

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.



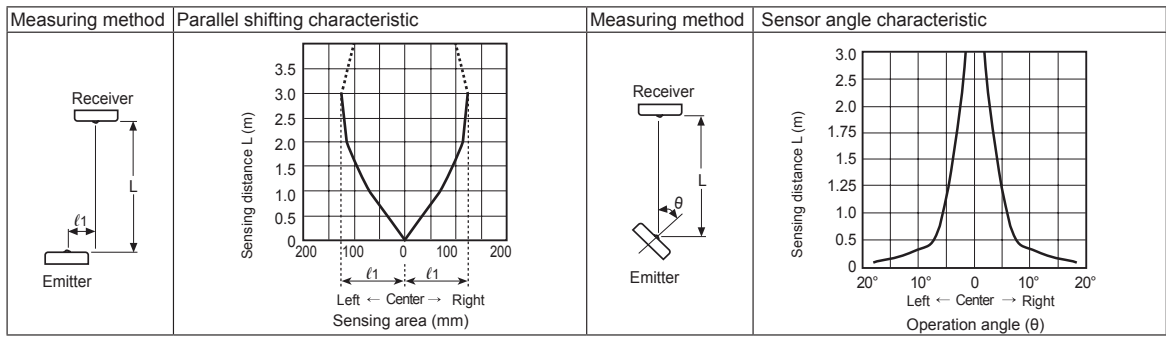
■ Specifications

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 circuit, output overcurrent (short-circuit) protection circuit		
Indicator	Emitter - Power indicator: Red LED, Receiver - Operation indicator: Red LED		
Insulation resistance	Over 20MΩ (at 500VDC megger)		
Noise immunity	±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: Polycarbonate, Bolt: Steel chromium molybdenum, Nut: Steel chromium molybdenum		
Cable	Ø3mm, 3-wire, 2m (emitter of through-beam type: Ø3mm, 2-wire, 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.

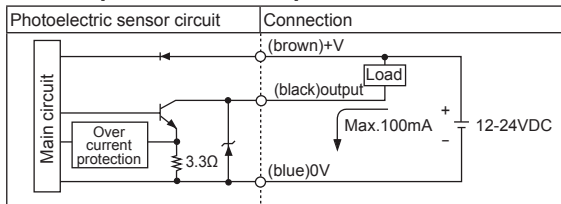
Slim And Amplifier Built-in Type

Feature Data

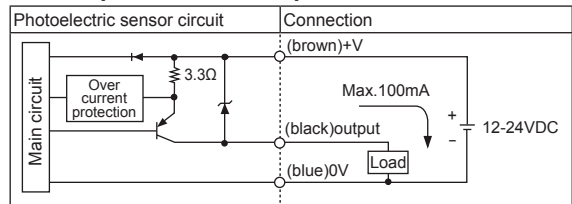


Control Output Diagram

• NPN open collector output



• PNP open collector output

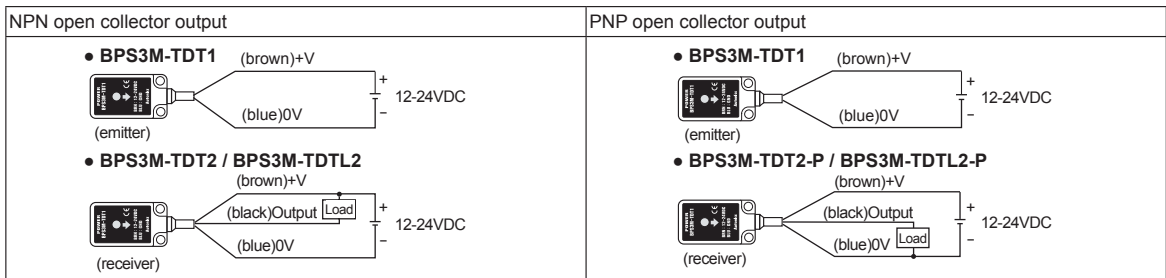


Operation Mode

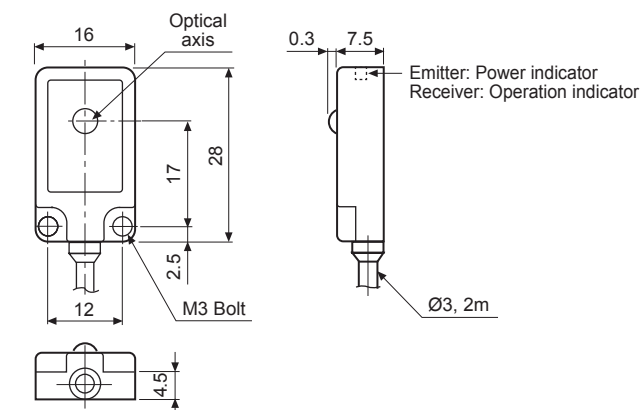
Operation mode	Light ON	Dark ON
Receiver operation	Received light Interrupted light	Received light Interrupted light
Operation indicator (red LED)	ON OFF	ON OFF
Transistor output	ON OFF	ON OFF

※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.

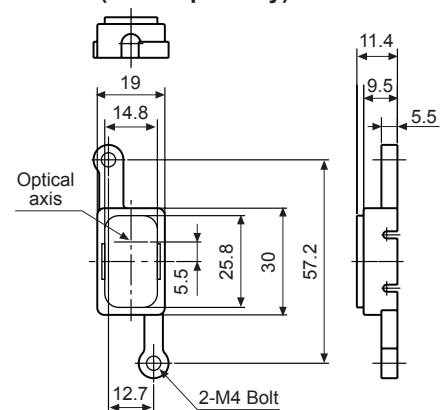
Connections



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/ Connector Cables/ Sensor Distribution Boxes/ 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