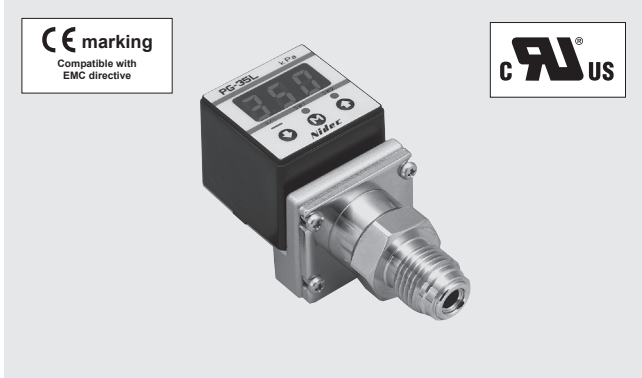


# PRESSURE GAUGES

# PG-35L



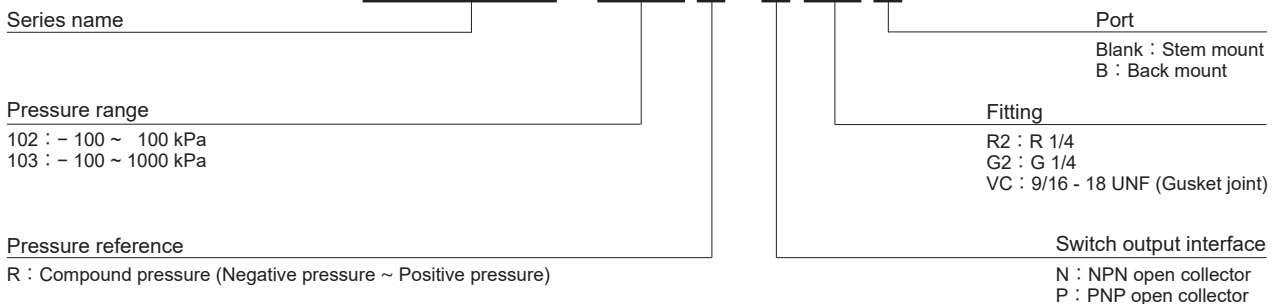
## FEATURES

- 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		
②	Sensor module (oil less)		SUS316L
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**



## 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
	G2 (9/16-18UNF)	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
	G2 (9/16-18UNF)	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  $25 \pm 5$  °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		$\pm 3$ %F.S. (0 ~ 50 °C)	
	Insulation resistance		50 M $\Omega$ 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	
Display accuracy		$\pm 1$ %F.S.		
Switch output	Output status	NPN/PNP		
	Output mode	2-point output (Transistor, Open collector output)		
	Output mode	Separate mode / window comparator mode		
	Switching capacity	30 VDC 100 mA maximum		
	Residual voltage	1.2 V maximum (NPN), 2.2 V maximum (PNP)		
	State indication	Output 1 (Green LED), Output 2 (Red LED) Lighted when output is ON.		
	Switch hysteresis	0~300 counts Adjustable		
	Repeatability	$\pm 0.2$ %F.S. $\pm 1$ count		
Response		Approx. 5, 25, 250, 2500 ms adjustable		
Analog output	Output mode	3 modes		
	Output voltage	1 ~ 5 V ( G/V mode ZERO : $1 \pm 0.2$ V, SPAN : $4 \pm 0.2$ V ) 103 R (R mode) ZERO : $1.36 \pm 0.2$ V		
	V zero : Pin=0, V span : Pin=0 ~ Pin (H)	( R mode ZERO : $3 \pm 0.2$ V, SPAN : $2 \pm 0.2$ V ) SPAN : $3.64 \pm 0.2$ V		
	Impedance	10 k $\Omega$		
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 <sup>2</sup> or 1.5 mm P-P, 3 directions for 2 hours each	$\pm 2$ %F.S. maximum after test ※ 1 Amount of analog output fluctuation is permitted by adding conversion error of 20 mV.
Shock	490 m/s <sup>2</sup> , 3 directions for 3 times each	
Pressure cycling	0 ~ Rated pressure, 10 <sup>6</sup> cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	
EMC	EMI : EN55011: 2007, A2 : 2007 Group 1, class B EMS : EN61326-1: 2006 Table 2	Pressure indication, switch operating pressure and analog output : $\pm 5$ %F.S. maximum during test ※ 1

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



# PG-35L

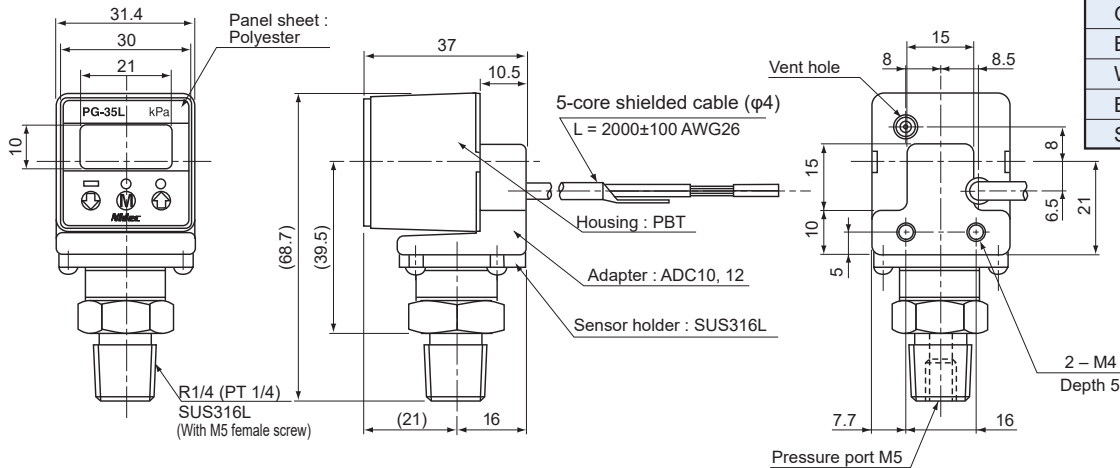
## PRESSURE GAUGES

### OUTLINE DIMENSIONS

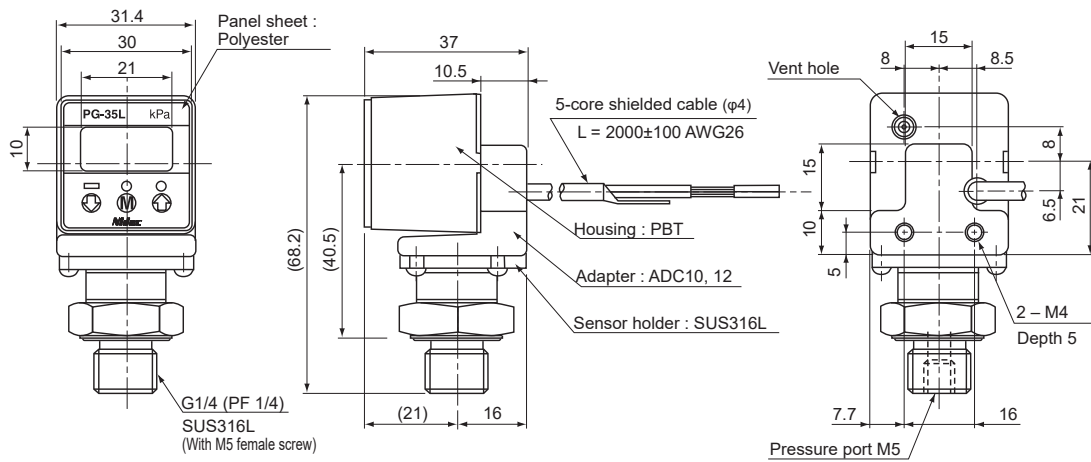
Unless otherwise specified tolerance : ± 0.5 (Unit: mm)

#### ● Fitting R2 (R 1/4)

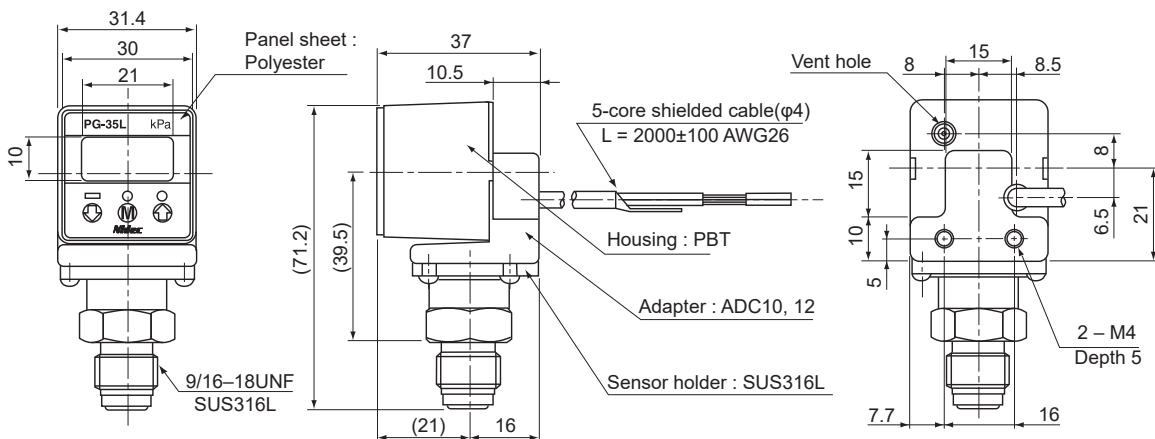
Wire color	Connection
Brown	Power ⊕
Gray	Analog output
Black	Switch output 1
White	Switch output 2
Blue	Common
Shield	Fitting



#### ● Fitting G2 (G 1/4)



#### ● Fitting VC (9/16 - 18 UNF)

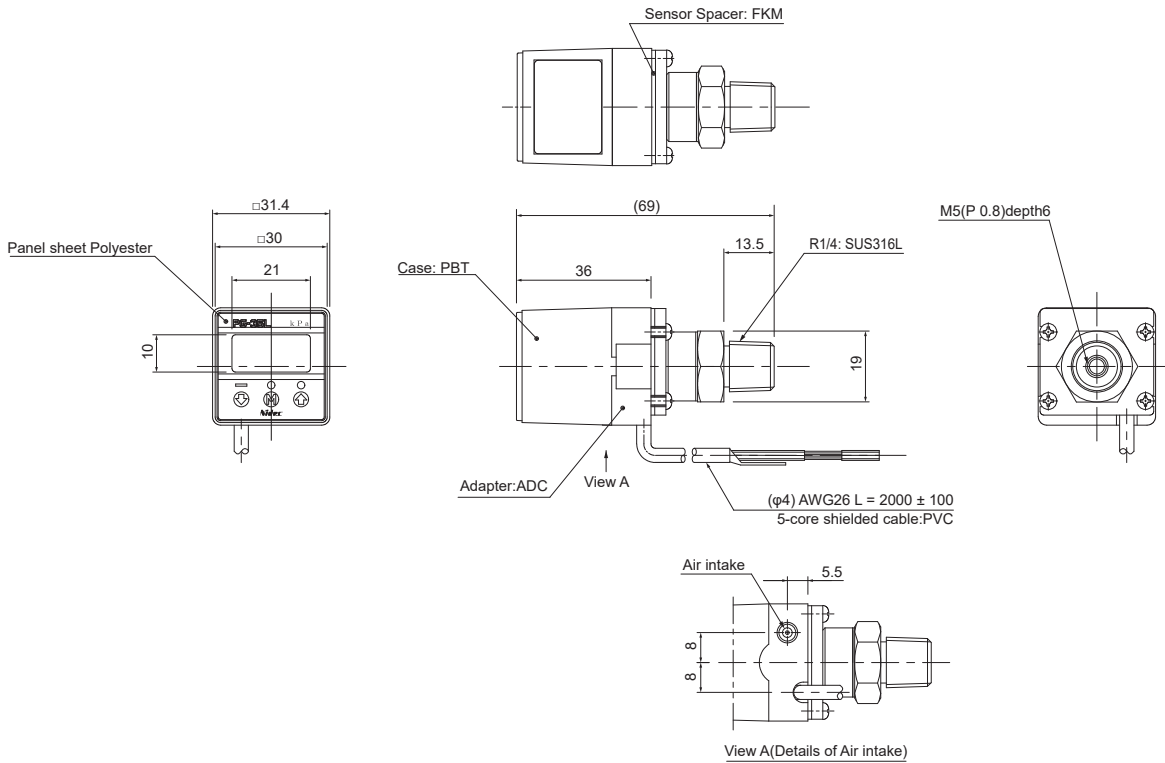


# PG-35L PRESSURE GAUGES

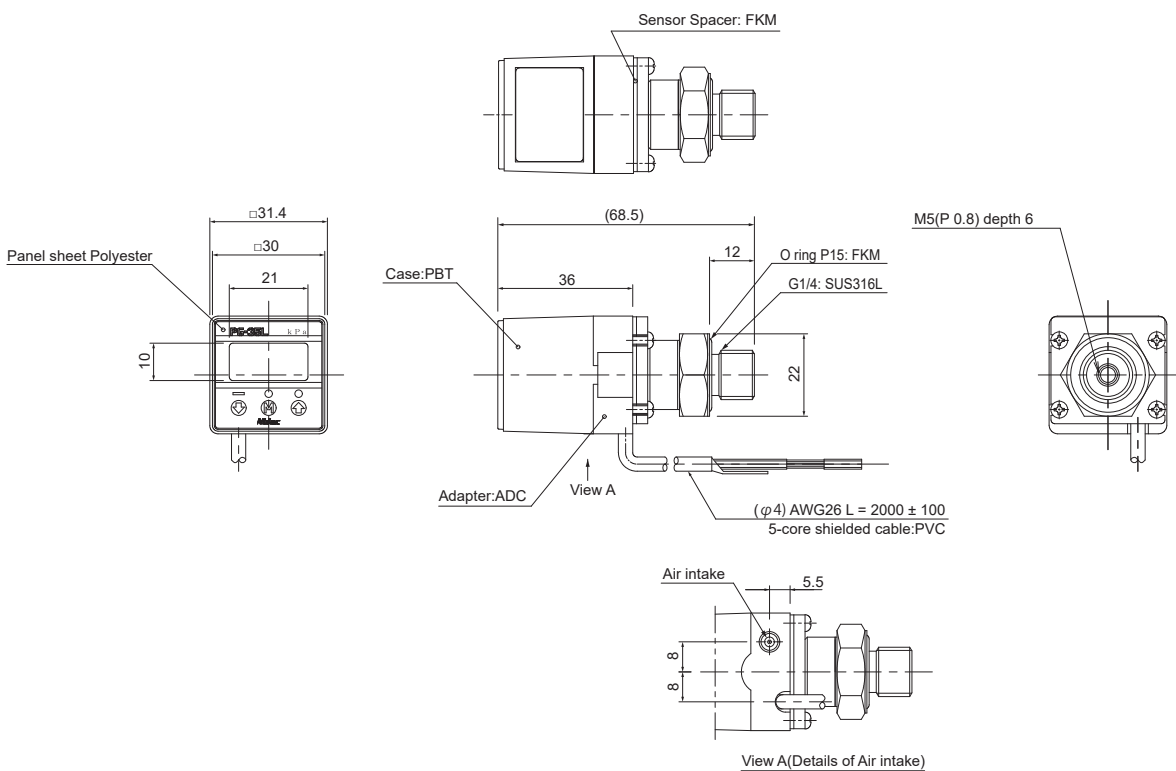
## OUTLINE DIMENSIONS

Unless otherwise specified tolerance :  $\pm 0.5$  (Unit: mm)

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



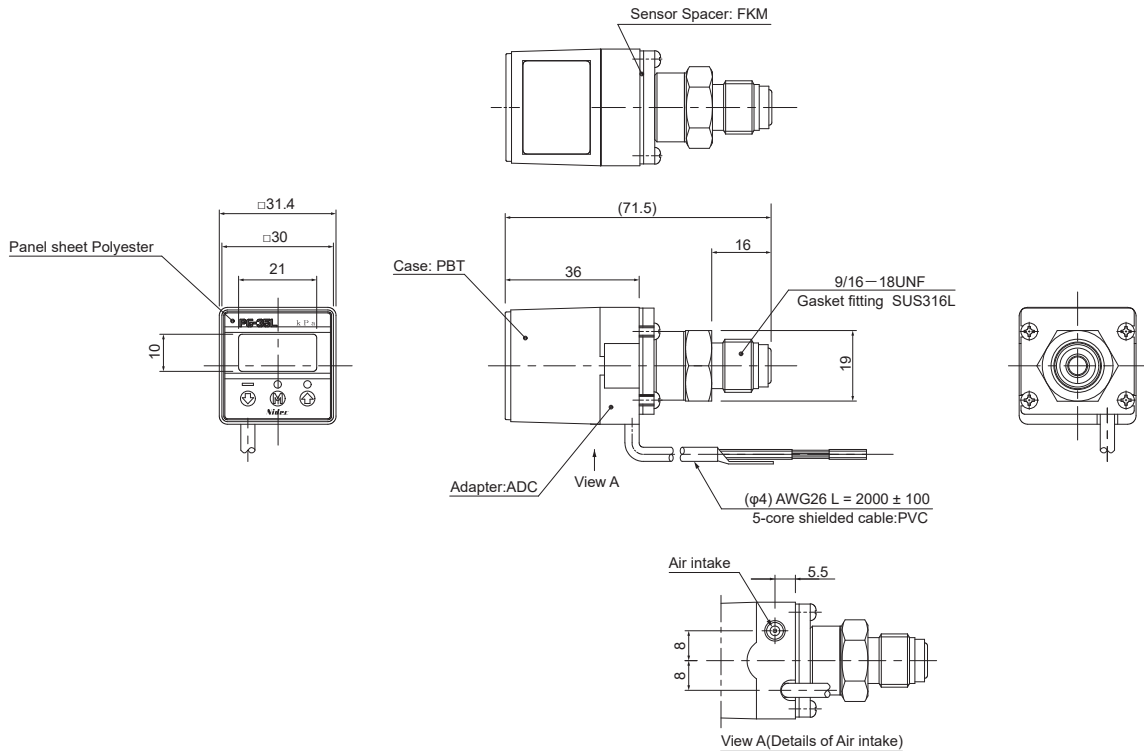
### ● Fitting G2 (G 1/4) The horizontal installation type



# PG-35L

## PRESSURE GAUGES

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



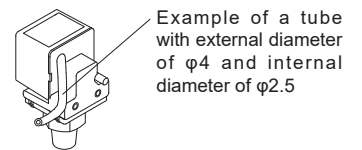
### ■ Others

#### ● 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

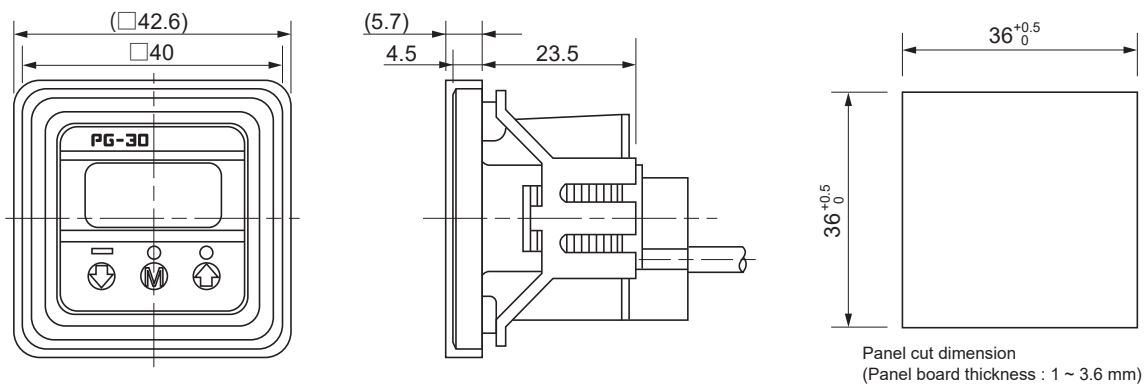
## ACCESSORIES (Sold separately)

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

