

PRESSURE GAUGES

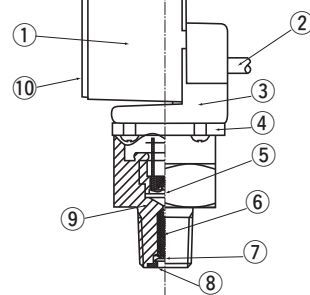
PG-35H



FEATURES

- For high 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 (R 1/4)



Part name		Material
①	Shield case	PBT (Polybutyleneterephthalate)
②	Push cable	Vinyl chlorid resin
③	Adaptor	Aluminum
④	Sensor holder	SUS316L
⑤	Diaphragm	SUS316L
⑥	M4 screw	SUS303 (R2 only)
⑦	Push nut	Spring steel (R2 only)
⑧	Plug	SUS303 (R2 only)
⑨	Fitting	R2 : Iron, Nickel G3 : SUS316
⑩	Panel sheet	Polyester

MODEL NUMBER DESIGNATION

PG-35H-104R-NR2

Series name

Pressure range

104 : -0.1 ~ 10 MPa
354 : -0.1 ~ 35 MPa

Pressure reference

R : Compound pressure (Negative pressure ~ Positive pressure)

Fitting

R2 : R 1/4
G3 : G 3/8

Switch output interface

N : NPN open collector
P : PNP open collector

LIST OF MODEL NUMBERS

Fitting	Pressure reference		Gauge	
	Switch output interface	Rated pressure range	-0.1 ~ 10 MPa	-0.1 ~ 35 MPa
R2 (R 1/4)	NPN		PG-35H-104R-NR2	PG-35H-354R-NR2
	PNP		➡ PG-35H-104R-PR2	➡ PG-35H-354R-PR2
G3 (G 3/8)	NPN		PG-35H-104R-NG3	PG-35H-354R-NG3
	PNP		➡ PG-35H-104R-PG3	➡ PG-35H-354R-PG3

※ Verify the above model numbers when placing orders.

Marked ➡ is manufactured upon receipt of order basis.

PG-35H

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-35H	
			104R	354R
General specifications	Pressure reference		Gauge	
	Pressure medium	R2	Corrosive hydraulic oil compatible with Iron or Nickel	
		G3	Corrosive gases/liquids compatible with SUS 316 and SUS 316L	
	Rated pressure range	MPa	– 0.1 ~ 10	– 0.1 ~ 35
	Maximum pressure	MPa	20	50
	Break-down pressure	MPa	40	50
	Operating temp. range	°C	– 10 ~ 50	
	Compensated temp. range	°C	0 ~ 50	
	Operating humidity	%RH	35 ~ 85 (No condensation)	
	Protection grade		IP65	
	Type of mounting		R 1/4, G 3/8	
	Material of pressure port attachment		SUS 316L	
	Net weight	g	Approx. 200 (Including 2 m cable)	
	Thermal error		± 3 %F.S. (0 ~ 50 °C)	
	Insulation resistance		100 MΩ minimum	
	Dielectric strength		500 V AC 1 minute	
	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	MPa	– 0.10 ~ 9.99	– 00.1 ~ 35.0
	Multiplier settings		Max. 11 settings	
	Display cycle		Approx. 4 times/s	
	Negative pressure display		“–” LED is ON	
	Display accuracy		± 2 %	
Switch output	Output status		NPN/PNP	
			2-point output (Transistor, Open collector output)	
	Output mode		Separate mode / window comparator mode	
	Switching capacity		30 V DC 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		± 0.2 %F.S. ± 1 count	
Analog output	Response		Approx. 5, 25, 250, 2500 ms adjustable	
	Output mode		3 modes	
	Output voltage V zero : Pin=0, V span : Pin=0 ~ Pin (H)		1 ~ 5 V (R mode 104R-ZERO : 1.04 ± 0.2 V, SPAN : 3.96 ± 0.2 V, 354R-ZERO : 1.01 ± 0.2V, SPAN : 3.99 ± 0.2 V) G mode ZERO : 1 ± 0.2 V, SPAN : 4 ± 0.2 V ※The accuracy at V mode is not guaranteed.	
	Impedance		10 kΩ	
	Resolution		1/204	

ENVIRONMENTAL CHARACTERISTICS

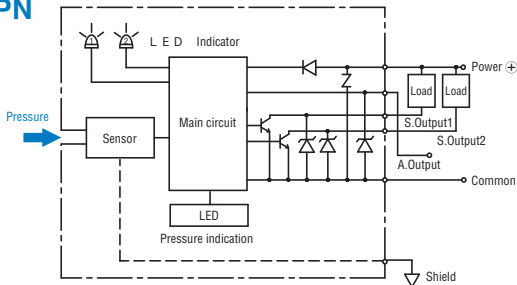
Test item	Test conditions	Permissible change
Vibration	10 ~ 500 Hz, 98.1 m/s ² or 1.5 mm P-P, 3 directions for 2 hours each	Pressure indication, switch operating points and analog output variation : ± 2 %F.S. maximum each after test
Shock	490 m/s ² , 3 directions for 3 times each	
Pressure cycling	0 ~ Rated pressure, 10 ⁶ cycles	
Moisture resistance	40 °C, 90 ~ 95 %RH, 240 hrs.	

PG-35H

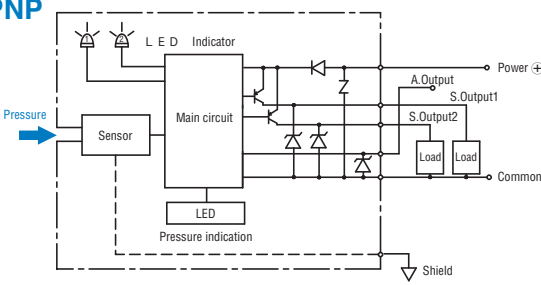
PRESSURE GAUGES

INTERNAL ELECTRICAL SCHEMATICS

● NPN



● PNP



SELECTION OF DISPLAY MULTIPLIER

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

Display multiplier		Pressure range (−Pr~+Pr)	
		104R	354R
Selection code	1 × 1		
	2 × 0.0102	− 1.0 ~ 99.9	− 1 ~ 350
	3 × 10.2		
	4 × 7.501		
	5 × 102		
	6 × 0.01	− 1.0 ~ 99.9	− 1 ~ 350
	7 × 10		
	8 × 0.145		
	9 × 0.000145	− 0.01 ~ 1.45	− 0.01 ~ 5.07
	A × 0.001	− 0.10 ~ 9.99	− 00.1 ~ 35.0
	b × 0.2953		

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.

ANALOG OUTPUT MODE

Pressure range		−Pr	0	Pr
		←	→	→
1	R mode	1 V		5 V
2	G mode		1 V	5 V

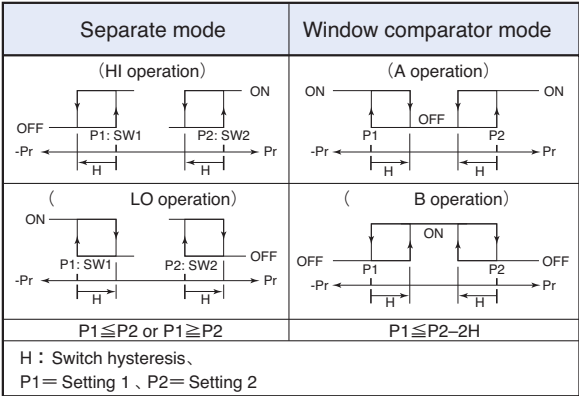
Selection code is set at “G” prior to shipment.

SWITCH OUTPUT MODE

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.



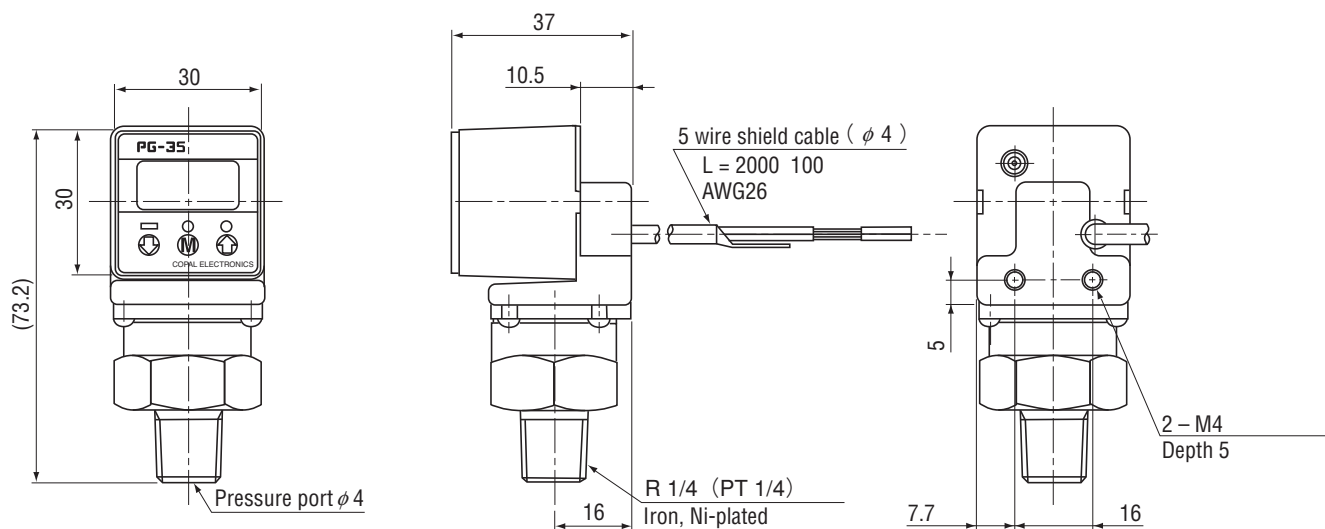
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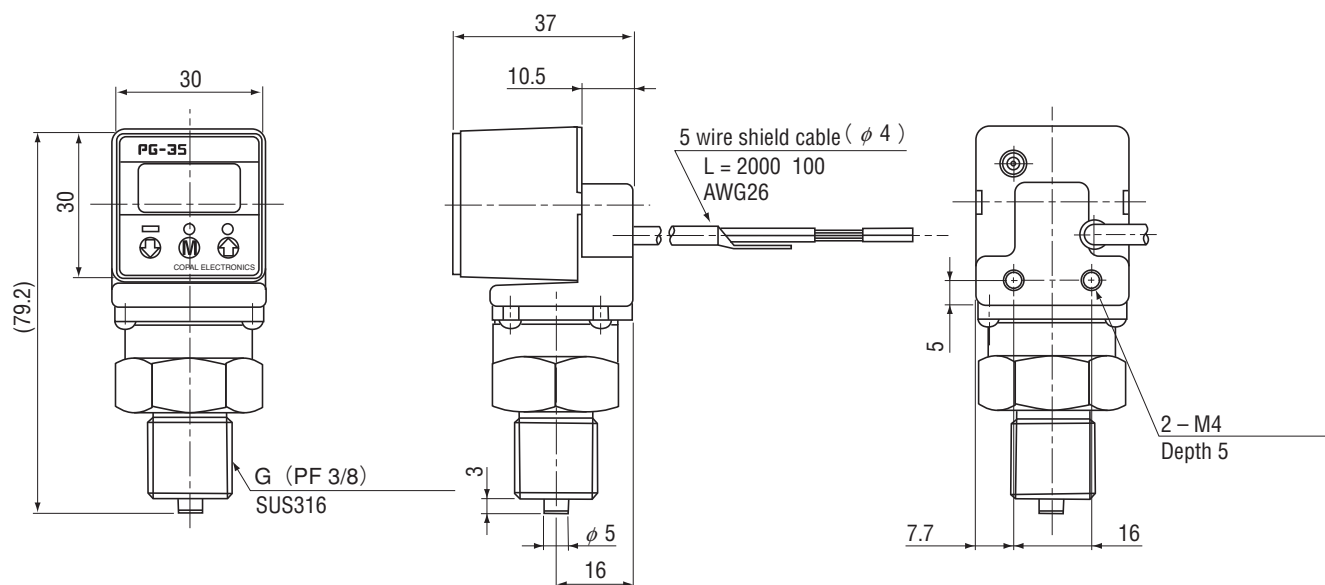
OUTLINE DIMENSIONS

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

● Fitting R2 (R 1/4)



● Fitting G3 (G 3/8)



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

※ Accessories (sold separately) are available for common use with PG-30, PG-35, PG-75 series. (P.173)