

# 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.



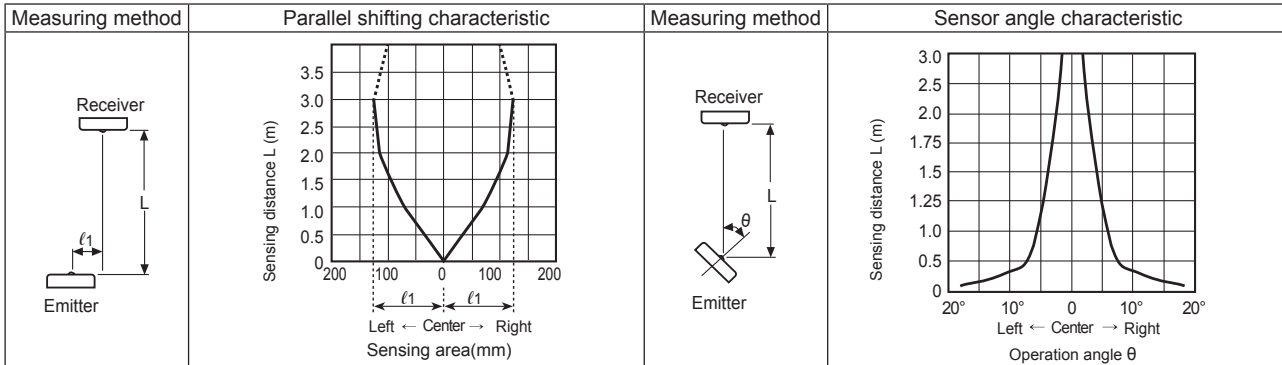
### ■ Specifications

Model	NPN open collector output	<b>BPS3M-TDT</b>	<b>BPS3M-TDTL</b>
	PNP open collector output	<b>BPS3M-TDT-P</b>	<b>BPS3M-TDTL-P</b>
Sensing type	Through-beam		
Sensing target	Opaque materials of Min. $\phi$ 5mm		
Operation mode	Dark ON	Light ON	
Sensing distance	3m		
Response time	Max. 1ms		
Power supply	12-24VDC $\pm$ 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: Min. 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. 20M $\Omega$ (at 500VDC megger)		
Noise resistance	$\pm$ 240V the square wave noise(pulse width:1 $\mu$ s) 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 of X, Y, Z directions for 2 hours		
Shock	500m/s <sup>2</sup> (50G) in each of X, Y, Z directions 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	IP67(IEC standard)		
Material	Case : PC		
Cable	$\phi$ 3mm, 3-wire, Length : 2m(Emitter of through-beam type : $\phi$ 3mm, 2-wire, Length : 2m) (AWG24, Core diameter : 0.08mm, Number of cores : 40, Insulator out diameter : $\phi$ 1mm)		
Approval	CE		
Unit weight	Approx. 66g		

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

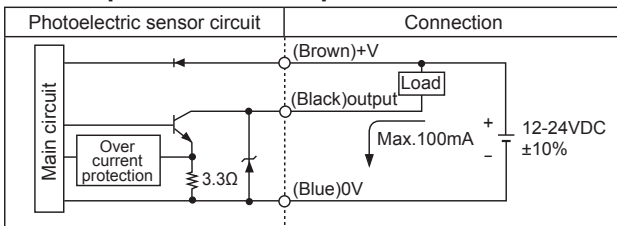
# Slim and Amplifier Built-in type

## Feature data

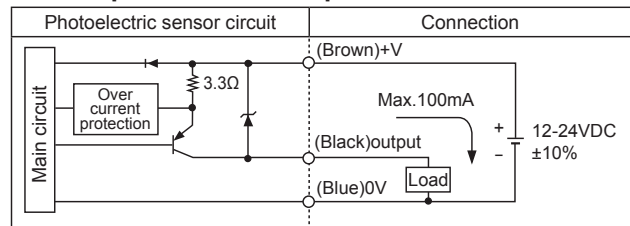


## Control output diagram

### NPN open collector output



### PNP open collector output

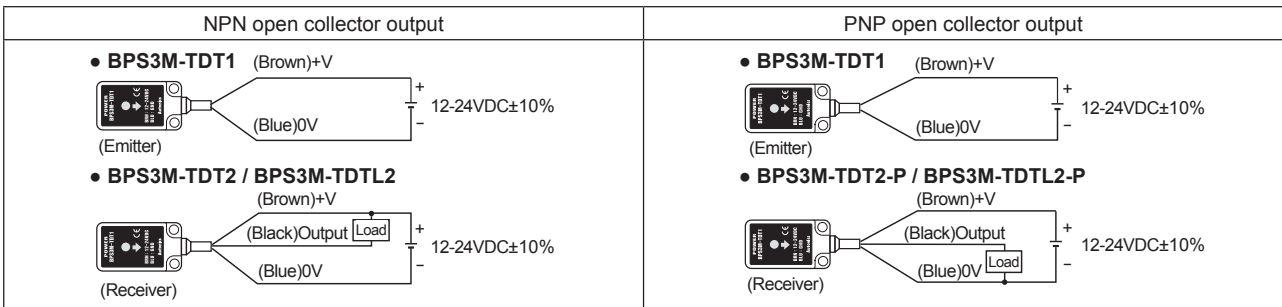


## Operation mode

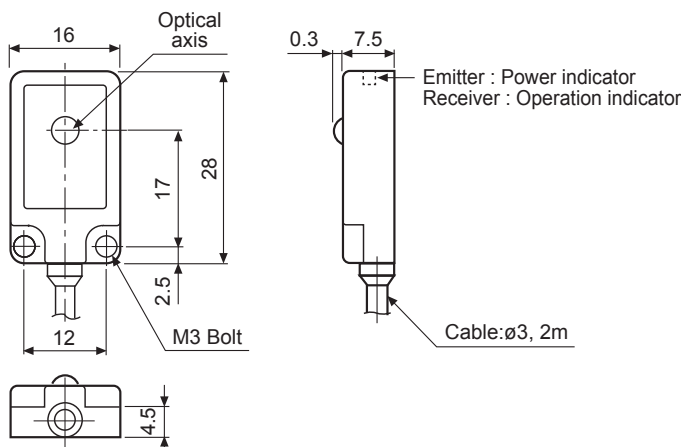
Operation mode	Light ON	Dark ON
Receiver operation	Received light Interrupted light	Received light Interrupted light
Operation indicator (red LED)	ON OFF	ON OFF
Transistor output	ON OFF	ON OFF

※ 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

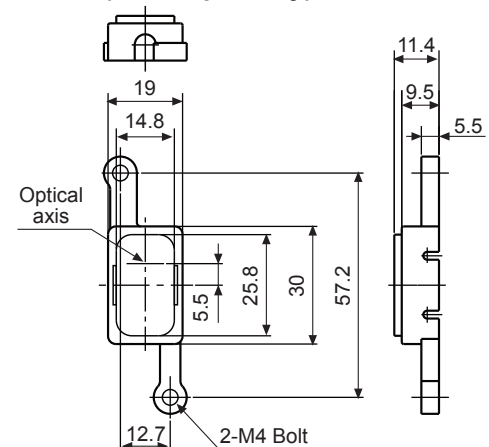


## Dimensions



### Cover(sold separately)

(unit: mm)



(A) 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 power supply

(Q) Stepping motor& Driver&Controller

(R) Graphic/Logic panel

(S) Field network device

(T) Software

(U) Other