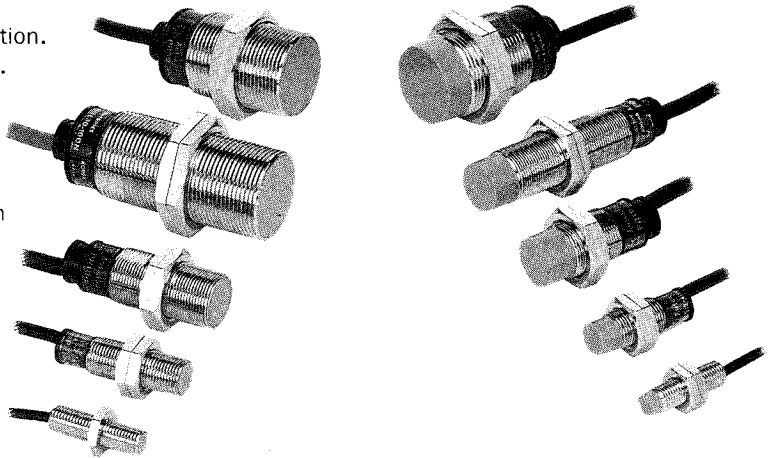


PR SERIES

Inductive cylindrical type Proximity Switch

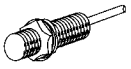
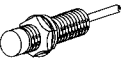


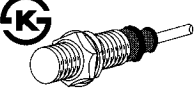
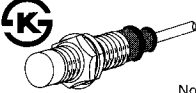
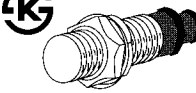
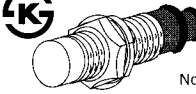
■ Features

- Surge protection function.
- All DC switching types has reverse polarity protection.
- PR ϕ 18, PR ϕ 30 series has short-circuit protection.
- Long life cycle & high reliability.
- Red LED indicator for monitoring the operation.
- Wide application for replacement of micro switch, limit switch, etc.
- The load with Max. 200mA can be operated within range of operating voltare 10 to 30VDC, 90 to 250VAC(at resistive load).
- Wafer resistance to IP67.

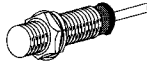

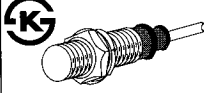
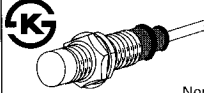
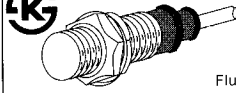
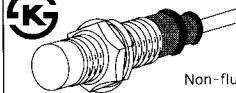


■ Type


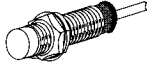
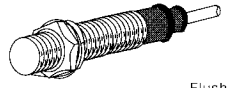
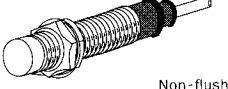
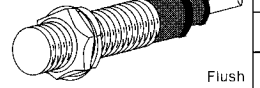
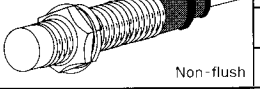
◎ DC switching type

Appearances		Output	Model
M08	 Flush	NPN NO	PR08-1.5DN
		PNP NO	PR08-1.5DP
		NPN NC	PR08-1.5DN2
		PNP NC	PR08-1.5DP2
M08	 Non-flush	NPN NO	PR08-2DN
		PNP NO	PR08-2DP
		NPN NC	PR08-2DN2
		PNP NC	PR08-2DP2
M12	 Flush	NPN NO	PR12-2DN
		PNP NO	PR12-2DP
		NPN NC	PR12-2DN2
	 Non-flush	NPN NO	PR12-4DN
PNP NO		PR12-4DP	
NPN NC		PR12-4DN2	
M18	 Flush	NPN NO	PR18-5DN
		PNP NO	PR18-5DP
		NPN NC	PR18-5DN2
		PNP NC	PR18-5DP2
	 Non-flush	NPN NO	PR18-8DN
		PNP NO	PR18-8DP
M30	 Flush	NPN NO	PR30-10DN
		PNP NO	PR30-10DP
		NPN NC	PR30-10DN2
		PNP NC	PR30-10DP2
	 Non-flush	NPN NO	PR30-15DN
		PNP NO	PR30-15DP
		NPN NC	PR30-15DN2
		PNP NC	PR30-15DP2

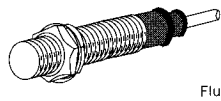
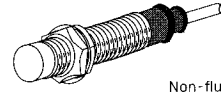
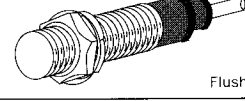
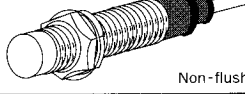
◎ AC switching type

Appearances		Output	Model
M12	 Flush	NO	PR12-2AO
		NC	PR12-2AC
M12	 Non-flush	NO	PR12-4AO
		NC	PR12-4AC
M18	 Flush	NO	PR18-5AO
		NC	PR18-5AC
	 Non-flush	NO	PR18-8AO
		NC	PR18-8AC
M30	 Flush	NO	PR30-10AO
		NC	PR30-10AC
	 Non-flush	NO	PR30-15AO
		NC	PR30-15AC

◎DC switching short/long size type

Appearances		Output	Model
SHORT		NPN NO	PRS12-2DN
		PNP NO	PRS12-2DP
		NPN NC	PRS12-2DN2
		NPN NO	PRS12-4DN
		PNP NO	PRS12-4DP
		NPN NC	PRS12-4DN2
LONG		NPN NO	PRL18-5DN
		PNP NO	PRL18-5DP
		NPN NC	PRL18-5DN2
		NPN NO	PRL18-8DN
		PNP NO	PRL18-8DP
		NPN NC	PRL18-8DN2
LONG		NPN NO	PRL30-10DN
		PNP NO	PRL30-10DP
		NPN NC	PRL30-10DN2
		NPN NO	PRL30-15DN
		PNP NO	PRL30-15DP
		NPN NC	PRL30-15DN2

◎AC switching long size type

Appearances		Output	Model
LONG		NO	PRL18-5AO
		NC	PRL18-5AC
		NO	PRL18-8AO
		NC	PRL18-8AC
LONG		NO	PRL30-10AO
		NC	PRL30-10AC
		NO	PRL30-15AO
		NC	PRL30-15AC

■Specification(DC switching type)

Model	PR08-1.5DN PR08-1.5DP PR08-1.5DN2 PR08-1.5DP2	PR08-2DN PR08-2DP PR08-2DN2 PR08-2DP2	PR12-2DN PR12-2DP PR12-2DN2 PRS12-2DN PRS12-2DP PRS12-2DN2	PR12-4DN PR12-4DP PR12-4DN2 PRS12-4DN PRS12-4DP PRS12-4DN2	PR18-5DN PR18-5DP PR18-5DN2 PR18-5DP2 PRL18-5DN PRL18-5DP PRL18-5DN2	PR18-8DN PR18-8DP PR18-8DN2 PR18-8DP2 PRL18-8DN PRL18-8DP PRL18-8DN2	PR30-10DN PR30-10DP PR30-10DN2 PR30-10DP2 PRL30-10DN PRL30-10DP PRL30-10DN2	PR30-15DN PR30-15DP PR30-15DN2 PR30-15DP2 PRL30-15DN PRL30-15DP PRL30-15DN2
Detecting distance	1.5mm ±10%	2mm ±10%	2mm ±10%	4mm ±10%	5mm ±10%	8mm ±10%	10mm ±10%	15mm ±10%
Hysteresis	Max. 10% of detecting distance *							
Standard detecting target	8×8×1mm(Iron)	12×12×1mm(Iron)			18×18×1mm(Iron)	25×25×1mm(Iron)	30×30×1mm(Iron)	45×45×1mm(Iron)
Setting distance	0 to 1.05	0 to 1.4	0 to 1.4	0 to 2.8	0 to 3.5	0 to 5.6	0 to 7	0 to 10.5
Power supply (Operating voltage)	12 to 24VDC (10 to 30VDC)							
Power consumption	Max. 10mA							
Response frequency	800Hz			400Hz	350Hz	200Hz	250Hz	100Hz
Residual voltage	Max. 2V			Max. 1.5V				
Variation due to Temp. fluctuation	±10% Max. of detecting distance at +20°C within temperature range of -25 to +70°C , M8:Max. ±20%							
Control output	Resistive load:200mA, Inductive load:100mA							
Insulation resistance	Min. 50M Ω (500VDC)							
Dielectric strength	1500VAC 50/60Hz for 1minute							
Vibration	1mm amplitude at frequency of 10 to 55Hz in each of X,Y,Z directions for 2 hours							
Shock	500%(50G) in X,Y,Z directions for 3 times							
Indicator	Operating indicator : red LED							
Operating temperature	-25 to +70°C(non-freezing condition)							
Storage temperature	-30 to +80°C(non-freezing condition)							
Ambient humidity	35 to 95% RH							
Protection circuit	Reverse polarity protection, surge protection circuit				Reverse polarity protection, surge protection circuit, overload & short-circuit protection			
Protection	IP67(IEC specification)							
Weight	About 36g	About 36g	PR:About 70g PRS:About 68g	PR:About 70g PRS:About 68g	PR:About 119g PRL:About 147g	PR:About 118g PRL:About 142g	PR:About 184g PRL:About 222g	PR:About 181g PRL:About 227g

*The weight of above chart is net weight.

PR Series

■ Specification(AC switching type)

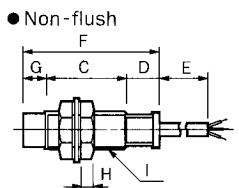
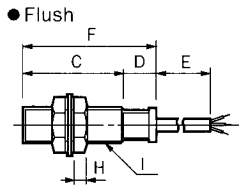
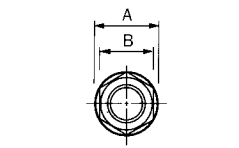
Model	PR12-2AO PR12-2AC	PR12-4AO PR12-4AC	PR18-5AO PR18-5AC PRL18-5AO PRL18-5AC	PR18-8AO PR18-8AC PRL18-8AO PRL18-8AC	PR30-10AO PR30-10AC PRL30-10AO PRL30-10AC	PR30-15AO PR30-15AC PRL30-15AO PRL30-15AC
Detecting distance	2mm ±10%	4mm ±10%	5mm ±10%	8mm ±10%	10mm ±10%	15mm ±10%
Hysteresis	Max. 10% of detecting distance					
Standard detecting target	12×12×1mm(Iron)		18×18×1mm(Iron)	25×25×1mm(Iron)	30×30×1mm(Iron)	45×45×1mm(Iron)
Setting distance	0 to 1.4	0 to 2.8	0 to 3.5	0 to 5.6	0 to 7	0 to 10.5
Power supply (Operating voltage)	100 to 240VAC (90 to 250VAC)					
Leakage current	Max. 2.5mA					
Response frequency	20Hz					
Residual voltage	Max. 10V					
Variation due to Temp. fluctuation	±10% Max. of detecting distance at +20℃ within temperature range of -25 to +70℃					
Control output	Resistive load:150mA, Inductive load:75mA		Resistive load:200mA, Inductive load:100mA			
Insulation resistance	Min. 50M Ω (500VDC)					
Dielectric strength	1500VAC 50/60Hz for 1minute					
Vibration	1mm amplitude at frequency of 10 to 55Hz in each of X,Y,Z directions for 2 hours					
Shock	500 μ s(50G) in X,Y,Z directions for 3 times					
Indicator	Operating indicator : red LED					
Operating temperature	-25 to +70℃(non-freezing condition)					
Storage temperature	-30 to +80℃(non-freezing condition)					
Ambient humidity	35 to 95% RH					
Protection circuit	Surge protection circuit					
Protection	IP67(IEC specification)					
Weight	About 66g	About 66g	PR:About 130g PRL:About 150g	PR:About 130g PRL:About 150g	PR:About 185g PRL:About 255g	PR:About 185g PRL:About 255g

* The weight of above chart is net weight.

■ Dimensions

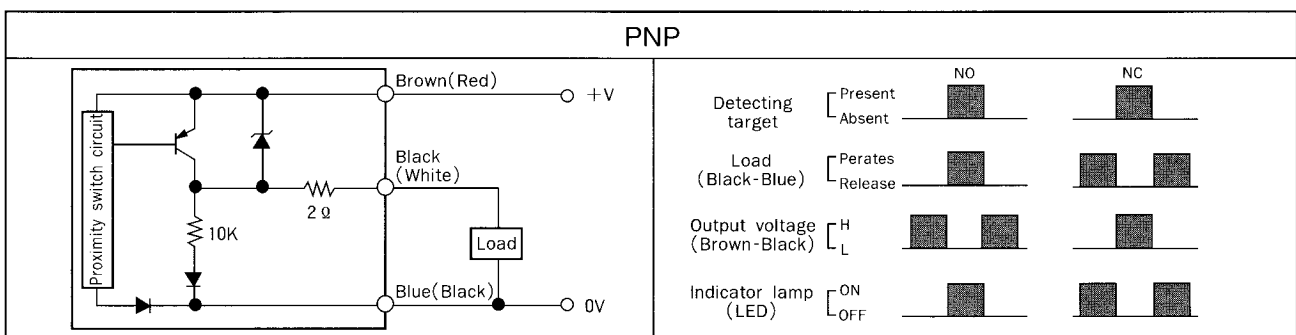
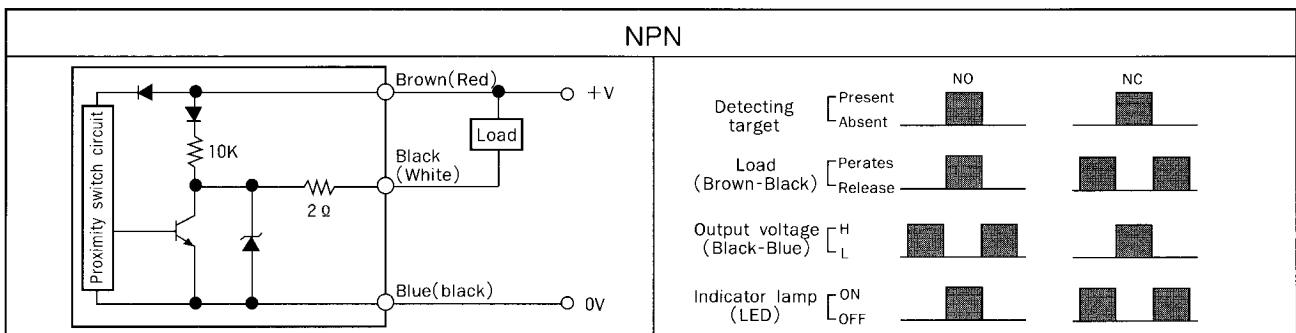
Unit:mm

Model	Dimensions		A	B	C	D	E	F	G	H	I
PR081.5D	—	—	—	13	30	—	2,000	—	—	4	M08×1
PR08-2D	—	—	—	13	26	—	2,000	30	4	4	M08×1
PRS12-2D	21	—	21	17	25	11	2,000	36	—	4	M12×1
PRS12-4D	21	—	21	17	18	11	2,000	36	7	4	M12×1
PR12-2D	21	—	21	17	32	11	2,000	43	—	4	M12×1
PR12-4D	21	—	21	17	25	11	2,000	43	7	4	M12×1
PR18-5D	29	—	29	24	29	18	2,000	47	—	4	M18×1
PR18-8D	29	—	29	24	19	18	2,000	47	10	4	M18×1
PR30-10D/10A	44	—	44	35	38	20	2,000	58	—	5	M30×1.5
PR30-15D/15A	44	—	44	35	28	20	2,000	58	10	5	M30×1.5
PRL18-5	29	—	29	24	62	18	2,000	80	—	4	M18×1
PRL18-8	29	—	29	24	52	18	2,000	80	10	4	M18×1
PRL30-10	44	—	44	35	60	20	2,000	80	—	5	M30×1.5
PRL30-15	44	—	44	35	50	20	2,000	80	10	5	M30×1.5
PR12-2A	21	—	21	17	49	11	2,000	60	—	4	M12×1
PR12-4A	21	—	21	17	42	11	2,000	60	7	4	M12×1
PR18-5A	29	—	29	24	36	18	2,000	54	—	4	M18×1
PR18-8A	29	—	29	24	26	18	2,000	54	10	4	M18×1

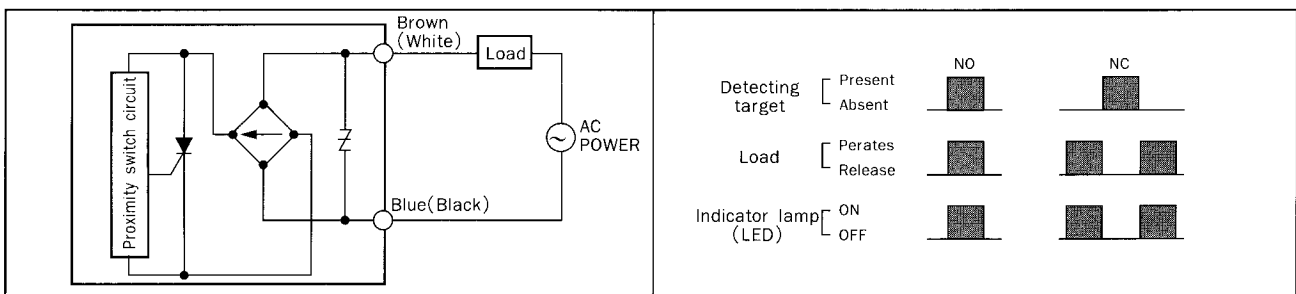


■ Control output circuit & operating load

◎ DC switching type



◎ AC switch type



PROXIMITY SWITCH