

PRD Series

Long distance inductive proximity sensor

■ Features

- Improve the noise resistance by adopting dedicated IC.
- Built-in protection circuit of reverse power polarity.
- Built-in surge protection circuit.
- Built-in overcurrent protection circuit.
- Long life cycle, high reliability with simple operation
- Available to check the status of operation by Red LED indicator
- Waterproof structure by IP 67
- Wide range of applications for replacement of micro switch, limit switch.



⚠ Please read "Caution for your safety" in operation manual before using.



■ Specifications

● DC 3-wire type

Model	PRD12-4DN PRD12-4DP PRD12-4DN2 PRD12-4DP2 PRDS12-4DN PRDS12-4DP PRDS12-4DN2 PRD12-8DN PRD12-8DP PRD12-8DN2 PRD12-8DP2 PRDL18-7DN PRDL18-7DP PRDL18-7DN2 PRDL18-7DP2 PRDW18-7DN PRDW18-7DP PRDW18-7DN2 PRDW18-7DP2 PRDWL18-7DN PRDWL18-7DP PRDWL18-7DN2 PRDWL18-7DP2	PRD12-8DN PRV12-8DP PRD12-8DN2 PRD12-8DP2 PRDS12-8DN PRDS12-8DP PRDS12-8DN2 PRD12-8DN2 PRD12-8DP2 PRDL30-15DN PRDL30-15DP PRDL30-15DN2 PRDL30-15DP2 PRDW30-15DN PRDW30-15DP PRDW30-15DN2 PRDW30-15DP2 PRDWL30-15DN PRDWL30-15DP PRDWL30-15DN2 PRDWL30-15DP2	PRD18-7DN PRD18-7DP PRD18-7DN2 PRD18-7DP2 PRDL18-7DN PRDL18-7DP PRDL18-7DN2 PRDL18-7DP2 PRDW18-7DN PRDW18-7DP PRDW18-7DN2 PRDW18-7DP2 PRDWL18-7DN PRDWL18-7DP PRDWL18-7DN2 PRDWL18-7DP2	PRD18-14DN PRD18-14DP PRD18-14DN2 PRD18-14DP2 PRDL18-14DN PRDL18-14DP PRDL18-14DN2 PRDL18-14DP2 PRDW18-14DN PRDW18-14DP PRDW18-14DN2 PRDW18-14DP2 PRDWL18-14DN PRDWL18-14DP PRDWL18-14DN2 PRDWL18-14DP2	PRD30-15DN PRD30-15DP PRD30-15DN2 PRD30-15DP2 PRDL30-15DN PRDL30-15DP PRDL30-15DN2 PRDL30-15DP2 PRDW30-15DN PRDW30-15DP PRDW30-15DN2 PRDW30-15DP2 PRDWL30-15DN PRDWL30-15DP PRDWL30-15DN2 PRDWL30-15DP2	PRD30-25DN PRD30-25DP PRD30-25DN2 PRD30-25DP2 PRDL30-25DN PRDL30-25DP PRDL30-25DN2 PRDL30-25DP2 PRDW30-25DN PRDW30-25DP PRDW30-25DN2 PRDW30-25DP2 PRDWL30-25DN PRDWL30-25DP PRDWL30-25DN2 PRDWL30-25DP2
Sensing distance	4mm ±10%	8mm ±10%	7mm ±10%	14mm ±10%	15mm ±10%	25mm ±10%
Hysteresis	Max. 10% of sensing distance					
Standard sensing target	12×12×1mm (Iron)	25×25×1mm (Iron)	20×20×1mm (Iron)	40×40×1mm (Iron)	45×45×1mm (Iron)	75×75×1mm (Iron)
Setting distance	0 to 2.8mm	0 to 5.6mm	0 to 4.9mm	0 to 9.8mm	0 to 10.5mm	0 to 17.5mm
Power supply (Operating voltage)	12-24VDC (10-30VDC)					
Current consumption	Max. 10mA					
Response frequency(*1)	500Hz	400Hz	300Hz	200Hz	200Hz	100Hz
Residual voltage	Max. 1.5V					
Affection by Temp.	Within ±10% max. of sensing distance at +20°C in temperature range of -25 to +70°C					
Control output	200mA					
Insulation resistance	Min. 50MΩ (at 500VDC mega)					
Dielectric strength	1500VAC 50/60Hz for 1minute					
Vibration	1mm amplitude at frequency of 10 ~ 55Hz in each of X, Y, Z directions for 2 hours					
Shock	500m/s ² (50G) X, Y, Z directions for 3 times					
Indicator	Operating indicator (Red LED)					
Ambient temperature	-25 ~ +70°C (non-freezing condition)					
Storage temperature	-30 ~ +80°C (non-freezing condition)					
Ambient humidity	35 ~ 95%RH					
Protection circuit	Reverse polarity protection, Surge protection, Overcurrent protection					
Protection	IP67 (IEC Standard)					
Approval	CE					
Unit weight	PRD:Approx.74g PRDS:Approx.72g PRDW:Approx.44g	PRD:Approx.72g PRDS:Approx.70g PRDW:Approx.42g	PRD:Approx.115g PRDL:Approx.159g PRDW:Approx.80g PRDWL:Approx.110g	PRD:Approx.110g PRDL:Approx.140g PRDW:Approx.75g PRDWL:Approx.105g	PRD:Approx.175g PRDL:Approx.215g PRDW:Approx.140g PRDWL:Approx.180g	PRD:Approx.180g PRDL:Approx.220g PRDW:Approx.145g PRDWL:Approx.185g

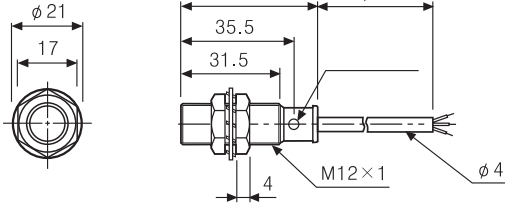
*(*1) The response frequency is the average value. The standard sensing target is used and the width is set as 2 times of the standard sensing target, 1/2 of the sensing distance for the distance.

Long Distance Inductive Type

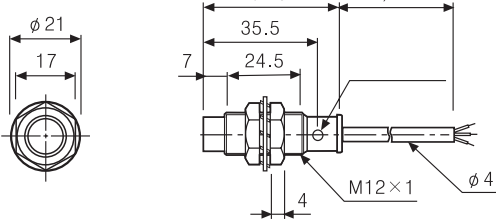
Dimensions

(Unit:mm)

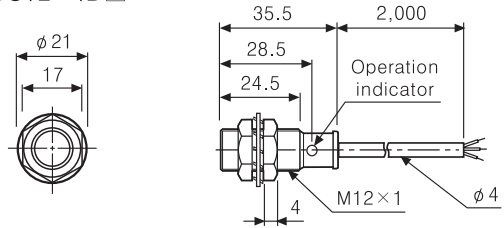
●PRD12-4D□



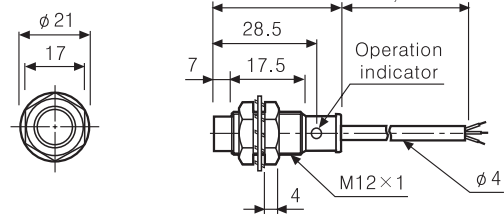
●PRD12-8D□



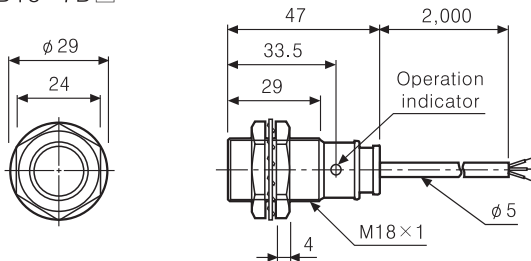
●PRDS12-4D□



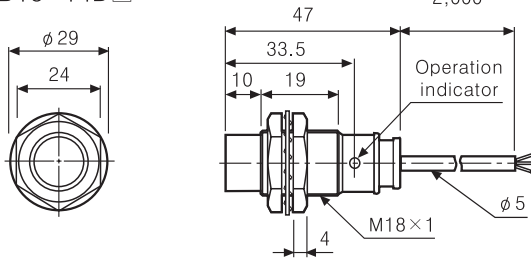
●PRDS12-8D□



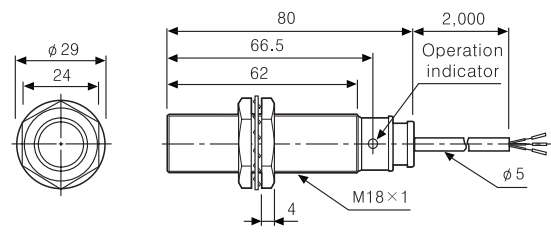
●PRD18-7D□



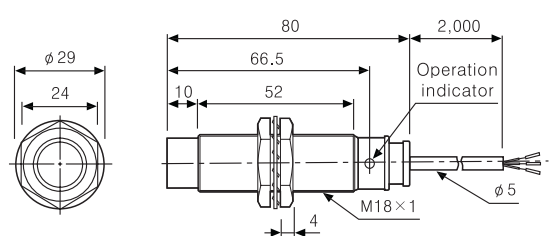
●PRD18-14D□



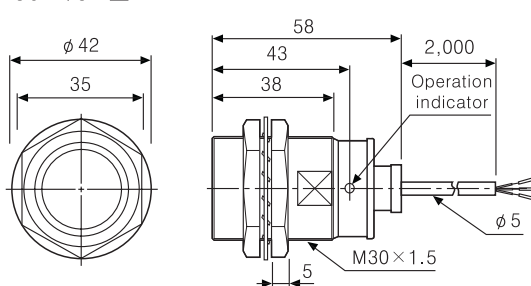
●PRDL18-7D□



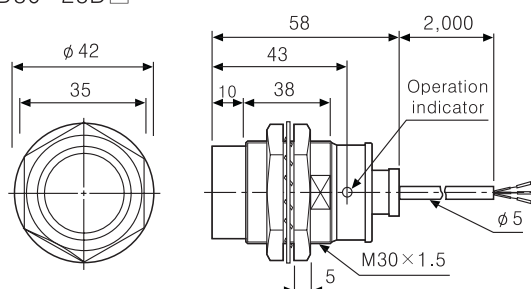
●PRDL18-14D□



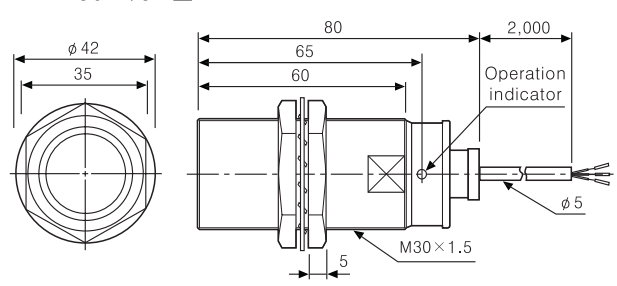
●PRD30-15D□



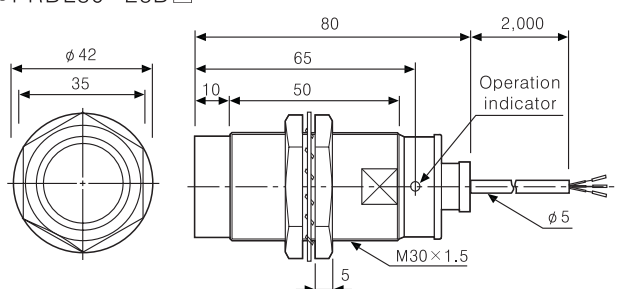
●PRD30-25D□



●PRDL30-15D□



●PRDL30-25D□



(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

(I) Switching power supply

(J) Proximity sensor

(K) Photo electric sensor

(L) Pressure sensor

(M) Rotary encoder

(N) Stepping motor & Driver & Controller

(O) Graphic panel

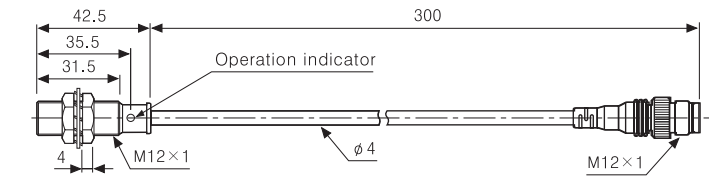
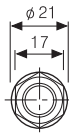
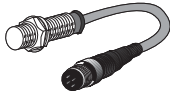
(P) Production stoppage models & replacement

PRD Series

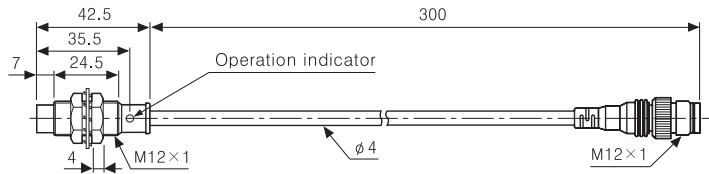
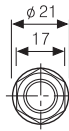
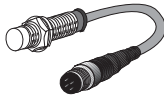
Dimensions

(Unit:mm)

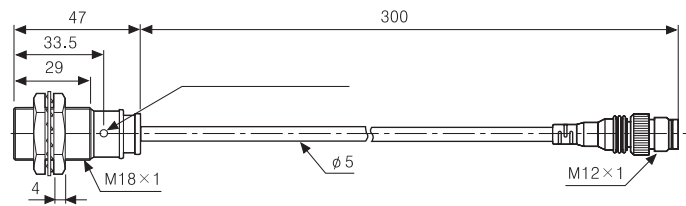
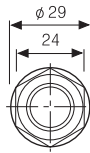
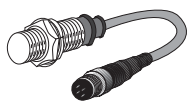
●PRDW12-4D□



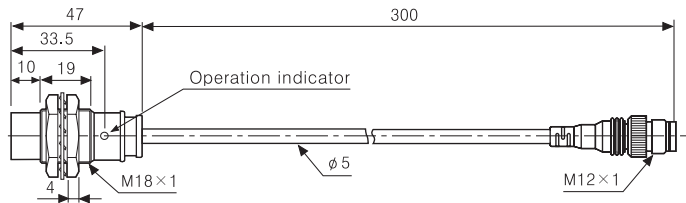
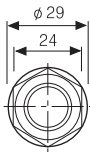
●PRDW12-8D□



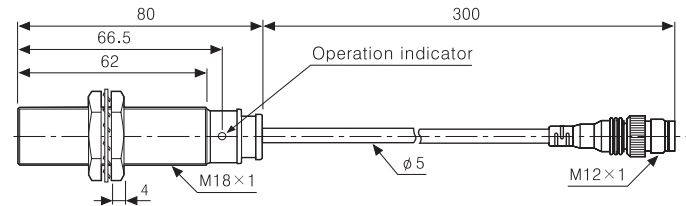
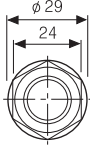
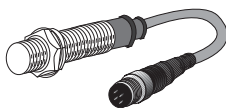
●PRDW18-7D□



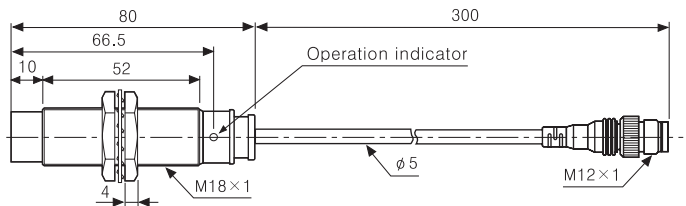
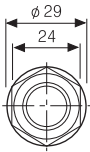
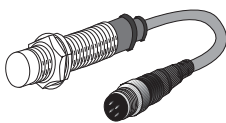
●PRDW18-14D□



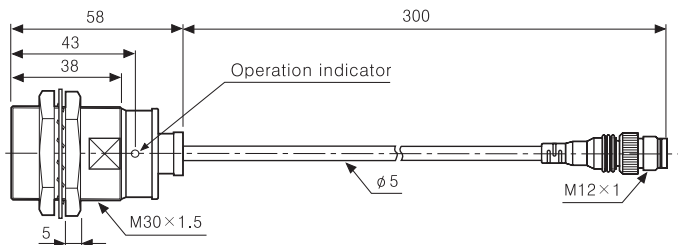
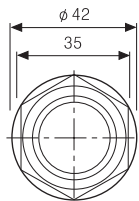
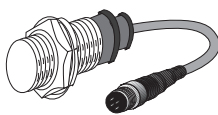
●PRDWL18-7D□



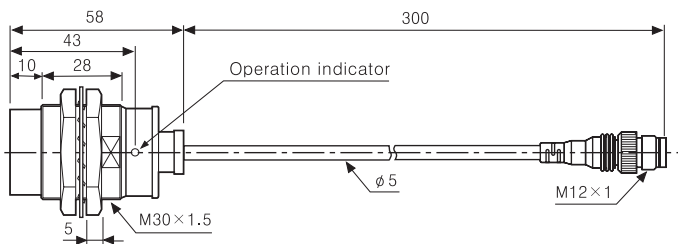
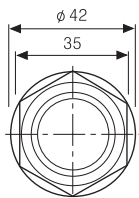
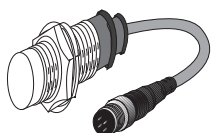
●PRDWL18-14D□



●PRDW30-15D□



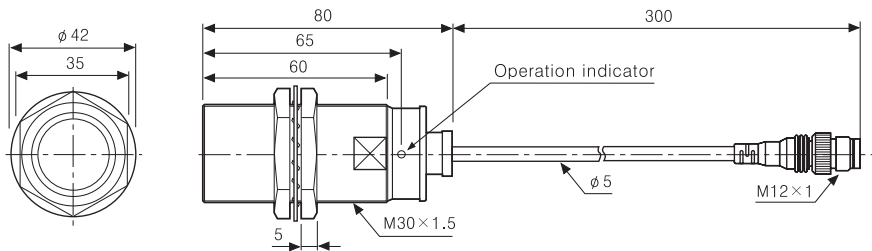
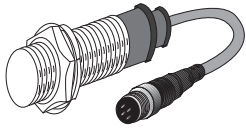
●PRDW30-25D□



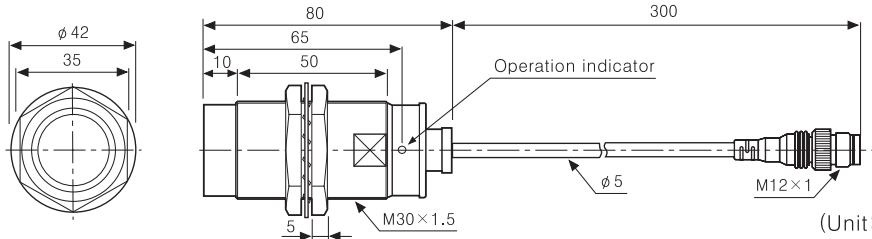
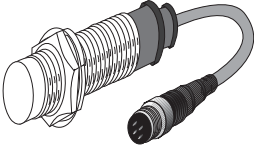
Long Distance Inductive Type

Dimensions

● PRDWL30-15D□



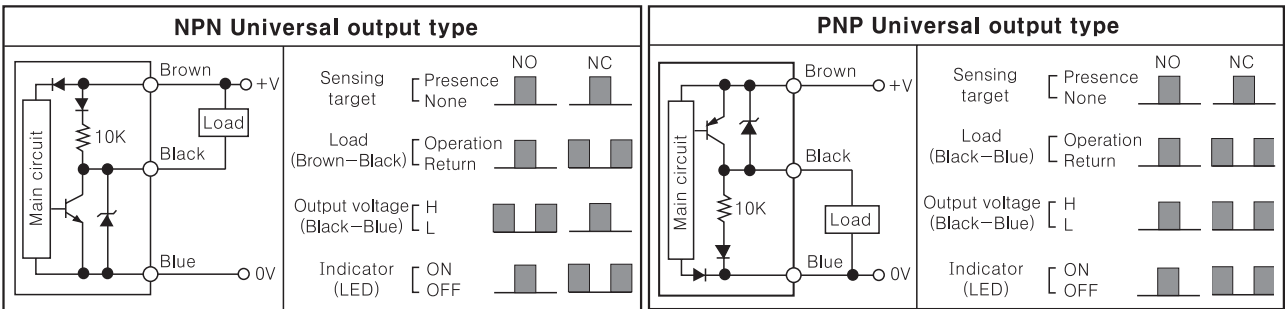
● PRDWL30-25D□



(Unit:mm)

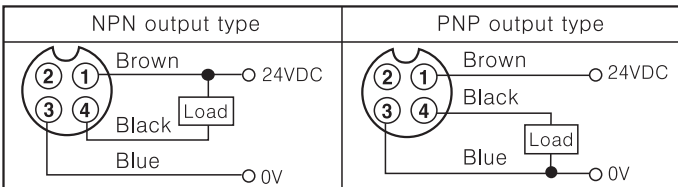
Control output diagram

◎ DC 3-wire type



Connections

◎ DC 3-wire type



※ Please fasten the cleat of connector not to shown the thread. (0.39~0.49N • m)

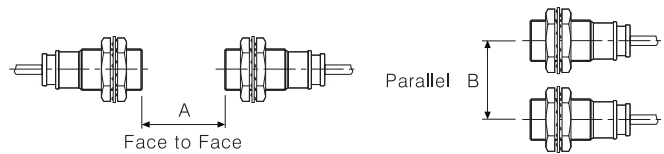
※ Please fasten the vibration part with Teflon tape.

※ Refer to C-44 for connector cables.

Proper usage

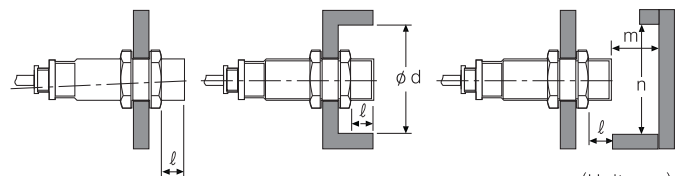
◎ Mutual-interference

When several proximity sensors are mounted closely, malfunction of sensor may be caused due to mutual interference. Therefore, be sure to provide a minimum distance between the two sensors, as below charts.



◎ Influence by surrounding metals

When sensors are mounted on metallic panel, you must prevent the sensors from being affected by any metallic object except target. Therefore, be sure to provide a minimum distance as below chart.



(Unit:mm)

Item	Model	PRD□12-4D□	PRD□12-8D□	PRD□18-7D□ PRDW□18-7D□	PRD□18-14D□ PRDW□18-14D□	PRD□30-15D□ PRDW□30-15D□	PRD□30-25D□ PRDW□30-25D□
	A		24	48	42	84	90
B		24	36	36	54	60	90
l		0	11	0	14	0	15
phi d		12	36	18	54	30	90
m		12	24	21	42	45	75
n		18	36	27	54	45	90

(A) Counter

(B) Timer

(C) Temp. controller

(D) Power controller

(E) Panel meter

(F) Tacho/Speed/Pulse meter

(G) Display unit

(H) Sensor controller

(I) Switching power supply

(J) Proximity sensor

(K) Photo electric sensor

(L) Pressure sensor

(M) Rotary encoder

(N) Stepping motor & Driver & Controller

(O) Graphic panel

(P) Production stoppage models & replacement