

# Digital pressure sensor PPG-C Series

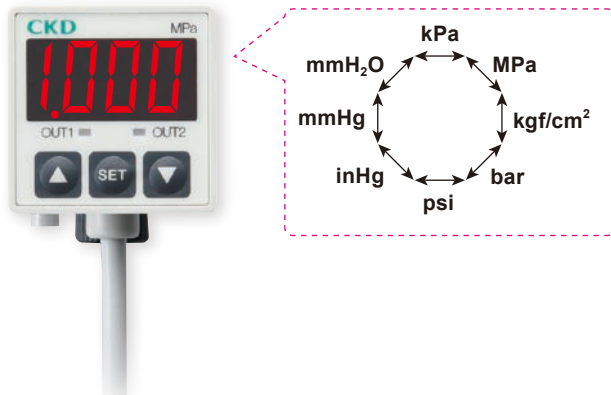


### Features

- Set pressure: Composite pressure (-100.0 to 100.0kPa)  
Vacuum pressure (10.0 to -101.3kPa)  
Positive pressure (-0.100 to 1.000MPa)
- Switch output 2 point, analog voltage output 1 point
- Set hysteresis
- Pressure display repeatability: Within  $\pm 2\%$  F.S.
- Pressure unit can be switched: kPa, MPa,  $\text{kgf/cm}^2$ , bar, psi, inHg, mmHg, mmH<sub>2</sub>O
- Degree of protection: IP65



### Pressure unit can be switched



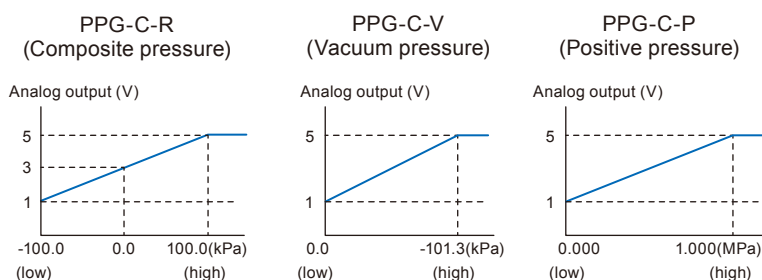
### Dust proof and water proof performance

Degree of protection: IP65



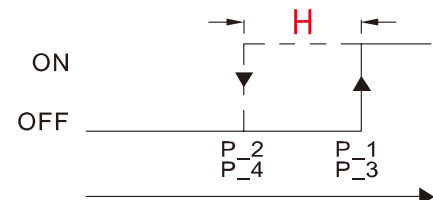
### Analog voltage output (NA, PA type)

(Switch output 2 point + analog voltage output 1 point type)  
1 to 5V analog voltage output in proportion to pressure



### Adjustable hysteresis

Switch output hysteresis (H) is adjustable



\* Environmental survey only corresponds to the RoHS Certificate and REACH Certificate.  
Details of components do not correspond.



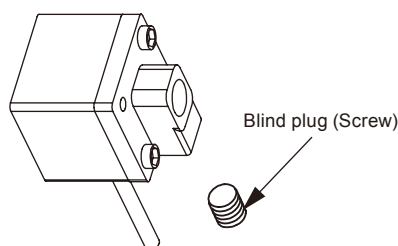
Prior to usage, please read the precautions in "Compressed Air, Vacuums, Auxiliary Component Integration No. CB-024S".

**CKD Corporation**  
CC-1176A

## Specifications

Description		PPG-C-R	PPG-C-V	PPG-C-P
Rated pressure		-100.0 to 100.0 kPa	0.0 to -101.3 kPa	0.000 to 1.000 MPa
Set pressure		-100.0 to 100.0 kPa	10.0 to -101.3 kPa	-0.100 to 1.000 MPa
Proof pressure		300kPa		1.5MPa
Working fluid		air/non-corrosive gas		
Display unit	kPa	0.1		-
	MPa	-		0.001
	kgf/cm <sup>2</sup>	0.001		0.01
	bar	0.001		0.01
	psi	0.01		0.1
	inHg	0.1		-
	mmHg	1		-
	mmH <sub>2</sub> O	0.1		-
Power supply voltage		DC12 to 24V ±10%, ripple (P-P)10% or less		
Current consumption		55mA or less		
Switch output		NPN: transistor and open collector 2 point		PNP: transistor and open collector 2 point
		Max. load current: 80mA		Max. load current: 80mA
		Max. power supply voltage: 30V DC		Max. power supply voltage: 24V DC
		Internal voltage drop: 1V or less		Internal voltage drop: 1V or less
Repeatability (Switch output)		Within ±0.2% F.S. ±1 digit		
Hysteresis	Hysteresis mode	Adjustable		
	Window comparator mode	Fixed (3digits)		
Response time		2.5 ms or less (prevent deviation: 24ms, 192ms and 768ms acceptable)		
Switch output load short circuit protection		Equipment		
Display		3½ digit LED display (sampling rate: 5 times/second)		
Repeatability		Within ±2% F.S. ± 1digit (standard temperature: 25 ±3°C)		
Indicator light		OUT1= green/OUT2= red		
Analog output (PPG-C-□NA-□ PPG-C-□PA-□)		Analog voltage output: Within 1 to 5V ± 5% F.S. (Rated pressure) Linearity: Within ± 1% F.S.		Analog voltage output : Within 1 to 5V ± 2.5% F.S. (Rated pressure) Linearity: Within ± 1% F.S.
		IP 65		
Environmental resistance	Degree of protection	IP 65		
	Ambient temperature	Use: 0 to 50°C or to store:-20 to 60°C (no dew condensation and no freezing)		
	Ambient humidity	Use/ store: 35 to 85% RH (no dew condensation)		
	Withstand voltage	AC1000V, 1 minute (between case and lead wire)		
	Insulation resistance	50MΩor less (DC 500V applied to )		
	Vibration resistance	Double amplitude at 1.5mm to 10Hz-55Hz-10Hz for 1 minute, and X, Y, Z directions for 2 hours		
	Shock resistance	Endurance 980/s <sup>2</sup> (100G), 3 times in each X, Y, Z direction		
Temperature characteristic		Within ±2% F.S. (standard 25°C) temperature range 0 to 50°C		
Port size		6B: RC1/8 (female thread) 6N : NPT1/8 (female thread) 6G: G1/8 (female thread)		
Connector cable		Oil resistant cable (0.15mm <sup>2</sup> )		
Weight		Approx. 105g (2m connector cable) and approx. 71g (M8 connector)		

## ⚠ Installation Instructions



1. Two inlets are mounted on the back of the sensor.  
Please select one inlet port for easier piping.
2. To avoid pressure leaks, please seal with a blind plug  
Block the unused inlets.

## How to order

PPG-C- **R** **NA** - **6B** **C** **2**

**A** Rated pressure

**B** Output type

**C** Piping shape

**D** Connector cable

**E** Unit change

- Discrete option model no.

PPG-C- **KL**

Symbol	Descriptions
<b>C2</b>	2m connector cable with M8 connector
<b>KL</b>	Mount one set of 2 metal brackets
<b>KHS</b>	Panel bracket
<b>KHSCB</b>	Panel bracket + front protective cover

Symbol	Descriptions
<b>A Rated pressure</b>	
<b>R</b>	Composite pressure (-100 to 100kPa)
<b>V</b>	Vacuum pressure (0 to -101.3kPa)
<b>P</b>	Positive pressure (0.000 to 1.000MPa)
<b>B Output type</b>	
<b>NA</b>	2NPN output + 1 analog output (1 to 5V)
<b>N</b>	2NPN output
<b>PA</b>	2PNP output + 1 analog output (1 to 5V)
<b>P</b>	2PNP output
<b>C Piping shape</b>	
<b>6B</b>	Rc1/8 (female thread)
<b>6N</b>	NPT1/8 (female thread)
<b>6G</b>	G1/8 (female thread)
<b>D Connector cable</b>	
<b>Blank</b>	2m
<b>C</b>	*1 0.3m connector cable with M8 connector (pin)
<b>E Unit change</b>	
<b>2</b>	Operation instruction with unit change function (for Chinese): simplified Chinese/English

Note 1: **B** Only NA and PA are selectable.

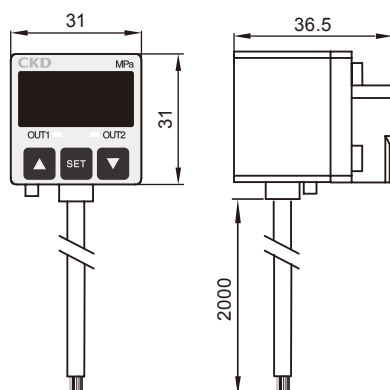
Note 2: **B** Only PA is selectable.

Note 3: **B** Only N and P are selectable.

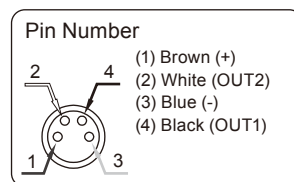
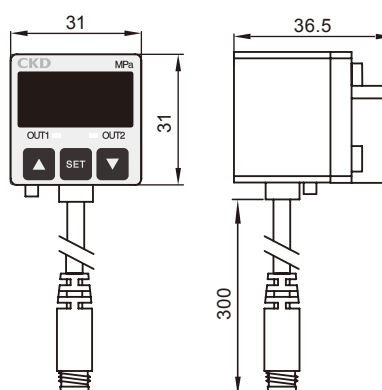
M8 connector is custom order.

## Dimensions

- PPG-C - □ - □ 2

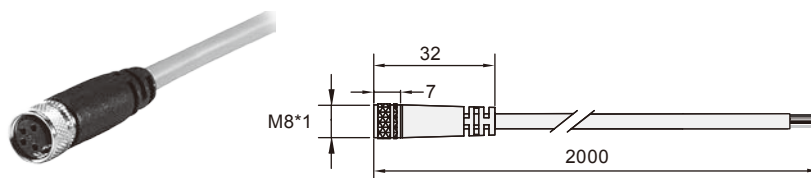


- PPG-C - □ C2

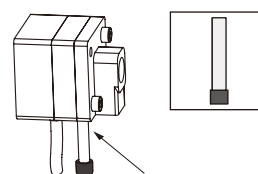


## Dimensions

- Connector cable with M8 connector (jack) (model: PPG-C-C2)



- Protection cover body (IP65)  
(It's one of the standard accessories for the body.)

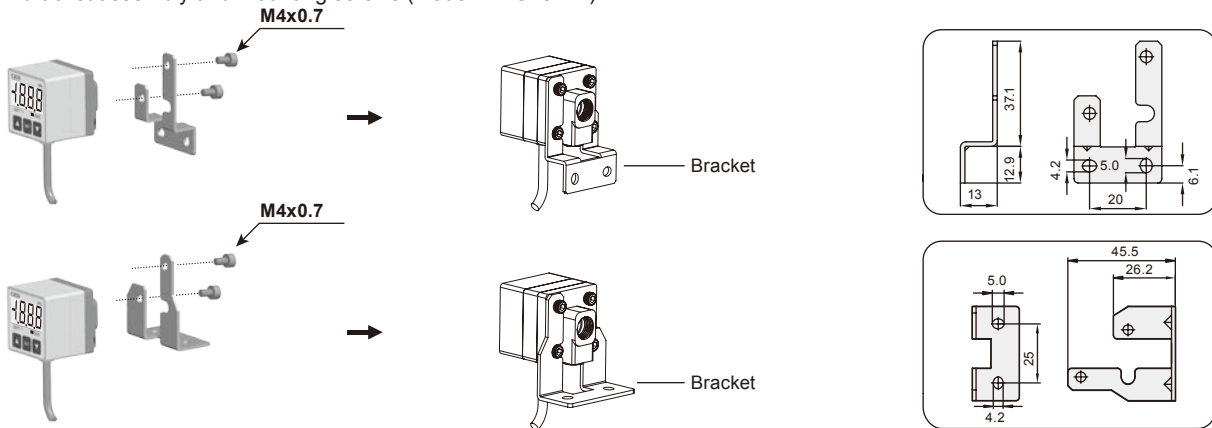


Due to degree of protection IP65, please be sure to assemble the parts before use.

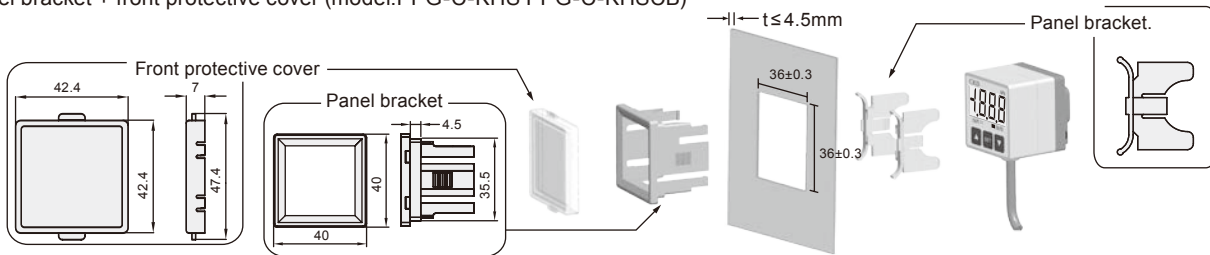
Dust proof protection cover

## Dimensions

- 2 bracket assembly and mounting screws (model: PPG-C-KL)



Panel bracket + front protective cover (model: PPG-C-KHS PPG-C-KHSCB)



## Display part description

OUT1:

Output 1 operational indicator light (green LED)

(▲)UP key:

Change setting mode and set value

SET key:

When changing setting mode and defining setting value

3 ½ digit LED display

Panel: display pressure value, set content and error code

OUT2:

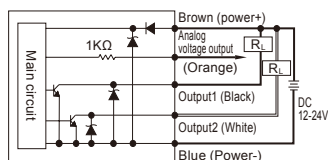
Output 2 operational indicator light (red LED)

(▼)DOWN key:

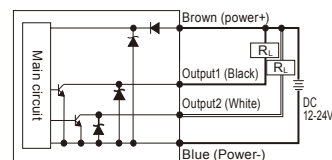
Change setting mode and set value

## Internal circuit and connection method

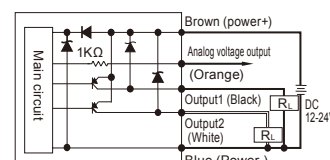
PPG-C-NA - □ - □  
NPN output + analog output (1~5V)



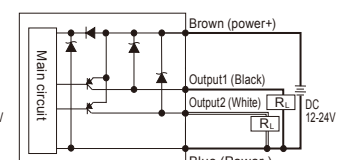
PPG-C-N - □ □  
NPN output 2 point



PPG-C-PA - □ - □  
PNP output + analog output (1~5V)



PPG-C-P - □ □  
PNP output 2 point



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# CKD Corporation

<Website>  
<http://www.ckd.co.jp/>

Head Office • Plant  
Overseas Sales Administration dpt.  
Tokyo Branch Office

Nagoya Branch Office  
Osaka Branch Office

2-250, Oujii, Komaki, Aichi 485-8551  
2-250, Oujii, Komaki, Aichi 485-8551  
4F, Bunkahousou Media Plus, 1-31-1, Hamamatsu-cho,  
Minato-ku, Tokyo 105-0013  
2-250, Oujii, Komaki, Aichi 485-8551  
1-3-20, Tosabori, Nishi-ku, Osaka 550-0001

TEL(0568)77-1111  
TEL(0568)77-1338  
TEL(03)5402-3620

TEL(0568)77-1356  
TEL(06)6459-5770

FAX(0568)77-1123  
FAX(0568)77-3461  
FAX(03)5402-0120

FAX(0568)77-3317  
FAX(06)6446-1945