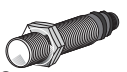
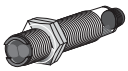
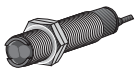
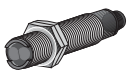
Product Overview

Appearances	Sensing type	Sensing distance (Light source)	Model	Power supply	Response speed	Response speed	Reference
BTF Series NEW	Through-beam type	1m (Red LED)	**BTF1M-TDTL** **BTF1M-TDTD**	12-24VDC	Max.1ms	NPN open collector output	**A-8 to 11**
			BTF1M-TDTL-P **BTF1M-TDTD-P**			PNP open collector output	
	Diffuse reflective type	5 to 30mm (Red LED)	**BTF30-DDTL** **BTF30-DDTD**			NPN open collector output	
			BTF30-DDTL-P **BTF30-DDTD-P**			PNP open collector output	
	BGS reflective type (Convergent reflective type)+ (Narrow spot type)	1 to 15mm (Red LED)	**BTF15-BDTL** **BTF15-BDTD**			NPN open collector output	
			BTF15-BDTL-P **BTF15-BDTD-P**			PNP open collector output	
BJ Series	Through-beam type	15m (Infrared LED)	**BJ15M-TDT** **BJ15M-TDT-C**	12-24VDC	Max.1ms	NPN open collector output	**A-12 to 18**
			BJ15M-TDT-P **BJ15M-TDT-C-P**			PNP open collector output	
		10m (Red LED)	**BJ10M-TDT** **BJ10M-TDT-C**			NPN open collector output	
			BJ10M-TDT-P **BJ10M-TDT-C-P**			PNP open collector output	
		7m (Red LED)	**BJ7M-TDT**			NPN open collector output	
			BJ7M-TDT-P			PNP open collector output	
Line-up **Connector type**	Retroreflective type	Polarizing filter built-in 0.1 to 3m (Red LED)	**BJ3M-PDT** **BJ3M-PDT-C**			NPN open collector output	
			BJ3M-PDT-P **BJ3M-PDT-C-P**			PNP open collector output	
	Diffuse reflective type	1m (Infrared LED)	**BJ1M-DDT** **BJ1M-DDT-C**			NPN open collector output	
			BJ1M-DDT-P **BJ1M-DDT-C-P**			PNP open collector output	
		300mm (Red LED)	**BJ300-DDT** **BJ300-DDT-C**			NPN open collector output	
			BJ300-DDT-P **BJ300-DDT-C-P**			PNP open collector output	
		100mm (Infrared LED)	**BJ100-DDT** **BJ100-DDT-C**			NPN open collector output	
			BJ100-DDT-P **BJ100-DDT-C-P**			PNP open collector output	
		30mm (Infrared LED)	**BJG30-DDT**			NPN open collector output	
	NEW BGS reflective type (Convergent reflective type)+ (Narrow spot type)	10 to 30mm (Red LED)	**BJ30-BDT**		Max.1.5ms	NPN open collector output	
			BJ30-BDT-P			PNP open collector output	
		10 to 50mm (Red LED)	**BJ50-BDT**			NPN open collector output	
			BJ50-BDT-P			PNP open collector output	
		10 to 100mm (Red LED)	**BJ100-BDT**			NPN open collector output	
			BJ100-BDT-P			PNP open collector output	
	Narrow beam reflective type (Micro spot type)	30 to 70mm (Red LED)	**BJN50-NDT**		Max.1ms	NPN open collector output	
			BJN50-NDT-P			PNP open collector output	
		70 to 130mm (Red LED)	**BJN100-NDT**			NPN open collector output	
			BJN100-NDT-P			PNP open collector output	
BS5 Series Line-up	Through-beam type (not modulated)	5mm (Red LED)	**BS5-L2M**	5-24VDC	Received light : Max. 20μs Interrupted light : Max.100μs	NPN open collector output	**A-19 to 21**
			BS5-K2M				
			BS5-T2M				
			BS5-Y2M				
			BS5-V2M				
			BS5-L2M-P			PNP open collector output	
			BS5-K2M-P				
			BS5-T2M-P				
			BS5-Y2M-P				
			BS5-V2M-P				

Appearances	Sensing type	Sensing distance (Light source)	Model	Power supply	Response speed	Control output	Reference
BA Series	Diffuse reflective type	2m (Infrared LED)	**BA2M-DDT**	12-24VDC	Max.1ms	NPN open collector output	**A-22 to 24**
			BA2M-DDTD				
			BA2M-DDT-P			PNP open collector output	
			BA2M-DDTD-P				
BY Series **Standard** **Side sensing type**	Through-beam type	500mm (Infrared LED)	**BY500-TDT**	12-24VDC	Max. 1ms	NPN open collector output	**A-25 to 27**
			BYS500-TDT				
BYD Series Operation indicator **BYD30-DDT-U** **BYD50-DDT-U**	Through-beam type	3m (Infrared LED)	**BYD3M-TDT**	12-24VDC	Max. 1ms	NPN open collector output	**A-28 to 33**
			BYD3M-TDT-P			PNP open collector output	
	Convergent reflective type	10 to 30mm (Infrared LED)	**BYD30-DDT**		Max. 3ms	NPN open collector output	
			BYD30-DDT-U				
			Timer built-in **BYD30-DDT-T**				
		10 to 50mm (Infrared LED)	**BYD50-DDT**				
			BYD50-DDT-U				
			Timer built-in **BYD50-DDT-T**				
	Diffuse reflective type	100mm (Infrared LED)	**BYD100-DDT**				
BPS Series	Through-beam type	3m (Infrared LED)	**BPS3M-TDT**	12-24VDC	Max. 1ms	NPN open collector output	**A-34 to 35**
			BPS3M-TDTL				
			BPS3M-TDT-P			PNP open collector output	
			BPS3M-TDTL-P				
BM Series	Through-beam type	3m (Infrared LED)	**BM3M-TDT**	12-24VDC	Max. 3ms	NPN open collector output	**A-36 to 39**
	Retroeflective type	0.1 to 1m (Infrared LED)	**BM1M-MDT**				
	Diffuse reflective type	200mm (Infrared LED)	**BM200-DDT**				
BMS Series	Through-beam type	5m (Infrared LED)	**BMS5M-TDT**	12-24VDC	Max. 1ms	NPN open collector output	**A-40 to 43**
			BMS5M-TDT-P			PNP open collector output	
	Retroreflective type	0.1 to 2m (Infrared LED)	**BMS2M-MDT**			NPN open collector output	
			BMS2M-MDT-P			PNP open collector output	
	Diffuse reflective type	300mm (Infrared LED)	**BMS300-DDT**			NPN open collector output	
			BMS300-DDT-P			PNP open collector output	

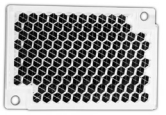
Product Overview

Appearances	Sensing type	Sensing distance (Light source)	Model	Power supply	Response speed	Control output	Reference
BEN Series CE (DC only)	Through-beam type	10m (Infrared LED)	**BEN10M-TFR**	24-240VAC/ 24-240VDC	Max. 20ms	Relay output	**A-44 to 49**
			BEN10M-TDT	12-24VDC	Max. 1ms	NPN/PNP open collector output	
	Retro-reflective type (Standard type)	Standard type 0.1 to 5m (Infrared LED)	**BEN5M-MFR**	24-240VAC/ 24-240VDC	Max. 20ms	Relay output	
			BEN5M-MDT	12-24VDC	Max. 1ms	NPN/PNP open collector output	
	Retro-reflective type(Built-in polarzing filter)	Polarizing filter built-in 0.1 to 3m (Infrared LED)	**BEN3M-PFR**	24-240VAC/ 24-240VDC	Max. 20ms	Relay output	
			BEN3M-PDT	12-24VDC	Max. 1ms	NPN/PNP open collector output	
	Diffuse reflective type	300mm (Infrared LED)	**BEN300-DFR**	24-240VAC/ 24-240VDC	Max. 20ms	Relay output	
			BEN300-DDT	12-24VDC	Max. 1ms	NPN/PNP open collector output	
BX Series CE	Through-beam type	15m (Infrared LED)	**BX15M-TFR**	24-240VAC/ 24-240VDC	Max. 20ms	Relay output	**A-50 to 56**
			Timer built-in **BX15M-TFR-T**				
			BX15M-TDT	12-24VDC	Max. 1ms	NPN/PNP open collector output	
			Timer built-in **BX15M-TDT-T**				
	Retro-reflective type (Standard type)	Standard type 0.1 to 5m (Infrared LED)	Timer built-in **BX5M-MFR**	24-240VAC/ 24-240VDC	Max. 20ms	Relay output	
			Timer built-in **BX5M-MFR-T**				
	Retro-reflective type(Built-in polarzing filter)		**BX5M-MDT**	12-24VDC	Max. 1ms	NPN/PNP open collector output	
			Timer built-in **BX5M-MDT-T**				
	Retro-reflective type (Standard type)	Polarizing filter built-in 0.1 to 3m (Red LED)	**BX3M-PFR**	24-240VAC/ 24-240VDC	Max. 20ms	Relay output	
			Timer built-in **BX3M-PFR-T**				
	Retro-reflective type(Built-in polarzing filter)		**BX3M-PDT**	12-24VDC	Max. 1ms	NPN/PNP open collector output	
			Timer built-in **BX3M-PDT-T**				
	Diffuse reflective type	700mm (Infrared LED)	**BX700-DFR**	24-240VAC/ 24-240VDC	Max. 20ms	Relay output	
			Timer built-in **BX700-DFR-T**				
			BX700-DDT	12-24VDC	Max. 1ms	NPN/PNP open collector output	
			Timer built-in **BX700-DDT-T**				
BR Series CE **BR4M (Metal case)** **Connector type** **BR20M (Metal case)**  **Connector type**	Through-beam type	4m (Infrared LED)	**BR4M-TDTL** **BR4M-TDTL-C**	12-24VDC	Max. 1ms	NPN open collector output	**A-57 to 62**
			BR4M-TDTD **BR4M-TDTD-C**				
			BR4M-TDTL-P **BR4M-TDTL-C-P**			PNP open collector output	
			BR4M-TDTD-P **BR4M-TDTD-C-P**				
		20m (Infrared LED)	**BR20M-TDTL** **BR20M-TDTL-C**			NPN open collector output	
			BR20M-TDTD **BR20M-TDTD-C**				
			BR20M-TDTL-P **BR20M-TDTL-C-P**			PNP open collector output	
			BR20M-TDTD-P **BR20M-TDTD-C-P**				

Appearances	Sensing type	Sensing distance (Light source)	Model	Power supply	Response speed	Control output	Reference
BR Series CE **BR (Metal case)**  **Connector type** **BRP (Plastic case))**   **Connector type**	Retro-reflective type	0.1 to 3m (Infrared LED)	**BR3M-MDT** **BR3M-MDT-C**	12-24VDC	Max. 1ms	NPN open collector output	**A-57 to 62**
			BR3M-MDT-P **BR3M-MDT-C-P**			PNP open collector output	
			BRP3M-MDT **BRP3M-MDT-C**			NPN open collector output	
			BRP3M-MDT-P **BRP3M-MDT-C-P**			PNP open collector output	
	Diffuse reflective type	100mm (Infrared LED)	**BR100-DDT** **BR100-DDT-C**		Max. 1ms	NPN open collector outpu	
			BR100-DDT-P **BR100-DDT-C-P**			PNP open collector output	
			BRP100-DDT **BRP100-DDT-C**			NPN open collector output	
			BRP100-DDT-P **BRP100-DDT-C-P**			PNP open collector output	
		400mm (Infrared LED)	**BR400-DDT** **BR400-DDT-C**			NPN open collector output	
			BR400-DDT-P **BR400-DDT-C-P**			PNP open collector output	
			BRP400-DDT **BRP400-DDT-C**			NPN open collector output	
			BRP400-DDT-P **BRP400-DDT-C-P**			PNP open collector output	
	Narrow beam reflective type	200mm (Infrared LED)	**BR200-DDTN** **BR200-DDTN -C**			NPN open collector output	
			BR200-DDTN-P **BR200-DDTN-C-P**			PNP open collector output	
			BRP200-DDTN **BRP200-DDTN-C**			NPN open collector output	
			BRP200-DDTN-P **BRP200-DDTN-C-P**			PNP open collector output	
BRE Series NEW 	Through-beam type	5m (Infrared LED)	**BRE5M-TDTL** **BRE5M-TDTD**	12-24VDC	Max. 1ms	NPN open collector output	**A-63 to 64**
		10m (Infrared LED)	**BRE10M-TDTL** **BRE10M-TDTD**				
BUP Series CE 	Through-beam type	30mm (Infrared LED)	**BUP-30**	12-24VDC	Max. 1ms	NPN open collector output	**A-65 to 66**
			BUP-30S Adjuster built-in				
			BUP-30-P			PNP open collector output	
			BUP-30S-P Adjuster built-in				
		50mm (Infrared LED)	**BUP-50**			NPN open collector output	
			BUP-50S Adjuster built-in				
			BUP-50-P			PNP open collector output	
			BUP-50S-P Adjuster built-in				
BL Series NEW CE 	Through-beam type	–	**BL13-TDT**	12-24VDC	Max. 2ms	NPN open collector output	**A-67 to 69**
			BL13-TDT-P			PNP open collector output	

Product Overview

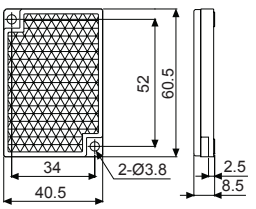
◎ Reflector



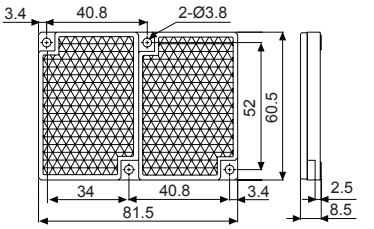
(MS-2)

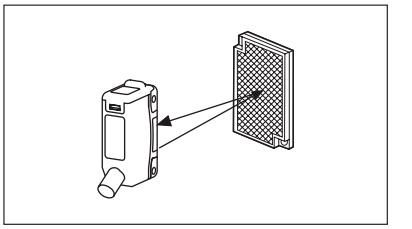
Retroreflective photo sensor is sold with a basic reflector. You can select other reflectors for the proper install environment.
※Select proper reflector size for the install space.
※Basically the bigger reflector size has the longer sensing distance.
※High reflectivity reflectors (MS-2S, MS-3S) tend to have longer sensing distance then a basic reflector's sensing distance.

● **MS-2, MS-2S**
(High reflectivity reflectors)

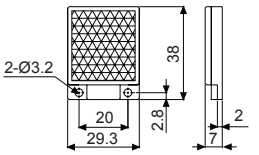


● **MS-3, MS-3S(High reflectivity reflectors)**

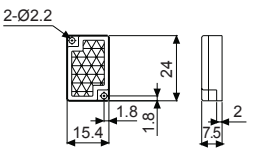




● **MS-4**



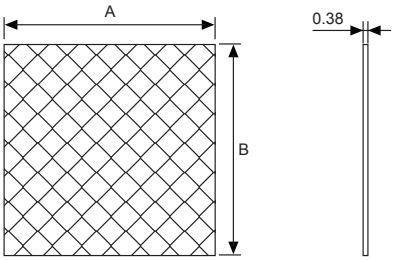
● **MS-5**



(unit: mm)

◎ Retroreflective tape

※Use the retroreflective tape at the place where is difficult to mount a reflector of the retroreflective photoelectric sensor.
※According to the environment, select the proper retroreflective tape. (Cut the tape before using.)
※Generally, the sensing distance and minimum sensing target size increase as tape size increases.



(unit: mm)

	A	B
MST-50-10	50	50
MST-100-5	100	100
MST-200-2	200	200

※There may be a ±0.02mm error in thickness dimension.