**Specifications** 

# **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)**

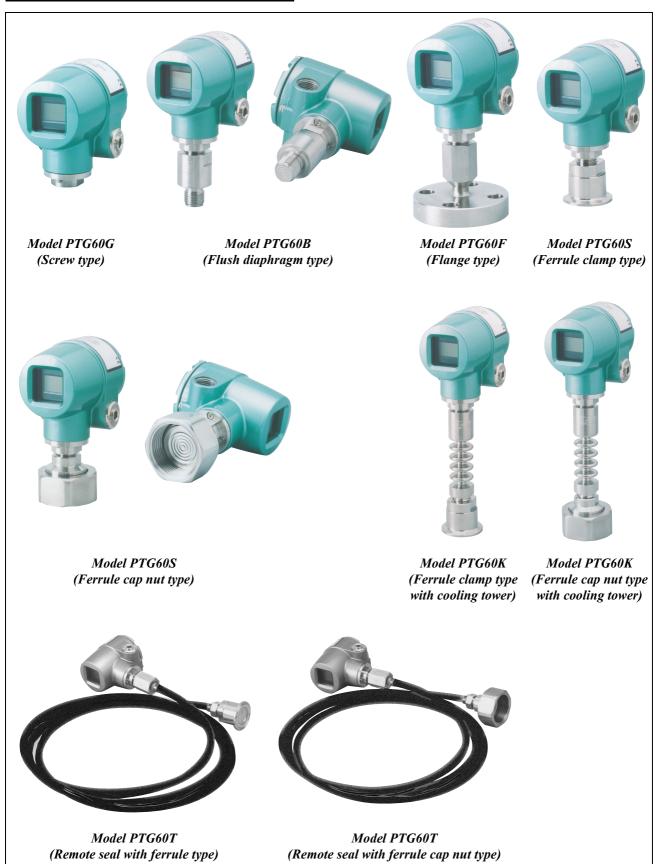
The built-in digital indicator option effectively checks output on site.

### Type of protection

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



# **External views of the PTG series**



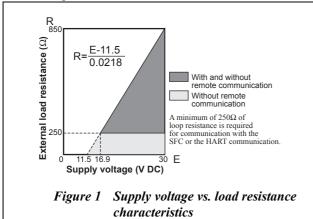
# **COMMON SPECIFICATIONS**

## 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.



## Power supply and voltage effect

0.005% F.S./V

### **Output / Communication**

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

### 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

- EN50081-2-1993, Electromagnetic Compatibility-Generic Emission Standard, Part 2: Industrial Environment
- EN50082-2-1995, Electromagnetic Compatibility-Generic Immunity Standard, Part 2: Industrial Environment
- EN61010-1-1993, Safety requirements for electrical equipment, control and laboratory use, Part: General requirement

### **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), fungusproof finish

## Working range of negative pressure

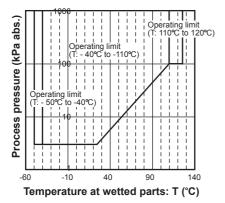


Figure 2 Minimum working pressure for model PTG60G

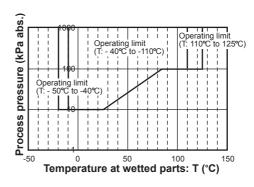


Figure 3 Minimum working pressure for model PTG60S, model PTG60T Minimum working pressure combination of model PTG60F and propylene glycol.

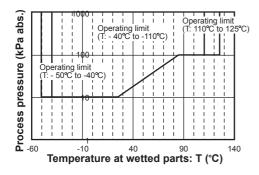


Figure 4 Minimum working pressure for combination of model PTG60B or model PTG60F

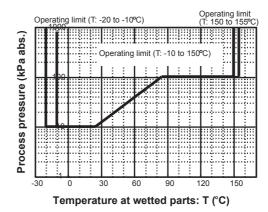


Figure 5 Minimum working pressure for model PTG60K

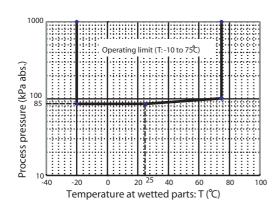
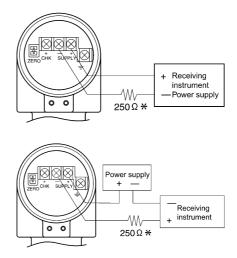


Figure 6 Minimum working pressure for model PTG60B or model PTG60G (Fluoline oil for Oxygen and chlorine models.



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

# Index of detailed specifications for process connection types

<b>Process connection</b>	<b>Process connection</b>	style	Meas	surement span	Reference page
Screw type Model PTG60G	G3/8 external G1/2 external Rc3/8 internal Rc1/2 internal 1/2NPT internal M20 × 1.5 external	thread thread thread 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 <sup>2</sup> } {0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> } {10.20 to 101.9 kgf/cm <sup>2</sup> }	6 to 11
	Rc1/4 internal (G1/2 external 1/4NPT internal M20 × 1.5 external	thread thread	5 to 50 MPa	{51.0 to 509 kgf/cm²}	
Flush diaphragm type Model PTG60B	G2-inch external th	nread	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 <sup>2</sup> } {0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> } {10.20 to 101.9 kgf/cm <sup>2</sup> }	12 to 14
	G1/2-inch external t	thread	0.2 to 2 MPa 1 to 10 MPa	{2.04 to 20.3 kgf/cm <sup>2</sup> } {10.20 to 101.9 kgf/cm <sup>2</sup> }	
Flange type Model PTG60F	JIS 30K 50 JIS 10K 15	0 mm 0 mm 5 mm 5 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 <sup>2</sup> } {0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> } {10.20 to 101.9 kgf/cm <sup>2</sup> }	15 to 18
Ferrule type (Direct mount) Model PTG60S	IDF 2S clan IDF 1½S clan IDF 1S clan	np	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm <sup>2</sup> } {0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> }	19 to 21
	IDF 2S cap IDF 1½S cap		2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm <sup>2</sup> } {0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> }	22 to 24
Ferrule type with cooling tower Model PTG60K	IDF 2S clan IDF 1½S clan	-	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm <sup>2</sup> } {0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> }	25 to 27
	IDF 1S clan	np	40 to 400 kPa 0.2 to 2 MPa	{0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> }	
	IDF 2S cap IDF 1½ inch ca		2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm <sup>2</sup> } {0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> }	28 to30
Remote seal with ferrule type (Capillary 1, 3, 5 m)	IDF 2S clan	np	2.0 to 100 kPa 40 to 400 kPa 0.2 to 2 MPa	{0.021 to 1.019 kgf/cm <sup>2</sup> } {0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> }	31 to 33
Model PTG60T	IDF 1½S clan	np	40 to 400 kPa 0.2 to 2 MPa	{0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> }	
	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 <sup>2</sup> } {0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> }	34 to 36
	IDF 1½S cap	nut	40 to 400 kPa 0.2 to 2 MPa	{0.408 to 4.07 kgf/cm <sup>2</sup> } {2.04 to 20.3 kgf/cm <sup>2</sup> }	

# **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, G3/8 external thread.
PTG60G 5	0.2 to 2 MPa	-0.1 to 2 MPa	4 MPa	G1/2 external thread, 1/2NPT internal thread,
PTG60G 6	1 to 10 MPa	-0.1 to 10MPa	20 MPa	1/21vi i internai un'eau,
PTG60G 7	5 to 50 MPa	-0.1 to 50 MPa	75 MPa*	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	$\pm 0.5\% \text{ F.S.} (100 \text{ kPa} > \text{X} > 20 \text{ kPa})$ $\pm (0.5 \times 20 / \text{X})\% \text{ F.S.} (20 \text{ kPa} > \text{X} > 2 \text{ kPa})$
Zero temperature effect per 30°C *1	± (0.5×40 / X + 0.35)%

### Model PTG60G-\_4

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

### Model PTG60G-\_5

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

### Model PTG60G-\_6

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

## Model PTG60G-\_7

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

Note) \*1:Within a range of  $URV \ge 0$  and  $LRV \ge 0$ \*2:Negative pressure accuracy Accuracy, which is greater value of either  $\pm 3\%$  F.S. or

## **Ambient temperature limits**

upper calculated accuracy.

### 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.

# **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

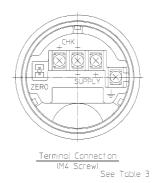
Model number structure: Basic model number - selection - Option1 - Option2

Type of protection		Sele	ction			Option	<b>1</b>	Option	12
Type of protection		Basic model number PTG60G -				-		-	
Type of protection									
Electrical conduit: G1/2	Product description	Gauge pressure transmitter: Screw connection type PTG60G							
Electrical conduit: G1/2		-							
Description   Section   Section	Type of protection								
40 to 400 kPa (0.408 to 4.07 kgf/cm²)   4   4   6   6   6   5   6   6   6   6   6   6		Electrical conduit: G1/2							
0.2 to 2 MPa (2.04 to 20.3 kg/fcm²)   5   1 to 10 MPa (10.20 to 101.9 kg/fcm²)   6   6   5   5 to 50 MPa (51.0 to 509 kg/fcm²)   7   7   8   1   1   1   1   1   1   1   1   1	Measuring span	, _ ,	3						
1 to 10 MPa (10.20 to 101.9 kgf/cm²)			4						
S to 50 MPa (51.0 to 509 kg/f/m²)   7		0.2 to 2 MPa (2.04 to 20.3 kgf/cm <sup>2</sup> )	5						
Material:   Diaphragm / wetted Diaphragm / wetted parts other than diaphragm / fill fluid   SUS316L / SUS316 / Fluorine oil   B2   B2   B2   B2   B2   B2   B2   B		1 to 10 MPa (10.20 to 101.9 kgf/cm <sup>2</sup> )	6						
Diaphragm / wetted parts other than diaphragm / wetted parts other than diaphragm / fill fluid		5 to 50 MPa (51.0 to 509 kgf/cm <sup>2</sup> )	7						
Parts other than dia-phragm / fill fluid   B2   Process connection   B2   Process connection   G1/2 external thread   G3/8 external thread (Not applicable for measuring span code "7")   G2   Rc 1/2 internal thread (Not applicable for measuring span code "7")   C4   Rc 3/8 internal thread (Not applicable for measuring span code "7")   N2   1/4NPT internal thread (Not applicable for measuring span code "7")   N2   1/2NPT internal thread (Not applicable for measuring span code "7")   N4   Process connection   No option   X   X   X   X   X   X   X   X   X	Material:	SUS316L / SUS316 / Silicone oil		B1					
Phragm / fill fluid									
Process connection   G1/2 external thread   G4		SUS316L / SUS316 / Fluorine oil		B2					
G3/8 external thread (Not applicable for measuring span code "7")   G3   Rc 1/4 internal thread (Applicable only for measuring span code "7")   C2   Rc 1/2 internal thread (Not applicable for measuring span code "7")   C3   1/4NPT internal thread (Not applicable for measuring span code "7")   N2   1/2NPT internal thread (Not applicable for measuring span code "7")   N4   No option	Process connection	G1/2 external thread			G4				
Rc 1/4 internal thread (Applicable only for measuring span code "7")									
Rc1/2 internal thread (Not applicable for measuring span code "7")									
Rc3/8 internal thread (Not applicable for measuring span code "7")   N2   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									
1/4NPT internal thread (Applicable only for measuring span code "7") N2   1/2NPT internal thread (Not applicable for measuring span code "7") N4   N4   N5   N4   N5   N5   N5   N5									
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									
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         Z           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	Option 1					_			
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         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						7	X		
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	-	tor				N	М		
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						]	В		
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		-				- (	C		
Water and oil free finish  Option2  No option  Test report  Material certificate  Documents conforming to Japanese high pressure gas control law  Over-pressure leak test  Strength calculation sheet (JIS)  Traceability certificate  Mounting bracket  Certificate of oil free finish  Certificate of oil free and No water finish  P									
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	1					I	Η		
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	Option2							-	
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									X
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		•							
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	Material certificate						2		
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						3			
Strength calculation sheet (JIS)  Traceability certificate  Mounting bracket  Certificate of oil free finish  Certificate of oil free and No water finish  P	7 7 7								
Traceability certificate 6  Mounting bracket H  Certificate of oil free finish J  Certificate of oil free and No water finish P	•					5			
Mounting bracket  Certificate of oil free finish  J  Certificate of oil free and No water finish  P						6			
Certificate of oil free finish  Certificate of oil free and No water finish  P	·					Н			
Certificate of oil free and No water finish P									
Documents conforming to Japanese high pressure gas control law and thickness test report  Y	Certificate of oil free and No water finish					P			

[Unit: mm]

Materials of construction

KEY No.	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316 (Diaghragm SUS 316L)
3	Joint	SUS 316



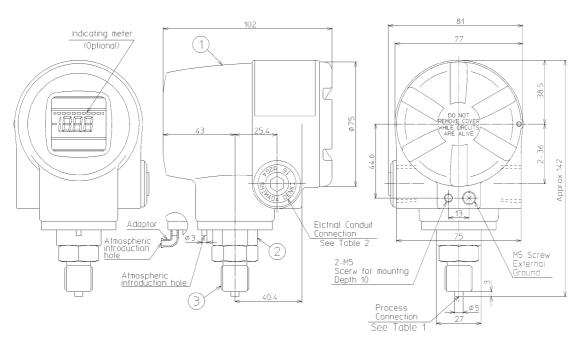


Table1 (See Inst. spec.)

Mode No.		Thread T	ype of
Thread Type	Thread Size	Process	Connection
G	3	G3/8	External

Table2 (See Inst. spec.)

Mode No.		Electrical				
Selection	Optional2	Conduit Connection				
A.B	_	G 1/2 Internal				
	_	1/2NPT Internal				
N. D. L	T	M20 Internal (1 pc )				
	U	M20 Internal (2 pcs)				

Table3 Terminal

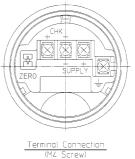
Symbol	Terminal				
SUPPLY + SUPPLY -	Power supply and output signal				
CHK+, CHK-	Check meter				
<u>+</u>	Ground				
ZER0	ZERO Adjuster				

Process connection: G3/8 External

[Unit: mm]

Materials of construction

KE)	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316 (Diaghragm SUS 316L)
3	Joint	SUS 316



Terminal Connection
(M4 Screw)
See Table 3

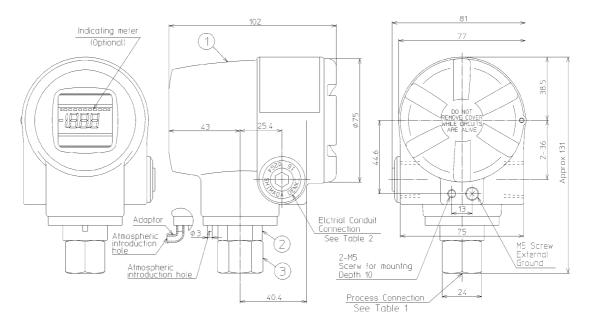


Table1 (See Inst. spec.)

rubler (See IIIS), Spec./				
Mode	No.	Thread Type of		
Thread Type	Thread Size	Process Connection		
C	3	Rc3/8 Internal		

Table2 (See Inst. spec.)

rabicz locc mor. opcc./			
Mode	No.	Electrical	
Selection	Optional2	Conduit Connection	
A.B	_	G 1/2 Internal	
	_	1/2NPT Internal	
N.D.L	T	M20 Internal (1 pc )	
	U	M20 Internal (2pcs)	

Table3 Terminal

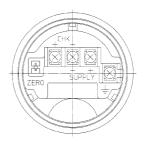
abres reminar				
Symbol Terminal				
SUPPLY +, SUPPLY -	Power supply and output signa.			
CHK+, CHK-	Check meter			
<u></u>	Ground			
ZERO	ZERO Adjuster			

Process connection:Rc3/8 Internal

[Unit: mm]

Materials of construction

k	ÆΥ Vo.	Description	Materials
Γ	1	Case	Aluminum alloy
	2	Body	SUS 316 (Diaghragm SUS 316L)



Terminal Connection
(M4 Screw)
See Table 3

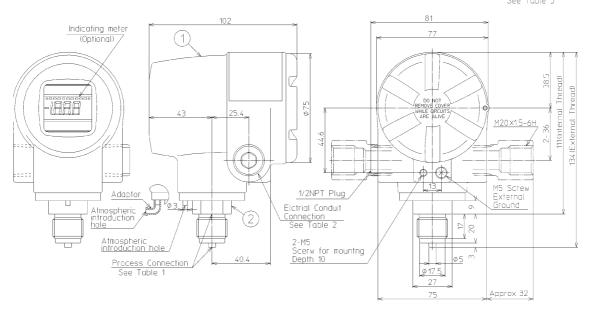


Table1 (See Inst. spec.)

rabital loca mon opean				
Mode No.		Thread Typ	be of	
Thread Type	Thread Size	Process Connection		
G	4	G1/2	External	
N	4	NPT 1/2	Internal	
C	4	Rc 1/2	Internal	

Table2 (See Inst. spec.)

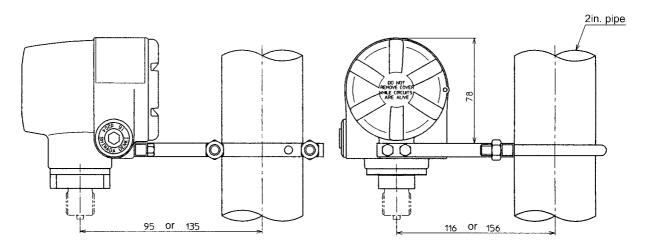
Mode No.		Electrical	
Selection	Optional2	Conduit Connection	
— 1/2NPT Internal		1/2NPT Internal	
N.D.L	Т	M20 Internal (1 pc )	
	U	M20 Internal (2 <b>pcs</b> )	

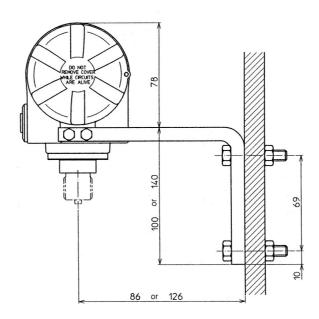
Table3 Terminal

Symbol	Ternina.	
SUPPLY + SUPPLY -	Power supply and output signal	
CHK+, CHK-	Check meter	
±	Ground	
ZERO	ZERO Adjuster	

Process connection : G1/2 External : 1/2NPT internal : M20×1.5 External

[Unit: mm]





# Flush diaphragm type

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



# Measuring span / Setting range / Max. working pressure

	<u> </u>			
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	G2 external tillead
PTG60B 5	0.2 to 2 MPa	-0.1 to 2 MPa	4MPa	G2 external thread
PTG60B 6	1 to 10 MPa	-0.1 to 10 MPa	20MPa	G1/2 external thread

# **Accuracy / Temperature effect**

### Model PTG60B-\_3

Accuracy *1, *2	$ \begin{array}{l} \pm \ 0.5\% \ F.S. \ (100 \ kPa \ge X \ge 20 \ kPa) \\ \pm \ (0.5 \times 20 \ / \ X)\% \ F.S. \ (20k \ Pa \ge X \ge 2.0 \ kPa) \end{array} $		
Zero temperature effect per 30°C *1	G2 external thread	± (4.7 ×40 / X + 0.35)%	

## Model PTG60B-\_4

Accuracy *1, *2 $\pm 0.5\%$ F.S. $(400 \text{ kPa} \ge \text{X} \ge 80 \text{ kPa})$ $\pm (0.5 \times 80 \text{ / X})\%$ F.S. $(80 \text{ kPa} \ge \text{X} \ge 40 \text{ kPa})$
--

Zero temperature	G2 external thread	$\pm (2.5 \times 80 / X + 0.35)\%$
effect per 30°C *1	G2 externar unread	$\pm (2.3 \times 80 / \Lambda \pm 0.33)\%$

### Model PTG60B-\_5

Accuracy *1, *2	$ \begin{array}{l} \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) \end{array} $				
Zero temperature	G2 external thread	$\pm (0.82 \times 0.4 / X + 0.35)\%$			
effect per 30°C *1	G1/2 external thread	$\pm (10.8 \times 0.4 / X + 0.35)\%$			

### Model PTG60B-\_6

Accuracy *1, *2	± 0.5% F.S. (10.0 MP) ± (0.5 × 2.0 / X)% F.S	$a \ge X \ge 2.0 \text{ MPa}$ 5. $(2.0 \text{ MPa} \ge X \ge 1.0 \text{ MPa})$
Zero temperature	G2 external thread	± (0.49 × 2.0 / X + 0.35)%
effect per 30°C *1	G1/2 external thread	$\pm (2.48 \times 2.0 / X + 0.35)\%$

Note) \*1:Within a range of  $URV \ge 0$  and  $LRV \ge 0$ 

\*2:Negative pressure accuracy Accuracy, which is greater value of either ±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. 2.5 kg
- G1/2 inch external thread: Approx. 1.5 kg

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

## **Smart pressure transmitter model PTG60B**

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

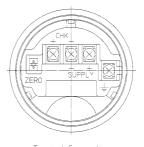
Measuring span: 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa, 1 to 10 MPa Model number structure: Basic model number - Selection - Option 1 - Option 2

	·	1	_ ;	Selecti	ion			Op	tion1	Opti	on2
	Basic model number	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/cm²) (Not applicable for process connection G1/2)				3						
	40 to 400 kPa (0.408 to 4.07 kgf/cm²) (Not applicable for process connection G1/2)				4						
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm²)				5						
	1 to 10 MPa (10.20 to 101.9 kgf/cm²)				6						
Material: Diaphragm / wetted	SUS316L / SUS316L / Silicone oil					C1					
parts other than dia- phragm /fill fluid	SUS316L / SUS316L / Propylene glycol					СВ					
Process connection	G2 external thread						AGF				
Process connection	G1/2 external thread						AG4				
Option 1							•	-			
No option									X		
Built-in digital indica	ator								M		
Heavy duty corrosion	n-proof coating								В		
Remote communicat	ion function								С		
Wetted a sate Cariela	Oil free finish								G		
Wetted parts finish	Water and oil free finish								Н		
Option2									•	-	
No option											X
Test report											1
Material certificate											2
Documents conformi	ing to Japanese high pressure gas control law										3
Over-pressure leak to	est										4
Strength calculation	sheet (JIS)										5
Traceability certifica	te										6
Mounting bracket											Н
Certificate of oil free	finish										J
Certificate of oil free	and No water finish										P

[Unit: mm]

Materials of construction

K	ΈΥ Ιο.	Description	Materials
	1	Case	Aluminum alloy
	2	Body	SUS 316 (Diaghragm SUS 316L)
Γ	3	Wetted Part	SUS 316L



Terminal Connection
(M4 Screw)
See Table 3

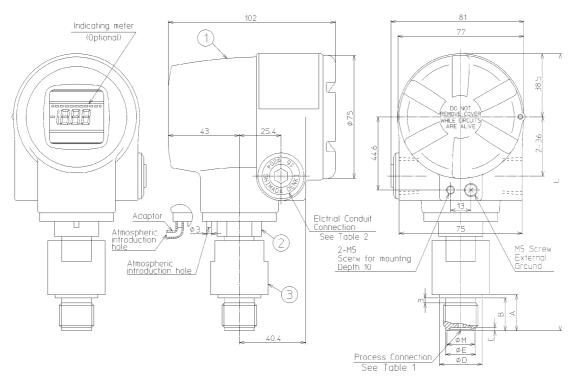


Table1 (See Inst. spec.)

rubier (See inst. Spee)												
	Mode No		Thread 1		Type of	Α.	_	40	_	a =	414	
Fitting	Thread Type	Thread Size	Proc	ess	Connection (G)	А	В	φυ	L	ΨE	Ø141	L
Λ.		4	G	1/2	External	22	20	26	2	18.2	17	Approx 172
A	U	F	G	2	External	30	_	_	_	_	43	Approx. 180

Table2 (See Inst. spec.)

Mode No.	Electrical Con	duit Connection
А, В	G 1/2	Internal
N, D, L	1/2NPT	Internal

Table3 Terminal

Symbol	Terminal
SUPPLY +, SUPPLY -	Power supply and output signal
CHK+, CHK-	Check meter
<u></u>	Ground
ZERO	ZERO Adjuster

# 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
PTG60F3	2.0 to 100 kPa	-100 to 100 kPa	200 kPa	
PTG60F4	40 to 400 kPa	-100 to 400 kPa	800 kPa	2 inches (50 mm),
PTG60F - _5	0.2 to 2 MPa	-0.1 to 2 MPa	4 MPa or flange rating	1/2 inch (15 mm)
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	$ \begin{array}{l} \pm \ 0.5\% \ F.S. \ (100 \ kPa \geq X \geq 20 \ kPa) \\ \pm \ (0.5 \times 2 \ 0 \ / \ X)\% \ F.S. \ (20 \ kPa > X > 2 \ kPa) \end{array} $							
Zero temperature	2 inches (50 mm)	$\pm (4.5 \times 40 / X + 0.35)\%$						
effect per 30°C *1	1/2 inch (15 mm)	$\pm (10.0 \times 40 / X + 0.35)\%$						

### Model PTG60F-\_4

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

### Model PTG60F-\_5

Accuracy *1 *2	$ \begin{array}{l} \pm \ 0.5\% \text{F.S.} \ (2\text{MPa} \ge \text{X} \ge 0.4\text{MPa}) \\ \pm \ (0.5 \times 0.4 \ / \ \text{X})\% \text{F.S.} \ (0.4\text{MPa} \ge \text{X} \ge 0.2\text{MPa}) \end{array} $			
Zero temperature	2 inches (50 mm)	± (0.8×0.4 / X + 0.35)%		
effect per 30°C *1	1/2 inch (15 mm)	± (1.4×0.4 / 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	2 inches (50 mm)	$\pm (0.5 \times 2.0 / X + 0.35)\%$				
effect per 30°C *1	1/2 inch (15 mm)	$\pm (0.5 \times 2.0 / X + 0.35)\%$				

Note) \*1:Within a range of  $URV \ge 0$  and  $LRV \ge 0$ 

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

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

<sup>\*2:</sup>Negative pressure accuracy

# **Smart pressure transmitter model PTG60F**

Process connection: Flange type

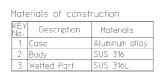
Measuring span: 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa, 1 to 10 MPa Model number structure: Basic model number - Selection - Option1 - Option2

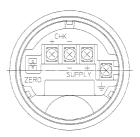
tion   Flange mount type   Pl Goop				_	Selec	tion						Opt	ion1	Opti	on2
tion   Flange mount type   Pl 1000F		Basic model number	PTG60F	-								-		-	
tion   Flange mount type   Pl 1000F															
Type of protection	Product descrip-		PTG60F												
Electrical conduit: G1/2   3	tion	Flange mount type	110001												
Electrical conduit: G1/2   3	m 0	III		-											
A0 to 400 kPa (0.408 to 4.07 kg/cm²)	Type of protection				G										
D. 2 to 2 MPa (2.04 to 20.3 kgf/cm²)   5     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     2 to 2 MPa (2.04 to 20.3 kgf/cm²)   6     3 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     4 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     5 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     6 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     6 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     6 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     6 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     6 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     6 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     6 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     7 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     8 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     9 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   6     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 101.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 MPa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7     1 to 10 Mpa (10.20 to 10.9 kgf/cm²)   7	Measuring span	2.0 to 100 kPa (0.021 to 1.019 kgf/c	m²)			3									
Tito 10 MPa (10.20 to 101.9 kg//cm²)		40 to 400 kPa (0.408 to 4.07 kgf/cm	2)			4									
Material Diaphragm / wetted Diaphragm / wetted parts other than diaphragm/fill fluid   SUS316L/SUS316L/Propylene glycol   CB   SUS316L/SUS316L/SUS316L/Propylene glycol   CB   SUS316L/SUS316L/SUS316L/Propylene glycol   CB   SUS316L/SUS31		0.2 to 2 MPa (2.04 to 20.3 kgf/cm <sup>2</sup> )				5									
Diaphragm / wetted parts other than diaphragm/fill fluid		1 to 10 MPa (10.20 to 101.9 kgf/cm	2)			6									
Phragm/fill fluid   SUS316L/SUS316L/Propylene glycol   CB	Material Diaphragm / wetted	SUS316L / SUS316L / Silicone oil					C1								
Standard/rating   JIS 30K *1	parts other than dia- phragm/fill fluid	SUS316L/SUS316L/Propylene glyc	ol				СВ								
Flange diameter	Flange	ЛS 10K						A							
Tinch / 25 mm *2	standard/rating	JIS 30K *1						D							
1/2 inch / 15 mm	Flange diameter	2 inches / 50 mm							3						
Flange material   SUS304   S   Flange extension   None   X   Option 1   -		1 inch / 25 mm *2							5						
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         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		1/2 inch / 15 mm							7						
Option 1         -           No option         X           Built-in digital indicator         M           Heavy duty corrosion-proof coating         B           Remote communication function         C           Wetted parts finish         G           Water and oil free finish         G           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	Flange material	SUS304								S					
No option         X           Built-in digital indicator         M           Heavy duty corrosion-proof coating         B           Remote communication function         C           Wetted parts finish         G           Water and oil free finish         G           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	Flange extension	None									X				
Built-in digital indicator         M           Heavy duty corrosion-proof coating         B           Remote communication function         C           Wetted parts 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	Option 1														
Heavy duty corrosion-proof coating         B           Remote communication function         C           Wetted parts finish         Oil free finish         G           Water and oil free finish         H           Option2         Z           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	No option												X		
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	Built-in digital ind	icator											M		
Wetted parts 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	Heavy duty corrosi	ion-proof coating											В		
Wetted parts 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	Remote communic	ration function											C		
Option2-No optionXTest report1Material certificate2Documents conforming to Japanese high pressure gas control law3Over-pressure leak test4Strength calculation sheet (JIS)5Traceability certificate6Mounting bracketHCertificate of oil free finishJ	Wattad narta finish	Oil free finish											G		
Option2-No optionXTest report1Material certificate2Documents conforming to Japanese high pressure gas control law3Over-pressure leak test4Strength calculation sheet (JIS)5Traceability certificate6Mounting bracketHCertificate of oil free finishJ	wetted parts fillish	Water and oil free finish											Н		
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 1	Option2													-	
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	No option														X
Documents conforming to Japanese high pressure gas control law  Over-pressure leak test  Strength calculation sheet (JIS)  Traceability certificate  Mounting bracket  Certificate of oil free finish  3  4  Strength calculation sheet (JIS)  5  Traceability certificate  6  Mounting bracket  J	Test report														1
Over-pressure leak test 4 Strength calculation sheet (JIS) 5 Traceability certificate 6 Mounting bracket H Certificate of oil free finish J	Material certificate	;													2
Strength calculation sheet (JIS) 5 Traceability certificate 6 Mounting bracket H Certificate of oil free finish J	Documents conform	ming to Japanese high pressure gas co	ontrol law												3
Traceability certificate 6 Mounting bracket H Certificate of oil free finish J	Over-pressure leak	test													4
Mounting bracket H Certificate of oil free finish J	Strength calculation sheet (JIS)							5							
Certificate of oil free finish J	Traceability certificate							6							
	Mounting bracket														Н
Certificate of oil free and No water finish P															J
	Certificate of oil fr	ee and No water finish													P

Note) \*1 Flange rating JIS 20K cannot be selected with flange size 2 inches / 50 mm.

<sup>\*2</sup> Flange size 1 inch / 25 mm is applicable only with flange rating JIS 20K

[Unit: mm]





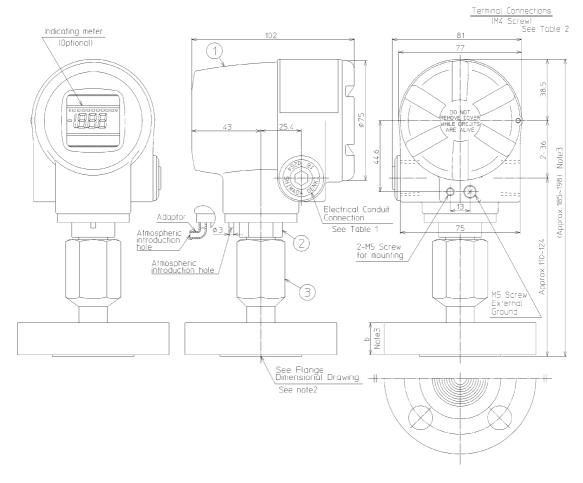


Table1 (See Inst. spec.)

Model No.	Electrical Conduit Connection
А, В	G 1/2 Internal
N, D, L	1/2 NPT Internal

Table2 Terminal

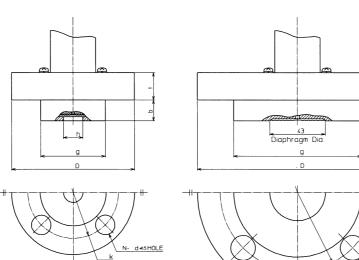
Symbol	Terminal
SUPPLY + SUPPLY -	Power supply and output signal
CHK++CHK-	Check meter
÷	Ground
ZER0	ZERO Adjuster

Note) 1. See Table 1.

- 2. See flange dimensions on proceeding pages.
- 3. See flange dimensions on proceeding pages.
- 4. Do not loosen. Loosening the flange can cause fill fluid leakage.

JIS 10K - 15 mm / 25 mm

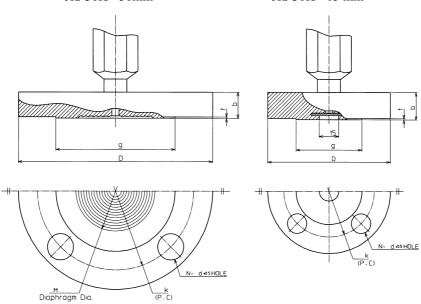
JIS 10K - 50 mm



Flange rating	$\mathbf{D}_{0}^{-1}$	gg	k	N	$d^{\pm0.5}$	1 <sup>+1</sup>	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 - 50mm

JIS 30K - 15 mm



Flange rating	D-1	g	k	N	$d^{\pm0.5}$	M	b <sup>+1</sup>	f
JIS 30K - 15 mm	115	55	80	4	19	ı	21	1
JIS 30K - 50 mm	165	105	130	8	19	59	22	2

# Ferrule type

## (1S, 1½S, 2S clamp type)



# Measuring span / Setting range / Max. working pressure

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60S3	2.0 to 100 kPa	-100 to 100 kPa	200 kPa	2S, 1½S
PTG60S4	40 to 400 kPa	-100 to 400 kPa	800 kPa or clamp rating	2S, 1½S, 1S
PTG60S5	0.2 to 2 MPa	-0.1 to 2 MPa	4 MPa or clamp rating	25, 1/25, 15

# Accuracy / Max. working pressure

## Model PTG60S-\_3

Accuracy *1, *2	$\pm 0.5\%$ F.S. $(100 \text{ kPa} \ge \text{X} \ge 20 \text{ kPa})$ $\pm (0.5 \times 20 / \text{X})\%$ F.S. $(20 \text{ kPa} \ge \text{X} \ge 2 \text{ kPa})$					
Zero tempera- ture effect per	2S (Clamp type)	± (2.4 × 40 / X + 0.35)%				
30°C *1	1½S (Clamp type)	$\pm (5.7 \times 40 / X + 0.35)\%$				

### Model PTG60S-\_4

Accuracy *1, *2	$\pm 0.5\%$ F.S. $(400 \text{ kPa} \ge X \ge 80 \text{ kPa})$ $\pm (0.5 \times 80 / X)\%$ F.S. $(80 \text{ kPa} \ge X \ge 40 \text{ kPa})$					
	28	± (1.3 × 80 / X + 0.35)%				

Zero tempera-	2S (Clamp type)	$\pm (1.3 \times 80 / X + 0.35)\%$
ture effect per	1½S (Clamp type)	$\pm (3.0 \times 80 / X + 0.35)\%$
30 C	1S (Clamp type)	± (30.4 × 80 / X + 0.35)%

## Model PTG60S-\_5

Accuracy *1, *2	$\pm (0.5 \times 0.4 / X)\%$	$F.S.(0.4MPa \ge X \ge 0.2MPa)$
		T

Zero tempera- ture effect per 30°C *1	2S (Clamp type)	$\pm (0.58 \times 0.4 / X + 0.35)\%$
	1½S (Clamp type)	$\pm (0.92 \times 0.4 / X + 0.35)\%$
30 C	1S (Clamp type)	$\pm (6.4 \times 0.4 / X + 0.35)\%$

te) \*1:Within a range of  $URV \ge 0$  and  $LRV \ge 0$ 

\*2:Negative pressure accuracy Accuracy, which is greater value of either ±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

- IDF 1S clamp type
- IDF 11/2S clamp type
- IDF 2S clamp type

## 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

			Select	ion			Oı	otion1	Opti	on2
	Basic model number	PTG60S								
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 kg (Not applicable for process connec			3						
	40 to 400 kPa (0.408 to 4.07 kgf/cr	n²)		4						
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm <sup>2</sup> )	)		5						
Material: Diaphragm / wetted parts other than dia- phragm/fill fluid	SUS316L / SUS316L / Propylene g	glycol			СВ					
Process connection	IDF 1S ferrule clamp type					AH2X				
	IDF1½S ferrule clamp type					AH3X				
	IDF 2S ferrule clamp type					AH4X				
Option 1							-			
No option							•	X		
Built-in digital indicat	tor							M		
Heavy duty corrosion-	-proof coating							В		
Remote communication	on function							С		
Wetted parts finish	Anti-dynamic pressure specificatio	n *1						F		
	Anti-pulsation specification *2							J		
	Oil free finish							G		
	Water and oil free finish							Н		
	Electrolytic grinding							K		
	Passive state finish							W		
Option2									-	
No option										X
Test report										1
Material certificate										2
Documents conformir	ng to Japanese high pressure gas cont	rol law								3
Over-pressure leak tes	et									4
Strength calculation sheet (JIS)							5			
Traceability certificate								6		
Mounting bracket										Н
Certificate of oil free										J
Certificate of oil free	and No water finish									P

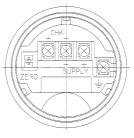
Note) \*1 Not applicable for ferrule size 1S. The temperature effect will be 3.5 times of the standard. Wetted parts temperature range is +10 to +90°C.

<sup>\*2</sup> 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.

[Unit: mm]

Materials of construction

KEY No.	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316
3	Ferrule	SUS 316L (Diaghragm SUS 316L)



Terminal Connections
(M4 Screw)
See Table 3

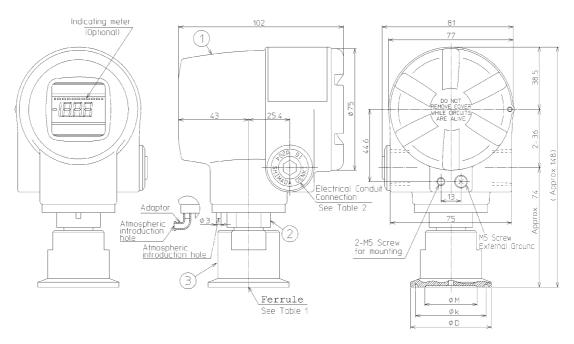


Table1 (See Inst. spec.)

rable rable mon opec.						
Model No.		Ferrlue		Øk	ØΜ	
Rating	Fitting	Size	size	D	ΨK	WI.I
		2	IDF 1S	50.5	435	22
Α	Н	3	IDF 1.5S	20.3	43.0	28
		4	IDF 2S	64	56.5	43

Table2 (See Inst. spec.)

Model No.	Electrical Cond	luit Connection
A, B	G 1/2	Internal
N, D, L	1/2 NPT	Internal

Table3 Terminal

Tables Terminal	
Symbol	Terminal
SUPPLY +, SUPPLY -	Power supply and cutput signal
CHK+.CHK-	Check meter
±	Ground
ZER0	ZERO Adjuster

# Ferrule type

## (1½ 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	
PTG60S 4	40 to 400 kPa	-100 to 400 kPa	800 kPa or cap nut rating	2S, 1½S
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. $(100 \text{ kPa} \ge \text{X} \ge 20 \text{ kPa})$
riccurucy	$\pm (0.5 \times 20 / X)\%$ F.S. $(20 \text{ kPa} \ge X \ge 2 \text{ kPa})$

1	2S (Cap nut type)	± (2.4 × 40 / X + 0.35)%
effect per 30°C *1	1½S (Cap nut type)	$\pm (5.7 \times 40 / X + 0.35)\%$

### Model PTG60S-\_4

Accuracy *1, *2	$ \begin{array}{l} \pm \ 0.5\% \ F.S. \ (400 \ kPa \ge X \ge 80k \ Pa) \\ \pm \ (0.5 \times 80 \ / \ X)\% F.S. \ (80 \ kPa \ge X \ge 40 \ kPa) \end{array} $		
Zero temperature	2S (Cap nut type)	$\pm (1.3 \times 80 / X + 0.35)\%$	
effect per 30°C *1	1½S (Cap nut type)	$\pm (3.0 \times 80 / X + 0.35)\%$	

### Model PTG60S- 5

	<del>_</del>
Accuracy 1, 4	$ \begin{array}{l} \pm \ 0.5\% \ F.S. \ (2 \ MPa \ge X \ge 0.4 \ MPa) \\ \pm \ (0.5 \times 0.4 \ / \ X)\% \ F.S. \ (0.4 \ MPa \ge X \ge 0.2M \ Pa) \end{array} $

		$\pm (0.58 \times 0.4 / X + 0.35)\%$
effect per 30°C *1	1½S (Cap nut type)	$\pm (0.92 \times 0.4 / X + 0.35)\%$

*Note)* \*1: Within a range of  $URV \ge 0$  and  $LRV \ge 0$ 

\*2:Negative pressure accuracy Accuracy, which is greater value of either ±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

1½ inch : Approx. 1.4 kg
 2 inches : Approx. 1.7 kg

- IDF 1½S cap nut type
- IDF 2S cap nut type

# **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

		_	S	electio	n			(	Option1	Opti	ion2
		PTG60S	-					-		-	
										ı	
Product Description	Gauge pressure transmitter: Ferrule type	PTG60S									
			-								
Type of protection	Water and dust proof: IEC IP67 Electrical conduit: G1/2										
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 dia- phragm/fill fluid	SUS316L / SUS316L / Propylene glyo	col				СВ					
Process connection	IDF 1½S ferrule cap nut type						AC3X				
	IDF 2S ferrule cap nut type						AC4X				
Option 1								-			
No option								•	X		
Built-in digital indic	eator								M		
Heavy duty corrosion	on-proof coating								В		
Remote communica	tion function								С		
Wetted parts finish	Anti-dynamic pressure specification *	1							F		
	Anti-pulsation specification *2								J		
	Oil free finish								G		
	Water and oil free finish								Н		
	Electrolytic grinding								K		
	Passive state finish								W		
Option2										-	
No option											X
Test report											1
Material certificate											2
	ning to Japanese high pressure gas cont	rol law									3
Over-pressure leak	test										4
Strength calculation sheet (JIS)								5			
Traceability certific	ate										6
Mounting bracket											Н
Certificate of oil fre											J
Certificate of oil fre	e and No water finish										P

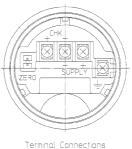
Note) \*1 The temperature effect will be 3.5 times of the standard. Wetted parts temperature range is +10 to  $+90^{\circ}C$ .

<sup>\*2</sup> 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  $+45^{\circ}$ C.

[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 3

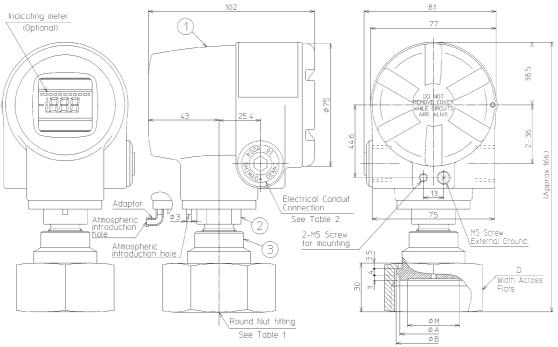


Table1 (See Inst. spec.)

	Model	No.	Fitting	Ь	øМ	۸	В
Rating	Fitting	Size	Size(d)	U	WI'I	A	
Α	-	3	IDF 1.5S	60	28	42.7	47
A		4	IDF 2S	75	43	56.2	60.5

Table2 (See Inst. spec.)

Model No.	Electrical Cond	uit Connection
A, B	G 1/2	Internal
N, D, L	1/2 NPT	Internal

Table3 Terminal

Symbol	Terminal
SUPPLY +, SUPPLY -	Power supply and output signal
CHK+, CHK-	Check meter
<u>+</u>	Ground
ZERO	ZERO Adjuster

# Ferrule with cooling tower

(1 inch, 1 ½ 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, 1½S
PTG60K 4	40 to 400 kPa	-100 to 400 kPa	800 kPa or clamp rating	2S, 1½S,
PTG60K 5	0.2 to 2 MPa	-0.1 to 2 MPa	4 MPa or clamp rating	1S

# **Accuracy / Temperature effect**

## Model PTG60K-\_3

<b>Zero tempera-</b> 2S (Clamp type) $\pm (2.5 \times 40 / X + 0.35)\%$	Accuracy *1, *2		$kPa \ge X \ge 20 \text{ kPa}$ ) F.S. $(20 \text{ kPa} \ge X \ge 2 \text{ kPa})$
	Zero tempera-	2S (Clamp type)	$\pm (2.5 \times 40 / X + 0.35)\%$

ture effect per	
30°C *1	pe) $\pm (8.5 \times 40 / X + 0.35)\%$

### Model PTG60K-\_4

Accuracy *1, *2	± 0.5% F.S. (400 kPa > X > 80 kPa) ± (0.5 × 80 / X)% F.S. (80 kPa > X > 40 kPa)		
Zero tempera-	2S (Clamp type)	$\pm (1.4 \times 80 / X + 0.35)\%$	
ture effect per	1½S (Clamp type)	$\pm (4.4 \times 80 / X + 0.35)\%$	

1S (Clamp type)  $\pm (37.5 \times 80 / X + 0.35)\%$ 

### Model PTG60K-\_5

30°С \*1

	$\pm 0.5\%$ F.S. (2 MPa > X > 0.4 MPa)
Accuracy 1, 2	$\pm (0.5 \times 0.4 / X)\%$ F.S. $(0.4 \text{ MPa} > X > 0.2 \text{ MPa})$

	\ 1 31 /	$\pm (0.6 \times 0.4 / X + 0.35)\%$
ture effect per	1½S (Clamp type)	$\pm (1.2 \times 0.4 / X + 0.35)\%$
30°C <sup>*1</sup>	1S (Clamp type)	$\pm (7.8 \times 0.4 / X + 0.35)\%$

Note) \*1:Within a range of  $URV \ge 0$  and  $LRV \ge 0$ 

\*2:Negative pressure accuracy
Accuracy, which is greater value of either ±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

- IDF 1S clamp
- IDF 11/2S clamp
- IDF 2S clamp

# **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

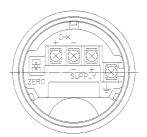
Model number structure: Basic model number - Selection - Option1 - Option2

			Sele	ction			Option	1	Opti	on2
	Basic model numb	ber 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/cm²) (Not applicable for ferrule size 1S)			3						
	40 to 400 kPa (0.408 to 4.07 kgf/cm²)			4						
	0.2 to 2MPa (2.04 to 20.3 kgf/cm²)			5						
Material: Diaphragm / wetted parts other than dia- phragm/fill fluid	SUS316L / SUS316L / Propylene glyco	<b>1</b>			СВ					
Process connec-	IDF 1S ferrule clamp type (Not applical	ble for span code "	'3")			AH2X				
tion	IDF 1½S ferrule clamp type					AH3X				
	IDF 2S ferrule clamp type					AH4X				
Option 1							-			
No option							У			
Built-in digital ind	icator						N	1		
Heavy duty corrosi							E	3		
Remote communic	ation function						(	2		
Wetted parts fin-	Oil free finish						(	j		
ish	Water and oil free finish									
	Electrolytic grinding									
	Passive state finish						V	V		
Option2									-	
No option										X
Test report										1
Material certificate	:									2
Documents conform	ming to Japanese high pressure gas contro	ol law								3
Over-pressure leak										4
Strength calculation	* *									5
Traceability certific	cate									6
Mounting bracket										Н
Certificate of oil fr										J
Certificate of oil fr	ee and No water finish									P

[Unit: mm]

Materials of construction

KEY No.	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316
3	Capillaly A'ssy	SUS 316
4	Wetted Part	SUS 316L



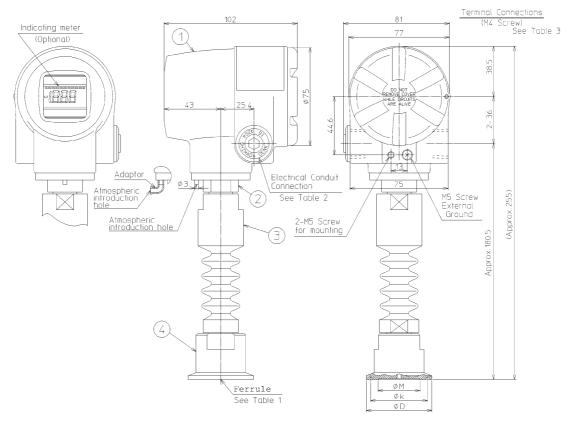


Table1 (See Inst. spec.)

ruble	1.7566	11151.	sher	/			
Model No.			Ferrule		ØD	Øk	øм
Rating	Fitting	Size	Size		Ψυ	ΨK	911
	Н	2	IDF	1S	50.5	43.5	22
Α		3	IDF	1.5S	اد.0د	4.).)	28
		4	IDF	2S	64	56.5	43

Table2 (See Inst. spec.)

Model No.	Electrical Condu	uit Connection
А, В	G 1/2	Internal
N, D, L	1/2 NPT	Internal

Table3 Terminal

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

# Ferrule with cooling tower

(1½ 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	
PTG60K 4	40 to 400 kPa	-100 to 400 kPa	800 kPa or cap nut rating	2S, 1½S
PTG60K 5	0.2 to 2 MPa	-0.1 to 2 MPa	4 MPa or cap nut rating	

# **Accuracy / Temperature effect**

### Model PTG60K-\_3

	<del></del>				
Accuracy *1, *2					
Zero temperature	2S (Cap nut type)	$\pm (2.5 \times 40 / X + 0.35)\%$			
effect per 30°C *1	1½S (Cap nut type)	$\pm (8.5 \times 40 / X + 0.35)\%$			

## Model PTG60K-\_4

Accuracy *1, *2	$ \begin{array}{l} \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) \end{array} $				
Zero temperature	2S (Cap nut type)	± (1.4 × 80 / X + 0.35)%			
effect per 30°C *1	1½S (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)
Accuracy 3, 2	$\pm (0.5 \times 0.4 / X)\%$ F.S. $(0.4 \text{ MPa} \ge X \ge 0.2 \text{ MPa})$

Zero temperature	, ,	$\pm (0.6 \times 0.4 / X + 0.35)\%$
effect per 30°C *1	1½S (Cap nut type)	$\pm (1.2 \times 0.4 / X + 0.35)\%$

Note) \*1:Within a range of  $URV \ge 0$  and  $LRV \ge 0$ 

\*2:Negative pressure accuracy Accuracy, which is greater value of either ±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

• 1½ inch: Approx. 1.6 kg

• 2 inches: Approx. 1.9 kg

- IDF 11/2S cap nut type
- IDF 2S cap nut type

# **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

		1	S	electi	on			Opt	ion1	Opti	on2
	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	*			3						
	40 to 400 kPa (0.408 to 4.07 kgf/c	*			4						
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm²	<sup>2</sup> )			5						
Material: Diaphragm / wetted parts other than diaphragm/fill fluid	SUS316L / SUS316L / Propylene	glycol				СВ					
Process connection	IDF 1½S 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-pro									В		
Remote communication f	function								С		
Wetted parts finish	Oil free finish								G		
	Water and oil free finish								Н		
	Electrolytic grinding								K		
	Passive state finish								W		
Option2										-	
No option											X
Test report											1
Material certificate											2
-	o Japanese high pressure gas control	law									3
Over-pressure leak test											4
Strength calculation shee	et (JIS)										5
Traceability certificate											6
Mounting bracket											Н
Certificate of oil free fini											J
Certificate of oil free and	l No water finish										P

[Unit: mm]

Materials of construction

KEY	Description	Materials
1	Case	Aluminum alloy
2	Bady	SUS 316
3	Capillaly A'ssy	SUS 316
4	Wetted Part	SUS 316L

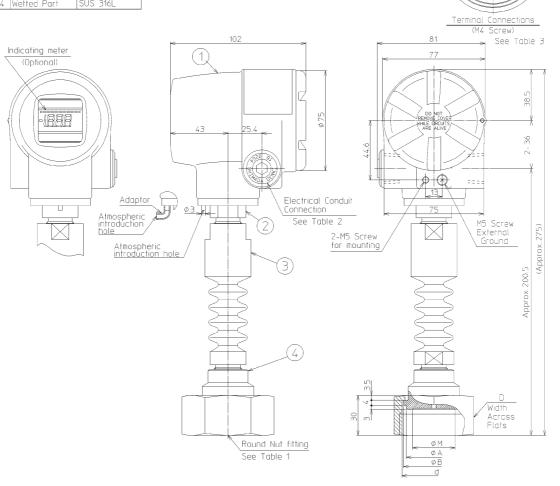


Table1 (See Inst. spec.)

Model No.			Fitting		Б	ØM	Λ	0
Rating	Fitting	Size	Size(đ)		U	Ψη	A	D
٨	-	3	IDF	1.5S	60	28	42.7	47
А		4	IDF	2S	75	43	56.2	60.5

Table2 (See Inst. spec.)

10002	tocc mon opeca
Model No.	Electrical Conduit Connection
A, B	G 1/2 Internal
N, D, L	1/2 NPT Internal

Table3 Terminal

Symbol	Terminal
SUPPLY +.SUPPLY -	Power supply and output signal
CHK+, CHK-	Check meter
÷	Ground
ZER0	ZERO Adjuster

# Remote seal with ferrule type

(1½ inch, 2 inches clamp type)



# Measuring span/ Setting range/ Max. working pressure

Model number	Measuring span	Setting range	Max. working pressure	Process connection
PTG60T-	2.0 to 100 kPa	-100 to 100 kPa	200 kPa	2S
PTG60T4	40 to 400 kPa	-100 to 400 kPa	800 kPa or clamp rating	2S, 1½S
PTG60T-	0.2 to 2 MPa	-0.1 to 2 MPa	4 MPa or clamp rating	25, 1/25

# **Accuracy / Temperature effect**

### Model PTG60T-\_3

$\begin{array}{l} \pm \ 0.5\% \ F.S. \ (100 \ kPa \geq X \geq 20 \ kPa) \\ \pm \ (0.5 \times 20 \ / \ X)\% \ F.S. \ (20 \ kPa \geq X \geq 2 \ kPa) \end{array}$

Zero temperature effect per 30°C *1	2S (Clamp type)	$\pm (11.5 \times 40 / X + 0.35)\%$
--	-----------------	-------------------------------------

## Model PTG60T-\_4

Accuracy *1, *2	$\pm 0.5\% \text{ F.S. } (400 \text{ kPa} \ge X \ge 80 \text{ kPa})$ $\pm (0.5 \times 80 \text{ / X})\% \text{F.S. } (80 \text{ kPa} \ge X \ge 40 \text{ kPa})$				
Zero temperature	2S (Clamp type)	$\pm (5.9 \times 80 / X + 0.35)\%$			
•	( 1 )1 /	$\pm (21.7 \times 80 / X + 0.35)\%$			

### Model PTG60T-\_5

Accuracy *1, *2	$ \begin{array}{l} \pm \ 0.5\% \ F.S. \ (2 \ MPa \ge X \ge 0.4 \ MPa) \\ \pm \ (0.5 \times 0.4 \ / \ X)\% F.S. \ (0.4 \ MPa \ge X \ge 0.2 \ MPa) \end{array} $			
Zero temperature	2S (Clamp type)	$\pm (1.5 \times 0.4 / X + 0.35)\%$		
effect per 30°C *1	1½S (Clamp type)	$\pm (4.65 \times 0.4 / X + 0.35)\%$		

Note) \*1:Within a range of  $URV \ge 0$  and  $LRV \ge 0$ 

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

## **Ambient temperature limits**

## Normal operating ranges

1½ 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)

- IDF 1½S clamp type
- IDF 2S clamp type

# **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

		<b>F</b>	Se	lectio	on				Op	tion1	Opti	on2
		PTG60T	-						-		-	
			Ī						Ĭ			
Product description	Gauge pressure transmitter: Ferrule type with remote seal with SFC Communication	PTG60T										
	I		-									
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 kg (Not applicable for process connections)				3							
	40 to 400 kPa (0.408 to 4.07 kgf/	cm²)			4							
	0.2 to 2 MPa (2.04 to 20.3 kgf/cn	n²)			5							
Material: Diaphragm / wetted parts other than diaphragm/fill fluid	SUS316L / SUS316 L / Propylen	e glycol		1		СВ						
Process connection	IDF 1½S ferrule clamp type						AH3X					
	IDF 2S ferrule clamp type						AH4X					
Capillary length	1 m (with olefin tube)							Е				
	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-prod	of coating									В		
Remote communication fu	inction									C		
Wetted parts finish	Oil free finish									G		
	Water and oil free finish									Н		
	Electrolytic grinding									K		
	Passive state finish									W		
Option2											-	
No option												X
Test report												1
Material certificate												2
	Japanese high pressure gas contro	l law										3
Over-pressure leak test												4
Strength calculation sheet	(JIS)											5
Traceability certificate												6
Mounting bracket												Н
Certificate of oil free finish												J
Certificate of oil free and	No water finish		-						-			P

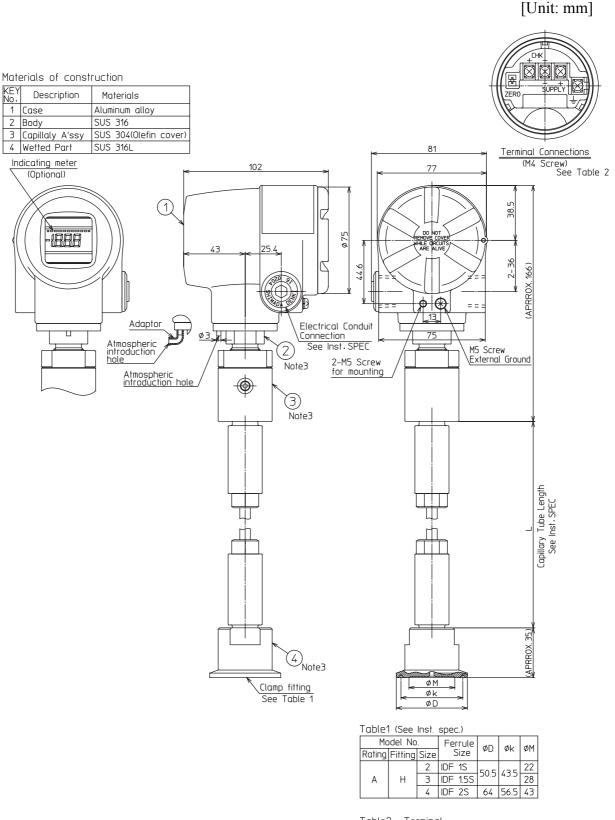


Table2 Terminal

Symbol	Terminal
SUPPLY + SUPPLY -	Power supply and output signal
CHK+, CHK-	Check meter
- -	Ground
ZER0	ZERO Adjuster

# Remote seal with ferrule type

(1½ 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, 1½S
PTG60T 5	0.2 to 2 MPa	-0.1 to 2 MPa	4 MPa or cap nut rating	25, 1/25

## **Accuracy / Temperature effect**

## Model PTG60T-\_3

Accuracy *1, *2	$\pm 0.5\%$ F.S. $(100 \text{ kPa} \ge X \ge 20 \text{ kPa})$
Accuracy ', 2	$\pm (0.5 \times 20 / X)\%$ F.S. $(20 \text{ kPa} \ge X \ge 2 \text{ kPa})$

Zero temperature	25 (Can mut tuma)	± (11.5×40 / X + 0.35)%
effect per 30°C *1	28 (Cap nut type)	$\pm (11.3 \times 40 / A \pm 0.33) \%$

### Model PTG60T-\_4

Accuracy *1, *2	$\pm 0.5\%$ F.S. $(400 \text{ kPa} \ge X \ge 80 \text{ kPa})$
Accuracy ', 2	$\pm (0.5 \times 80 / X)\%$ F.S. $(80 \text{ kPa} \ge X \ge 40 \text{ kPa})$

Zero temperature	2S (Cap nut type)	$\pm (5.9 \times 80 / X + 0.35)\%$				
effect per 30°C *1	1½S (Cap nut type)	$\pm (21.7 \times 80 / X + 0.35)\%$				

## Model PTG60T-\_5

		$\pm 0.5\%$ F.S. (2 MPa > X > 0.4 MPa)
1	Accuracy	$\pm (0.5 \times 0.4 / X)\%$ F.S. $(0.4 \text{ MPa} > X > 0.2 \text{ MPa})$

*	\ 1 J1 /	$\pm (1.5 \times 0.4 / X + 0.35)\%$				
effect per 30°C *1	1½S (Cap nut type)	$\pm (4.65 \times 0.4 / X + 0.35)\%$				

Note) \*1:Within a range of  $URV \ge 0$  and  $LRV \ge 0$ 

\*2:Negative pressure accuracy
Accuracy, which is greater value of either ±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)

- IDF 11/2S cap nut type
- IDF 2S cap nut type

# **Smart pressure transmitter model PTG60T**

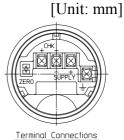
Process connection: Remote seal with ferrule cap nut type Measuring span 2.0 to 100 kPa, 40 to 400 kPa, 0.2 to 2 MPa

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

			Sele	ction				Opt	ion1	Opt	ion2
		PTG60T	-					-		-	
								ĺ '			
Product description	Gauge pressure transmitter: Fer-										
	rule type with remote seal with	PTG60T									
	SFC communication										
	T		-								
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	f/cm²)		3							
Treasuring Span	40 to 400 kPa (0.408 to 4.07 kgf/c			4							
	0.2 to 2 MPa (2.04 to 20.3 kgf/cm			5	-						
Material:	0.2 to 2 1.11 ti (2.0 1 to 20.5 light tin	. )									
Diaphragm / wetted parts	SUS316L / SUS316L / Propylene	alvaal			СВ						
other than diaphragm/fill	SUSSIGE / SUSSIGE / Propylene	giycoi			СБ						
fluid						. ~					
Process connection	IDF 1½S ferrule cap nut type					AC3X					
	IDF 2S ferrule cap nut type					AC4X					
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		
Heavy duty corrosion-p	· ·								В		
Remote communication									C		
Built-in digital indicato									M		
Wetted parts finish	Oil free finish								G		
	Water and oil free finish								Н		
	Electrolytic grinding								K		
	Passive state finish								W		
Option2										-	
No option											X
Test report											1
Material certificate											2
_	to Japanese high pressure gas cont	rol law									3
Over-pressure leak test											4
Strength calculation she	eet (JIS)										5
Traceability certificate					6						
					Н						
Certificate of oil free fir											J
Certificate of oil free ar	nd No water finish	<del></del>	<u> </u>								P

Materials of construction

KEY No:	Description	Materials
1	Case	Aluminum alloy
2	Body	SUS 316
3	Capillaly A'ssy	SUS 304(Olefin cover)
4	Wetted Part	SUS 316L



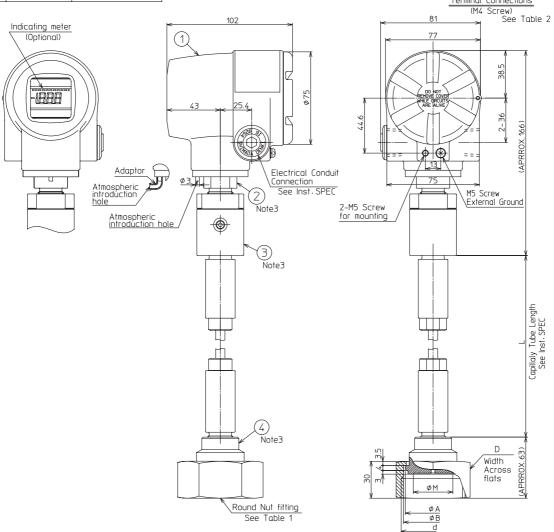


Table1 (See Inst. spec.)

Table I tole IIIst. Spec./														
	Model	No.	ze Fitting Size(d)		Fitting		Fitting				D	øм	_	В
Rating	Fitting	Size			U .	ויוש	_ ^	ا						
_	٠	3	IDF	1.5S	60	32	42.7	28						
Α .	J	4	IDF	2S	75	52	56.2	43						

Table2 Terminal

Table2 Terminal							
Symbol	Terminal						
SUPPLY +, SUPPLY -	Power supply and output signal						
CHK++ CHK-	Check meter						
±	Ground						
ZER0	ZERO Adjuster						

Please read the "Terms and Conditions" from the following URL before ordering or use:

http://www.azbil.com/products/bi/order.html

Specifications are subject to change without notice.



# **Azbil Corporation**

**Advanced Automation Company** 

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

1st edition: Dec. 1997 5th edition: Jun 2013