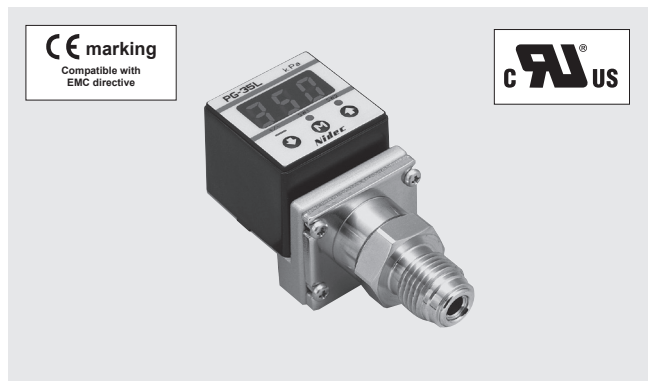


PRESSURE GAUGES

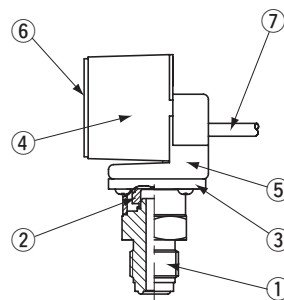
PG-35L



FEATURES

- For high vacuum pressure
- For corrosive gases and liquids compatible with SUS316L stainless steel diaphragm
- Compact • Light weight • Drip-proof structure (30 mm sq • 200 g • IP65)
- Low consumption by nondisplay mode
- Set data protection by panel lock function

INTERNAL STRUCTURE (9/16-18UNF)



Part name		Material
①	Fitting	SUS316L
②	Sensor module (oil less)	
③	Sensor holder	
④	Housing (Aluminum coating)	PBT (UL-94-HB)
⑤	Adapter	ADC 10, 12
⑥	Panel sheet	Polyester (UL746)
⑦	Shielded cable	Vinyl chlorid resin

MODEL NUMBER DESIGNATION

PG-35L-102R-NVCB

Series name

Pressure range

102 : - 100 ~ 100 kPa
103 : - 100 ~ 1000 kPa

Pressure reference

R : Compound pressure (Negative pressure ~ Positive pressure)

Port

Blank : Stem mount
B : Back mount

Fitting

R2 : R 1/4
G2 : G 1/4
VC : 9/16 - 18 UNF (Gasket joint)

Switch output interface

N : NPN open collector
P : PNP open collector

LIST OF MODEL NUMBERS

Port	Fitting	Pressure reference		Gauge	
		Switch output interface	Rated pressure range	-100~100 kPa	-100~1000 kPa
Stem mount	R2 (R 1/4)	NPN		PG-35L-102R-NR2	PG-35L-103R-NR2
		PNP	⊕	PG-35L-102R-PR2	PG-35L-103R-PR2
	G2 (G 1/4)	NPN		PG-35L-102R-NG2	PG-35L-103R-NG2
		PNP	⊕	PG-35L-102R-PG2	PG-35L-103R-PG2
		NPN		PG-35L-102R-NVC	PG-35L-103R-NVC
		PNP	⊕	PG-35L-102R-PVC	PG-35L-103R-PVC
Back mount	R2 (R 1/4)	NPN	⊕	PG-35L-102R-NR2B	PG-35L-103R-NR2B
		PNP	⊕	PG-35L-102R-PR2B	PG-35L-103R-PR2B
	G2 (G 1/4)	NPN	⊕	PG-35L-102R-NG2B	PG-35L-103R-NG2B
		PNP	⊕	PG-35L-102R-PG2B	PG-35L-103R-PG2B
		NPN	⊕	PG-35L-102R-NVCB	PG-35L-103R-NVCB
		PNP	⊕	PG-35L-102R-PVCB	PG-35L-103R-PVCB

※ Verify the above model numbers when placing orders.
Marked ⊕ is manufactured upon receipt of order basis.

PG-35L

PRESSURE GAUGES

STANDARD SPECIFICATIONS

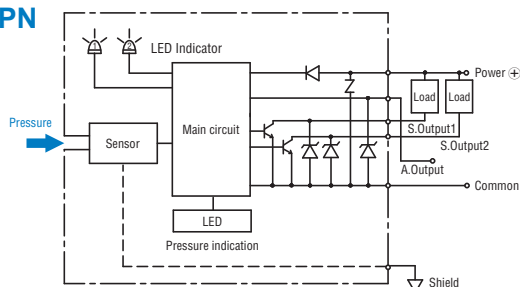
● Unless otherwise specified, the specs are defined at an ambient temperature of 25 ± 5 °C and excitation voltage of 12 VDC.

Item / Model number		PG-35L	
		102R	103R
General specifications	Pressure reference	Gauge	
	Pressure medium	Corrosive gases/liquids compatible with SUS 316L	
	Rated pressure range kPa	- 100 ~ 100	- 100 ~ 1000
	Maximum pressure kPa	200	1500
	Break-down pressure kPa	300	2000
	Operating temp. range °C	- 10 ~ 50	
	Compensated temp. range °C	0 ~ 50	
	Operating humidity %RH	35 ~ 85 (No condensation)	
	Protection grade	IP65	
	Pressure Port	R 1/4, G 1/4, VC (9/16 - 18 UNF)	
	Type of mounting	Stem mount, Back mount	
	Material of pressure port attachment	SUS 316L	
	Net weight g	Approx. 150 (Including 2 m cable)	
	Thermal error	± 3 %F.S. (0 ~ 50 °C)	
	Insulation resistance	50 MΩ minimum	
	Dielectric strength	125 VDC 1 minute	
	Input voltage	10.8 ~ 30 VDC (Including ripple percentage)	
	Consumption current	50 mA maximum	
Display	Display element	Full 3-digit LED	
	Rated display range kPa	- 99.9 ~ 99.9	- 100 ~ 999
	Multiplier settings	Max. 11 settings	
	Display cycle	Approx. 4 times/s	
	Negative pressure display	“-” LED is ON	
Switch output	Display accuracy	± 1 %F.S.	
	Output status	NPN/PNP	
	Output mode	2-point output (Transistor, Open collector output)	
	Switching capacity	Separate mode / window comparator mode	
	Residual voltage	30 VDC 100 mA maximum	
	State indication	1.2 V maximum (NPN), 2.2 V maximum (PNP)	
	Switch hysteresis	Output 1 (Green LED), Output 2 (Red LED) Lighted when output is ON.	
	Repeatability	0~300 counts Adjustable	
Analog output	Response	± 0.2 %F.S. ± 1 count	
	Output mode	Approx. 5, 25, 250, 2500 ms adjustable	
	Output voltage	3 modes	
	V zero : Pin=0, V span : Pin=0 ~ Pin (H)	1 ~ 5 V (G/V mode ZERO : 1 ± 0.2 V, SPAN : 4 ± 0.2 V) 103 R (R mode) ZERO : 1.36 ± 0.2 V SPAN : 3.64 ± 0.2 V)	
	Impedance	10 kΩ	
	Resolution	1/204 (Approx. 20 mV / Approx. 0.5%F.S.)	

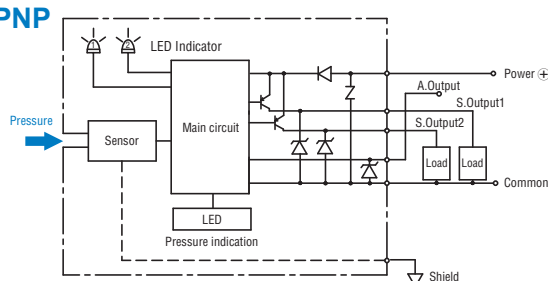
ENVIRONMENTAL CHARACTERISTICS

Test item	Test conditions	Permissible change
Vibration	10 ~ 500 Hz, 98.1 m/s ² or 1.5 mm P-P, 3 directions for 2 hours each	± 2 %F.S. maximum after test ※ 1 Amount of analog output fluctuation is permitted by adding conversion error of 20 mV.
Shock	490 m/s ² , 3 directions for 3 times each	
Pressure cycling	0 ~ Rated pressure, 10 ⁶ cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	

※ 1 Change in the pressure indication, switch operating points and analog output.



● PNP



The last digit/letter represents the selection code : Blinking red LED indicates negative pressure.

Display multiplier			Pressure range (–Pr ~ +Pr)	
			102R	103R
Selection code	1	× 1	– 99.9 ~ 99.9	– 100 ~ 999
	2	× 0.0102		– 1.02 ~ 9.99
	3	× 10.2	– 999 ~ 999	
	4	× 7.501	– 750 ~ 750	
	5	× 102		
	6	× 0.01		– 1.00 ~ 9.99
	7	× 10	– 999 ~ 999	
	8	× 0.145	– 14.5 ~ 14.5	– 14 ~ 145
	9	× 0.000145		
	A	× 0.001		– 0.10 ~ 1.00
b	× 0.2953	– 29.5 ~ 29.5	– 29 ~ 29.5	

Diagonal column: Display multiplier cannot be selected due to resolution and number of digits. (Selection code is not indicated either.)
Selection code is set at "A" prior to shipment.

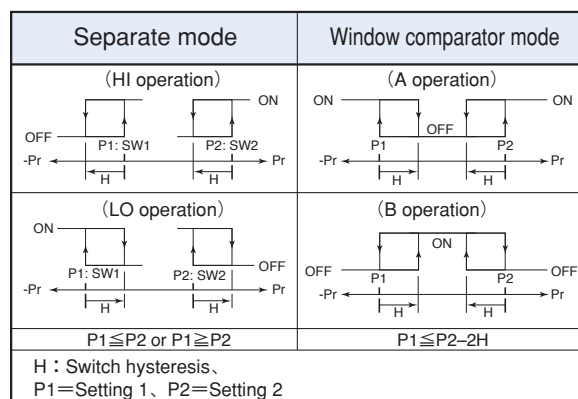
Display		Pressure range	
		-Pr	Pr
1	R mode	1 V	5 V
2	G mode	1 V	5 V
3	V mode	5 V	1 V

V mode for 102R are set prior to shipment.
R/G mode for 103R can only be selected.

Output	SW1				SW2			
Mode	Separate		Window comparator		Separate		Window comparator	
Operation	HI	LO	A	B	HI	LO	A	B
S-1	○				○			
S-2	○					○		
S-3		○			○			
S-4		○				○		
C-5			○				○	
C-6			○					○
C-7				○			○	
C-8				○				○
Pressure setting (Operating point)	Setting 1		(Lower limit) : Setting 1 (Upper limit) : Setting 2		Setting 2		(Lower limit) : Setting 1 (Upper limit) : Setting 2	

Note 1. In the Separate Mode, setting 1 corresponds to SW1, and Setting 2 corresponds to SW2.

Note 2. In the Window Comparator Mode, the minimum value for SW1 and SW2 corresponds to Setting 1 and the maximum value corresponds to Setting 2.

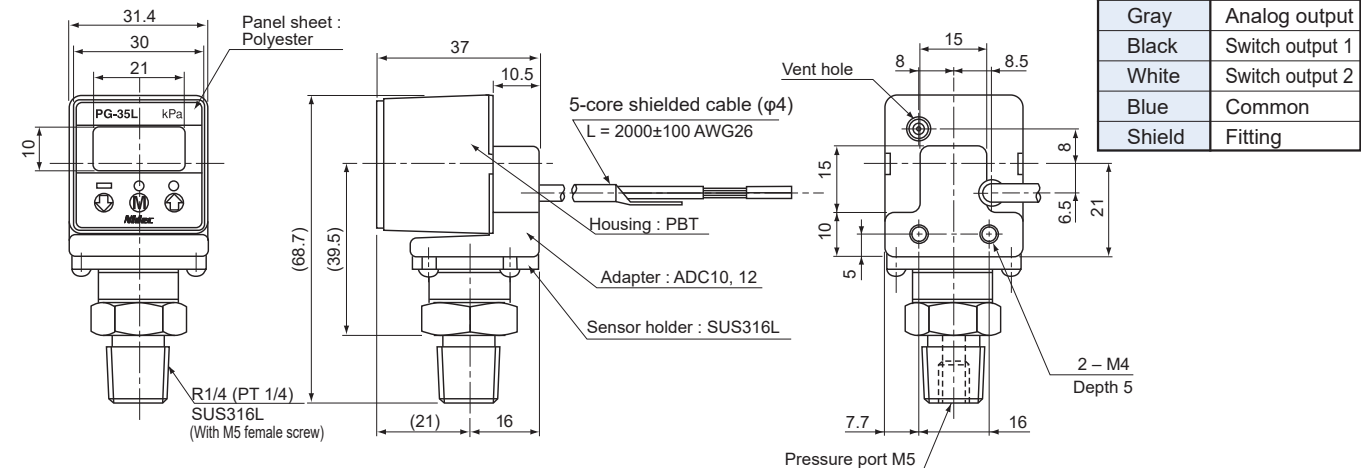


PG-35L

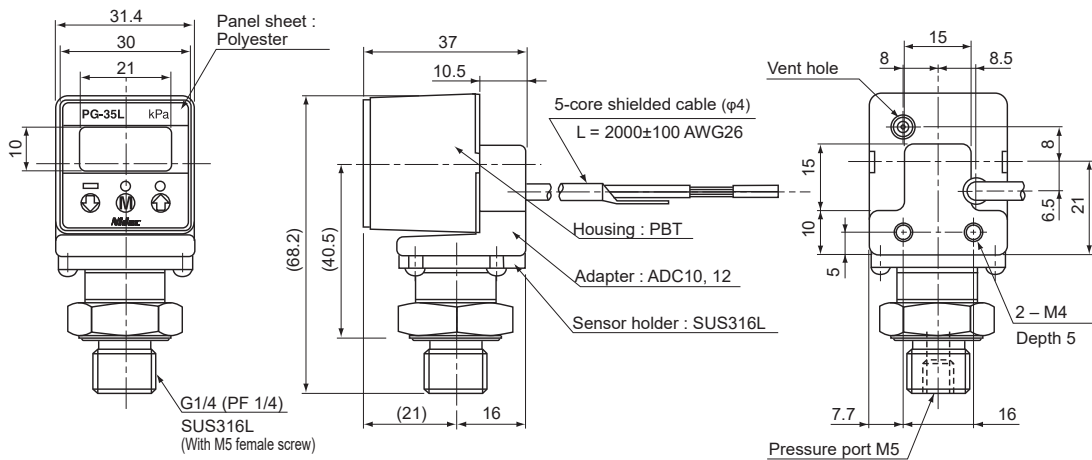
PRESSURE GAUGES

OUTLINE DIMENSIONS

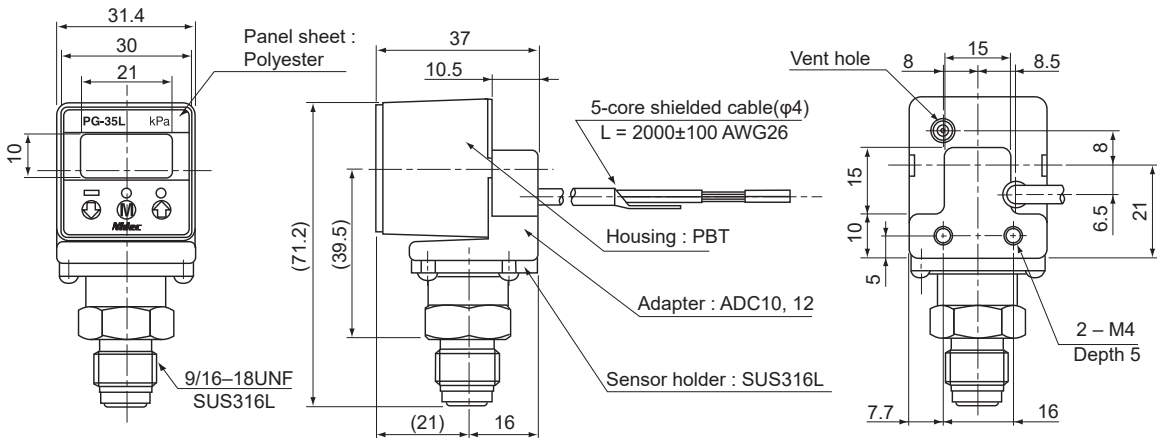
Fitting R2 (R 1/4)



Fitting G2 (G 1/4)



Fitting VC (9/16 - 18 UNF)



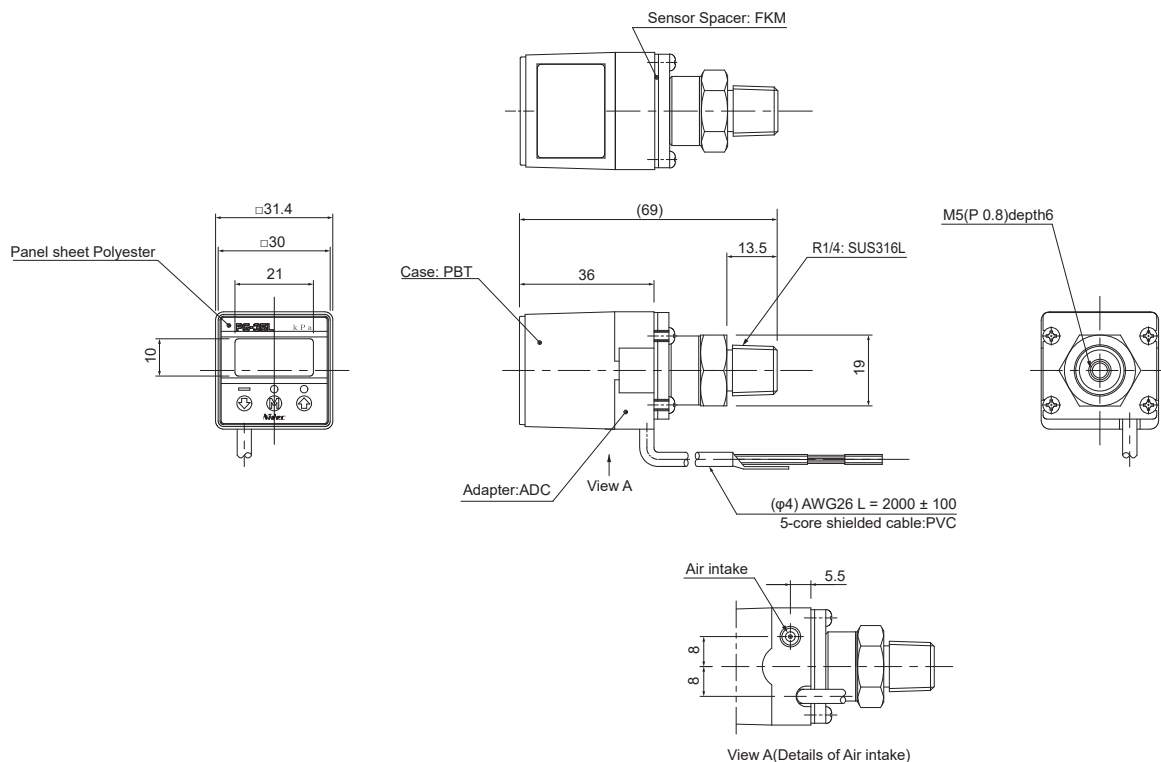
PG-35L

PRESSURE GAUGES

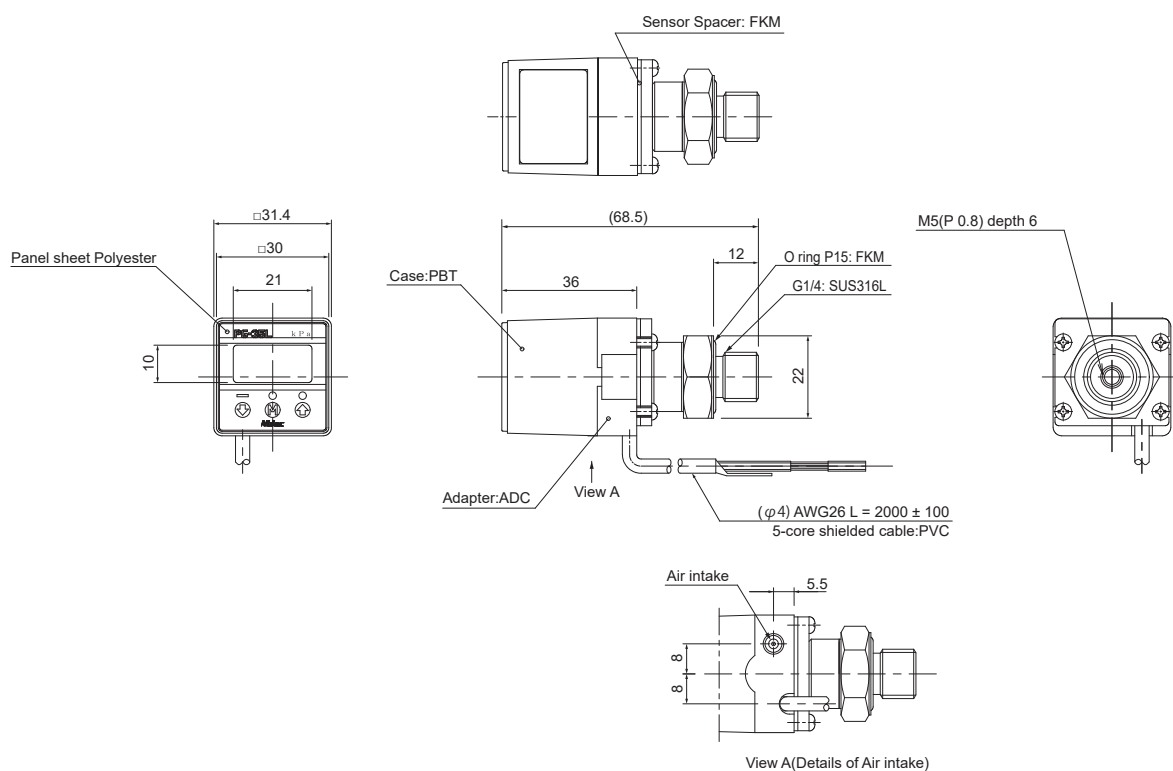
OUTLINE DIMENSIONS

Unless otherwise specified tolerance : ± 0.5 (Unit: mm)

● Fitting R2 (R 1/4) The horizontal installation type



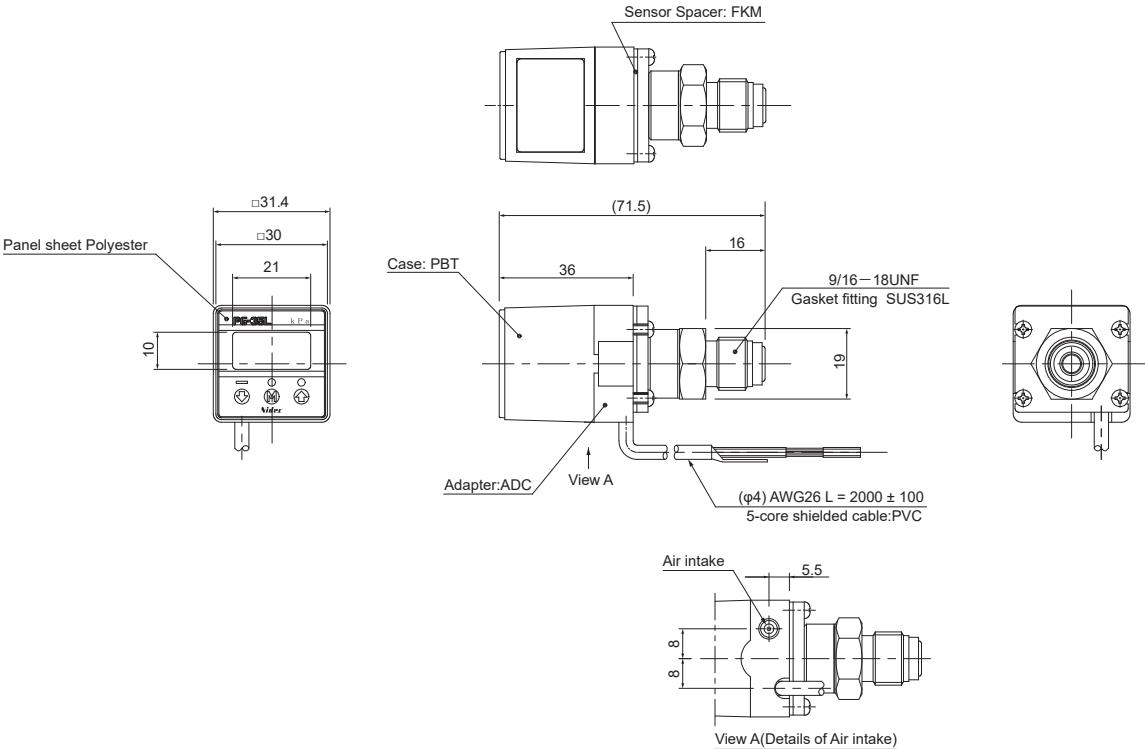
● Fitting G2 (G 1/4) The horizontal installation type



PG-35L

PRESSURE GAUGES

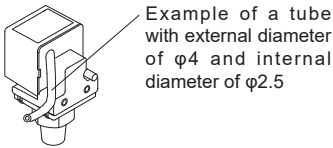
● Fitting VC (9/16 - 18 UNF) The horizontal installation type



■ Others

● Tube at atmospheric pressure intake

If there is any possibility that the sensor may become wet with oil or water, which may enter the case through the air intake, connect a silicon tube, or similar, to the intake and position the end of the tube in a suitably safe place. Be sure not to bend the tube or block the end of the tube.



● Piping

Use a wrench on a hexagon of fitting part. Do not hold the main body when tightening.

■ Customer specifications

We also offer customized solutions. Please contact your local sales office for details.

Model number	Shape and other customization
PG-35L-103R-NVC-056	Use no oil

PG-35L

PRESSURE GAUGES

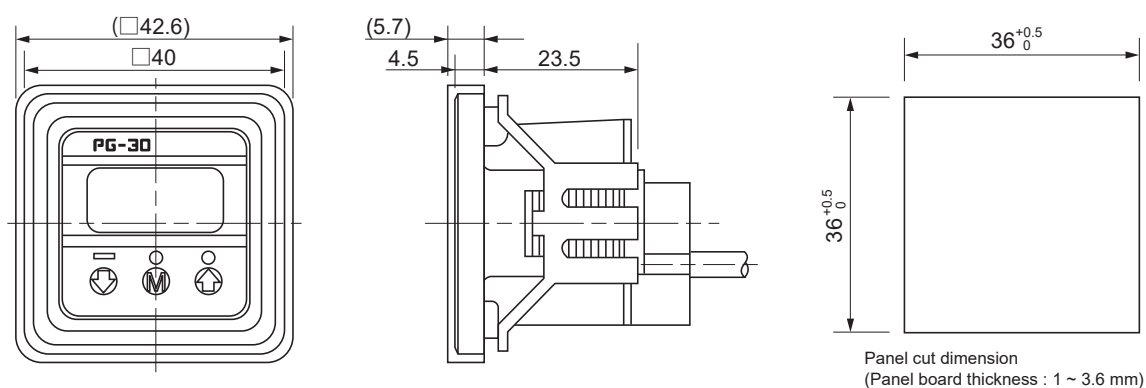
ACCESSORIES (Sold separately)

Name	Series name	Contents	Applicable model
Panel holder set	ACPG-003	Panel holder cover Panel holder Panel stopper (2pcs.)	PG-30 · PG-35 · PG-75 PG-35H · PG-35L · PS30
Holder cover set (For protecting gauge operating panel)	ACPG-004	Panel holder cover Panel holder	PG-30 · PG-35 · PG-75 PG-35H · PG-35L · PS30
Holder stopper set	ACPG-007	Panel holder Panel stopper (2pcs.)	PG-30 · PG-35 · PG-75 PG-35H · PG-35L · PS30

HOW TO MOUNT OPTIONAL ACCESSORIES (Sold separately)

(Unit: mm)

PG-30 · PG-35 · PG-35H · PG-35L · PG-75 · PS30 Panel cut holder set & holder cover set



Panel holder cover set

