

Sensing the dream



Photoelectric sensors

Metal type

Plastic type

Rectangular type

U-type



Shanghai Lanbao Sensing Technology Co., Ltd.



Lanbao Sensor **complete solution for the sensors**

Established in 1998, Shanghai Lanbao Sensing Technology Co., Ltd is a leading supplier of electronic products in China. The company has been always dedicated in providing customers with individualized sensor products which are widely applied in industry and life area, engineering system, technical services and solutions.

Lanbao has successfully developed and produced over 3000 types of sensors: inductive sensors, capacitive sensors, photoelectric sensors, light curtains, magnetic sensors and solid state relays etc. All products have been certified according to CE, UL, CCC standards and meet the requirement of EU RoHS.

Focus on innovation, quality, service and global market, Lanbao insists on creating maximal value for customers.

Content

1 Overview

9 Metal type

9 Metal type DC 3/4 Wires

16 Metal type AC 2 Wires

34 Plastic type

34 Plastic DC 3/4 Wires

50 Plastic AC 2 Wires

59 Rectangular type

59 Rectangular type DC 3/4 Wires

77 Rectangular type AC/DC 5 Wires

83 U-Type

85 Wiring diagram

87 Mounting Rack

88 Reflector

89 Naming rules

Photoelectric sensors

In the long list you may find cylinder shape with size from M12 to M30 and two housing materials (plastic and metal) optional. Also, we provide various multifunctional square switches.

Detection mode: diffuse reflection, through beam reflection and retro-reflection.



Photoelectric sensors



Metal cylinder photoelectric sensors

- Distance adjustable, easy to set
- Cable and connector connection optional



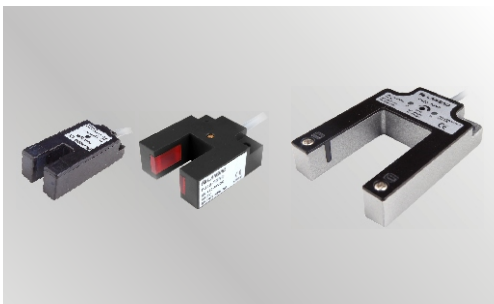
Plastic cylinder photoelectric sensors

- Easy to mounting, economical and durable



Plastic rectangular photoelectric sensors

- Built-in power, AC, DC or AC/DC optional
- Logical output and relay output optional
- Various time delay modes optional



U-Type photoelectric sensors

- Positioning accuracy fast response frequency
- Built in Surge protection / Polarity protection
/ Short-circuit protection

Photoelectric sensors

Metal type main parameters

Model	Output	Supply Voltage	Sensing Mode	Sensing Distance	Specifications	Housing Material	Connection
DC 3/4 Wires							
PR12	DC 3 Wires	DC10-30V	Diffuse reflection	15cm	M12*1*50	Nickel-copper Alloy	Cable
PR12	DC 3 Wires	DC10-30V	Diffuse reflection	15cm	M12*1*50	Nickel-copper Alloy	M12 Connector
PR12	DC 3 Wires	DC10-30V	Through beam	5m, 10m	M12*1*50	Nickel-copper Alloy	Cable
PR12	DC 3 Wires	DC10-30V	Through beam	5m, 10m	M12*1*50	Nickel-copper Alloy	M12 Connector
PR18	DC 3/4 Wires	DC10-30V	Diffuse reflection	10cm , 40cm	M18*1*30	Nickel-copper Alloy	Cable
PR18	DC 3/4 Wires	DC10-30V	Diffuse reflection	10cm , 40cm	M18*1*30	Nickel-copper Alloy	M12 Connector
PR18	DC 3/4 Wires	DC10-30V	Retro reflection	3m	M18*1*30	Nickel-copper Alloy	Cable
PR18	DC 3/4 Wires	DC10-30V	Retro reflection	3m	M18*1*30	Nickel-copper Alloy	M12 Connector
PR18	DC 3/4 Wires	DC10-30V	Through beam	10m,20m	M18*1*30	Nickel-copper Alloy	Cable
PR18	DC 3/4 Wires	DC10-30V	Through beam	10m,20m	M18*1*30	Nickel-copper Alloy	M12 Connector
PR18G	DC 3/4 Wires	DC10-30V	Diffuse reflection	10cm , 40cm	M18*1*30	Nickel-copper Alloy	Cable
PR18G	DC 3/4 Wires	DC10-30V	Diffuse reflection	10cm , 40cm	M18*1*30	Nickel-copper Alloy	M12 Connector
PR18G	DC 3/4 Wires	DC10-30V	Retro reflection	3m	M18*1*30	Nickel-copper Alloy	Cable
PR18G	DC 3/4 Wires	DC10-30V	Retro reflection	3m	M18*1*30	Nickel-copper Alloy	M12 Connector
PR18G	DC 3/4 Wires	DC10-30V	Through beam	10m,20m	M18*1*30	Nickel-copper Alloy	Cable
PR18G	DC 3/4 Wires	DC10-30V	Through beam	10m,20m	M18*1*30	Nickel-copper Alloy	M12 Connector
PR30	DC 3/4 Wires	DC10-30V	Diffuse reflection	50cm , 100cm	M30*1.5*50	Nickel-copper Alloy	Cable
PR30	DC 3/4 Wires	DC10-30V	Diffuse reflection	50cm , 100cm	M30*1.5*50	Nickel-copper Alloy	M12 Connector
PR30	DC 3/4 Wires	DC10-30V	Retro reflection	5m	M30*1.5*50	Nickel-copper Alloy	Cable
PR30	DC 3/4 Wires	DC10-30V	Retro reflection	5m	M30*1.5*50	Nickel-copper Alloy	M12 Connector
PR30	DC 3/4 Wires	DC10-30V	Through beam	20m , 40m	M30*1.5*50	Nickel-copper Alloy	Cable
PR30	DC 3/4 Wires	DC10-30V	Through beam	20m , 40m	M30*1.5*50	Nickel-copper Alloy	M12 Connector
PR30L	DC 3/4 Wires	DC10-30V	Through beam	100m , 150m	M30*1.5*80	Nickel-copper Alloy	Cable

Photoelectric sensors

Metal type main parameters

Model	Output	Supply Voltage	Sensing Mode	Sensing Distance	Specifications	Housing Material	Connection
AC 2 Wires							
PR18	AC 2 Wires	AC20-250V	Diffuse reflection	10cm , 40cm	M18*1*46.5	Nickel-copper Alloy	Cable
PR18	AC 2 Wires	AC20-250V	Diffuse reflection	10cm , 40cm	M18*1*46.5	Nickel-copper Alloy	M12 Connector
PR18	AC 2 Wires	AC20-250V	Retro reflection	3m	M18*1*46.5	Nickel-copper Alloy	Cable
PR18	AC 2 Wires	AC20-250V	Retro reflection	3m	M18*1*46.5	Nickel-copper Alloy	M12 Connector
PR18	AC 2 Wires	AC20-250V	Through beam	10m	M18*1*46.5	Nickel-copper Alloy	Cable
PR18	AC 2 Wires	AC20-250V	Through beam	10m	M18*1*46.5	Nickel-copper Alloy	M12 Connector
PR18G	AC 2 Wires	AC20-250V	Diffuse reflection	10cm , 40cm	M18*1*46.5	Nickel-copper Alloy	Cable
PR18G	AC 2 Wires	AC20-250V	Diffuse reflection	10cm , 40cm	M18*1*46.5	Nickel-copper Alloy	M12 Connector
PR18G	AC 2 Wires	AC20-250V	Retro reflection	3m	M18*1*46.5	Nickel-copper Alloy	Cable
PR18G	AC 2 Wires	AC20-250V	Retro reflection	3m	M18*1*46.5	Nickel-copper Alloy	M12 Connector
PR18G	AC 2 Wires	AC20-250V	Through beam	10m	M18*1*46.5	Nickel-copper Alloy	Cable
PR18G	AC 2 Wires	AC20-250V	Through beam	10m	M18*1*46.5	Nickel-copper Alloy	M12 Connector
PR30	AC 2 Wires	AC20-250V	Diffuse reflection	50cm , 100cm	M30*1.5*50	Nickel-copper Alloy	Cable
PR30	AC 2 Wires	AC20-250V	Diffuse reflection	50cm , 100cm	M30*1.5*50	Nickel-copper Alloy	M12 Connector
PR30	AC 2 Wires	AC20-250V	Retro reflection	5m	M30*1.5*60	Nickel-copper Alloy	Cable
PR30	AC 2 Wires	AC20-250V	Retro reflection	5m	M30*1.5*60	Nickel-copper Alloy	M12 Connector
PR30	AC 2 Wires	AC20-250V	Through beam	20m	M30*1.5*60	Nickel-copper Alloy	Cable
PR30	AC 2 Wires	AC20-250V	Through beam	20m	M30*1.5*60	Nickel-copper Alloy	M12 Connector

Photoelectric sensors

Plastic type main parameters

Model	Output	Supply Voltage	Sensing Mode	Sensing Distance	Specifications	Housing Material	Connection
DC 3/4 Wires							
PR12S	DC 3 Wires	DC10-30V	Diffuse reflection	15cm	M12*1*50	PBT	Cable
PR12S	DC 3 Wires	DC10-30V	Diffuse reflection	15cm	M12*1*50	PBT	M12 Connector
PR12S	DC 3/4 Wires	DC10-30V	Through beam	5m, 10m	M12*1*50	PBT	Cable
PR12S	DC 3/4 Wires	DC10-30V	Through beam	5m, 10m	M12*1*50	PBT	M12 Connector
PR18S	DC 3/4 Wires	DC10-30V	Diffuse reflection	10cm , 40cm	M18*1*30	PBT	Cable
PR18S	DC 3/4 Wires	DC10-30V	Diffuse reflection	10cm , 40cm	M18*1*30	PBT	M12 Connector
PR18S	DC 3/4 Wires	DC10-30V	Retro reflection	3m	M18*1*30	PBT	Cable
PR18S	DC 3/4 Wires	DC10-30V	Retro reflection	3m	M18*1*30	PBT	M12 Connector
PR18S	DC 3/4 Wires	DC10-30V	Through beam	10m,20m	M18*1*30	PBT	Cable
PR18S	DC 3/4 Wires	DC10-30V	Through beam	10m,20m	M18*1*30	PBT	M12 Connector
PR18GS	DC 3/4 Wires	DC10-30V	Diffuse reflection	10cm , 40cm	M18*1*30	PBT	Cable
PR18GS	DC 3/4 Wires	DC10-30V	Diffuse reflection	10cm , 40cm	M18*1*30	PBT	M12 Connector
PR18GS	DC 3/4 Wires	DC10-30V	Retro reflection	3m	M18*1*30	PBT	Cable
PR18GS	DC 3/4 Wires	DC10-30V	Retro reflection	3m	M18*1*30	PBT	M12 Connector
PR18GS	DC 3/4 Wires	DC10-30V	Through beam	10m,20m	M18*1*30	PBT	Cable
PR18GS	DC 3/4 Wires	DC10-30V	Through beam	10m,20m	M18*1*30	PBT	M12 Connector
PR30S	DC 3/4 Wires	DC10-30V	Diffuse reflection	50cm , 100cm	M30*1.5*60	PBT	Cable
PR30S	DC 3/4 Wires	DC10-30V	Diffuse reflection	50cm , 100cm	M30*1.5*60	PBT	M12 Connector
PR30S	DC 3/4 Wires	DC10-30V	Retro reflection	5m	M30*1.5*60	PBT	Cable
PR30S	DC 3/4 Wires	DC10-30V	Retro reflection	5m	M30*1.5*60	PBT	M12 Connector
PR30S	DC 3/4 Wires	DC10-30V	Through beam	20m,40m	M30*1.5*60	PBT	Cable
PR30S	DC 3/4 Wires	DC10-30V	Through beam	20m,40m	M30*1.5*60	PBT	M12 Connector
PR30SL	DC 3/4 Wires	DC10-30V	Through beam	100m , 150m	M30*1.5*80	PBT	Cable

Photoelectric sensors

Plastic type main parameters

Model	Output	Supply Voltage	Sensing Mode	Sensing Distance	Specifications	Housing Material	Connection
AC 2 Wires							
PR18S	AC 2 Wires	AC20-250V	Diffuse reflection	10cm , 40cm	M18*1*46.5	PBT	Cable
PR18S	AC 2 Wires	AC20-250V	Diffuse reflection	10cm , 40cm	M18*1*46.5	PBT	M12 Connector
PR18S	AC 2 Wires	AC20-250V	Retro reflection	3m	M18*1*46.5	PBT	Cable
PR18S	AC 2 Wires	AC20-250V	Retro reflection	3m	M18*1*46.5	PBT	M12 Connector
PR18S	AC 2 Wires	AC20-250V	Through beam	10m	M18*1*46.5	PBT	Cable
PR18S	AC 2 Wires	AC20-250V	Through beam	10m	M18*1*46.5	PBT	M12 Connector
PR18GS	AC 2 Wires	AC20-250V	Diffuse reflection	10cm , 40cm	M18*1*46.5	PBT	Cable
PR18GS	AC 2 Wires	AC20-250V	Diffuse reflection	10cm , 40cm	M18*1*46.5	PBT	M12 Connector
PR18GS	AC 2 Wires	AC20-250V	Retro reflection	3m	M18*1*46.5	PBT	Cable
PR18GS	AC 2 Wires	AC20-250V	Retro reflection	3m	M18*1*46.5	PBT	M12 Connector
PR18GS	AC 2 Wires	AC20-250V	Through beam	10m	M18*1*46.5	PBT	Cable
PR18GS	AC 2 Wires	AC20-250V	Through beam	10m	M18*1*46.5	PBT	M12 Connector
PR30S	AC 2 Wires	AC20-250V	Diffuse reflection	50cm , 100cm	M30*1.5*60	PBT	Cable
PR30S	AC 2 Wires	AC20-250V	Diffuse reflection	50cm , 100cm	M30*1.5*60	PBT	M12 Connector
PR30S	AC 2 Wires	AC20-250V	Retro reflection	5m	M30*1.5*60	PBT	Cable
PR30S	AC 2 Wires	AC20-250V	Retro reflection	5m	M30*1.5*60	PBT	M12 Connector
PR30S	AC 2 Wires	AC20-250V	Through beam	20m	M30*1.5*60	PBT	Cable
PR30S	AC 2 Wires	AC20-250V	Through beam	20m	M30*1.5*60	PBT	M12 Connector

Photoelectric sensors

Rectangular type main parameters

Model	Output	Supply Voltage	Sensing Mode	Sensing Distance	Housing Material	Connection
DC 3/4 Wires						
PSB	DC 3 Wires	DC10-30V	Through beam	3m	ABS	Cable
PSB	DC 3 Wires	DC10-30V	Through beam	3m	ABS	M8 Connector
PBA	DC 3 Wires	DC12-24V	Diffuse reflection	2m	PC/ABS	Cable
PSI	DC 3/4 Wires	DC10-30V	Diffuse reflection	30cm	ABS	Cable
PSI	DC 3/4 Wires	DC10-30V	Through beam	5m , 10m	ABS	Cable
PSL	DC 3 Wires	DC12-24V	Diffuse reflection	30cm	PC/ABS	Cable
PSL	DC 3 Wires	DC12-24V	Focus reflection	3cm	PC/ABS	Cable
PSL	DC 3 Wires	DC12-24V	Focus reflection	5cm	PC/ABS	Cable
PSL	DC 3 Wires	DC12-24V	Through beam	5m , 10m	PC/ABS	Cable
PSF	DC 3/4 Wires	DC12-24V	Diffuse reflection	30cm , 80cm	PC/ABS	Cable
PSF	DC 3/4 Wires	DC12-24V	Diffuse reflection	30cm , 80cm	PC/ABS	M8 Connector
PSF	DC 3/4 Wires	DC12-24V	Retro reflection	2m	PC/ABS	Cable
PSF	DC 3/4 Wires	DC12-24V	Retro reflection	2m	PC/ABS	M8 Connector
PSF	DC 3/4 Wires	DC12-24V	Polarized reflection	2m	PC/ABS	Cable
PSF	DC 3/4 Wires	DC12-24V	Polarized reflection	2m	PC/ABS	M8 Connector
PSF	DC 3/4 Wires	DC10-30V	Through beam	5m , 10m	PC/ABS	Cable
PSF	DC 3/4 Wires	DC10-30V	Through beam	5m , 10m	PC/ABS	M8 Connector
PTF	DC 3/4 Wires	DC10-30V	Diffuse reflection	50cm , 100cm	PC/ABS	Cable
PTF	DC 3/4 Wires	DC10-30V	Diffuse reflection	50cm , 100cm	PC/ABS	M12 Connector
PTF	DC 3/4 Wires	DC10-30V	Retro reflection	3m , 5m	PC/ABS	Cable
PTF	DC 3/4 Wires	DC10-30V	Retro reflection	3m , 5m	PC/ABS	M12 Connector
PTF	DC 3/4 Wires	DC10-30V	Polarized reflection	5m	PC/ABS	Cable
PTF	DC 3/4 Wires	DC10-30V	Polarized reflection	5m	PC/ABS	M12 Connector
PTF	DC 3/4 Wires	DC10-30V	Through beam	10m , 20m	PC/ABS	Cable
PTF	DC 3/4 Wires	DC10-30V	Through beam	10m , 20m	PC/ABS	M12 Connector
PTL	DC 4 Wires	DC10-30V	Diffuse reflection	80cm , 200cm	PC/ABS	Terminal connect
PTL	DC 4 Wires	DC10-30V	Retro reflection	5m	PC/ABS	Terminal connect
PTL	DC 4 Wires	DC10-30V	Polarized reflection	12m	PC/ABS	Terminal connect
PTL	DC 4 Wires	DC10-30V	Through beam	20m , 40m	PC/ABS	Terminal connect

Photoelectric sensors

Rectangular type

main parameters

Model	Output	Supply Voltage	Sensing Mode	Sensing Distance	Housing Material	Connection
AC/DC 5 Wires						
PTF	AC/DC 5 Wires	20-240VAC/12-240VDC	Diffuse reflection	50cm , 100cm	PC/ABS	Cable
PTF	AC/DC 5 Wires	20-240VAC/12-240VDC	Retro reflection	3m , 5m	PC/ABS	Cable
PTF	AC/DC 5 Wires	20-240VAC/12-240VDC	Polarized reflection	5m	PC/ABS	Cable
PTF	AC/DC 5 Wires	20-240VAC/12-240VDC	Through beam	10m , 20m	PC/ABS	Cable
PTL	AC/DC 5 Wires	20-240VAC/12-240VDC	Diffuse reflection	80cm , 200cm	PC/ABS	Terminal connect
PTL	AC/DC 5 Wires	20-240VAC/12-240VDC	Retro reflection	5m	PC/ABS	Terminal connect
PTL	AC/DC 5 Wires	20-240VAC/12-240VDC	Polarized reflection	12m	PC/ABS	Terminal connect
PTL	AC/DC 5 Wires	20-240VAC/12-240VDC	Through beam	20m , 30m		

U-Type

Model	Output	Supply Voltage	Sensing Mode	Sensing Distance	Housing Material	Connection
PU07	DC 3 Wires	DC10-30V	Through beam	7mm	PBT	Cable
PU15	DC 3 Wires	DC10-30V	Through beam	15mm	PBT	Cable
PU30	DC 3/4 Wires	DC10-30V	Through beam	30mm	Aluminum alloy	Cable

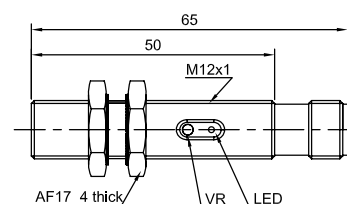
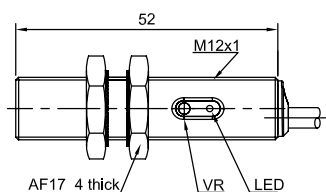
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Sensing mode	Diffuse reflection	Diffuse reflection
Sensing distance	15cm (Adjustable)	15cm (Adjustable)



Output	NPN NO	PR12-BC15DNO		PR12-BC15DNO-E2	
	NPN NC	PR12-BC15DNC		PR12-BC15DNC-E2	
Output	PNP NO	PR12-BC15DPO		PR12-BC15DPO-E2	
	PNP NC	PR12-BC15DPC		PR12-BC15DPC-E2	

Technical Parameter

Supply voltage	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<200mA	<200mA
Voltage drop	<2.5V	<2.5V
Consumption current	<25mA	<25mA
Hysteresis	3...20%	3...20%
Repeat accuracy	<5%	<5%
Response time	< 8.2ms	< 8.2ms
Output indicator	Yellow LED	Yellow LED
Polarity protection	yes	yes
Surge protection	yes	yes
Short-circuit protection	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%
Protection degree	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	M12 Connector
Certification	CE UL	CE UL

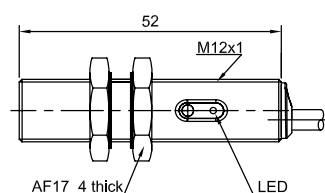
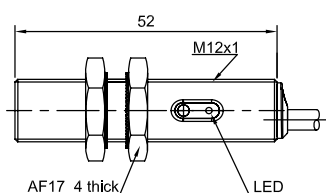


Item Code	PR12		PR12	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	NPN NO	PR12-TM5D	PR12-TM5DNO	PR12-TM10D	PR12-TM10DNO
	NPN NC	PR12-TM5D	PR12-TM5DNC	PR12-TM10D	PR12-TM10DNC
Output	PNP NO	PR12-TM5D	PR12-TM5DPO	PR12-TM10D	PR12-TM10DPO
	PNP NC	PR12-TM5D	PR12-TM5DPC	PR12-TM10D	PR12-TM10DPC

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U _L	CE U _L	CE U _L	CE U _L

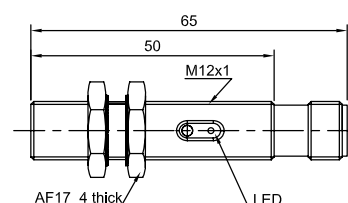
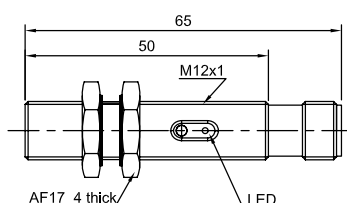


Item Code	PR12		PR12	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	NPN NO	PR12-TM5D-E2	PR12-TM5DNO-E2	PR12-TM10D-E2	PR12-TM10DNO-E2
	NPN NC	PR12-TM5D-E2	PR12-TM5DNC-E2	PR12-TM10D-E2	PR12-TM10DNC-E2
Output	PNP NO	PR12-TM5D-E2	PR12-TM5DPO-E2	PR12-TM10D-E2	PR12-TM10DPO-E2
	PNP NC	PR12-TM5D-E2	PR12-TM5DPC-E2	PR12-TM10D-E2	PR12-TM10DPC-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

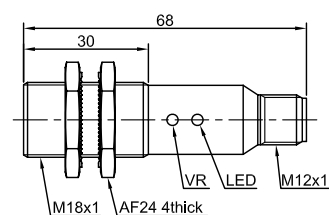
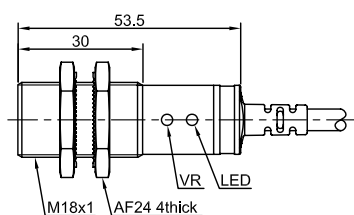


Item Code	PR18		PR18	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



Output	NPN NO	PR18-BC10DNO	PR18-BC40DNO	PR18-BC10DNO-E2	PR18-BC40DNO-E2
	NPN NC	PR18-BC10DNC	PR18-BC40DNC	PR18-BC10DNC-E2	PR18-BC40DNC-E2
	NPN NO+NC	PR18-BC10DNR	PR18-BC40DNR	PR18-BC10DNR-E2	PR18-BC40DNR-E2
Output	PNP NO	PR18-BC10DPO	PR18-BC40DPO	PR18-BC10DPO-E2	PR18-BC40DPO-E2
	PNP NC	PR18-BC10DPC	PR18-BC40DPC	PR18-BC10DPC-E2	PR18-BC40DPC-E2
	PNP NO+NC	PR18-BC10DPR	PR18-BC40DPR	PR18-BC10DPR-E2	PR18-BC40DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<200mA	<200mA	<200mA	<200mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	<8.2ms	<8.2ms	<8.2ms	<8.2ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

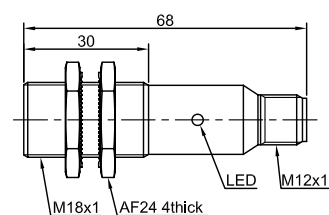
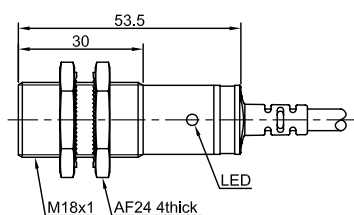


Item Code	PR18	PR18
Sensing mode	Retro reflection	
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



Output	NPN NO	PR18-DM3DNO	PR18-DM3DNO-E2
	NPN NC	PR18-DM3DNC	PR18-DM3DNC-E2
	NPN NO+NC	PR18-DM3DNR	PR18-DM3DNR-E2
Output	PNP NO	PR18-DM3DPO	PR18-DM3DPO-E2
	PNP NC	PR18-DM3DPC	PR18-DM3DPC-E2
	PNP NO+NC	PR18-DM3DPR	PR18-DM3DPR-E2

Technical Parameter			
Supply voltage	10...30 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	<200mA	<200mA	
Voltage drop	<2.5V	<2.5V	
Consumption current	<25mA	<25mA	
Hysteresis	...	...	
Repeat accuracy	<5%	<5%	
Response time	<8.2ms	<8.2ms	
Output indicator	Yellow LED	Yellow LED	
Polarity protection	yes	yes	
Surge protection	yes	yes	
Short-circuit protection	yes	yes	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP67	IP67	
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	
Connection	2m PVC Cable	M12 Connector	
Certification	CE UL	CE UL	

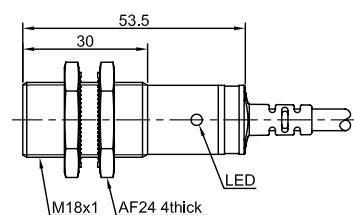
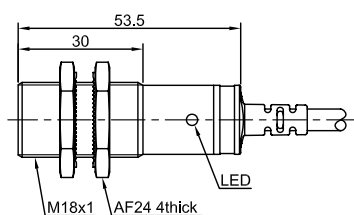


Item Code	PR18		PR18	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18-TM10D	PR18-TM10DNO	PR18-TM20D	PR18-TM20DNO
	NPN NC	PR18-TM10D	PR18-TM10DNC	PR18-TM20D	PR18-TM20DNC
	NPN NO+NC	PR18-TM10D	PR18-TM10DNR	PR18-TM20D	PR18-TM20DNR
Output	PNP NO	PR18-TM10D	PR18-TM10DPO	PR18-TM20D	PR18-TM20DPO
	PNP NC	PR18-TM10D	PR18-TM10DPC	PR18-TM20D	PR18-TM20DPC
	PNP NO+NC	PR18-TM10D	PR18-TM10DPR	PR18-TM20D	PR18-TM20DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U _L	CE U _L	CE U _L	CE U _L

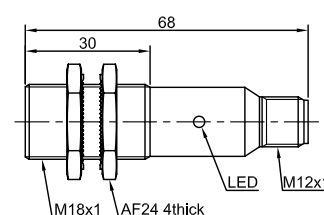
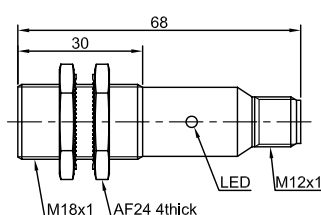


Item Code	PR18		PR18	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18-TM10D-E2	PR18-TM10DNO-E2	PR18-TM20D-E2	PR18-TM20DNO-E2
	NPN NC	PR18-TM10D-E2	PR18-TM10DNC-E2	PR18-TM20D-E2	PR18-TM20DNC-E2
	NPN NO+NC	PR18-TM10D-E2	PR18-TM10DNR-E2	PR18-TM20D-E2	PR18-TM20DNR-E2
Output	PNP NO	PR18-TM10D-E2	PR18-TM10DPO-E2	PR18-TM20D-E2	PR18-TM20DPO-E2
	PNP NC	PR18-TM10D-E2	PR18-TM10DPC-E2	PR18-TM20D-E2	PR18-TM20DPC-E2
	PNP NO+NC	PR18-TM10D-E2	PR18-TM10DPR-E2	PR18-TM20D-E2	PR18-TM20DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

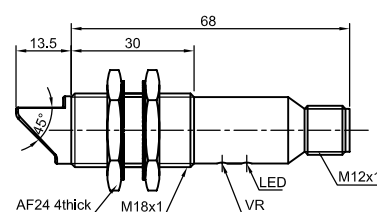
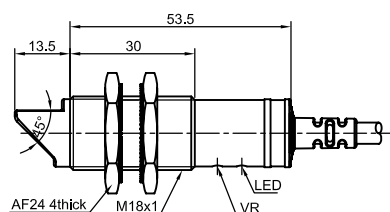


Item Code	PR18G		PR18G	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



Output	NPN NO	PR18G-BC10D	PR18G-BC40DNO	PR18G-BC10D-E2	PR18G-BC40DNO-E2
	NPN NC	PR18G-BC10D	PR18G-BC40DNC	PR18G-BC10D-E2	PR18G-BC40DNC-E2
	NPN NO+NC	PR18G-BC10D	PR18G-BC40DNR	PR18G-BC10D-E2	PR18G-BC40DNR-E2
Output	PNP NO	PR18G-BC10D	PR18G-BC40DPO	PR18G-BC10D-E2	PR18G-BC40DPO-E2
	PNP NC	PR18G-BC10D	PR18G-BC40DPC	PR18G-BC10D-E2	PR18G-BC40DPC-E2
	PNP NO+NC	PR18G-BC10D	PR18G-BC40DPR	PR18G-BC10D-E2	PR18G-BC40DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<200mA	<200mA	<200mA	<200mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	<8.2ms	<8.2ms	<8.2ms	<8.2ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

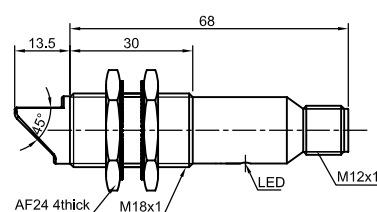
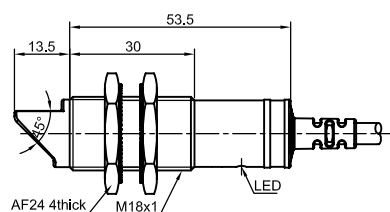


Item Code	PR18G	PR18G
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



Output	NPN NO	PR18G-DM3DNO	PR18G-DM3DNO-E2
	NPN NC	PR18G-DM3DNC	PR18G-DM3DNC-E2
	NPN NO+NC	PR18G-DM3DNR	PR18G-DM3DNR-E2
Output	PNP NO	PR18G-DM3DPO	PR18G-DM3DPO-E2
	PNP NC	PR18G-DM3DPC	PR18G-DM3DPC-E2
	PNP NO+NC	PR18G-DM3DPR	PR18G-DM3DPR-E2

Technical Parameter			
Supply voltage	10...30 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	<200mA	<200mA	
Voltage drop	<2.5V	<2.5V	
Consumption current	<25mA	<25mA	
Hysteresis	...	...	
Repeat accuracy	<5%	<5%	
Response time	<8.2ms	<8.2ms	
Output indicator	Yellow LED	Yellow LED	
Polarity protection	yes	yes	
Surge protection	yes	yes	
Short-circuit protection	yes	yes	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP65	IP65	
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	
Connection	2m PVC Cable	M12 Connector	
Certification	CE UL	CE UL	

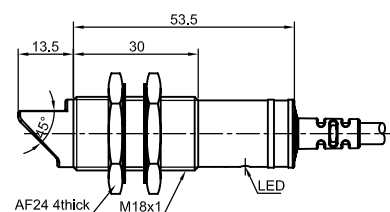
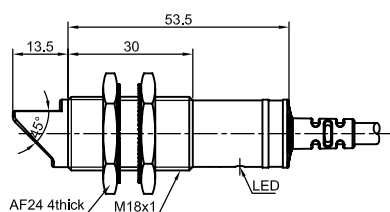


Item Code	PR18G		PR18G	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18G-TM10D	PR18G-TM10DNO	PR18G-TM20D	PR18G-TM20DNO
	NPN NC	PR18G-TM10D	PR18G-TM10DNC	PR18G-TM20D	PR18G-TM20DNC
	NPN NO+NC	PR18G-TM10D	PR18G-TM10DNR	PR18G-TM20D	PR18G-TM20DNR
Output	PNP NO	PR18G-TM10D	PR18G-TM10DPO	PR18G-TM20D	PR18G-TM20DPO
	PNP NC	PR18G-TM10D	PR18G-TM10DPC	PR18G-TM20D	PR18G-TM20DPC
	PNP NO+NC	PR18G-TM10D	PR18G-TM10DPR	PR18G-TM20D	PR18G-TM20DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U _L	CE U _L	CE U _L	CE U _L

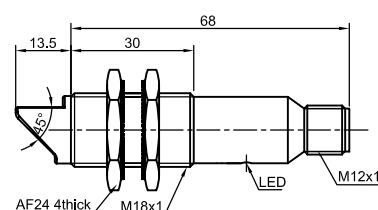
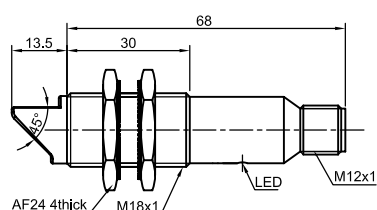


Item Code	PR18G		PR18G	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18G-TM10D-E2	PR18G-TM10DNO-E2	PR18G-TM20D-E2	PR18G-TM20DNO-E2
	NPN NC	PR18G-TM10D-E2	PR18G-TM10DNC-E2	PR18G-TM20D-E2	PR18G-TM20DNC-E2
	NPN NO+NC	PR18G-TM10D-E2	PR18G-TM10DNR-E2	PR18G-TM20D-E2	PR18G-TM20DNR-E2
Output	PNP NO	PR18G-TM10D-E2	PR18G-TM10DPO-E2	PR18G-TM20D-E2	PR18G-TM20DPO-E2
	PNP NC	PR18G-TM10D-E2	PR18G-TM10DPC-E2	PR18G-TM20D-E2	PR18G-TM20DPC-E2
	PNP NO+NC	PR18G-TM10D-E2	PR18G-TM10DPR-E2	PR18G-TM20D-E2	PR18G-TM20DPR-E2

Technical Parameter					
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA	<200mA
Voltage drop	...	<2.5V	...	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%	<5%
Response time	...	< 8.2ms	...	< 8.2ms	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65	IP65
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L	CE U _L

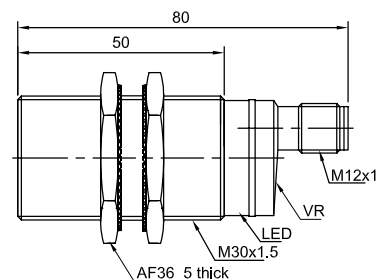
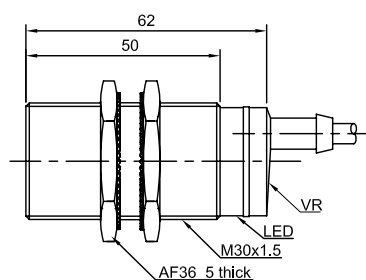


Item Code	PR30		PR30	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)



Output	NPN NO	PR30-BC50DNO	PR30-BC100DNO	PR30-BC50DNO-E2	PR30-BC100DNO-E2
	NPN NC	PR30-BC50DNC	PR30-BC100DNC	PR30-BC50DNC-E2	PR30-BC100DNC-E2
	NPN NO+NC	PR30-BC50DNR	PR30-BC100DNR	PR30-BC50DNR-E2	PR30-BC100DNR-E2
Output	PNP NO	PR30-BC50DPO	PR30-BC100DPO	PR30-BC50DPO-E2	PR30-BC100DPO-E2
	PNP NC	PR30-BC50DPC	PR30-BC100DPC	PR30-BC50DPC-E2	PR30-BC100DPC-E2
	PNP NO+NC	PR30-BC50DPR	PR30-BC100DPR	PR30-BC50DPR-E2	PR30-BC100DPR-E2

Technical Parameter					
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<200mA	<200mA	<200mA	<200mA	<200mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA	<25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	<5%	<5%	<5%	<5%	<5%
Response time	<8.2ms	<8.2ms	<8.2ms	<8.2ms	<8.2ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L	CE U _L

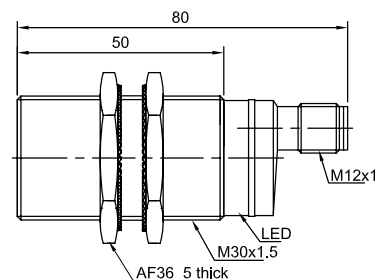
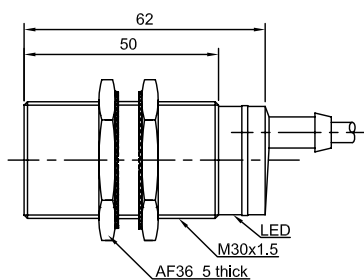


Item Code	PR30	PR30
Sensing mode	Retro reflection	Retro reflection
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)



Output	NPN NO	PR30-DM5DNO		PR30-DM5DNO-E2	
	NPN NC	PR30-DM5DNC		PR30-DM5DNC-E2	
	NPN NO+NC	PR30-DM5DNR		PR30-DM5DNR-E2	
Output	PNP NO	PR30-DM5DPO		PR30-DM5DPO-E2	
	PNP NC	PR30-DM5DPC		PR30-DM5DPC-E2	
	PNP NO+NC	PR30-DM5DPR		PR30-DM5DPR-E2	

Technical Parameter					
Supply voltage	10...30 VDC		10...30 VDC		
Light source	Infrared LED (880nm)		Infrared LED (880nm)		
Load current	<200mA		<200mA		
Voltage drop	<2.5V		<2.5V		
Consumption current	<25mA		<25mA		
Hysteresis	...		...		
Repeat accuracy	<5%		<5%		
Response time	< 8.2ms		< 8.2ms		
Output indicator	Yellow LED		Yellow LED		
Polarity protection	yes		yes		
Surge protection	yes		yes		
Short-circuit protection	yes		yes		
Ambient temperature	-15...+55°C		-15...+55°C		
Ambient moisture	35...95%		35...95%		
Protection degree	IP67		IP67		
Housing material	Nickel-copper Alloy		Nickel-copper Alloy		
Connection	2m PVC Cable		M12 Connector		
Certification	CE U _L		CE U _L		

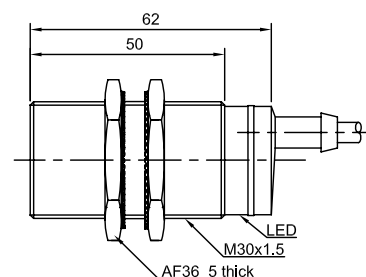
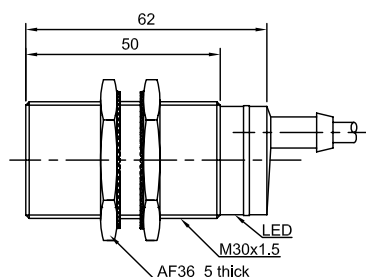


Item Code	PR30		PR30	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)	40m (Non-adjustable)



Output	NPN NO	PR30-TM20D	PR30-TM20DNO	PR30-TM40D	PR30-TM40DNO
	NPN NC	PR30-TM20D	PR30-TM20DNC	PR30-TM40D	PR30-TM40DNC
	NPN NO+NC	PR30-TM20D	PR30-TM20DNR	PR30-TM40D	PR30-TM40DNR
Output	PNP NO	PR30-TM20D	PR30-TM20DPO	PR30-TM40D	PR30-TM40DPO
	PNP NC	PR30-TM20D	PR30-TM20DPC	PR30-TM40D	PR30-TM40DPC
	PNP NO+NC	PR30-TM20D	PR30-TM20DPR	PR30-TM40D	PR30-TM40DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U _L	CE U _L	CE U _L	CE U _L

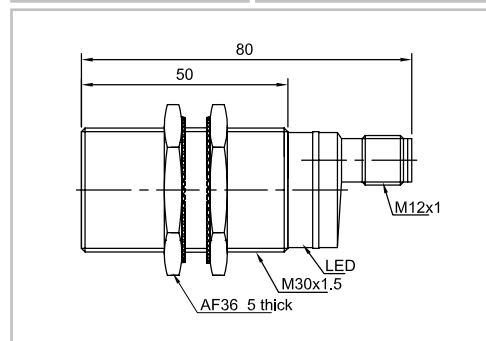
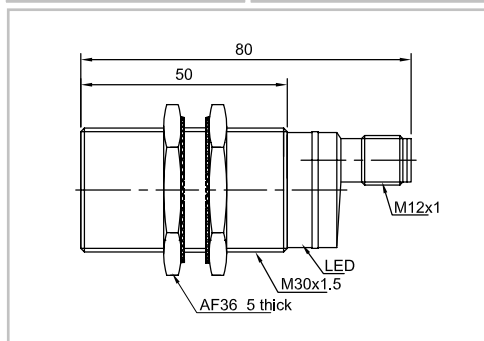
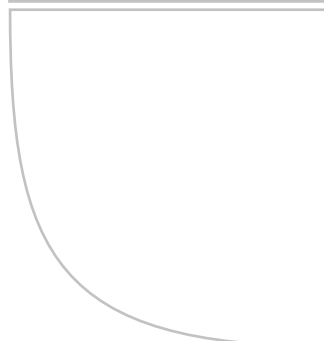


Item Code	PR30		PR30	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)	40m (Non-adjustable)



Output	NPN NO	PR30-TM20D-E2	PR30-TM20DNO-E2	PR30-TM40D-E2	PR30-TM40DNO-E2
	NPN NC	PR30-TM20D-E2	PR30-TM20DNC-E2	PR30-TM40D-E2	PR30-TM40DNC-E2
	NPN NO+NC	PR30-TM20D-E2	PR30-TM20DNR-E2	PR30-TM40D-E2	PR30-TM40DNR-E2
Output	PNP NO	PR30-TM20D-E2	PR30-TM20DPO-E2	PR30-TM40D-E2	PR30-TM40DPO-E2
	PNP NC	PR30-TM20D-E2	PR30-TM20DPC-E2	PR30-TM40D-E2	PR30-TM40DPC-E2
	PNP NO+NC	PR30-TM20D-E2	PR30-TM20DPR-E2	PR30-TM40D-E2	PR30-TM40DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

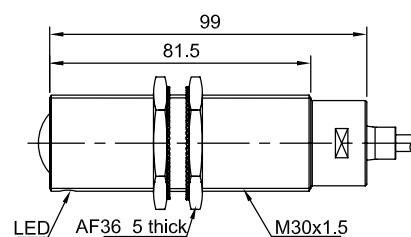
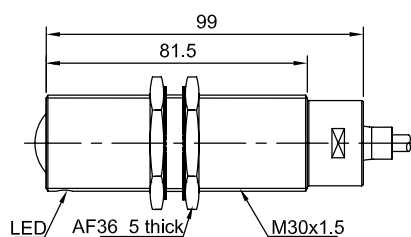


Item Code	PR30L		PR30L	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	100m (Non-adjustable)	100m (Non-adjustable)	150m (Non-adjustable)	150m (Non-adjustable)



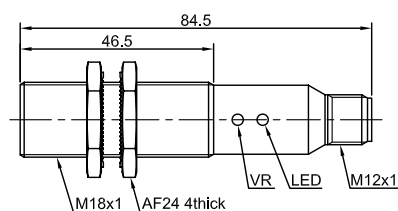
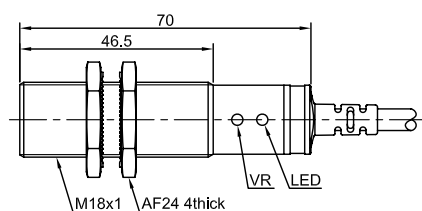
Output	NPN/PNP NO/NC	PR30L-TM100D	PR30L-TM100DEB	PR30L-TM150D	PR30L-TM150DEB
	NPN/PNP NO/NC	PR30L-TM100D 1001	PR30L-TM100DEB 1001	PR30L-TM150D 1001	PR30L-TM150DEB 1001
	NPN/PNP NO/NC	PR30L-TM100D 1002	PR30L-TM100DEB 1002	PR30L-TM150D 1002	PR30L-TM150DEB 1002

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Red LED	Green LED	Red LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U _L	CE U _L	CE U _L	CE U _L



Item Code		PR18		PR18	
Sensing mode		Diffuse reflection		Diffuse reflection	
Sensing distance		10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)
					
Output	AC 2 Wires NO	PR18-BC10ATO	PR18-BC40ATO	PR18-BC10ATO-E2	PR18-BC40ATO-E2
	AC 2 Wires NC	PR18-BC10ATC	PR18-BC40ATC	PR18-BC10ATC-E2	PR18-BC40ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	< 300mA	< 300mA	< 300mA	< 300mA	< 300mA
Voltage drop	< 10V	< 10V	< 10V	< 10V	< 10V
Consumption current	< 3mA	< 3mA	< 3mA	< 3mA	< 3mA
Hysteresis	3...20%	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	< 5%
Response time	< 50ms	< 50ms	< 50ms	< 50ms	< 50ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	...	...	...	...	...
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	...	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U L	CE U L	CE U L	CE U L	CE U L

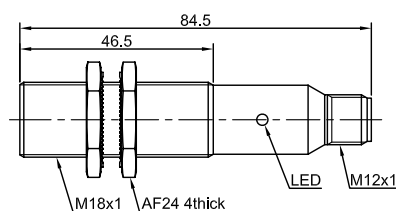
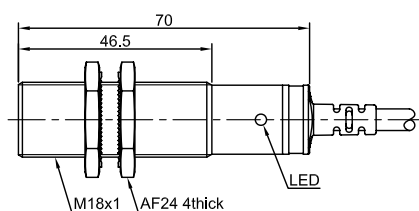


Item Code	PR18	PR18
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



Output	AC 2 Wires NO	PR18-DM3ATO	PR18-DM3ATO-E2
	AC 2 Wires NC	PR18-DM3ATC	PR18-DM3ATC-E2

Technical Parameter			
Supply voltage	20...250 VAC	20...250 VAC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	< 300mA	< 300mA	
Voltage drop	< 10V	< 10V	
Leakage current	< 3mA	< 3mA	
Hysteresis	...	...	
Repeat accuracy	< 5%	< 5%	
Response time	< 50ms	< 50ms	
Output indicator	Yellow LED	Yellow LED	
Polarity protection	...	...	
Surge protection	yes	yes	
Short-circuit protection	...	...	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP67	IP67	
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	
Connection	2m PVC Cable	M12 Connector	
Certification	CE U L	CE U L	

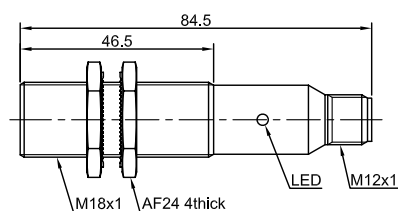
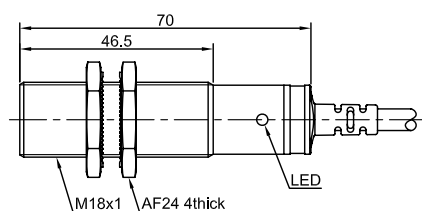


Item Code	PR18		PR18	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	AC 2 Wires NO	PR18-TM10A	PR18-TM10ATO	PR18-TM10A-E2	PR18-TM10ATO-E2
	AC 2 Wires NC	PR18-TM10A	PR18-TM10ATC	PR18-TM10A-E2	PR18-TM10ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 300mA	...	< 300mA	< 300mA
Voltage drop	...	< 10V	...	< 10V	< 10V
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA	< 3mA
Hysteresis	...	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	< 5%
Response time	< 50ms	< 50ms	< 50ms	< 50ms	< 50ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED	Yellow LED
Polarity protection	...	...	...	...	...
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	...	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U L	CE U L	CE U L	CE U L	CE U L

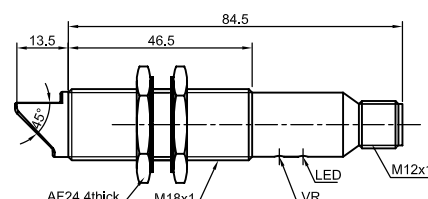
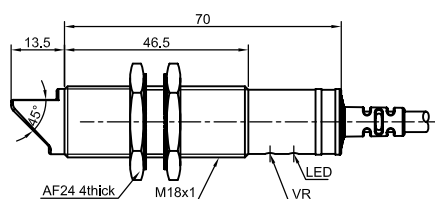


Item Code	PR18G		PR18G	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



Output	AC 2 Wires NO	PR18G-BC10A	PR18G-BC40ATO	PR18G-BC10A-E2	PR18G-BC40ATO-E2
	AC 2 Wires NC	PR18G-BC10A	PR18G-BC40ATC	PR18G-BC10A-E2	PR18G-BC40ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	< 300mA	< 300mA	< 300mA	< 300mA	< 300mA
Voltage drop	< 10V	< 10V	< 10V	< 10V	< 10V
Consumption current	< 3mA	< 3mA	< 3mA	< 3mA	< 3mA
Hysteresis	3...20%	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	< 5%
Response time	< 50ms	< 50ms	< 50ms	< 50ms	< 50ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	...	...	...	...	...
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	...	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65	IP65
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U L	CE U L	CE U L	CE U L	CE U L

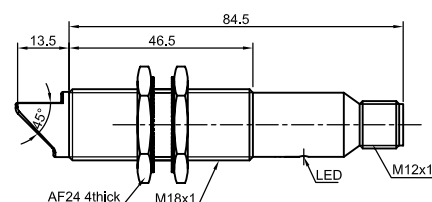
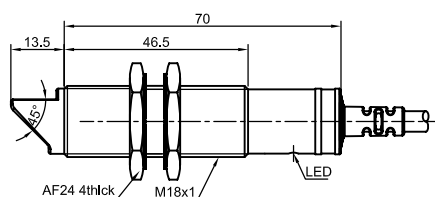


Item Code	PR18G	PR18G
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



Output	AC 2 Wires NO	PR18G-DM3ATO	PR18G-DM3ATO-E2
	AC 2 Wires NC	PR18G-DM3ATC	PR18G-DM3ATC-E2

Technical Parameter			
Supply voltage	20...250 VAC	20...250 VAC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	< 300mA	< 300mA	
Voltage drop	< 10V	< 10V	
Leakage current	< 3mA	< 3mA	
Hysteresis	...	...	
Repeat accuracy	< 5%	< 5%	
Response time	< 50ms	< 50ms	
Output indicator	Yellow LED	Yellow LED	
Polarity protection	...	...	
Surge protection	yes	yes	
Short-circuit protection	...	...	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP65	IP65	
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	
Connection	2m PVC Cable	M12 Connector	
Certification	CE U L	CE U L	

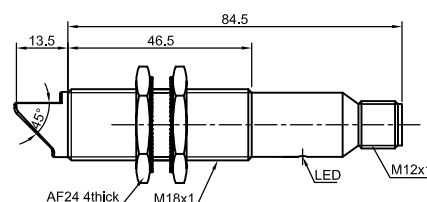
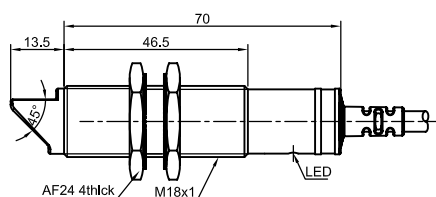


Item Code	PR18G		PR18G	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	AC 2 Wires NO	PR18G-TM10A	PR18G-TM10ATO	PR18G-TM10A-E2	PR18G-TM10ATO-E2
	AC 2 Wires NC	PR18G-TM10A	PR18G-TM10ATC	PR18G-TM10A-E2	PR18G-TM10ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 300mA	...	< 300mA	< 300mA
Voltage drop	...	< 10V	...	< 10V	< 10V
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA	< 3mA
Hysteresis	...	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	< 5%
Response time	< 50ms	< 50ms	< 50ms	< 50ms	< 50ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED	Yellow LED
Polarity protection	...	...	...	...	...
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	...	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65	IP65
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U L	CE U L	CE U L	CE U L	CE U L

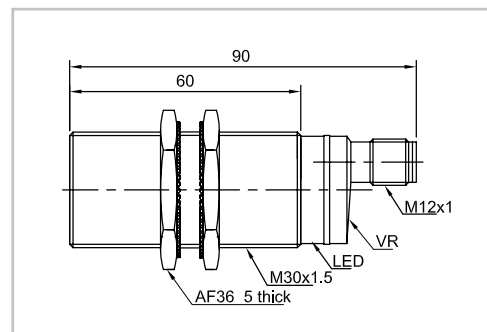
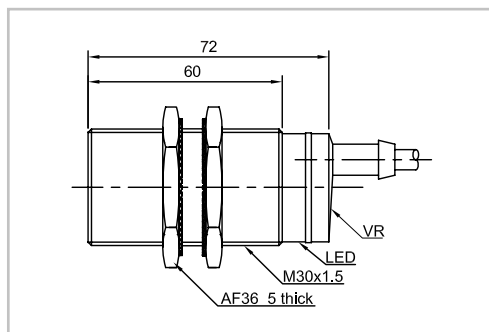
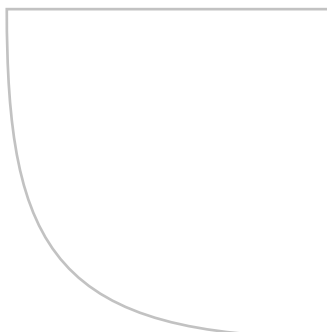


Item Code	PR30		PR30	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)



Output	AC 2 Wires NO	PR30-BC50ATO	PR30-BC100ATO	PR30-BC50ATO-E2	PR30-BC100ATO-E2
	AC 2 Wires NC	PR30-BC50ATC	PR30-BC100ATC	PR30-BC50ATC-E2	PR30-BC100ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	< 300mA	< 300mA	< 300mA	< 300mA	< 300mA
Voltage drop	< 10V	< 10V	< 10V	< 10V	< 10V
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA	< 3mA
Hysteresis	3...20%	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	< 5%
Response time	< 50ms	< 50ms	< 50ms	< 50ms	< 50ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	...	...	...	...	...
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	...	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U L	CE U L	CE U L	CE U L	CE U L

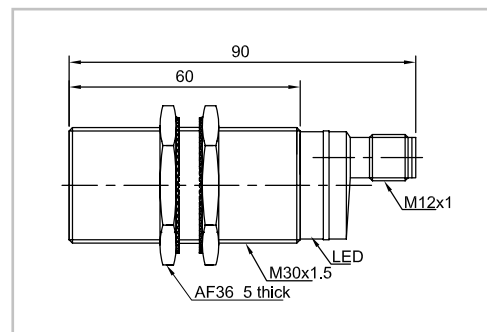
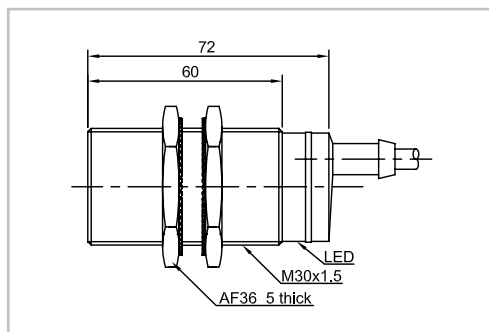
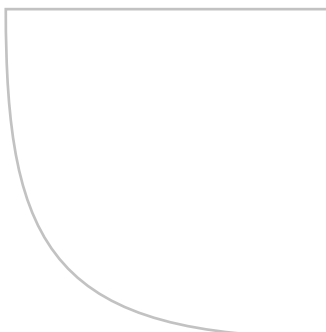


Item Code	PR30	PR30
Sensing mode	Retro reflection	Retro reflection
Sensing distance	5m (Adjustable)	5m (Adjustable)



Output	AC 2 Wires NO	PR30-DM5ATO		PR30-DM5ATO-E2	
	AC 2 Wires NC	PR30-DM5ATC		PR30-DM5ATC-E2	

Technical Parameter					
Supply voltage	20...250 VAC		20...250 VAC		
Light source	Infrared LED (880nm)		Infrared LED (880nm)		
Load current	< 300mA		< 300mA		
Voltage drop	< 10V		< 10V		
Leakage current	< 3mA		< 3mA		
Hysteresis	...		...		
Repeat accuracy	< 5%		< 5%		
Response time	< 50ms		< 50ms		
Output indicator	Yellow LED		Yellow LED		
Polarity protection	...		...		
Surge protection	yes		yes		
Short-circuit protection	...		...		
Ambient temperature	-15...+55°C		-15...+55°C		
Ambient moisture	35...95%		35...95%		
Protection degree	IP67		IP67		
Housing material	Nickel-copper Alloy		Nickel-copper Alloy		
Connection	2m PVC Cable		M12 Connector		
Certification	CE U L		CE U L		



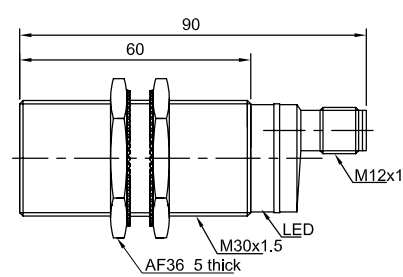
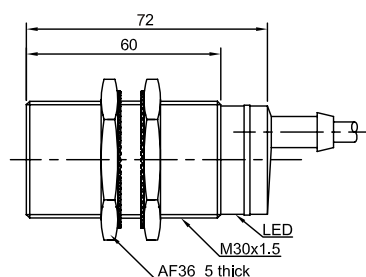
Item Code	PR30		PR30	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	AC 2 Wires NO	PR30-TM20A	PR30-TM20ATO	PR30-TM20A-E2	PR30-TM20ATO-E2
	AC 2 Wires NC	PR30-TM20A	PR30-TM20ATC	PR30-TM20A-E2	PR30-TM20ATC-E2

Technical Parameter

Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 300mA	...	< 300mA
Voltage drop	...	< 10V	...	< 10V
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 50ms	...	< 50ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	...	...	...	...
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy	Nickel-copper Alloy
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector
Certification	CE CCC	CE CCC	CE CCC	CE CCC

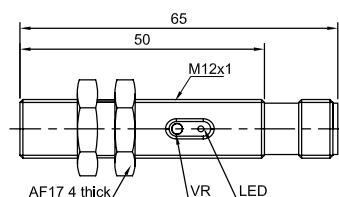
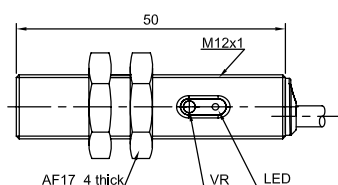


Item Code	PR12S	PR12S
Sensing mode	Diffuse reflection	Diffuse reflection
Sensing distance	15cm (Adjustable)	15cm (Adjustable)



Output	NPN NO	PR12S-BC15DNO	PR12S-BC15DNO-E2
	NPN NC	PR12S-BC15DNC	PR12S-BC15DNC-E2
Output	PNP NO	PR12S-BC15DPO	PR12S-BC15DPO-E2
	PNP NC	PR12S-BC15DPC	PR12S-BC15DPC-E2

Technical Parameter			
Supply voltage	10...30 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	< 200mA	< 200mA	
Voltage drop	< 2.5V	< 2.5V	
Consumption current	< 25mA	< 25mA	
Hysteresis	3...20%	3...20%	
Repeat accuracy	< 5%	< 5%	
Response time	< 8.2ms	< 8.2ms	
Output indicator	Yellow LED	Yellow LED	
Polarity protection	yes	yes	
Surge protection	yes	yes	
Short-circuit protection	yes	yes	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP67	IP67	
Housing material	PBT	PBT	
Connection	2m PVC Cable	M12 Connector	
Certification	CE U _I	CE U _I	

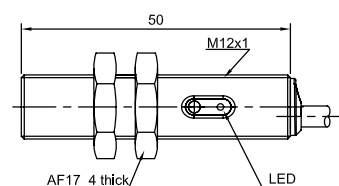
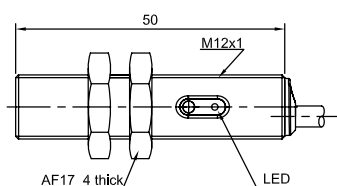


Item Code	PR12S		PR12S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	NPN NO	PR12S-TM5D	PR12S-TM5DNO	PR12S-TM10D	PR12S-TM10DNO
	NPN NC	PR12S-TM5D	PR12S-TM5DNC	PR12S-TM10D	PR12S-TM10DNC
	NPN NO+NC	PR12S-TM5D	PR12S-TM5DNR	PR12S-TM10D	PR12S-TM10DNR
Output	PNP NO	PR12S-TM5D	PR12S-TM5DPO	PR12S-TM10D	PR12S-TM10DPO
	PNP NC	PR12S-TM5D	PR12S-TM5DPC	PR12S-TM10D	PR12S-TM10DPC
	PNP NO+NC	PR12S-TM5D	PR12S-TM5DPR	PR12S-TM10D	PR12S-TM10DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 200mA	...	< 200mA
Voltage drop	...	< 2.5V	...	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U _L	CE U _L	CE U _L	CE U _L

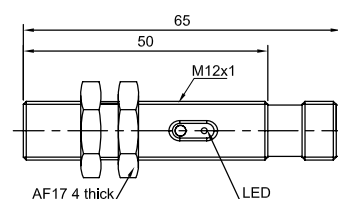
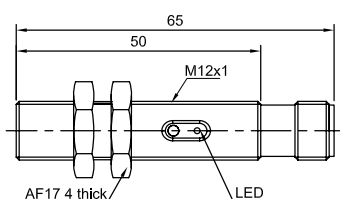


Item Code	PR12S		PR12S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	NPN NO	PR12S-TM5D-E2	PR12S-TM5DNO-E2	PR12S-TM10D-E2	PR12S-TM10DNO-E2
	NPN NC	PR12S-TM5D-E2	PR12S-TM5DNC-E2	PR12S-TM10D-E2	PR12S-TM10DNC-E2
	NPN NO+NC	PR12S-TM5D-E2	PR12S-TM5DNR-E2	PR12S-TM10D-E2	PR12S-TM10DNR-E2
Output	PNP NO	PR12S-TM5D-E2	PR12S-TM5DPO-E2	PR12S-TM10D-E2	PR12S-TM10DPO-E2
	PNP NC	PR12S-TM5D-E2	PR12S-TM5DPC-E2	PR12S-TM10D-E2	PR12S-TM10DPC-E2
	PNP NO+NC	PR12S-TM5D-E2	PR12S-TM5DPR-E2	PR12S-TM10D-E2	PR12S-TM10DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 200mA	...	< 200mA
Voltage drop	...	< 2.5V	...	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PBT	PBT	PBT	PBT
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

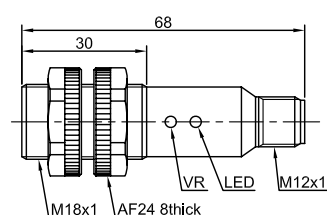
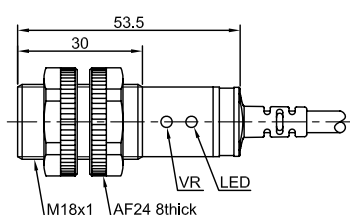


Item Code	PR18S		PR18S	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



Output	NPN NO	PR18S-BC10DNO	PR18S-BC40DNO	PR18S-BC10DNO-E2	PR18S-BC40DNO-E2
	NPN NC	PR18S-BC10DNC	PR18S-BC40DNC	PR18S-BC10DNC-E2	PR18S-BC40DNC-E2
	NPN NO+NC	PR18S-BC10DNR	PR18S-BC40DNR	PR18S-BC10DNR-E2	PR18S-BC40DNR-E2
Output	PNP NO	PR18S-BC10DPO	PR18S-BC40DPO	PR18S-BC10DPO-E2	PR18S-BC40DPO-E2
	PNP NC	PR18S-BC10DPC	PR18S-BC40DPC	PR18S-BC10DPC-E2	PR18S-BC40DPC-E2
	PNP NO+NC	PR18S-BC10DPR	PR18S-BC40DPR	PR18S-BC10DPR-E2	PR18S-BC40DPR-E2

Technical Parameter					
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	< 200mA	< 200mA	< 200mA	< 200mA	< 200mA
Voltage drop	< 2.5V	< 2.5V	< 2.5V	< 2.5V	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	< 5%
Response time	< 8.2ms	< 8.2ms	< 8.2ms	< 8.2ms	< 8.2ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67	IP67
Housing material	PBT	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U	CE U	CE U	CE U	CE U

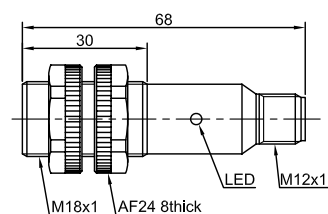
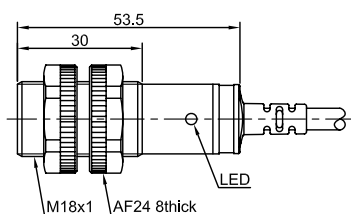


Item Code	PR18S	PR18S
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



Output	NPN NO	PR18S-DM3DNO	PR18S-DM3DNO-E2
	NPN NC	PR18S-DM3DNC	PR18S-DM3DNC-E2
	NPN NO+NC	PR18S-DM3DNR	PR18S-DM3DNR-E2
Output	PNP NO	PR18S-DM3DPO	PR18S-DM3DPO-E2
	PNP NC	PR18S-DM3DPC	PR18S-DM3DPC-E2
	PNP NO+NC	PR18S-DM3DPR	PR18S-DM3DPR-E2

Technical Parameter			
Supply voltage	10...30 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	< 200mA	< 200mA	
Voltage drop	< 2.5V	< 2.5V	
Consumption current	< 25mA	< 25mA	
Hysteresis	...	...	
Repeat accuracy	< 5%	< 5%	
Response time	< 8.2ms	< 8.2ms	
Output indicator	Yellow LED	Yellow LED	
Polarity protection	yes	yes	
Surge protection	yes	yes	
Short-circuit protection	yes	yes	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP67	IP67	
Housing material	PBT	PBT	
Connection	2m PVC Cable	M12 Connector	
Certification	CE U _L	CE U _L	

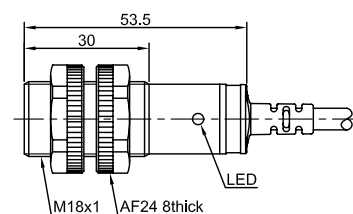
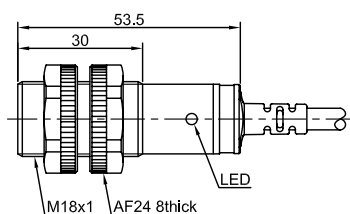


Item Code	PR18S		PR18S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18S-TM10D	PR18S-TM10DNO	PR18S-TM20D	PR18S-TM20DNO
	NPN NC	PR18S-TM10D	PR18S-TM10DNC	PR18S-TM20D	PR18S-TM20DNC
	NPN NO+NC	PR18S-TM10D	PR18S-TM10DNR	PR18S-TM20D	PR18S-TM20DNR
Output	PNP NO	PR18S-TM10D	PR18S-TM10DPO	PR18S-TM20D	PR18S-TM20DPO
	PNP NC	PR18S-TM10D	PR18S-TM10DPC	PR18S-TM20D	PR18S-TM20DPC
	PNP NO+NC	PR18S-TM10D	PR18S-TM10DPR	PR18S-TM20D	PR18S-TM20DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 200mA	...	< 200mA
Voltage drop	...	< 2.5V	...	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U _L	CE U _L	CE U _L	CE U _L

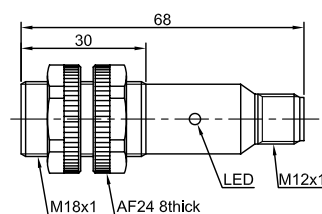
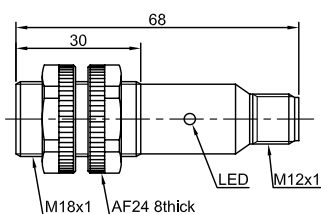


Item Code	PR18S		PR18S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18S-TM10D-E2	PR18S-TM10DNO-E2	PR18S-TM20D-E2	PR18S-TM20DNO-E2
	NPN NC	PR18S-TM10D-E2	PR18S-TM10DNC-E2	PR18S-TM20D-E2	PR18S-TM20DNC-E2
	NPN NO+NC	PR18S-TM10D-E2	PR18S-TM10DNR-E2	PR18S-TM20D-E2	PR18S-TM20DNR-E2
Output	PNP NO	PR18S-TM10D-E2	PR18S-TM10DPO-E2	PR18S-TM20D-E2	PR18S-TM20DPO-E2
	PNP NC	PR18S-TM10D-E2	PR18S-TM10DPC-E2	PR18S-TM20D-E2	PR18S-TM20DPC-E2
	PNP NO+NC	PR18S-TM10D-E2	PR18S-TM10DPR-E2	PR18S-TM20D-E2	PR18S-TM20DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 200mA	...	< 200mA
Voltage drop	...	< 2.5V	...	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PBT	PBT	PBT	PBT
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

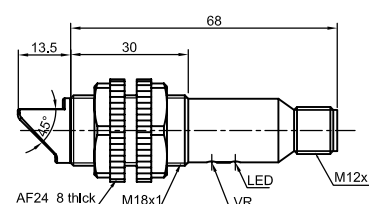
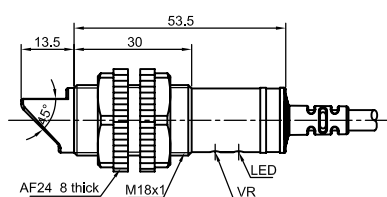


Item Code	PR18GS		PR18GS	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



Output	NPN NO	PR18GS-BC10DNO	PR18GS-BC40DNO	PR18GS-BC10DNO-E2	PR18GS-BC40DNO-E2
	NPN NC	PR18GS-BC10DNC	PR18GS-BC40DNC	PR18GS-BC10DNC-E2	PR18GS-BC40DNC-E2
	NPN NO+NC	PR18GS-BC10DNR	PR18GS-BC40DNR	PR18GS-BC10DNR-E2	PR18GS-BC40DNR-E2
Output	PNP NO	PR18GS-BC10DPO	PR18GS-BC40DPO	PR18GS-BC10DPO-E2	PR18GS-BC40DPO-E2
	PNP NC	PR18GS-BC10DPC	PR18GS-BC40DPC	PR18GS-BC10DPC-E2	PR18GS-BC40DPC-E2
	PNP NO+NC	PR18GS-BC10DPR	PR18GS-BC40DPR	PR18GS-BC10DPR-E2	PR18GS-BC40DPR-E2

Technical Parameter					
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	< 200mA	< 200mA	< 200mA	< 200mA	< 200mA
Voltage drop	< 2.5V	< 2.5V	< 2.5V	< 2.5V	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	< 5%
Response time	< 8.2ms	< 8.2ms	< 8.2ms	< 8.2ms	< 8.2ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65	IP65
Housing material	PBT	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L	CE U _L

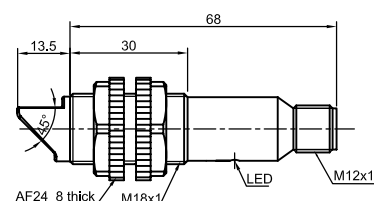
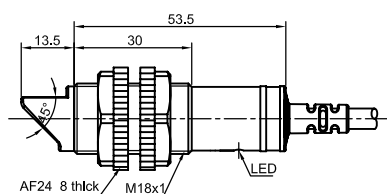


Item Code	PR18GS	PR18GS
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



Output	NPN NO	PR18GS-DM3DNO	PR18GS-DM3DNO-E2
	NPN NC	PR18GS-DM3DNC	PR18GS-DM3DNC-E2
	NPN NO+NC	PR18GS-DM3DNR	PR18GS-DM3DNR-E2
Output	PNP NO	PR18GS-DM3DPO	PR18GS-DM3DPO-E2
	PNP NC	PR18GS-DM3DPC	PR18GS-DM3DPC-E2
	PNP NO+NC	PR18GS-DM3DPR	PR18GS-DM3DPR-E2

Technical Parameter			
Supply voltage	10...30 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	< 200mA	< 200mA	
Voltage drop	< 2.5V	< 2.5V	
Consumption current	< 25mA	< 25mA	
Hysteresis	...	...	
Repeat accuracy	< 5%	< 5%	
Response time	< 8.2ms	< 8.2ms	
Output indicator	Yellow LED	Yellow LED	
Polarity protection	yes	yes	
Surge protection	yes	yes	
Short-circuit protection	yes	yes	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP65	IP65	
Housing material	PBT	PBT	
Connection	2m PVC Cable	M12 Connector	
Certification	CE U _I	CE U _I	

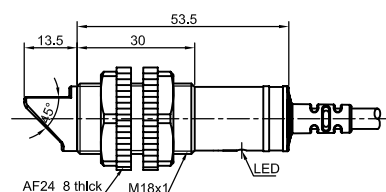
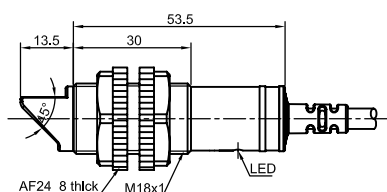


Item Code	PR18GS		PR18GS	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18GS-TM10D	PR18GS-TM10DNO	PR18GS-TM20D	PR18GS-TM20DNO
	NPN NC	PR18GS-TM10D	PR18GS-TM10DNC	PR18GS-TM20D	PR18GS-TM20DNC
	NPN NO+NC	PR18GS-TM10D	PR18GS-TM10DNR	PR18GS-TM20D	PR18GS-TM20DNR
Output	PNP NO	PR18GS-TM10D	PR18GS-TM10DPO	PR18GS-TM20D	PR18GS-TM20DPO
	PNP NC	PR18GS-TM10D	PR18GS-TM10DPC	PR18GS-TM20D	PR18GS-TM20DPC
	PNP NO+NC	PR18GS-TM10D	PR18GS-TM10DPR	PR18GS-TM20D	PR18GS-TM20DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 200mA	...	< 200mA
Voltage drop	...	< 2.5V	...	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65
Housing material	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U _L	CE U _L	CE U _L	CE U _L

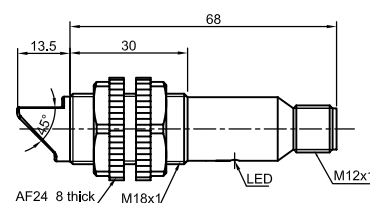
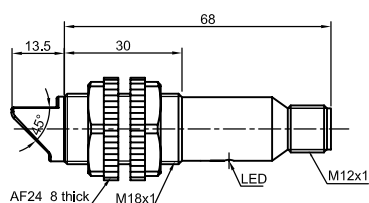


Item Code	PR18GS		PR18GS	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18GS-TM10D-E2	PR18GS-TM10DNO-E2	PR18GS-TM20D-E2	PR18GS-TM20DNO-E2
	NPN NC	PR18GS-TM10D-E2	PR18GS-TM10DNC-E2	PR18GS-TM20D-E2	PR18GS-TM20DNC-E2
	NPN NO+NC	PR18GS-TM10D-E2	PR18GS-TM10DNR-E2	PR18GS-TM20D-E2	PR18GS-TM20DNR-E2
Output	PNP NO	PR18GS-TM10D-E2	PR18GS-TM10DPO-E2	PR18GS-TM20D-E2	PR18GS-TM20DPO-E2
	PNP NC	PR18GS-TM10D-E2	PR18GS-TM10DPC-E2	PR18GS-TM20D-E2	PR18GS-TM20DPC-E2
	PNP NO+NC	PR18GS-TM10D-E2	PR18GS-TM10DPR-E2	PR18GS-TM20D-E2	PR18GS-TM20DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 200mA	...	< 200mA
Voltage drop	...	< 2.5V	...	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65
Housing material	PBT	PBT	PBT	PBT
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

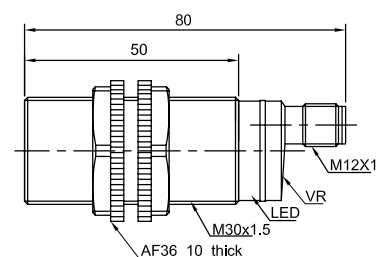
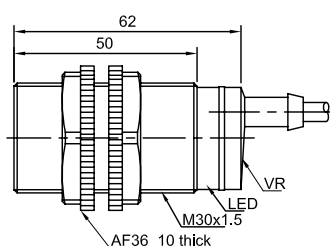


Item Code	PR30S		PR30S	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)



Output	NPN NO	PR30S-BC50DNO	PR30S-BC100DNO	PR30S-BC50DNO-E2	PR30S-BC100DNO-E2
	NPN NC	PR30S-BC50DNC	PR30S-BC100DNC	PR30S-BC50DNC-E2	PR30S-BC100DNC-E2
	NPN NO+NC	PR30S-BC50DNR	PR30S-BC100DNR	PR30S-BC50DNR-E2	PR30S-BC100DNR-E2
Output	PNP NO	PR30S-BC50DPO	PR30S-BC100DPO	PR30S-BC50DPO-E2	PR30S-BC100DPO-E2
	PNP NC	PR30S-BC50DPC	PR30S-BC100DPC	PR30S-BC50DPC-E2	PR30S-BC100DPC-E2
	PNP NO+NC	PR30S-BC50DPR	PR30S-BC100DPR	PR30S-BC50DPR-E2	PR30S-BC100DPR-E2

Technical Parameter					
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	< 200mA	< 200mA	< 200mA	< 200mA	
Voltage drop	< 2.5V	< 2.5V	< 2.5V	< 2.5V	
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA	
Hysteresis	3...20%	3...20%	3...20%	3...20%	
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	
Response time	< 8.2ms	< 8.2ms	< 8.2ms	< 8.2ms	
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	
Polarity protection	yes	yes	yes	yes	
Surge protection	yes	yes	yes	yes	
Short-circuit protection	yes	yes	yes	yes	
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	35...95%	35...95%	
Protection degree	IP67	IP67	IP67	IP67	
Housing material	PBT	PBT	PBT	PBT	
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	
Certification	CE U _L	CE U _L	CE U _L	CE U _L	

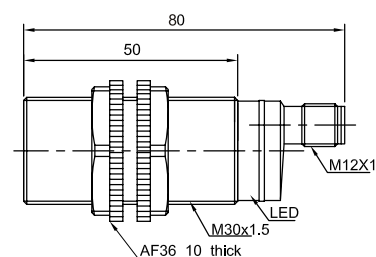
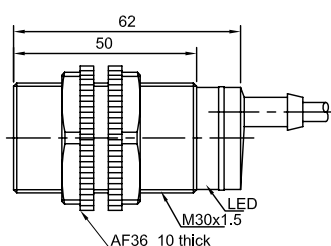


Item Code	PR30S	PR30S
Sensing mode	Retro reflection	Retro reflection
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)



Output	NPN NO	PR30S-DM5DNO	PR30S-DM5DNO-E2
	NPN NC	PR30S-DM5DNC	PR30S-DM5DNC-E2
	NPN NO+NC	PR30S-DM5DNR	PR30S-DM5DNR-E2
Output	PNP NO	PR30S-DM5DPO	PR30S-DM5DPO-E2
	PNP NC	PR30S-DM5DPC	PR30S-DM5DPC-E2
	PNP NO+NC	PR30S-DM5DPR	PR30S-DM5DPR-E2

Technical Parameter			
Supply voltage	10...30 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	< 200mA	< 200mA	
Voltage drop	< 2.5V	< 2.5V	
Consumption current	< 25mA	< 25mA	
Hysteresis	...	...	
Repeat accuracy	< 5%	< 5%	
Response time	< 8.2ms	< 8.2ms	
Output indicator	Yellow LED	Yellow LED	
Polarity protection	yes	yes	
Surge protection	yes	yes	
Short-circuit protection	yes	yes	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP67	IP67	
Housing material	PBT	PBT	
Connection	2m PVC Cable	M12 Connector	
Certification	CE U _L	CE U _L	

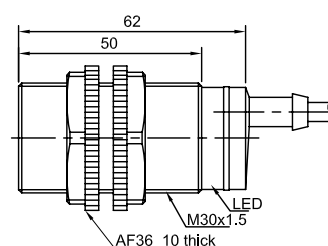
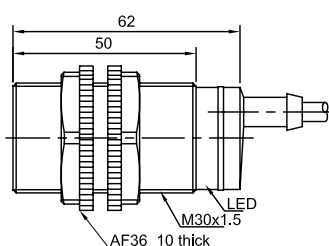


Item Code	PR30S		PR30S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)	40m (Non-adjustable)



Output	NPN NO	PR30S-TM20D	PR30S-TM20DNO	PR30S-TM40D	PR30S-TM40DNO
	NPN NC	PR30S-TM20D	PR30S-TM20DNC	PR30S-TM40D	PR30S-TM40DNC
	NPN NO+NC	PR30S-TM20D	PR30S-TM20DNR	PR30S-TM40D	PR30S-TM40DNR
Output	PNP NO	PR30S-TM20D	PR30S-TM20DPO	PR30S-TM40D	PR30S-TM40DPO
	PNP NC	PR30S-TM20D	PR30S-TM20DPC	PR30S-TM40D	PR30S-TM40DPC
	PNP NO+NC	PR30S-TM20D	PR30S-TM20DPR	PR30S-TM40D	PR30S-TM40DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 200mA	...	< 200mA
Voltage drop	...	< 2.5V	...	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U _L	CE U _L	CE U _L	CE U _L

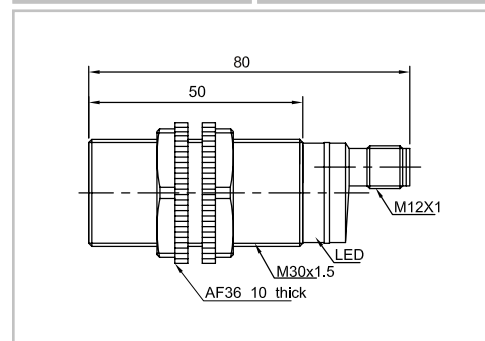
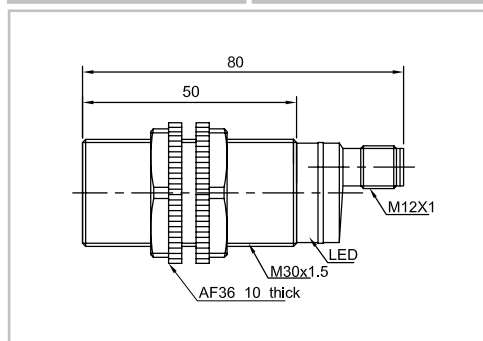
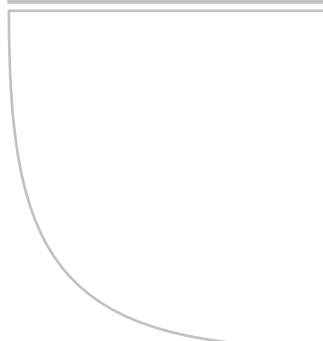


Item Code	PR30S		PR30S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)



Output	NPN NO	PR30S-TM20D-E2	PR30S-TM20DNO-E2	PR30S-TM40D-E2	PR30S-TM40DNO-E2
	NPN NC	PR30S-TM20D-E2	PR30S-TM20DNC-E2	PR30S-TM40D-E2	PR30S-TM40DNC-E2
	NPN NO+NC	PR30S-TM20D-E2	PR30S-TM20DNR-E2	PR30S-TM40D-E2	PR30S-TM40DNR-E2
Output	PNP NO	PR30S-TM20D-E2	PR30S-TM20DPO-E2	PR30S-TM40D-E2	PR30S-TM40DPO-E2
	PNP NC	PR30S-TM20D-E2	PR30S-TM20DPC-E2	PR30S-TM40D-E2	PR30S-TM40DPC-E2
	PNP NO+NC	PR30S-TM20D-E2	PR30S-TM20DPR-E2	PR30S-TM40D-E2	PR30S-TM40DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 200mA	...	< 200mA
Voltage drop	...	< 2.5V	...	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PBT	PBT	PBT	PBT
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

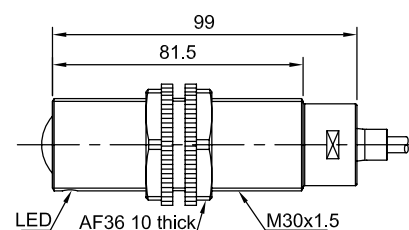
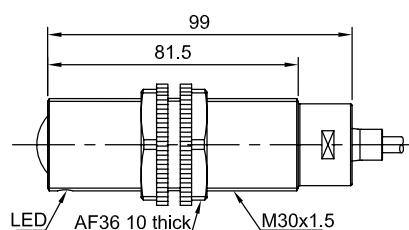


Item Code	PR30SL		PR30SL	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	100m (Non-adjustable)	100m (Non-adjustable)	150m (Non-adjustable)	150m (Non-adjustable)



Output	NPN/PNP NO/NC	PR30SL-TM100D	PR30SL-TM100DEB	PR30SL-TM150D	PR30SL-TM150DEB
	NPN/PNP NO/NC	PR30SL-TM100D 1001	PR30SL-TM100DEB 1001	PR30SL-TM150D 1001	PR30SL-TM150DEB 1001
	NPN/PNP NO/NC	PR30SL-TM100D 1002	PR30SL-TM100DEB 1002	PR30SL-TM150D 1002	PR30SL-TM150DEB 1002

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 200mA	...	< 200mA
Voltage drop	...	< 2.5V	...	< 2.5V
Consumption current	< 25mA	< 25mA	< 25mA	< 25mA
Hysteresis	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%
Response time	...	< 8.2ms	...	< 8.2ms
Output indicator	Green LED	Red LED	Green LED	Red LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE U L C	CE U L C	CE U L C	CE U L C

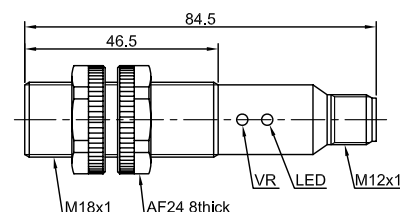
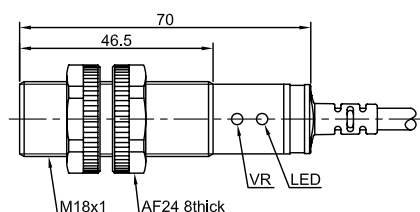


Item Code	PR18S		PR18S	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



Output	AC 2 Wires NO	PR18S-BC10ATO	PR18S-BC40ATO	PR18S-BC10ATO-E2	PR18S-BC40ATO-E2
	AC 2 Wires NC	PR18S-BC10ATC	PR18S-BC40ATC	PR18S-BC10ATC-E2	PR18S-BC40ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	< 300mA	< 300mA	< 300mA	< 300mA	
Voltage drop	< 10V	< 10V	< 10V	< 10V	
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA	
Hysteresis	3...20%	3...20%	3...20%	3...20%	
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	
Response time	< 50ms	< 50ms	< 50ms	< 50ms	
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	
Polarity protection	...	...	...	...	
Surge protection	yes	yes	yes	yes	
Short-circuit protection	...	...	...	...	
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	35...95%	35...95%	
Protection degree	IP67	IP67	IP67	IP67	
Housing material	PBT	PBT	PBT	PBT	
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	
Certification	CE U L	CE U L	CE U L	CE U L	



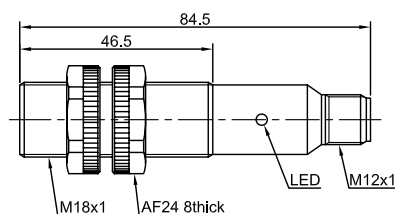
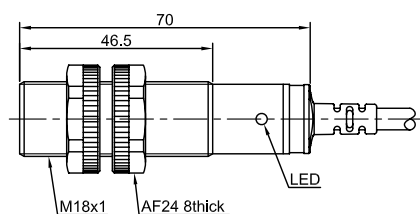
Item Code	PR18S	PR18S
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



Output	AC 2 Wires NO	PR18S-DM3ATO		PR18S-DM3ATO-E2	
	AC 2 Wires NC	PR18S-DM3ATC		PR18S-DM3ATC-E2	

Technical Parameter

Supply voltage	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)
Load current	< 300mA	< 300mA
Voltage drop	< 10V	< 10V
Leakage current	< 3mA	< 3mA
Hysteresis	...	...
Repeat accuracy	< 5%	< 5%
Response time	< 50ms	< 50ms
Output indicator	Yellow LED	Yellow LED
Polarity protection	...	...
Surge protection	yes	yes
Short-circuit protection	...	...
Ambient temperature	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%
Protection degree	IP67	IP67
Housing material	PBT	PBT
Connection	2m PVC Cable	M12 Connector
Certification	CE U _L CCC	CE U _L CCC

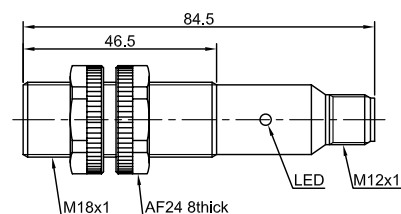
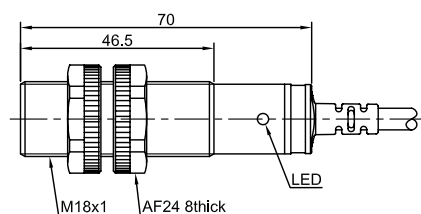


Item Code	PR18S		PR18S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	AC 2 Wires NO	PR18S-TM10A	PR18S-TM10ATO	PR18S-TM10A-E2	PR18S-TM10ATO-E2
	AC 2 Wires NC	PR18S-TM10A	PR18S-TM10ATC	PR18S-TM10A-E2	PR18S-TM10ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	...	< 300mA	...	< 300mA	
Voltage drop	...	< 10V	...	< 10V	
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA	
Hysteresis	...	...	...	...	
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	
Response time	< 50ms	< 50ms	< 50ms	< 50ms	
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED	
Polarity protection	...	...	...	...	
Surge protection	yes	yes	yes	yes	
Short-circuit protection	...	...	...	...	
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	35...95%	35...95%	
Protection degree	IP67	IP67	IP67	IP67	
Housing material	PBT	PBT	PBT	PBT	
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	
Certification	CE U L	CE U L	CE U L	CE U L	

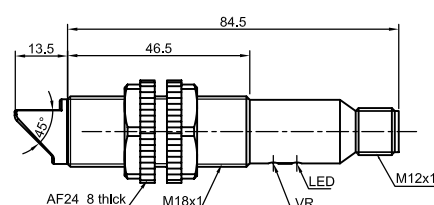
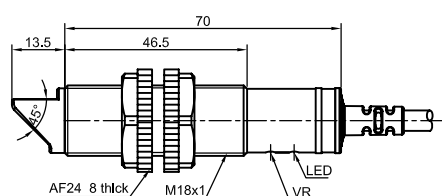


Item Code	PR18GS		PR18GS	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



Output	AC 2 Wires NO	PR18GS-BC10ATO	PR18GS-BC40ATO	PR18GS-BC10ATO-E2	PR18GS-BC40ATO-E2
	AC 2 Wires NC	PR18GS-BC10ATC	PR18GS-BC40ATC	PR18GS-BC10ATC-E2	PR18GS-BC40ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	< 300mA	< 300mA	< 300mA	< 300mA	
Voltage drop	< 10V	< 10V	< 10V	< 10V	
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA	
Hysteresis	3...20%	3...20%	3...20%	3...20%	
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	
Response time	< 50ms	< 50ms	< 50ms	< 50ms	
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	
Polarity protection	...	...	...	...	
Surge protection	yes	yes	yes	yes	
Short-circuit protection	...	...	...	...	
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	35...95%	35...95%	
Protection degree	IP65	IP65	IP65	IP65	
Housing material	PBT	PBT	PBT	PBT	
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	
Certification	CE U L	CE U L	CE U L	CE U L	



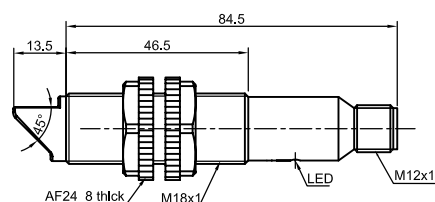
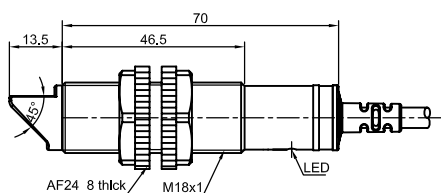
Item Code	PR18GS	PR18GS
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



Output	AC 2 Wires NO	PR18GS-DM3ATO	PR18GS-DM3ATO-E2
	AC 2 Wires NC	PR18GS-DM3ATC	PR18GS-DM3ATC-E2

Technical Parameter

Supply voltage	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)
Load current	< 300mA	< 300mA
Voltage drop	< 10V	< 10V
Leakage current	< 3mA	< 3mA
Hysteresis	...	...
Repeat accuracy	< 5%	< 5%
Response time	< 50ms	< 50ms
Output indicator	Yellow LED	Yellow LED
Polarity protection	...	...
Surge protection	yes	yes
Short-circuit protection	...	...
Ambient temperature	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%
Protection degree	IP65	IP65
Housing material	PBT	PBT
Connection	2m PVC Cable	M12 Connector
Certification	CE U _L CCC	CE U _L CCC

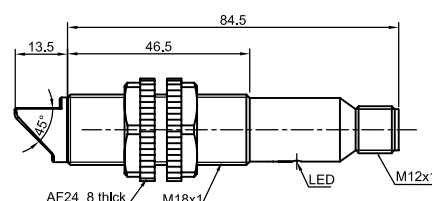
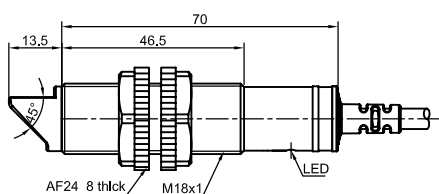


Item Code	PR18GS		PR18GS	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	AC 2 Wires NO	PR18GS-TM10A	PR18GS-TM10ATO	PR18GS-TM10A-E2	PR18GS-TM10ATO-E2
	AC 2 Wires NC	PR18GS-TM10A	PR18GS-TM10ATC	PR18GS-TM10A-E2	PR18GS-TM10ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	< 300mA	...	< 300mA	< 300mA
Voltage drop	...	< 10V	...	< 10V	< 10V
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA	< 3mA
Hysteresis	...	...	...	...	...
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	< 5%
Response time	< 50ms	< 50ms	< 50ms	< 50ms	< 50ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED	Yellow LED
Polarity protection	...	...	...	...	...
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	...	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65	IP65
Housing material	PBT	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U L	CE U L	CE U L	CE U L	CE U L

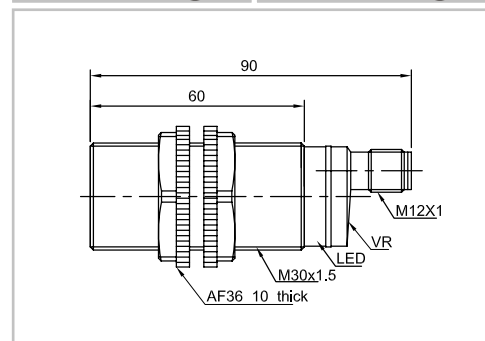
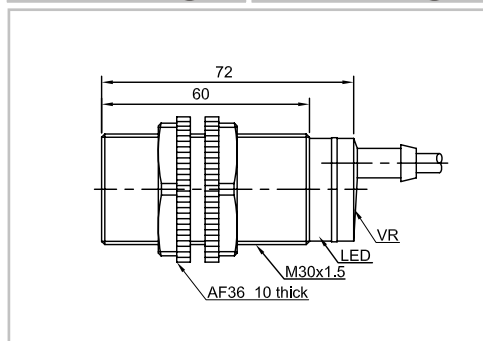
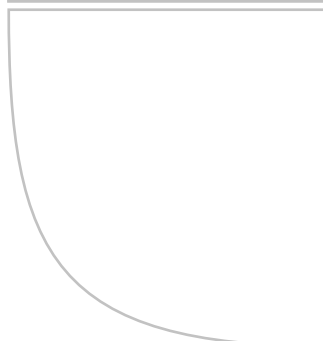


Item Code	PR30S		PR30S	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)



Output	AC 2 Wires NO	PR30S-BC50ATO	PR30S-BC100ATO	PR30S-BC50ATO-E2	PR30S-BC100ATO-E2
	AC 2 Wires NC	PR30S-BC50ATC	PR30S-BC100ATC	PR30S-BC50ATC-E2	PR30S-BC100ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	< 300mA	< 300mA	< 300mA	< 300mA	< 300mA
Voltage drop	< 10V	< 10V	< 10V	< 10V	< 10V
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA	< 3mA
Hysteresis	3...20%	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	< 5%
Response time	< 50ms	< 50ms	< 50ms	< 50ms	< 50ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	...	...	...	...	...
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	...	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67	IP67
Housing material	PBT	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE U L	CE U L	CE U L	CE U L	CE U L

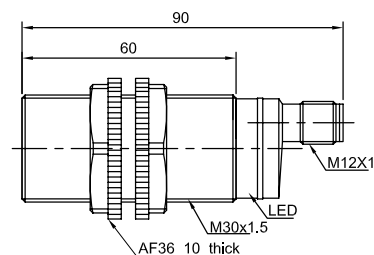
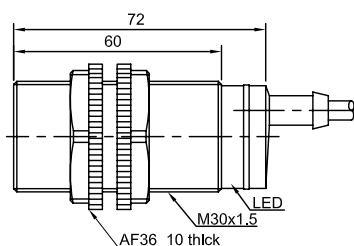


Item Code	PR30S	PR30S
Sensing mode	Retro reflection	Retro reflection
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)



Output	AC 2 Wires NO	PR30S-DM5ATO		PR30S-DM5ATO-E2	
	AC 2 Wires NC	PR30S-DM5ATC		PR30S-DM5ATC-E2	

Technical Parameter					
Supply voltage	20...250 VAC		20...250 VAC		
Light source	Infrared LED (880nm)		Infrared LED (880nm)		
Load current	< 300mA		< 300mA		
Voltage drop	< 10V		< 10V		
Leakage current	< 3mA		< 3mA		
Hysteresis	...		...		
Repeat accuracy	< 5%		< 5%		
Response time	< 50ms		< 50ms		
Output indicator	Yellow LED		Yellow LED		
Polarity protection	...		...		
Surge protection	yes		yes		
Short-circuit protection	...		...		
Ambient temperature	-15...+55°C		-15...+55°C		
Ambient moisture	35...95%		35...95%		
Protection degree	IP67		IP67		
Housing material	PBT		PBT		
Connection	2m PVC Cable		M12 Connector		
Certification	CE U _L CCC		CE U _L CCC		

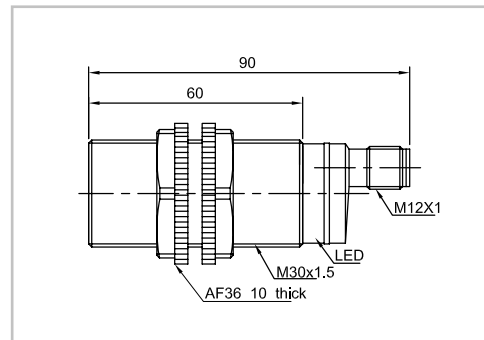
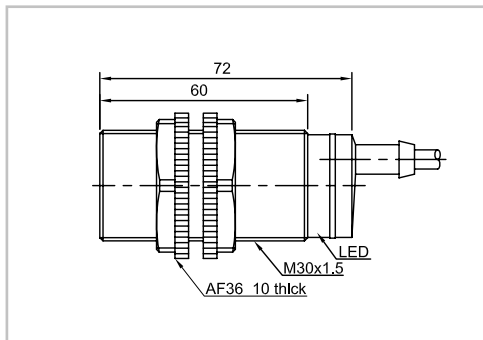
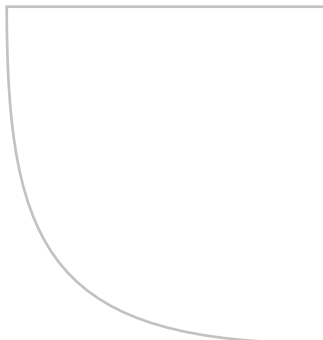


Item Code	PR30S		PR30S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	AC 2 Wires NO	PR30S-TM20A	PR30S-TM20ATO	PR30S-TM20A-E2	PR30S-TM20ATO-E2
	AC 2 Wires NC	PR30S-TM20A	PR30S-TM20ATC	PR30S-TM20A-E2	PR30S-TM20ATC-E2

Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	...	< 300mA	...	< 300mA	
Voltage drop	...	< 10V	...	< 10V	
Leakage current	< 3mA	< 3mA	< 3mA	< 3mA	
Hysteresis	...	...	...	...	
Repeat accuracy	< 5%	< 5%	< 5%	< 5%	
Response time	...	< 50ms	...	< 50ms	
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED	
Polarity protection	...	...	...	...	
Surge protection	yes	yes	yes	yes	
Short-circuit protection	...	...	...	...	
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	35...95%	35...95%	
Protection degree	IP67	IP67	IP67	IP67	
Housing material	PBT	PBT	PBT	PBT	
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	
Certification	CE U L	CE U L	CE U L	CE U L	



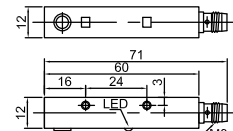
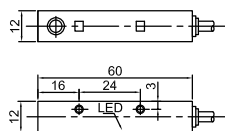
Item Code	PSB		PSB	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)	3m (Non-adjustable)	3m (Non-adjustable)



Output	NPN NO	PSB-TM3D	PSB-TM3DNO	PSB-TM3D-E1	PSB-TM3DNO-E1
	NPN NC	PSB-TM3D	PSB-TM3DNC	PSB-TM3D-E1	PSB-TM3DNC-E1
Output	PNP NO	PSB-TM3D	PSB-TM3DPO	PSB-TM3D-E1	PSB-TM3DPO-E1
	PNP NC	PSB-TM3D	PSB-TM3DPC	PSB-TM3D-E1	PSB-TM3DPC-E1

Technical Parameter

Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Red LED	Green LED	Red LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	ABS	ABS	ABS	ABS
Connection	2m PVC Cable	2m PVC Cable	M8 Connector	M8 Connector
Certification	CE	CE	CE	CE

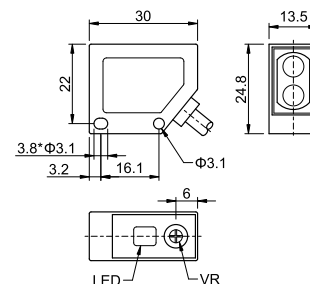
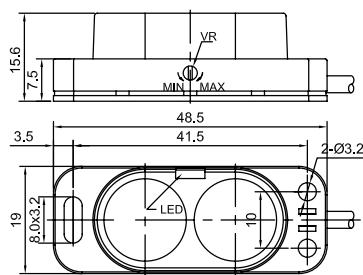


Item Code	PBA	PSI
Sensing mode	Diffuse reflection	Diffuse reflection
Sensing distance	2m (Adjustable)	30cm (Adjustable)



Output	NPN NO	PBA-BC200DNO	PSI-BC30DNO
	NPN NC	PBA-BC200DNC	PSI-BC30DNC
	NPN NO+NC		PSI-BC30DNR
Output	PNP NO	PBA-BC200DPO	PSI-BC30DPO
	PNP NC	PBA-BC200DPC	PSI-BC30DPC
	PNP NO+NC		PSI-BC30DPR

Technical Parameter			
Supply voltage	12...24 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	<100mA	<200mA	
Voltage drop	<2.5V	<2.5V	
Consumption current	<25mA	<25mA	
Hysteresis	3...20%	3...20%	
Repeat accuracy	<5%	<5%	
Response time	<3ms	<8.2ms	
Output indicator	Red LED	Yellow LED	
Polarity protection	yes	yes	
Surge protection	yes	yes	
Short-circuit protection	...	yes	
Ambient temperature	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	
Protection degree	IP54	IP65	
Housing material	PC/ABS	ABS	
Connection	2m PVC Cable	2m PVC Cable	
Certification	CE	CE	

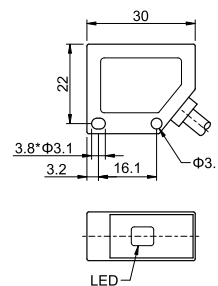
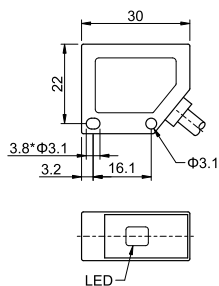


Item Code	PSI		PSI	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	NPN NO	PSI-TM5D	PSI-TM5DNO	PSI-TM10D	PSI-TM10DNO
	NPN NC	PSI-TM5D	PSI-TM5DNC	PSI-TM10D	PSI-TM10DNC
	NPN NO+NC	PSI-TM5D	PSI-TM5DNR	PSI-TM10D	PSI-TM10DNR
Output	PNP NO	PSI-TM5D	PSI-TM5DPO	PSI-TM10D	PSI-TM10DPO
	PNP NC	PSI-TM5D	PSI-TM5DPC	PSI-TM10D	PSI-TM10DPC
	PNP NO+NC	PSI-TM5D	PSI-TM5DPR	PSI-TM10D	PSI-TM10DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP65	IP65	IP65	IP65
Housing material	ABS	ABS	ABS	ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE	CE

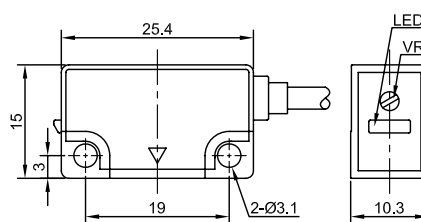
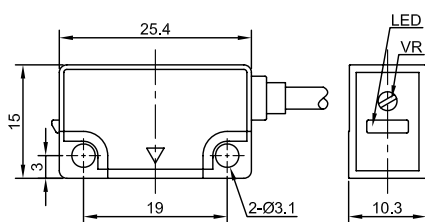


Item Code	PSL		PSL	
Sensing mode	Diffuse reflection		Focus reflection	
Sensing distance	30cm (Adjustable)		3cm (Adjustable)	5cm (Adjustable)



Output	NPN NO	PSL-BC30DNO	PSL-SC3DNO	PSL-SC5DNO
	NPN NC	PSL-BC30DNC	PSL-SC3DNC	PSL-SC5DNC
Output	PNP NO	PSL-BC30DPO	PSL-SC3DPO	PSL-SC5DPO
	PNP NC	PSL-BC30DPC	PSL-SC3DPC	PSL-SC5DPC

Technical Parameter				
Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (660nm)	Infrared LED (660nm)	Infrared LED (660nm)
Load current	<100mA	<100mA	<100mA	<100mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	<1ms	<1ms	<1ms	<1ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE	CE

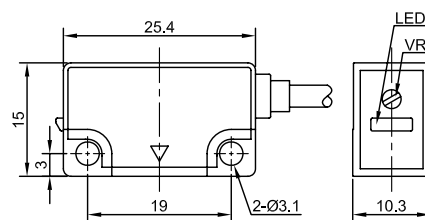
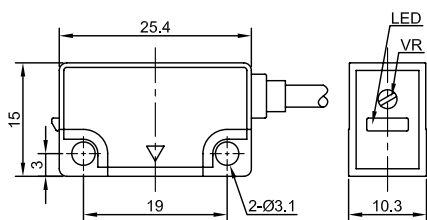


Item Code	PSL		PSL	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (adjustable)	10m (Non-adjustable)	10m (adjustable)



Output	NPN NO	PSL-TM5D	PSL-TM10DNO	PSL-TM10D	PSL-TM10DNO
	NPN NC	PSL-TM5D	PSL-TM10DNC	PSL-TM10D	PSL-TM10DNC
Output	PNP NO	PSL-TM5D	PSL-TM10DPO	PSL-TM10D	PSL-TM10DPO
	PNP NC	PSL-TM5D	PSL-TM10DPC	PSL-TM10D	PSL-TM10DPC

Technical Parameter				
Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<100mA	...	<100mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	<1ms	<1ms	<1ms	<1ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE	CE

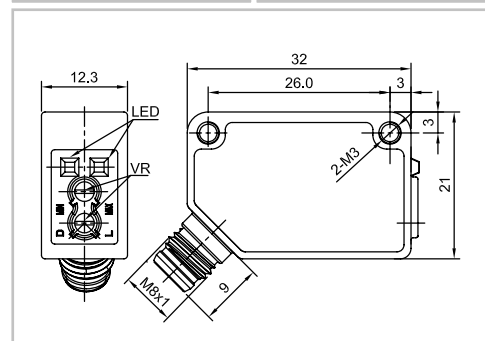
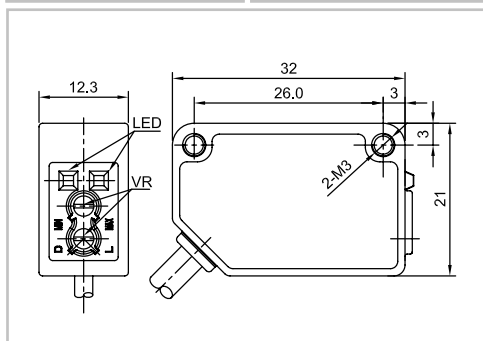
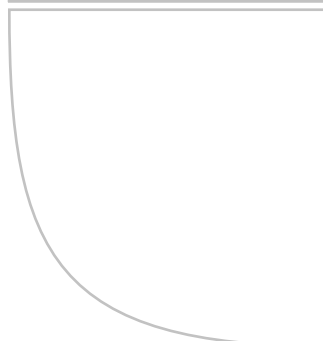


Item Code	PSF		PSF	
Sensing mode	Diffuse reflection		Diffuse reflection	
Sensing distance	30cm (Adjustable)	80cm (Adjustable)	30cm (Adjustable)	80cm (Adjustable)



Output	NPN NO	PSF-BC30DNO	PSF-BC80DNO	PSF-BC30DNO-E1	PSF-BC80DNO-E1
	NPN NC	PSF-BC30DNC	PSF-BC80DNC	PSF-BC30DNC-E1	PSF-BC80DNC-E1
	NPN NO/NC	PSF-BC30DNB	PSF-BC80DNB	PSF-BC30DNB-E1	PSF-BC80DNB-E1
Output	PNP NO	PSF-BC30DPO	PSF-BC80DPO	PSF-BC30DPO-E1	PSF-BC80DPO-E1
	PNP NC	PSF-BC30DPC	PSF-BC80DPC	PSF-BC30DPC-E1	PSF-BC80DPC-E1
	PNP NO/NC	PSF-BC30DPB	PSF-BC80DPB	PSF-BC30DPB-E1	PSF-BC80DPB-E1

Technical Parameter				
Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<100mA	<100mA	<100mA	<100mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	<1ms	<1ms	<1ms	<1ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	M8 Connector	M8 Connector
Certification	CE	CE	CE	CE



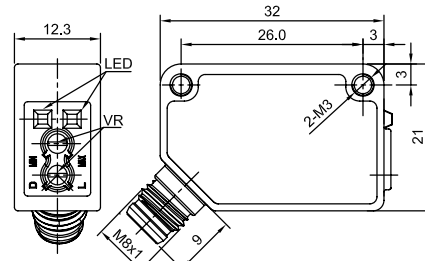
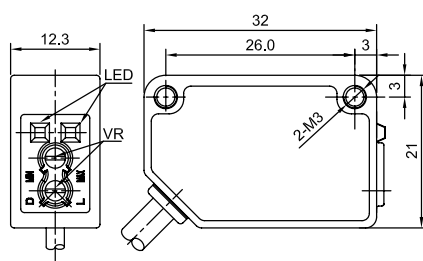
Item Code	PSF	PSF
Sensing mode	Retro reflection	
Sensing distance	2m (Adjustable)	2m (Adjustable)



Output	NPN NO	PSF-DM2DNO		PSF-DM2DNO-E1	
	NPN NC	PSF-DM2DNC		PSF-DM2DNC-E1	
	NPN NO/NC	PSF-DM2DNB		PSF-DM2DNB-E1	
Output	PNP NO	PSF-DM2DPO		PSF-DM2DPO-E1	
	PNP NC	PSF-DM2DPC		PSF-DM2DPC-E1	
	PNP NO/NC	PSF-DM2DPB		PSF-DM2DPB-E1	

Technical Parameter

Supply voltage	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<100mA	<100mA
Voltage drop	<2.5V	<2.5V
Consumption current	<25mA	<25mA
Hysteresis	...	...
Repeat accuracy	<5%	<5%
Response time	<1ms	<1ms
Output indicator	Yellow LED	Yellow LED
Polarity protection	yes	yes
Surge protection	yes	yes
Short-circuit protection	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%
Protection degree	IP67	IP67
Housing material	PC/ABS	PC/ABS
Connection	2m PVC Cable	M8 Connector
Certification	CE	CE

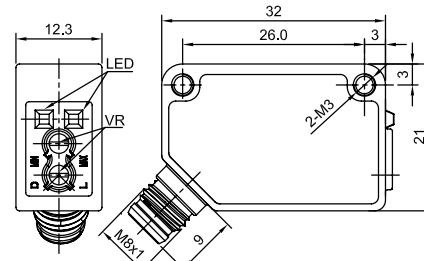
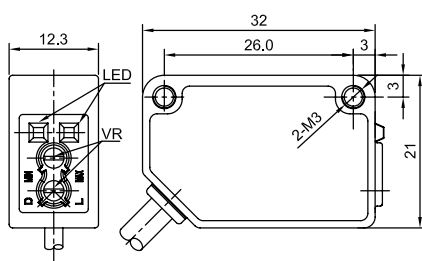


Item Code	PSF		PSF	
Sensing mode	Polarized reflection		Polarized reflection	
Sensing distance	2m (Adjustable)		2m (Adjustable)	



Output				
	NPN NO/NC	PSF-PM2DNB		PSF-PM2DNB-E1
Output				
	PNP NO/NC	PSF-PM2DPB		PSF-PM2DPB-E1

Technical Parameter				
Supply voltage	12...24 VDC		12...24 VDC	
Light source	Infrared LED (660nm)		Infrared LED (660nm)	
Load current	<100mA		<100mA	
Voltage drop	<2.5V		<2.5V	
Consumption current	<25mA		<25mA	
Hysteresis	...		...	
Repeat accuracy	<5%		<5%	
Response time	<1ms		<1ms	
Output indicator	Yellow LED		Yellow LED	
Polarity protection	yes		yes	
Surge protection	yes		yes	
Short-circuit protection	yes		yes	
Ambient temperature	-15...+55°C		-15...+55°C	
Ambient moisture	35...95%		35...95%	
Protection degree	IP67		IP67	
Housing material	PC/ABS		PC/ABS	
Connection	2m PVC Cable		M8 Connector	
Certification	CE		CE	

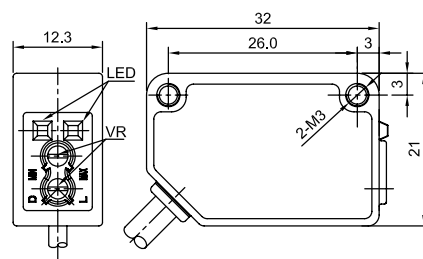
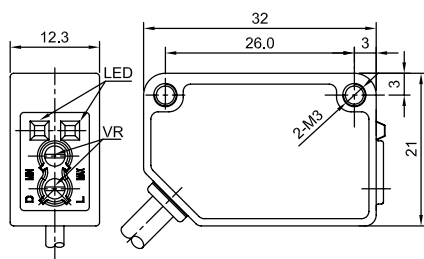


Item Code	PSF		PSF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (adjustable)	10m (Non-adjustable)	10m (adjustable)



Output	NPN NO	PSF-TM5D	PSF-TM5DNO	PSF-TM10D	PSF-TM10DNO
	NPN NC	PSF-TM5D	PSF-TM5DNC	PSF-TM10D	PSF-TM10DNC
	NPN NO/NC	PSF-TM5D	PSF-TM5DNB	PSF-TM10D	PSF-TM10DNB
Output	PNP NO	PSF-TM5D	PSF-TM5DPO	PSF-TM10D	PSF-TM10DPO
	PNP NC	PSF-TM5D	PSF-TM5DPC	PSF-TM10D	PSF-TM10DPC
	PNP NO/NC	PSF-TM5D	PSF-TM5DPB	PSF-TM10D	PSF-TM10DPB

Technical Parameter				
Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<100mA	...	<100mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<1ms	...	<1ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE	CE

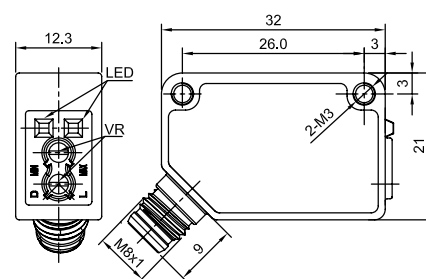
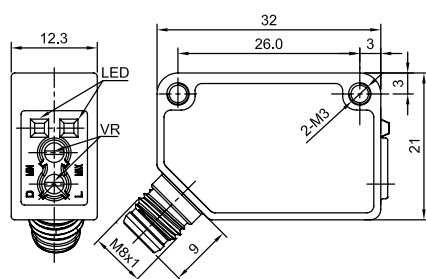


Item Code	PSF		PSF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (adjustable)	10m (Non-adjustable)	10m (adjustable)



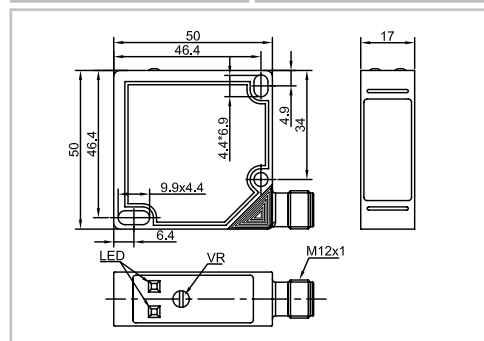
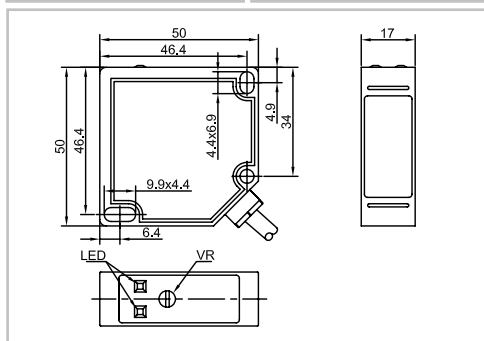
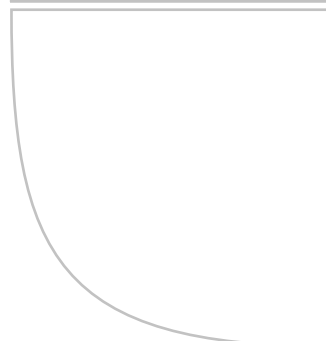
Output	NPN NO	PSF-TM5D-E1	PSF-TM5DNO-E1	PSF-TM10D-E1	PSF-TM10DNO-E1
	NPN NC	PSF-TM5D-E1	PSF-TM5DNC-E1	PSF-TM10D-E1	PSF-TM10DNC-E1
	NPN NO/NC	PSF-TM5D-E1	PSF-TM5DNB-E1	PSF-TM10D-E1	PSF-TM10DNB-E1
Output	PNP NO	PSF-TM5D-E1	PSF-TM5DPO-E1	PSF-TM10D-E1	PSF-TM10DPO-E1
	PNP NC	PSF-TM5D-E1	PSF-TM5DPC-E1	PSF-TM10D-E1	PSF-TM10DPC-E1
	PNP NO/NC	PSF-TM5D-E1	PSF-TM5DPB-E1	PSF-TM10D-E1	PSF-TM10DPB-E1

Technical Parameter				
Supply voltage	12...24 VDC	12...24 VDC	12...24 VDC	12...24 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<100mA	...	<100mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<1ms	...	<1ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	M8 Connector	M8 Connector	M8 Connector	M8 Connector
Certification	CE	CE	CE	CE



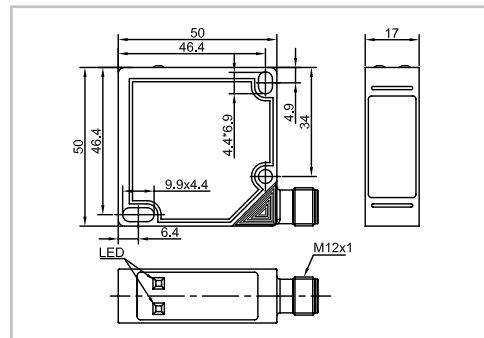
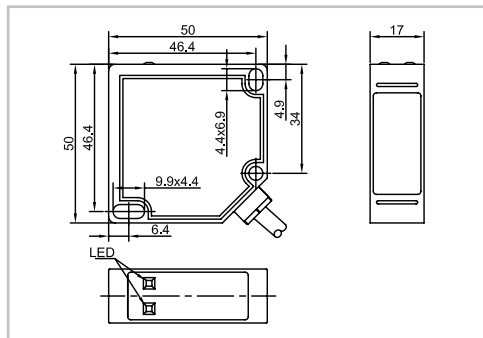
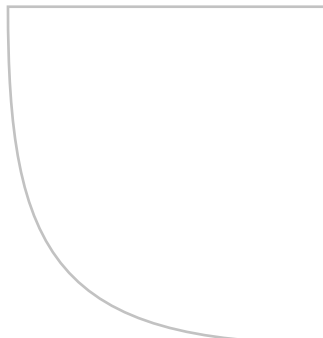
Item Code		PTF		PTF	
Sensing mode		Diffuse reflection		Diffuse reflection	
Sensing distance		50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)
					
Output	NPN NO	PTF-BC50DNO	PTF-BC100DNO	PTF-BC50DNO-E2	PTF-BC100DNO-E2
	NPN NC	PTF-BC50DNC	PTF-BC100DNC	PTF-BC50DNC-E2	PTF-BC100DNC-E2
	NPN NO+NC	PTF-BC50DNR	PTF-BC100DNR	PTF-BC50DNR-E2	PTF-BC100DNR-E2
Output	PNP NO	PTF-BC50DPO	PTF-BC100DPO	PTF-BC50DPO-E2	PTF-BC100DPO-E2
	PNP NC	PTF-BC50DPC	PTF-BC100DPC	PTF-BC50DPC-E2	PTF-BC100DPC-E2
	PNP NO+NC	PTF-BC50DPR	PTF-BC100DPR	PTF-BC50DPR-E2	PTF-BC100DPR-E2

Technical Parameter					
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<200mA	<200mA	<200mA	<200mA	<200mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA	<25mA
Hysteresis	3...20%	3...20%	3...20%	3...20%	3...20%
Repeat accuracy	<5%	<5%	<5%	<5%	<5%
Response time	< 3ms	< 3ms	< 3ms	< 3ms	< 3ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector	M12 Connector
Certification	CE	CE	CE	CE	CE



Item Code		PTF		PTF	
Sensing mode		Retro reflection		Retro reflection	
Sensing distance		3m (Non-adjustable)	5m (Non-adjustable)	3m (Non-adjustable)	5m (Non-adjustable)
					
Output	NPN NO	PTF-DM3DNO	PTF-DM5DNO	PTF-DM3DNO-E2	PTF-DM5DNO-E2
	NPN NC	PTF-DM3DNC	PTF-DM5DNC	PTF-DM3DNC-E2	PTF-DM5DNC-E2
	NPN NO+NC	PTF-DM3DNR	PTF-DM5DNR	PTF-DM3DNR-E2	PTF-DM5DNR-E2
Output	PNP NO	PTF-DM3DPO	PTF-DM5DPO	PTF-DM3DPO-E2	PTF-DM5DPO-E2
	PNP NC	PTF-DM3DPC	PTF-DM5DPC	PTF-DM3DPC-E2	PTF-DM5DPC-E2
	PNP NO+NC	PTF-DM3DPR	PTF-DM5DPR	PTF-DM3DPR-E2	PTF-DM5DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	<200mA	<200mA	<200mA	<200mA
Voltage drop	<2.5V	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	<8.2ms	<8.2ms	<8.2ms	<8.2ms
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	yes	yes	yes	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector
Certification	CE	CE	CE	CE

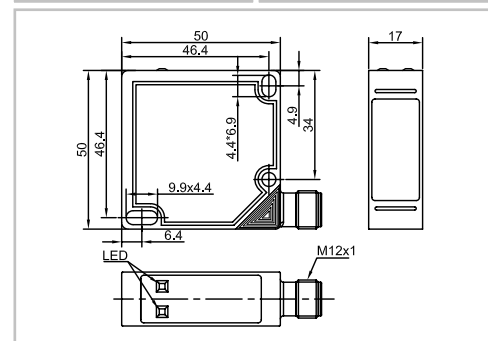
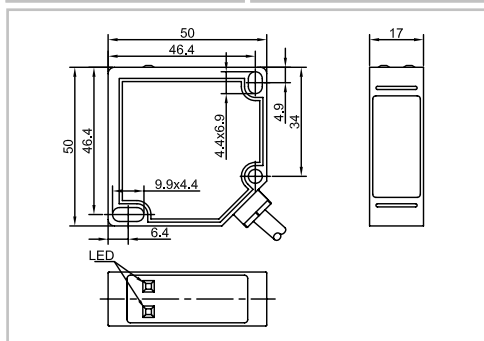
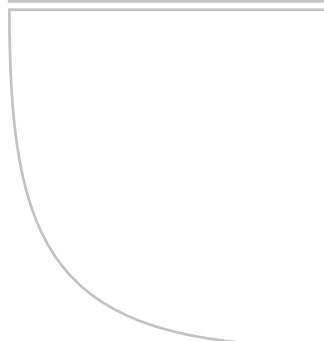


Item Code	PTF	PTF
Sensing mode	Polarized reflection	
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)



Output				
	NPN NO+NC	PTF-PM5DNR		PTF-PM5DNR-E2
Output				
	PNP NO+NC	PTF-PM5DPR		PTF-PM5DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC		10...30 VDC	
Light source	Infrared LED (660nm)		Infrared LED (660nm)	
Load current	<200mA		<200mA	
Voltage drop	<2.5V		<2.5V	
Consumption current	<25mA		<25mA	
Hysteresis	...		...	
Repeat accuracy	<5%		<5%	
Response time	<8.2ms		<8.2ms	
Output indicator	Yellow LED		Yellow LED	
Polarity protection	yes		yes	
Surge protection	yes		yes	
Short-circuit protection	yes		yes	
Ambient temperature	-15...+55°C		-15...+55°C	
Ambient moisture	35...95%		35...95%	
Protection degree	IP64		IP64	
Housing material	PC/ABS		PC/ABS	
Connection	2m PVC Cable		M12 Connector	
Certification	CE		CE	

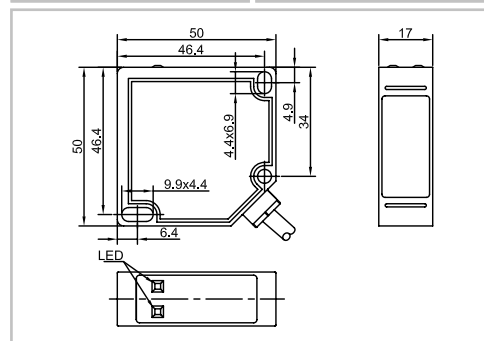
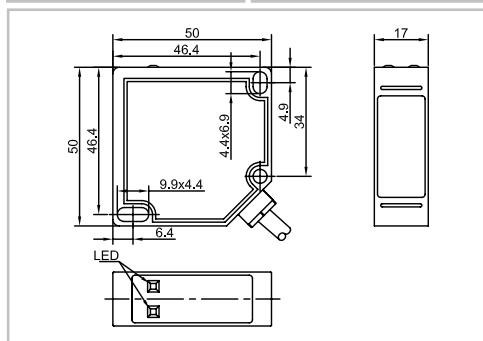


Item Code	PTF		PTF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PTF-TM10D	PTF-TM10DNO	PTF-TM20D	PTF-TM20DNO
	NPN NC	PTF-TM10D	PTF-TM10DNC	PTF-TM20D	PTF-TM20DNC
	NPN NO+NC	PTF-TM10D	PTF-TM10DNR	PTF-TM20D	PTF-TM20DNR
Output	PNP NO	PTF-TM10D	PTF-TM10DPO	PTF-TM20D	PTF-TM20DPO
	PNP NC	PTF-TM10D	PTF-TM10DPC	PTF-TM20D	PTF-TM20DPC
	PNP NO+NC	PTF-TM10D	PTF-TM10DPR	PTF-TM20D	PTF-TM20DPR

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE	CE

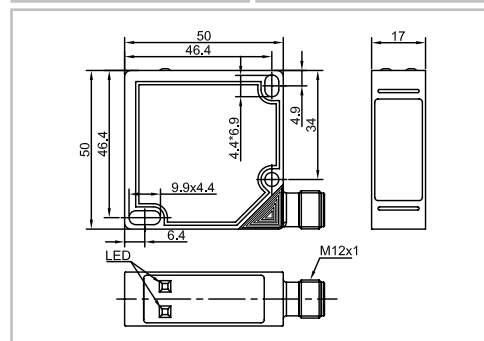
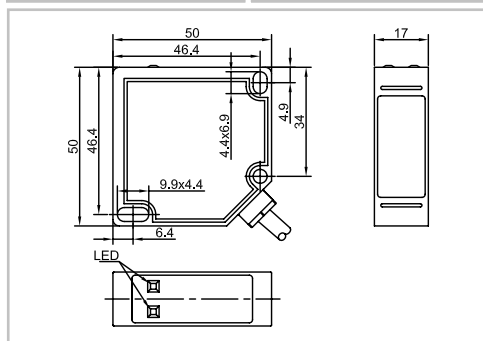


Item Code	PTF		PTF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



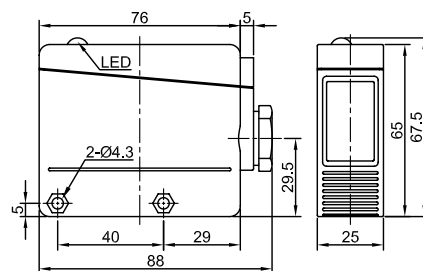
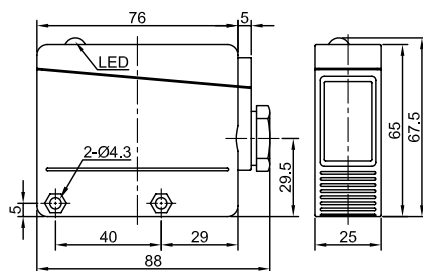
Output	NPN NO	PTF-TM10D-E2	PTF-TM10DNO-E2	PTF-TM20D-E2	PTF-TM20DNO-E2
	NPN NC	PTF-TM10D-E2	PTF-TM10DNC-E2	PTF-TM20D-E2	PTF-TM20DNC-E2
	NPN NO+NC	PTF-TM10D-E2	PTF-TM10DNR-E2	PTF-TM20D-E2	PTF-TM20DNR-E2
Output	PNP NO	PTF-TM10D-E2	PTF-TM10DPO-E2	PTF-TM20D-E2	PTF-TM20DPO-E2
	PNP NC	PTF-TM10D-E2	PTF-TM10DPC-E2	PTF-TM20D-E2	PTF-TM20DPC-E2
	PNP NO+NC	PTF-TM10D-E2	PTF-TM10DPR-E2	PTF-TM20D-E2	PTF-TM20DPR-E2

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE	CE	CE	CE



Item Code	PTL		PTL	
Sensing mode	Diffuse reflection		Retro reflection	
Sensing distance	80cm (Adjustable)	2m (Adjustable)	5m (Non-adjustable)	
				
Output				
NPN NO+NC	PTL-BC80DNRT3-D	PTL-BC200DNRT3-D	PTL-DM5DNRT3-D	
Output				
PNP NO+NC	PTL-BC80DPRT3-D	PTL-BC200DPRT3-D	PTL-DM5DPRT3-D	

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	
Load current	<200mA	<200mA	<200mA	
Voltage drop	<2.5V	<2.5V	<2.5V	
Consumption current	<25mA	<25mA	<25mA	
Hysteresis	5...20%	5...20%	...	
Repeat accuracy	<5%	<5%	<5%	
Response time	<8.2ms	<8.2ms	<8.2ms	
Output indicator	Yellow LED	Yellow LED	Yellow LED	
Polarity protection	yes	yes	yes	
Surge protection	yes	yes	yes	
Short-circuit protection	yes	yes	yes	
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	
Ambient moisture	35...95%	35...95%	35...95%	
Protection degree	IP67	IP67	IP67	
Housing material	PC/ABS	PC/ABS	PC/ABS	
Connection	Terminal Connect	Terminal Connect	Terminal Connect	
Certification	CE	CE	CE	

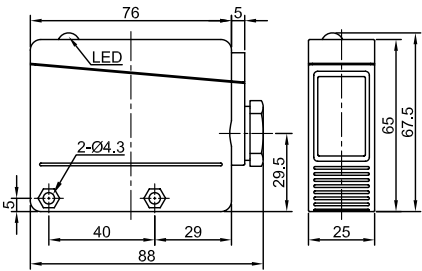


Item Code	PTL			
Sensing mode	Polarized reflection			
Sensing distance	12m (Non-adjustable)			



Output				
	NPN NO+NC	PTL-PM12DNR-D		
Output				
	PNP NO+NC	PTL-PM12DPR-D		

Technical Parameter				
Supply voltage	10...30 VDC			
Light source	Infrared LED (660nm)			
Load current	<200mA			
Voltage drop	<2.5V			
Consumption current	<25mA			
Hysteresis	...			
Repeat accuracy	<5%			
Response time	< 8.2ms			
Output indicator	Yellow LED			
Polarity protection	yes			
Surge protection	yes			
Short-circuit protection	yes			
Ambient temperature	-15...+55°C			
Ambient moisture	35...95%			
Protection degree	IP67			
Housing material	PC/ABS			
Connection	Terminal Connect			
Certification	CE			

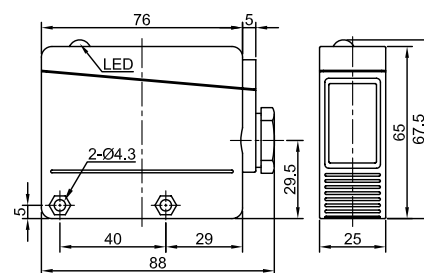
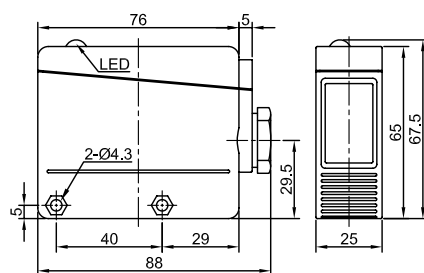


Item Code	PTL		PTL	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)	40m (adjustable)



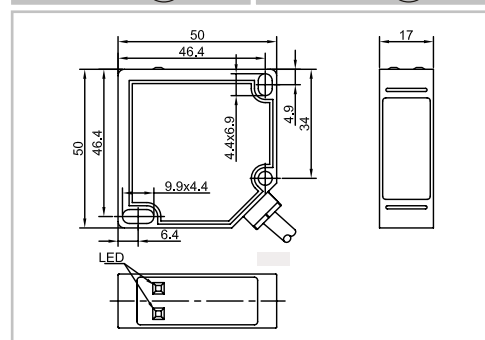
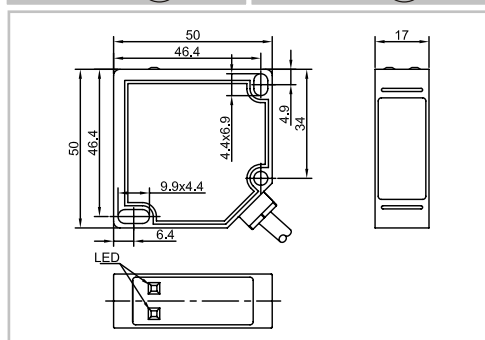
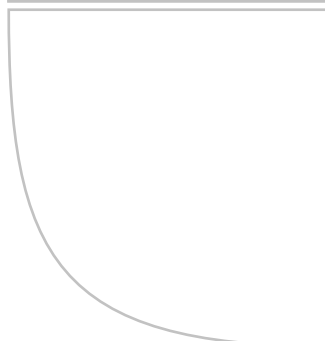
Output					
	NPN NO+NC	PTL-TM20D-D	PTL-TM20DNRT3-D	PTL-TM40D-D	PTL-TM40DNRT3-D
Output					
	PNP NO+NC	PTL-TM20D-D	PTL-TM20DPRT3-D	PTL-TM40D-D	PTL-TM40DPRT3-D

Technical Parameter				
Supply voltage	10...30 VDC	10...30 VDC	10...30 VDC	10...30 VDC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	...	<200mA	...	<200mA
Voltage drop	...	<2.5V	...	<2.5V
Consumption current	<25mA	<25mA	<25mA	<25mA
Hysteresis	...	...	...	...
Repeat accuracy	<5%	<5%	<5%	<5%
Response time	...	<8.2ms	...	<8.2ms
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	yes	yes	yes	yes
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	yes	...	yes
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP67	IP67	IP67	IP67
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	Terminal Connect	Terminal Connect	Terminal Connect	Terminal Connect
Certification	CE	CE	CE	CE



Item Code	PTF		PTF	
Sensing mode	Diffuse reflection		Retro reflection	
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	3m (Non-adjustable)	5m (Non-adjustable)
				
Output				
Contact output	PTF-BC50SK	PTF-BC100SK	PTF-DM3SK	PTF-DM5SK

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC		24...240 VAC/12...240 VDC	
Light source	Infrared LED (880nm)		Infrared LED (880nm)	
Load current	<3A		<3A	
Voltage drop	...		...	
Leakage current	...		...	
Hysteresis	3...20%		...	
Repeat accuracy	<5%		<5%	
Response time	<30ms		<30ms	
Output indicator	Yellow LED	Yellow LED	Yellow LED	Yellow LED
Polarity protection	...	...	...	...
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CCC	CE	CCC

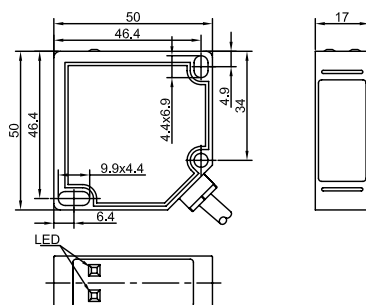


Item Code	PTF		
Sensing mode	Polarized reflection		
Sensing distance	5m (Non-adjustable)		



Output				
	Contact output	PTF-PM5SK		

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC			
Light source	Infrared LED (660nm)			
Load current	<3A			
Voltage drop	...			
Leakage current	...			
Hysteresis	3...20%			
Repeat accuracy	<5%			
Response time	<30ms			
Output indicator	Yellow LED			
Polarity protection	...			
Surge protection	yes			
Short-circuit protection	...			
Ambient temperature	-15...+55°C			
Ambient moisture	35...95%			
Protection degree	IP64			
Housing material	PC/ABS			
Connection	2m PVC Cable			
Certification	CE CCC			



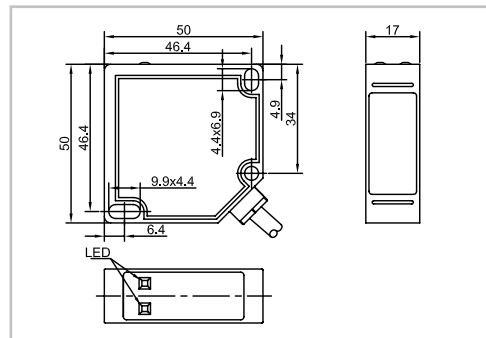
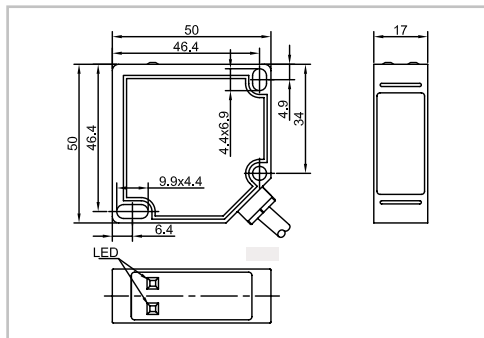
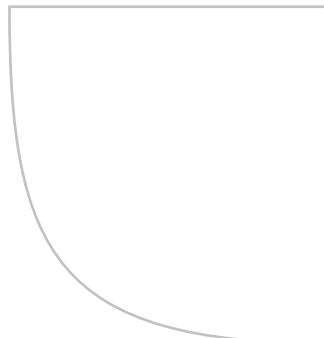
Item Code	PTF		PTF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output					
	Contact output	PTF-TM10S	PTF-TM10SK	PTF-TM20S	PTF-TM20SK

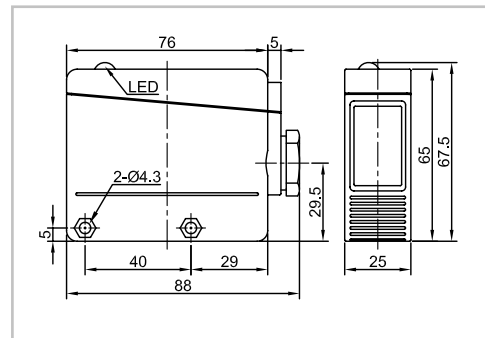
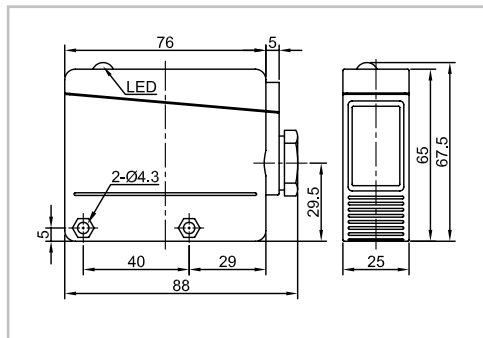
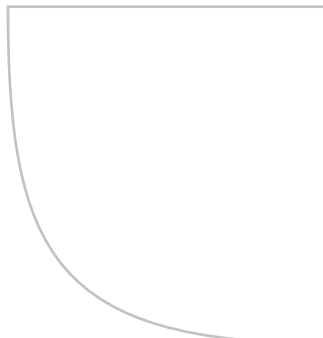
Technical Parameter

Supply voltage	24...240 VAC/12...240 VDC		24...240 VAC/12...240 VDC	
Light source	Infrared LED (880nm)		Infrared LED (880nm)	
Load current	...	<3A	...	<3A
Voltage drop	...		...	
Leakage current	...		...	
Hysteresis	...		...	
Repeat accuracy	<5%		<5%	
Response time	< 30ms		< 30ms	
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	...	...	...	...
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C	-15...+55°C	-15...+55°C	-15...+55°C
Ambient moisture	35...95%	35...95%	35...95%	35...95%
Protection degree	IP64	IP64	IP64	IP64
Housing material	PC/ABS	PC/ABS	PC/ABS	PC/ABS
Connection	2m PVC Cable	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE CCC		CE CCC	



Item Code		PTL		PTL	
Sensing mode		Diffuse reflection		Retro reflection	
Sensing distance		80cm (Adjustable)	200cm (Adjustable)	5m (Non-adjustable)	
					
Output					
	Contact output	PTL-BC80SKT3-D	PTL-BC200SKT3-D	PTL-DM5SKT3-D	

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC		24...240 VAC/12...240 VDC	
Light source	Infrared LED (880nm)		Infrared LED (880nm)	
Load current	<3A		<3A	
Voltage drop	...		...	
Leakage current	...		...	
Hysteresis	3...20%		...	
Repeat accuracy	<5%		<5%	
Response time	< 30ms		< 30ms	
Output indicator	Yellow LED	Yellow LED	Yellow LED	
Polarity protection	...	...	...	
Surge protection	yes	yes	yes	
Short-circuit protection	...	...	...	
Ambient temperature	-15...+55℃	-15...+55℃	-15...+55℃	
Ambient moisture	35...95%	35...95%	35...95%	
Protection degree	IP67	IP67	IP67	
Housing material	PC/ABS	PC/ABS	PC/ABS	
Connection	Terminal Connect	Terminal Connect	Terminal Connect	
Certification	CECCC	CECCC	CECCC	

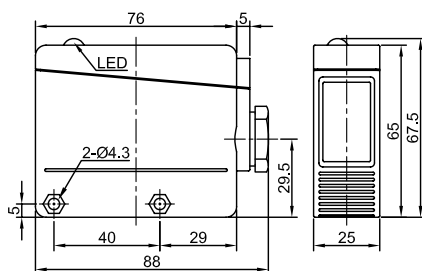


Item Code	PTL		
Sensing mode	Polarized reflection		
Sensing distance	12m (Non-adjustable)		



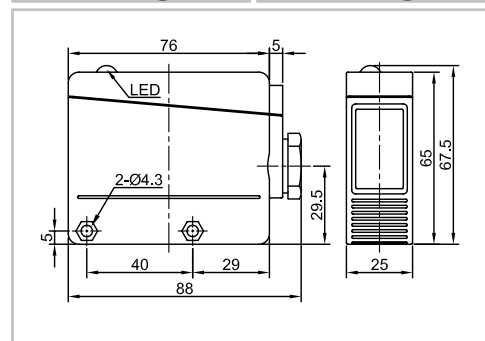
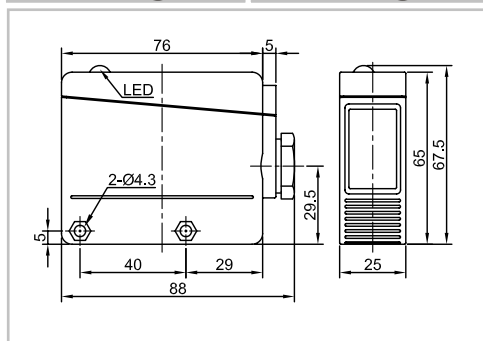
Output				
	Contact output	PTL-PM12SK-D		

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC			
Light source	Infrared LED (660nm)			
Load current	<3A			
Voltage drop	...			
Leakage current	...			
Hysteresis	...			
Repeat accuracy	<5%			
Response time	< 30ms			
Output indicator	Yellow LED			
Polarity protection	...			
Surge protection	yes			
Short-circuit protection	...			
Ambient temperature	-15...+55°C			
Ambient moisture	35...95%			
Protection degree	IP67			
Housing material	PC/ABS			
Connection	Terminal Connect			
Certification	CE CCC			



Item Code		PTL		PTL	
Sensing mode		Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance		20m (Non-adjustable)	20m (adjustable)	30m (Non-adjustable)	30m (adjustable)
					
Output					
	Contact output	PTL-TM20S-D	PTL-TM20SKT3-D	PTL-TM30S-D	PTL-TM30SKT3-D

Technical Parameter				
Supply voltage	24...240 VAC/12...240 VDC		24...240 VAC/12...240 VDC	
Light source	Infrared LED (880nm)		Infrared LED (880nm)	
Load current	... <3A		... <3A	
Voltage drop	...		...	
Leakage current	...		...	
Hysteresis	...		...	
Repeat accuracy	< 5%		< 5%	
Response time	< 30ms		< 30ms	
Output indicator	Green LED	Yellow LED	Green LED	Yellow LED
Polarity protection	...	...	...	...
Surge protection	yes	yes	yes	yes
Short-circuit protection	...	...	...	...
Ambient temperature	-15...+55°C		-15...+55°C	
Ambient moisture	35...95%		35...95%	
Protection degree	IP67		IP67	
Housing material	PC/ABS		PC/ABS	
Connection	Terminal Connect	Terminal Connect	Terminal Connect	Terminal Connect
Certification	CE CCC		CE CCC	



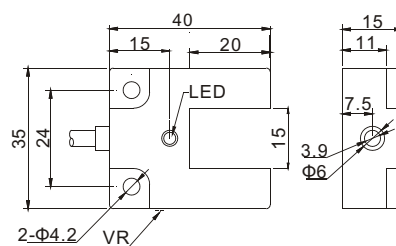
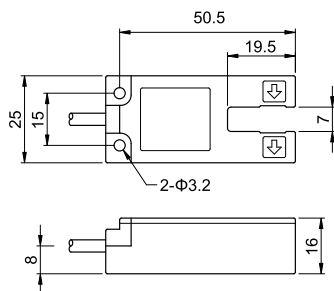
Item Code	PU07	PU15
Sensing mode	Through beam	Through beam
Slot width	7mm (adjustable)	15mm (adjustable)

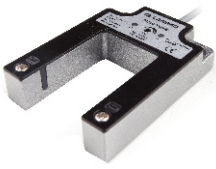
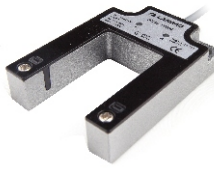


Output	NPN NO	PU07-TDNO	PU15-TDNO
	NPN NC	PU07-TDNC	PU15-TDNC
Output	PNP NO	PU07-TDPO	PU15-TDPO
	PNP NC	PU07-TDPC	PU15-TDPC

Technical Parameter

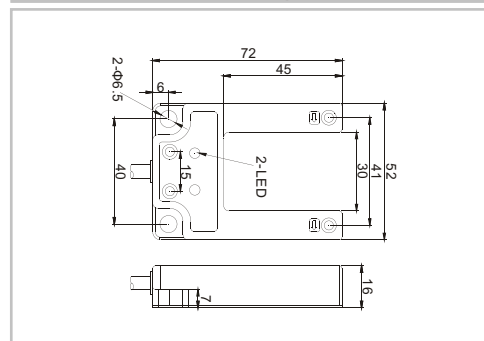
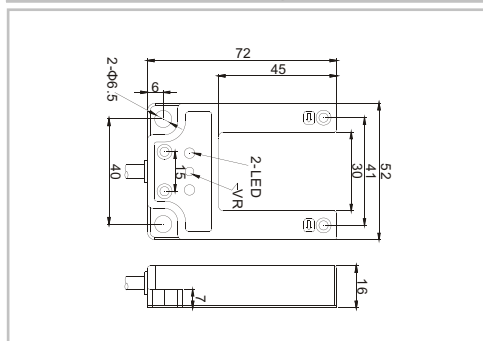
Supply voltage	10...30VDC	10...30VDC
Light source	Infrared LED(Modulated)	Infrared LED(Modulated)
Sensing Object	Opaque Objects with $\Phi > 1\text{mm}$	Opaque Objects with $\Phi > 1\text{mm}$
Residual voltage	Max,1ms	Max,1ms
Response time	$\leq 200\text{ms}$	$\leq 200\text{ms}$
Load current	$\leq 2.5\text{VDC}$	$\leq 2.5\text{VDC}$
Consumption current	$\leq 15\text{mA}$	$\leq 15\text{mA}$
Protection	Polarity protection / Surge protection	Polarity protection / Surge protection
Output indicator	Yellow LED	Yellow LED
Ambient temperature	-15...55°C	-15...55°C
Dielectric	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s
Insulation	$\geq 50\text{M}\Omega(500\text{VDC})$	$\geq 50\text{M}\Omega(500\text{VDC})$
Vibration	15mm amplitude at 10 to 50Hz in each of xy and z direction for two hours	15mm amplitude at 10 to 50Hz in each of xy and z direction for two hours
Shock	500m/S(50G)for 3 Times,in each of xy and z direction	500m/S(50G)for 3 Times,in each of xy and z direction
Protection degree	IP64	IP64
Housing material	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable
Certification	CE	CE



Item Code	PU30	PU30
Sensing mode	Through beam	Through beam
Slot width	30mm (adjustable)	30mm (Non-adjustable)
 		
Output		
NPN NO/NC	PU30-TDNB	PU30-TDNB 3001
Output		
PNP NO/NC	PU30-TDPB	PU30-TDPB 3001

Technical Parameter

Supply voltage	10...30VDC	10...30VDC
Light source	Infrared LED(Modulated)	Infrared LED(Modulated)
Sensing Object	Opaque Objects with $\Phi > 2\text{mm}$	Opaque Objects with $\Phi > 2\text{mm}$
Residual voltage	Max,1ms	Max,1ms
Response time	$\leq 200\text{ms}$	$\leq 200\text{ms}$
Load current	$\leq 2.5\text{VDC}$	$\leq 2.5\text{VDC}$
Consumption current	$\leq 15\text{mA}$	$\leq 15\text{mA}$
Protection	Polarity protection / Surge protection / Short-circuit protection	Polarity protection / Surge protection / Short-circuit protection
Output indicator	Yellow LED	Yellow LED
Ambient temperature	-15...55°C	-15...55°C
Dielectric	1000V/AC 50/60Hz 60s	1000V/AC 50/60Hz 60s
Insulation	$\geq 50\text{M}\Omega(500\text{VDC})$	$\geq 50\text{M}\Omega(500\text{VDC})$
Vibration	15mm amplitude at 10 to 50Hz in each of x,y and z direction for two hours	15mm amplitude at 10 to 50Hz in each of x,y and z direction for two hours
Shock	500m/S(50G)for 3 Times,in each of x,y and z direction	500m/S(50G)for 3 Times,in each of x,y and z direction
Protection degree	IP60	IP67
Housing material	Aluminum alloy	Aluminum alloy
Connection	2m PVC Cable	2m PVC Cable
Certification	CE UL	CE UL



Photoelectric sensors

Wiring diagram

Emitter	Lead wire	M8 Connector	M12 Connector	Terminal connect
DC				
AC/DC				

DC 3 Wires	Lead wire	M8 Connector	M12 Connector	Terminal connect
NPN NO				
NPN NC				
PNP NO				
PNP NC				

DC 4 Wires	Lead wire	M12 Connector	Terminal connect
NPN NO+NC			
PNP NO+NC			

Photoelectric sensors

AC 2 Wires		Lead wire	M12 Connector	Terminal connect	
SCR NO					
SCR NC					

AC/DC 5 Wires		Lead wire	Terminal connect	
Relay				

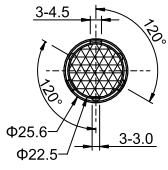
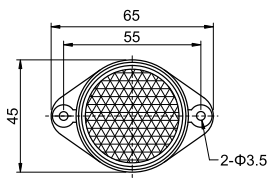
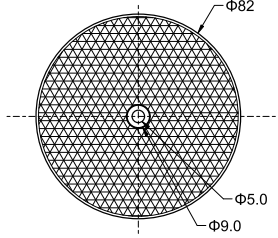
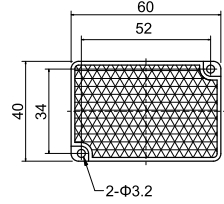
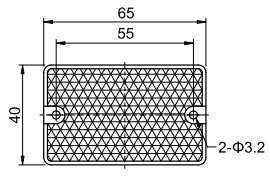
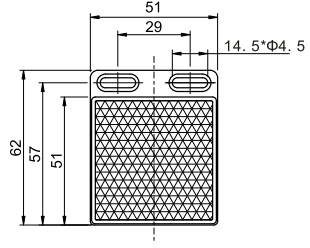
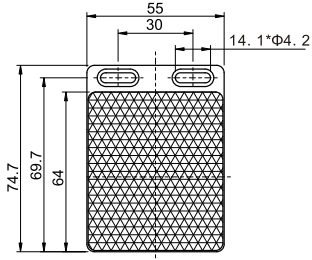
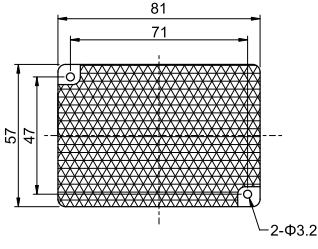
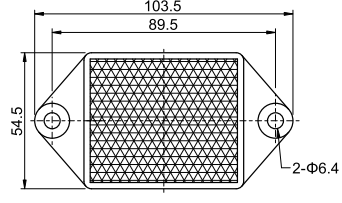
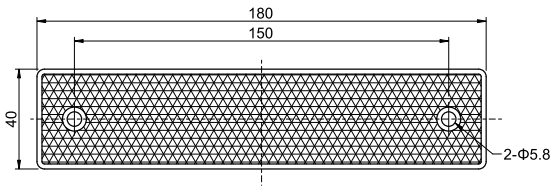
NPN(selectable)		Lead wire	M12 Connector	

PNP(selectable)		Lead wire	M12 Connector	

NPN/PNP (selectable)		Lead wire		

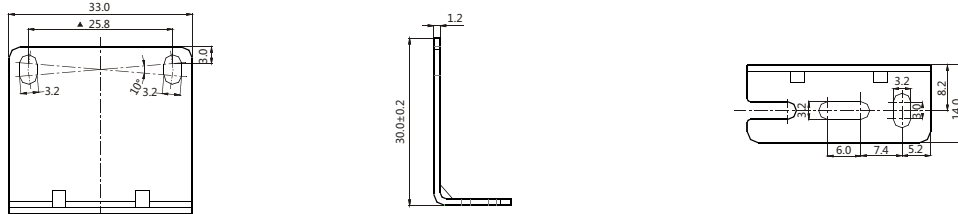
Remarks				
Connector		M8 Connector	M12 Connector	

Reflector

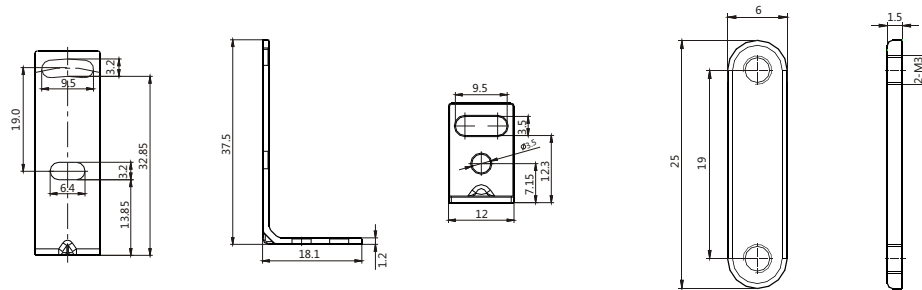
Item Code	STD-06	TD-04	TD-05
Dimensions			
Item Code	TD-09	TD-02	TD-08
Dimensions			
Item Code	TD-01	TD-03	TD-01-3
Dimensions			
Item Code	TD-10		
Dimensions			

Mounting rack

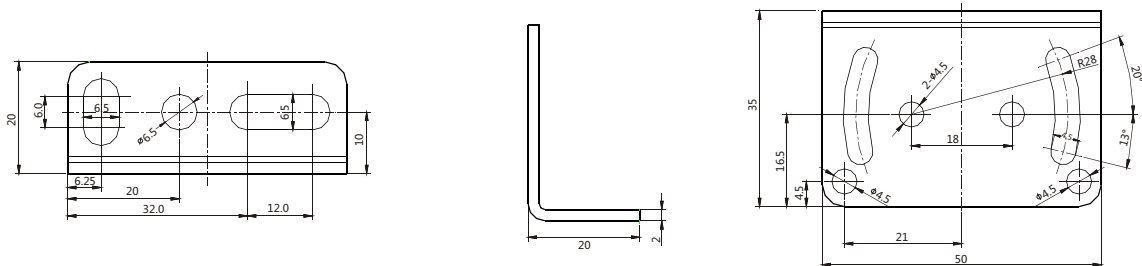
ZJP-1 (PSF Mounting rack)



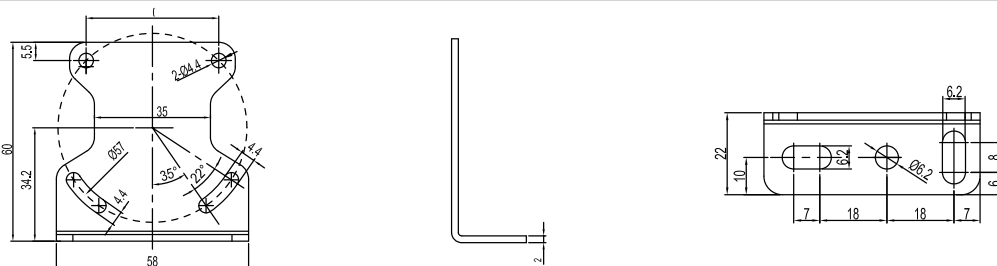
ZJP-2 (PSL Mounting rack)



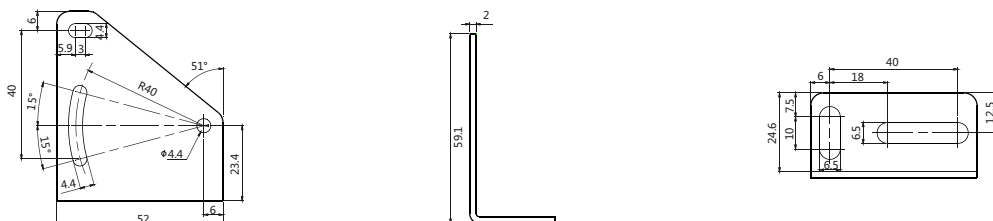
ZJP-4 (PTF Mounting rack)



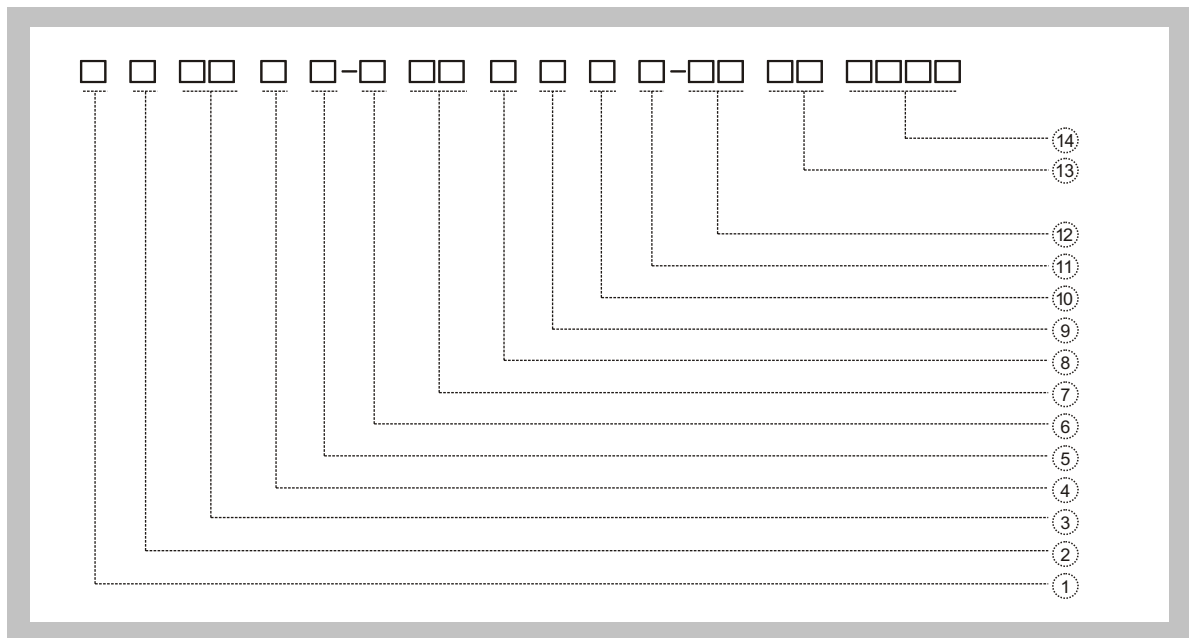
ZJP-5 (PTF/PTA Mounting rack)



ZJP-6 (PTL Mounting rack)



Naming rules



1. Type Code

P:Photoelectric

2. Shape Code

R:Threaded Cylindrical

U:U-Shaped

Q:Smooth Cylindrical

2 letters:

Rectangular Housing Code

3. Size Code

Number:Housing diameter

e.g: 08:M8

4. Housing Material

N/A:Copper

S:Plastic

V:Aluminium

5. Housing Length

N/A:Standard

Short:S

Long:L

6. Mounting

B:Diffuse Reflection

D:Retro Reflection

P:With Polarizer

S:Focus Reflection

T:Through Beam Reflection

M:Mark Detect

Y:Background Suppression

7. Sensing Distance

C10:10cm

C40:40cm

M5:5m

M10:10m

8. Supply Voltage

A:20...250VAC

A1:110VAC

A2:220VAC

B:90...250VAC

C:380VAC

D:10...30VDC

E:10...60VDC

I:10...40VDC

J:5VDC

S:12...240VDC/24...240VAC

T:12...24VDC

9. Output Way

T:AC 2 wires

P:PNP

N:NPN

E:NPN/PNP

F:NPN+PNP

K:Relay

10. Output Status

O:NO

C:NC

R:NO+NC

A:NO/NC Reversible

B:NO/NC Optional

Cable Optional;Potentiometer optional

Note:Relay output is optional

11. Time Delay Status

N/A:Without Time Delay Function

T1:With Previous Time Delay Function

T2:With Later Time Delay Function

T3:With Previous/Later Time Delay Function

12. Cable Length

N/A:2m

3M:3m

13. Connection

N/A:2M cable

E1:M8 connector (3 pins)

E2:M12 connector (4 pins)

E3:M8 connector (4 pins)

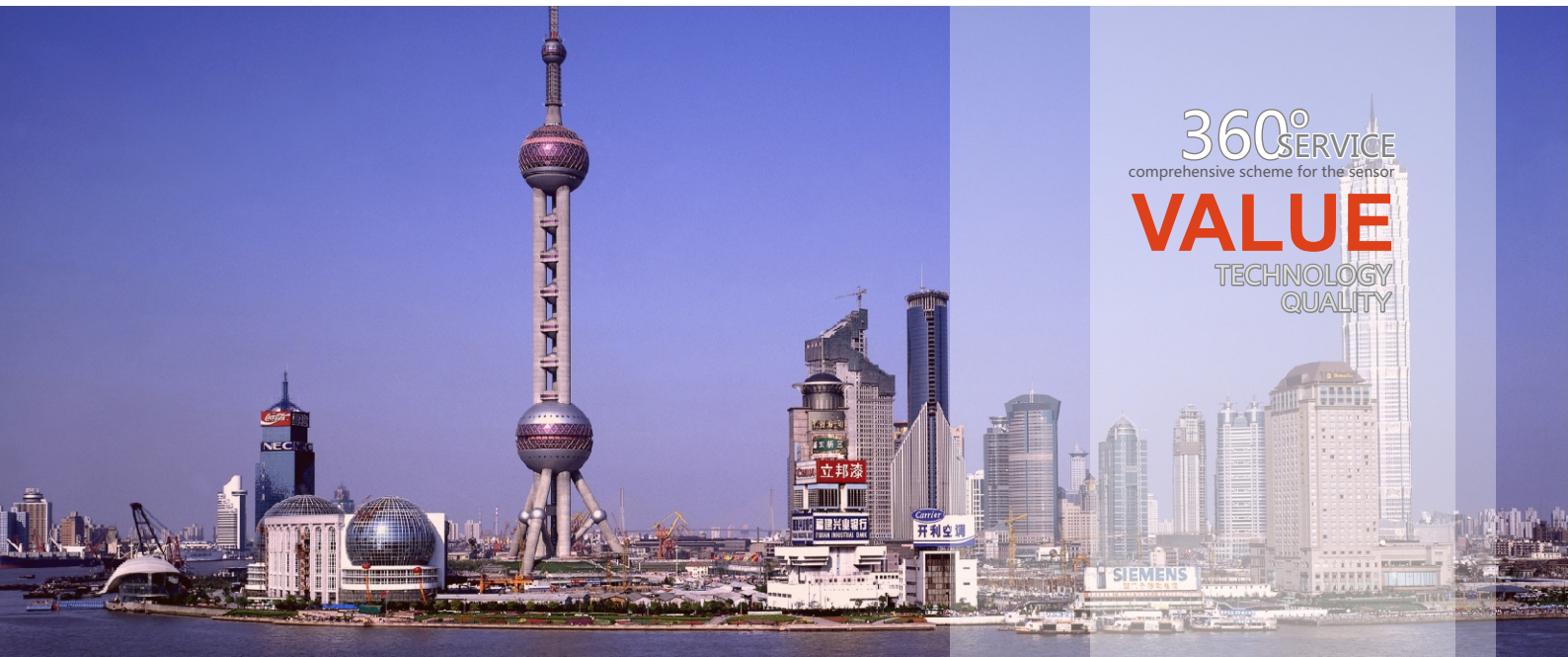
E4:M12 trapezoid connector (4 pins)

E5:M12 connector (5 pins)

D:Terminal

14. Special Requirement

In 4 Digits



360°SERVICE
comprehensive scheme for the sensor
VALUE
TECHNOLOGY
QUALITY

Focus on global market, high-tech products

Try to build Lanbao to be a leading sensor and industrial automation group.

Lanbao seeks survival with quality,
development with technology and deems its duty to create value for customers.

