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Photoelectric sensor

B18 series

- Precautions
- The maximum allowable voltage of the sensor is 10% of the rated voltage. Please confirm that the supply voltage is less than the maximum allowable value before powering on.
 - The time from powering-on to normal detection of the sensor is 100ms. Please ensure that the sensor is used after 100ms of powering-on.
 - When using different power sources for the sensor and load, be sure to turn on the power of the sensor first.
 - When the sensor is not used, it is recommended to cut off the power of the load first and then turn off the power of the sensor. Avoid using thinner, alcohol or other organic solvents when cleaning.

- Safety Warning
- Do not use in an environment with flammable, explosive or corrosive gases.
 - Do not use in oil or chemical environments.
 - Do not use in a high humidity environment.
 - Do not use in direct sunlight.

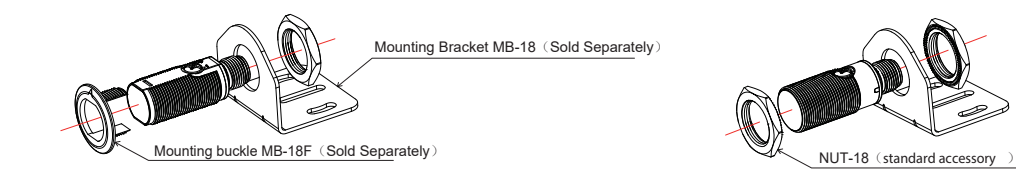
Terminal wiring diagram

Through beam emitter	Diffuse ,Polarized retroreflective, Clear object detection ,Background suppression,Through beam receiver
BN : + BU : -	BN : + BU : - BK : OUT WH : -NC /+ or Floating NO

Dimensions

Connector	Cable
(Background suppression) - Connector	(Background suppression) - Cable

Mounting



Technical specifications

Detection type		Through beam		Polarized reflection	Clear object detection	Diffuse reflection				Fixed Field
Model	NPN cable	Emitter B18TBLSI	Receiver B18TBRNI	B18PR300NR	B18CR200NR	B18D10NI	B18D40NI	B18D40NR	B18D100NI	B18F10NR
	NPN connector	Emitter B18TBLSIC	Receiver B18TBRNIC	B18PR300NRC	B18CR200NRC	B18D10NIC	B18D40NIC	B18D40NRC	B18D100NIC	B18F10NRC
	PNP cable	Emitter B18TBLSI	Receiver B18TBRPI	B18PR300PR	B18CR200PR	B18D10PI	B18D40PI	B18D40PR	B18D100PI	B18F10PR
	PNP connector	Emitter B18TBLSIC	Receiver B18TBRPIC	B18PR300PRC	B18CR200PRC	B18D10PIC	B18D40PIC	B18D40PRC	B18D100PIC	B18F10PRC
Sensing distance		20m		3m*	2m*	10cm	40cm	40cm	100cm	10cm
Spot diameter		/		/	45°45mm@100cm	/	/	15°15mm@40cm	/	8°8mm@10cm
Light source		Infrared (850nm)		Red light (660nm)		Infrared (940nm)	Infrared (940nm)	Red led (660nm)	Infrared (940nm)	Red led (660nm)
Hysteresis range		/		/		3...20 %				<5°
Direction angle		>4°		<2.5°		/				/
Indicator	Green LED: Power, stable signal									
	Yellow LED: Output, overload or short circuit									
NO/NC adjustment	Cable: NO mode; white wire connected to positive or floating, NC mode; white wire connected to negative									
	Connector : NO mode; Pin 2 connected to positive or floating, NC mode; Pin 2 feet connected to negative									
Supply voltage		10...30V DC								
Consumption current		Emitter : ≤20mA; Receiver : ≤20mA		≤20mA						
Response time		≤1ms		≤0.5ms						
Voltage drop		≤1V								≤1.8V
Load current		≤200mA								≤100mA
Distance adjustment		Single-turn potentiometer								No knob
Ambient temperature		-25℃...55℃								-20℃...55℃
Circuit protection		Short circuit, Reverse polarity, Overload, Zener protection								
Anti-ambient light		Anti-ambient light interference≥10,000lux; Anti-incandescent light interference≥3,000lux								
Storage temperature		-25℃...70℃								
Protection degree		IP67								
Certification		CE								
Material		PC+ABS								
Optical element		PMMA								
Accessories		2 X NUT-18								

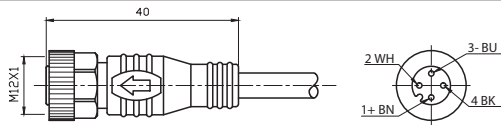
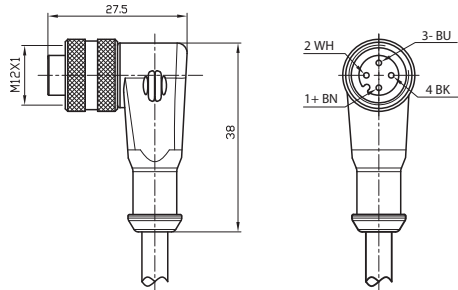
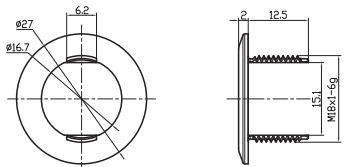
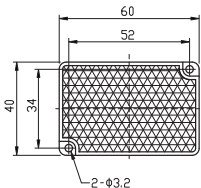
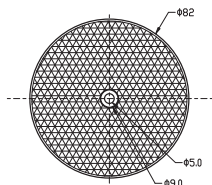
*Range when used with AR4060B reflector.

Wiring diagram

Diffuse ,Polarized retroreflective, Background suppression, Clear object detection ,Through beam receiver-NPN Output	Diffuse ,Polarized retroreflective, Background suppression, Clear object detection ,Through beam receiver-PNP Output	Through beam emitter

Accessory Dimensions

The following accessories are required to be purchased separately except M18 nuts.

M12 Connector SE C-2MU		M12 Connector RSEC- 2MU	
			
Mounting buckle MB-18F			
			
Reflector AR4060B	Reflector AR82	Reflector AR46	Reflector AR78
			
NUT-18		Mounting Bracket MB-18	
