

BPS Series

Slim Photoelectric Sensor For Long Sensing Distance

■ Features

- Easy to mount by Flat type
- Realization of 3m sensing distance as small size
- Protection structure IP67 (IEC standard)



⚠ Please read "Caution for your safety" in operation manual before using.



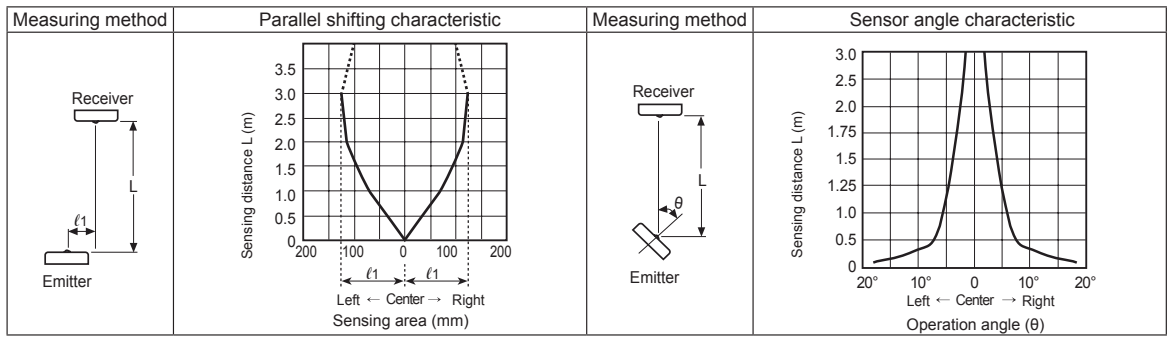
■ Specifications

| Model | NPN open collector output | BPS3M-TDT | BPS3M-TDTL |
|-----------------------|--|---|---------------------|
| | PNP open collector output | BPS3M-TDT-P | BPS3M-TDTL-P |
| Sensing type | Through-beam | | |
| Sensing target | Opaque materials of Min. Ø5mm | | |
| Operation mode | Dark ON | Light ON | |
| Sensing distance | 3m | | |
| Response time | Max. 1ms | | |
| Power supply | 12-24VDC ±10% (Ripple P-P: Max. 10%) | | |
| Current consumption | Max. 20mA | | |
| Light source | Infrared LED (850nm) | | |
| Control output | NPN or PNP open collector output ●Load voltage: Max. 30VDC ●Load current: Max. 100mA ●Residual voltage - NPN: Max. 1V, PNP: Max. 2.5V | | |
| Protection circuit | Reverse polarity protection, Output short-circuit protection | | |
| Indicator | Emitter: Power indicator (red LED), Receiver: Operation indicator (red LED) | | |
| Insulation resistance | Min. 20MΩ (at 500VDC megger) | | |
| Noise resistance | ±240V the square wave noise (pulse width: 1μs) by the noise simulator | | |
| Dielectric strength | 1,000VAC 50/60Hz for 1minute | | |
| Vibration | 1.5mm amplitude at frequency of 10 to 55Hz (for 1 min.) in each X, Y, Z direction for 2 hours | | |
| Shock | 500m/s ² (approx. 50G) in each X, Y, Z direction for 3 times | | |
| Environment | Ambient illumination | Sunlight: Max. 11,000lx , Incandescent lamp: Max. 3,000lx (Receiver illumination) | |
| | Ambient temperature | -25 to 65°C, storage: -25 to 70°C | |
| | Ambient humidity | 35 to 85%RH, storage: 35 to 90%RH | |
| Protection structure | IP67 (IEC standard) | | |
| Material | Case: PC | | |
| Cable | Ø3mm, 3-wire, Length: 2m (Emitter of through-beam type: Ø3mm, 2-wire, Length: 2m) (AWG24, Core diameter: 0.08mm, Number of cores: 40, Insulator out diameter: Ø1mm) | | |
| Approval | CE | | |
| Unit weight | Approx. 66g | | |

※The temperature or humidity mentioned in Environment indicates a non freezing or condensation environment.

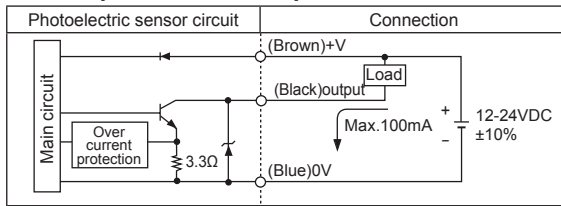
Slim And Amplifier Built-in Type

Feature Data

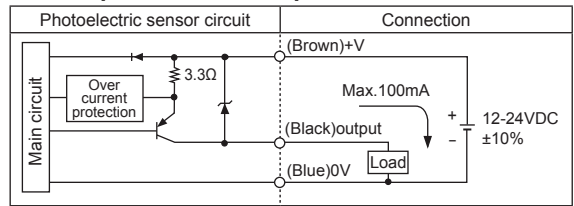


Control Output Diagram

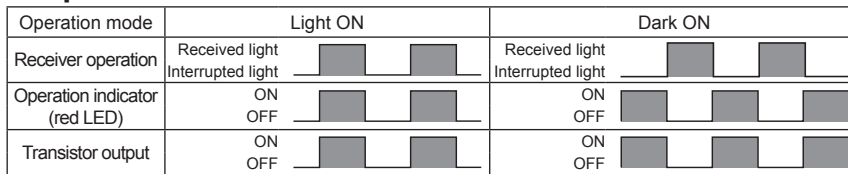
• NPN open collector output



• PNP open collector output

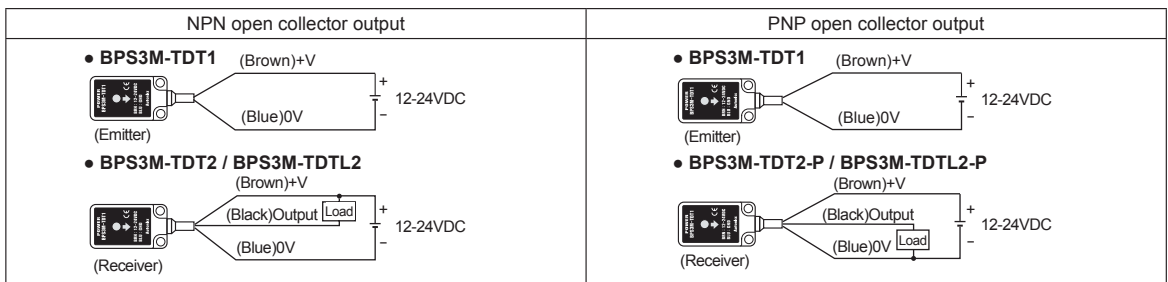


Operation Mode

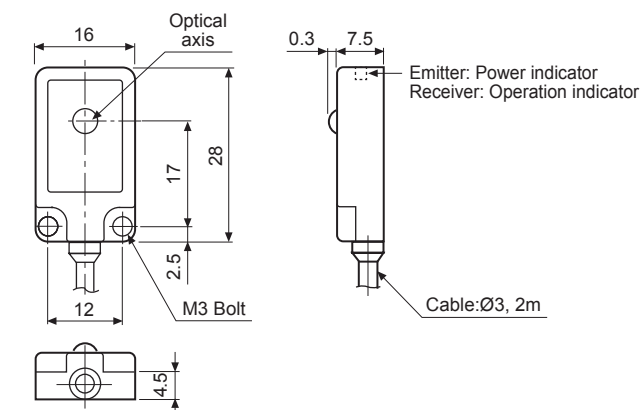


※If the control output terminal is short-circuited or overcurrent condition exists, the control output turns OFF due to protection circuit.
 ※Dark ON mode is standard and Light ON (Received light: ON) mode is customizable.

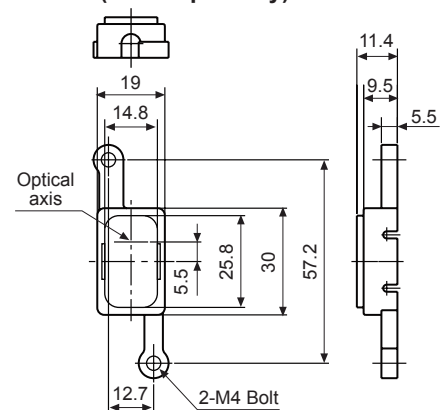
Connections



Dimensions



• Cover (sold separately) (unit: mm)



- (A) Photoelectric Sensors
- (B) Fiber Optic Sensors
- (C) Door/Area Sensors
- (D) Proximity Sensors
- (E) Pressure Sensors
- (F) Rotary Encoders
- (G) Connectors/ Sockets
- (H) Temperature Controllers
- (I) SSRs / Power Controllers
- (J) Counters
- (K) Timers
- (L) Panel Meters
- (M) Tacho / Speed / Pulse Meters
- (N) Display Units
- (O) Sensor Controllers
- (P) Switching Mode Power Supplies
- (Q) Stepper Motors & Drivers & Controllers
- (R) Graphic/ Logic Panels
- (S) Field Network Devices
- (T) Software