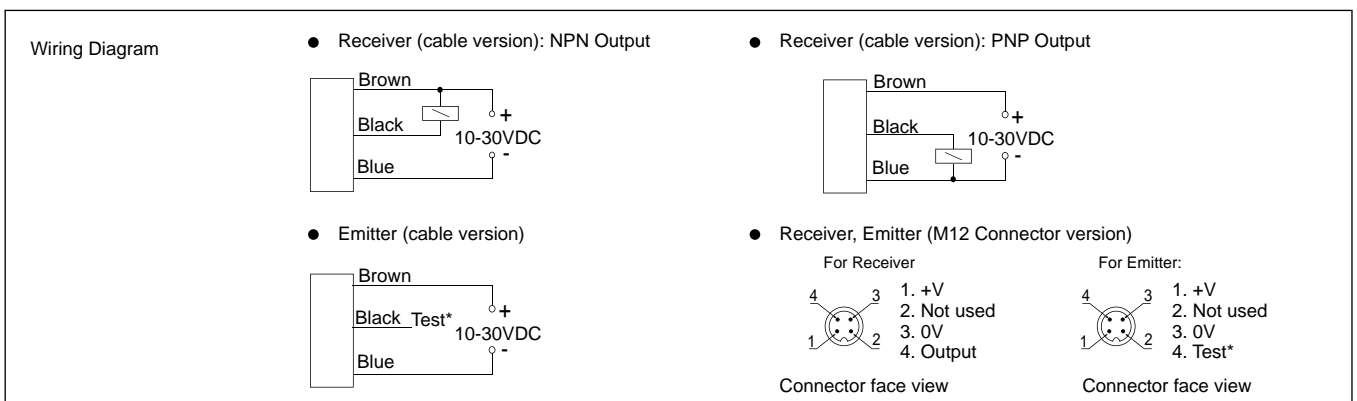
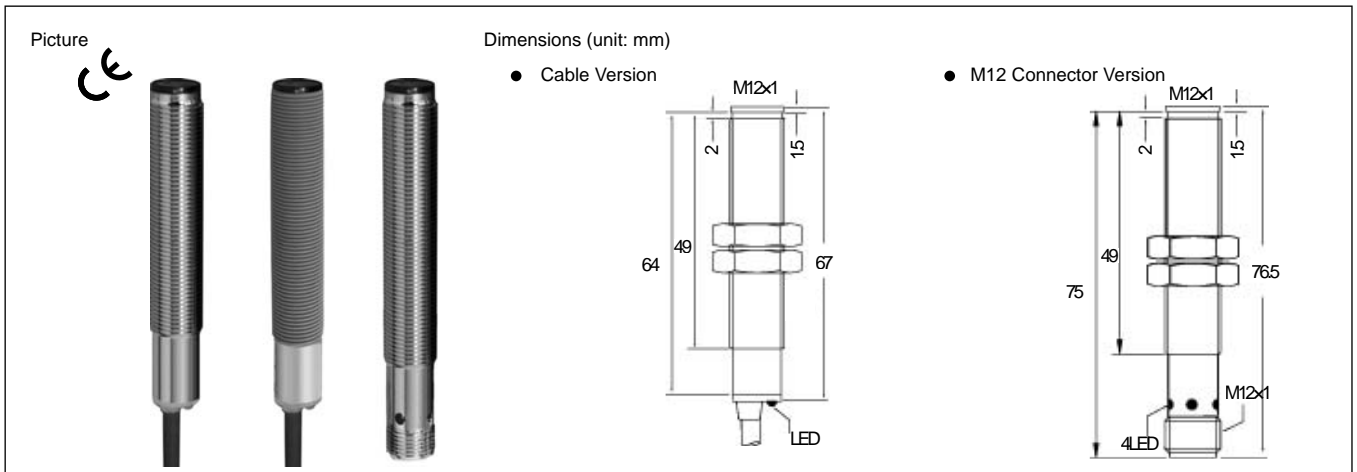


M12 SERIES PHOTOELECTRIC SENSOR (10-30VDC)

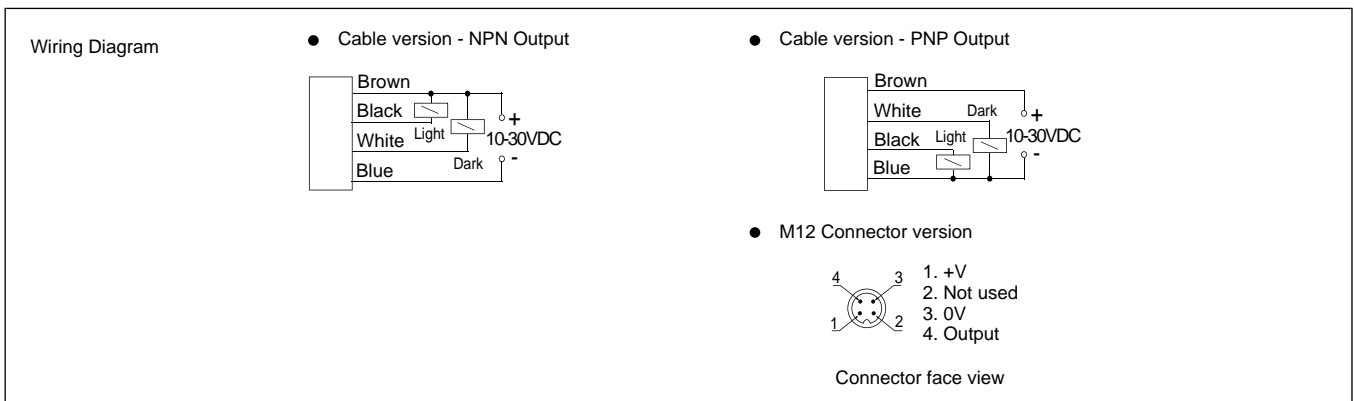
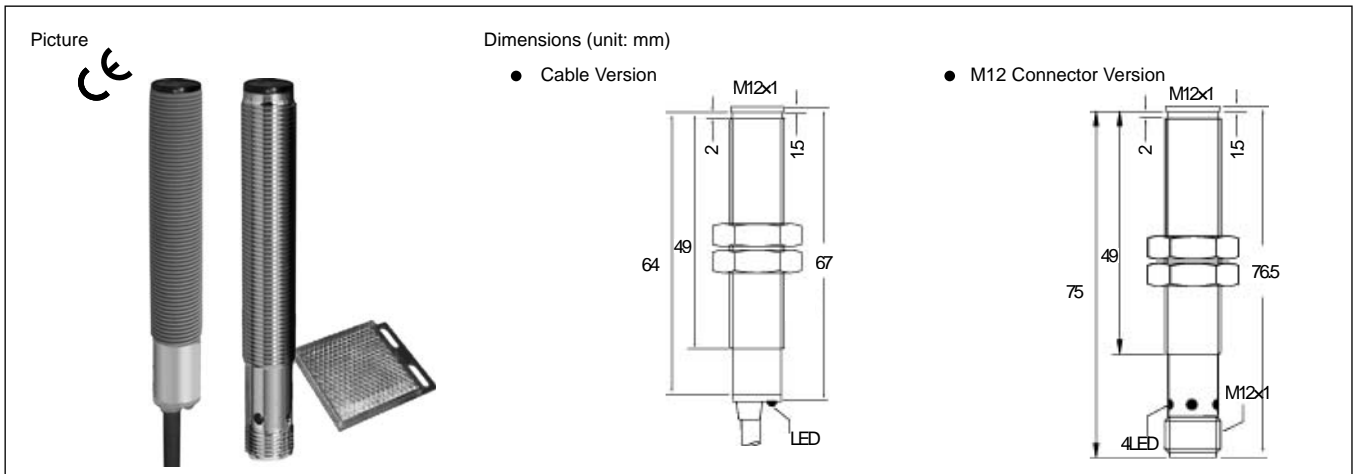
Series	M12		M12		
Sensing Mode	Through-beam		Through-beam		
Sensing Schematic					
Sensing Range	5.2M		10M		
Supply Voltage	10-30VDC (±10%)		10-30VDC (±10%)		
No Load Current	≤30mA		≤30mA		
Max. Load current	150mA		150mA		
Voltage Drop (Sensor ON)	≤2.5V		≤2.5V		
Switching Hysteresis	<10%(Sr)		<10%(Sr)		
Output	PNP or NPN		PNP or NPN		
Output Operation	Light On or Dark On		Light On or Dark On		
Response Time	1ms		1ms		
Emitting Element	Infrared (880nm)		Infrared (880nm)		
Protection Category	IP67		IP67		
Operating Temperature	-25°C - +55°C		-25°C - +55°C		
Ambient Humidity	35% - 85% RH		35% - 85% RH		
Light Immunity	>10,000Lux		>10,000Lux		
Tolerance	±10%(Sr)		±10%(Sr)		
Short Circuit Protection	Yes		Yes		
Electric Protections	Yes		Yes		
Sensing Object	Φ8mm or more		Φ8mm or more		
Weight	approx.65 g	approx.75 g	approx.65 g	approx.75 g	
Housing Material	Plastic	Nickel Plated Brass	Plastic	Nickel Plated Brass	
2m PVC Cable (4.0φ 3x0.25)	Emitter	PPM12-T52E-H1V2	PBM12-T52E-H1V2	PPM12-T10ME-H1V2	PBM12-T10ME-H1V2
	NPN Light On	PPM12-T52N-A1V2	PBM12-T52N-A1V2	PPM12-T10MN-A1V2	PBM12-T10MN-A1V2
	NPN Dark On	PPM12-T52N-B1V2	PBM12-T52N-B1V2	PPM12-T10MN-B1V2	PBM12-T10MN-B1V2
	PNP Light On	PPM12-T52P-A1V2	PBM12-T52P-A1V2	PPM12-T10MP-A1V2	PBM12-T10MP-A1V2
	PNP Dark On	PPM12-T52P-B1V2	PBM12-T52P-B1V2	PPM12-T10MP-B1V2	PBM12-T10MP-B1V2
M12 Connector	Emitter	PPM12-T52E-H1E4	PBM12-T52E-H1E4	PPM12-T10ME-H1E4	PBM12-T10ME-H1E4
	NPN Light On	PPM12-T52N-A1E4	PBM12-T52N-A1E4	PPM12-T10MN-A1E4	PBM12-T10MN-A1E4
	NPN Dark On	PPM12-T52N-B1E4	PBM12-T52N-B1E4	PPM12-T10MN-B1E4	PBM12-T10MN-B1E4
	PNP Light On	PPM12-T52P-A1E4	PBM12-T52P-A1E4	PPM12-T10MP-A1E4	PBM12-T10MP-A1E4
	PNP Dark On	PPM12-T52P-B1E4	PBM12-T52P-B1E4	PPM12-T10MP-B1E4	PBM12-T10MP-B1E4




* Test (Black wire)=0V, Emitter off.


M12 SERIES PHOTOELECTRIC SENSOR (10-30VDC)

Series	M12		M12		
Sensing Mode	Retro-reflective		Retro-reflective (With polarized filter)		
Sensing Schematic					
Sensing Range	2M		500mm		
Supply Voltage	10-30VDC (±10%)		10-30VDC (±10%)		
No Load Current	≤30mA		≤30mA		
Max. Load current	150mA		150mA		
Voltage Drop (Sensor ON)	≤2.5V		≤2.5V		
Switching Hysteresis	<10%(Sr)		<10%(Sr)		
Output	PNP or NPN		PNP or NPN		
Output Operation	Light On & Dark On		Light On & Dark On		
Response Time	1ms		1ms		
Emitting Element	Infrared (880nm)		Red (660nm)		
Protection Category	IP67		IP67		
Operating Temperature	-25°C - +55°C		-25°C - +55°C		
Ambient Humidity	35% - 85% RH		35% - 85% RH		
Light Immunity	>10.000Lux		>10.000Lux		
Tolerance	±10%(Sr)		±10%(Sr)		
Short Circuit Protection	Yes		Yes		
Electric Protections	Yes		Yes		
Sensing Object	Q51 Mirror		Q51 Mirror		
Weight	approx.60 g	approx.75 g	approx.60 g	approx.75 g	
Housing Material	Plastic	Nickel Plated Brass	Plastic	Nickel Plated Brass	
2m PVC Cable (4.0 ∅ 3x0.25)	NPN Light On&Dark On	PPM12-R2N-C1V2	PBM12-R2N-C1V2	PPM12-R05N-C1V2/F	PBM12-R05N-C1V2/F
	PNP Light On&Dark On	PPM12-R2P-C1V2	PBM12-R2P-C1V2	PPM12-R05P-C1V2/F	PBM12-R05P-C1V2/F
M12 Connector	NPN Light On&Dark On	PPM12-R2N-C1E4	PBM12-R2N-C1E4	PPM12-R05N-C1E4/F	PBM12-R05N-C1E4/F
	PNP Light On&Dark On	PPM12-R2P-C1E4	PBM12-R2P-C1E4	PPM12-R05P-C1E4/F	PBM12-R05P-C1E4/F

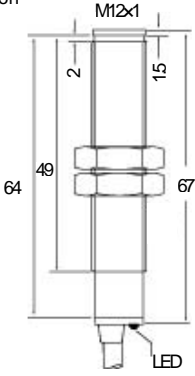
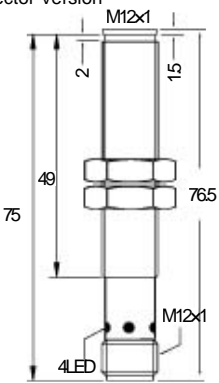


M12 SERIES PHOTOELECTRIC SENSOR (10-30VDC)

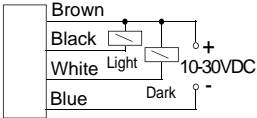
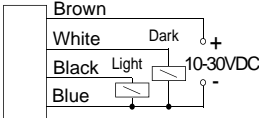

Series	M12		
Sensing Mode	Diffuse		
Sensing Schematic			
Sensing Range	200mm		
Supply Voltage	10-30VDC (±10%)		
No Load Current	≤30mA		
Max. Load current	150mA		
Voltage Drop (Sensor ON)	≤2.5V		
Switching Hysteresis	<10%(Sr)		
Output	PNP or NPN		
Output Operation	Light On & Dark On		
Response Time	1ms		
Emitting Element	Infrared (880nm)		
Protection Category	IP67		
Operating Temperature	-25°C - +55°C		
Ambient Humidity	35% - 85% RH		
Light Immunity	>10.000Lux		
Tolerance	±10%(Sr)		
Short Circuit Protection	Yes		
Electric Protections	Yes		
Sensing Object	10x10cm white paper		
Weight	approx.60 g	approx.75 g	
Housing Material	Plastic	Nickel Plated Brass	
2m PVC Cable (4.0 ∅ 3x0.25)	NPN Light On&Dark On	PPM12-D02N-C1V2	PBM12-D02N-C1V2
	PNP Light On&Dark On	PPM12-D02P-C1V2	PBM12-D02P-C1V2
M12 Connector	NPN Light On&Dark On	PPM12-D02N-C1E4	PBM12-D02N-C1E4
	PNP Light On&Dark On	PPM12-D02P-C1E4	PBM12-D02P-C1E4

Picture 

Dimensions (unit: mm)

- Cable Version
 
- M12 Connector Version
 

Wiring Diagram

- Cable version - NPN Output
 
- Cable version - PNP Output
 
- M12 Connector version
 

1. +V
2. Not used
3. 0V
4. Output

Connector face view