

M18 SERIES PHOTOELECTRIC SENSOR (10-30VDC)

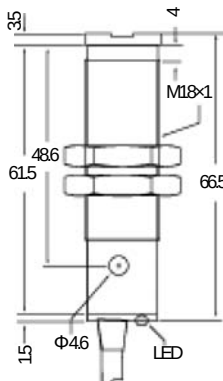
Series	M18	
Sensing Mode	Through-beam	
Sensing Schematic		
Sensing Range	15M	
Supply Voltage	10-30VDC (±10%)	
No Load Current	≤30mA	
Max. Load current	200mA	
Voltage Drop (Sensor ON)	≤2.5V	
Switching Hysteresis	<10%(Sr)	
Output	PNP or NPN	
Output Operation	Light On or Dark On; Light On & Dark On	
Response Time	1ms	
Emitting Element	Infrared (880nm)	
Protection Category	IP67	
Operating Temperature	-25°C - +55°C	
Ambient Humidity	35% - 85% RH	
Light Immunity	>10.000Lux	
Sensitivity Adjustment	Trimmer 1 turn	
Short Circuit Protection	Yes	
Electric Protections	Yes	
Sensing Object	Φ8mm or more	
Weight	approx.105 g	approx.120 g
Housing Material	Plastic	Nickel Plated Brass
2m PVC Cable (5.0Φ 4x0.25)	Emitter	PPM18-T15ME-H1V2
	NPN Light On & Dark On	PBM18-T15ME-H1V2
	PNP Light On & Dark On	PBM18-T15MN-C1V2
	NPN Light On or Dark On	PBM18-T15MP-C1V2
	PNP Light On or Dark On	PBM18-T15MP-D1V2
M12 Connector	Emitter	PPM18-T15ME-H1E4
	NPN Light On & Dark On	PBM18-T15ME-H1E4
	PNP Light On & Dark On	PBM18-T15MN-C1E4
	NPN Light On or Dark On	PBM18-T15MP-C1E4
	PNP Light On or Dark On	PBM18-T15MP-D1E4

Picture

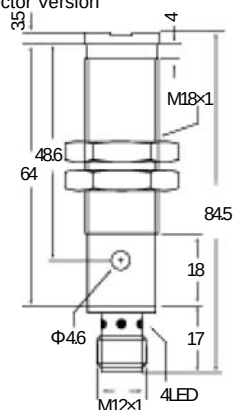


Dimensions (unit: mm)

● Cable Version

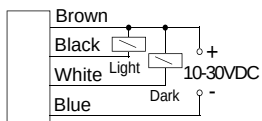


● M12 Connector Version

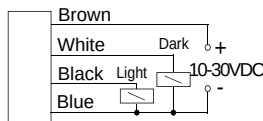


Wiring Diagram

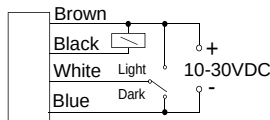
● Cable version - NPN Output
Light on & Dark on



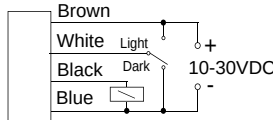
● Cable version - PNP Output
Light on & Dark on



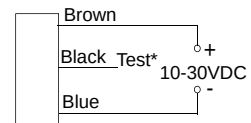
● Cable version - NPN Output
Light on or Dark on



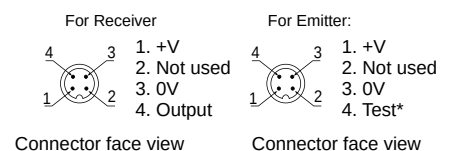
● Cable version - PNP Output
Light on or Dark on



● Emitter (cable version)



● M12 Connector version



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

M18 SERIES PHOTOELECTRIC SENSOR (10-30VDC)

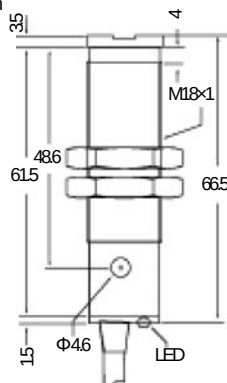
Series	M18	M18
Sensing Mode	Retro-reflective	Retro-reflective (With polarized filter)
Sensing Schematic		
Sensing Range	3M	1M
Supply Voltage	10-30VDC (±10%)	10-30VDC (±10%)
No Load Current	≤30mA	≤30mA
Max. Load current	200mA	200mA
Voltage Drop (Sensor ON)	≤2.5V	≤2.5V
Switching Hysteresis	<10%(Sr)	<10%(Sr)
Output	PNP or NPN	PNP or NPN
Output Operation	Light On or Dark On; Light On & Dark On	Light On or 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
Sensitivity Adjustment	Trimmer 1 turn	Trimmer 1 turn
Short Circuit Protection	Yes	Yes
Electric Protections	Yes	Yes
Sensing Object	Q51 Mirror	Q51 Mirror
Weight	approx.105 g	approx.75 g
Housing Material	Plastic	Nickel Plated Brass
2m PVC Cable (5.0φ 4x0.25)	NPN Light On & Dark On	PPM18-R3N-C1V2
	PNP Light On & Dark On	PPM18-R3P-C1V2
	NPN Light On or Dark On	PPM18-R3N-D1V2
	PNP Light On or Dark On	PPM18-R3P-D1V2
M12 Connector	NPN Light On & Dark On	PPM18-R3N-C1E4
	PNP Light On & Dark On	PPM18-R3P-C1E4
	NPN Light On or Dark On	PPM18-R3N-D1E4
	PNP Light On or Dark On	PPM18-R3P-D1E4
	PPM18-R1N-C1V2/F	PBM18-R1N-C1V2/F
	PPM18-R1N-C1V2/F	PBM18-R1N-C1V2/F
	PPM18-R1P-C1V2/F	PBM18-R1P-C1V2/F
	PPM18-R1P-C1V2/F	PBM18-R1P-C1V2/F
	PPM18-R1N-C1E4/F	PBM18-R1N-C1E4/F
	PPM18-R1N-C1E4/F	PBM18-R1N-C1E4/F
	PPM18-R1P-C1E4/F	PBM18-R1P-C1E4/F
	PPM18-R1P-C1E4/F	PBM18-R1P-C1E4/F

Picture

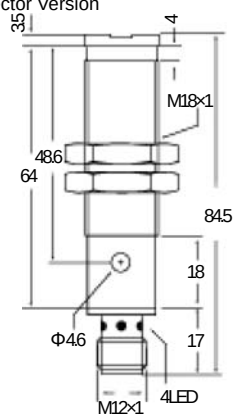


Dimensions (unit: mm)

● Cable Version

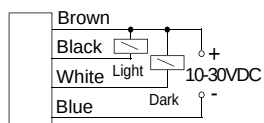


● M12 Connector Version

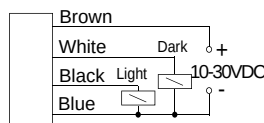


Wiring Diagram

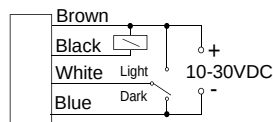
● Cable version - NPN Output
Light on & Dark on



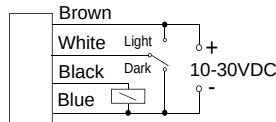
● Cable version - PNP Output
Light on & Dark on



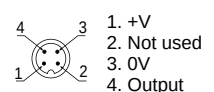
● Cable version - NPN Output
Light on or Dark on



● Cable version - PNP Output
Light on or Dark on



● M12 Connector version



Connector face view

M18 SERIES PHOTOELECTRIC SENSOR (10-30VDC)

Series	M18	M18
Sensing Mode	Diffuse	Diffuse
Sensing Schematic		
Sensing Range	150mm	500mm
Supply Voltage	10-30VDC (±10%)	10-30VDC (±10%)
No Load Current	≤30mA	≤30mA
Max. Load current	200mA	200mA
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 & Dark On	Light On or Dark On; Light On & 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
Sensitivity Adjustment	Trimmer 1 turn	Trimmer 1 turn
Short Circuit Protection	Yes	Yes
Electric Protections	Yes	Yes
Sensing Object	10x10cm white paper	20x20cm white paper
Weight	approx.105 g	approx.65 g
Housing Material	Plastic	Nickel Plated Brass

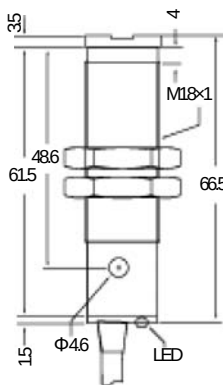
2m PVC Cable (5.0φ 4x0.25)	NPN Light On & Dark On	PPM18-D015N-C1V2	PBM18-D015N-C1V2	PPM18-D05N-C1V2	PBM18-D05N-C1V2
	PNP Light On & Dark On	PPM18-D015P-C1V2	PBM18-D015P-C1V2	PPM18-D05P-C1V2	PBM18-D05P-C1V2
	NPN Light On or Dark On	PPM18-D015N-D1V2	PBM18-D015N-D1V2	PPM18-D05N-D1V2	PBM18-D05N-D1V2
	PNP Light On or Dark On	PPM18-D015P-D1V2	PBM18-D015P-D1V2	PPM18-D05P-D1V2	PBM18-D05P-D1V2
M12 Connector	NPN Light On & Dark On	PPM18-D015N-C1E4	PBM18-D015N-C1E4	PPM18-D05N-C1E4	PBM18-D05N-C1E4
	PNP Light On & Dark On	PPM18-D015P-C1E4	PBM18-D015P-C1E4	PPM18-D05P-C1E4	PBM18-D05P-C1E4
	NPN Light On or Dark On	PPM18-D015N-D1E4	PBM18-D015N-D1E4	PPM18-D05N-D1E4	PBM18-D05N-D1E4
	PNP Light On or Dark On	PPM18-D015P-D1E4	PBM18-D015P-D1E4	PPM18-D05P-D1E4	PBM18-D05P-D1E4

Picture

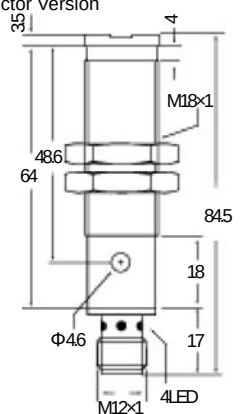


Dimensions (unit: mm)

- Cable Version

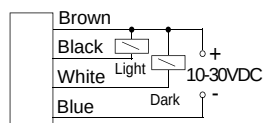


- M12 Connector Version

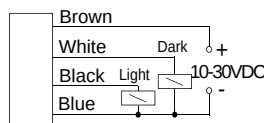


Wiring Diagram

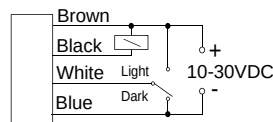
- Cable version - NPN Output
Light on & Dark on



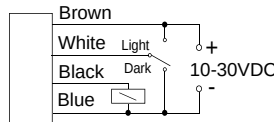
- Cable version - PNP Output
Light on & Dark on



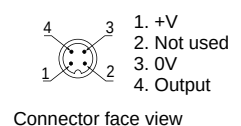
- Cable version - NPN Output
Light on or Dark on



- Cable version - PNP Output
Light on or Dark on



- M12 Connector version

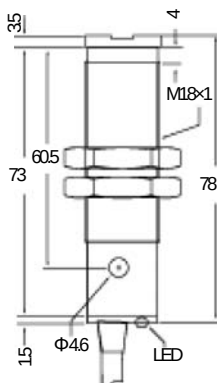


M18 SERIES PHOTOELECTRIC SENSOR (20-240VAC)

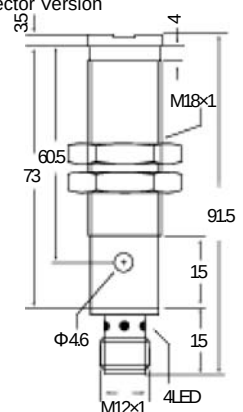
Series		M18		
Sensing Mode		Through-beam		
Sensing Schematic				
Sensing Range		15M		
Supply Voltage		24-240VDC (±10%)		
No Load Current		≤5mA		
Max. Load current		200mA		
Switching Hysteresis		<10%(Sr)		
Output		AC non-contact (MOSFET Output)		
Output Operation		Light On or Dark On		
Response Time		15ms		
Emitting Element		Infrared (880nm)		
Protection Category		IP67		
Operating Temperature		-25℃- +55℃		
Ambient Humidity		35% - 85% RH		
Light Immunity		>10.000Lux		
Tolerance		±10%(Sr)		
Sensitivity Adjustment		Trimmer 1 turn		
Sensing Object		Φ8mm or more		
Weight		approx.105 g	approx.120 g	
Housing Material		Plastic	Nickel Plated Brass	
2m PVC Cable (5.0 Φ 3x0.34)	Emitter	PPM18-T15ME-H2V2	PBM18-T15ME-H2V2	
	Light On	PPM18-T15MA-A2V2	PBM18-T15MA-A2V2	
	Dark On	PPM18-T15MA-B2V2	PBM18-T15MA-B2V2	
M12 Connector	Emitter	PPM18-T15ME-H2E4	PBM18-T15ME-H2E4	
	Light On	PPM18-T15MA-A2E4	PBM18-T15MA-A2E4	
	Dark On	PPM18-T15MA-B2E4	PBM18-T15MA-B2E4	



- Cable Version

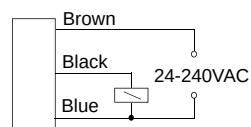


- M12 Connector Version

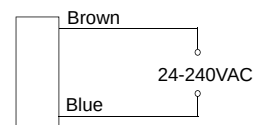


Wiring Diagram

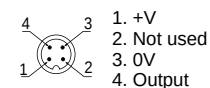
- Cable version - Receiver



- Cable version - Emitter



- M12 Connector version



Connector face view

M18 SERIES PHOTOELECTRIC SENSOR (20-240VAC)

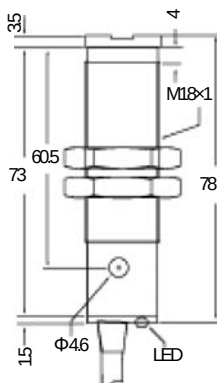
Series	M18		M18	
Sensing Mode	Retro-reflective		Retro-reflective (With polarized filter)	
Sensing Schematic				
Sensing Range	3M		1M	
Supply Voltage	24-240VDC (±10%)		24-240VDC (±10%)	
No Load Current	≤5mA		≤5mA	
Max. Load current	200mA		200mA	
Switching Hysteresis	<10%(Sr)		<10%(Sr)	
Output	AC non-contact (MOSFET Output)		AC non-contact (MOSFET Output)	
Output Operation	Light On or Dark On		Light On or Dark On	
Response Time	15ms		15ms	
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)	
Sensitivity Adjustment	Trimmer 1 turn		Trimmer 1 turn	
Sensing Object	Q51 Mirror		Q51 Mirror	
Weight	approx.105 g	approx.120 g	approx.105 g	approx.120 g
Housing Material	Plastic	Nickel Plated Brass	Plastic	Nickel Plated Brass
2m PVC Cable (5.0φ 3x0.34)	Light On	PPM18-R3A-A2V2	PBM18-R3A-A2V2	PPM18-R1A-A2V2/F
	Dark On	PPM18-R3A-B2V2	PBM18-R3A-B2V2	PBM18-R1A-B2V2/F
M12 Connector	Light On	PPM18-R3A-A2E4	PBM18-R3A-A2E4	PPM18-R1A-A2E4/F
	Dark On	PPM18-R3A-B2E4	PBM18-R3A-B2E4	PBM18-R1A-B2E4/F

Picture

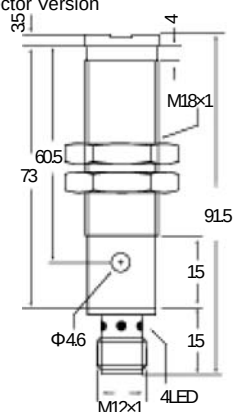


Dimensions (unit: mm)

- Cable Version

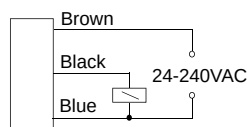


- M12 Connector Version

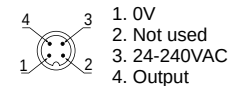


Wiring Diagram

- Cable version



- M12 Connector version



Connector face view

M18 SERIES PHOTOELECTRIC SENSOR (20-240VAC)

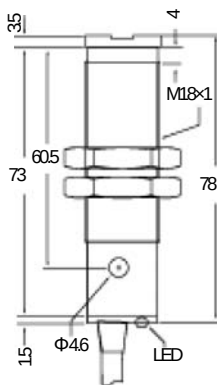
Series	M18	M18
Sensing Mode	Diffuse	Diffuse
Sensing Schematic		
Sensing Range	150mm	500mm
Supply Voltage	24-240VDC (±10%)	24-240VDC (±10%)
No Load Current	≤5mA	≤5mA
Max. Load current	200mA	200mA
Switching Hysteresis	<10%(Sr)	<10%(Sr)
Output	AC non-contact (MOSFET Output)	AC non-contact (MOSFET Output)
Output Operation	Light On or Dark On	Light On or Dark On
Response Time	15ms	15ms
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)
Sensitivity Adjustment	Trimmer 1 turn	Trimmer 1 turn
Sensing Object	10x10cm white paper	20x20cm white paper
Weight	approx.105 g	approx.120 g
Housing Material	Plastic	Nickel Plated Brass
2m PVC Cable (5.0φ 3x0.34)	Light On	PPM18-D015A-A2V2
	Dark On	PBM18-D015A-A2V2
M12 Connector	Light On	PPM18-D015A-A2E4
	Dark On	PBM18-D015A-A2E4

Picture

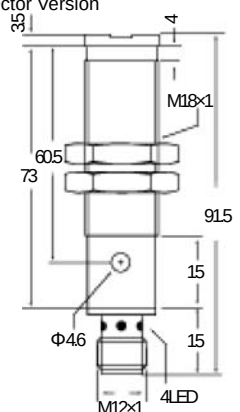


Dimensions (unit: mm)

- Cable Version

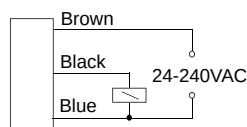


- M12 Connector Version

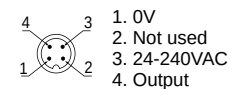


Wiring Diagram

- Cable version



- M12 Connector version



Connector face view