













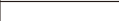

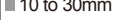











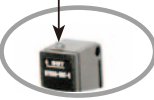















Product Overview

















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

Product Overview

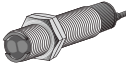
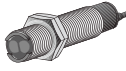



| Appearances | Sensing type | Sensing distance (Light source) | Model | Power supply | Response speed | Control output | Reference | (A) Photo electric sensor | |
|--|--|---|--|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| 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  | 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 |
| | | | BYD30-DDT | | | Max. 3ms | | | |
| | | | BYD30-DDT-U | | | | | | |
| | BYD30-DDT-T <small>Timer built-in</small> | | | | | | | | |
| | Convergent reflective type |  10 to 30mm (Infrared LED) | BYD50-DDT | Max. 3ms | NPN open collector output | | | | |
| | | | BYD50-DDT-U | | | | | | |
| | | | BYD50-DDT-T <small>Timer built-in</small> | | | | | | |
| | 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 | | |
| | Retroreflective 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 | | | |

| |
|--------------------------------------|
| (A) Photo electric sensor |
| (B) Fiber optic sensor |
| (C) Door/Area sensor |
| (D) Proximity sensor |
| (E) Pressure sensor |
| (F) Rotary encoder |
| (G) Connector/Socket |
| (H) Temp. controller |
| (I) SSR/Power controller |
| (J) Counter |
| (K) Timer |
| (L) Panel meter |
| (M) Tacho/Speed/Pulse meter |
| (N) Display unit |
| (O) Sensor controller |
| (P) Switching mode power supply |
| (Q) Stepper motor& Driver&Controller |
| (R) Graphic/Logic panel |
| (S) Field network device |
| (T) Software |
| (U) Other |

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 polarizing 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 |
| | | | BX15M-TFR-T | | | | |
| | | | BX15M-TDT | 12-24VDC | Max. 1ms | NPN/PNP open collector output | |
| | | | BX15M-TDT-T | | | | |
| | Retro-reflective type (Standard type) | Standard type  0.1 to 5m (Infrared LED) | BX5M-MFR | 24-240VAC/ 24-240VDC | Max. 20ms | Relay output | |
| | | | BX5M-MFR-T | | | | |
| | Retro-reflective type (Built-in polarizing filter) | (Infrared LED) | BX5M-MDT | 12-24VDC | Max. 1ms | NPN/PNP open collector output | |
| | | | 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 | |
| | | | BX3M-PFR-T | | | | |
| | Retro-reflective type (Built-in polarizing filter) | (Red LED) | BX3M-PDT | 12-24VDC | Max. 1ms | NPN/PNP open collector output | |
| | | | BX3M-PDT-T | | | | |
| | Diffuse reflective type |  700mm (Infrared LED) | BX700-DFR | 24-240VAC/ 24-240VDC | Max. 20ms | Relay output | |
| | | | BX700-DFR-T | | | | |
| BX700-DDT | | | 12-24VDC | Max. 1ms | NPN/PNP open collector output | | |
| BX700-DDT-T | | | | | | Timer built-in | |
| BR Series CE BR4M (Metal case)  Connector type BR20M (Metal case)  Connector type  Connector type  | Through-beam type |  4m (Infrared LED) | BR4M-TDTL | 12-24VDC | Max. 1ms | NPN open collector output | A-57 to 62 |
| | | | BR4M-TDTL-C | | | | |
| | | | BR4M-TDTD | | | NPN open collector output | |
| | | | BR4M-TDTD-C | | | | |
| | | | BR20M-TDTL | | | NPN open collector output | |
| | | | BR20M-TDTL-C | | | | |
| | BR20M-TDTD | NPN open collector output | | | | | |
| | BR20M-TDTD-C | | PNP open collector output | | | | |
| | BR20M-TDTL-P | NPN open collector output | | | | | |
| | BR20M-TDTL-C-P | | PNP open collector output | | | | |
| | BR20M-TDTD-P | NPN open collector output | | | | | |
| | BR20M-TDTD-C-P | | PNP open collector output | | | | |
| |  20m (Infrared LED) | | | | | | |

Product Overview

| 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 | NPN open collector output |
| | | | | | | | | 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 | | | | | | | |
| | Narrow beam reflective type | 200mm (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 | | | | |
| | | | BR200-DDTN BR200-DDTN -C | | NPN open collector output | | | | |
| | | | BR200-DDTN-P BR200-DDTN-C-P | | PNP open collector output | | | | |
| | BRE Series NEW  Through-beam type | Through-beam type | 5m (Infrared LED) | | BRE5M-TDTL BRE5M-TDTD | 12-24VDC | | Max. 1ms | NPN open collector output |
| 10m (Infrared LED) | | | BRE10M-TDTL BRE10M-TDTD | | | | | | |
| BUP Series CE  Through-beam type | Through-beam type | 30mm (Infrared LED) | BUP-30 | 12-24VDC | Max. 1ms | NPN open collector output | A-65 to 66 | | |
| | | | BUP-30S <small>Adjuster built-in</small> | | | PNP open collector output | | | |
| | | | BUP-30-P | | | NPN open collector output | | | |
| | | | BUP-30S-P <small>Adjuster built-in</small> | | | PNP open collector output | | | |
| | | 50mm (Infrared LED) | BUP-50 | | | NPN open collector output | | | |
| | | | BUP-50S <small>Adjuster built-in</small> | | | PNP open collector output | | | |
| | | | BUP-50-P | | | NPN open collector output | | | |
| | | | BUP-50S-P <small>Adjuster built-in</small> | | | PNP open collector output | | | |
| BL Series NEW CE  Through-beam type | Through-beam type | | BL13-TDT | 12-24VDC | Max. 2ms | NPN open collector output | A-67 to 69 | | |
| | | | BL13-TDT-P | | | PNP open collector output | | | |

- (A) Photo electric sensor
- (B) Fiber optic sensor
- (C) Door/Area sensor
- (D) Proximity sensor
- (E) Pressure sensor
- (F) Rotary encoder
- (G) Connector/Socket
- (H) Temp. controller
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- (T) Software
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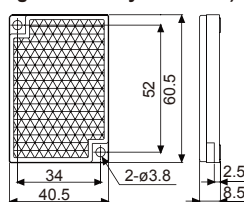
© Reflector

Retroreflective photo sensor is sold with a basic reflector. You can select other reflectors for the proper install environment.

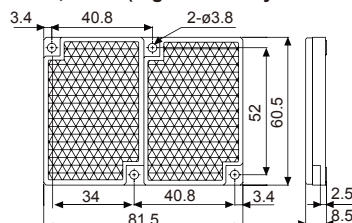
- Select proper reflector size for the install space. - Basically the bigger reflector size has the longer sensing distance.

- High reflectivity reflectors (MS-2S, MS-3S) tend to have longer sensing distance than a basic reflector's sensing distance.

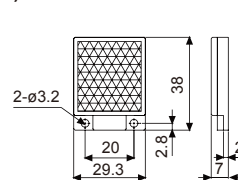
• MS-2, MS-2S (High reflectivity reflectors)



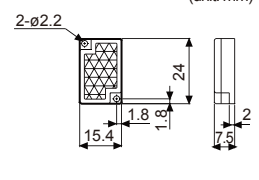
• MS-3, MS-3S (High reflectivity reflectors)



• MS-4



• MS-5



(unit: mm)