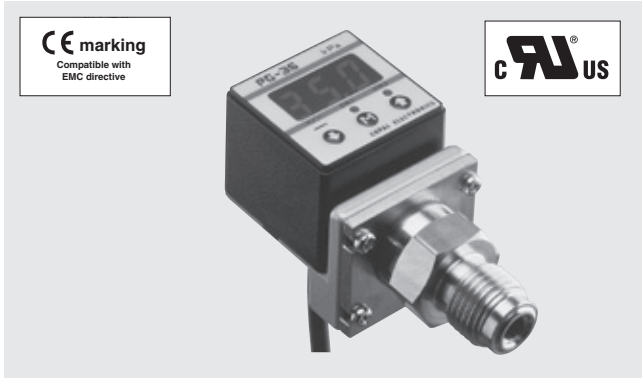


# PRESSURE GAUGES

# PG-35



## FEATURES

- **Both absolute pressure type and compound pressure type are available**

Compound pressure type measures negative and positive gauge pressure.

- **Compact and lightweight general-purpose pressure gauges**

Innovative general-purpose gauges of compact design (30mm sq.) and drip-proof structure (IP65).

- **Clear indication by LED**

Easy-to-see LED assures clear readings on the panel and even in a dark place.

- **Various modes and units can be selected according to applications**

Eight different pressure units  
 Three analog output modes  
 Eight switch output modes

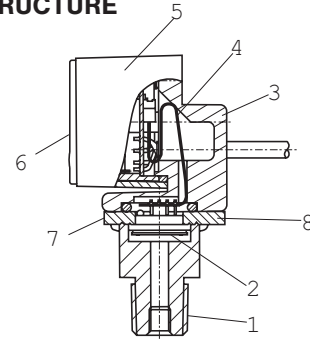
- **Meet EMC standards**

EN 55011 (EMI)  
 EN 61326-1 (EMS)

- **Low consumption by nondisplay mode**

- **Set data protection by panel lock function**

## INTERNAL STRUCTURE (R 1/4)



Part name		Material
①	Fitting	SUS316L
②	Sensor module	SUS316L
③	Adaptor	Aluminum
④	FPC	Polymide
⑤	Case	PBT(Polybutyleneterphthalate)
⑥	Panel sheet	Polyester
⑦	“O” ring	NBR
⑧	Sensor holder	SUS316L

# PG-35 PRESSURE GAUGES

## MODEL NUMBER DESIGNATION

High corrosion resistance type

**P G - 3 5 - 1 0 2 R - N R 2 B**

Series name

Pressure range

102R : -100 ~ 100 kPa (Compound pressure [Negative pressure ~ Positive pressure])  
102A : 0 ~ 100 kPa (Absolute pressure [Absolute vacuum ~ Barometric pressure])  
103R : -100 ~ 1000 kPa (Compound pressure [Negative pressure ~ Positive pressure])

Pressure reference

R : Compound pressure (Negative pressure ~ Positive pressure)  
A : Absolute pressure (Absolute vacuum ~ Barometric pressure)

Port

Blank : Stem mount  
B : Back mount

Fitting

R2 : R 1/4 (With M5 female screw)  
GF : G 3/8 (Flush diaphragm type)  
G2 : G 1/4 (With M5 female screw)  
VC : 9/16-18UNF (Gasket joint)

Switch output interface

N : NPN open collector  
P : PNP open collector

## LIST OF MODEL NUMBERS

Pressure medium	Fitting	Port	Switch output interface	Pressure reference	Gauge		Absolute
				Rated pressure range	-100 ~ 100 kPa	-100 ~ 1000 kPa	0 ~ 100 kPa abs
Corrosive gases/ liquids compatible with SUS 316L	R 1/4	Stem mount	NPN		PG-35-102R-NR2	PG-35-103R-NR2	PG-35-102A-NR2
		Back mount		Ⓒ PG-35-102R-NR2B	Ⓒ PG-35-103R-NR2B	Ⓒ PG-35-102A-NR2B	
		Stem mount	PNP		PG-35-102R-PR2	PG-35-103R-PR2	PG-35-102A-PR2
		Back mount		Ⓒ PG-35-102R-PR2B	Ⓒ PG-35-103R-PR2B	Ⓒ PG-35-102A-PR2B	
	G 3/8	Stem mount	NPN		PG-35-102R-NGF	PG-35-103R-NGF	PG-35-102A-NGF
			PNP		PG-35-102R-PGF	PG-35-103R-PGF	PG-35-102A-PGF
	9/16-	Stem mount	NPN		PG-35-102R-NVC	PG-35-103R-NVC	PG-35-102A-NVC
		Back mount		Ⓒ PG-35-102R-NVCB	Ⓒ PG-35-103R-NVCB	Ⓒ PG-35-102A-NVCB	
	18UNF	Stem mount	PNP		PG-35-102R-PVC	PG-35-103R-PVC	PG-35-102A-PVC
		Back mount		Ⓒ PG-35-102R-PVCB	Ⓒ PG-35-103R-PVCB	Ⓒ PG-35-102A-PVCB	
	G 1/4	Stem mount	NPN		PG-35-102R-NG2	PG-35-103R-NG2	PG-35-102A-NG2
			PNP		PG-35-102R-PG2	PG-35-103R-PG2	PG-35-102A-PG2

※ Verify the above model numbers when placing orders.

The products marked Ⓒ are manufactured upon receipt of order basis.

## 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	<div style="border: 1px solid black; padding: 5px; display: inline-block;">                     ± 2 %F.S. maximum after test ※ 1                      Amount of analog output fluctuation is permitted                      by adding conversion error of 20 mV.                 </div>
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 : ± 5 %F.S. maximum during test ※ 1

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

# PG-35

## PRESSURE GAUGES

### STANDARD SPECIFICATIONS

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

Item / Model number		PG-35			
		102R	103R	102A	
General specifications	Pressure reference	Gauge		Absolute	
	Pressure medium	Corrosive gases/liquids compatible with SUS 316L			
	Rated pressure range	kPa	- 100 ~ 100	- 100 ~ 1000	0 ~ 100 (abs)
	Maximum pressure	kPa	200	2000	200 (abs)
	Break-down pressure	kPa	300	3000	300 (abs)
	Operating temp. range	°C	- 10 ~ 50		
	Compensated temp. range	°C	0 ~ 50		
	Operating humidity	%RH	35 ~ 85		
	Protection grade		In accordance with IEC IP65		
	Pressure Port		R 1/4, G 3/8, G 1/4, 9/16-18UNF		
	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		100 MΩ minimum (DC500 V)		
	Dielectric strength		AC500 V 1 minute (Leakage current 1 mA maximum)		
Input voltage		10.8 ~ 30 V DC (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	0.0 ~ 99.9
	Multiplier settings		Max. 11 settings		
	Negative pressure display		Red LED is ON.		—
	Display accuracy		± 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 V DC 100 mA Short-circuit protection			
	Residual voltage	1.2 V maximum (NPN), 2.2 V maximum (PNP) (At load current of 100 mA)			
	State indication	Output 1 (Green LED), Output 2 (Red LED) Lighted when output is ON.			
	Switch hysteresis	0 ~ 300 counts Adjustable			
	Repeatability	± 0.2 %F.S. ± 1 count (± 0.3 %F.S. maximum)			
Response	Approx. 5, 25, 250, 2500 ms Adjustable				
Analog output	Output mode	3 modes			
	Output voltage 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 R mode ZERO : 3 ± 0.2 V, SPAN : 2 ± 0.2 V ) SPAN : 3.64 ± 0.2 V			
	Impedance	10 kΩ			
	Resolution	1/204(Approx. 20mV / Approx. 0.5%F.S.)			
	Response	Approx. 5, 25, 250, 2500 ms Adjustable			
Accessories		"O" rings are supplied (G 3/8 : P18, G 1/4 : P15)			



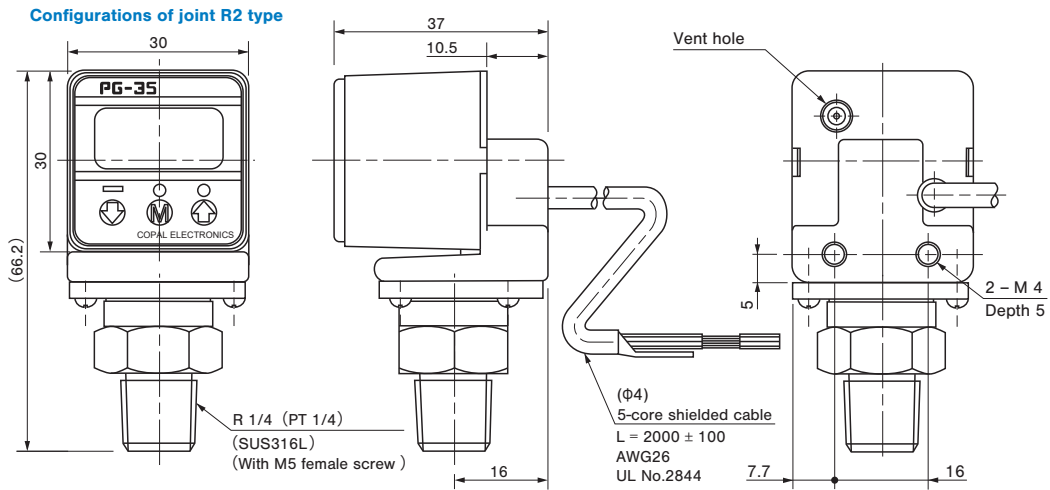
# PG-35

## PRESSURE GAUGES

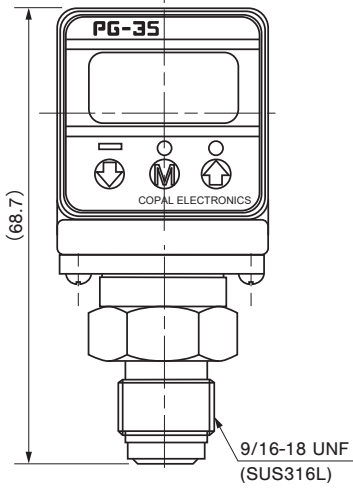
### OUTLINE DIMENSIONS

#### PG-35

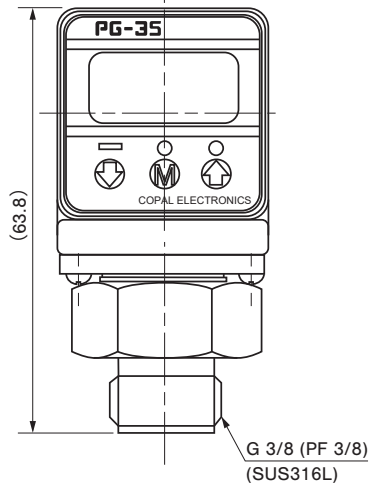
Unless otherwise specified tolerance : ± 0.5 (Unit: mm)



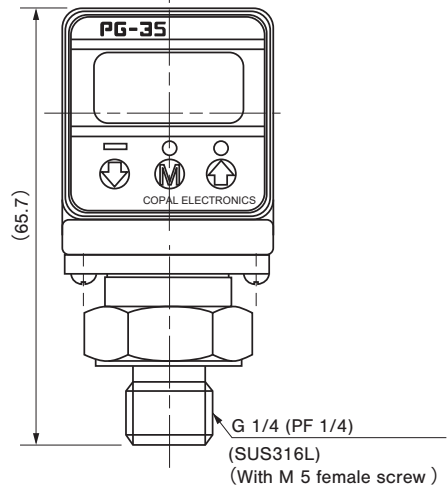
**Configurations of joint VC type**



**Configurations of joint GF type**



**Configurations of joint G2 type**



Extra care should be taken with the diaphragm part. Do not touch the diaphragm directly to avoid damaging the diaphragm.

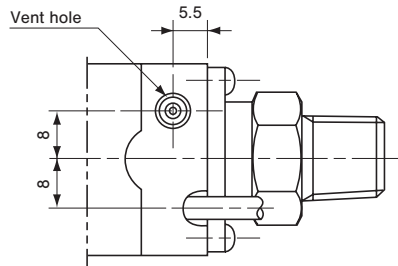
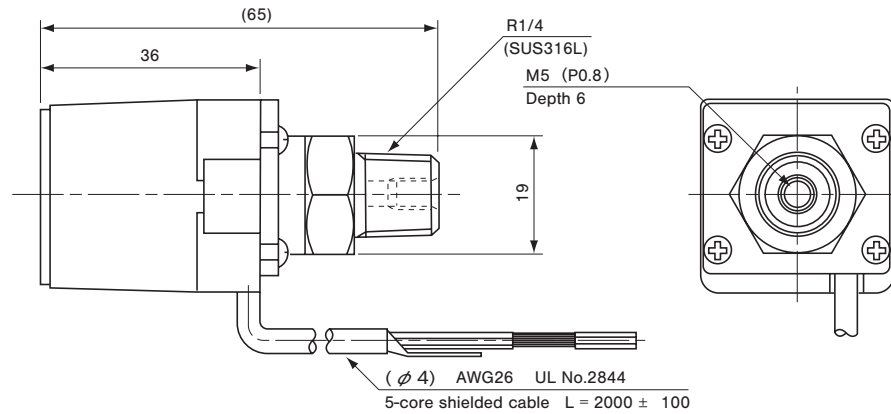
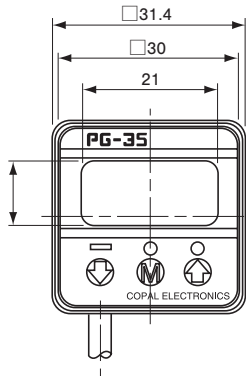
Wire color	Connection
Brown	Power ⊕
Gray	Analog output
Black	Switch output 1
White	Switch output 2
Blue	Common
Shield	Fitting

# PG-35 PRESSURE GAUGES

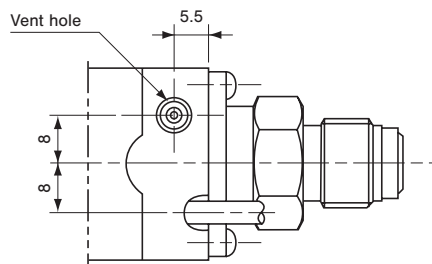
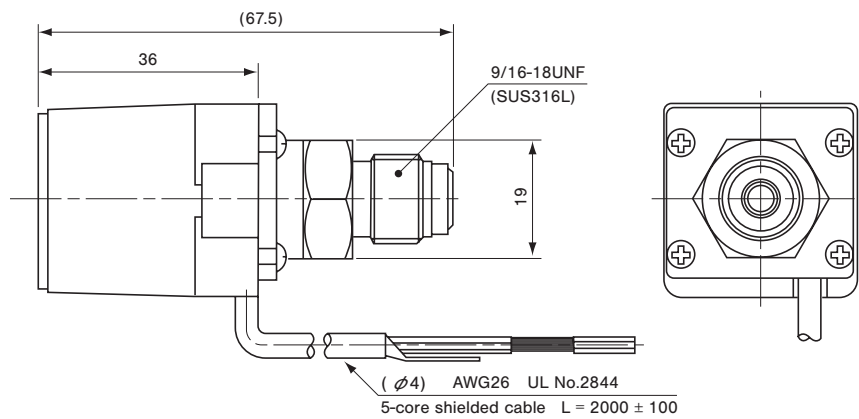
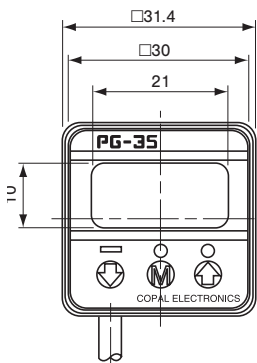
## OUTLINE DIMENSIONS

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

### PG-35-B (R2)



### PG-35-B (VC)



# PG-35

## PRESSURE GAUGES

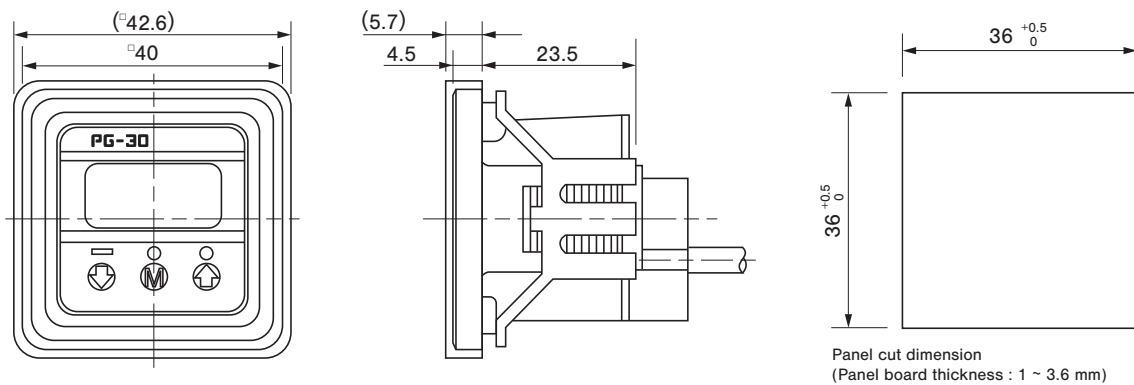
### ACCESSORIES (Sold separately)

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

