Measuring span	Setting range	Max. working pressure	Process connection
PTG60G - _3	2.0 to 100 kPa	-100 to +100 kPa	200 kPa	Rc3/8 internal thread,
PTG60G - _4	40 to 400 kPa	-100 to +400 kPa	800 kPa	Rc1/2 internal thread,
PTG60G - _5	0.2 to 2 MPa	-0.1 to +2 MPa	4 MPa	G3/8 external thread,
PTG60G - _6	1 to 10 MPa	-0.1 to +10MPa	20 MPa	G1/2 external thread,
PTG60G - _7	5 to 50 MPa	-0.1 to +50 MPa	75 MPa*	1/2NPT internal thread,
				Rc1/4 internal thread G1/2 external thread

Note) * 62.5 MPa for explosion-proof type

Accuracy / Temperature effect

Model PTG60G- _3

Accuracy *1, *2	$\pm 0.5\%$ F.S. (100 kPa > X > 20 kPa) $\pm (0.5 \times 20 / X)\%$ F.S. (20 kPa > X > 2 kPa)
Zero temperature effect per 30 °C *1	$\pm (0.5 \times 40 / X + 0.35)\%$

Model PTG60G- _4

Accuracy *1, *2	$\pm 0.5\%$ F.S. (400 kPa > X > 80 kPa) $\pm (0.5 \times 80 / X)\%$ F.S. (80 kPa > X > 40 kPa)
Zero temperature effect per 30 °C *1	$\pm (0.4 \times 80 / X + 0.35)\%$

Model PTG60G- _5

Accuracy *1, *2	$\pm 0.5\%$ F.S. (2.0 MPa > X > 0.4 MPa) $\pm (0.5 \times 0.4 / X)\%$ F.S. (0.4 MPa > X > 0.2 MPa)
Zero temperature effect per 30 °C *1	$\pm (0.4 \times 0.4 / X + 0.35)\%$

Model PTG60G- _6

Accuracy *1, *2	$\pm 0.5\%$ F.S. (10 MPa > X > 2.0 MPa) $\pm (0.5 \times 2.0 / X)\%$ F.S. (2.0 MPa > X > 5.0 MPa)
Zero temperature effect per 30 °C *1	$\pm (0.4 \times 2.0 / X + 0.35)\%$

Model PTG60G- _7

Accuracy *1, *2	$\pm 0.5\%$ F.S. (50 MPa > X > 10 MPa) $\pm (0.5 \times 10.0 / X)\%$ F.S. (10 MPa > X > 5.0 MPa)
Zero temperature effect per 30 °C *1	$\pm (0.4 \times 10.0 / X + 0.35)\%$

Note) *1. Within a range of URV ≥ 0 and LRV ≥ 0

*2. Negative pressure accuracy

Accuracy, which is greater value of either $\pm 3\%$ F.S. or upper calculated accuracy.

Ambient temperature limits

Normal operating range

-25 to +70°C

Transportation and storage temperature

-40 to +70°C

Temperature range of wetted parts

-40 to +110°C

Ambient humidity limits

5 to 100% RH

Materials

Fill fluid

Silicone oil for general purpose models

Fluorine oil for oxygen and chlorine models

Wetted parts

Diaphragm

SUS316L

Others

SUS316

Case

Aluminum alloy

Weight

Approx. 0.9 kg

For other specification, please refer to COMMON SPECIFICATIONS.

MODEL SELECTION

Smart Pressure Transmitter model PTG60G

Process connection: Screw type

Measuring span: 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa, 1 to 10 MPa, 5 to 50 MPa

Model number structure: Basic model number - selection - Option1 - Option2

Basic model number		Selection				Option1	Option2
PTG60G		-				-	-
Product description	Gauge pressure transmitter: Screw connection type	PTG60G					
		-					
Type of protection	Water and dust proof: IEC IP67 Electrical conduit: G1/2	G					
Measuring span	2.0 to 100 kPa (0.021 to 1.019 kgf/cm ²)	3					
	40 to 400 kPa (0.408 to 4.07 kgf/cm ²)	4					
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm ²)	5					
	1 to 10 MPa (10.20 to 101.9 kgf/cm ²)	6					
	5 to 50 MPa (51.0 to 509 kgf/cm ²)	7					
Material: Diaphragm / wetted parts other than diaphragm / fill fluid	SUS316L / SUS316 / Silicone oil	B1					
	SUS316L / SUS316 / Fluorine oil	B2					
Process connection	G1/2 external thread	G4					
	G3/8 external thread (Not applicable for measuring span code "7")	G3					
	Rc1/4 internal thread (Applicable only for measuring span code "7")	C2					
	Rc1/2 internal thread (Not applicable for measuring span code "7")	C4					
	Rc3/8 internal thread (Not applicable for measuring span code "7")	C3					
	1/4NPT internal thread (Applicable only for measuring span code "7")	N2					
	1/2NPT internal thread (Not applicable for measuring span code "7")	N4					
Option 1						-	
No option							X
Built-in digital indicator							M
Heavy duty corrosion-proof coating							B
Remote communication function							C
Wetted parts finish	Oil free finish					G	
	Water and oil free finish					H	
Option2							-
No option							X
Test report							1
Material certificate							2
Documents conforming to Japanese high pressure gas control law							3
Over-pressure leak test							4
Strength calculation sheet (JIS)							5
Traceability certificate							6
Mounting bracket							H
Certificate of oil free finish							J
Certificate of oil free and No water finish							P
Documents conforming to Japanese high pressure gas control law and thickness test report							Y

DIMENSIONS

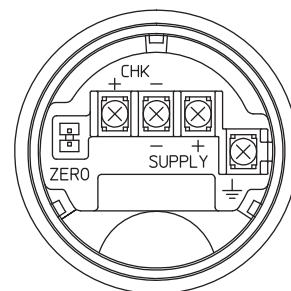
[Unit: mm]

Materials of Construction

KEY No.	Description	Materials
1	Case	Aluminum Alloy
2	Body	SUS 316 (Diaphragm SUS 316L)

Table1 Terminal

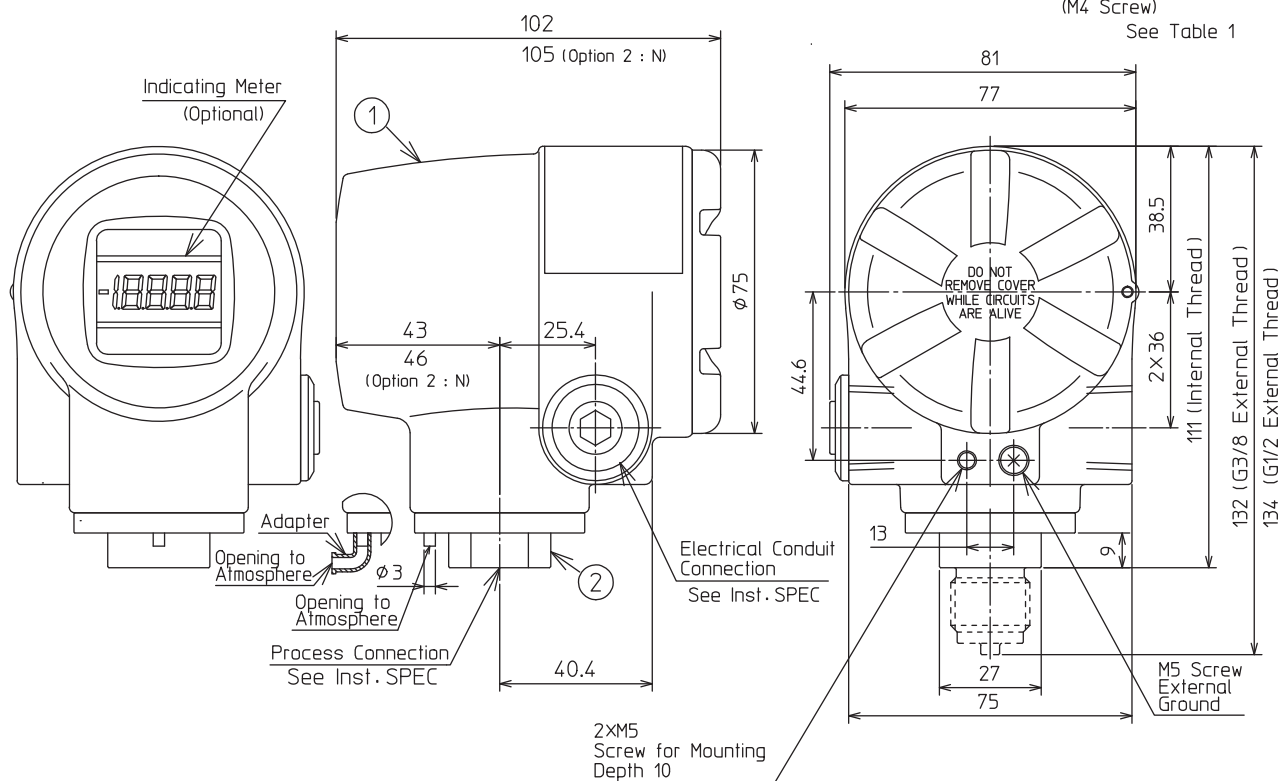
Symbol	Terminal
SUPPLY +, SUPPLY -	Power Supply / Output Signal
CHK+, CHK-	Check Meter
\perp	Ground
ZERO	Zero Adjustment



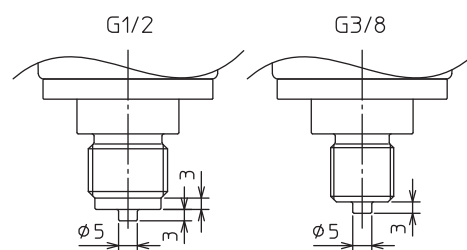
Terminal Connection

(M4 Screw)

See Table 1



External Thread Shape

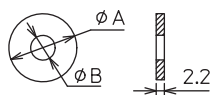


Note 1. See drawing no. ED-551053-00 for dimensions including elbow.

2. See drawing no. ED-551052-00 for dimensions including mounting bracket.

3. A ring-shaped gasket as in below drawing is included for external thread connections.

Material: PTFE



Thread	A	B
G1/2	18	6.5
G3/8	14	5.8

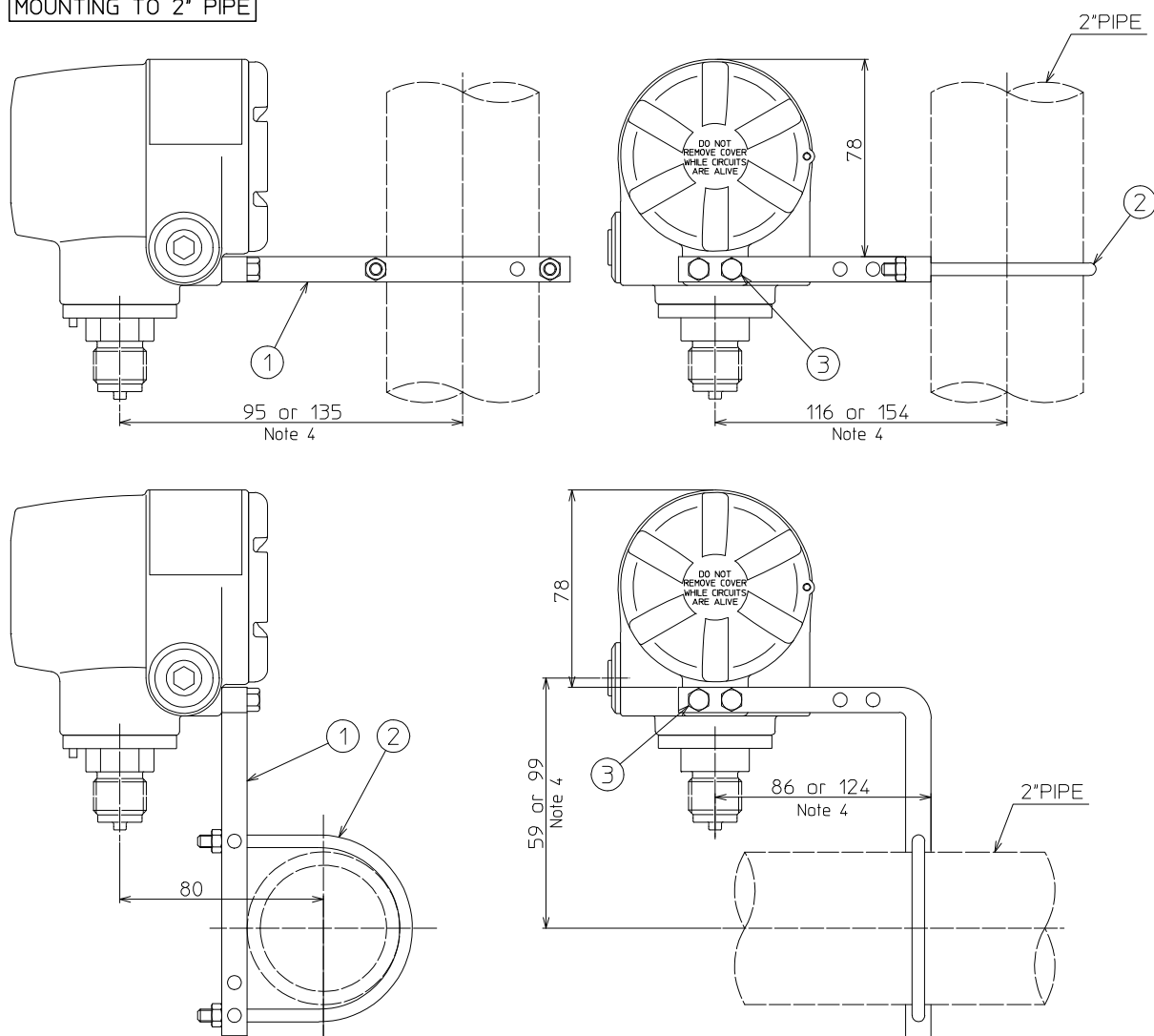
Process Connection

G1/2, G3/8 External Thread

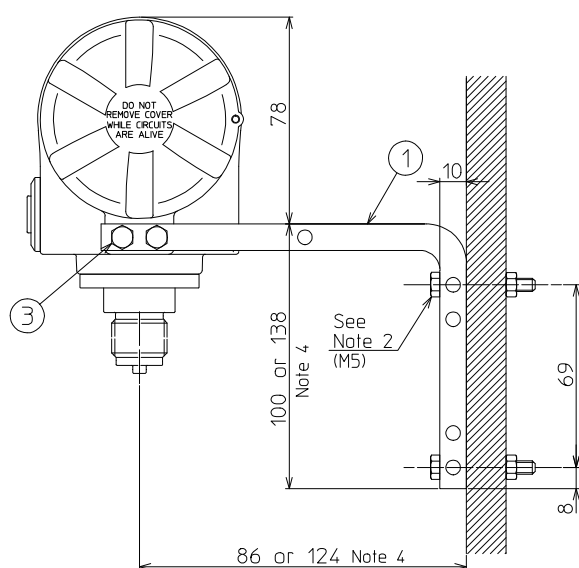
Rc1/2, Rc3/8, Rc1/4 Internal Thread

1/2NPT, 1/4NPT Internal Thread

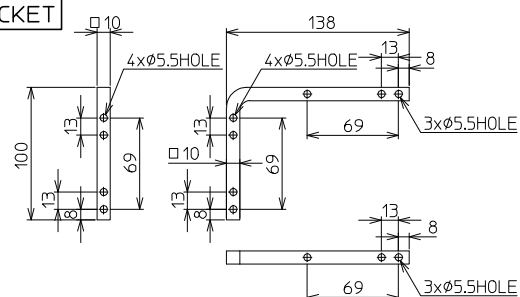
MOUNTING TO 2" PIPE



MOUNTING TO WALL



DIMENSION OF BRACKET



MATERIALS OF CONSTRUCTION

KEY No.	DESCRIPTION	MATERIALS
1	MOUNTING BRACKET	SUS 304
2	U-BOLT/NUT	SUS 304
3	BOLT	SUS XM7

NOTES

- 1) Drawing shows dimensions when mounting bracket is used.
- 2) Bolts for wall mounting are not included.
Recommended thread size: M5
- 3) This drawing shows several mounting examples using the bracket.
- 4) This dimension depends on which side of the bracket, short or long, is connected to the pipe or wall.

Flush diaphragm type

(G2 inch external, G1/2 inch external / flush diaphragm)

**Measuring span / Setting range / Max. working pressure**

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60B - _3	2.0 to 100 kPa	-100 to +100 kPa	200kPa	G2 external thread
PTG60B - _4	40 to 400 kPa	-100 to +400 kPa	800kPa	
PTG60B - _5	0.2 to 2 MPa	-0.1 to +2 MPa	4MPa	G2 external thread G1/2 external thread
PTG60B - _6	1 to 10 MPa	-0.1 to +10 MPa	20MPa	

Accuracy / Temperature effect**Model PTG60B- _3**

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($100 \text{ kPa} \geq X \geq 20 \text{ kPa}$) $\pm (0.5 \times 20 / X)\%$ F.S. ($20 \text{ kPa} \geq X \geq 2.0 \text{ kPa}$)	
Zero temperature effect per 30 °C *1	G2 external thread	$\pm (4.7 \times 40 / X + 0.35)\%$

Model PTG60B- _4

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($400 \text{ kPa} \geq X \geq 80 \text{ kPa}$) $\pm (0.5 \times 80 / X)\%$ F.S. ($80 \text{ kPa} \geq X \geq 40 \text{ kPa}$)	
Zero temperature effect per 30 °C *1	G2 external thread	$\pm (2.5 \times 80 / X + 0.35)\%$

Model PTG60B- _5

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($2 \text{ MPa} \geq X \geq 0.4 \text{ MPa}$) $\pm (0.5 \times 0.4 / X)\%$ F.S. ($0.4 \text{ MPa} \geq X \geq 0.2 \text{ MPa}$)	
Zero temperature effect per 30 °C *1	G2 external thread	$\pm (0.82 \times 0.4 / X + 0.35)\%$
	G1/2 external thread	$\pm (10.8 \times 0.4 / X + 0.35)\%$

Model PTG60B- _6

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($10.0 \text{ MPa} \geq X \geq 2.0 \text{ MPa}$) $\pm (0.5 \times 2.0 / X)\%$ F.S. ($2.0 \text{ MPa} \geq X \geq 1.0 \text{ MPa}$)	
Zero temperature effect per 30 °C *1	G2 external thread	$\pm (0.49 \times 2.0 / X + 0.35)\%$
	G1/2 external thread	$\pm (2.48 \times 2.0 / X + 0.35)\%$

Note) *1. Within a range of URV ≥ 0 and LRV ≥ 0

*2. Negative pressure accuracy
Accuracy, which is greater value of either $\pm 3\%$ F.S. or upper calculated accuracy.

Ambient temperature limits**Normal operating ranges**

Fill fluid	G2 external thread	G1/2 external thread
Silicone oil	-10 to +50 °C	-10 to +50 °C
Propylene glycol	-10 to +50 °C	-10 to +50 °C

Transportation and storage temperatures

Fill fluid	G2 external thread	G1/2 external thread
Silicone oil	-20 to +60 °C	-20 to +60 °C
Propylene glycol	-20 to +60 °C	-20 to +60 °C

Temperature ranges of wetted parts

Fill fluid	G2 external thread	G1/2 external thread
Silicone oil	-10 to +85 °C	-10 to +85 °C
Propylene glycol	-10 to +85 °C	-10 to +85 °C

Ambient humidity limits

5 to 100% RH

Materials**Fill fluid**

- Silicone oil
- Propylene glycol

Wetted parts**Diaphragm**

SUS316L

Others

SUS316

Case

Aluminum alloy

Weight

- G2 inch external thread: Approx. 2.5kg
- G1/2 inch external thread: Approx. 1.5kg

Process connection

- G2 inch external thread
- G1/2 inch external thread

MODEL SELECTION

Smart pressure transmitter model PTG60B

Process connection: Flush diaphragm type (G2 inch external, G1/2 inch external / flush diaphragm)

Measuring span: 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa, 1 to 10 MPa

Model number structure: Basic model number - Selection - Option 1 - Option 2

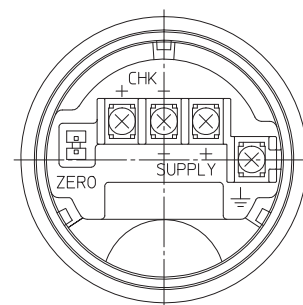
Basic model number			Selection				Option1		Option2	
			PTG60B	-					-	
Product description			Gauge pressure transmitter: Screw connection type (flush)	PTG60B						
				-						
Type of protection	Water and dust proof: IEC IP67 Electrical conduit: G1/2				G					
Measuring span	2.0 to 100 kPa (0.021 to 1.019 kgf/cm ²) (Not applicable for process connection G1/2)					3				
	40 to 400 kPa (0.408 to 4.07 kgf/cm ²) (Not applicable for process connection G1/2)					4				
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm ²)					5				
	1 to 10 MPa (10.20 to 101.9 kgf/cm ²)					6				
Material: Diaphragm / wetted parts other than diaphragm / fill fluid	SUS316L / SUS316L / Silicone oil						C1			
	SUS316L / SUS316L / Propylene glycol						CB			
Process connection	G2 external thread						AGF			
	G1/2 external thread						AG4			
Option 1								-		
No option									X	
Built-in digital indicator									M	
Heavy duty corrosion-proof coating									B	
Remote communication function									C	
Wetted parts finish	Oil free finish							G		
	Water and oil free finish							H		
Option2									-	
No option										X
Test report										1
Material certificate										2
Documents conforming to Japanese high pressure gas control law										3
Over-pressure leak test										4
Strength calculation sheet (JIS)										5
Traceability certificate										6
Mounting bracket										H
Certificate of oil free finish										J
Certificate of oil free and No water finish										P

DIMENSIONS

[Unit: mm]

Materials of construction

KEY No.	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316 (Diaphragm SUS 316L)
3	Wetted Part	SUS 316L



Terminal Connection
(M4 Screw) See Table 2

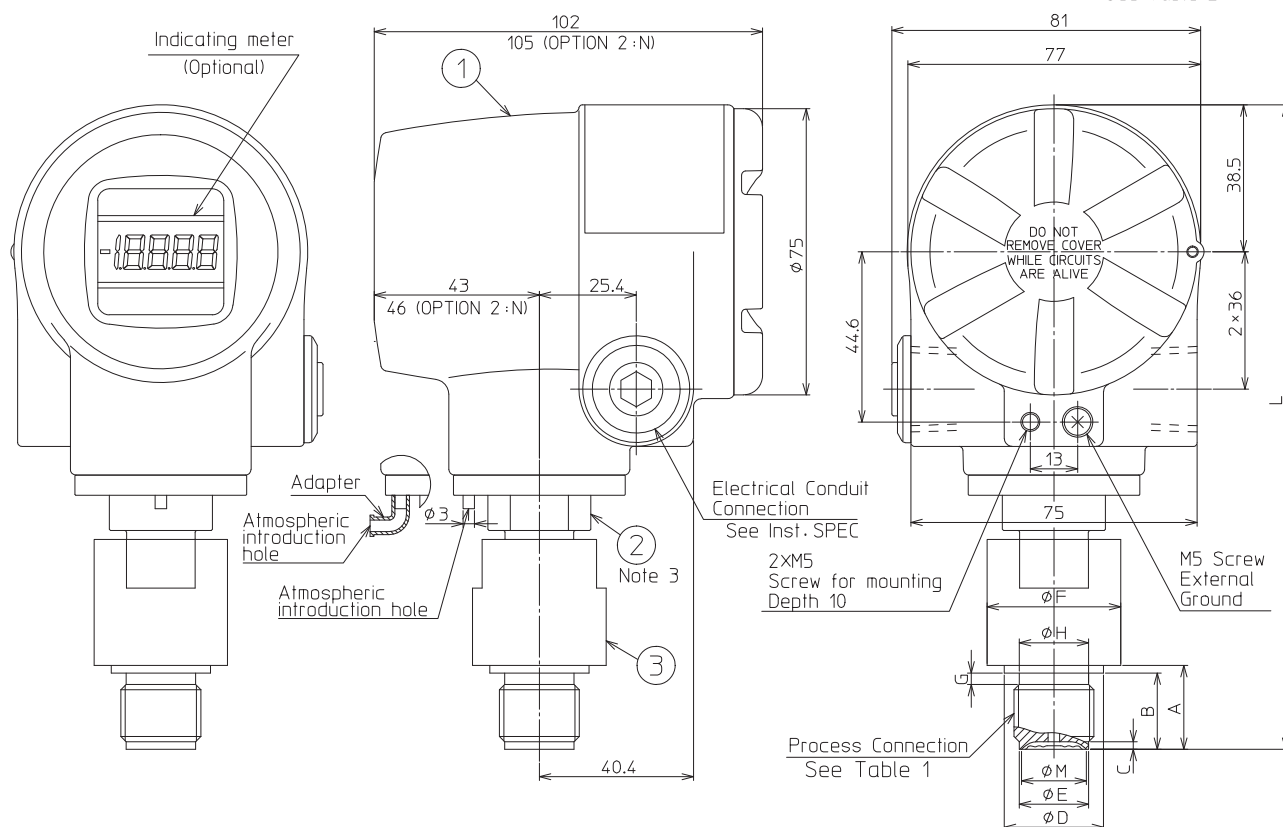


Table1(See Inst. spec.)

Code No.			Thread Type of Process Connection	A	B	ØD	C	ØE	ØF	G	ØH	ØM	L
Fitting	Thread Type	Thread Size	(G)										
A	G	4	G 1/2 External	22	20	26	2	18.2	35	2.5	17.8	17	Approx. 172
		F	G 2 External	30	—	—	—	68	4.4	56	43	—	Approx. 180

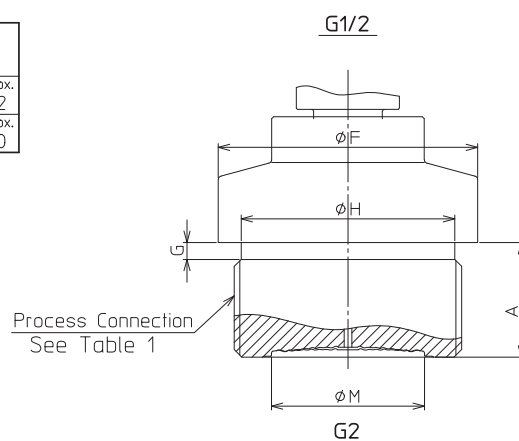
Table2 Terminal

Symbol	Terminal
SUPPLY + SUPPLY -	Power supply and output signal
CHK+·CHK-	Check meter
⏏	Ground
ZERO	Zero Adjustment

Note 1. See drawing no. ED-551053-00 for dimensions including elbow.

2. See drawing no. ED-551052-00 for dimensions including mounting bracket.

3. Do not loosen. Loosening will lead to fill-fluid leakage.



Flange type

(1/2 inch, 2 inches)



Measuring Span / Setting Range / Max. Working Pressure

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60F - _3	2.0 to 100 kPa	-100 to +100 kPa	200 kPa	2 inches (50 mm), 1/2 inch (15 mm)
PTG60F - _4	40 to 400 kPa	-100 to + 400 kPa	800 kPa	
PTG60F - _5	0.2 to 2 MPa	-0.1 to +2 MPa	4 MPa or flange rating	
PTG60F - _6	1 to 10 MPa	-0.1 to +10 MPa	20 MPa or flange rating	

Accuracy / Temperature effect

Model PTG60F- _3

Accuracy *1, *2	$\pm 0.5\%$ F.S. (100 kPa $\geq X \geq 20$ kPa) $\pm (0.5 \times 20 / X)\%$ F.S. (20 kPa $> X > 2$ kPa)	
Zero temperature effect per 30 °C *1	2 inches (50 mm)	$\pm (4.5 \times 40 / X + 0.35)\%$
	1/2 inch (15 mm)	$\pm (10.0 \times 40 / X + 0.35)\%$

Model PTG60F- _4

Accuracy *1, *2	$\pm 0.5\%$ F.S. (400 kPa $\geq X \geq 80$ kPa) $\pm (0.5 \times 80 / X)\%$ F.S. (80 kPa $\geq X \geq 40$ kPa)	
Zero temperature effect per 30 °C *1	2 inches (50 mm)	$\pm (2.4 \times 80 / X + 0.35)\%$
	1/2 inch (15 mm)	$\pm (7.1 \times 80 / X + 0.35)\%$

Model PTG60F- _5

Accuracy *1, *2	$\pm 0.5\%$ F.S. (2 MPa $\geq X \geq 0.4$ MPa) $\pm (0.5 \times 0.4 / X)\%$ F.S. (0.4 MPa $\geq X \geq 0.2$ MPa)	
Zero temperature effect per 30 °C *1	2 inches (50 mm)	$\pm (0.8 \times 0.4 / X + 0.35)\%$
	1/2 inch (15 mm)	$\pm (1.4 \times 0.4 / X + 0.35)\%$

Model PTG60F- _6

Accuracy *1, *2	$\pm 0.5\%$ F.S. (10.0 MPa $> X > 2.0$ MPa)	
	$\pm (0.5 \times 2.0 / X)\%$ F.S. (2.0 MPa $> X > 1.0$ MPa)	
Zero temperature effect per 30 °C *1	2 inches (50 mm)	$\pm (0.5 \times 2.0 / X + 0.35)\%$
	1/2 inch (15 mm)	$\pm (0.5 \times 2.0 / X + 0.35)\%$

Note) *1. Within a range of URV ≥ 0 and LRV ≥ 0

*2. Negative pressure accuracy

Accuracy, which is greater value of either $\pm 3\%$ F.S. or upper calculated accuracy.

Ambient temperature limits

Normal operating range

Silicone oil -25 to +70 °C

Propylene glycol -10 to +70 °C

Transportation and storage temperature

Silicone oil -30 to +80 °C

Propylene glycol -30 to +80 °C

Temperature ranges of wetted parts

Silicone oil -40 to +110 °C

Propylene glycol -10 to +110 °C

150 °C for 30 minutes during steam cleaning.

Ambient humidity limits

5 to 100% RH

Materials

Fill fluid

- Silicone oil
- Propylene glycol

Wetted parts

Diaphragm

SUS316L

Others

SUS316

Flange parts

SUS304

Case

Aluminum alloy

Weight

JIS10K 50A : Approx. 4.2 kg

JIS10K 15A : Approx. 2 kg

Process connection

- JIS10K 15 mm, 50 mm
- JIS30K 15 mm, 50 mm

MODEL SELECTION

Smart pressure transmitter model PTG60F

Process connection: Flange type

Measuring span: 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa, 1 to 10 MPa

Model number structure: Basic model number - Selection - Option1 - Option2

Basic model number		Selection							Option1	Option2
PTG60F		-							-	
Product description	Gauge pressure transmitter: Flange mount type	PTG60F								
		-								
Type of protection	Water and dust proof: IEC IP67 Electrical conduit: G1/2		G							
Measuring span	2.0 to 100 kPa (0.021 to 1.019 kgf/cm ²)		3							
	40 to 400 kPa (0.408 to 4.07 kgf/cm ²)		4							
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm ²)		5							
	1 to 10 MPa (10.20 to 101.9 kgf/cm ²)		6							
Material Diaphragm / wetted parts other than diaphragm / fill fluid	SUS316L / SUS316L / Silicone oil		C1							
	SUS316L / SUS316L / Propylene glycol		CB							
Flange standard / rating	JIS 10K			A						
	JIS 30K *1			D						
Flange diameter	2 inches / 50 mm		3							
	1 inch / 25 mm *2		5							
	1/2 inch / 15 mm		7							
Flange material	SUS304			S						
Flange extension	None			X						
Option 1									-	
No option									X	
Built-in digital indicator									M	
Heavy duty corrosion-proof coating									B	
Remote communication function									C	
Wetted parts finish	Oil free finish			G						
	Water and oil free finish			H						
Option2									-	
No option									X	
Test report									1	
Material certificate									2	
Documents conforming to Japanese high pressure gas control law									3	
Over-pressure leak test									4	
Strength calculation sheet (JIS)									5	
Traceability certificate									6	
Mounting bracket									H	
Certificate of oil free finish									J	
Certificate of oil free and No water finish									P	

Note) *1. Flange rating JIS20K cannot be selected with flange size 2 inches / 50 mm.

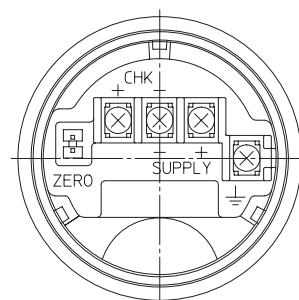
*2. Flange size 1 inch / 25 mm is applicable only with flange rating JIS 20K

DIMENSIONS

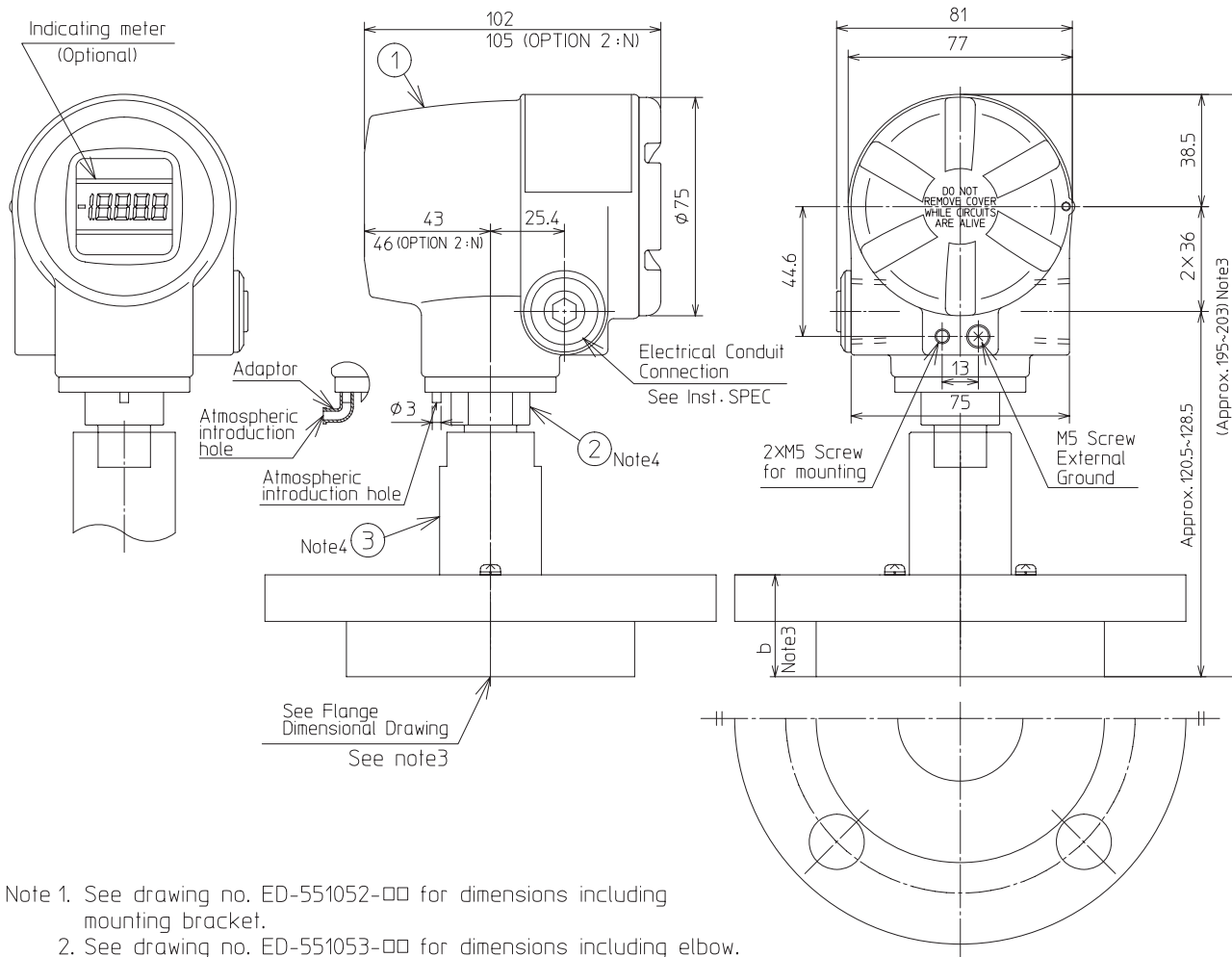
[Unit: mm]

Materials of construction

KEY No.	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316
3	Wetted Part	See Spec. Code.



Terminal Connections
(M4 Screw) See Table 1

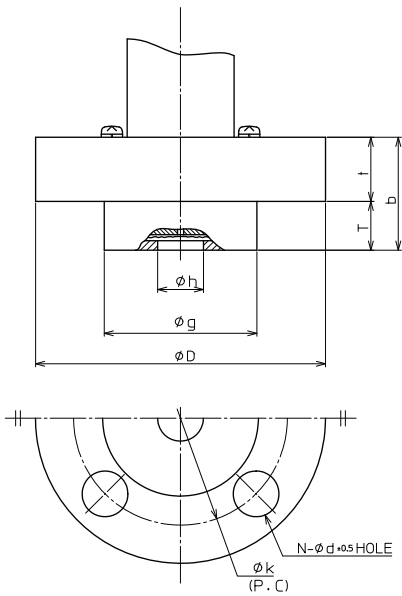


- Note 1. See drawing no. ED-551052-□□ for dimensions including mounting bracket.
 Note 2. See drawing no. ED-551053-□□ for dimensions including elbow.
 Note 3. Total length will vary from 195 to 203 according to flange thickness b. See ED-551056-1,-2 for b value.
 Note 4. Do not loosen. Loosening will lead to fill-fluid leakage.

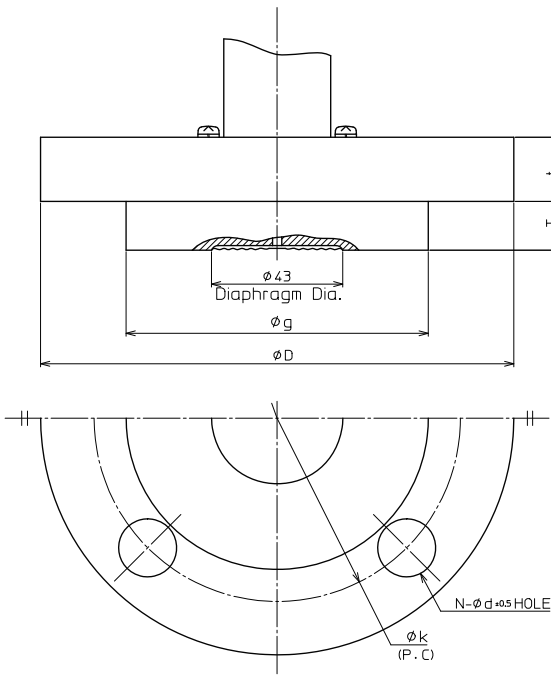
Table1 Terminal

Symbol	Terminal
SUPPLY +, SUPPLY -	Power supply and output signal
CHK +, CHK -	Check meter
\perp	Ground
ZERO	ZERO Adjuster

JIS 10K - 15 mm / 25 mm

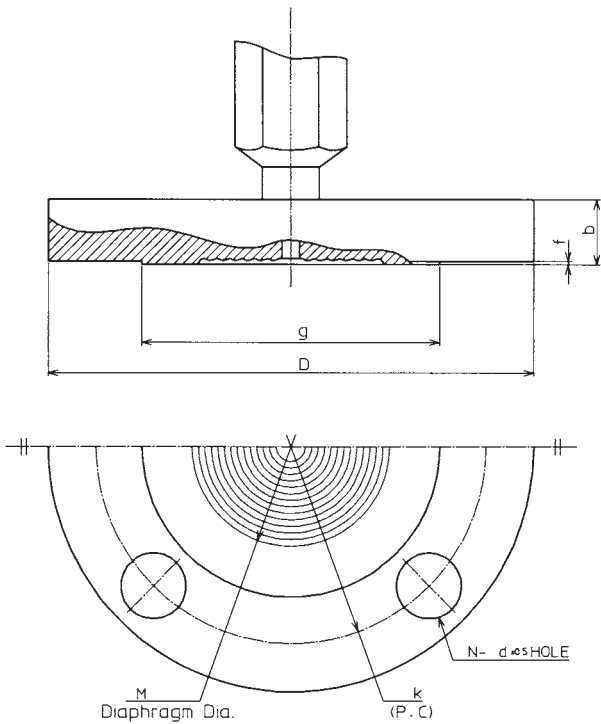


JIS 10K - 50 mm

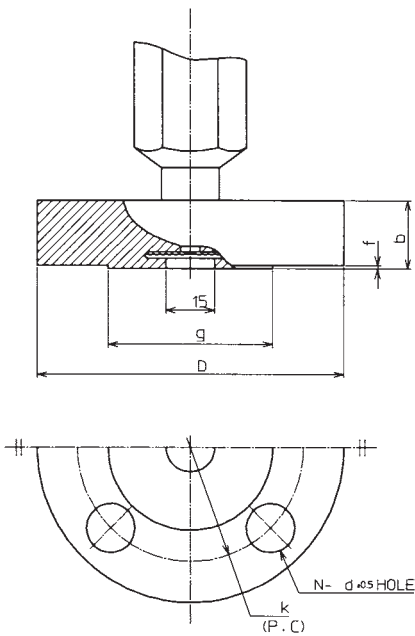


Flange rating	D^{-1}	g	k	N	$d \pm 0.5$	$1 + 1$	h	b
JIS 10K - 15 mm	95	54	70	4	15	12	15	16
JIS 10K - 50 mm	155	99	120	4	19	16	-	19

JIS 30K - 50 mm



JIS 30K - 15 mm



Flange rating	D^{-1}	g	k	N	$d \pm 0.5$	M	$b + 1$	f
JIS 30K - 15 mm	115	55	80	4	19	-	21	1
JIS 30K - 50 mm	165	105	130	8	19	59	22	2

Ferrule type

(1S, 1-1/2S, 2S clamp type)



Measuring span / Setting range / Max. working pressure

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60S - _3	2.0 to 100 kPa	-100 to +100 kPa	200 kPa	2S, 1-1/2S
PTG60S - _4	40 to 400 kPa	-100 to +400 kPa	800 kPa or clamp rating	2S, 1-1/2S, 1S
PTG60S - _5	0.2 to 2 MPa	-0.1 to +2 MPa	4 MPa or clamp rating	

Accuracy / Max. working pressure

Model PTG60S- _3

Accuracy *1, *2	$\pm 0.5\%$ F.S. (100 kPa $\geq X \geq 20$ kPa) $\pm (0.5 \times 20 / X)\%$ F.S. (20 kPa $\geq X \geq 2$ kPa)	
Zero temperature effect per 30 °C *1	2S (Clamp type)	$\pm (2.4 \times 40 / X + 0.35)\%$
	1-1/2S (Clamp type)	$\pm (5.7 \times 40 / X + 0.35)\%$

Model PTG60S- _4

Accuracy *1, *2	$\pm 0.5\%$ F.S. (400 kPa $\geq X \geq 80$ kPa) $\pm (0.5 \times 80 / X)\%$ F.S. (80 kPa $\geq X \geq 40$ kPa)	
Zero temperature effect per 30 °C *1	2S (Clamp type)	$\pm (1.3 \times 80 / X + 0.35)\%$
	1-1/2S (Clamp type)	$\pm (3.0 \times 80 / X + 0.35)\%$
	1S (Clamp type)	$\pm (30.4 \times 80 / X + 0.35)\%$

Model PTG60S- _5

Accuracy *1, *2	$\pm 0.5\%$ F.S. (2 MPa $\geq X \geq 0.4$ MPa) $\pm (0.5 \times 0.4 / X)\%$ F.S. (0.4 MPa $\geq X \geq 0.2$ MPa)	
Zero temperature effect per 30 °C *1	2S (Clamp type)	$\pm (0.58 \times 0.4 / X + 0.35)\%$
	1-1/2S (Clamp type)	$\pm (0.92 \times 0.4 / X + 0.35)\%$
	1S (Clamp type)	$\pm (6.4 \times 0.4 / X + 0.35)\%$

Note) *1. Within a range of URV ≥ 0 and LRV ≥ 0

*2. Negative pressure accuracy

Accuracy, which is greater value of either $\pm 3\%$ F.S. or upper calculated accuracy.

Ambient temperature limits

Normal operating range

-10 to +70 °C

Transportation and storage temperature

-30 to +80 °C

Temperature ranges of wetted parts

-10 to +110 °C

150 °C for 60 minutes during steam cleaning

Ambient humidity limits

5 to 100% RH

Materials

Fill fluid

Propylene glycol

Wetted parts

Diaphragm

SUS316L

Others

SUS316

Case

Aluminum alloy

Weight

Approx 1.2 kg

Process connection

- IDF 1S clamp type
- IDF 1-1/2S clamp type
- IDF 2S clamp type

MODEL SELECTION

Smart pressure transmitter model PTG60S

Process connection: Ferrule clamp type

Measuring span: 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa

Model number structure: Basic model number - Selection - Option1 - Option2

		Basic model number	PTG60S	-	Selection							Option1	Option2	
Product description	Gauge pressure transmitter: Ferrule type with SFC communication	PTG60S												
				-										
Type of protection	Water and dust proof: IEC IP67 Electrical conduit: G1/2				G									
Measuring span	2.0 to 100 kPa (0.021 to 1.1019 kgf/cm ²) (Not applicable for process connection 1S.)					3								
	40 to 400 kPa (0.408 to 4.07 kgf/cm ²)					4								
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm ²)					5								
Material: Diaphragm / wetted parts other than diaphragm/fill fluid	SUS316L / SUS316L / Propylene glycol						CB							
Process connection	IDF 1S ferrule clamp type							AH2X						
	IDF 1-1/2S ferrule clamp type							AH3X						
	IDF 2S ferrule clamp type							AH4X						
Option 1											-			
No option												X		
Built-in digital indicator												M		
Heavy duty corrosion-proof coating												B		
Remote communication function												C		
Wetted parts finish	Anti-dynamic pressure specification *1											F		
	Anti-pulsation specification *2											J		
	Oil free finish											G		
	Water and oil free finish											H		
	Electrolytic grinding											K		
	Passive state finish											W		
Option2												-		
No option													X	
Test report													1	
Material certificate													2	
Documents conforming to Japanese high pressure gas control law													3	
Over-pressure leak test													4	
Strength calculation sheet (JIS)													5	
Traceability certificate													6	
Mounting bracket													H	
Certificate of oil free finish													J	
Certificate of oil free and No water finish													P	

Note) *1. Not applicable for ferrule size 1S. The temperature effect will be 3.5 times of the standard. Wetted parts temperature range is +10 to +90 °C.

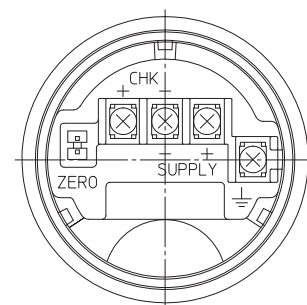
*2. Not applicable for ferrule size 1S. The accuracy will be 1.5 times and the temperature effect will be 3.5 times of the standard. Wetted parts temperature range is +10 to +45 °C.

DIMENSIONS

[Unit: mm]

Materials of construction

KEY No.	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316
3	Wetted Part	SUS 316L



Terminal Connections

(M4 Screw)

See Table 2

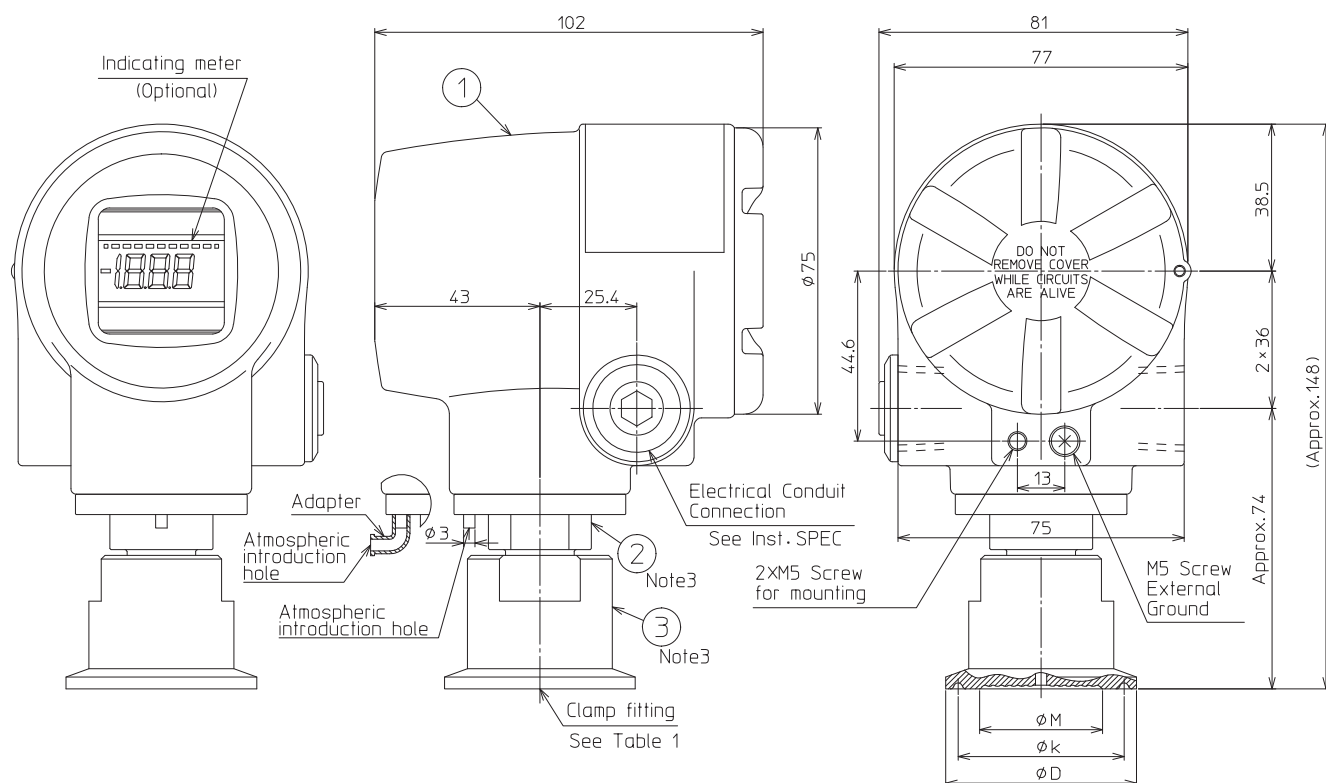


Table1 (See Inst. spec.)

Code No.			Ferrule Size	ØD	øk	øM
Rating	Fitting	Size				
A	H	2	IDF 1S	50.5	43.5	22
		3	IDF 1.5S			28
		4	IDF 2S			43

Table2 Terminal

Symbol	Terminal
SUPPLY +, SUPPLY -	Power supply and output signal
CHK+, CHK-	Check meter
\perp	Ground
ZERO	Zero Adjustment

- Note 1. See drawing no. ED-551053-00 for dimensions including elbow.
 Note 2. See drawing no. ED-551052-00 for dimensions including mounting bracket.
 Note 3. Do not loosen. Loosening will lead to fill-fluid leakage.
 Note 4. See drawing no. ED-551061-1 for dimensions including M22 size adapter.

Ferrule type

(1-1/2 inch, 2 inches cap nut type)



Measuring Span / Setting Range / Max. Working Pressure

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60S - _3	2.0 to 100 kPa	-100 to +100 kPa	200 kPa	2S, 1-1/2S
PTG60S - _4	40 to 400 kPa	-100 to +400 kPa	800 kPa or cap nut rating	
PTG60S - _5	0.2 to 2 MPa	-0.1 to +2 MPa	4 MPa or cap nut rating	

Accuracy / Max. working pressure

Model PTG60S- _3

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($100 \text{ kPa} \geq X \geq 20 \text{ kPa}$) $\pm (0.5 \times 20 / X)\%$ F.S. ($20 \text{ kPa} \geq X \geq 2 \text{ kPa}$)	
Zero temperature effect per 30 °C *1	2S (Cap nut type)	$\pm (2.4 \times 40 / X + 0.35)\%$
	1-1/2S (Cap nut type)	$\pm (5.7 \times 40 / X + 0.35)\%$

Model PTG60S- _4

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($400 \text{ kPa} \geq X \geq 80 \text{ kPa}$) $\pm (0.5 \times 80 / X)\%$ F.S. ($80 \text{ kPa} \geq X \geq 40 \text{ kPa}$)	
Zero temperature effect per 30 °C *1	2S (Cap nut type)	$\pm (1.3 \times 80 / X + 0.35)\%$
	1-1/2S (Cap nut type)	$\pm (3.0 \times 80 / X + 0.35)\%$

Model PTG60S- _5

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($2 \text{ MPa} \geq X \geq 0.4 \text{ MPa}$) $\pm (0.5 \times 0.4 / X)\%$ F.S. ($0.4 \text{ MPa} \geq X \geq 0.2 \text{ MPa}$)	
Zero temperature effect per 30 °C *1	2S (Cap nut type)	$\pm (0.58 \times 0.4 / X + 0.35)\%$
	1-1/2S (Cap nut type)	$\pm (0.92 \times 0.4 / X + 0.35)\%$

Note) *1. Within a range of URV ≥ 0 and LRV ≥ 0

*2. Negative pressure accuracy
Accuracy, which is greater value of either $\pm 3\%$ F.S. or upper calculated accuracy.

Ambient temperature limits

Normal operating range

-10 to +70 °C

Transportation and storage temperature

-30 to +80 °C

Temperature range of wetted parts

-10 to +110 °C

150 °C within 30 minutes of steam cleaning

Ambient humidity limits

5 to 100% RH

Materials

Fill fluid

Propylene glycol

Wetted parts

Diaphragm

SUS316L

Others

SUS316

Case

Aluminum alloy

Weight

- 1-1/2 inch : Approx. 1.4 kg
- 2 inches : Approx. 1.7 kg

Process connection

- IDF 1-1/2S cap nut type
- IDF 2S cap nut type

MODEL SELECTION

Smart pressure transmitter model PTG60S

Process connection: Ferrule cap nut type

Measuring span: 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa

Model number structure: Basic model number - Selection - Option1 - Option2

			Selection				Option1		Option2			
			PTG60S	-					-		-	
Product Description	Gauge pressure transmitter: Ferrule type	PTG60S										
				-								
Type of protection	Water and dust proof: IEC IP67 Electrical conduit: G1/2				G							
Measuring span	2.0 to 100 kPa (0.021 to 1.1019 kgf/cm²)					3						
	40 to 400 kPa (0.408 to 4.07 kgf/cm²)					4						
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm²)					5						
Material: Diaphragm / wetted parts other than diaphragm/fill fluid	SUS316L / SUS316L / Propylene glycol						CB					
Process connection	IDF 1-1/2S ferrule cap nut type							AC3X				
	IDF 2S ferrule cap nut type							AC4X				
Option 1									-			
No option										X		
Built-in digital indicator										M		
Heavy duty corrosion-proof coating										B		
Remote communication function										C		
Wetted part finish	Anti-dynamic pressure specification *1									F		
	Anti-pulsation specification *2									J		
	Oil free finish									G		
	Water and oil free finish									H		
	Electrolytic grinding									K		
	Passive state finish									W		
Option2											-	
No option												X
Test report												1
Material certificate												2
Documents conforming to Japanese high pressure gas control law												3
Over-pressure leak test												4
Strength calculation sheet (JIS)												5
Traceability certificate												6
Mounting bracket												H
Certificate of oil free finish												J
Certificate of oil free and No water finish												P

Note) *1. The temperature effect will be 3.5 times of the standard. Wetted parts temperature range is +10 to +90°C.

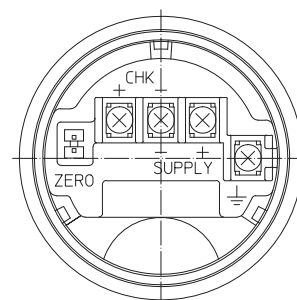
*2. Not applicable for ferrule size 1.5S. The accuracy will be 1.5 times and the temperature effect will be 3.5 times of the standard. Wetted parts temperature range is +10 to +45°C.

DIMENSIONS

[Unit: mm]

Materials of construction

KEY No.	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316
3	Wetted Part	SUS 316L



Terminal Connections

(M4 Screw)

See Table 2

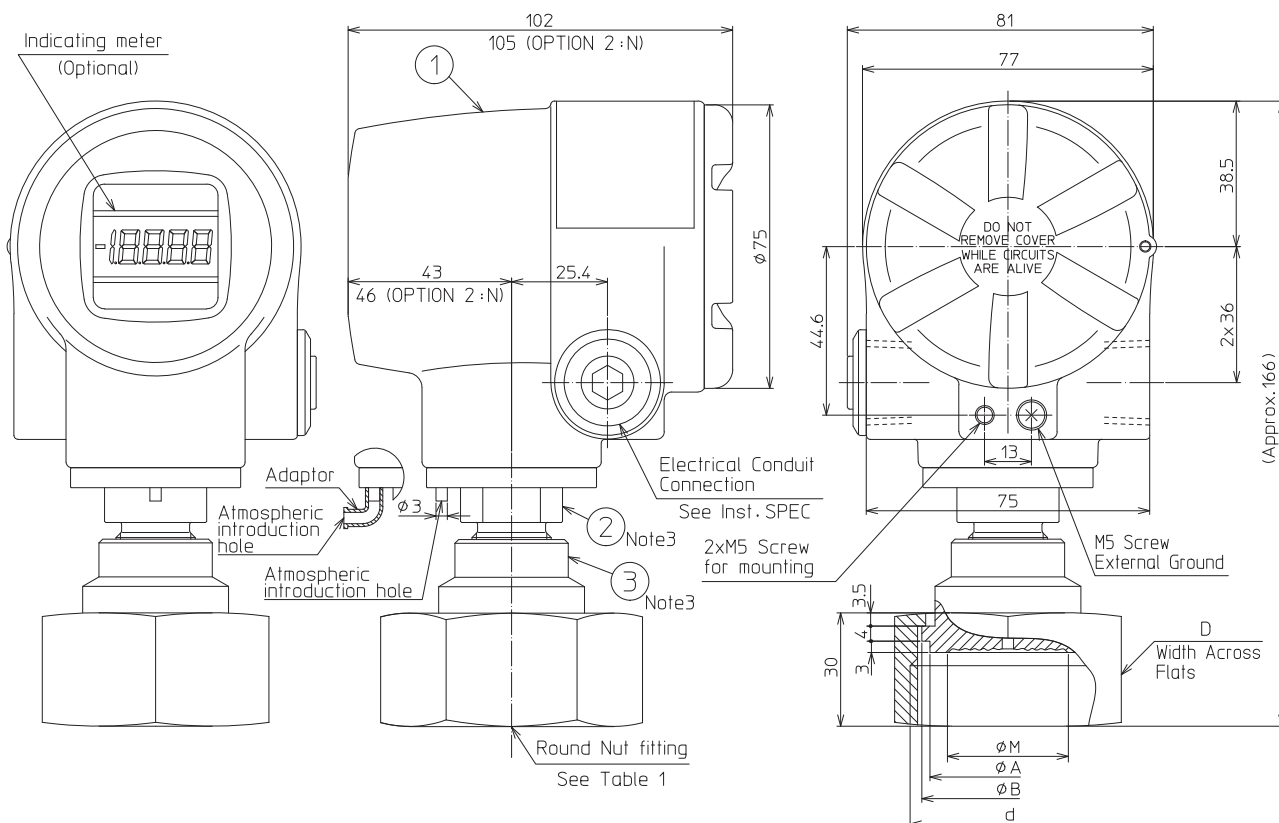


Table1 (See Inst. spec.)

Rating	Code No.		Fitting Size(d)	D	ØM	A	B
	Fitting	Size					
A	C	3	IDF 1.5S	60	28	42.7	47
		4	IDF 2S	75	43	56.2	60.5

Table2 Terminal

Symbol	Terminal
SUPPLY +, SUPPLY -	Power supply and output signal
CHK+, CHK-	Check meter
⏏	Internal Ground
ZERO	ZERO Adjuster

Note 1. See drawing no. ED-551053-00 for dimensions including elbow.

2. See drawing no. ED-551052-00 for dimensions including mounting bracket.

3. Do not loosen. Loosening will lead to fill-fluid leakage.

Ferrule with cooling tower

(1 inch, 1-1/2 inch, 2 inches clamp type)



Measuring span / Setting range / Max. working pressure

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60K- ₃	2.0 to 100 kPa	-100 to +100 kPa	200 kPa	2, 1-1/2S
PTG60K- ₄	40 to 400 kPa	-100 to +400 kPa	800 kPa or clamp rating	2S, 1-1/2S, 1S
PTG60K- ₅	0.2 to 2 MPa	-0.1 to +2 MPa	4 MPa or clamp rating	

Accuracy / Temperature effect

Model PTG60K-₃

Accuracy *1, *2	$\pm 0.5\%$ F.S. (100 kPa $\geq X \geq 20$ kPa) $\pm (0.5 \times 20 / X)\%$ F.S. (20 kPa $\geq X \geq 2$ kPa)	
Zero temperature effect per 30 °C *1	2S (Clamp type)	$\pm (2.5 \times 40 / X + 0.35)\%$
	1-1/2S (Clamp type)	$\pm (8.5 \times 40 / X + 0.35)\%$

Model PTG60K-₄

Accuracy *1, *2	$\pm 0.5\%$ F.S. (400 kPa $> X > 80$ kPa) $\pm (0.5 \times 80 / X)\%$ F.S. (80 kPa $> X > 40$ kPa)	
Zero temperature effect per 30 °C *1	2S (Clamp type)	$\pm (1.4 \times 80 / X + 0.35)\%$
	1-1/2S (Clamp type)	$\pm (4.4 \times 80 / X + 0.35)\%$
	1S (Clamp type)	$\pm (37.5 \times 80 / X + 0.35)\%$

Model PTG60K-₅

Accuracy *1, *2	$\pm 0.5\%$ F.S. (2 MPa $> X > 0.4$ MPa) $\pm (0.5 \times 0.4 / X)\%$ F.S. (0.4 MPa $> X > 0.2$ MPa)	
	2S (Clamp type)	$\pm (0.6 \times 0.4 / X + 0.35)\%$
Zero temperature effect per 30 °C *1	1-1/2S (Clamp type)	$\pm (1.2 \times 0.4 / X + 0.35)\%$
	1S (Clamp type)	$\pm (7.8 \times 0.4 / X + 0.35)\%$

Note) *1. Within a range of URV ≥ 0 and LRV ≥ 0

*2. Negative pressure accuracy

Accuracy, which is greater value of either $\pm 3\%$ F.S. or upper calculated accuracy.

Ambient temperature limits

Normal operating range

-10 to +70 °C

Transportation and storage temperature

-30 to +80 °C

Temperature range of wetted parts

-10 to +150 °C

Ambient humidity limit

5 to 100% RH

Materials

Fill fluid

Propylene glycol

Wetted parts

Diaphragm

SUS316L

Others

SUS316

Case

Aluminum alloy

Weight

Approx. 1.4 kg

Process connection

- IDF 1S clamp
- IDF 1-1/2S clamp
- IDF 2S clamp

MODEL SELECTION**Smart pressure transmitter model PTG60K**

Process connection: Ferrule clamp type with cooling tower

Measuring span: 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa

Model number structure: Basic model number - Selection - Option1 - Option2

Basic model number		Selection				Option1	Option2
PTG60K		-				-	
Product description	Gauge pressure transmitter: Ferrule type with cooling tower	PTG60K					
		-					
Type of protection	Water and dust proof: IEC IP67 Electrical conduit: G1/2	G					
Measuring span	2.0 to 100 kPa (0.021 to 1.019 kgf/cm ²) (Not applicable for ferrule size 1S)		3				
	40 to 400 kPa (0.408 to 4.07 kgf/cm ²)		4				
	0.2 to 2MPa (2.04 to 20.3 kgf/cm ²)		5				
Material: Diaphragm / wetted parts other than diaphragm / fill fluid	SUS316L / SUS316L / Propylene glycol			CB			
Process connection	IDF 1S ferrule clamp type (Not applicable for span code "3")				AH2X		
	IDF 1-1/2S ferrule clamp type				AH3X		
	IDF 2S ferrule clamp type				AH4X		
Option 1						-	
No option							X
Built-in digital indicator							M
Heavy duty corrosion-proof coating							B
Remote communication function							C
Wetted parts finish	Oil free finish					G	
	Water and oil free finish					H	
	Electrolytic grinding					K	
	Passive state finish					W	
Option2							-
No option							X
Test report							1
Material certificate							2
Documents conforming to Japanese high pressure gas control law							3
Over-pressure leak test							4
Strength calculation sheet (JIS)							5
Traceability certificate							6
Mounting bracket							H
Certificate of oil free finish							J
Certificate of oil free and No water finish							P

DIMENSIONS

[Unit: mm]

Materials of Construction

KEY No.	Parts Name	Material
1	Case	Aluminum Alloy
2	Body	SUS316
3	Cooling Fin	SUS303 or SUS304
4	Ferrule	SUS316L

Table2 Terminal Connections

Symbol	Description
SUPPLY +, SUPPLY -	Power Supply and Output Signal
CHK +, CHK -	Check Meter
\perp	Ground
ZERO	ZERO Adjuster

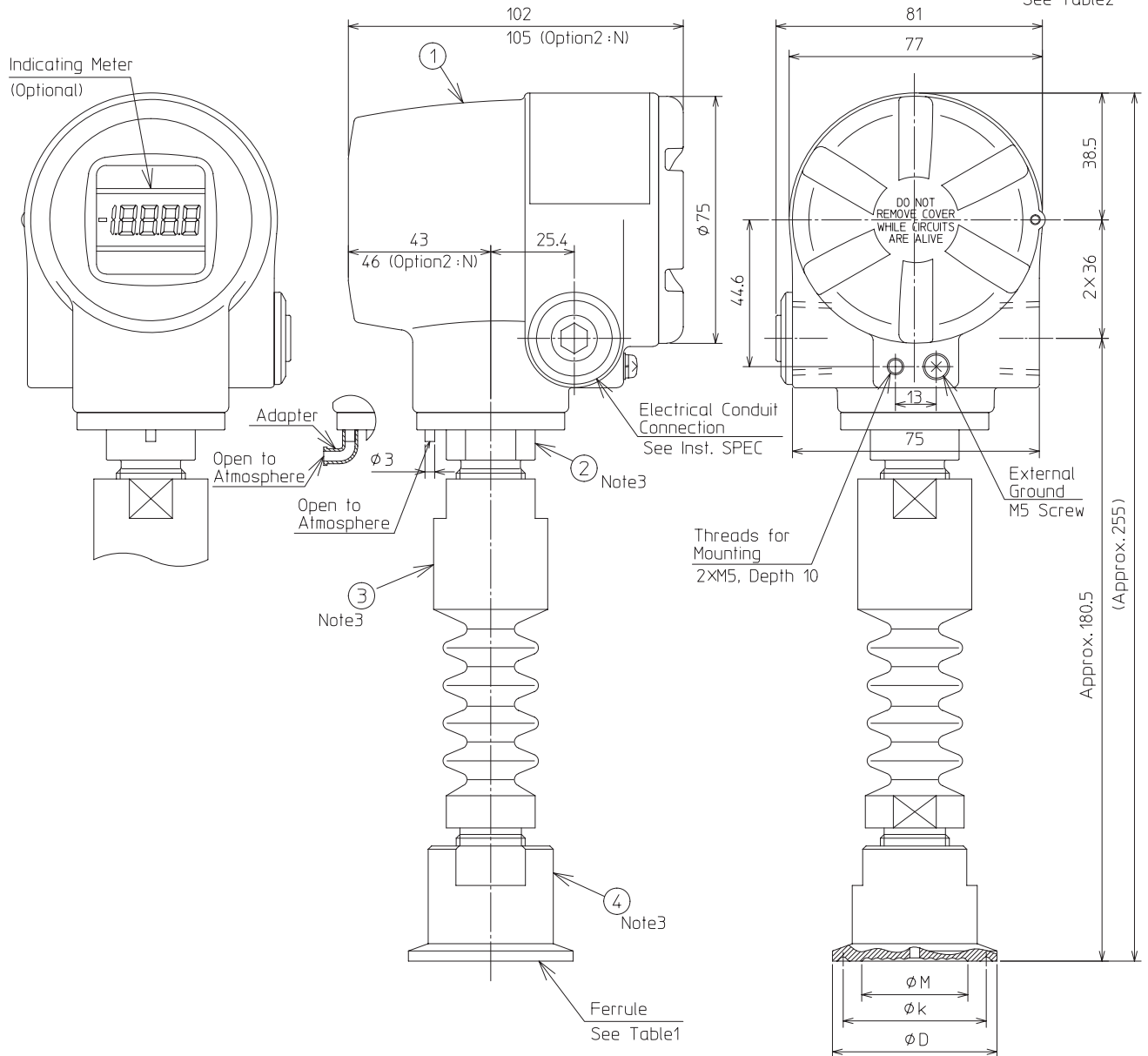
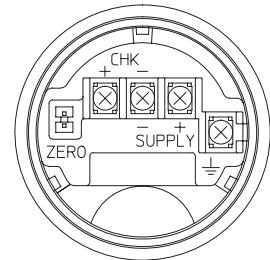


Table1 (See Inst. SPEC)

Rating	Code No.		Ferrule Size	ϕD	ϕk	ϕM
	Fitting	Size				
A	H	2	IDF 1S	50.5	43.5	22
		3	IDF 1.5S			28
		4	IDF 2S	64	56.5	43

Note1. See Drawing No.ED-551053-□□ for dimensions including elbow.

2. See Drawing No.ED-551052-□□ for dimensions including mounting bracket.

3. Do not loosen. Loosening will lead to fill-fluid leakage.

Ferrule with cooling tower

(1-1/2 inch, 2 inches cap nut type)



Measuring span/ Setting range/ Max. working pressure

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60K - _3	2.0 to 100kPa	-100 to +100 kPa	200 kPa	2S, 1-1/2S
PTG60K - _4	40 to 400 kPa	-100 to +400 kPa	800 kPa or cap nut rating	
PTG60K - _5	0.2 to 2 MPa	-0.1 to +2 MPa	4 MPa or cap nut rating	

Accuracy / Temperature effect

Model PTG60K- _3

Accuracy *1, *2	$\pm 0.5\%$ F.S. (100kPa $\geq X \geq 20$ kPa) $\pm (0.5 \times 20 / X)\%$ F.S. (20 kPa $\geq X \geq 2$ kPa)	
Zero temperature effect per 30 °C *1	2S (Cap nut type)	$\pm (2.5 \times 40 / X + 0.35)\%$
	1-1/2S (Cap nut type)	$\pm (8.5 \times 40 / X + 0.35)\%$

Model PTG60K- _4

Accuracy *1, *2	$\pm 0.5\%$ F.S. (400 kPa $\geq X \geq 80$ kPa) $\pm (0.5 \times 80 / X)\%$ F.S. (80 kPa $\geq X \geq 40$ kPa)	
Zero temperature effect per 30 °C *1	2S (Cap nut type)	$\pm (1.4 \times 80 / X + 0.35)\%$
	1-1/2S (Cap nut type)	$\pm (4.4 \times 80 / X + 0.35)\%$

Model PTG60K- _5

Accuracy *1, *2	$\pm 0.5\%$ F.S. (2 MPa $\geq X \geq 0.4$ MPa) $\pm (0.5 \times 0.4 / X)\%$ F.S. (0.4 MPa $\geq X \geq 0.2$ MPa)	
Zero temperature effect per 30 °C *1	2S (Cap nut type)	$\pm (0.6 \times 0.4 / X + 0.35)\%$
	1-1/2S (Cap nut type)	$\pm (1.2 \times 0.4 / X + 0.35)\%$

Note) *1. Within a range of URV ≥ 0 and LRV ≥ 0

*2. Negative pressure accuracy
Accuracy, which is greater value of either $\pm 3\%$ F.S. or upper calculated accuracy.

Ambient temperature limits

Normal operating range

-10 to +70 °C

Transportation and storage temperature

-30 to +80 °C

Temperature ranges of wetted parts

-10 to +150 °C

Ambient humidity limits

5 to 100% RH

Materials

Fill fluid

Propylene glycol

Wetted parts

Diaphragm

SUS316L

Others

SUS316

Case

Aluminum alloy

Weight

- 1-1/2 inch: Approx. 1.6 kg
- 2 inches: Approx. 1.9 kg

Process connection

- IDF 1-1/2S cap nut type
- IDF 2S cap nut type

MODEL SELECTION

Smart pressure transmitter model PTG60K

Process connection: Ferrule cap nut type with cooling tower

Measuring span 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa

Model number structure: Basic model number - Selection - Option1 - Option2

		Selection				Option1	Option2				
Basic model number		PTG60K	-					-		-	
Product description		Gauge pressure transmitter: Ferrule type with cooling tower with SFC communication	PTG60K								
				-							
Type of protection	Water and dust proof: IEC IP67 Electrical conduit: G1/2			G							
Measuring span	2.0 to 100 kPa (0.021 to 1.019 kgf/cm²)				3						
	40 to 400 kPa (0.408 to 4.07 kgf/cm²)				4						
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm²)				5						
Material: Diaphragm / wetted parts other than diaphragm / fill fluid	SUS316L / SUS316L / Propylene glycol					CB					
Process connection	IDF 1-1/2S ferrule cap nut type						AC3X				
	IDF 2S ferrule cap nut type						AC4X				
Option 1								-			
No option									X		
Built-in digital indicator									M		
Heavy duty corrosion-proof coating									B		
Remote communication function									C		
Wetted parts finish	Oil free finish								G		
	Water and oil free finish								H		
	Electrolytic grinding								K		
	Passive state finish								W		
Option2										-	
No option											X
Test report											1
Material certificate											2
Documents conforming to Japanese high pressure gas control law											3
Over-pressure leak test											4
Strength calculation sheet (JIS)											5
Traceability certificate											6
Mounting bracket											H
Certificate of oil free finish											J
Certificate of oil free and No water finish											P

DIMENSIONS

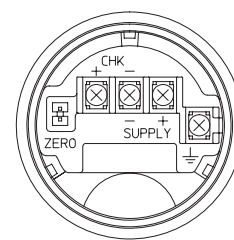
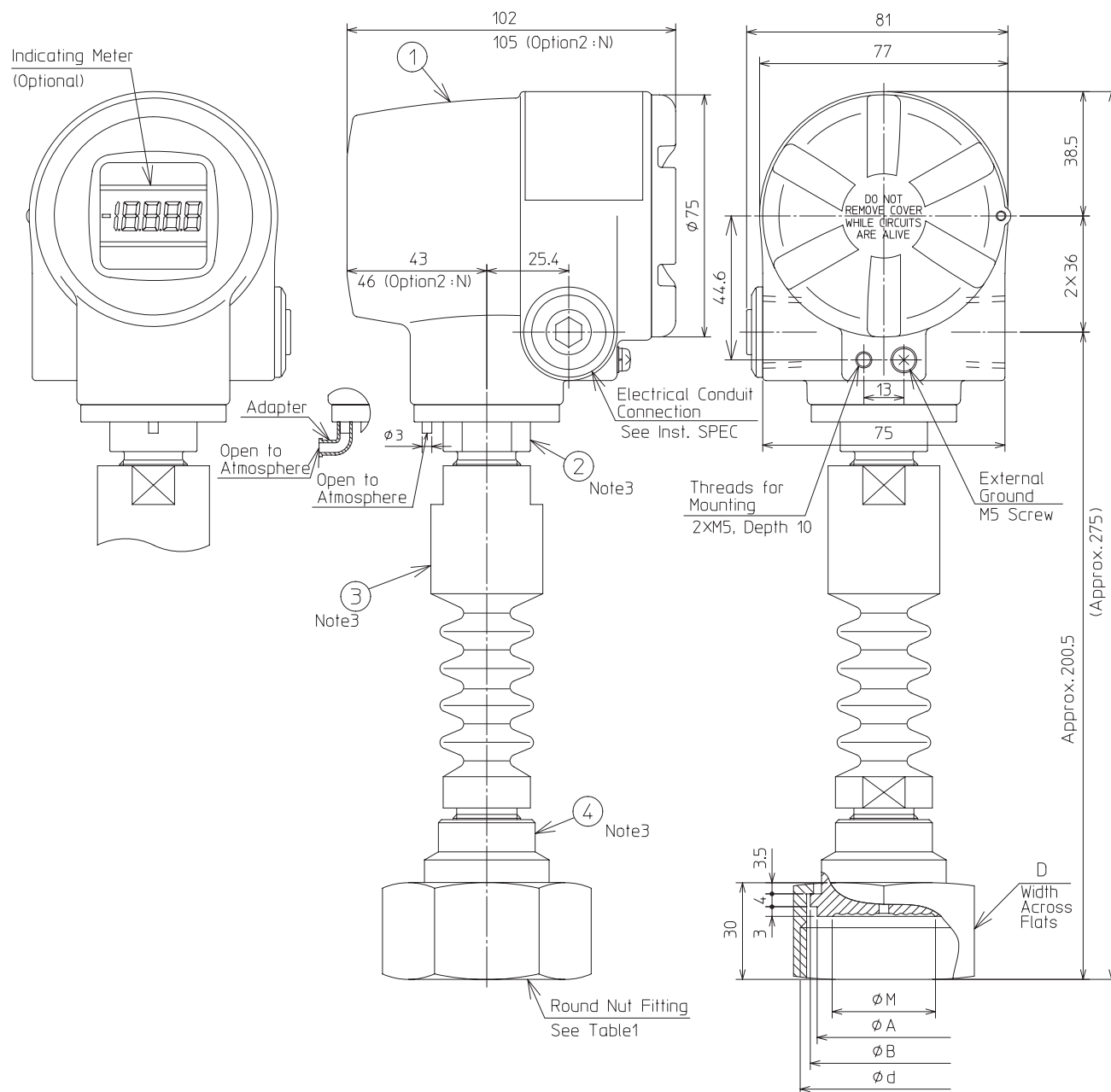
[Unit: mm]

Materials of Construction

KEY No.	Parts Name	Material
1	Case	Aluminum Alloy
2	Body	SUS316
3	Cooling Fin	SUS303 or SUS304
4	Wetted Part	SUS316L

Table2 Terminal Connections

Symbol	Description
SUPPLY +, SUPPLY -	Power Supply and Output Signal
CHK +, CHK -	Check Meter
\perp	Ground
ZERO	ZERO Adjuster

Terminal Connections
(M4 Screw) See Table2

Note1. See Drawing No.ED-551053-00 for dimensions including elbow.

2. See Drawing No.ED-551052-00 for dimensions including mounting bracket.

3. Do not loosen. Loosening will lead to fill-fluid leakage.

Table1 (See Inst. SPEC)

Code No.			Fitting Size (φd)	D	φM	φA	φB
Rating	Fitting	Size					
A	C	3	IDF 1.5S	60	28	42.7	47
		4	IDF 2S	75	43	56.2	60.5

Remote seal with ferrule type

(1-1/2 inch, 2 inches clamp type)



Measuring span/ Setting range/ Max. working pressure

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60T - _3	2.0 to 100 kPa	-100 to +100 kPa	200 kPa	2S
PTG60T - _4	40 to 400 kPa	-100 to +400 kPa	800 kPa or clamp rating	2S, 1-1/2S
PTG60T - _5	0.2 to 2 MPa	-0.1 to +2 MPa	4 MPa or clamp rating	

Accuracy / Temperature effect

Model PTG60T- _3

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($100 \text{ kPa} \geq X \geq 20 \text{ kPa}$) $\pm (0.5 \times 20 / X)\%$ F.S. ($20 \text{ kPa} \geq X \geq 2 \text{ kPa}$)	
Zero temperature effect per 30 °C *1	2S (Clamp type)	$\pm (11.5 \times 40 / X + 0.35)\%$

Model PTG60T- _4

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($400 \text{ kPa} \geq X \geq 80 \text{ kPa}$) $\pm (0.5 \times 80 / X)\%$ F.S. ($80 \text{ kPa} \geq X \geq 40 \text{ kPa}$)	
Zero temperature effect per 30 °C *1	2S (Clamp type)	$\pm (5.9 \times 80 / X + 0.35)\%$
	1-1/2S (Clamp type)	$\pm (21.7 \times 80 / X + 0.35)\%$

Model PTG60T- _5

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($2 \text{ MPa} \geq X \geq 0.4 \text{ MPa}$) $\pm (0.5 \times 0.4 / X)\%$ F.S. ($0.4 \text{ MPa} \geq X \geq 0.2 \text{ MPa}$)	
Zero temperature effect per 30 °C *1	2S (Clamp type)	$\pm (1.5 \times 0.4 / X + 0.35)\%$
	1-1/2S (Clamp type)	$\pm (4.65 \times 0.4 / X + 0.35)\%$

Note) *1. Within a range of URV ≥ 0 and LRV ≥ 0

*2. Negative pressure accuracy

Accuracy, which is greater value of either $\pm 3\%$ F.S. or upper calculated accuracy.

Ambient temperature limits

Normal operating ranges

1-1/2 inch -5 to +55 °C

2 inches -5 to +60 °C

Transportation and storage temperature

-5 to +50 °C

Temperature range of wetted parts

-5 to +110 °C

150 °C for 30 minutes during steam cleaning

Ambient humidity limits

5 to 100% RH

Materials

Fill fluid

Propylene glycol

Wetted parts

Diaphragm

SUS316L

Others

SUS316

Case

Aluminum alloy

Capillary cover

Olefin

Weight

Approx. 1.8 kg (Capillary length 3 m)

Process connection

- IDF 1-1/2S clamp type
- IDF 2S clamp type

MODEL SELECTION

Smart pressure transmitter model PTG60T

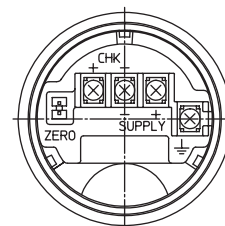
Process connection: Remote seal with ferrule clamp type

Measuring span: 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa

Model number structure: Basic model number - Selection - Option1 - Option2

			Selection					Option1		Option2			
			PTG60T	-						-		-	
Product description		Gauge pressure transmitter: Ferrule type with remote seal with SFC Communication	PTG60T										
				-									
Type of protection		Water and dust proof: IEC IP67 Electrical conduit: G1/2			G								
Measuring span		2.0 to 100 kPa (0.021 to 1.019 kgf/cm ²) (Not applicable for process connection 1S)				3							
		40 to 400 kPa (0.408 to 4.07 kgf/cm ²)				4							
		0.2 to 2 MPa (2.04 to 20.3 kgf/cm ²)				5							
Material: Diaphragm / wetted parts other than diaphragm / fill fluid		SUS316L / SUS316 L / Propylene glycol					CB						
Process connection		IDF 1-1/2S ferrule clamp type						AH3X					
		IDF 2S ferrule clamp type						AH4X					
Capillary length		1 m (with Olefin tube)							E				
		3 m (with Olefin tube)							G				
		5 m (with Olefin tube)							J				
Option 1									-				
No option											X		
Built-in digital indicator											M		
Heavy duty corrosion-proof coating											B		
Remote communication function											C		
Wetted parts finish		Oil free finish									G		
		Water and oil free finish									H		
		Electrolytic grinding									K		
		Passive state finish									W		
Option2											-		
No option												X	
Test report												1	
Material certificate												2	
Documents conforming to Japanese high pressure gas control law												3	
Over-pressure leak test												4	
Strength calculation sheet (JIS)												5	
Traceability certificate												6	
Mounting bracket												H	
Certificate of oil free finish												J	
Certificate of oil free and No water finish												P	

KEY No.	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316
3	Capillary A'ssy	SUS 304(10efin cover)
4	Wetted Part	SUS 316L



Model No.			Ferrule Size	ØD	Øk	ØN
Rating	Fitting	Size				
A	H	2	IDF 1S	50.5	43.5	22
		3	IDF 1.5S			28
		4	IDF 2S	64	56.5	43

Symbol	Terminal
SUPPLY +, SUPPLY -	Power supply and output signal
CHK+, CHK-	Check meter
\perp	Ground
ZERO	ZERO Adjuster

Remote seal with ferrule type

(1-1/2 inch, 2 inches cap nut type)



Measuring span/ Setting range/ Max. working pressure

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60T - _3	2.0 to 100 kPa	-100 to +100 kPa	200 kPa	2S
PTG60T - _4	40 to 400 kPa	-100 to +400 kPa	800 kPa or cap nut rating	2S, 1-1/2S
PTG60T - _5	0.2 to 2 MPa	-0.1 to +2 MPa	4 MPa or cap nut rating	

Accuracy / Temperature effect

Model PTG60T- _3

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($100 \text{ kPa} \geq X \geq 20 \text{ kPa}$) $\pm (0.5 \times 20 / X)\%$ F.S. ($20 \text{ kPa} \geq X \geq 2 \text{ kPa}$)	
Zero temperature effect per 30 °C *1	2S (Cap nut type)	$\pm (11.5 \times 40 / X + 0.35)\%$

Model PTG60T- _4

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($400 \text{ kPa} \geq X \geq 80 \text{ kPa}$) $\pm (0.5 \times 80 / X)\%$ F.S. ($80 \text{ kPa} \geq X \geq 40 \text{ kPa}$)	
Zero temperature effect per 30 °C *1	2S (Cap nut type)	$\pm (5.9 \times 80 / X + 0.35)\%$
	1-1/2S (Cap nut type)	$\pm (21.7 \times 80 / X + 0.35)\%$

Model PTG60T- _5

Accuracy *1, *2	$\pm 0.5\%$ F.S. ($2 \text{ MPa} > X > 0.4 \text{ MPa}$) $\pm (0.5 \times 0.4 / X)\%$ F.S. ($0.4 \text{ MPa} > X > 0.2 \text{ MPa}$)	
Zero temperature effect per 30 °C *1	2S (Cap nut type)	$\pm (1.5 \times 0.4 / X + 0.35)\%$
	1-1/2S (Cap nut type)	$\pm (4.65 \times 0.4 / X + 0.35)\%$

Note) *1. Within a range of URV ≥ 0 and LRV ≥ 0

*2. Negative pressure accuracy
Accuracy, which is greater value of either $\pm 3\%$ F.S. or upper calculated accuracy.

Ambient temperature limits

Normal operating range

-5 to +55 °C

Transportation and storage temperature

-5 to +50 °C

Temperature range of wetted parts

-5 to +110 °C

150°C for 30 minutes during steam cleaning

Ambient humidity limits

5 to 100% RH

Materials

Fill fluid

Propylene glycol

Wetted parts

Diaphragm

SUS316L

Others

SUS316

Case

Aluminum alloy

Capillary cover

Olefin

Weight

Approx. 2.3 kg (Capillary length 3 m)

Process connection

- IDF 1-1/2S cap nut type
- IDF 2S cap nut type

MODEL SELECTION

Smart pressure transmitter model PTG60T

Process connection: Remote seal with ferrule cap nut type

Measuring span 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa

Model number structure: Basic model number - Selection - Option1 - Option 2

		PTG60T	-	Selection					-	Option1	-	Option2
		PTG60T	-						-		-	
Product description	Gauge pressure transmitter: Ferrule type with remote seal with SFC communication	PTG60T	-									
Type of protection	Water and dust proof: IEC IP67 Electrical conduit: G1/2			G								
Measuring span	2.0 to 100 kPa (0.021 to 1.019 kgf/cm ²)				3							
	40 to 400 kPa (0.408 to 4.07 kgf/cm ²)				4							
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm ²)				5							
Material: Diaphragm / wetted parts other than diaphragm / fill fluid	SUS316L / SUS316L / Propylene glycol					CB						
Process connection	IDF 1-1/2S ferrule cap nut type						AC3X					
	IDF 2S ferrule cap nut type						AC4X					
Capillary length	1m (with Olefin tube)							E				
	3m (with Olefin tube)							G				
	5m (with Olefin tube)							J				
Option 1										-		
No option											X	
Heavy duty corrosion-proof coating											B	
Remote communication function											C	
Built-in digital indicator											M	
Wetted parts finish	Oil free finish										G	
	Water and oil free finish										H	
	Electrolytic grinding										K	
	Passive state finish										W	
Option2											-	
No option												X
Test report												1
Material certificate												2
Documents conforming to Japanese high pressure gas control law												3
Over-pressure leak test												4
Strength calculation sheet (JIS)												5
Traceability certificate												6
Mounting bracket												H
Certificate of oil free finish												J
Certificate of oil free and No water finish												P

DIMENSIONS

[Unit: mm]

Materials of construction

KEY No.	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316
3	Capillary A'ssy	SUS 304(0lefin cover)
4	Wetted Part	SUS 316L

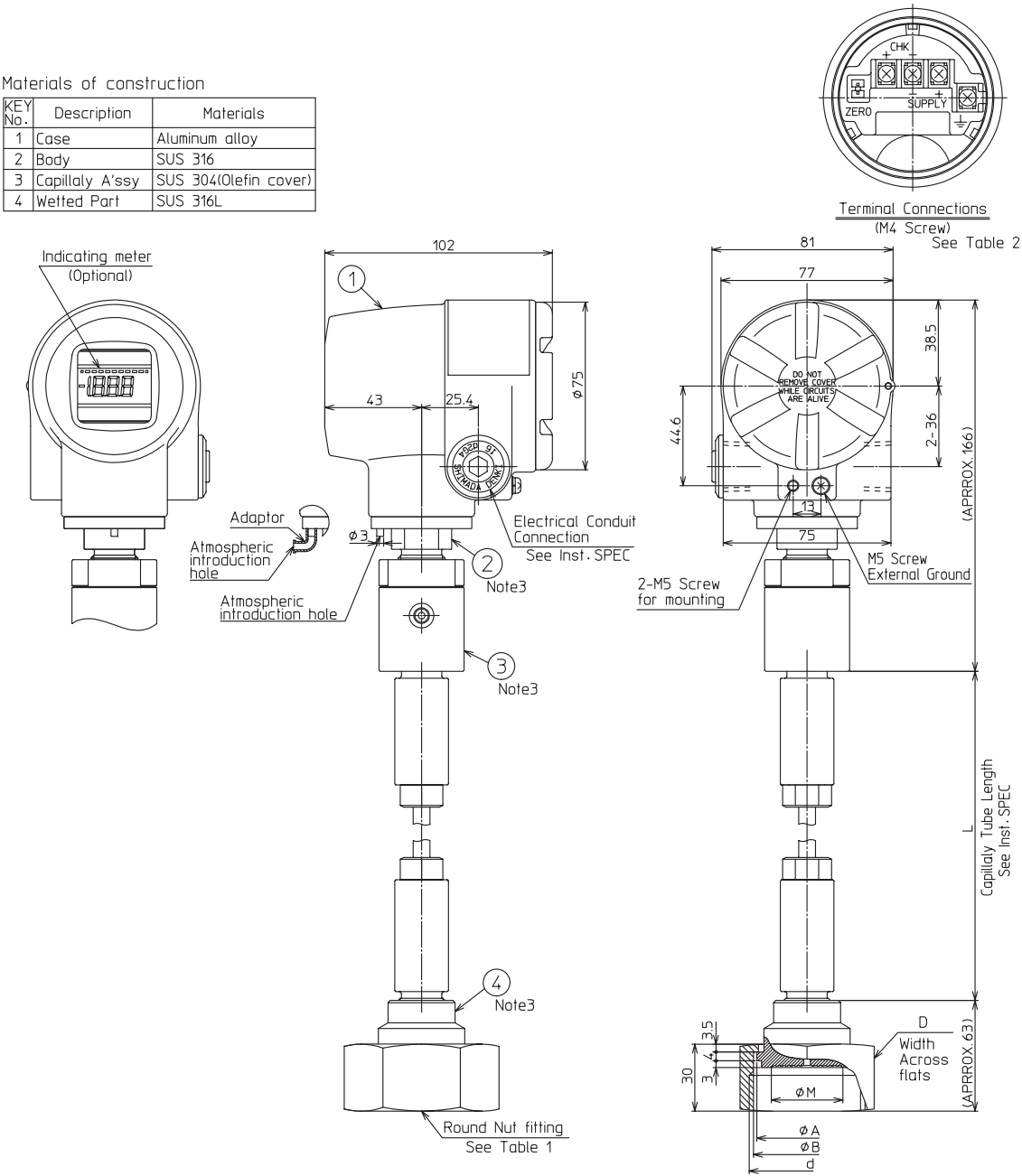


Table1 (See Inst. spec.)

Model No.			Fitting Size(d)	D	ϕM	A	B
Rating	Fitting	Size					
A	C	3	IDF 1.5S	60	32	42.7	28
		4	IDF 2S	75	52	56.2	43

Table2 Terminal

Symbol	Terminal
SUPPLY +, SUPPLY -	Power supply and output signal
CHK+, CHK-	Check meter
\perp	Ground
ZERO	ZERO Adjuster

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Azbil Corporation
Advanced Automation Company

1-12-2 Kawana, Fujisawa
Kanagawa 251-8522 Japan
URL: <https://www.azbil.com/>

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