

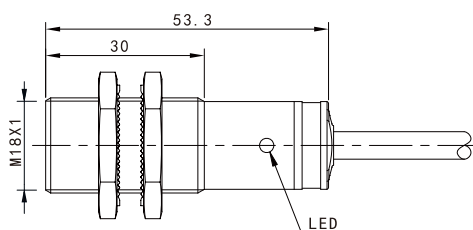


Appearance

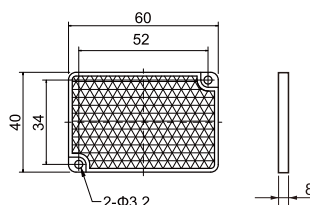
Sensing type		Diffuse reflection		Thru-beam		Retro-reflection	
Sensing distance		10cm(fixed)	40cm(adjustable)	1000cm(fixed)	2000cm(fixed)	300cm(fixed)	
Hysteresis		3~20%		...			
Repeat accuracy		< 5%					
Output type		NPN/PNP Open-collector					
Switch type		Selectable L.on/D.on					
Indicator		Yellow LED		Green LED(Emitter)/Yellow LED(Receiver)		Yellow LED	
Response time		< 8.2 ms					
Light source		Infrared LED(880nm)					
Operating voltage		10~30V DC					
Voltage drop		< 2.5V					
Current consumption		< 25mA					
Load current		< 200mA					
Protection circuit		Reverse polarity, short circuit, surge protection					
Ambient temperature		-15℃~+55℃, No freezing					
Ambient humidity		35%~95%RH, No condensation					
Degree of protection		IP67					
Material		Nickel copper alloy					
Connection method		2M 4core cable					
Accessories		Mounting screws					
Model No.	NPN	PM18-D10NR	PM18-D40NR	HOT	PM18-TM10NR	PM18-TM20NR	PM18-R300NR
	PNP	PM18-D10PR	PM18-D40PR		PM18-TM10PR	PM18-TM20PR	PM18-R300PR

Dimensions

Unit: mm



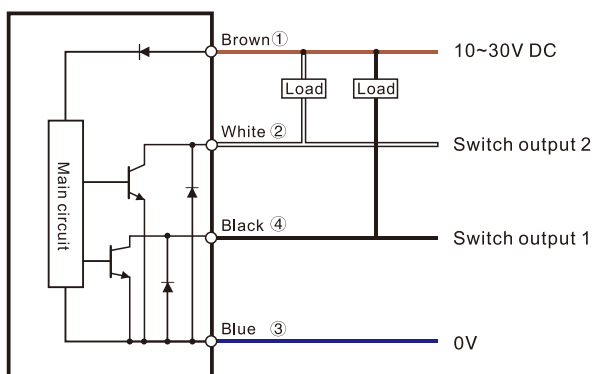
Reflector for PM18-R300



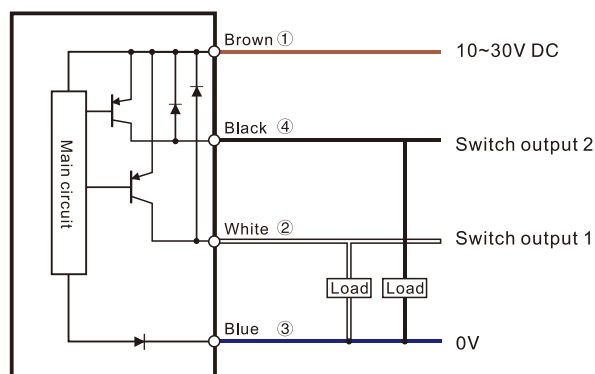
(Standard TD-09)

Circuit diagram

NPN Output



PNP Output



Fiber Optic

Slot Sensors

Photoelectric

Laser

Proximity

Displacement

Magnetic

Contact

Area

Ultrasonic

Vision

Code Readers

Vibration

Temperature

Accessories

Guidance

Photoelectric

Cylindrical

Square

Flat type

Thin type

BGS

Transparent detection

Color/Mark Detection

TOF type

IP69K high protection type

Anti-glare type

IO-Link type

Reflectors

Reflectors

Cylindrical

PM18 Series

Economical Type

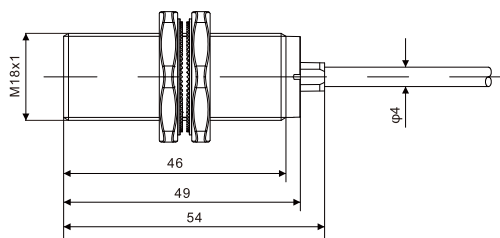


Appearance

Sensing type	Disffuse Reflection		Thru-beam			
Sensing distance	10cm(fixed)		5m(fixed)		20m(fixed)	
Detected object	100mm × 100mm 90% whiteness white paper		> ϕ 18mm,opaque			
Output type	NPN Open-collector		NPN/PNP Open-collector			
Switch type	L.on		Selectable L.on/D.on			
Indicator	Motion indicator light: yellow		Transmitter end: power indicator: green; Receiving end: action indicator light: yellow			
Response time	0.5ms		33ms			
Light source	Infrared LED 940nm (modulation)		Infrared LED 850nm (modulation)			
Operating voltage	10~30V DC		12~24V DC		10~24V DC	
Residual voltage	< 2V					
Current consumption	<25mA		Transmitter < 20 mA; Receiver <20mA		Transmitter < 25 mA; Receiver <25mA	
Load current	< 150mA		< 100mA			
Circuit protection	Reverse polarity, short circuit, surge protection					
Ambient temperature	-20℃~-+55℃, No freezing		-20℃~-+60℃, No freezing			
Storage temperature	-25℃~-+65℃		-25℃~-+70℃		-20℃~-+60℃	
Ambient humidity	35~90%RH, No condensation					
Storage humidity	35~90%RH					
Withstand Voltage	± 1000V 50/60Hz 60s					
Electrostatic	± 4000V					
group value	± 2000V					
Resistance	10~50Hz, 0.5mm amplitude, X, Y, Z direction 2 hours each					
Ambient illuminance	Incandescent lamp: < 3000lux,sunlight: < 10000lux					
Degree of protection	IP67					
Material	Nickel copper alloy					
Connection method	2M 3core cable					
Accessories	Mounting screws					
Model No.	NPN	PM18-D10NO	PM18-D10NC	PM18-TM05NO	PM18-TM20NO	PM18-TM20NC
	PNP			PM18-TM05PO	PM18-TM20PO	PM18-TM20PC

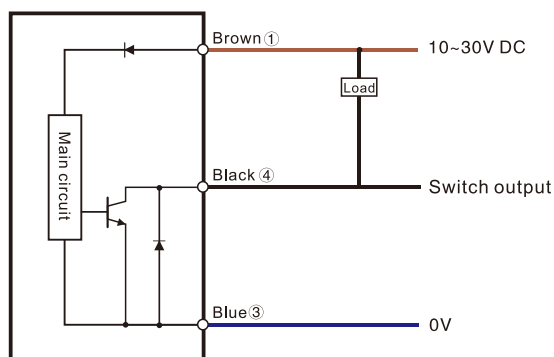
Dimensions

Unit: mm



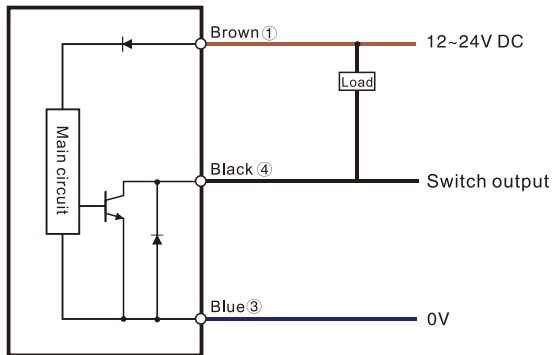
PM18-D10NO(NC)

NPN Output

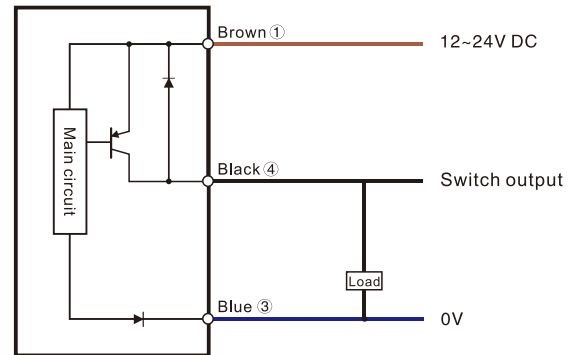


PM18-TM05N(P)O

NPN Output

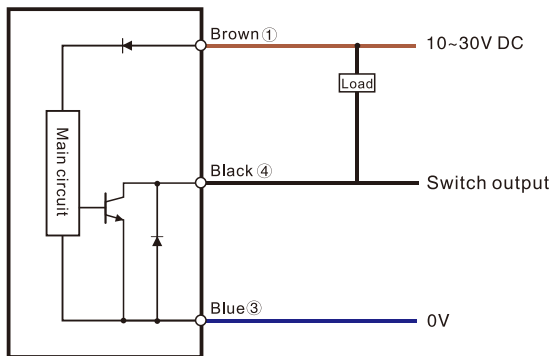


PNP Output

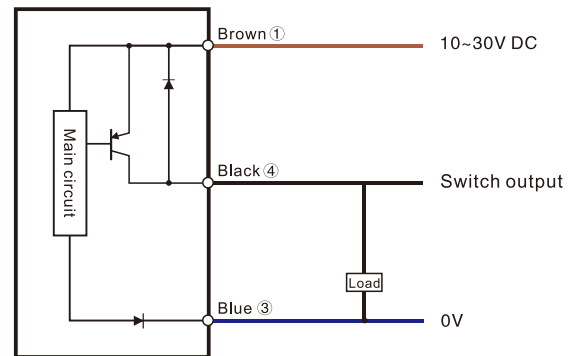


PM18-TM20N(P)O (C)

NPN Output



PNP Output



Fiber Optic
Slot Sensors
Photoelectric
Laser
Proximity
Displacement
Magnetic
Contact
Area
Ultrasonic
Vision
Code Readers
Vibration
Temperature
Accessories

Guidance

Photoelectric

Cylindrical

Square

Flat type

Thin type

BGS

Transparent detection

Color/Mark Detection

TOF type

IP69K high protection type

Anti-glare type

IO-Link type

Reflectors

Reflectors

TOF Type Photoelectric

PM18-TF Series

TOF Principle

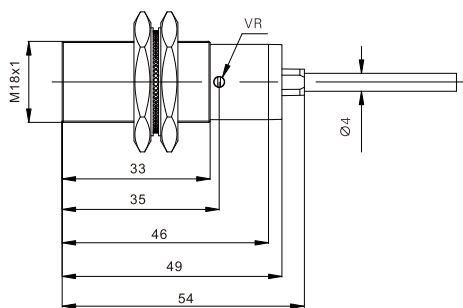


Appearance

Sensing type	Reflection
Sensing distance	1.2m
Spot divergence angle	30°
Output	NPN / PNP open collector
Switch type	L.on/ D.on selectable
Indicator	Operation: green, Motion: Red
Sensitivity adjustment	multi-turn adjuster
Light source	Laser 940nm (Modulated), class 1
Operating voltage	10~30V DC
Volatge drop	< 1.5V
Current consumption	≤20mA
Load current	≤100mA
Circuit protection	Short circuit,reverse polarity,surge protection
Ambient temperature	-10℃~50℃ No freezing
Ambient humidity	35~85%RH,No condensation
Withstand voltage	± 1000V 50/60Hz 60s
Static electricity	± 8000V (air discharge)
Group pulse	± 2000V (5kHz/50kHz)
Impact resistance	10~55Hz amplitude 1.5mm;X,Y,Z 3 directions,2 hours each
Ambient illuminance	Incandescent lamp: <3,000 lux, Sunlight < 5,000 lux
Degree of protection	IP67
Material	Nickel-copper alloy
Connection	2M 3-core cable
Accessories	Mounting screws
Model No.	NPN PM18-TF120N PNP PM18-TF120P

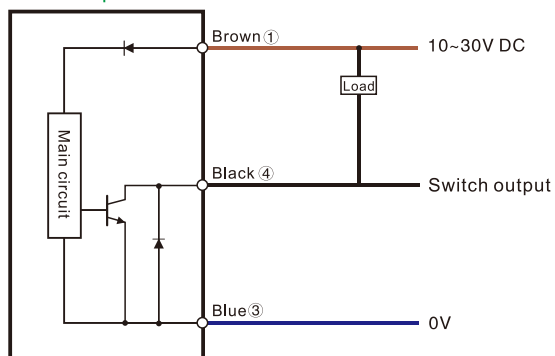
Dimensions

Unit: mm

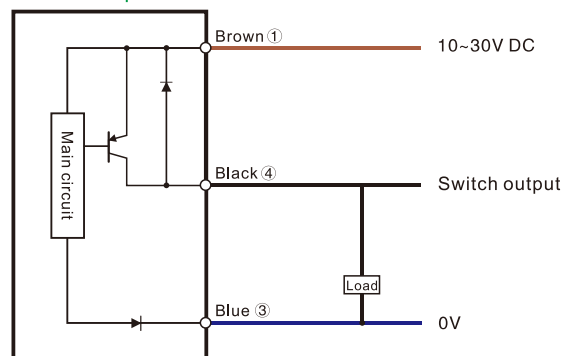


Circuit diagram

NPN Output



PNP Output



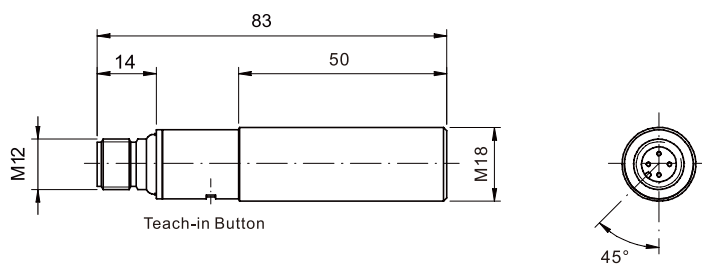
IP69K Type



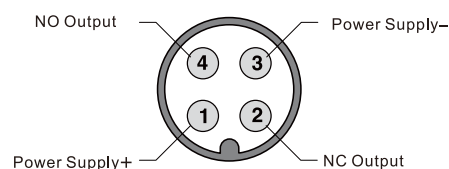
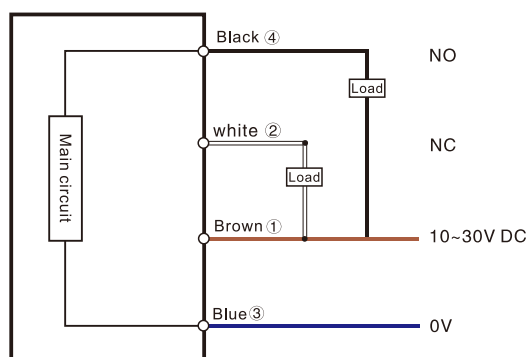
Appearance	
Sensing type	Diffuse Reflection
Sensing distance	400mm
Light source	IR 880 nm
Hysteresis	≤10%
Repeatability	5%
Tolerance	+15/-5% Sn
Operating voltage	10~30V DC
Ripple factor	≤10%
No load current	Max. 35mA (30V)
Load current	≤100mA
LED	Green: teach-in Yellow: Excess gain
Output voltage drop	2Vmax. IL=100mA
Output type	NPN
Switch frequency	500Hz
Start delay	200ms
Ambient illuminance	Incandescent lamp: <5,000 lux, Sunlight < 10,000 lux
Ambient temperature	-25℃~80℃, no condensation
Circuit protection	Reverse polarity protection, short-term overvoltage protection
Output protection	Short circuit protection (Automatic reset)
Sensitivity	Teach-in
Temperature drift	10%Sr
Degree of protection	IP67; IP68 (1m, 7m /days); IP69K (40050~9 standard)
Material	stainless steel 316
Accessories	Mounting screws
Model No.	PM18K-D40NR

Dimensions

Unit: mm



Circuit diagram



Fiber Optic

Slot Sensors

Photoelectric

Laser

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IO-Link type

Reflectors

Reflectors