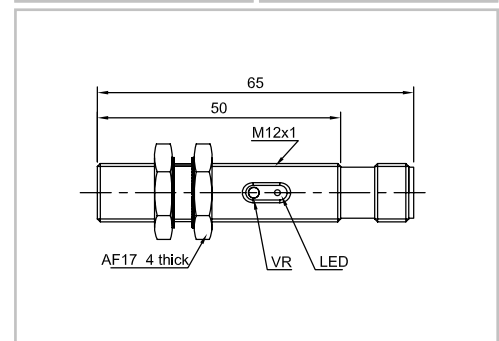
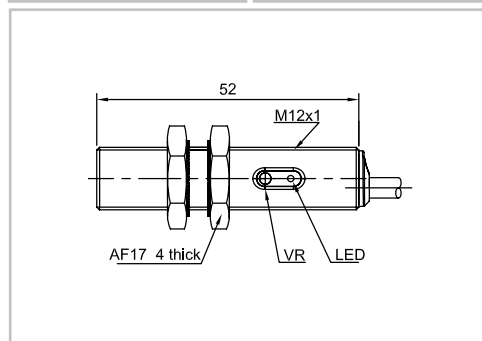
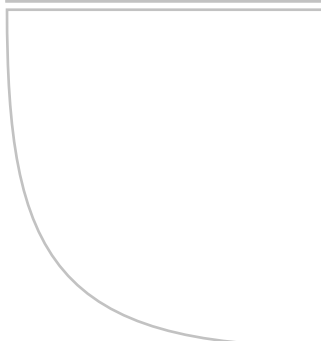


Item Code	PR12	PR12
Sensing mode	Diffuse reflection	Diffuse reflection
Sensing distance	15cm (Adjustable)	15cm (Adjustable)



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 U _L	CE U _L

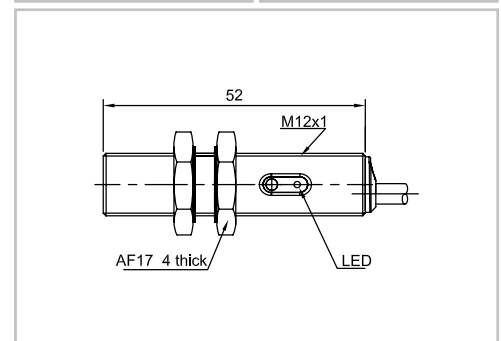
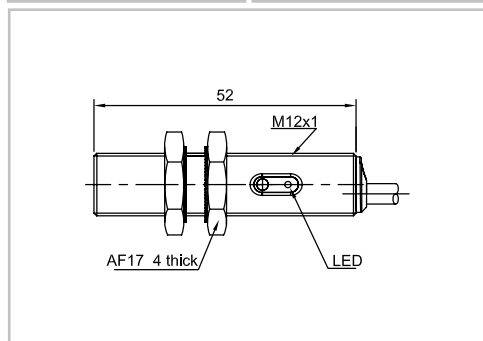
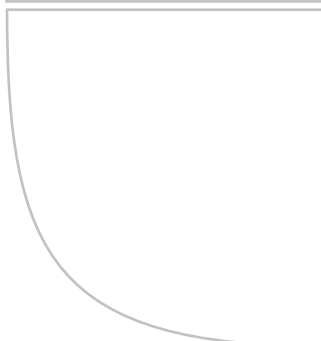


Item Code	PR12		PR12	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



Output	NPN NO	PR12-TM5D	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

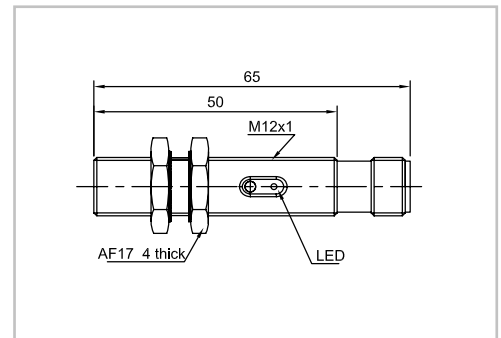
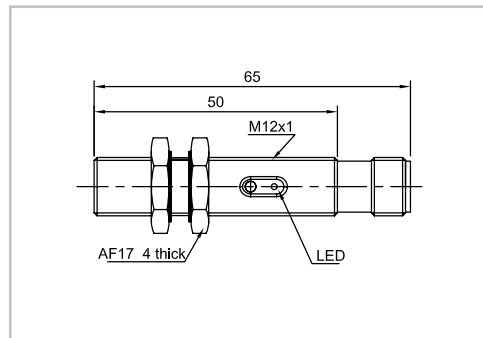
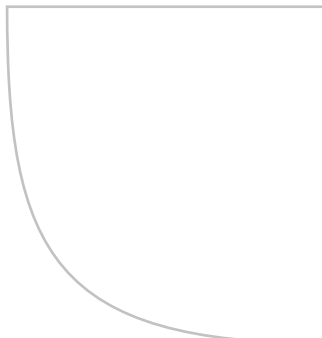


Item Code	PR12		PR12	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



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

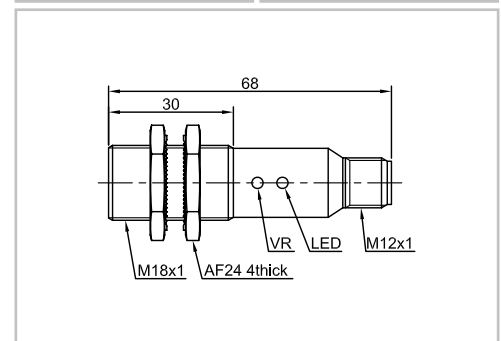
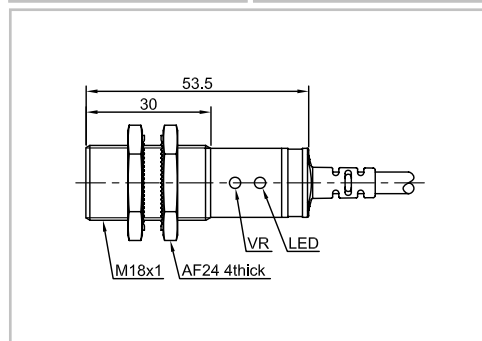
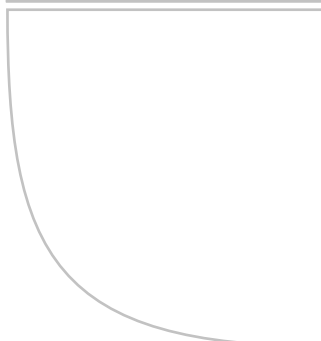


Item Code	PR18		PR18	
Sensing mode	Diffuse reflection			
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



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

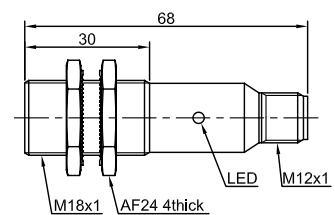
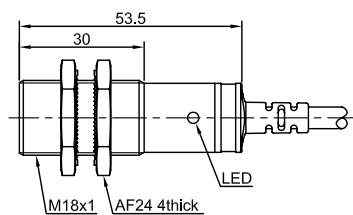


Item Code	PR18	PR18
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



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 U _L	CE U _L

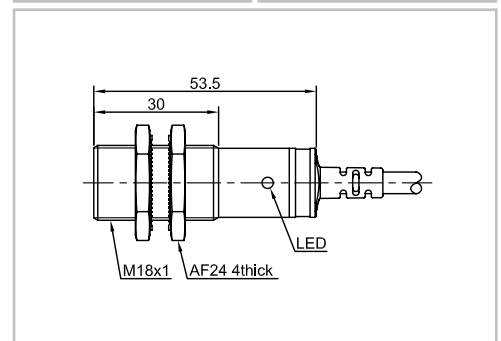
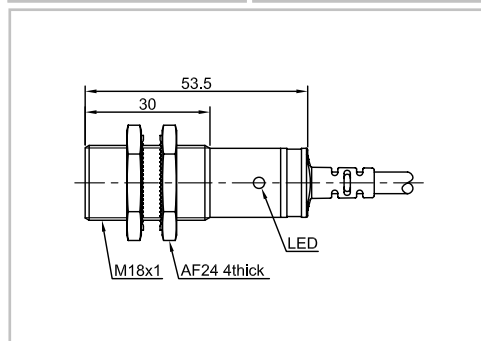


Item Code	PR18		PR18	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18-TM10D	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

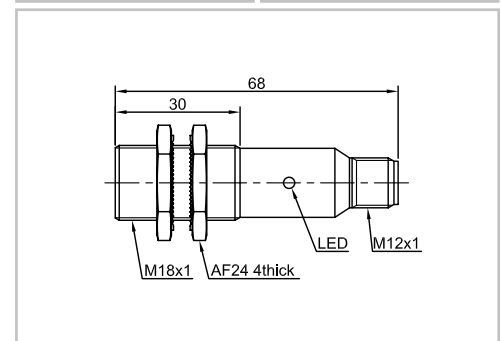
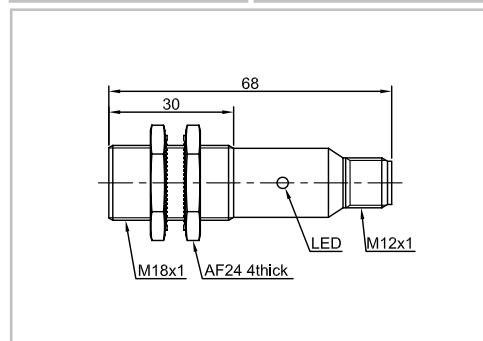
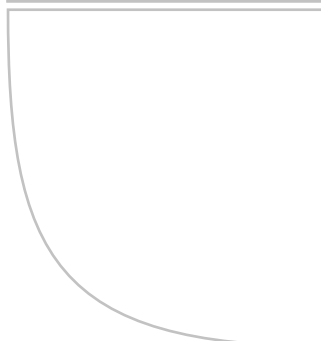


Item Code	PR18		PR18	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



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

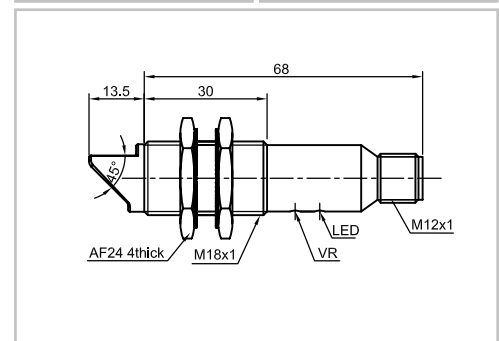
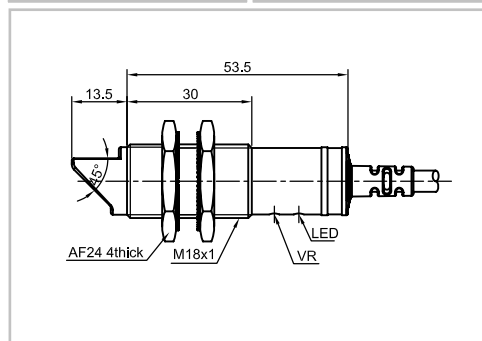
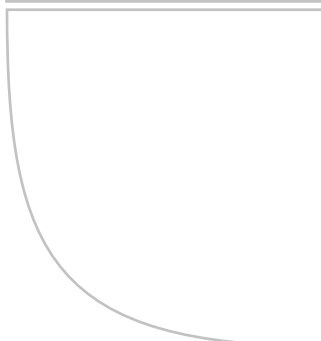


Item Code	PR18G		PR18G	
Sensing mode	Diffuse reflection			
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



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

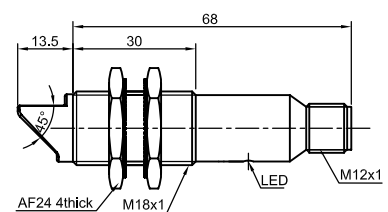
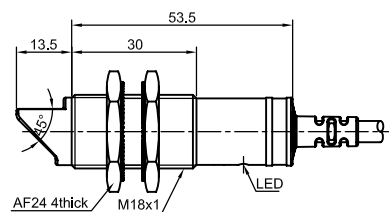


Item Code	PR18G	PR18G
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



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 U _L	CE U _L

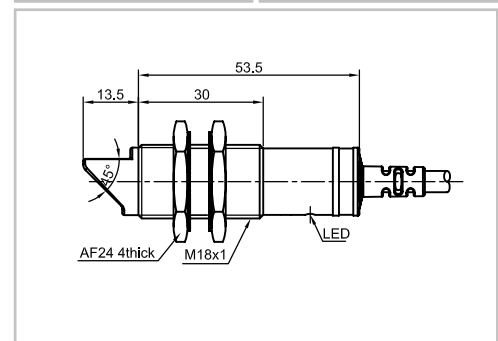
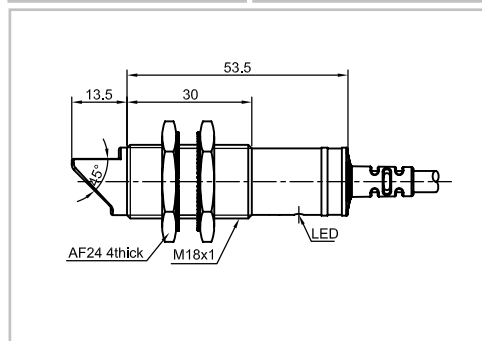
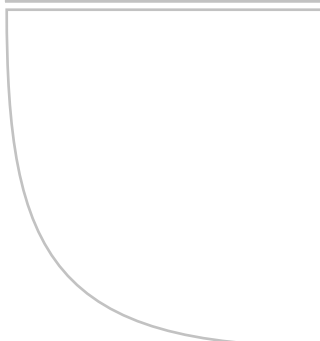


Item Code	PR18G		PR18G	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



Output	NPN NO	PR18G-TM10D	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

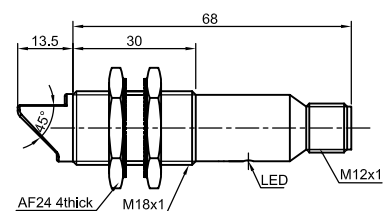
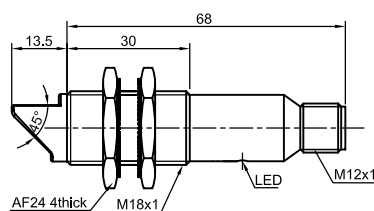


Item Code	PR18G		PR18G	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



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
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	M12 Connector	M12 Connector	M12 Connector	M12 Connector
Certification	CE U _L	CE U _L	CE U _L	CE U _L

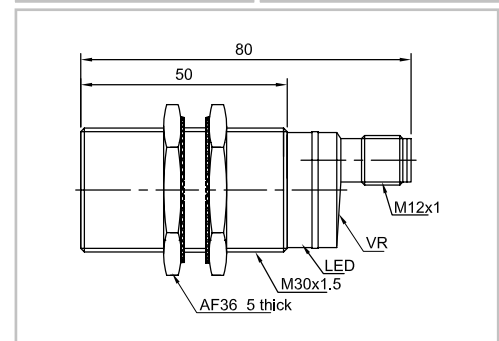
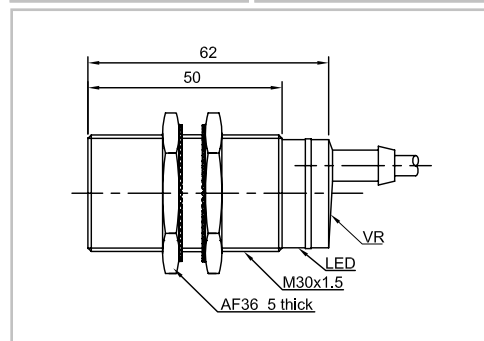


Item Code	PR30		PR30	
Sensing mode	Diffuse reflection			
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)



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
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 _I	CE U _I	CE U _I	CE U _I

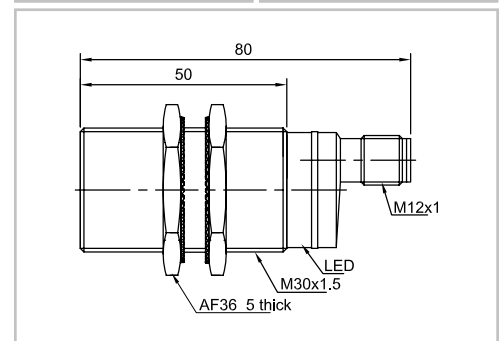
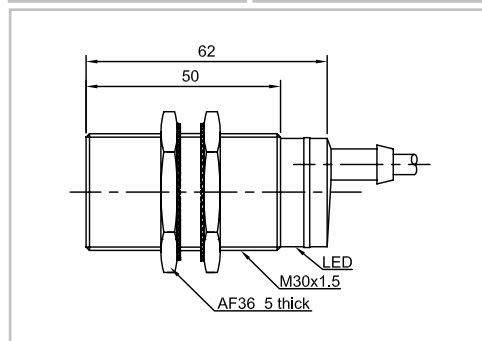
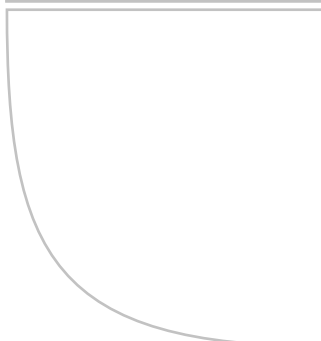


Item Code	PR30	PR30
Sensing mode	Retro reflection	Retro reflection
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)



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 _I	CE U _I

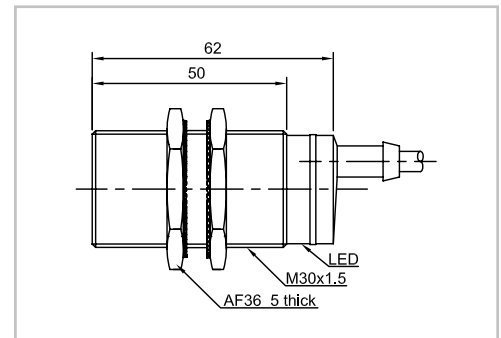
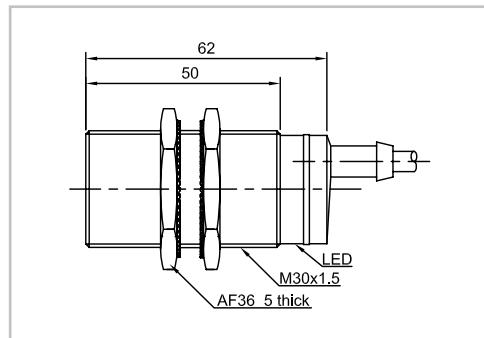


Item Code	PR30		PR30	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)	40m (Non-adjustable)



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

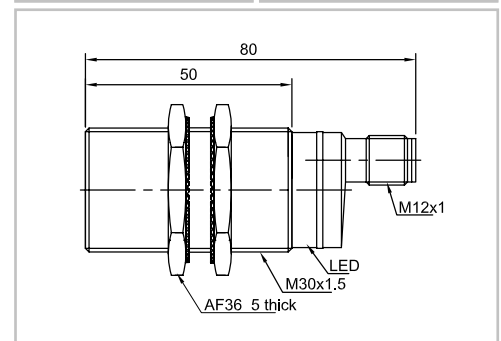
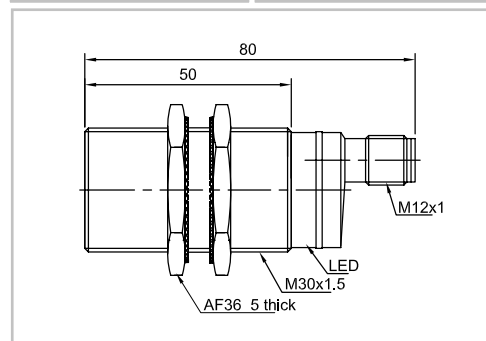


Item Code	PR30		PR30	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)	40m (Non-adjustable)



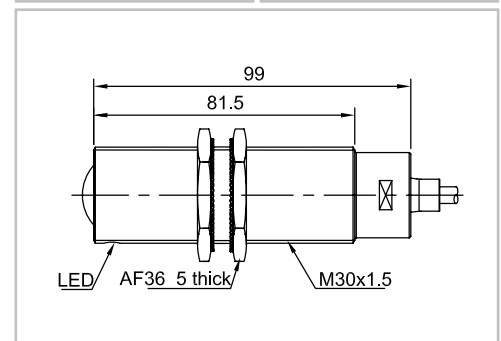
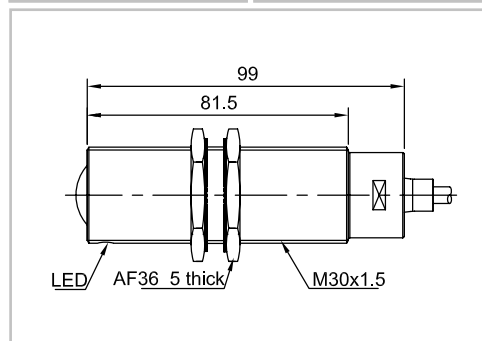
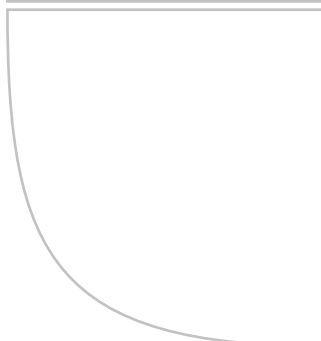
Output	NPN NO	PR30-TM20D-E2	PR30-TM20DNO-E2	PR30-TM40D-E2	PR30-TM40DNO-E2
	NPN NC	PR30-TM20D-E2	PR30-TM20DNC-E2	PR30-TM40D-E2	PR30-TM40DNC-E2
	NPN NO+NC	PR30-TM20D-E2	PR30-TM20DNR-E2	PR30-TM40D-E2	PR30-TM40DNR-E2
Output	PNP NO	PR30-TM20D-E2	PR30-TM20DPO-E2	PR30-TM40D-E2	PR30-TM40DPO-E2
	PNP NC	PR30-TM20D-E2	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 _I	CE U _I	CE U _I	CE U _I



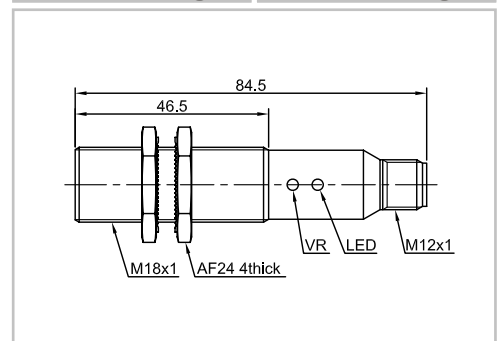
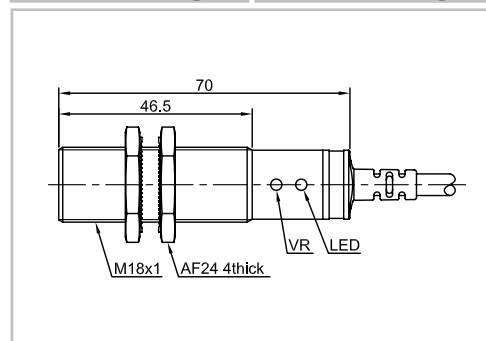
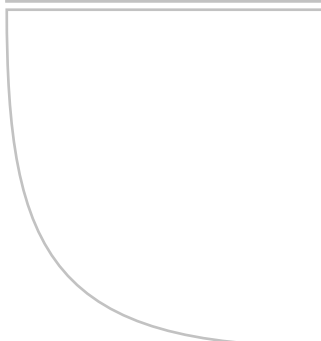
Item Code		PR30L		PR30L	
Sensing mode		Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance		100m (Non-adjustable)	100m (Non-adjustable)	150m (Non-adjustable)	150m (Non-adjustable)
Output	NPN/PNP NO/NC	PR30L-TM100D	PR30L-TM100DEB	PR30L-TM150D	PR30L-TM150DEB
	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

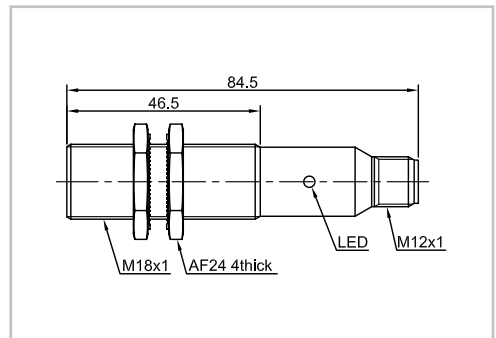
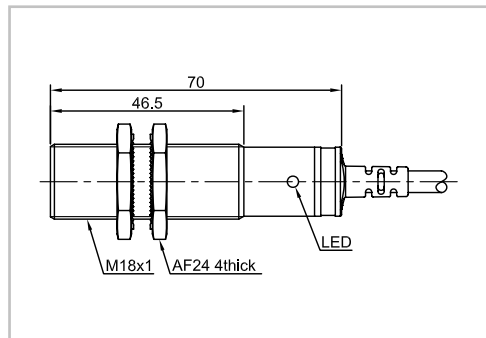
Technical Parameter					
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
Light source	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)	Infrared LED (880nm)
Load current	< 300mA	< 300mA	< 300mA	< 300mA	< 300mA
Voltage drop	< 10V	< 10V	< 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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



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
		AC 2 Wires NC	PR18-DM3ATC



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 CCC	CE U _L CCC	

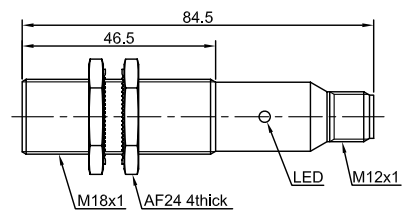
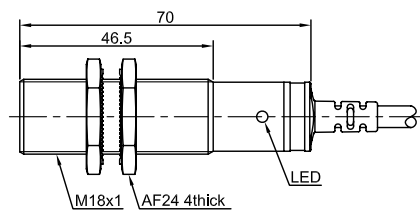


Item Code	PR18		PR18	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



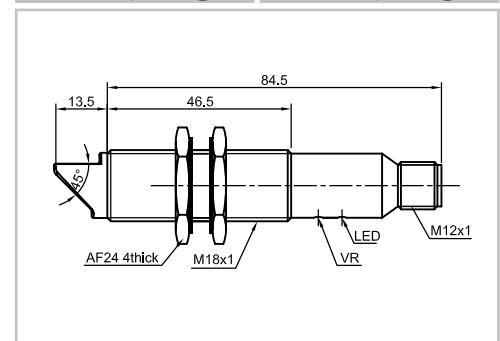
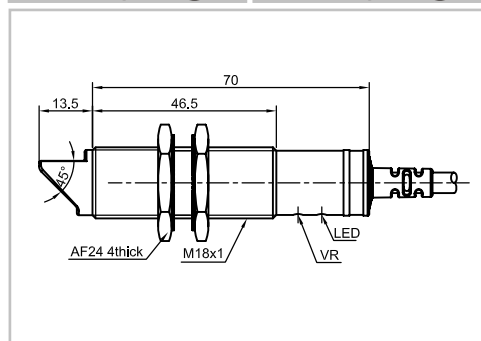
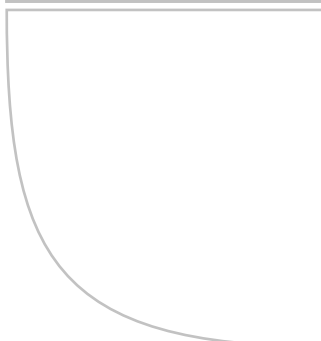
Output	AC 2 Wires NO	PR18-TM10A	PR18-TM10ATO	PR18-TM10A-E2	PR18-TM10ATO-E2
	AC 2 Wires NC	PR18-TM10A	PR18-TM10ATC	PR18-TM10A-E2	PR18-TM10ATC-E2

Technical Parameter				
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
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	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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



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
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
Consumption 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		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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



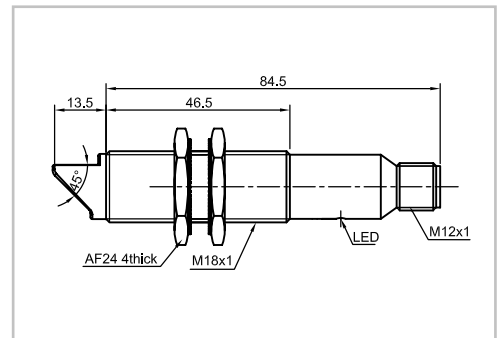
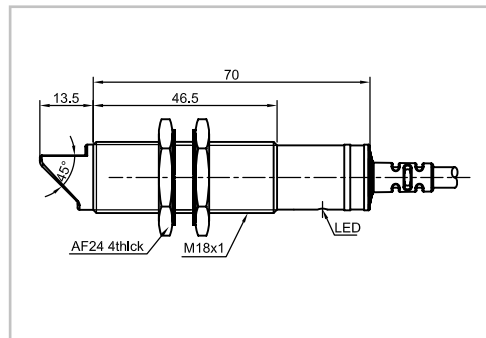
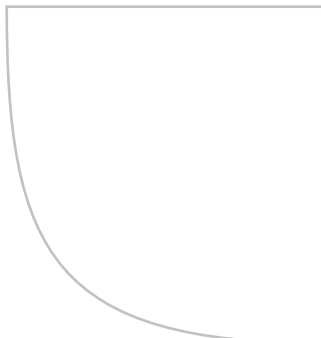
Item Code	PR18G	PR18G
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



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 CCC	CE U _L CCC



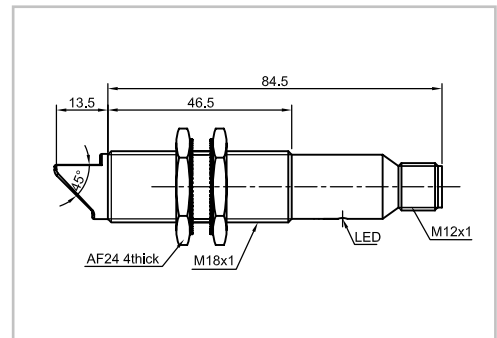
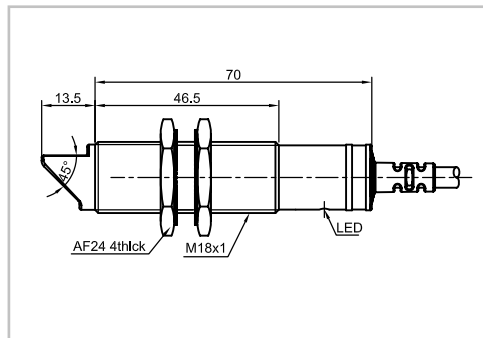
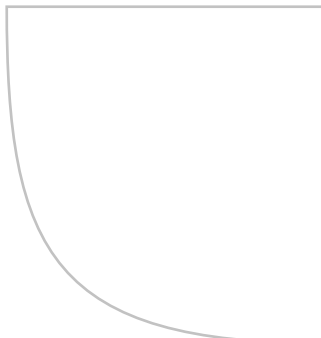
Item Code	PR18G		PR18G	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



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

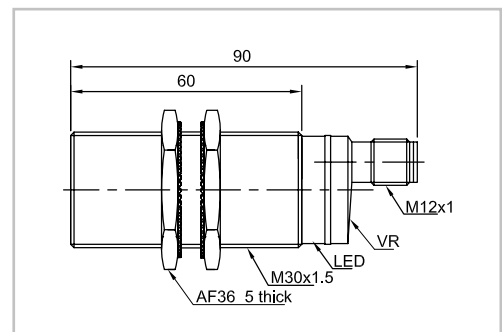
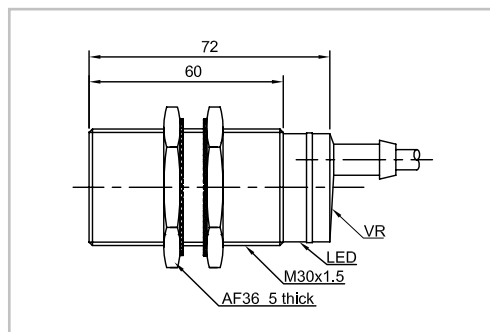
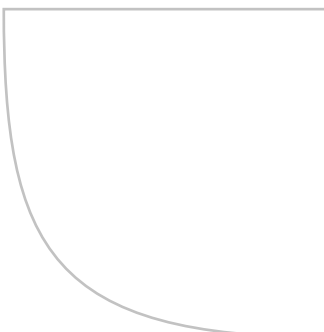
Technical Parameter

Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
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	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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



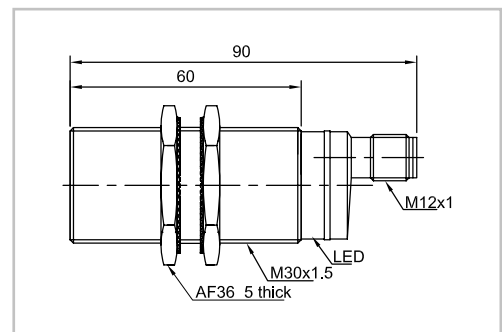
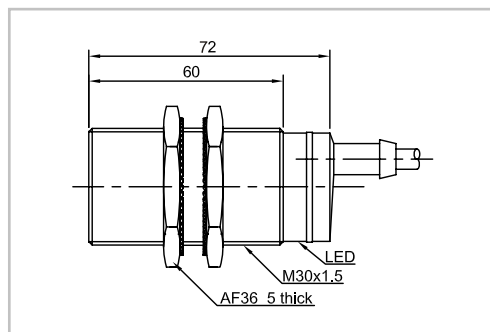
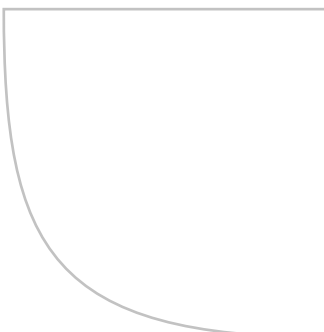
Item Code	PR30		PR30		
Sensing mode	Diffuse reflection				
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)	
					
Output	AC 2 Wires NO	PR30-BC50ATO	PR30-BC100ATO	PR30-BC50ATO-E2	PR30-BC100ATO-E2
	AC 2 Wires NC	PR30-BC50ATC	PR30-BC100ATC	PR30-BC50ATC-E2	PR30-BC100ATC-E2

Technical Parameter				
Supply voltage	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
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	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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



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 CCC	CE U _L CCC	



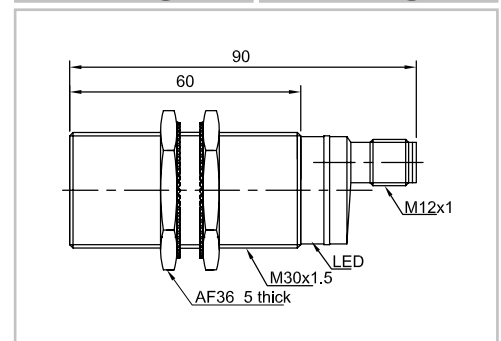
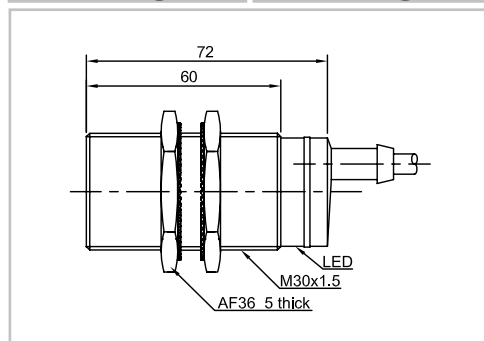
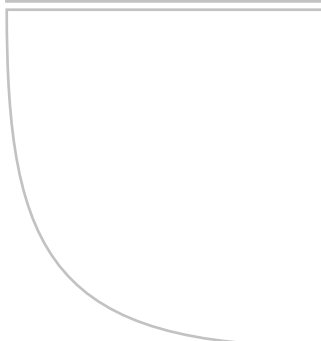
Item Code	PR30		PR30	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



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)



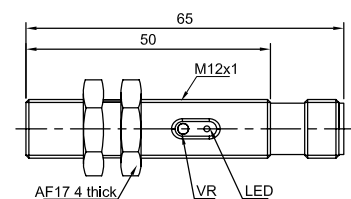
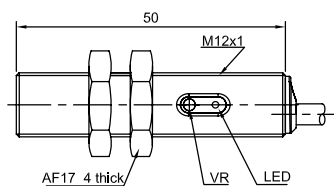
Item Code	PR12S	PR12S
Sensing mode	Diffuse reflection	Diffuse reflection
Sensing distance	15cm (Adjustable)	15cm (Adjustable)



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

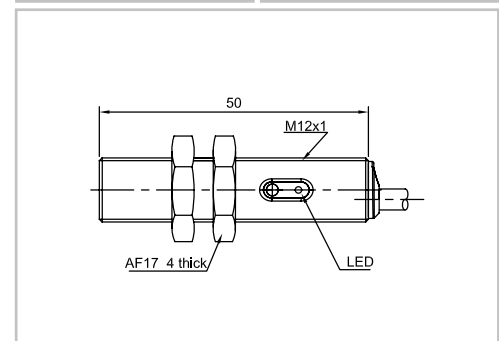
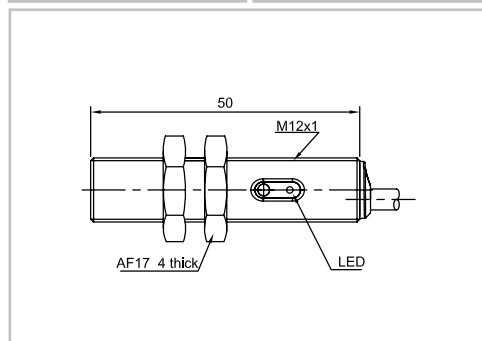
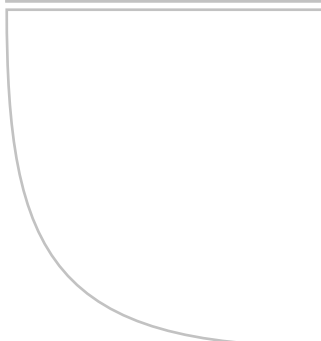


Item Code	PR12S		PR12S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



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

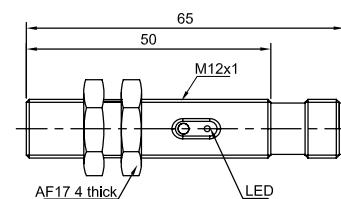
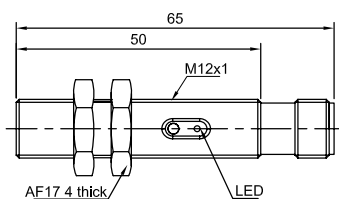


Item Code	PR12S		PR12S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



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

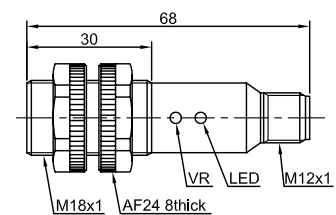
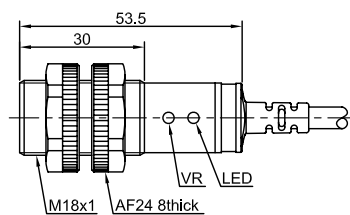


Item Code	PR18S		PR18S	
Sensing mode	Diffuse reflection			
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



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
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



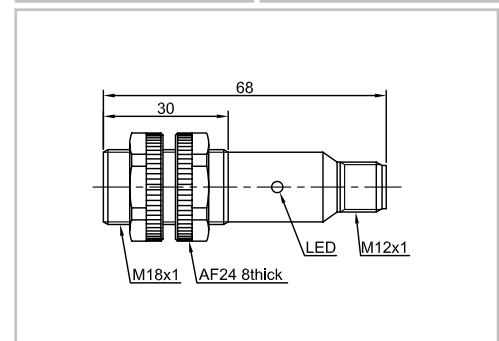
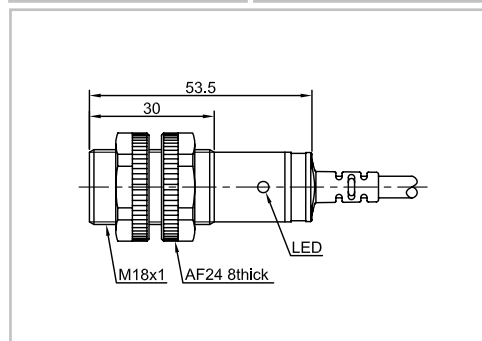
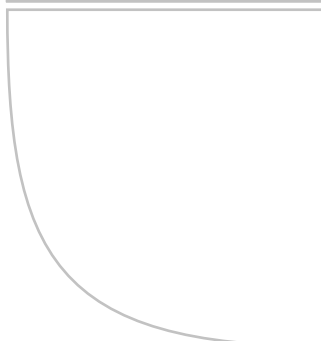
Item Code	PR18S	PR18S
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



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 _i	CE U _i

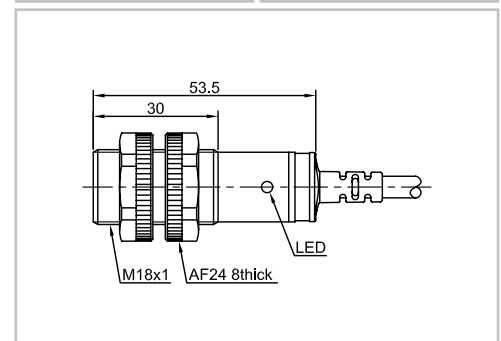
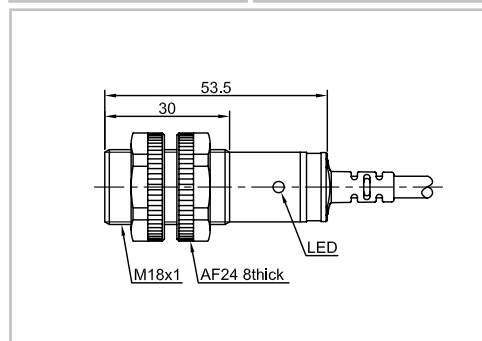
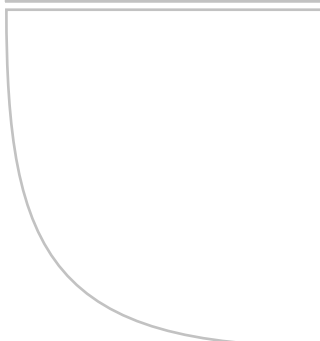


Item Code	PR18S		PR18S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



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

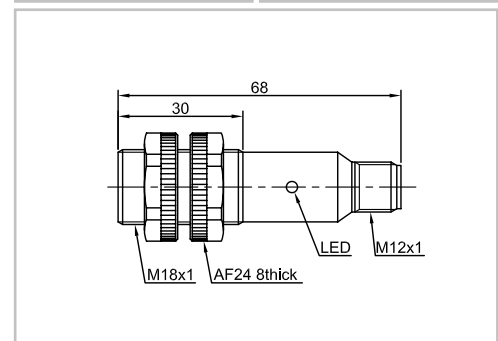
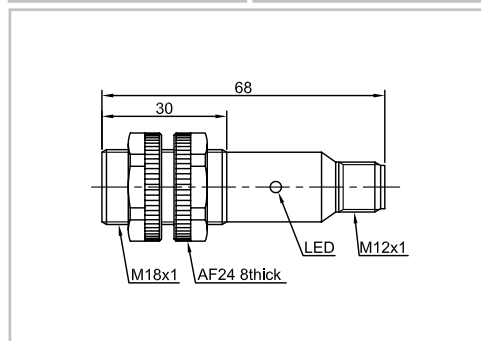
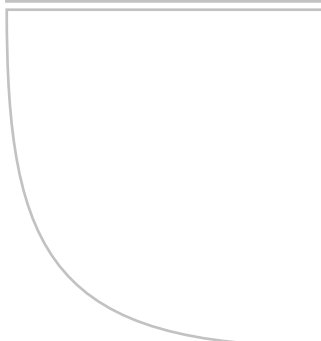


Item Code	PR18S		PR18S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



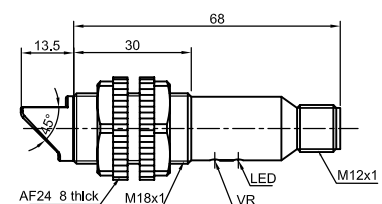
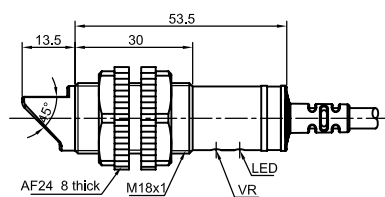
Output	NPN NO	PR18S-TM10D-E2	PR18S-TM10DNO-E2	PR18S-TM20D-E2	PR18S-TM20DNO-E2
	NPN NC	PR18S-TM10D-E2	PR18S-TM10DNC-E2	PR18S-TM20D-E2	PR18S-TM20DNC-E2
	NPN NO+NC	PR18S-TM10D-E2	PR18S-TM10DNR-E2	PR18S-TM20D-E2	PR18S-TM20DNR-E2
Output	PNP NO	PR18S-TM10D-E2	PR18S-TM10DPO-E2	PR18S-TM20D-E2	PR18S-TM20DPO-E2
	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			
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
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	PBT	PBT	PBT	PBT
Connection	2m PVC Cable	2m PVC Cable	M12 Connector	M12 Connector
Certification	CE U _I	CE U _I	CE U _I	CE U _I

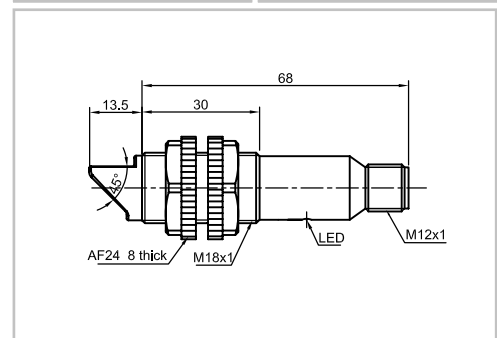
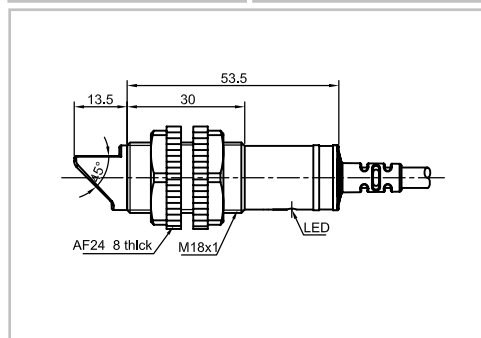


Item Code	PR18GS	PR18GS
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



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	



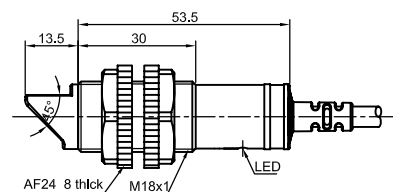
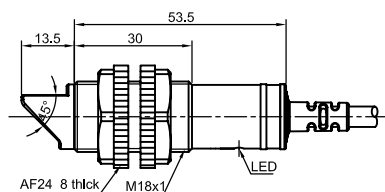
Item Code	PR18GS		PR18GS	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



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

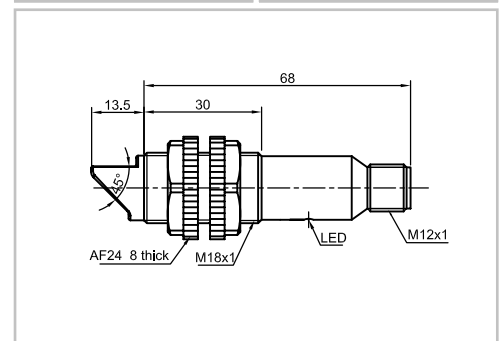
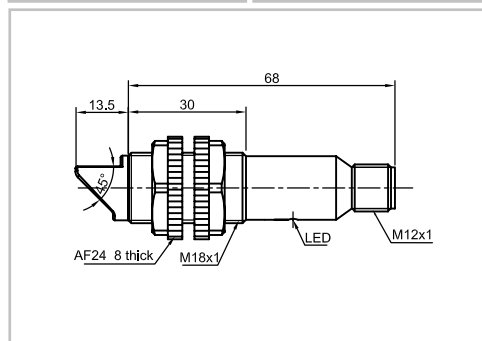
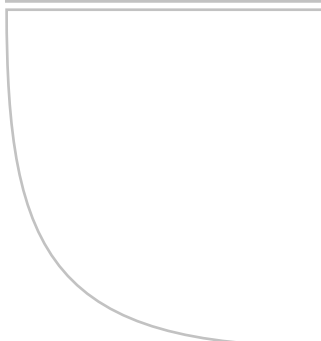


Item Code	PR18GS		PR18GS	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



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

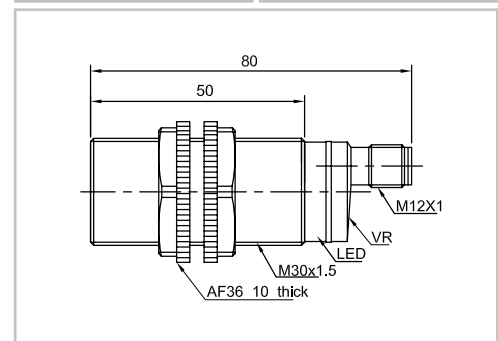
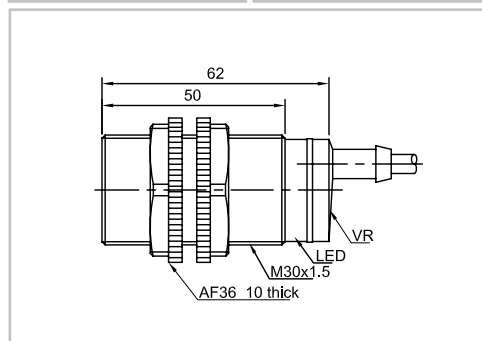
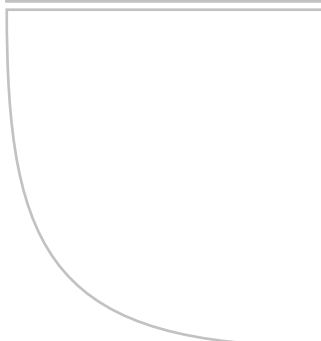


Item Code	PR30S		PR30S	
Sensing mode	Diffuse reflection			
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)



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

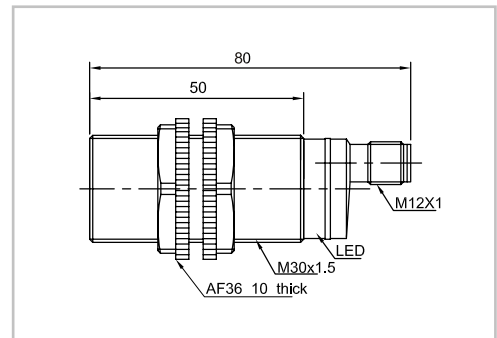
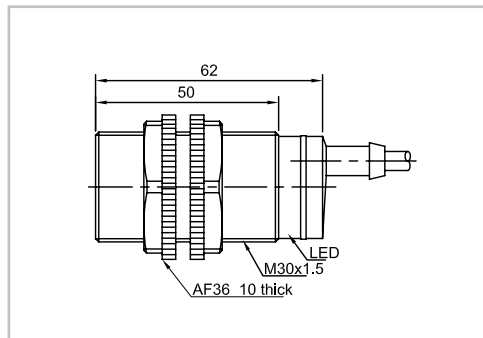
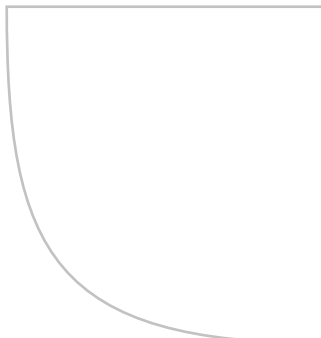


Item Code	PR30S	PR30S
Sensing mode	Retro reflection	Retro reflection
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)



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 _I	CE U _I	

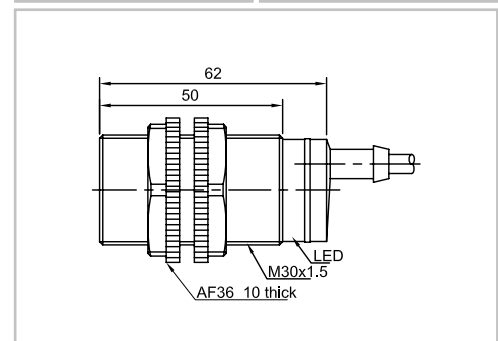
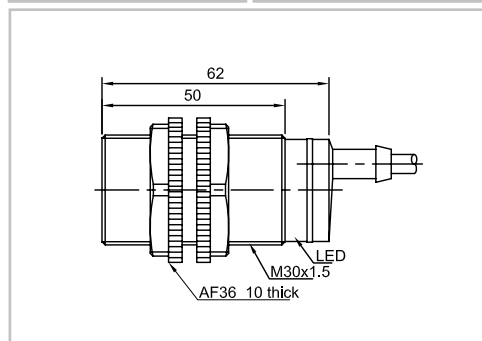
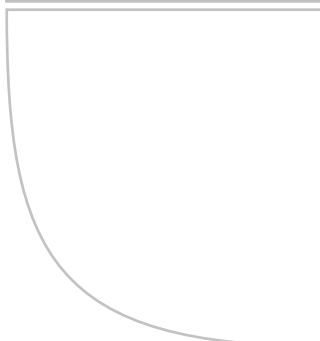


Item Code	PR30S		PR30S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)	40m (Non-adjustable)



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

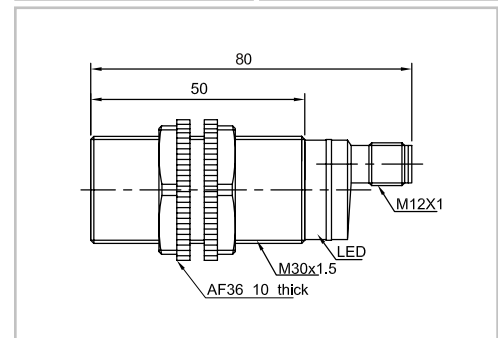
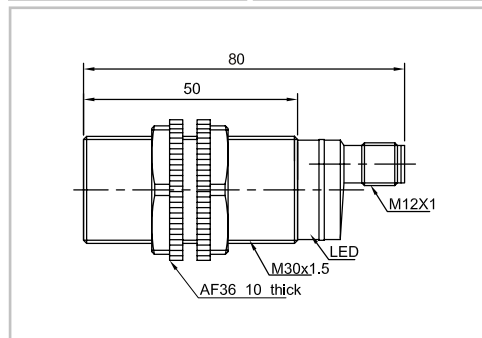
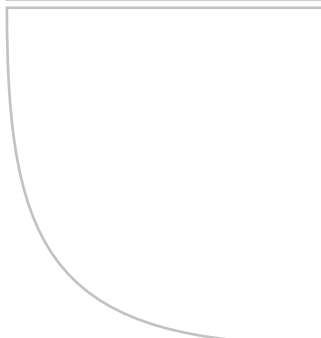


Item Code	PR30S		PR30S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)



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

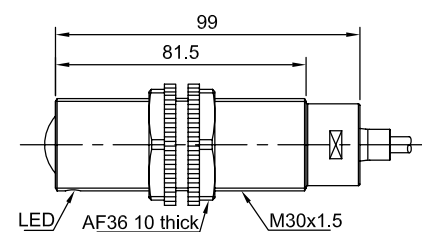
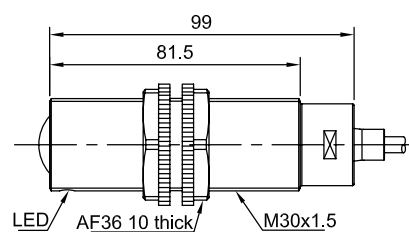


Item Code	PR30SL		PR30SL	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	100m (Non-adjustable)	100m (Non-adjustable)	150m (Non-adjustable)	150m (Non-adjustable)



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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



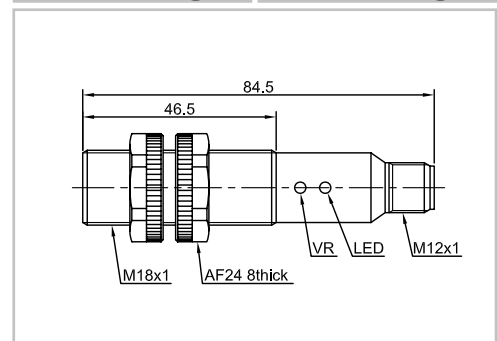
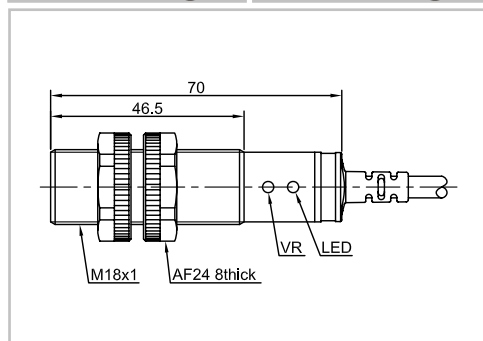
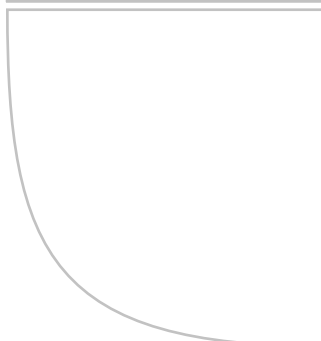
Item Code	PR18S		PR18S	
Sensing mode	Diffuse reflection			
Sensing distance	10cm (Non-adjustable)	40cm (Adjustable)	10cm (Non-adjustable)	40cm (Adjustable)



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 _I CCC	CE U _I CCC	CE U _I CCC	CE U _I CCC



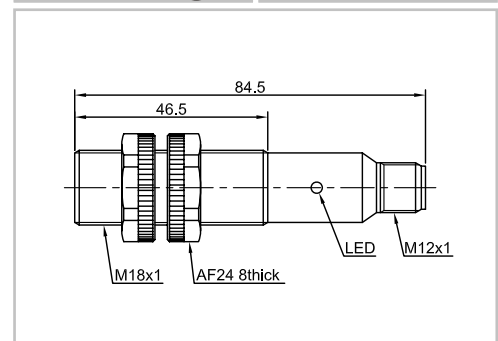
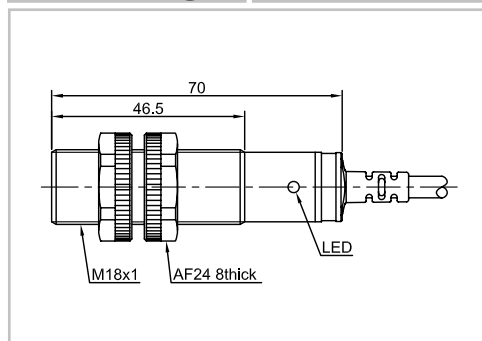
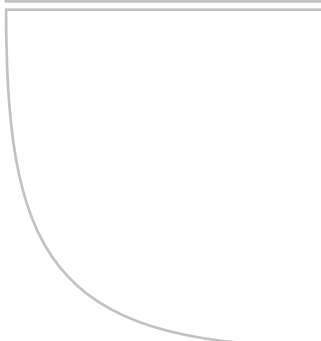
Item Code	PR18S	PR18S
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



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



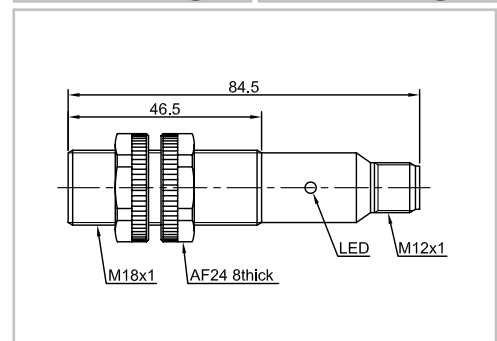
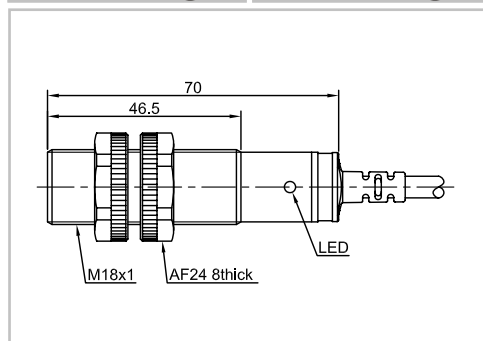
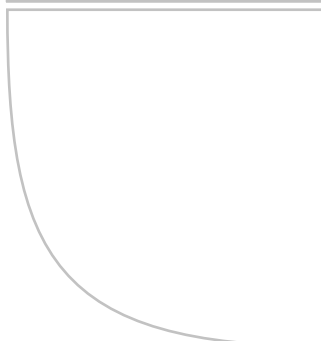
Item Code	PR18S		PR18S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



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

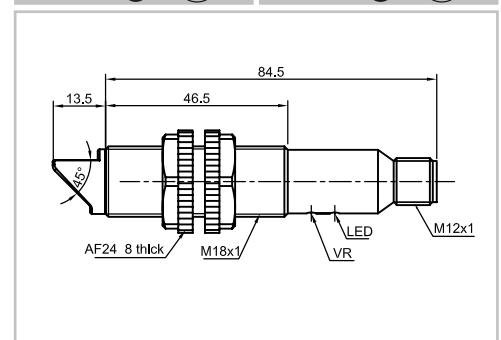
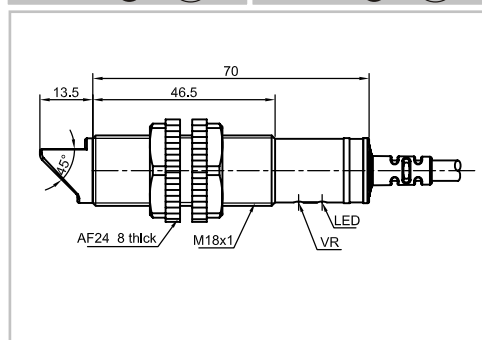
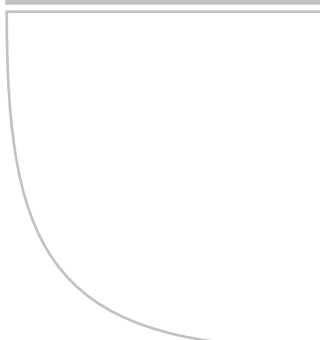
Technical Parameter

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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



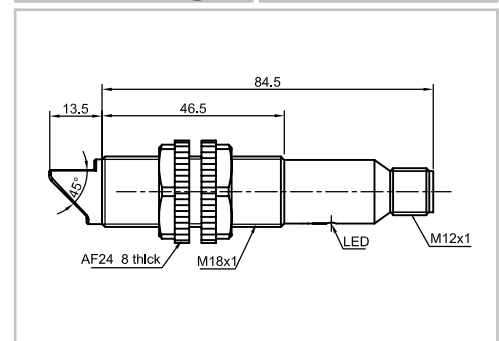
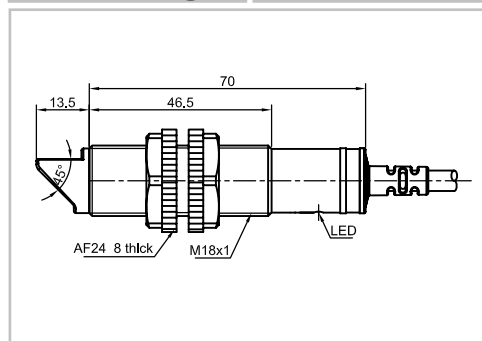
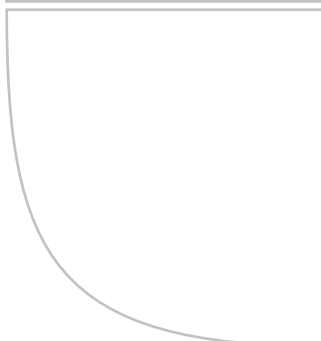
Item Code	PR18GS	PR18GS
Sensing mode	Retro reflection	Retro reflection
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)



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

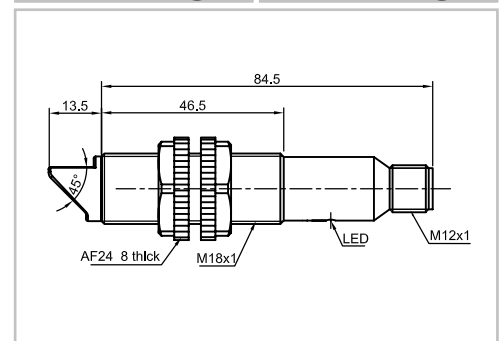
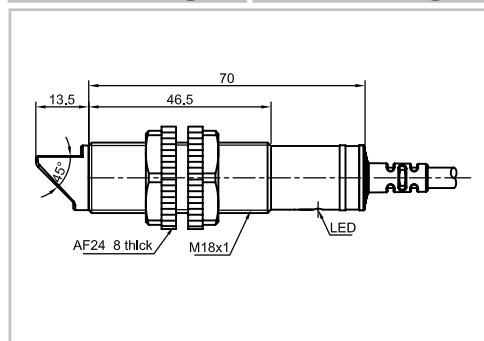
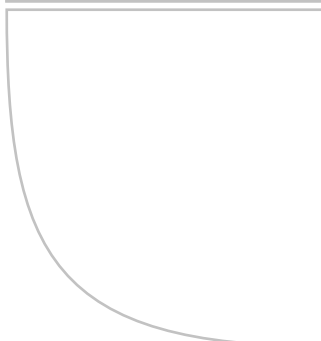


Item Code	PR18GS		PR18GS	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



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
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	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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



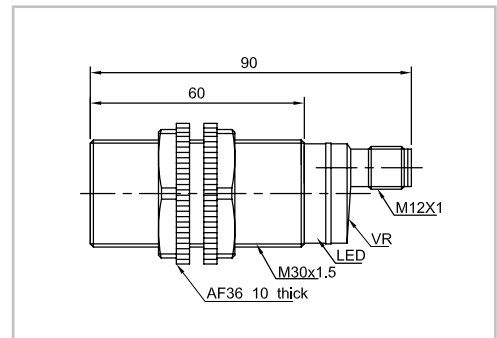
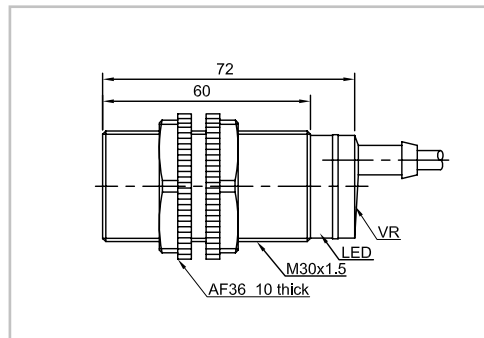
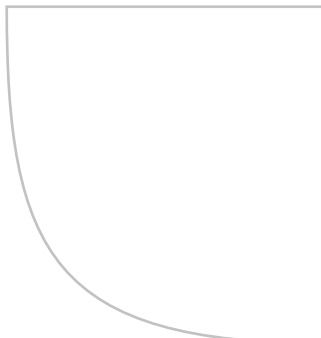
Item Code	PR30S		PR30S	
Sensing mode	Diffuse reflection			
Sensing distance	50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)



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

	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC



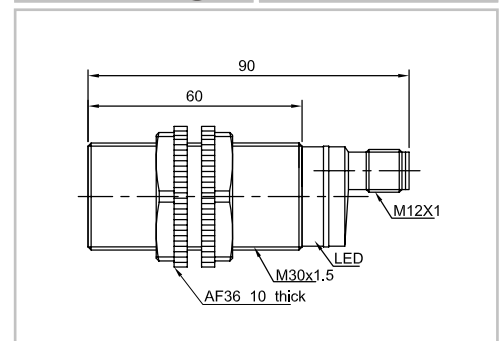
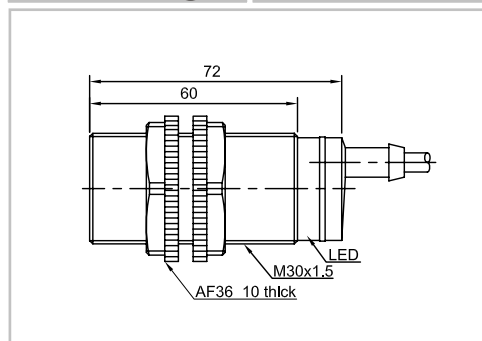
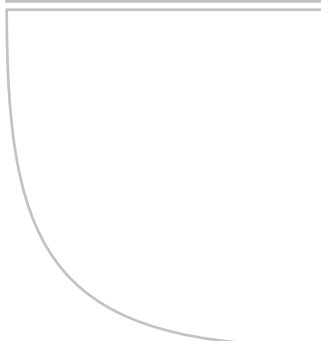
Item Code	PR30S	PR30S
Sensing mode	Retro reflection	Retro reflection
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)



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



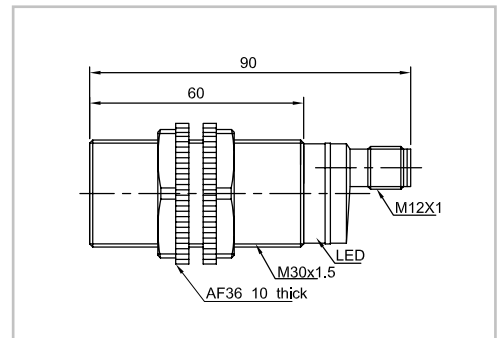
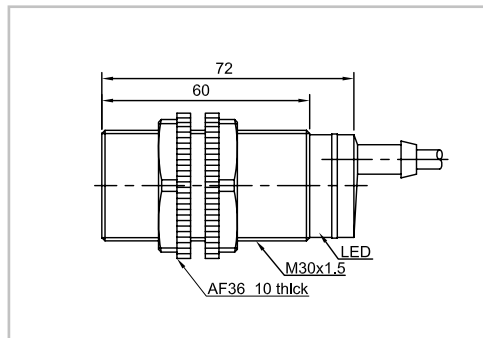
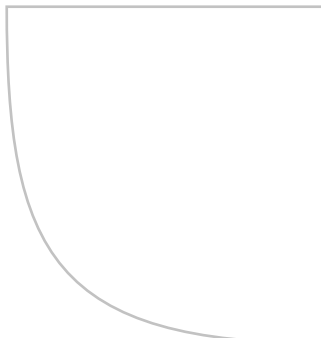
Item Code	PR30S		PR30S	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



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

	20...250 VAC	20...250 VAC	20...250 VAC	20...250 VAC
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 CCC	CE U _L CCC	CE U _L CCC	CE U _L CCC

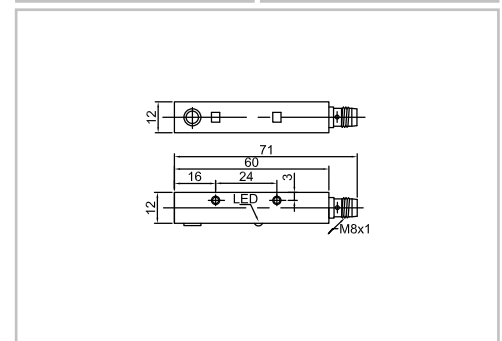
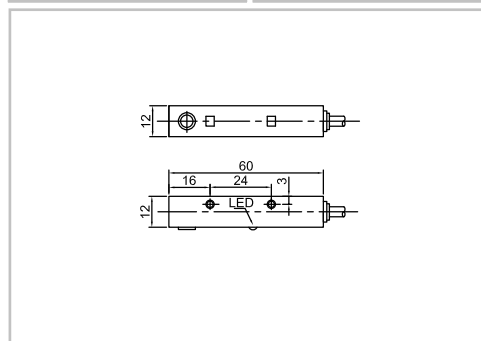
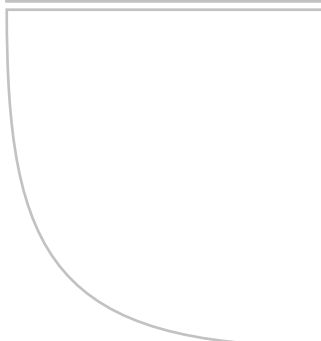


Item Code	PSB		PSB	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	3m (Non-adjustable)	3m (Non-adjustable)	3m (Non-adjustable)	3m (Non-adjustable)



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

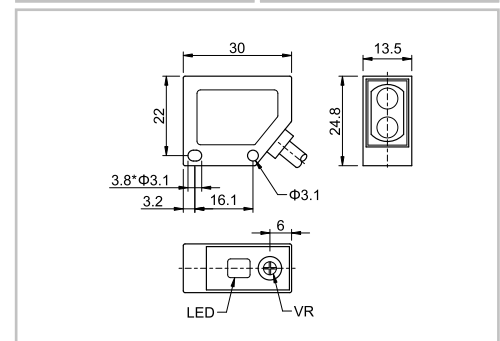
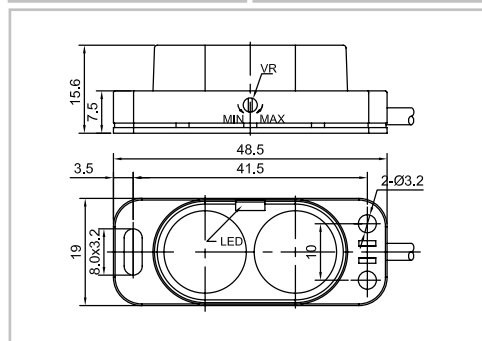
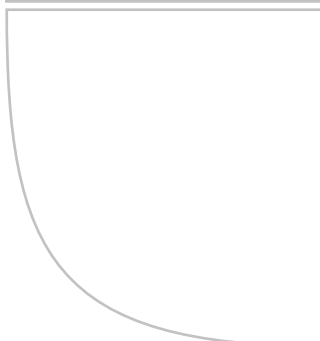


Item Code	PBA	PSI
Sensing mode	Diffuse reflection	Diffuse reflection
Sensing distance	2m (Adjustable)	30cm (Adjustable)



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

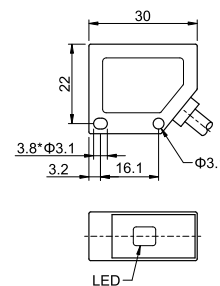
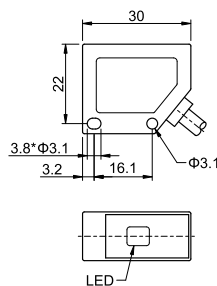


Item Code	PSI		PSI	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (Non-adjustable)	10m (Non-adjustable)	10m (Non-adjustable)



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



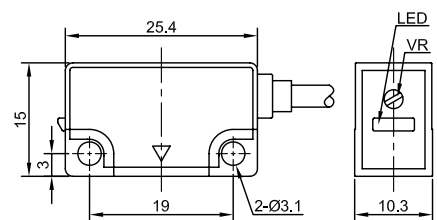
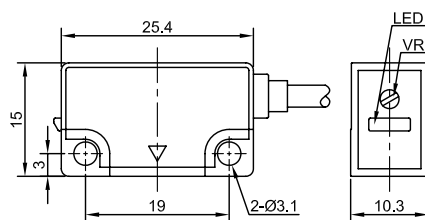
Item Code	PSL		PSL	
Sensing mode	Diffuse reflection		Focus reflection	
Sensing distance	30cm (Adjustable)		3cm (Adjustable)	5cm (Adjustable)



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
Light source	Infrared LED (880nm)	Infrared LED (660nm)	Infrared LED (660nm)
Load current	<100mA	<100mA	<100mA
Voltage drop	<2.5V	<2.5V	<2.5V
Consumption current	<25mA	<25mA	<25mA
Hysteresis	3...20%	3...20%	3...20%
Repeat accuracy	<5%	<5%	<5%
Response time	< 1ms	< 1ms	< 1ms
Output indicator	Yellow LED	Yellow LED	Yellow LED
Polarity protection	yes	yes	yes
Surge protection	yes	yes	yes
Short-circuit protection	...	...	...
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	2m PVC Cable	2m PVC Cable	2m PVC Cable
Certification	CE	CE	CE

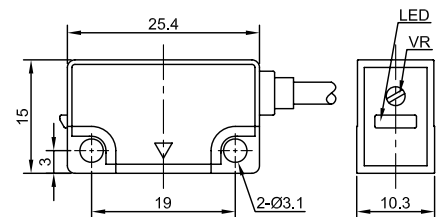
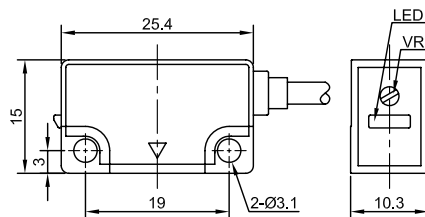


Item Code	PSL		PSL	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (adjustable)	10m (Non-adjustable)	10m (adjustable)



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

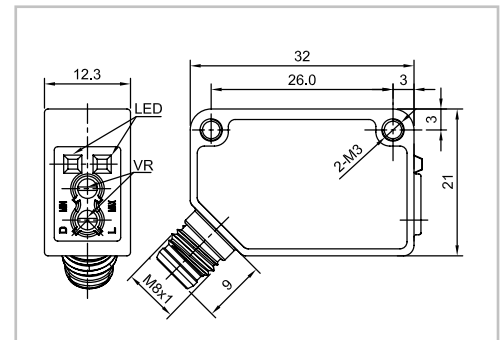
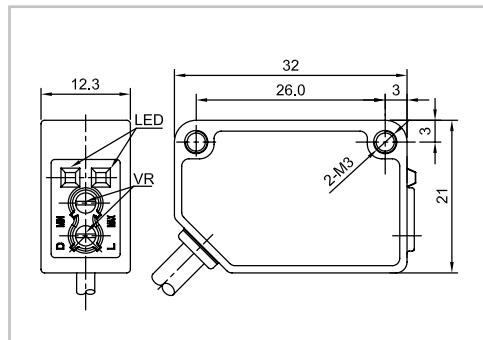
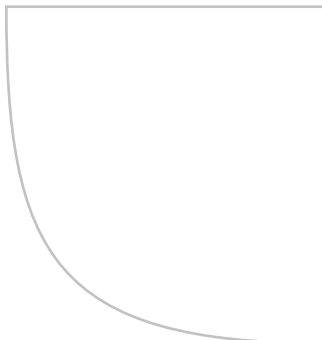


Item Code	PSF		PSF	
Sensing mode	Diffuse reflection			
Sensing distance	30cm (Adjustable)	80cm (Adjustable)	30cm (Adjustable)	80cm (Adjustable)



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



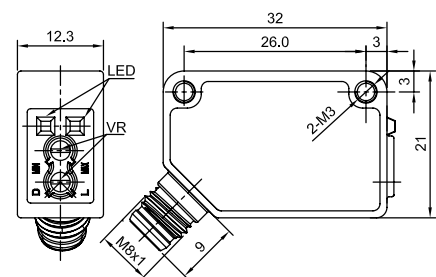
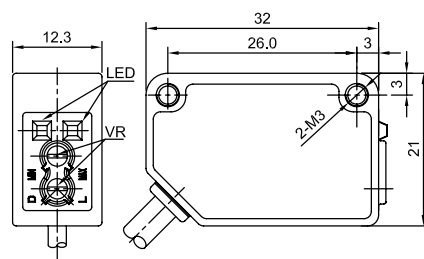
Item Code	PSF	PSF
Sensing mode	Retro reflection	Retro reflection
Sensing distance	2m (Adjustable)	2m (Adjustable)



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

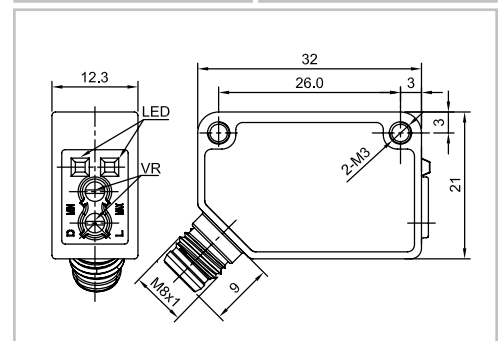
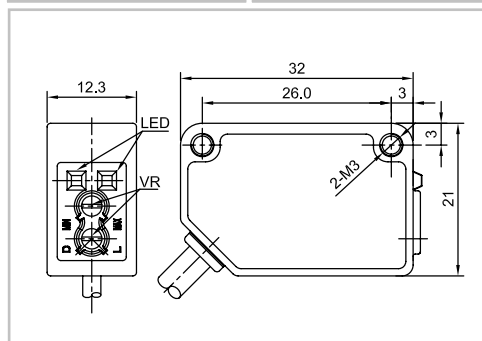
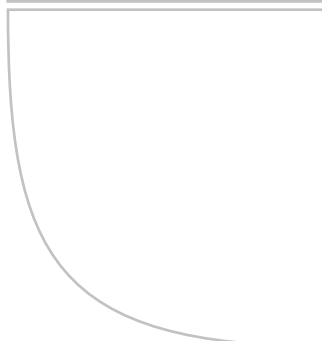


Item Code	PSF	PSF
Sensing mode	Polarized reflection	Polarized reflection
Sensing distance	2m (Adjustable)	2m (Adjustable)



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

Technical Parameter	
Supply voltage	12...24 VDC
Light source	Infrared LED (660nm)
Load current	<100mA
Voltage drop	<2.5V
Consumption current	<25mA
Hysteresis	...
Repeat accuracy	<5%
Response time	< 1ms
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	2m PVC Cable
Certification	CE



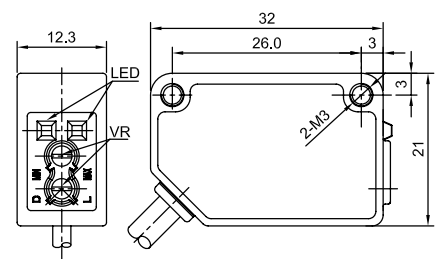
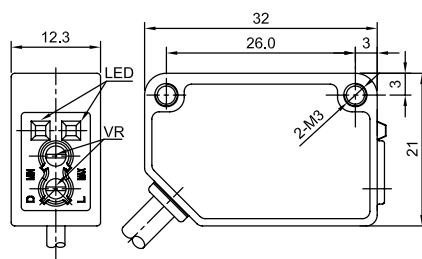
Item Code	PSF		PSF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (adjustable)	10m (Non-adjustable)	10m (adjustable)



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

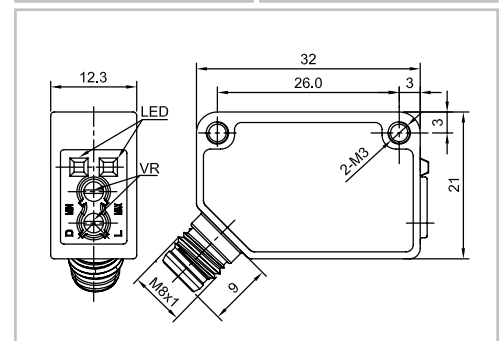
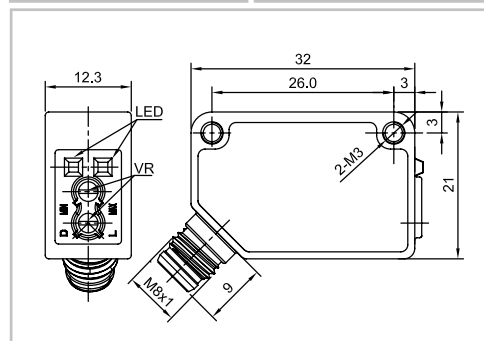
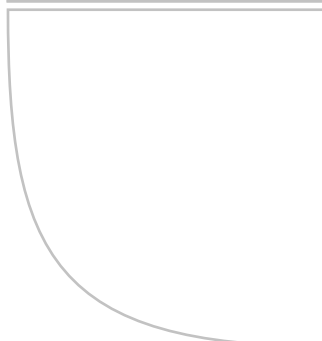






Item Code	PSF		PSF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	5m (Non-adjustable)	5m (adjustable)	10m (Non-adjustable)	10m (adjustable)



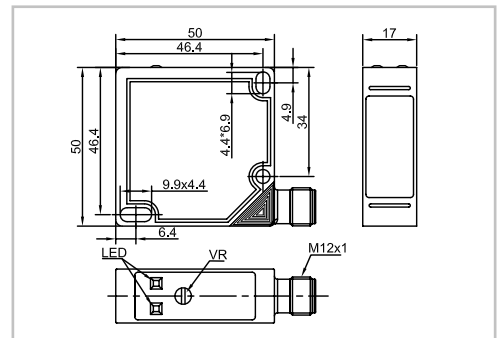
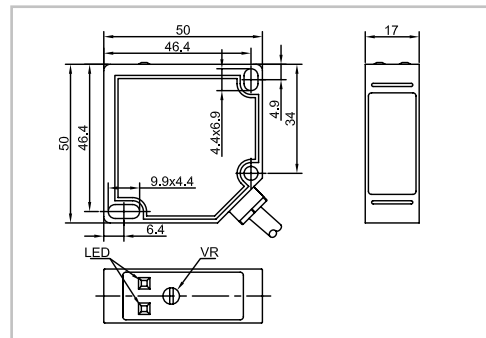
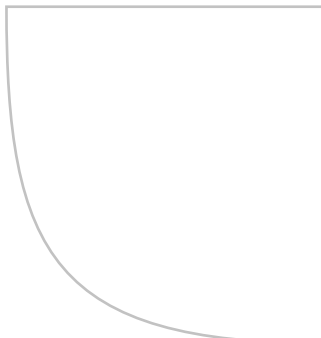
Output	NPN NO	PSF-TM5D-E1	PSF-TM5DNO-E1	PSF-TM10D-E1	PSF-TM10DNO-E1
	NPN NC	PSF-TM5D-E1	PSF-TM5DNC-E1	PSF-TM10D-E1	PSF-TM10DNC-E1
	NPN NO/NC	PSF-TM5D-E1	PSF-TM5DNB-E1	PSF-TM10D-E1	PSF-TM10DNB-E1
Output	PNP NO	PSF-TM5D-E1	PSF-TM5DPO-E1	PSF-TM10D-E1	PSF-TM10DPO-E1
	PNP NC	PSF-TM5D-E1	PSF-TM5DPC-E1	PSF-TM10D-E1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



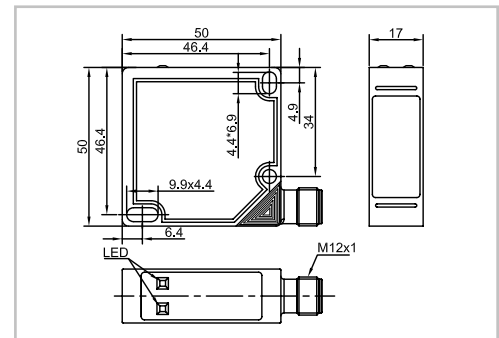
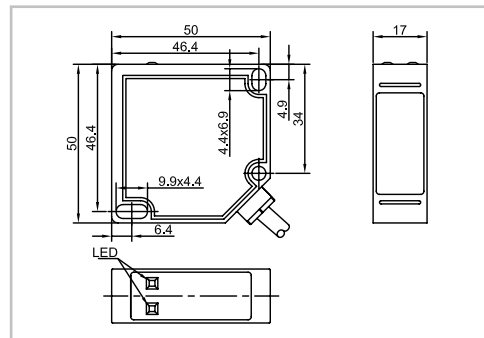
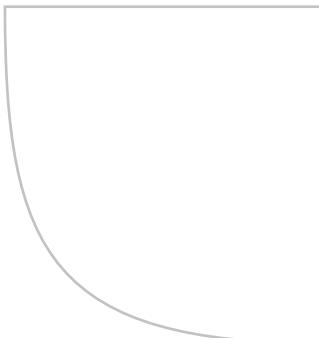
Item Code		PTF		PTF	
Sensing mode		Diffuse reflection			
Sensing distance		50cm (Adjustable)	100cm (Adjustable)	50cm (Adjustable)	100cm (Adjustable)
					
Output	NPN NO	PTF-BC50DNO	PTF-BC100DNO	PTF-BC50DNO-E2	PTF-BC100DNO-E2
	NPN NC	PTF-BC50DNC	PTF-BC100DNC	PTF-BC50DNC-E2	PTF-BC100DNC-E2
	NPN NO+NC	PTF-BC50DNR	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
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		< 3ms	< 3ms	< 3ms	< 3ms
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



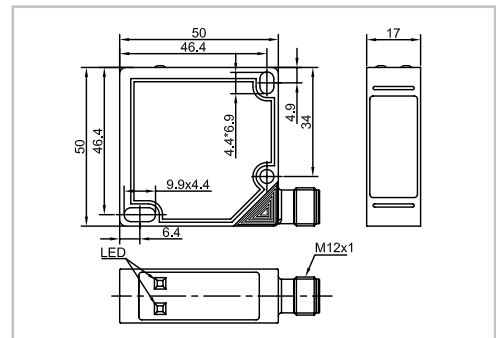
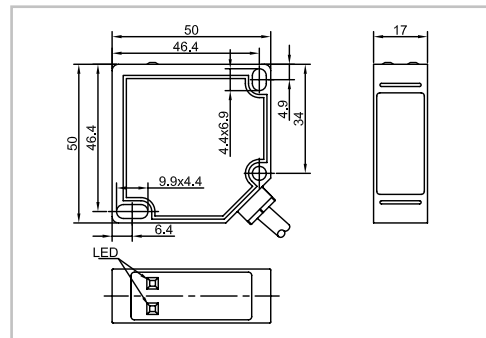
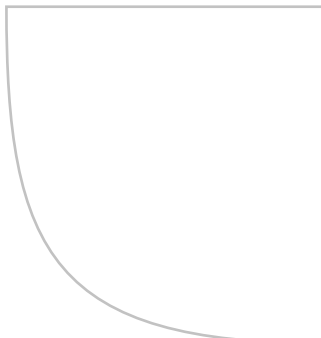
Item Code		PTF		PTF	
Sensing mode		Retro reflection			
Sensing distance		3m (Non-adjustable)	5m (Non-adjustable)	3m (Non-adjustable)	5m (Non-adjustable)
					
Output	NPN NO	PTF-DM3DNO	PTF-DM5DNO	PTF-DM3DNO-E2	PTF-DM5DNO-E2
	NPN NC	PTF-DM3DNC	PTF-DM5DNC	PTF-DM3DNC-E2	PTF-DM5DNC-E2
	NPN NO+NC	PTF-DM3DNR	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		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	

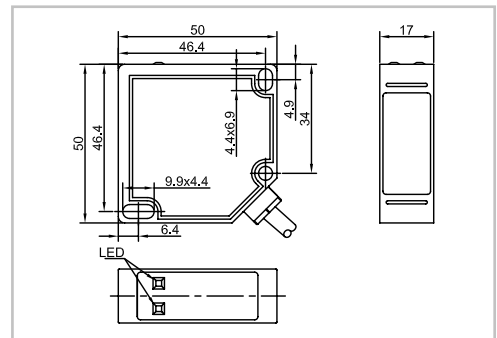
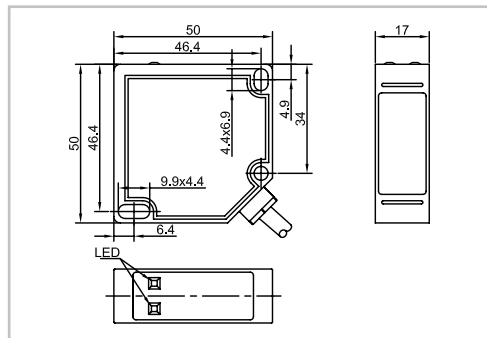
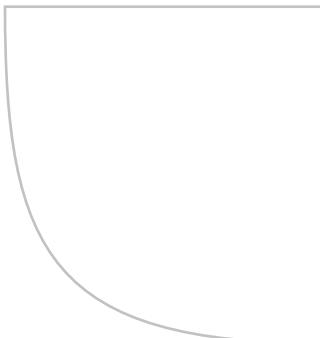


Item Code	PTF		PTF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



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

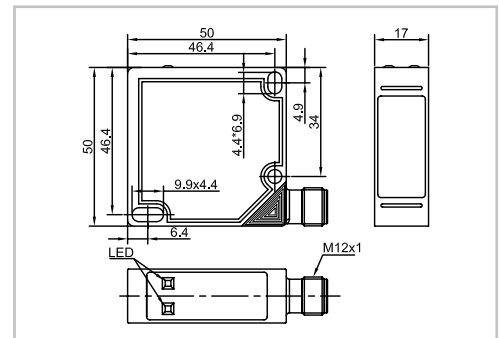
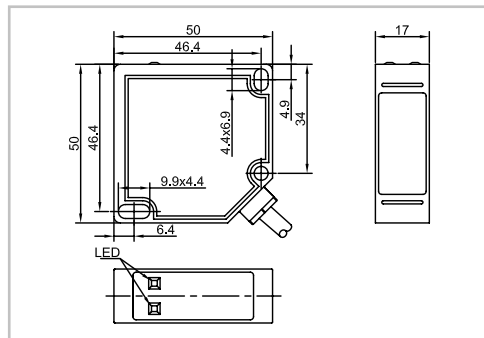





Item Code	PTF		PTF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



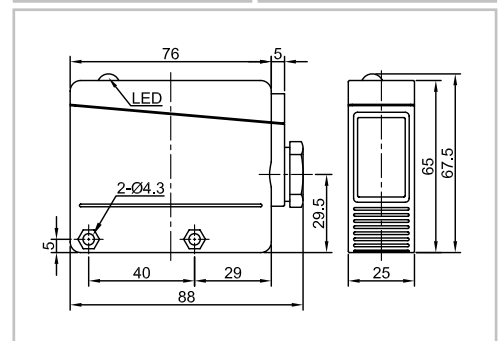
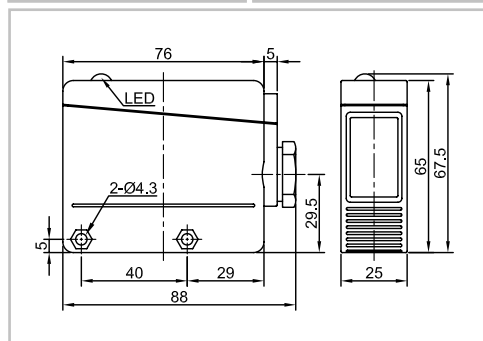
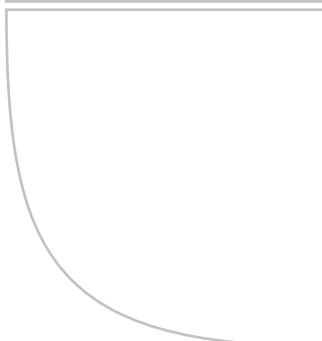
Output	NPN NO	PTF-TM10D-E2	PTF-TM10DNO-E2	PTF-TM20D-E2	PTF-TM20DNO-E2
	NPN NC	PTF-TM10D-E2	PTF-TM10DNC-E2	PTF-TM20D-E2	PTF-TM20DNC-E2
	NPN NO+NC	PTF-TM10D-E2	PTF-TM10DNR-E2	PTF-TM20D-E2	PTF-TM20DNR-E2
Output	PNP NO	PTF-TM10D-E2	PTF-TM10DPO-E2	PTF-TM20D-E2	PTF-TM20DPO-E2
	PNP NC	PTF-TM10D-E2	PTF-TM10DPC-E2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

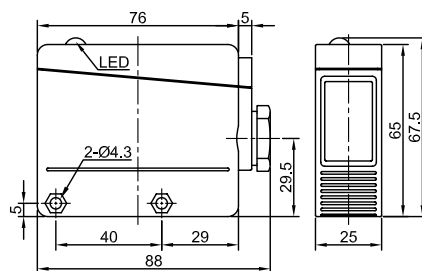


Item Code	PTL		
Sensing mode	Polarized reflection		
Sensing distance	12m (Non-adjustable)		



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

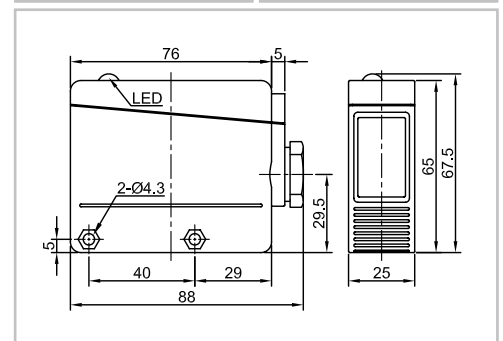
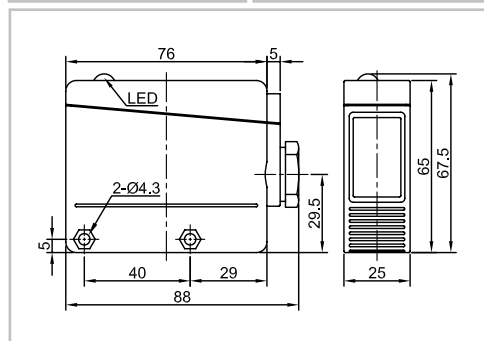
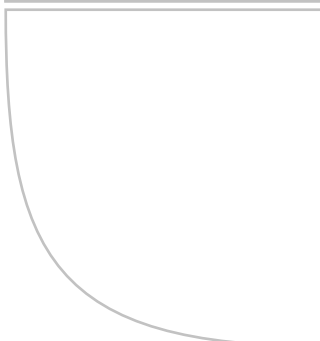






Item Code	PTL		PTL	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	20m (Non-adjustable)	20m (Non-adjustable)	40m (Non-adjustable)	40m (adjustable)



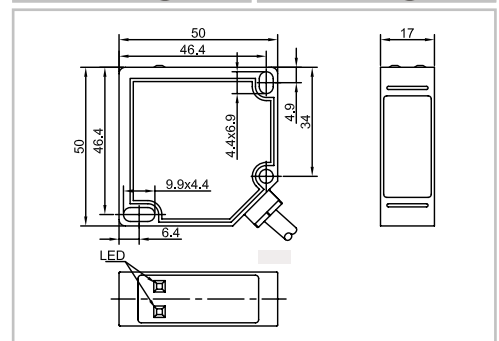
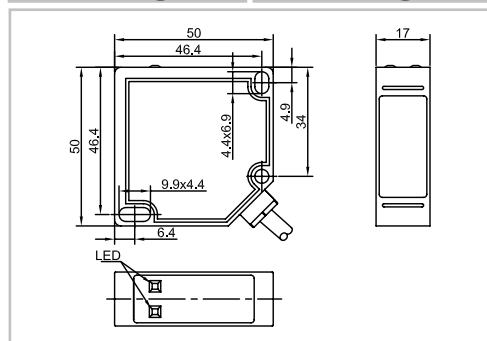
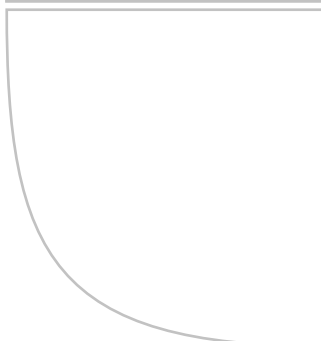
Output				
	NPN NO+NC	PTL-TM20D-D	PTL-TM20DNRT3-D	PTL-TM40D-D	PTL-TM40DNRT3-D
Output				
	PNP NO+NC	PTL-TM20D-D	PTL-TM20DPRT3-D	PTL-TM40D-D	PTL-TM40DPRT3-D

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



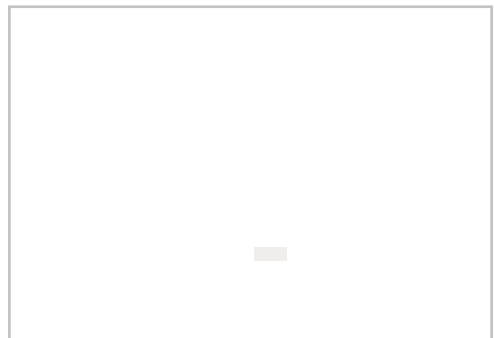
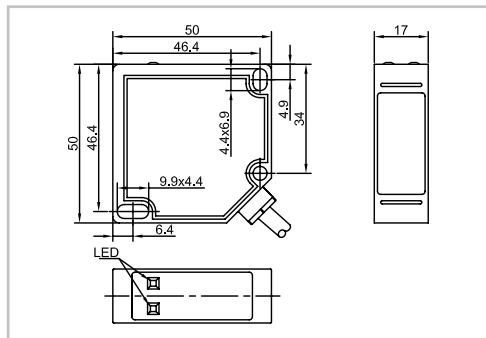
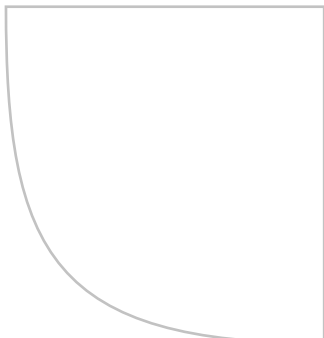
Item Code	PTF		
Sensing mode	Polarized reflection		
Sensing distance	5m (Non-adjustable)		



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		

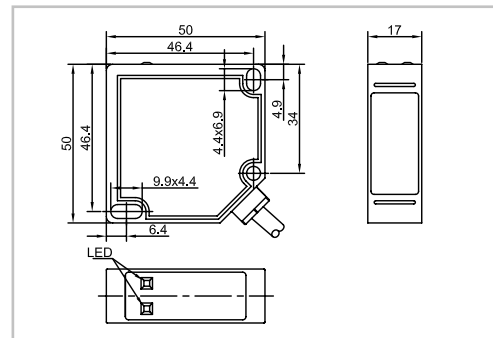
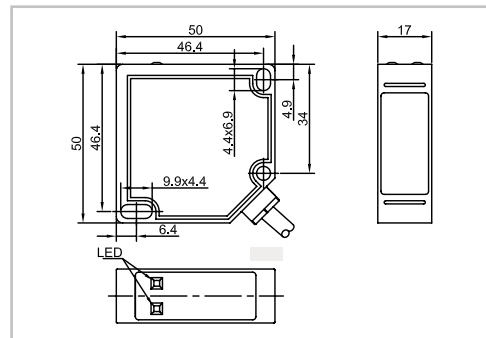
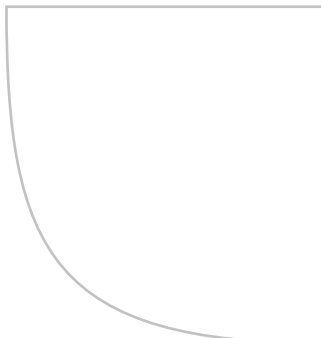



Item Code	PTF		PTF	
Sensing mode	Through beam(Emitter)	Through beam(Receiver)	Through beam(Emitter)	Through beam(Receiver)
Sensing distance	10m (Non-adjustable)	10m (Non-adjustable)	20m (Non-adjustable)	20m (Non-adjustable)



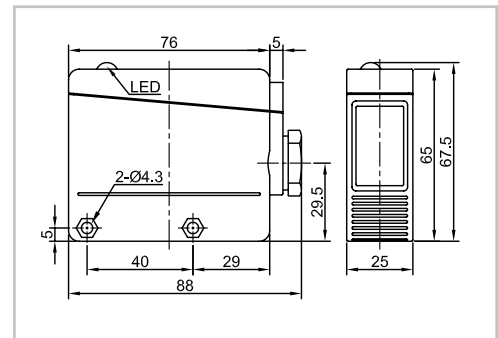
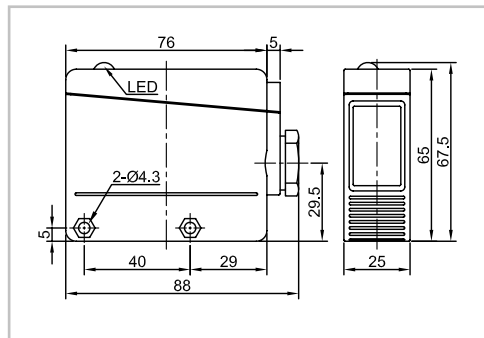
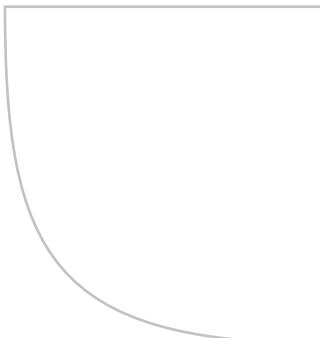
Output				
	Contact output	PTF-TM10S	PTF-TM10SK	PTF-TM20S	PTF-TM20SK

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°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	
Certification	CE (CCC)		CE (CCC)	

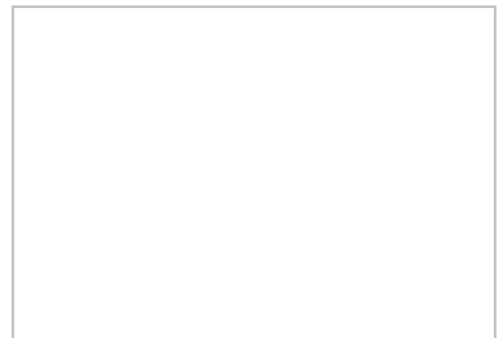
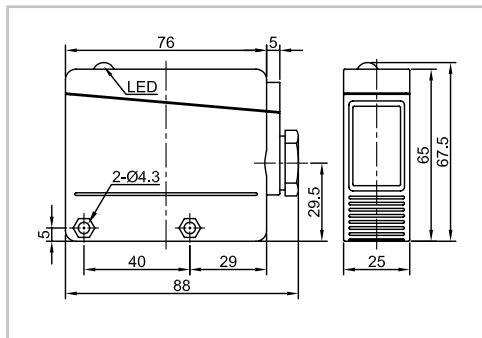
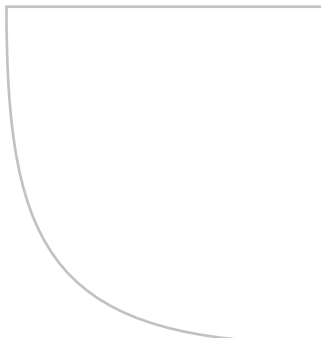






Item Code	PTL		
Sensing mode	Polarized reflection		
Sensing distance	12m (Non-adjustable)		



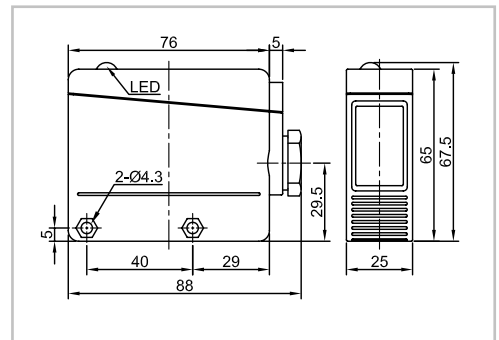
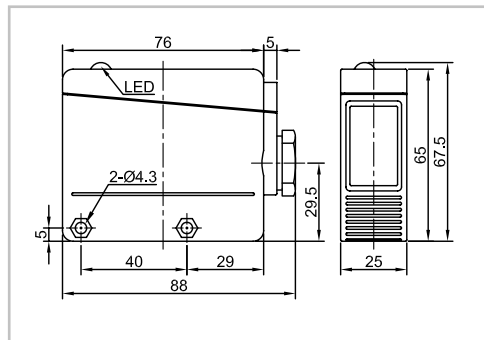
Output				
	Contact output	PTL-PM12SK-D		

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	-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 CCC		CE CCC	



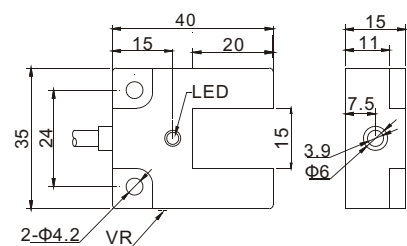
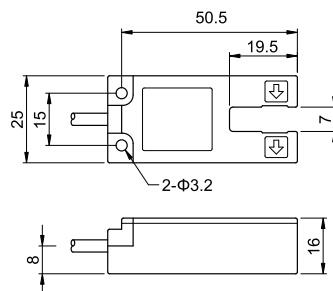
Item Code	PU07	PU15
Sensing mode	Through beam	Through beam
Slot width	7mm (adjustable)	15mm (adjustable)





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

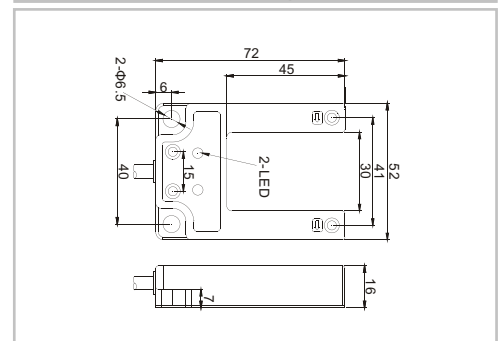
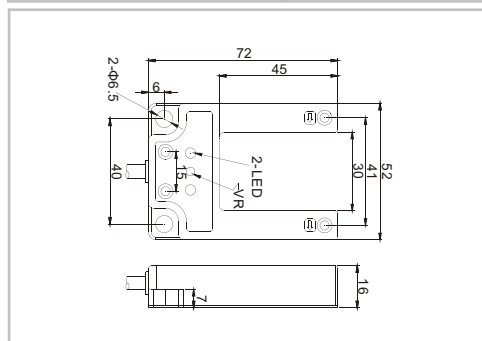
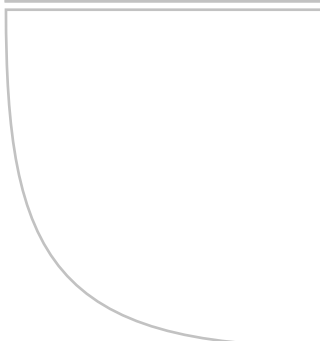
Supply voltage	10...30VDC	10...30VDC
Light source	Infrared LED(Modulated)	Infrared LED(Modulated)
Sensing Object	Opaque Objects with $\Phi > 1\text{mm}$	Opaque Objects with $\Phi > 1\text{mm}$
Residual voltage	Max,1ms	Max,1ms
Response time	$\leq 200\text{ms}$	$\leq 200\text{ms}$
Load current	$\leq 2.5\text{VDC}$	$\leq 2.5\text{VDC}$
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 50-Hz in each of xy and z direction for two hours	15mm amplitude at 10 to 50-Hz in each of xy 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



光纤放大器 系列

启迪光纤感应科技

开创工业自动化新未来



 LANBAO



上海兰宝传感器有限公司

上海兰宝传感器有限公司创立于1998年，是上海市高新技术企业，国内领先的工业自动化产品供应商。

我们为客户提供超过3000多种规格的产品，涵盖电感式传感器、电容式传感器、光电式传感器、霍尔传感器、磁感应传感器、各类光幕/光栅、固态继电器等系列产品，以及工业自动化综合解决方案。我们已通过ISO9001:2008质量管理体系认证，并已实施欧盟RoHS环保指令。我们的产品系列已通过CCC认证、CE认证和UL认证。

我们的产品广泛应用于冶金、钢铁、石油、化工、纺织、烟草、食品、印刷、矿山、电子、仪器等行业的工业机械设备及自动化生产线，作限位保护、定位检测、信号传送、自动计数、测速等作用，为客户创造长期的价值和潜在的增长。

我们始终坚持以质量第一、价格合理、交货及时、服务周到的原则，不但为客户提供常规型号产品，也可以根据客户的具体需求设计开发新产品，及时为客户提供全面的产品服务，最大限度地满足用户需要。



传通世界 感知未来
Sensing the dream

LANBAO SENSOR
LANBAO SENSOR



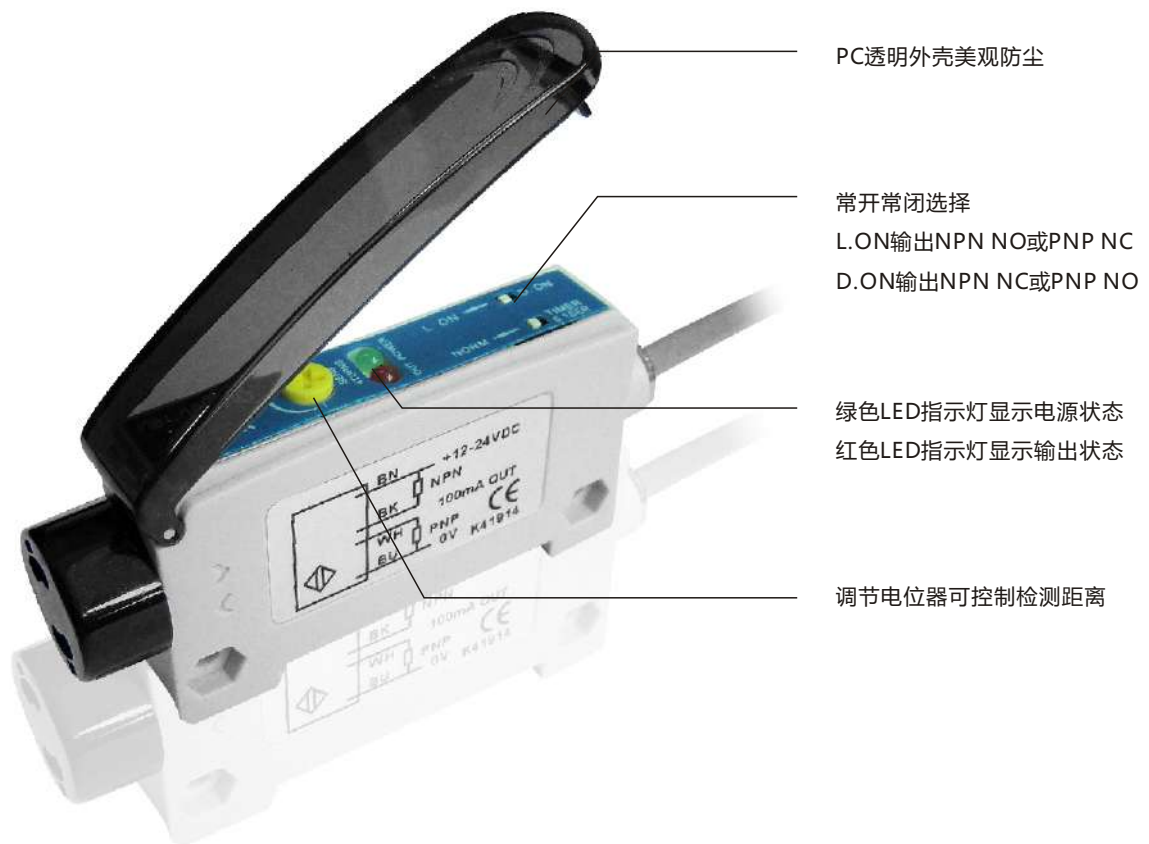
光纤传感器

FD1 系列

- 同时具备NPN/PNP，NO/NC多种输出模式
- 具有延时控制调节功能
- 具有灵敏度调节功能，用户可根据不同的检测物调节
- 响应快，频率高、
- 抗电磁干扰、抗外界光线影响



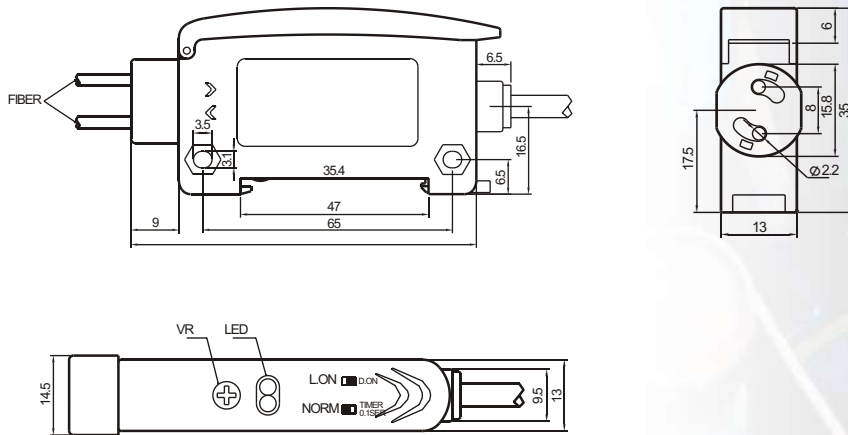
光纤传感器广泛应用于食品，包装，电子等自动化行业，通常用于机械工程和产品制造过程中在空间狭小位置、检测精度要求较高的场合，起检测、计数、位置控制等作用。



型号规格与参数

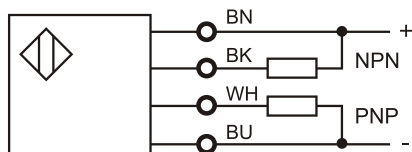
型号	FD1-NPR
检测物体	不透明体
电源电压	12~24VDC±10%
消耗电流	40mA以下
响应时间	1ms以下
负载电流	100mA以下
保护电路	过载保护, 极性保护
输出方式	NPN/PNP NO/NC
光源	红光LED
指示灯	电源: 绿色LED; 输出: 红色LED
环境温度	0~+50°C (注意不可结露、结冰)
环境湿度	35~85%RH
照明度	白炽灯: 受光面照明度3,000ex
耐电压	AC1,000V 1分钟 50/60HZ
绝缘电阻	50MΩ以上, 基于DC500V的高阻表
耐振动	10~50HZ, 双振幅; 0.75mm, X, Y和Z各方向2小时
耐冲击	加速度: 500m/s ² (约50G) X, Y和Z各方向3次
防护等级	IP65
材质	外壳: PC/ABS
电缆	2M PVC电缆

尺寸图



电气接线图

NPN/PNP NO/NC



































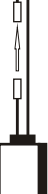































电缆颜色(符合DIN IEC 60757)

BN...棕 BK.....黑

BU...蓝 WH....白

直接反射式、对射式光纤头

检测方式	外形	直径	检测距离 (mm)	最小检测物	最小曲度	重量 (g)	型号	
		M6	110	Φ0.2	R25	40	PR-610	
		Φ5				40	PPR-510	
		M4				40	PRB-410	
		Φ3				40	PRB-310-Q	
		M6	170	Φ0.5	R40	43	PRX-610	
						Φ5	40	PRX-510
		M6	100	Φ0.1	R25	40	PRC-610	
						M4	50	Φ0.05	R15	35	PRC-410
		M3	33	PRC-310				
		Φ3	33	PRC-310-Q				
		Φ1	30	PRC7-110-Q20				
		M3	16	Φ0.05	R15	30	PRC4-310	
						Φ2	30	PRC4-210
						Φ1	30	PRC4-110
		M6	80	Φ0.2	R25	40	PRH-610	
						Φ5	40	PRH-510
		M4	40	Φ0.2	R2	40	PRZ-410	
						Φ3	40	PRZ-310-Q
		M4	16	Φ0.1	R1	40	PRW-410	
						square	40	PRW-11
		M6	100	Φ0.2	R2	45	PRY-610	
						M4	6	Φ0.05	R10	33	PRE-410
	35		PRA-410					
	33		PRE-310					
	33		PRE-310Q					
		M3	6	Φ0.05	R10	35	PRA-310	
						Φ2	33	PRE-210
			Φ5	40	Φ0.1	R15	36	PRS-510
			33				PRS-410	
			33				PRD-410	
		33	PRS-310					
		M3	40	Φ0.1	R15	35	PRD-310	
						Φ2	33	PRS-210
			M4	80	Φ0.05	R15	40	PRJ-410
			M3				40	PRJ-310
		Rectangle	90	Φ1.0	R25	60	PR-20ML	
						Rectangle	50	Φ1.0	R15	40	PR-10ML

检测方式	外形	直径	检测距离 (mm)	最小检测物	最小曲度	重量 (g)	型号				
		M6	500	Φ0.5	R25	49	PT-610				
		Φ5				47	PT-510				
		M4				45	PT-410				
		M3				45	PT-310				
		M4	360	Φ0.2	R15	35	PTB-410				
						M3	35	PTB-310			
		Φ2	360	Φ0.2	R15	35	PTB-210				
						M4	900	Φ1.0	R40	40	PTJ-410
			Φ2	40	PTJ-210						
		Φ5	240	Φ0.5	R25	42	PTX-510				
						M4	42	PTX-410			
		M3	40	Φ0.03	R10	40	PTH-410				
						Φ2	40	Φ0.03	R10	35	PTE-310
	35		PTA-310								
	35		PTE-210								
	33		PTA-210								
		Φ1	40	Φ0.03	R10	32	PTE-110				
						M6	300	Φ0.5	R2	47	PTY-610
			M4	45	PTY-410						
			M3	40	PTY-310						
			M4	40	PTZ-410						
		M3	300	Φ0.5	R2	40	PTZ-310				
						M4	60	Φ0.05	R1	35	PTW-410
			Φ1.5	30	Φ0.05	R1				50	TW2-475D
			M4	110	Φ0.05	R15				35	PTS-410
										M3	35	PTS-310
		Φ2	110	Φ0.05	R15	35	PTD-310				
		33				PTS-210					
		33				PTD-210					
		32				PTS-110					
		Φ1	100	Φ0.1	R15	30	PTC4-110				
						Φ1	100	Φ0.1	R15	33	PTC4-210
			M3	100	Φ0.1	R15				30	PTC4-310
			Φ1.5				240	Φ1.0	R15	35	PT-10ML
		Φ1.5	360	Φ1.0	R25	55	PT-15ML				
						Φ1.5	55	PT-15MLD			
		Rectangle	360	Φ1.0	R25	95	PT-20ML				

服务热线 **800-820-8259**

www.shlanbao.cn

上海兰宝传感器有限公司

地址：上海市奉贤区金汇工业园区金碧路228号

邮编：201404

电话：021-57486188

传真：021-57486199

邮箱：sales@shlanbao.cn



色标传感器 系列

传通世界 感知未来



 **LAMBDA**

色标传感器常用于检测特定色标或物体上的斑点，它通过与非色标区相比较来实现色标检测，而不是直接测量颜色。色标传感器是一种双透镜系统，受光器接收到由投光器发出被检测物表面漫反射光而引起动作来进行检测。

注：电位器旋转角度为270°，须按箭头标识旋转，直至拧不动为止，切不可强行再拧。



色标传感器

SPM系列

- 多种电路保护措施，确保产品稳定安全使用：逆极性保护、浪涌保护、短路保护
- 清晰明确的指示方式：黄色LED显示可检查传感器的状态
- 选用优良元件和严格生产流程，保证产品的长寿命和高可靠性
- 使用成本经济，操作简易，运用广泛



记号传感器(检测色感·明暗)

根据可判别彩色记号的颜色来选择

色标传感器识别色与光源：

○ 白色光源 ● 红色光源 ● 绿色光源 ● 蓝色光源

底色 标识色	白	黄	橙	红	绿	蓝	黑
白	—	○●	○●●	○●●	○●●●	○●●●	○●●●
黄	○●	—	○●	○●	○●●	○●●●	○●●●
橙	○●●	○●	—	○●	○●●	○●●	○●●
红	○●●	○●	○●	—	○●●	○●●●	○●●
绿	○●●●	○●●	○●●	○●●	—	●	○●●
蓝	○●●●	○●●●	○●●	○●●●	●	—	○●●
黑	○●●●	○●●●	○●●	○●●	○●●	○●●	—

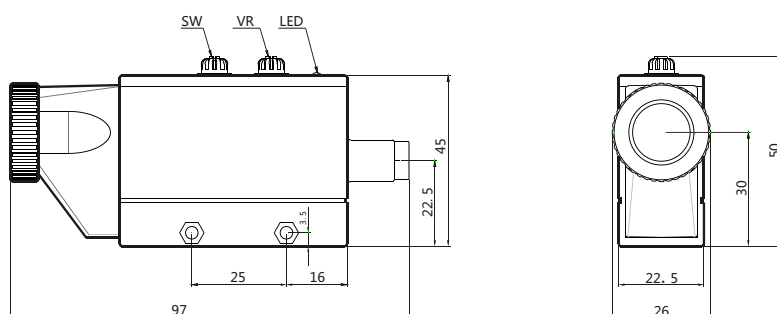
在单色光源中，绿光LED（565nm）和红光LED（660nm）各有所长
 绿光LED比白炽灯寿命长，并且在很宽的颜色范围内比红光光源灵敏度高
 红光LED对有限的颜色组合有响应，但它的检测距离比绿光LED远
 通常红光光源传感器的检测距离是绿光源传感器的6~8倍

色标传感器广泛应用于印刷、包装的设备中起辨别颜色、检测色标的作用，并可与其它设备一起使用；
 以实现自动定位、定长、辨色、分切、纠偏、计数等功能。

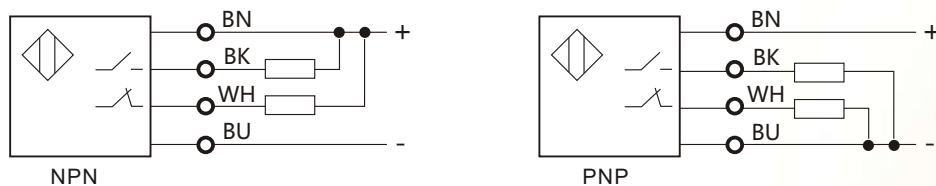
型号规格与参数

型号	SPM-TNR-WB	SPM-TPR-WB	SPM-TNR-RG	SPM-TPR-RG
类型	聚焦型			
开关组成	发射器与接收器一体			
检测距离[mm]	10±2mm			
输出方式	NPN NO+NC	PNP NO+NC	NPN NO+NC	PNP NO+NC
光源	可见白光/蓝光	可见白光/蓝光	可见红光/绿光	可见红光/绿光
检测距离	10±2mm			
电源电压	12...24VDC			
光斑直径	<1.5mm			
响应时间	Max, 1ms			
迟滞范围[%/Sr]	1...15%			
重复误差	≤3%			
负荷电流[mA]	≤200mA			
残留电压	≤2.5VDC			
消耗电流[mA]	≤45mA			
保护回路	浪涌、短路、逆极性保护			
输出指示灯	黄色LED			
环境温度[°C]	-25...55°C			
环境湿度	35-85%RH			
耐电压	1000V/AC 50/60Hz 60s			
绝缘阻抗	≥50MΩ(500VDC)			
耐振动	复振幅1.5mm 10...50Hz(X,Y,Z方向各2小时)			
防护等级	IP65			
外壳材料	PBT			
接线方式	2米PVC电缆			

尺寸图



电气接线图



服务热线 **800-820-8259**
www.shlanbao.cn

上海兰宝传感器有限公司

地址：上海市奉贤区金汇工业园区金碧路228号
邮编：201404
电话：021-57486188
传真：021-57486199
邮箱：sales@shlanbao.cn