

Digital Pressure Sensor PPG-D Series



Features

- Set pressure: Composite pressure (-100.0 to 100.0kPa)
Vacuum pressure (0.0 to -101.3kPa)
Positive pressure (0.000 to 1.000MPa)
- Bicolor display
- Copy function
- Switch output 2 point, analog output 1 point
(1 to 5V or 4 to 20mA)
- Set hysteresis
- Pressure display repeatability: $\pm 2\%$ F.S. ± 1 digit
- Pressure unit can be switched ^{Note 1}: kPa, MPa, kgf/cm², bar, psi, inHg
- Degree of protection: IP65



•Bicolor display (Green/Red)

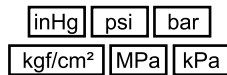
Display colors can be set between green and red, makes pressure status easier to perceive.



	50k	50r	100n	100d
ON	Green	Red	Green	Red
OFF	Red	Green	Green	Red

•Supports multiple pressure units ^{Note 1}

Pressure unit can be switched.



Note 1 : Applicable only for the models with "2" on the end of the model number.



•Copy function

Optimized for reducing man-hours and reducing errors.

Setting master unit



Setting copied unit



COPY

•Dust proof and water proof performance

Degree of protection: IP65



•Easy mounting and installation

Pressure switch can be mounted easily even after the electric wiring procedures, thanks to the connector type cable.



Note 2 : 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-024SA".

CKD Corporation

CC-1345A

Specifications

Description			PPG-D-P-□-□ (Positive pressure)	PPG-D-V-□-□ (Vacuum pressure)	PPG-D-R-□-□ (Composite pressure)
Rated pressure			0.000 to 1.000MPa	0.0 to -101.3kPa	-100.0 to 100.0kPa
Set pressure			-0.100 to 1.000MPa	10.0 to -101.3kPa	-101.0 to 101.0kPa
Proof pressure			1.5MPa	300kPa	
Working fluid			Air, non-corrosive gas, non-combustible gas		
Display unit		kPa	-	0.1	
		MPa	0.001	-	
		kgf/cm ²	0.01	0.001	
		bar	0.01	0.001	
		psi	0.1	0.01	
		inHg	-	0.1	
Power supply voltage			DC12 to 24V ±10%, ripple (P-P) less than 10% or class 2		
Current consumption			40mA or less (no-load)		
Switch output	Output type		NPN or PNP transistor, open collector 2 point		
	Max. load current		125mA		
	Max. power supply voltage		NPN output: DC30V, PNP output: DC24V		
	Internal voltage drop		1.5V or less		
	Response time		2.5ms or less (prevent deviation: 25ms, 100ms, 250ms, 500ms, 1000ms, 1500ms acceptable)		
	Switch output load short circuit protection		Available		
Analog output *2, 3	Voltage output	Voltage	1 to 5V (±2.5%)		
		Impedance	Approximately 1kΩ		
	Current output	Current	4 to 20mA (±2.5%)		
		Impedance	Max. load impedance: 250Ω (DC12V) 600Ω (DC24V) Min. load impedance: 50Ω		
	Linearity		±1% F.S.		
Display	LCD display		3½ digit, 7 segments (red/green)		
	Power ON indicator lamp		Orange (indicator lamp 1, 2) OUT 1 and OUT 2		
	Update time		Approx. 0.2 seconds		
	Display accuracy		±2% F.S. ± 1digit (standard temperature: 25 ±3°C)		
Repeatability (Switch output)			±2% F.S. ± 1digit		
Environmental resistance	Degree of protection		IP65		
	Operating ambient temperature		0 to 50 °C		
	Storage ambient temperature		-10 to 60°C (no dew condensation and no freezing)		
	Ambient humidity		35 to 85% RH (no dew condensation)		
	Withstand voltage		AC1000V, 1 minute (between case and lead wire)		
	Insulation resistance		50MΩ (DC500V applied to between case and lead wire)		
	Vibration resistance		Double amplitude at 1.5mm, 10G, to 10Hz-55Hz-10Hz for 1 minute, and X, Y, Z directions for 2 hours		
	Shock resistance		100m/s ² (10G), 3 times in each X, Y, Z direction		
Temperature characteristic			±2% F.S. (standard 25°C) temperature range 0 to 50°C		
Port size			6BM: R1/8", M5 6NM: NPT1/8", #10-32UNF 6GM: G1/8", M5		
Connector cable			Oil resistant cable (0.15mm ²)		
Weight			Approx. 86g (2m connector cable)		

*1: Hysteresis value of one point set mode and window comparator mode can be adjusted between 1 to 8 digits.

*2: Analog current output can not be selected simultaneously with analog voltage output.

*3: Analog voltage output can not be selected simultaneously with analog current output.

How to order

PPG - D - **R** **NA** - **6BM** **D**

A Rated pressure

B Output type

C Piping shape

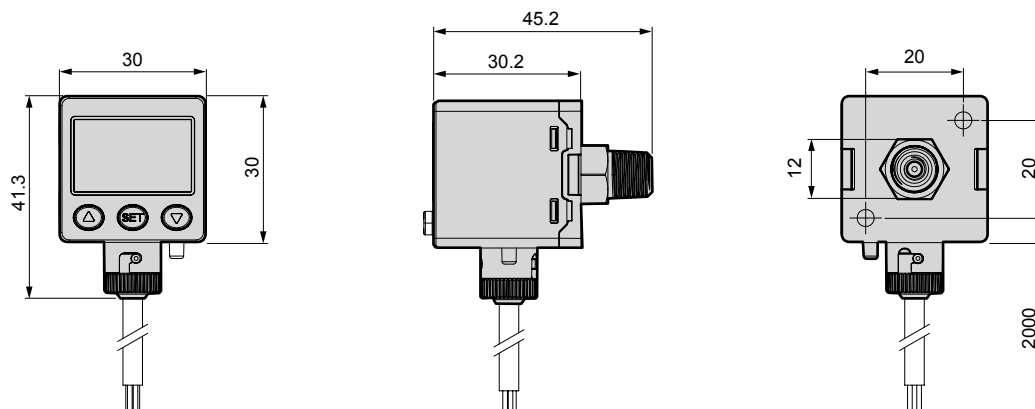
•Discrete option model No.

PPG - D - **KD**

Code	Descriptions
KD	Parallel mounting bracket (with mounting screw)
KL	L-shaped mounting bracket (with mounting screw)
KHS	Panel adapter
KHSCB	Panel adapter with front protective cover

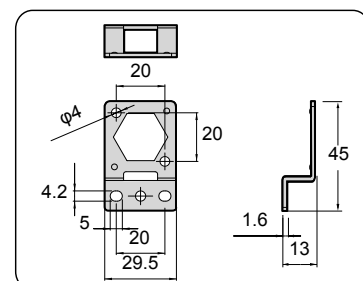
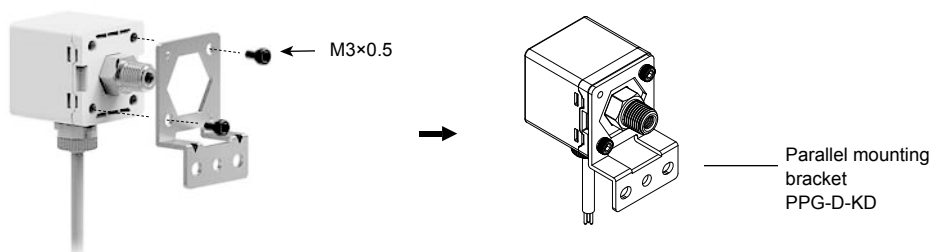
Code	Descriptions
A Rated pressure	
R	Composite pressure (-100 to 100kPa)
V	Vacuum pressure (0 to -101.3kPa)
P	Positive pressure (0.000 to 1.000MPa)
B Output type	
NV	NPN transistor, open collector 2 point + analog (voltage) output (1 to 5V)
NA	NPN transistor, open collector 2 point + analog (current) output (4 to 20mA)
NC	NPN transistor, open collector 2 point + copy function
PV	NPN transistor, open collector 2 point + analog (voltage) output (1 to 5V)
PA	PNP transistor, open collector 2 point + analog (current) output (4 to 20mA)
PC	PNP transistor, open collector 2 point + copy function
C Piping shape	
6BM	R1/8", M5 (female thread)
6NM	NPT1/8", #10-32UNF (female thread)
6GM	G1/8", M5 (female thread)
D Unit change	
2	With unit change function (Operation instruction: Traditional Chinese/English)

Dimensions

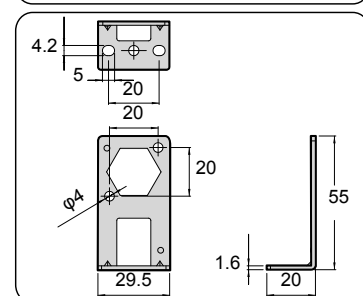
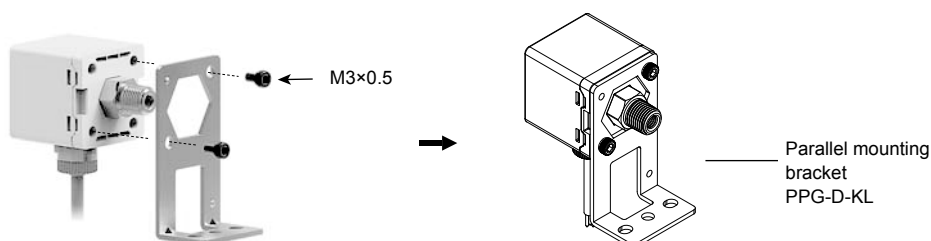


Dimensions with options

•Parallel mounting bracket (with mounting screw)

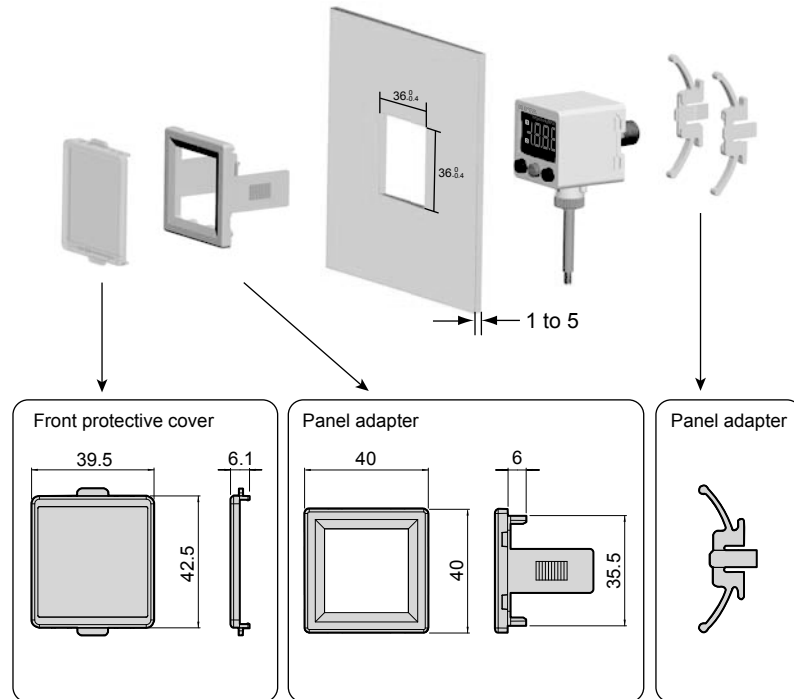


•L-shaped mounting bracket (with mounting screw)

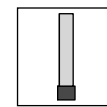
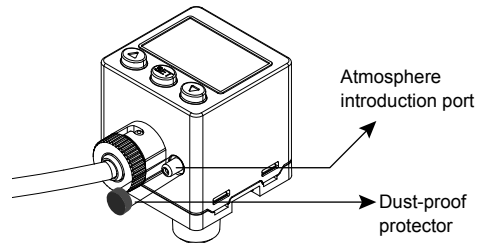


Dimensions with options

- Panel adapter with front protective cover
PPG-D-KHS, PPG-D-KHSCB

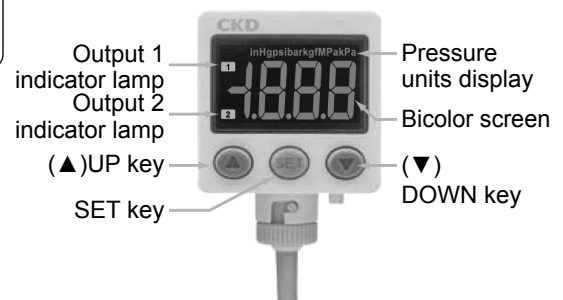


- Protector (IP65)



This protector must be mounted if intended to be used with degree of protection level IP65.

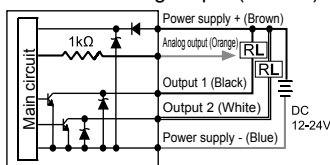
Display part description



Internal circuit and connection method

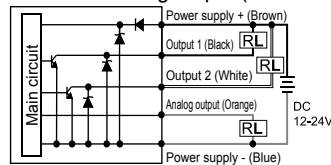
• PPG-D-□NV

2 NPN + analog output (1 to 5V)



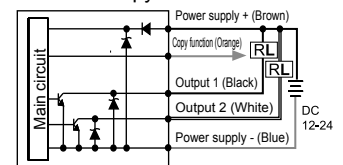
• PPG-D-□NA

2 NPN + analog output (4 to 20mA)



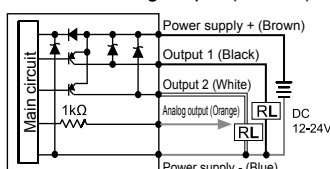
• PPG-D-□NC

2 NPN + copy function



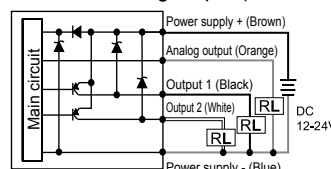
• PPG-D-□PV

2PNP + analog output (1 to 5V)



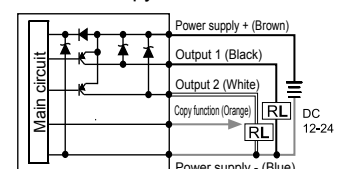
• PPG-D-□PA

2 NPN + analog output (4 to 20mA)



• PPG-D-□PC

2 NPN + copy function



If the goods and/or their replicas, the technology and/or software found in this catalog are to be exported, law requires that the exporter makes sure that they will never be used for the development and/or manufacture of weapons for mass destruction.

CKD Corporation

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

Head Office • Plant
Sales And Marketing Div.
Overseas Sales Administration dpt.
Tokyo Branch Office

Nagoya Branch Office
Osaka Branch Office

2-250 Oujii, Komaki City, Aichi 485-8551
2-250 Oujii, Komaki City, Aichi 485-8551
2-250 Oujii, Komaki City, Aichi 485-8551
4F, Bunkahousu 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 FAX(0568)77-1123
TEL(0568)74-1303 FAX(0568)77-3410
TEL(0568)77-1338 FAX(0568)77-3461
TEL(03)5402-3620 FAX(03)5402-0120
TEL(0568)74-1356 FAX(0568)75-1692
TEL(06)6459-5770 FAX(06)6446-1945