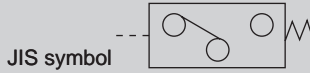


Digital pressure sensor IO-Link

# PPX Series



- 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
- PrecsCompn
- 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

## Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	IO-Link	
	For low pressure PPX-R01PC	For high pressure PPX-R10PC
Type of pressure	Gauge pressure	
Rated pressure	-100.0 (≈-14 psi, -1 bar) to +100.0 kPa (≈14 psi, 1 bar)	-0.100 (≈-14 psi, -1 bar) to +1.000 MPa (≈145 psi, 10 bar)
Set pressure	-101.0 (≈-14 psi, -1 bar) to +101.0 kPa (≈14 psi, 1 bar)	-0.101 (≈-14 psi, -1 bar) to +1.010 MPa (≈146 psi, 10 bar)
Proof pressure	500 kPa (≈72 psi, 5 bar)	1.5 MPa (≈217 psi, 15 bar)
Applicable fluids	Air/non-corrosive gas	
Power supply voltage	12 to 24 VDC ±10%, ripple P-P 10% or less	
Power consumption	Normal: 720 mW or less (current consumption 30 mA or less at 24 V power supply voltage) ECO mode: 480 mW or less at STD (current consumption 20 mA or less at power supply voltage 24 V), 360 mW or less at FULL (current consumption 15 mA or less at power supply voltage 24 V)	
Communication output (C/Q) *1	IO-Link communication	
	IO-Link specification V1.1	
	Transmission bit rate	
	COM3 (230.4 kbps)	
	Process data	
	4 byte	
	Minimum cycle	
	1.0 ms	
Control output (DO)	[PNP output] PNP transistor/open collector · Max. output current: 50 mA · Applied voltage: 30 VDC or less (control output - +V interval) · Residual voltage: 2 V or less (at outflow current 50 mA)	
	Output operation	Select from NO and NC
	Output mode	EASY mode/hysteresis mode/window comparator mode
	Hysteresis	Min. 1 digit (variable)
	Repeatability	±0.1% F.S. (within ±2 digits)      ±0.2% F.S. (within ±2 digits)
	Response time	2.5 ms, 5 ms, 10 ms, 25 ms, 50 ms, 100 ms, 250 ms, 500 ms, 1000 ms, 5000 ms
	Short-circuit protection	Equipped
Display	4-digit + 4-digit 3-color LCD display (display updating cycle: 250 ms, 500 ms, 1000 ms)	
	Display pressure range	-101.0 (≈-14 psi, -1 bar) to +101.0 kPa (≈14 psi, 1 bar)      -0.101 (≈-14 psi, -1 bar) to +1.010 MPa (≈146 psi, 10 bar)
Display lamp	Orange LED	
	Output operational indicator lamp 1: Blinks during IO-Link communication, turns ON during control output in non-IO-Link communication (synchronized with output operational indicator lamp 2)	
	Output operational indicator lamp 2: Turns ON when control output is ON	
Environment conditions	Degree of protection	
	IP40 (IEC)	
	Ambient temperature	
	-10 (14°F) to +50°C (122°F), in storage: -10 (14°F) to +60°C (140°F)	
	Ambient humidity	
	35 to 85% RH (no condensation or freezing), in storage: 35 to 85% RH	
Withstand voltage		
1000 VAC for 1 minute applied to all charged sections/between cases		
Insulation resistance		
50 MΩ and over with 500 VDC megger overall Charging section/between cases		
Vibration resistance		
Durability 10 to 500 Hz compound amplitude 3 mm 2 hours each in XYZ directions (when mounted on panel: durability 10 to 150 Hz compound amplitude 0.75 mm 2 hours each in XYZ directions)		
Shock resistance		
Durability 100 m/S <sup>2</sup> (approx. 10 G) 3 times each in XYZ directions		
Temperature characteristics (+20°C as reference)		
Within ±0.5% F.S.      Within ±1% F.S.		
Port size *2	M5 female thread + R (PT) 1/8 male thread	
	M5 female thread + G1/8 male thread	
	M5 female thread + NPT1/8 male thread	
Material	Case: PBT (glass fiber included), LCD display part: acrylic resin, pressure port: SUS 303, mounting screw part: copper alloy (nickeling), switch part: silicone rubber	
Connection	Connector	
Wire length	Up to 20 m total length permissible with 0.3 mm <sup>2</sup> and over cable (less than 20 m when CE Marking-compliant)	
Unit change function	Only supported for overseas (-KA) (MPa, kPa, kgf/cm <sup>2</sup> , bar, psi, mmHg, inchHg)	
Weight	Body weight: approx. 40 g, weight including package: approx. 130 g	
Accessory	PPX-C2 (2 m cable with connector): 1 pc. Unit seal label (-KA with unit change function): MPa, kPa, kgf/cm <sup>2</sup> , bar, psi, mmHg, inchHg	

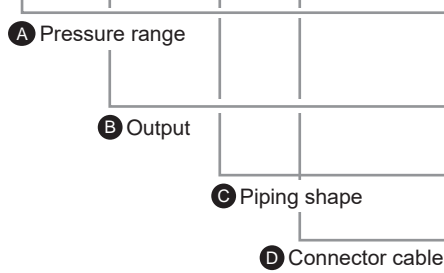
\*1) When used as a standard sensor, communication output (C/Q) will be the same output operation as control output (DO).

\*2) Only "M5 female thread + R (PT) 1/8 male thread" is available for Japan. All types are available for overseas.

## How to order

[How to order for domestic market]

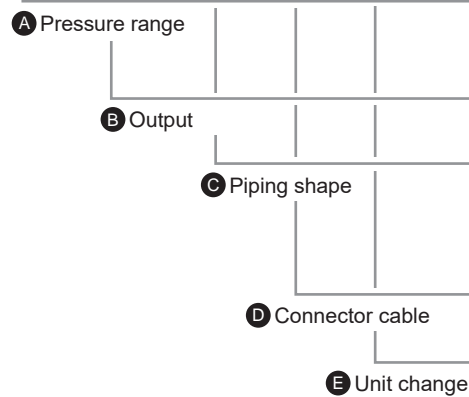
PPX - **R01** **PC** - **6M** - 



Code	Description
<b>A Pressure range</b>	
R01	-100.0 to 100.0 kPa
R10	-0.100 to 1.000 MPa
<b>B Output</b>	
PC	PNP output + IO-Link
<b>C Piping shape</b>	
6M	R 1/8, M5
<b>D Connector cable</b>	
Blank	2 m connector cable attached □ *1

[How to order for overseas markets]

PPX - **R01** **PC** - **6M** -  - **KA**



In compliance with new Measurement Laws, export models with unit select function cannot be used in Japan.

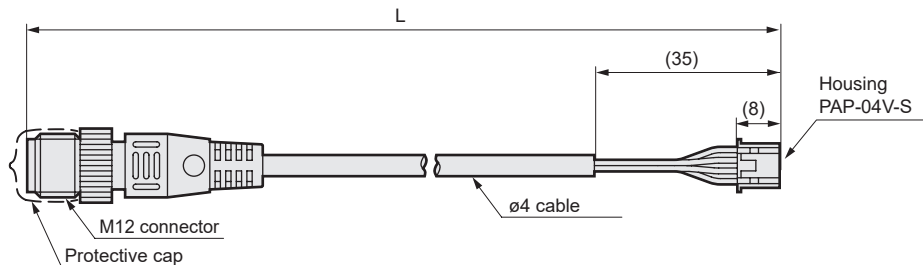
Code	Description
<b>A Pressure range</b>	
R01	-100.0 to 100.0 kPa
R10	-0.100 to 1.000 MPa
<b>B Output</b>	
PC	PNP output + IO-Link
<b>C Piping shape</b>	
6M	R1/8, M5
6N	NPT1/8, M5
6G	G1/8, M5
<b>D Connector cable</b>	
Blank	2 m connector cable attached *1
<b>E Unit change</b>	
KA	With unit change function

### ● Discrete option model No.

PPX - **CN1**

Code	Description
CN1	M12 connector With cable 1 m
CN2	M12 connector With cable 2 m
CN3	M12 connector With cable 3 m
KL	Mounting bracket (Mounting screw included)
KHS	Panel bracket
KCB	Front protective cover (when using panel bracket)

\*1: "Blank" 2 m connector cable is one-sided loose wire. (PPX-C2)  
M12 cable with connector is a separately-sold option.



M12 connector Pin No.	Lead wire color	Housing Terminal No.	Applications
1	Brown	1	+V
2	White	3	DO
3	Blue	4	0V
4	Black	2	C/Q

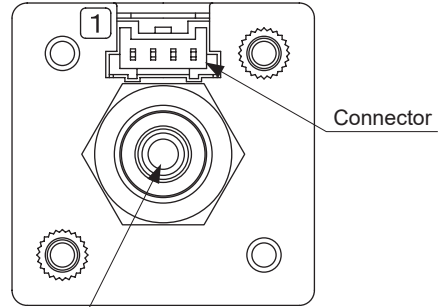
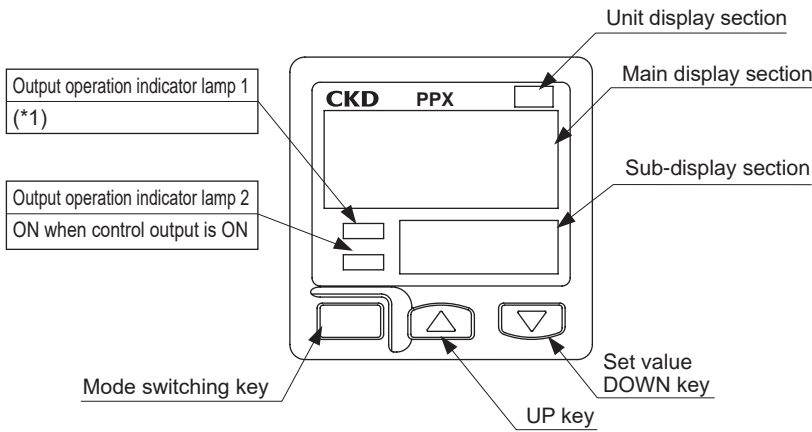
Model No.	Cable length	Weight g
PPX-CN1	1m	Approx. 40
PPX-CN2	2m	Approx. 70
PPX-CN3	3m	Approx. 100

## Dimensions

Same as the standard. For details, refer to page 1157.

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

## Names and functions of display/operation section (IO-Link)



6M: R<sup>1</sup>/<sub>8</sub> + M5 female thread  
6G: G<sup>1</sup>/<sub>8</sub> + M5 female thread  
6N: NPT<sup>1</sup>/<sub>8</sub> + M5 female thread

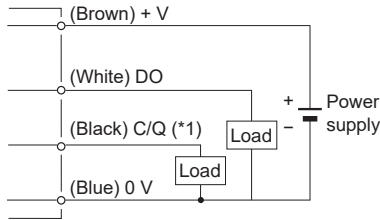
(\*1)

	During non-IO-Link communication	During IO-Link communication
Display lamp operation	ON when control output is ON (*2)	Blinking operation

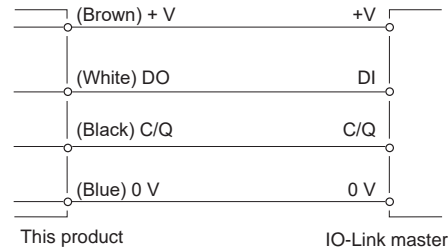
(\*2): Synchronized with operational output display lamp 2

## Connection

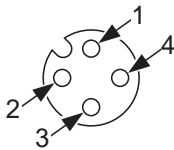
● When used as a standard sensor



● When used connected to IO-Link master



[M12 connector cable terminal array]



Terminal No.	Terminal name
1	+V
2	Control output (DO)
3	0V
4	IO-Link communication (C/Q) (*1)

(\*1): When used as a standard sensor, IO-Link communication (C/Q) will be the same output operation as control output (DO).

### M12 connector mounting

The connector will detach if the fixing ring loosens, resulting in a communication error from this product. Be sure to confirm before use that the fixing ring is not loose.

### Communication specifications

● Common to all models

Item	Details
Communication protocol	IO-Link
Communication protocol version	V1.1
Transmission bit rate	COM3 (230.4 kbps)
Port	Class A
Process data length (input)	4 byte
Process data length (output)	0 byte
Minimum cycle time	1 ms
Data storage	15 byte
SIO mode support	Yes
Vendor ID	855

● Device ID for each model

	Device ID
PPX-R01PC-6M	2179072
PPX-R10PC-6M	2179073
PPX-R01PC-6M-KA	2179074
PPX-R01PC-6N-KA	2179075
PPX-R01PC-6G-KA	2179076
PPX-R10PC-6M-KA	2179077
PPX-R10PC-6N-KA	2179078
PPX-R10PC-6G-KA	2179079

### Process data (PD)

		bit								
		7	6	5	4	3	2	1	0	
PD0	Upper byte of pressure value									
PD1	Lower byte of pressure value									
		PD2				Allocation		Remarks		
		bit								
7	6	5	4	3	2	1	0	Control output (DO) 0: OFF 1: ON		
								Lock 0		
								Lock 0		
								Lock 0		
								Lock 0		
								Notification information 0: No notification 1: Notification		
								Error level 0: Normal 1: Caution 2: Error		

PD3	Scale Low pressure sensor: -1 High pressure sensor: -3 (with MPa selected) 0
-----	---

	PD0 (31-24 bit)	PD1 (23-16 bit)
Low pressure	Pressure value [Pa] (-1010 to 1010)	
High pressure	Pressure value [Pa] (-100 to 1010)	

### Function list

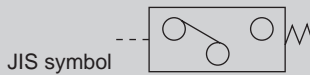
Function	Body side setting	IO-Link communication setting
Control output mode setting	Select from EASY mode/hysteresis mode/window comparator mode	Index61_2
Threshold setting	EASY mode: Threshold setting, hysteresis mode/window comparator mode: Low side threshold setting	Index60_1
	Hysteresis mode/window comparator mode: Hi side threshold setting	Index60_2
Zero adjustment	Run/Cancel	Index2
Key lock function	Set/Cancel	Index12
Peak/bottom hold function	Setting	Index82_4
Control output operation setting	N.O./N.C.	Index61_1
Setting response time	Select from 10 levels	Index66
Main display section color setting	Select from 4 modes	Index82_1
Pressure unit setting	Select from MPa/kPa/kgf/bar/psi/mmHg/inchHg [List of units that can be set] • For Japan/low pressure: kPa • For Japan/high pressure: MPa, kPa • For overseas/low pressure: kPa, kgf, bar, psi, mmHg, inchHg • For overseas/high pressure: MPa, kPa, kgf, bar, psi	Index83
	Select from 5 modes	Index82_2
Sub-display section display setting	No. display setting	Index84_1
	Customized display setting	Index84_2
Display speed setting	Select from 3 levels	Index82_3
Hysteresis setting	Select from 8 levels	Index61_3
Setting ECO mode	Select from 3 modes	Index80
Setting confirmation code	8-digit display	—
Setting reset	Run	Index2
Remote zero adjustment setting	—	Index2
Zero adjustment notification	—	Index85
Auto-reference setting	—	Index2
Operation time	—	Index163
No. of memory write cycles	—	Index164
Notification flag setting	—	Index168
Notification event code reading	—	Index169

\* The IO-Link setting file (IODD) can be downloaded from the CKD website (<http://www.ckd.co.jp/en>).

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  
Outdrrs 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

Digital pressure sensor standard

# PPX Series



## Specifications

1 MPa ≈ 145.0 psi, 1 MPa = 10 bar

Item	Standard		High-function	
	For low pressure PPX-R01□	For high pressure PPX-R10□	For low pressure PPX-R01□H	For high pressure PPX-R10□H
Type of pressure	Gauge pressure			
Rated pressure	-100.0 to +100.0 kPa	-0.100 to +1.000 MPa	-100.0 to +100.0 kPa	-0.100 to +1.000 MPa
Set pressure	-101.0 to +101.0 kPa	-0.101 to +1.010 MPa	-101.0 to +101.0 kPa	-0.101 to +1.010 MPa
Proof pressure	500 kPa (≈73 psi, 5 bar)	1.5 MPa (≈220 psi, 15 bar)	500 kPa (≈73 psi, 5 bar)	1.5 MPa (≈220 psi, 15 bar)
Applicable fluid	Air/non-corrosive gas			
Power supply voltage	12 to 24 VDC ±10% Ripple P-P 10% or less			
Power consumption	Normal: 720 mW or less (current consumption 30 mA or less at 24 V power supply voltage) ECO mode: 480 mW or less at STD (current consumption 20 mA or less at power supply voltage 24 V), 360 mW or less at FULL (current consumption 15 mA or less at power supply voltage 24 V)			
Comparison outputs (comparison output 1, comparison output 2)	[NPN output] NPN transistor/open collector · Max. inrush current: 100 mA · Applied voltage: 30 VDC or less (comparison output - 0 V interval) · Residual voltage: 2 V or less (at inrush current 100 mA)		[PNP output] PNP transistor/open collector · Max. outflow current: 100 mA · Applied voltage: 30 VDC or less (comparison output - +V interval) · Residual voltage: 2 V or less (at outflow current 100 mA)	
	Output operation	Select NO/NC with key operation		
Output mode	EASY mode/hysteresis mode/window comparator mode			
Hysteresis	Min. 1 digit (variable)			
Repeatability	±0.1% F.S. (within ±2 digits)	±0.2% F.S. (within ±2 digits)	±0.1% F.S. (within ±2 digits)	±0.2% F.S. (within ±2 digits)
Response time	2.5 ms, 5 ms, 10 ms, 25 ms, 50 ms, 100 ms, 250 ms, 500 ms, 1000 ms, 5000 ms select by key operation			
Short circuit protection	Equipped			
External input (auto reference function / remote zero adjustment function)	_____		[NPN output] ON voltage: 0.4 VDC or less OFF voltage: 5 to 30 VDC or release Input impedance: 10 kΩ Input time: 1 ms and over	[PNP output] ON voltage: 5 V to +VDC OFF voltage: 0.6 VDC or less or release Input impedance: 10 kΩ Input time: 1 ms and over
	_____		Output voltage: 1 to 5 V Zero point: Within 3V ± 5% F.S. Span: Within 4 V ± 5% F.S. Linearity: Within ±1% F.S. Output impedance: 1 kΩ	Output voltage: 0.6 to 5 V Zero point: Within 1 V ± 5% F.S. Span: Within 4.4 V ± 5% F.S. Linearity: Within ±1% F.S. Output impedance: 1 kΩ
Analog voltage output	_____		Output current: 4 to 20 mA Zero point: Within 12 mA ± 5% F.S. Span: Within 16 mA ± 5% F.S. Linearity: Within ±1% F.S. Load resistance: 250 Ω (max.)	Output current: 2.4 to 20 mA Zero point: Within 4 mA ± 5% F.S. Span: Within 17.6 mA ± 5% F.S. Linearity: Within ±1% F.S. Load resistance: 250 Ω (max.)
Analog current output	_____			
Display	4-digit + 4-digit 3-color LCD display (display updating cycle: 250 ms, 500 ms, 1000 ms select by key operation)			
Display pressure range	-101.0 to +101.0 kPa	-0.101 to +1.010 MPa	-101.0 to +101.0 kPa	-0.101 to +1.010 MPa
Indicator lamp	Orange LED (comparison output 1/2 oper lamp: Comparison outp ON→lamp)		Orange LED (comparison output 1 oper lamp: Comparison outp ON→lamp, Anlg V. outp oper lamp: Lit at setup)	
Environment conditions	Degree of protection	IP40(IEC)		
	Ambient temperature	-10 (14°F) to +50°C (122°F), at the time of storage: -10 (14°F) to +60°C (140°F)		
	Ambient humidity	35 to 85% RH (no condensation, freezing), store: 35 to 85% RH		
	Withstand voltage	1000 VAC for 1 minute applied to all charged sections/between cases		
	Insulation resistance	50 MΩ and over with 500 VDC megger overall charging section/between cases		
	Vibration resistance	Durability 10 to 500 Hz compound amplitude 3 mm 2 hours each in XYZ directions (when mounted on panel: durability 10 to 150 Hz compound amplitude 0.75 mm 2 hours each in XYZ directions)		
Shock resistance	Durability 100 m/S <sup>2</sup> (approx. 10 G) 3 times each in XYZ directions			
Temp characteristics at +20°C	±0.5% F.S. or less	Within ±1% F.S.	±0.5% F.S. or less	Within ±1% F.S.
Port size	*1 M5 female thread + R (PT) 1/8 male thread			
Material	Case: PBT (glass fiber included), LCD display section: acrylic resin, pressure port: SUS 303, mounting screw section: copper alloy (nickeling), switch section: silicone rubber			
Connection	Connector			
Wire length	When the wire is extended, up to 100 m permissible with 0.3 mm <sup>2</sup> and over cable (less than 30 m when CE Marking-compliant)			
Unit change function	Only supported for overseas (-KA) (MPa, kPa, kgf/cm <sup>2</sup> , bar, psi, mmHg, inchHg)			
Weight	Body weight: approx. 40 g, weight including package: 130 g			
Accessory	*2 PPX-C2 (2 m cable with connector): 1 pc. Unit seal label (KA with unit change): MPa, kPa, kgf/cm <sup>2</sup> , bar, psi, mmHg, inchHg			

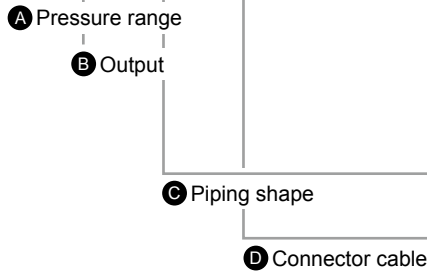
\*1: Refer to Table 1 on the next page for export use.

\*2: For (-J), connector cable is not included.

## How to order

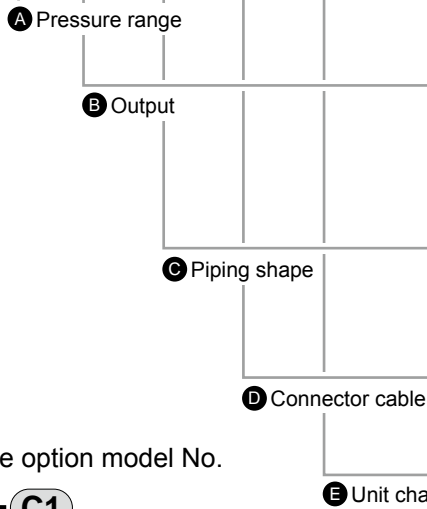
(How to order for domestic market)

PPX - **R01** - **N** - **6M** -



(How to order for foreign market)

PPX - **R01** - **N** - **6M** - **KA**



### ● Discrete option model No.

PPX - **C1**

Code	Description
C1	Cable with connector 1 m
C2	Cable with connector 2 m
C3	Cable with connector 3 m
C5	Cable with connector 5 m
CN	Connector set (10 pcs. per set)
KL	Mounting bracket (mounting screw attached)
KHS	Panel bracket
KCB	Front protective cover (when using panel bracket)

Code	Description
<b>A Pressure range</b>	
R01	-100.0 to 100.0 kPa
R10	-0.100 to 1.000 MPa
<b>B Output</b>	
N	NPN transistor output 2 point (Standard)
P	PNP transistor output 2 point (Standard)
NH	NPN transistor output 1 point + analog voltage output or external input (high-function)
PH	PNP transistor output 1 point + analog voltage output or external input (high-function)
<b>C Piping shape</b>	
6M	R1/8, M5 female thread
<b>D Connector cable</b>	
Blank	2 m connector cable attached
J *1	Without connector cable

\*1: Selectable only when "N" or "P" is selected for **B** Output.

In compliance with the new Measurement Law, export models with unit select function cannot be used in Japan.

Code	Description
<b>A Pressure range</b>	
R01	-100.0 to 100.0 kPa
R10	-0.100 to 1.000 MPa
<b>B Output</b>	
N	NPN transistor output 2 point (Standard)
P	PNP transistor output 2 point (Standard)
NH	NPN transistor output 1 point + analog voltage output or external input (high-function)
PH	PNP transistor output 1 point + analog voltage output or external input (high-function)
<b>C Piping shape</b>	
6M *1	R1/8, M5 female thread
6N	NPT1/8, M5 female thread
6G *2	G1/8, M5 female thread
<b>D Connector cable</b>	
Blank	2 m connector cable attached
J *3	Without connector cable
<b>E Unit change</b>	
KA	With unit change function

\*1: Only "N" or "NH" can be selected for **B** Output.

\*2: Selectable only when "P" or "PH" is selected for **B** Output.

\*3: Selectable only when "N" or "P" is selected for **B** Output.

Destination	Switch output		Unit	Unit change function	With unit seal label *1	Piping port
	NPN	PNP				
Domestic	<input type="radio"/>	<input type="radio"/>	kPa/MPa	-	-	R1/8(M5)
Asia	<input type="radio"/>	-	kPa/MPa	<input type="radio"/>	<input type="radio"/>	R1/8(M5)
Europe	-	<input type="radio"/>	kPa/MPa	<input type="radio"/>	<input type="radio"/>	G1/8(M5)
North America	<input type="radio"/>	<input type="radio"/>	kPa/MPa	<input type="radio"/>	<input type="radio"/>	NPT1/8(M5)

\*1: Refer to page 1226 for the enclosed unit sealant.

[Table 1]

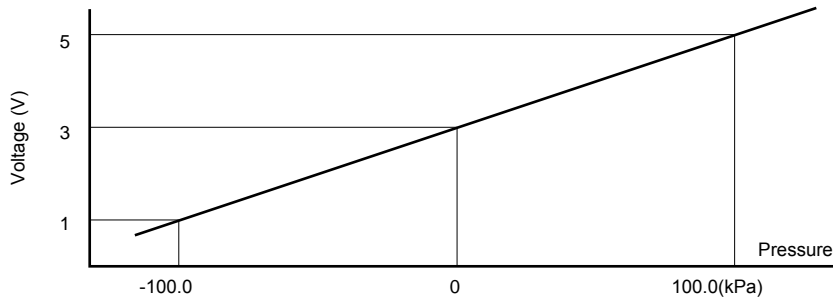
Type	Model No.	Port size	Output	Remarks
Standard	PPX-R01N-6M-(J)-KA	M5 female thread + R (PT) 1/8 male thread	NPN transistor/open collector	For Asia
	PPX-R10N-6M-(J)-KA			
High-function	PPX-R01NH-6M-KA			
	PPX-R10NH-6M-KA			
Standard	PPX-R01P-6G-(J)-KA	M5 female thread + G1/8 male thread	PNP transistor/open collector	For Europe
	PPX-R10P-6G-(J)-KA			
High-function	PPX-R01PH-6G-KA			
	PPX-R10PH-6G-KA			
Standard	PPX-R01N-6N-(J)-KA	M5 female thread + NPT1/8 male thread	NPN transistor/open collector	For North America
	PPX-R01P-6N-(J)-KA		PNP transistor/open collector	
	PPX-R10N-6N-(J)-KA		NPN transistor/open collector	
	PPX-R10P-6N-(J)-KA		PNP transistor/open collector	
High-function	PPX-R01NH-6N-KA		NPN transistor/open collector	
	PPX-R01PH-6N-KA		PNP transistor/open collector	
	PPX-R10NH-6N-KA		NPN transistor/open collector	
	PPX-R10PH-6N-KA		PNP transistor/open collector	

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  
PrecsCompn  
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

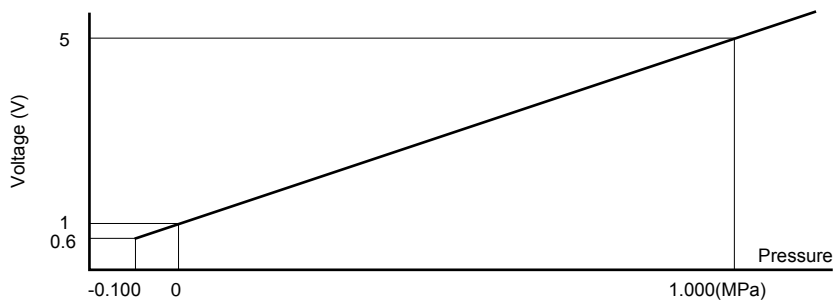
- F.R.L.
- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/PTFE FRL
- Outdrs FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/other
- Fit/Tube
- Nozzle
- Air Unit
- 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

## Analog output voltage - pressure characteristics

● PPX-R01NH  
R01PH

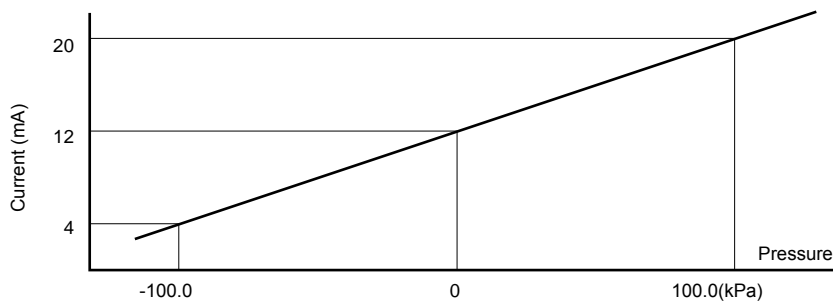


● PPX-R10NH  
R10PH

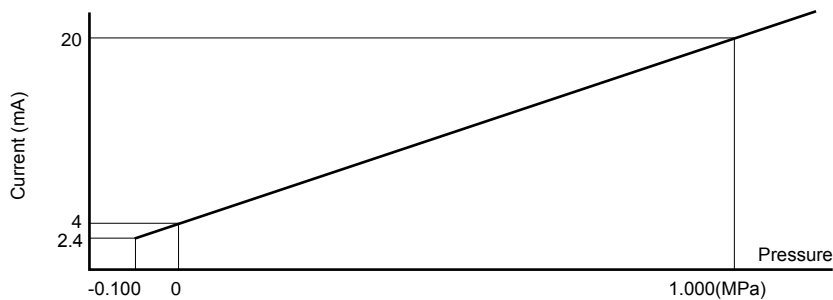


## Analog output current - pressure characteristics

● PPX-R01NH  
R01PH

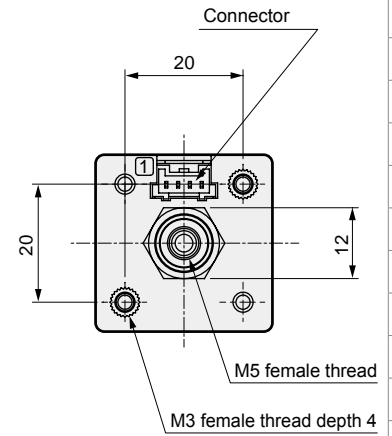
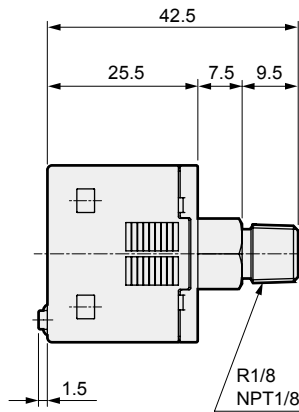
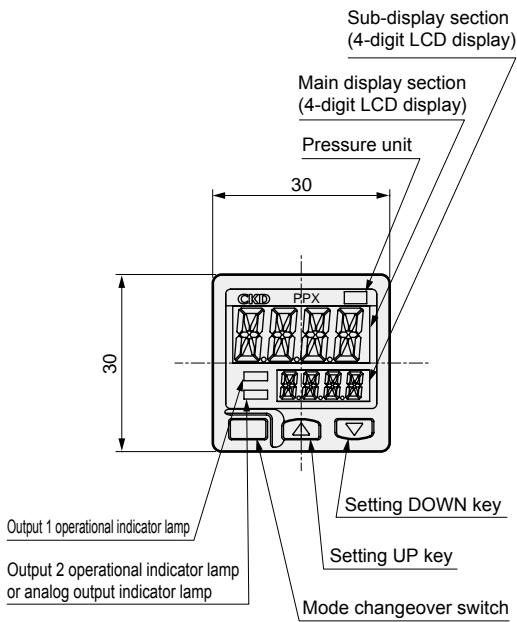


● PPX-R10NH  
R10PH

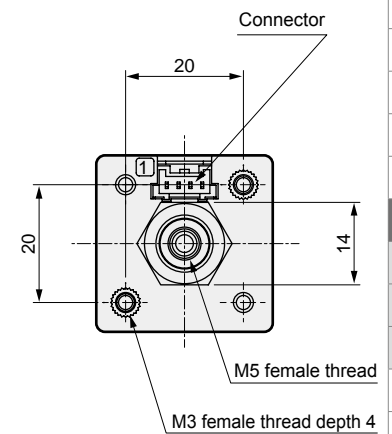
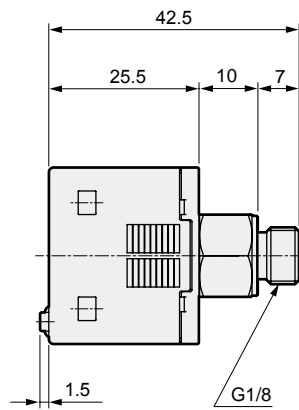
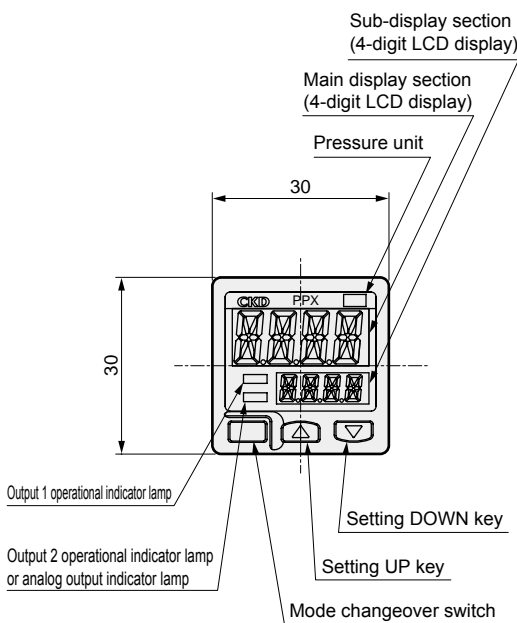


### Dimensions

● PPX-R □□ -6M/6N (R thread/NPT thread)



● PPX-R □□ -6G (G thread)



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
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



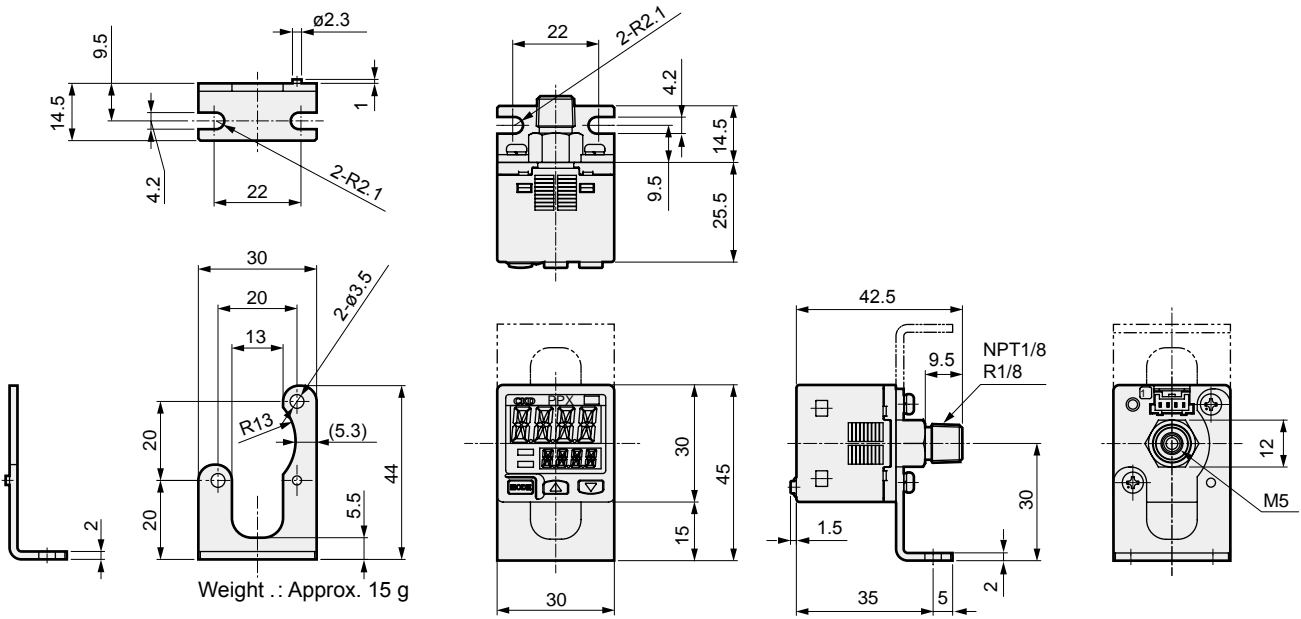
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-Prohr
Med Press FR
No Cu/ PTFE FRL
Outdrsr FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneur
AirBoost
Speed Ctrl
Silncr
CheckV/ other
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

## Dimensions with options

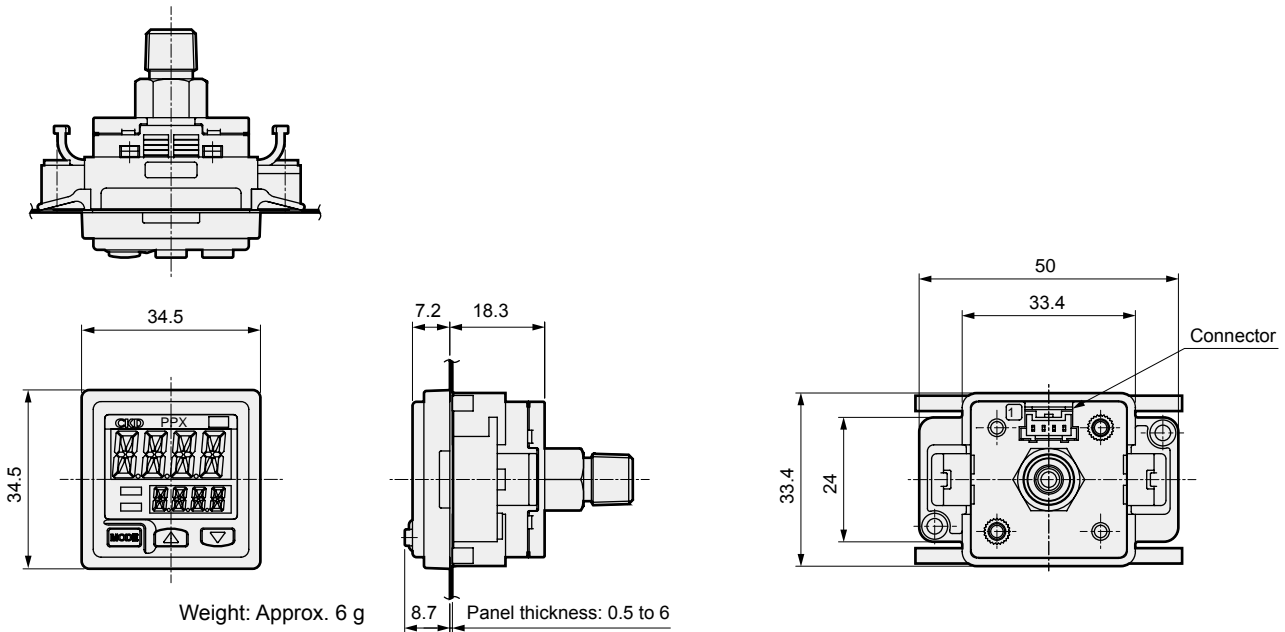


### ● Mounting bracket (PPX-KL)

Installation fig.

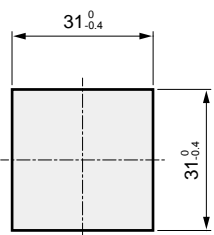


### ● Panel bracket (PPX-KHS) installation fig.

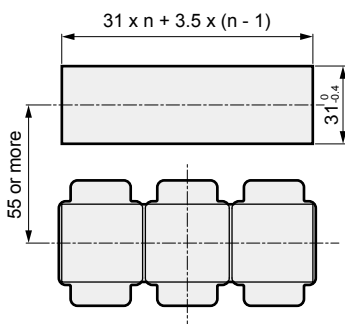


## Panel cut dimension

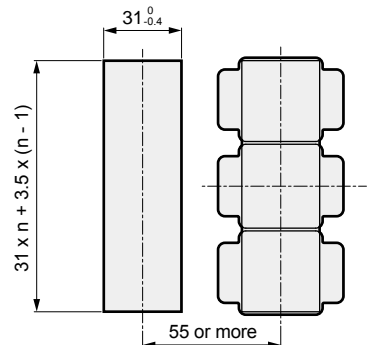
When installing 1 pc.



When installing consecutive n pcs. horizontally



When installing consecutive n pcs. vertically



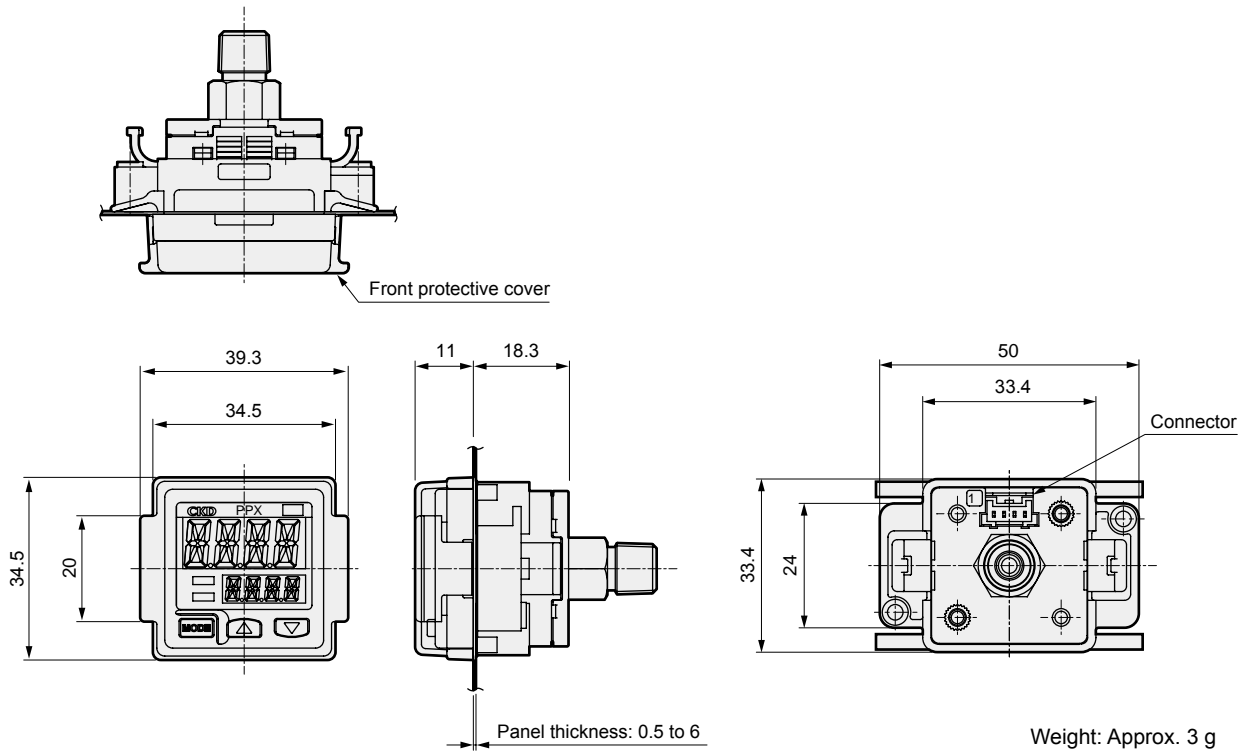
(\*1): Panel thickness must be 0.5 to 6 mm.

(\*1): Panel thickness must be 0.5 to 6 mm.

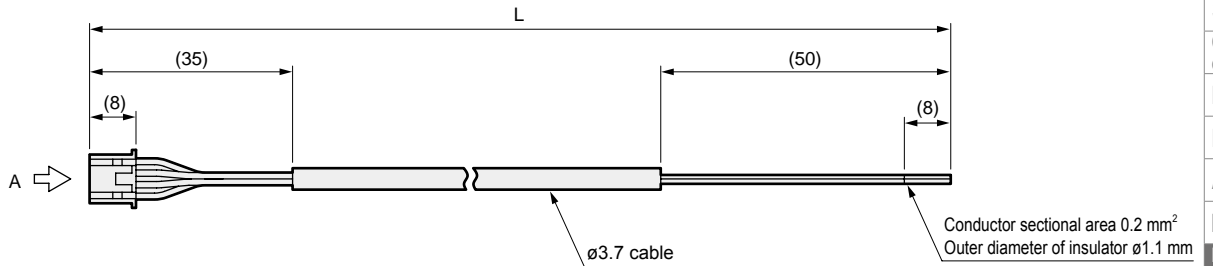
### Dimensions with options



- Front protective cover (PPX-KCB) installation fig.



- Cable with connector (PPX-C□)



(J.S.T.)

0 V	Blue	④
Standard: Comparison output 2 High-function: Analog voltage output or external input	White	③
Comparison output 1	Black	②
+V	Brown	①
Terminal name	Insulator color	Terminal No.

A arrow view

Model No.	Cable length	Weight g
PPX-C1	1 m	Approx. 20
PPX-C2	2 m	Approx. 40
PPX-C3	3 m	Approx. 60
PPX-C5	5 m	Approx. 100

- Connector set (PPX-CN)

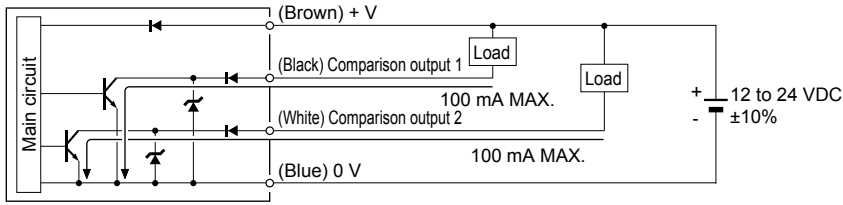
- Housing : J.S.T. Mfg. Co., Ltd. PAP-04V-S
- Contact : J.S.T. Mfg. Co., Ltd. SPHD-001T-P0.5

- 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
- PrecsCompn
- 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

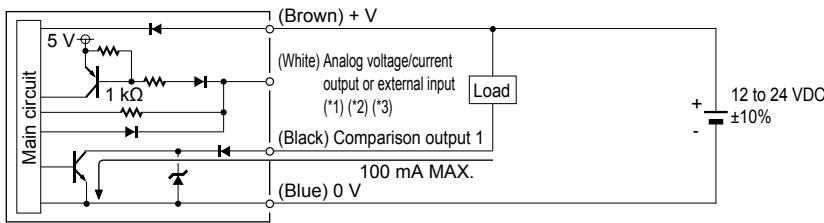
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
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

## Circuit and connection method

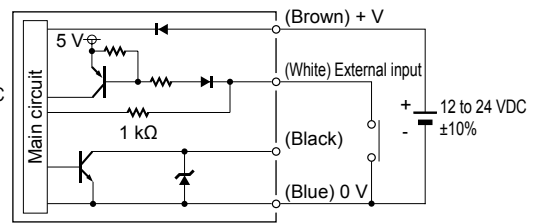
**NPN output**  
 ● Standard



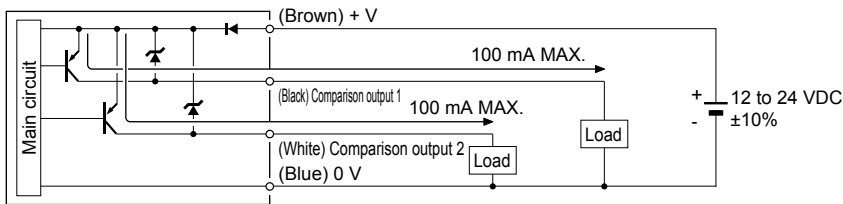
● High-function



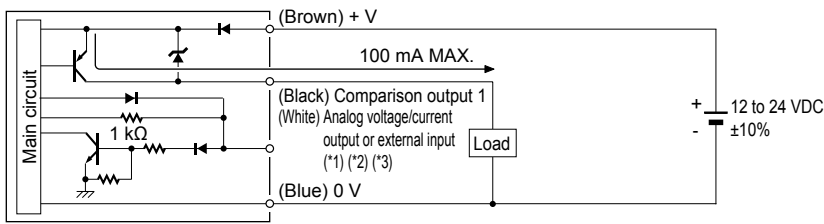
(Example of external input connection)



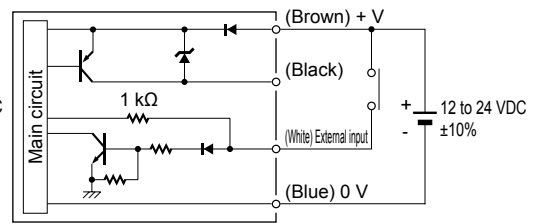
**PNP output**  
 ● Standard



● High-function



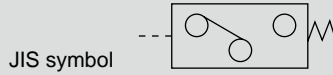
(Example of external input connection)



\*1: Use 250 Ω (max.) for output load resistance at the time of analog current output.  
 \*2: Note that the voltage of 5 V and over is generated at the time of analog current output.  
 \*3: Be careful of input impedance of the connection device when using analog current output.  
 In addition, note that the voltage is reduced by the resistance of cable at the time of cable extension.



# Digital pressure sensor oil-prohibited PPX-P12 Series



## Overview

- Oil-prohibited treatment (degreasing) at gas contact areas (piping ports, etc.)
- Silicone grease-free at gas contact areas (Grease is not used on the gas contact areas)

## Features

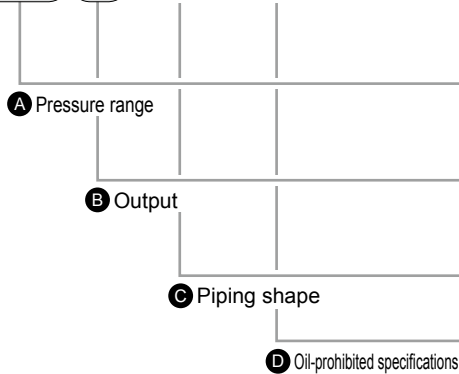
- Ideal for applications susceptible to grease, including liquid crystal, semiconductors, foodstuffs, medical use, and electronic parts.
- Because grease is not used, this type is suitable for pressure detection of paint lines.

## Specifications

Specifications are the same as the standard. Refer to page 1150 for details.

How to order

**PPX - R01 - N - 6M - P12**



Code	Description
<b>A Pressure range</b>	
<b>R01</b>	-100.0 to 100.0 kPa
<b>R10</b>	-0.100 to 1.000 MPa
<b>B Output</b>	
<b>N</b>	NPN transistor output 2 point
<b>NH</b>	NPN transistor output 1 point + analog voltage output or external input
<b>C Piping shape</b>	
<b>6M</b>	R1/8, M5 female thread
<b>D Oil-prohibited specifications</b>	
<b>P12</b>	Oil-prohibited

\* 2 m connector cable included

## Dimensions

Same as the standard. Refer to page 1157 for details.

- 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
- PreCsCompn
- 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