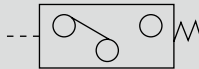
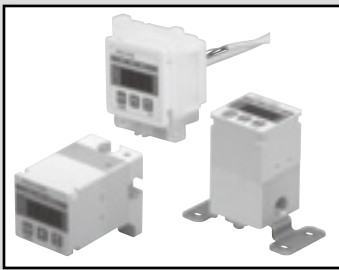


# PPD3-S Series



## Overview

Pressure switch PPD3-S Series is ideal for pneumatic lines. Due to various port options, in addition to source pressure confirmation, suction confirmation and contact confirmation, etc., are possible.

## Features

- Models can be easily replaced in response to worsened or improved air-line conditions.
- Push-in fitting resin ports (6HD/6HT/H6) are available. These lightweight ports help save space.
- Through ports (6T/6HT/H6) are available. Ideal for suction and seating confirmation. Can be installed using minimal piping space.
- Convenient functions such as peak hold function, forcible switch function, and pressure gauge reading function make equipment setting more efficient.
- CE marking compatible.

## Sensor integrated specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	PPD3-S		
	R10	R03	R01
Pressure sensitive element	Single stainless steel diaphragm pressure sensor		
Applicable fluids	Air/non-corrosive gas/compressed air (including water and drain)		
Rated pressure	-100 (≈-14 psi, -1 bar) to 980 kPa (≈142 psi, 9 bar)	-100 (≈-14 psi, -1 bar) to 300 kPa (≈43 psi, 3 bar)	-100 (≈-14 psi, -1 bar) to 100 kPa (≈14 psi, 1 bar)
Display unit	kPa	kPa	kPa
Min. display unit *1	1 kPa (≈145 psi, 10 bar)		
Proof pressure	2 MPa (≈290 psi, 20 bar)	0.6 MPa (≈87 psi, 6 bar)	0.6 MPa (≈87 psi, 6 bar)
Display accuracy (25°C)	±2% F.S.		±3% F.S.
Temperature characteristics (0 to 50°C)	±4% F.S.		±5% F.S.
Leak rate	1 cm <sup>3</sup> /min (ANR) or less		
Display	3-digit LED display character height 8 mm		
Power supply voltage	12 to 24 VDC ± 10% (ripple rate 1% or less)		
Current consumption	50 mA or less (60 mA or less for sensor separated)		
Switch output	Sensor integrated	N: NPN transistor open collector output 2 points P: PNP transistor open collector output 2 points NA: NPN transistor open collector output 1 point + analog output 1 point PA: PNP transistor open collector output 1 point + analog output 1 point	
Switch output current	50 mA or less		
Switch output voltage drop value	2.4 V or less		
Switch output response time	Approximately 5 msec		
Analog output	1 to 5 ±0.1 V load impedance: 10 kΩ or more		
Set value hold	EEPROM		
Lead wire	Body: Oil resistant vinyl cable 4-conductor (0.3 mm <sup>2</sup> insulator outer diameter ø1.1) 1 m		
Ambient temperature	0 (32°F) to 50°C (122°F)		
Ambient humidity	0 to 85%RH (no condensation)		
Vibration resistance	10 to 55 Hz compound amplitude 1.5 mm 2 hours per X, Y, Z direction		
Degree of protection	IP65 equiv. *2 (IP40 equivalent only for display section of sensor separated)		
Protection circuit *3	Power reverse connection protection, switch output reverse connection protection, switch output load short-circuit protection		
Weight	PPD3-S-R□□-6B: approx. 105 g		

\*1 : This indicates min. display unit, and does not guarantee display accuracy.

\*2 : When an atmosphere introduction port is machined (refer to page 1228).

\*3 : This product's protection circuit is effective only for specific misconnections and load short-circuits. It does not provide protection for all misconnections.

## Clean-room specifications

(Catalog No. CB-033SA)

## Circuit diagram and connection method

- Anti-dust generation structure for use in cleanrooms Refer to page 1187.

PPD3-S - ..... - P7\*

PPD3-S - ..... - P8\*

PPD3-S- ..... - P9\*

### How to order

- Sensor integrated

PPD3-S - R03 NA - 6T

Stainless steel diaphragm sensor

A Pressure range

B Output

C Port

Code	Description
<b>A Pressure range</b>	
R10	-100 to 980 kPa
R03	For -100 to 300 kPa
R01	For -100 to 100 kPa
<b>B Output</b>	
N	NPN transistor output 2 points
P	PNP transistor output 2 points
NA	NPN transistor output 1 point + analog output 1 point
PA	PNP transistor output 1 point + analog output 1 point
<b>C Port</b>	
6B	Rc1/8, 2 direction port rear side, lower outlet
6T	Axial Rc1/8, through port both sides outlet
6HD	Lightweight port with 6 mm push-in fitting (downward)
6HT	Lightweight through port with two 6 mm push-in fittings (horizontal both sides)

### ⚠ Precautions for model selection

Mounting brackets and kits are not included with the body.

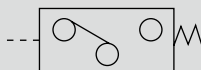
Available separately. Refer to the "Mounting brackets and kits" model numbers on the following page.

- Mounting bracket and kit  
**Refer to page 1180.**

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdris FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PressCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

Electronic pressure switch with digital display (pressure switch)

# PPD3/PPD3-S Series Sensor separated



## Overview

Pressure switch PPD3 Series is ideal for pneumatic lines. Due to various port options, in addition to source pressure confirmation, suction confirmation and contact confirmation, etc., are possible.

## Features

- Semiconductor pressure sensor and stainless steel diaphragm pressure sensor available as a series.
- Convenient functions such as a peak hold function, forcible switch function, and pressure gauge reading function make equipment settings more efficient.
- CE marking compatible.

## Sensor separated specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	PPD3			PPD3-S		
	R10	R03	R01	R10	R03	R01
Pressure sensitive element	Diffused semiconductor pressure sensor			Single stainless steel diaphragm pressure sensor		
Applicable fluid	Air/non-corrosive gas			Air/non-corrosive gas/compressed air (including water and drain)		
Rated pressure	-100 to 980 kPa	-100 to 300 kPa	-100 to 100 kPa	-100 to 980 kPa	-100 to 300 kPa	-100 to 100 kPa
Display unit	kPa	kPa	kPa	kPa	kPa	kPa
Min. display unit *1	1 kPa (≈0.2 psi, 0.01 bar)					
Proof pressure	1.5 MPa	0.6 MPa	0.2 MPa *2	2 MPa	0.6 MPa	0.6 MPa
Display accuracy (25°C)	±2% F.S.					±3% F.S.
Temp (0 to 50°C)	±4% F.S.					±5% F.S.
Leak rate	1 cm <sup>3</sup> /min (ANR) or less					
Display	3-digit LED display character height 8 mm					
Power supply voltage	12 to 24 VDC ± 10% (ripple rate 1% or less)					
Current consumption	60 mA or less					
Switch output	NA: NPN transistor open collector output 2 points + analog output 1 point PA: PNP transistor open collector output 2 points + analog output 1 point					
Switch output current	50 mA or less					
Switch output voltage drop value	2.4 V or less					
Switch output response time	Approximately 5 msec					
Analog output	1 to 5 ±0.1 V load impedance: 10 kΩ or more					
Set value hold	EEPROM					
Lead wire	Body: oil resistance vinyl cable (5-conductor 0.2 mm <sup>2</sup> insulator outer diameter ø1.0) Sensor section of sensor separated: oil resistance vinyl cable 3-conductor (0.15 mm <sup>2</sup> insulator outer diameter ø1.0) 3 m					
Ambient temperature	0 (32°F) to 50 (122°F)°C					
Ambient humidity	0 to 85%RH (no condensation)					
Vibration resistance	10 to 55 Hz compound amplitude 1.5 mm 2 hours per X, Y, Z direction					
Degree of protection	IP65 equiv. (IP40 equivalent only for display section of sensor separated)					
Protection circuit *3	Power reverse connection protection, switch output reverse connection protection, switch output load short-circuit protection					
Weight	PPD3-R□□D-6: approx. 100 g			PPD3-S-R□□D-6B: approx. 115 g		

\*1 : This indicates min. display unit, and does not guarantee display accuracy.

\*2 : Sensor separated is 0.3 MPa.

\*3 : This product's protection circuit is effective only for specific misconnections and load short-circuits. It does not provide protection for all misconnections.

Clean-room specifications (Catalog No. CB-033SA)

- Anti-dust generation structure for use in cleanrooms

PPD3-.....- P7\*

PPD3-.....- P8\*

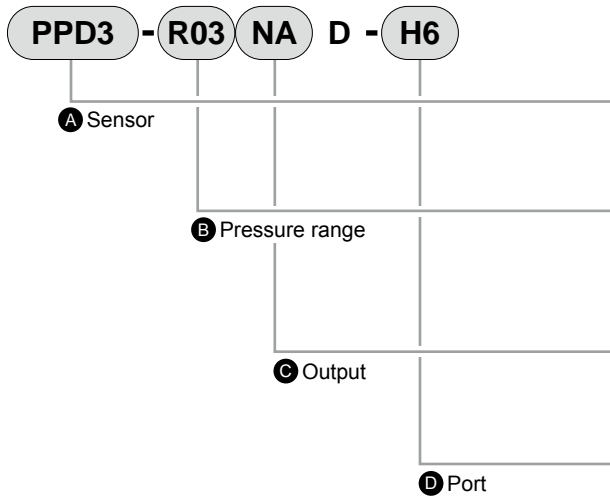
PPD3-.....- P9\*

Circuit diagram and connection method  
Refer to page 1187.

F.R.L.  
F.R.  
F (Filtr)  
R (Reg)  
L (Lub)  
Drain Separ  
Mech Press SW  
Res press exh valve  
SlowStart  
Anti-bac/Bac-remove Filtr  
Film Resist FR  
Oil-Prohr  
Med Press FR  
No Cu/ PTFE FRL  
Outdrs FRL  
Adapter Joiner Press Gauge  
CompFRL  
LgFRL  
PrecsR  
VacFR  
Clean FR  
ElecPneUR  
AirBoost  
Speed Ctrl  
Silncr  
CheckV/ other  
Fit/Tube  
Nozzle  
Air Unit  
PrecsCompn  
Electro Press SW  
ContactSW  
AirSens  
PresSW Cool  
Air Flo Sens/Ctrl  
WaterRtSens  
TotAirSys (Total Air)  
TotAirSys (Gamma)  
Gas generator  
RefrDry  
DesicDry  
HiPolymDry  
MainFiltr  
Dischrg etc  
Ending

### How to order

- Sensor separated



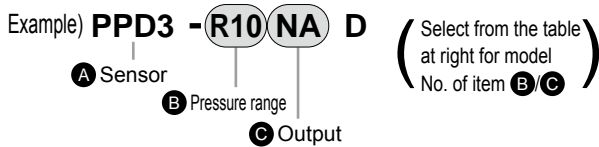
Code	Description	
<b>A Sensor</b>		
PPD3	Semiconductor sensor	
PPD3-S	Stainless steel diaphragm sensor	
<b>B Pressure range</b>		
R10	-100 to 980 kPa	
R03	-100 to 300 kPa	
R01	-100 to 100 kPa	
<b>C Output</b>		
NA	NPN transistor output 2 points + analog output 1 point	
PA	PNP transistor output 2 points + analog output 1 point	
<b>D Port</b>		
6	R1/8	For PPD3 (semiconductor sensor)
H6	6 mm push-in fitting	
H6-B	6 mm plug	
6B	Rc1/8	For PPD3-S (stainless steel diaphragm sensor)

### ⚠ Precautions for model selection

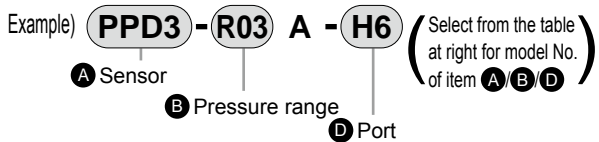
Mounting brackets and kits are not enclosed with the body.

They are available separately. Refer to the "Mounting brackets and kits" model numbers on the next page.

- Model No. of single display



- Discrete sensor model No.

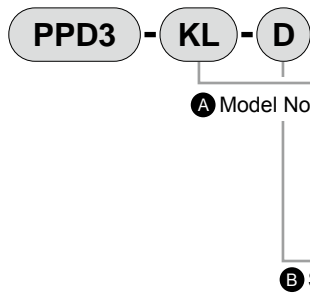


- Mounting bracket and kit  
Refer to page 1180.

- F.R.L.
- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/ PTFE FRL
- Outdrs FRL
- Adapter Joiner Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/ other
- Fit/Tube
- Nozzle
- Air Unit
- PressCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRISens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

# PPD3/PPD3-S Series

## ● Mounting bracket and kit



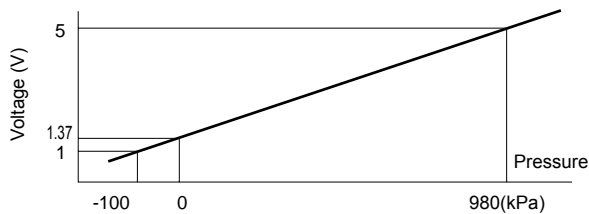
Code	Description
<b>A Model No.</b>	
PPD3-KL	One side mounting foot (L shaped mounting) (mounting screw attached)
PPD3-KD	Both sides mounting foot (parallel mounting) (mounting screw attached)
PPD3-KHS	Panel mounting bracket set, with guard (ø6 push-in fitting attached for integrated)
PPD3-KC	Operation protective cover *1
<b>B Shape</b>	
Blank	Sensor integrated *2
D	Sensor separated

\*1 Because PPD3-KC is common for integrated and separated sensors, indicate Blank for B Shape when selecting PPD3-KC for the sensor separated.

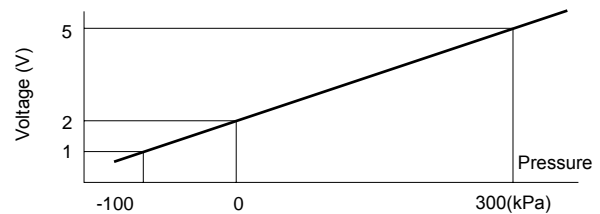
\*2 This panel mounting method applies for port "6B". It cannot be used with other ports.

## Analog output voltage - pressure characteristics

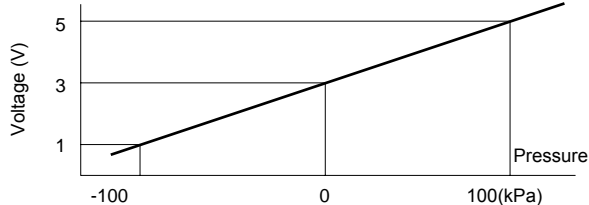
### ● PPD3-S-R10NA R10PA R10A



### ● PPD3-S-R03NA R03PA R03A



### ● PPD3-S-R01NA R01PA R01A



### [Precautions]

- Analog output accuracy is affected by temperature characteristics and heat generated when energized. Be sure to provide a standby time of 5 minutes and over after power is turned ON when using.

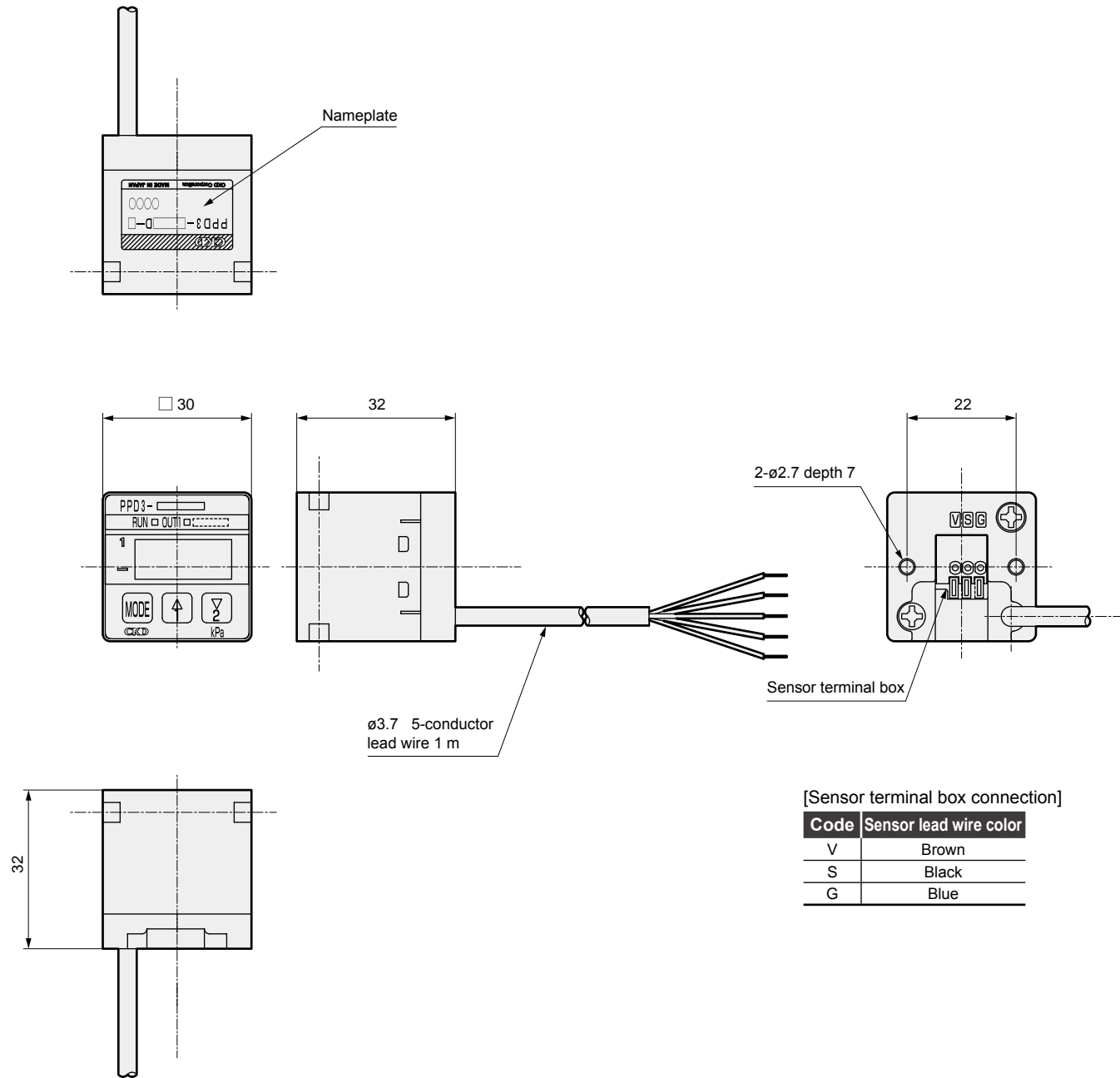
F.R.L.  
F.R.  
F (Filtr)  
R (Reg)  
L (Lub)  
Drain Separ  
Mech Press SW  
Res press exh valve  
SlowStart  
Anti-back/remove Filtr  
Film Resist FR  
Oil-ProhR  
Med Press FR  
No Cu/PTFE FRL  
Outdrs FRL  
Adapter Joiner Press Gauge  
CompFRL  
LgFRL  
PrecsR  
VacF/R  
Clean FR  
ElecPneuR  
AirBoost  
Speed Ctrl  
Silncr  
CheckV/other  
Fit/Tube  
Nozzle  
Air Unit  
PrecsCompn  
Electro Press SW  
ContactSW  
AirSens  
PresSW Cool  
Air Flo Sens/Ctrl  
WaterRtSens  
TotAirSys (Total Air)  
TotAirSys (Gamma)  
Gas generator  
RefrDry  
DesicDry  
HiPolymDry  
MainFiltr  
Dischrg etc  
Ending

# PPD3/PPD3-S Series

Sensor separated (display)

## Dimensions

Sensor separated (display)  
 ● PPD3-\*\*\*\*\*-D (display)



F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PresCompn
<b>Electro Press SW</b>
<b>ContactSW</b>
<b>AirSens</b>
<b>PresSW Cool</b>
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

# PPD3/PPD3-S Series

Sensor separated

## Internal structure and parts list

Sensor separated (semiconductor sensor)

● PPD3-R\*\*D-6

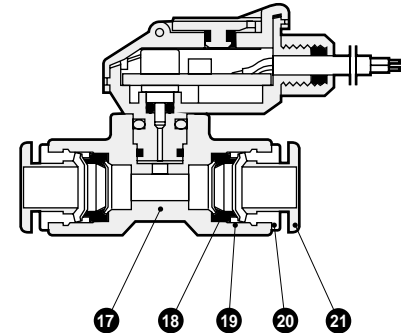
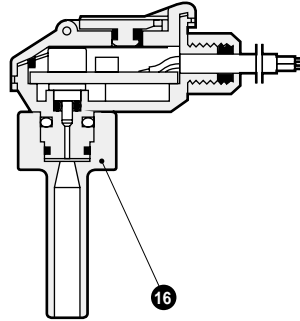
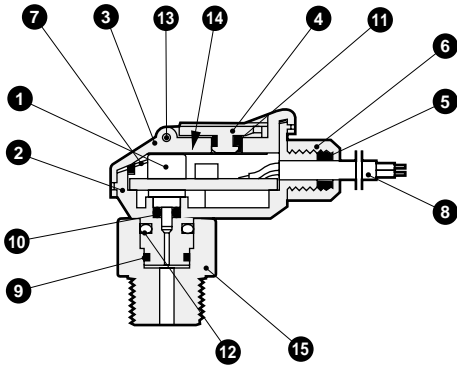
● PPD3-R\*\*D-H6-B

● PPD3-R\*\*D-H6

● PPD3-R\*\*A-6 (discrete sensor model No.)

● PPD3-R\*\*A-H6-B (discrete sensor model No.)

● PPD3-R\*\*A-H6 (discrete sensor model No.)



**Cannot be disassembled**

No.	Part name	Material	No.	Part name	Material
1	Pressure sensor	Diffusion semiconductor strain gauge	12	Stopper	Stainless steel
2	Body	Polybutylene terephthalate (glass fiber 30%)	13	Spring pin	Stainless steel
3	Cover	Polycarbonate	14	Shield sheet	Aluminum
4	Trimmer guard	Polycarbonate	15	R1/8	Polybutylene terephthalate (glass fiber 30%)
5	Bush	Nitrile rubber	16	Plug	Polybutylene terephthalate (glass fiber 30%)
6	Bush holder	Aluminum	17	Push-in fitting	Polybutylene terephthalate
7	Cover gasket	Silicone rubber	18	Packing	Nitrile rubber
8	Lead wire (3 m)	Polyvinyl chloride	19	Chuck	Copper alloy (electroless nickeling)
9	O-ring	Nitrile rubber	20	Outer ring	Copper alloy (electroless nickeling)
10	O-ring	Nitrile rubber	21	Push ring	Polyacetal
11	O-ring	Nitrile rubber			

## Dimensions

Sensor separated (semiconductor sensor)

● PPD3-R\*\*D-6

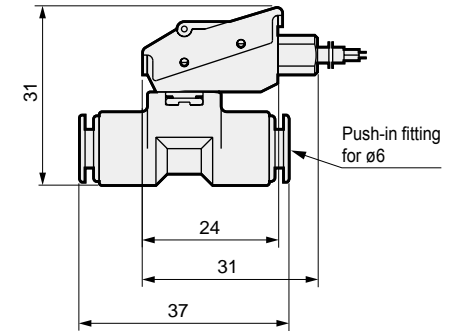
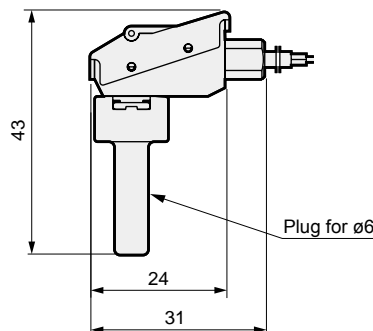
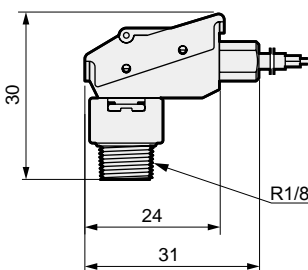
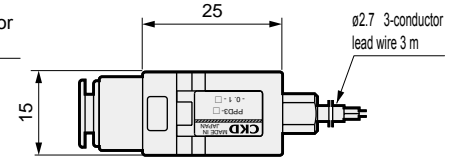
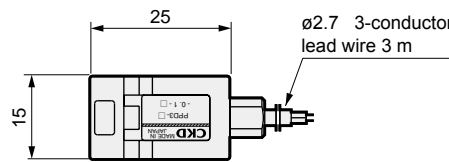
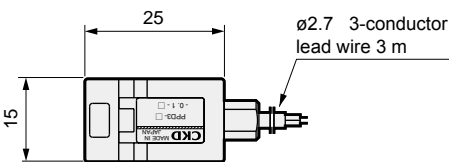
● PPD3-R\*\*D-H6-B

● PPD3-R\*\*D-H6

● PPD3-R\*\*A-6 (discrete sensor model No.)

● PPD3-R\*\*A-H6-B (discrete sensor model No.)

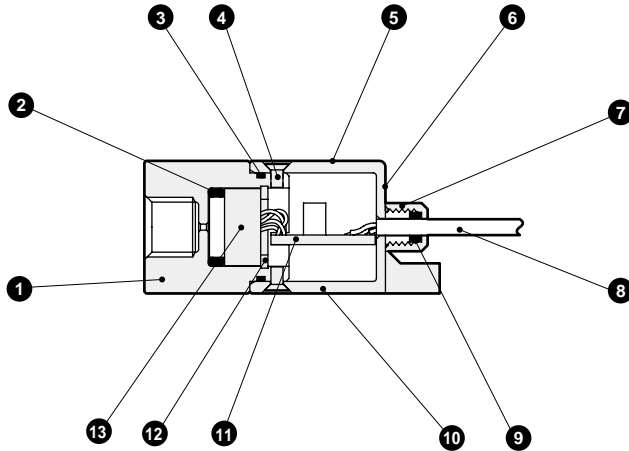
● PPD3-R\*\*A-H6 (discrete sensor model No.)



### Internal structure and parts list

Sensor separated (stainless steel diaphragm sensor)

- PPD3-S-R\*\*D-6B
- PPD3-S-R\*\*A-6B (discrete sensor model No.)



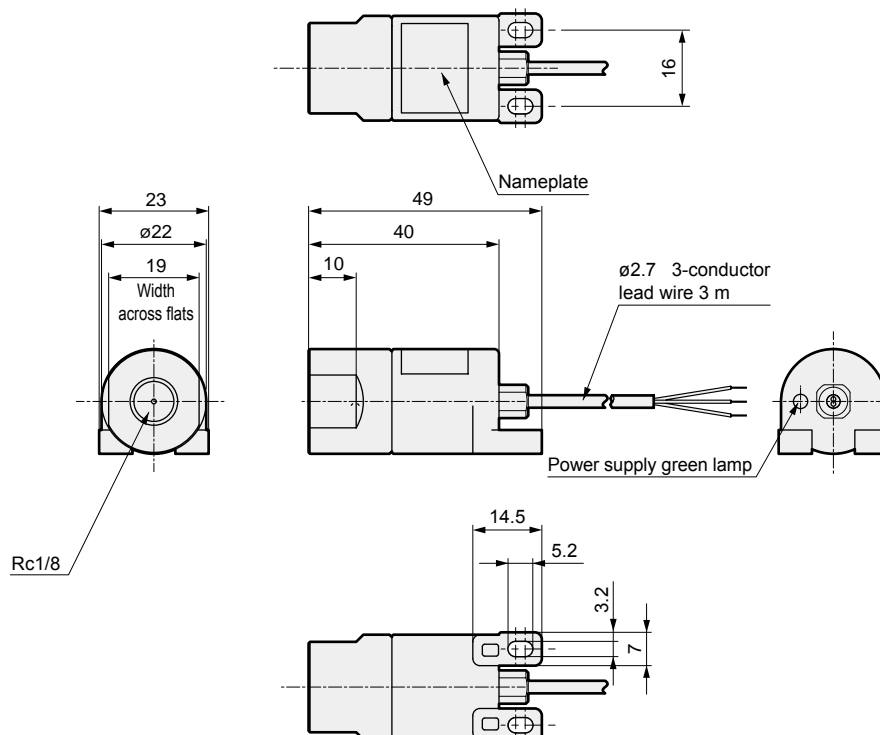
**Cannot be disassembled**

No.	Part name	Material	No.	Part name	Material
1	Pressure port	Aluminum	8	Lead wire (3 m)	Polyvinyl chloride
2	O-ring	Fluoro rubber	9	Bush	Nitrile rubber
3	O-ring	Nitrile rubber	10	Sensor body	Polybutylene terephthalate (glass fiber 30%)
4	Flat head screw	SUSXM7	11	Amplifier board	Glass epoxy resin
5	Nameplate	Polyester film	12	C ring for hole	Stainless steel
6	Light sheet	Polyester film	13	Pressure sensor	Stainless steel diaphragm strain gauge
7	Bush holder	Aluminum			

### Dimensions

Sensor separated (stainless steel diaphragm sensor)

- PPD3-S-R\*\*D-6B
- PPD3-S-R\*\*A-6B (discrete sensor model No.)





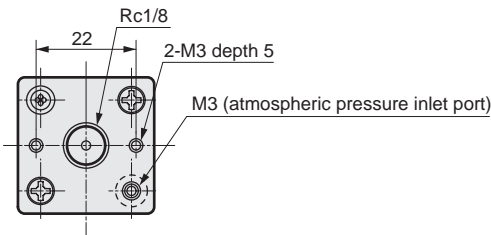
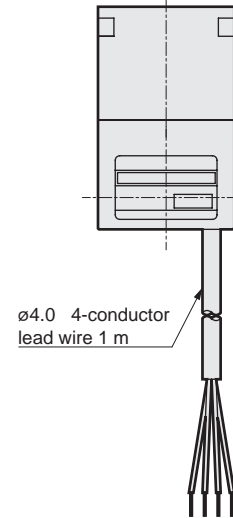
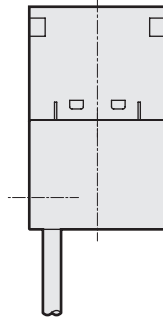
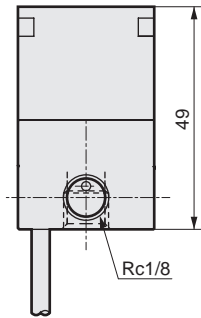
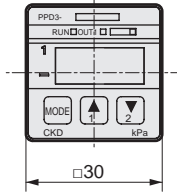
# PPD3-S Series



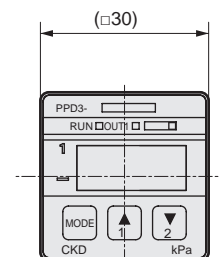
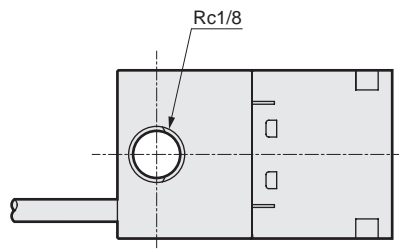
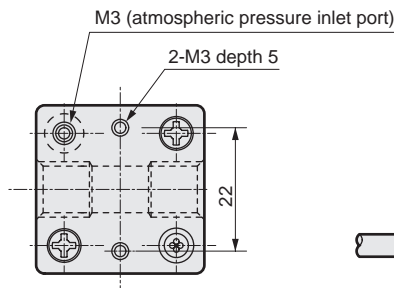
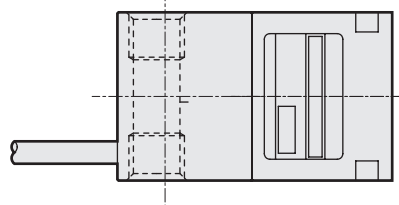
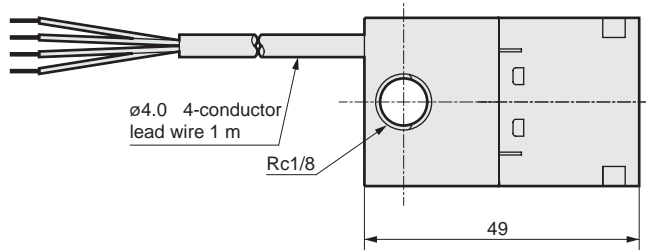
## F.R.L. Dimensions

F.R. Sensor integrated (stainless steel diaphragm sensor)  
 F (Filtr) ● PPD3-S-\*\*\*\*\*-6B

- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/ PTFE FRL
- Outdrs FRL
- Adapter Joiner Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/ other
- Fit/Tube
- Nozzle
- Air Unit
- PrecsCompn
- Electro Press SW**
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending



## ● PPD3-S-\*\*\*\*\*-6T



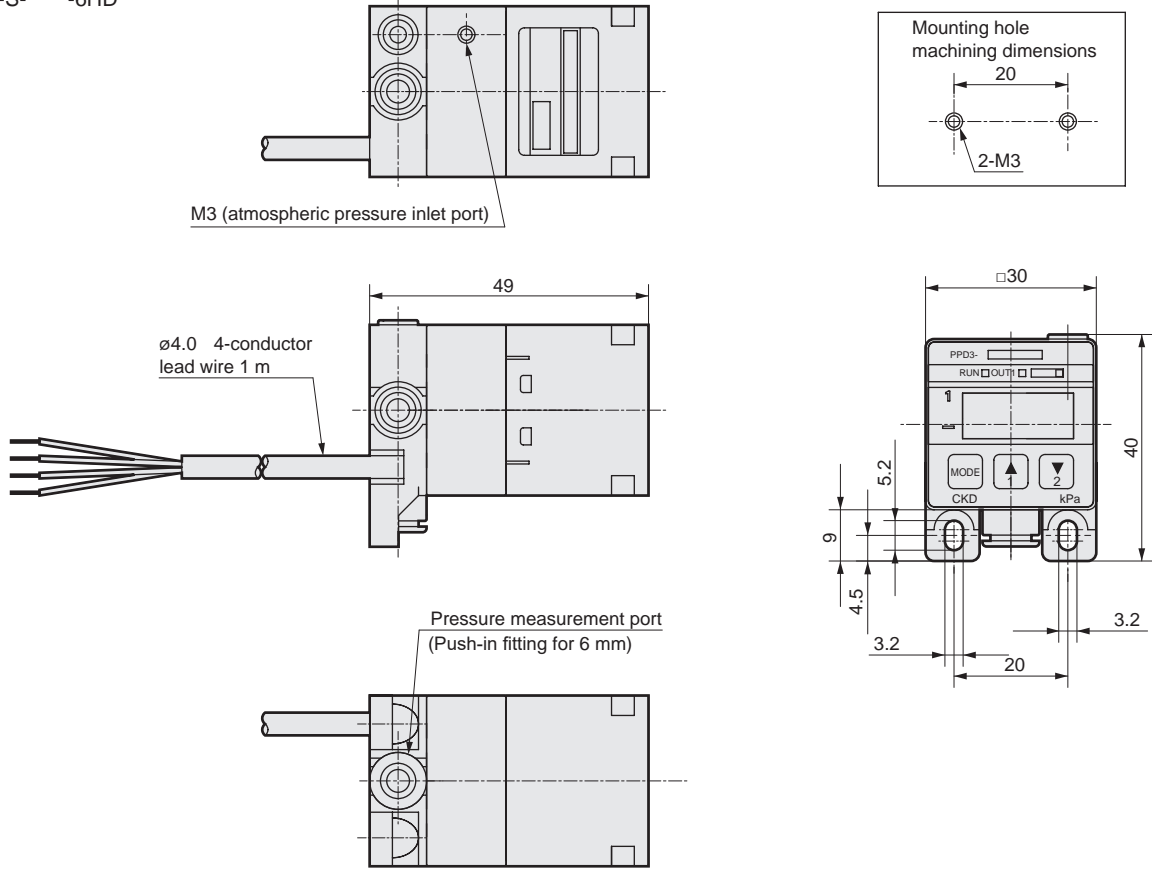
Refer to Safety precautions of PPD3 (-S) Series on pages 1227 to 1229 for wiring method and precautions.

### Dimensions: PPD3-S

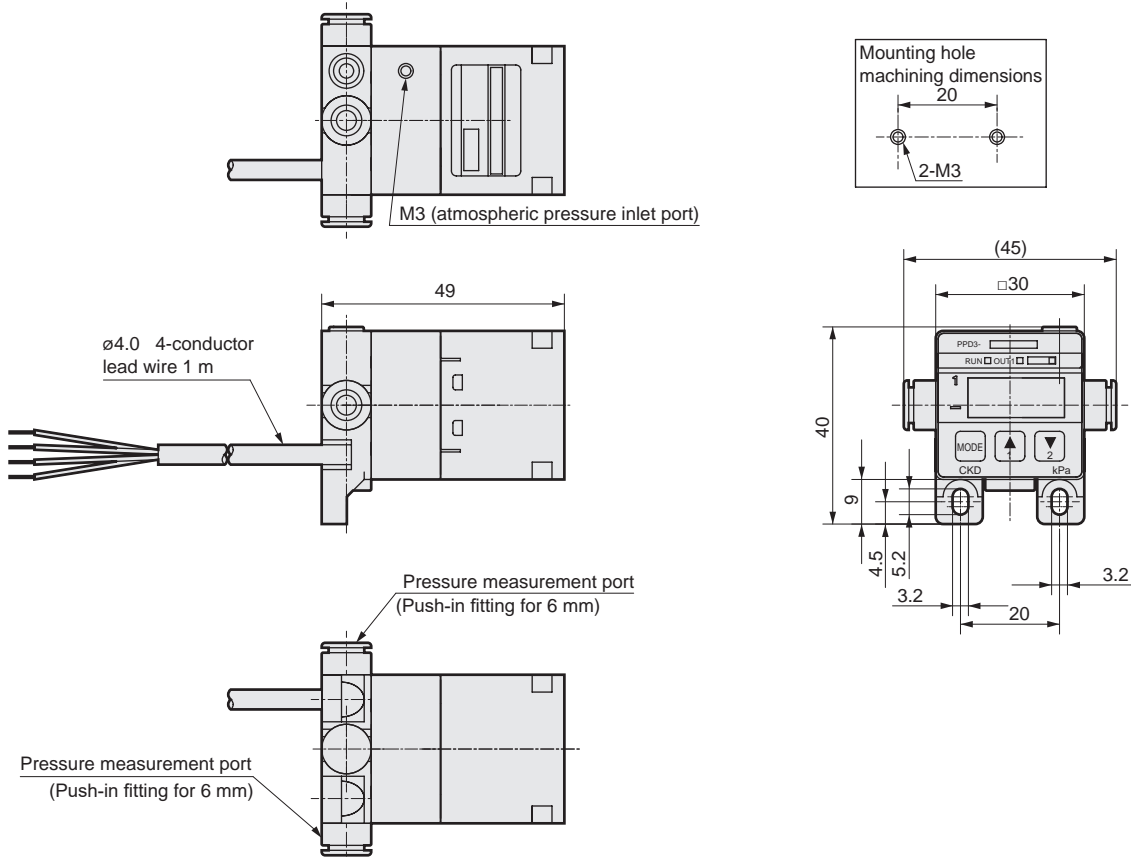


Sensor integrated (stainless steel diaphragm sensor)

● PPD3-S-\*\*\*\*\*-6HD



● PPD3-S-\*\*\*\*\*-6HT



Refer to Safety precautions of PPD3 (-S) Series on pages 1227 to 1229 for wiring method and precautions.

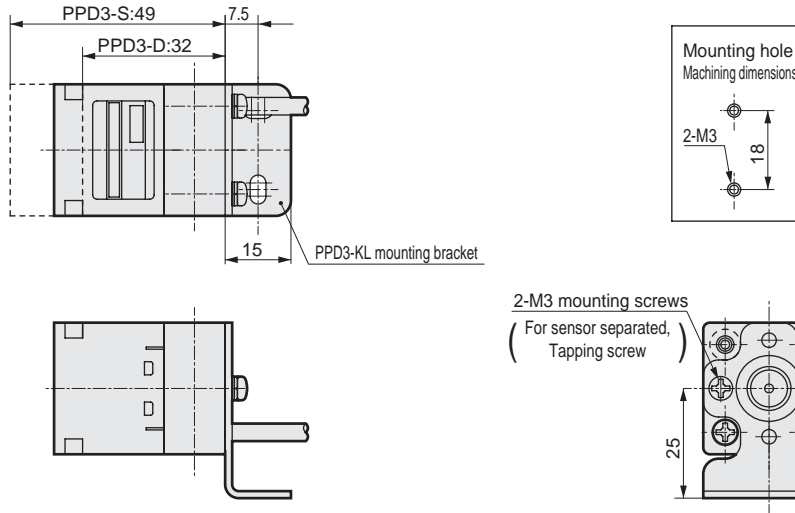
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PresCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

# PPD3/PPD3-S Series

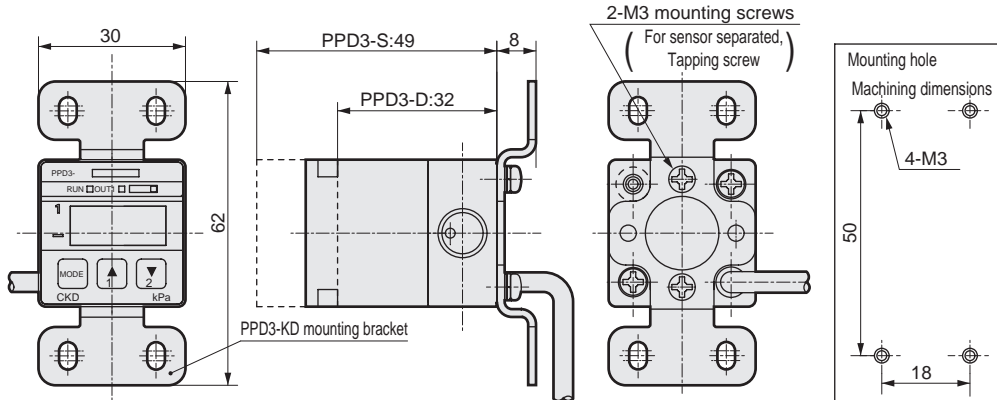
## F.R.L. Dimensions: Mounting bracket

- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/ PTFE FRL
- Outdrsr FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneur
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/ other
- Fit/Tube
- Nozzle
- Air Unit
- PrecsCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRtSens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesicDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

### ● PPD3-KL (-D) assembly drawing

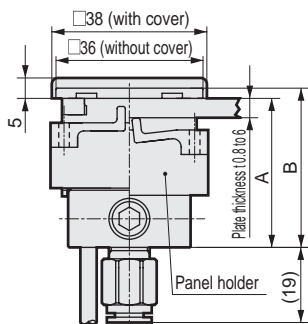


### ● PPD3-KD (-D) assembly drawing Note: For this installation, use CKD miniature fitting FTL4-M3 for atmospheric release port. (Sensor integrated only)



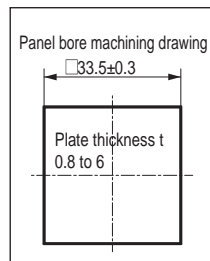
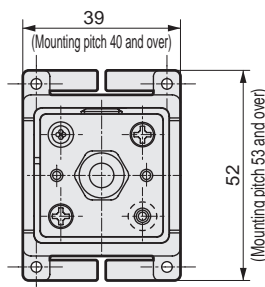
### ● PPD3-KHS (-D) assembly drawing Note: Push-in fitting is not included with PPD3-KHS-D.

#### Combinations with PPD3-R\*\*\*\*-6B



Mounting dimensions for each model

Model	A	B
PPD3-S	46.5	49
PPD3-D	29.5	32



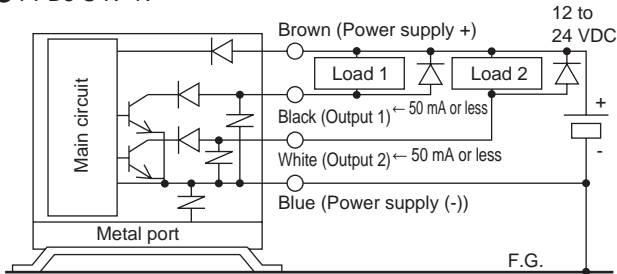
Refer to Safety precautions of PPD3 (-S) Series on pages 1227 to 1229 for wiring method and precautions.

### Internal circuit / connection method

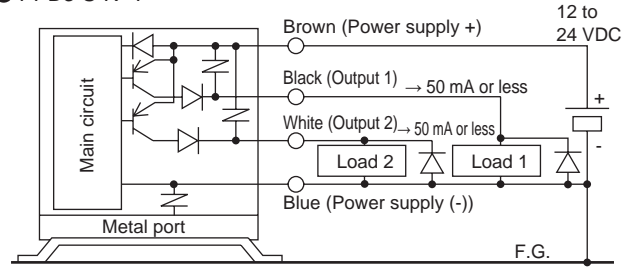
#### [Circuit and connection method]

#### PPD3-S Series (sensor integrated)

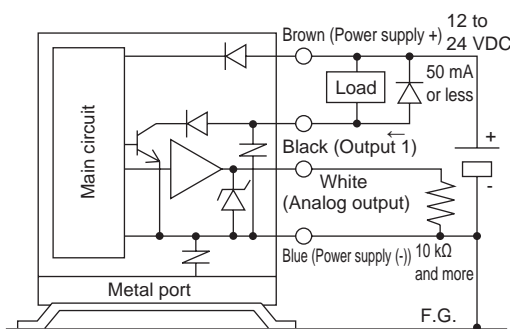
##### ● PPD3-S-R\*\*N



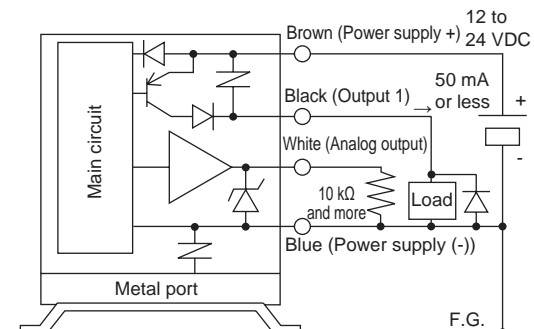
##### ● PPD3-S-R\*\*P



##### ● PPD3-S-R\*\*NA



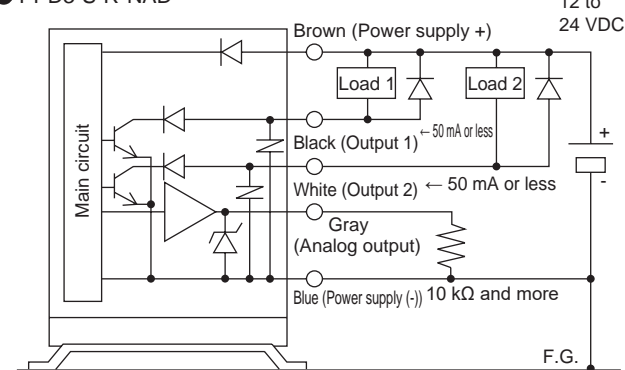
##### ● PPD3-S-R\*\*PA



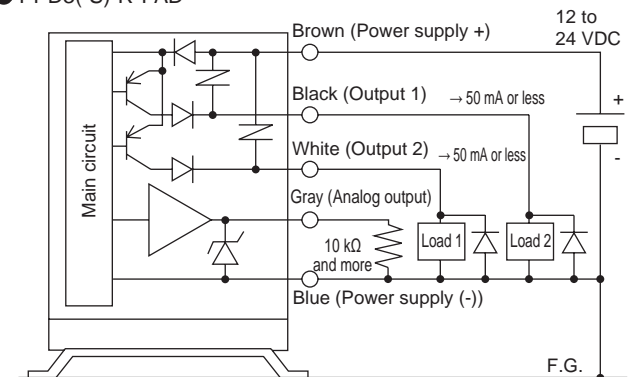
#### [Circuit and connection method]

#### PPD3 (-S)-D Series (sensor separated)

##### ● PPD3-S-R\*NAD

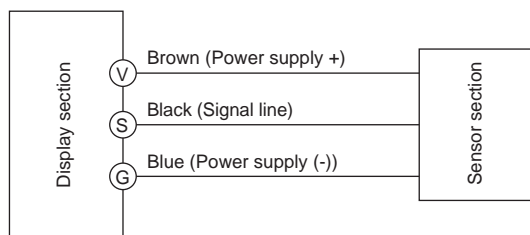


##### ● PPD3(-S)-R\*PAD

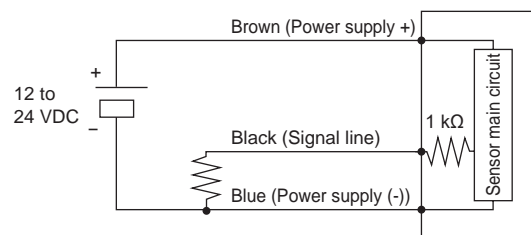


#### Sensor section connection method

##### ● PPD3(-S)-R\*D



##### ● PPD3(-S)-R\*A connection method when single sensor is used



F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdris FRL
Adapter Joiner Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterR/Sens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending