

# Slim and Amplifier Built-in Type

## Slim photoelectric sensor for long sensing distance

### ■ Features

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



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



### ■ Specifications

| Model                 | BPS3M-TDT   | BPS3M-TDTL | BPS3M-TDT-P  | BPS3M-TDTL-P |
|-----------------------|---|------------|--|--------------|
| Sensing type          | Transmitted beam  |            |  |              |
| Sensing target        | Opaque materials of Min. $\phi$ 5mm   |            |  |              |
| Operation mode        | Dark ON   | Light ON   | 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 (modulated)  |            |  |              |
| Control output        | NPN open collector output<br>⚡ Load voltage : Max. 30VDC,<br>Load current : Max. 100mA,<br>Residual voltage : Max. 1V |            | PNP open collector output<br>⚡ Output voltage : Min. (Power supply - 2.5)V,<br>Load current : Max. 100mA |              |
| Protection circuit    | Reverse polarity protection, Short-circuit protection   |            |  |              |
| Indicator             | Emitter : Power indicator (Red LED), Receiver : Operation indicator (Red LED)   |            |  |              |
| Connection            | Outgoing cable  |            |  |              |
| Insulation resistance | Min. 20M $\Omega$ (at 500VDC mega)  |            |  |              |
| Noise strength        | $\pm$ 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 ~ 55Hz in each of X, Y, Z directions for 2 hours                                   |            |  |              |
| Shock                 | 500m/s <sup>2</sup> (50G) in X, Y, Z directions for 3 times   |            |  |              |
| Ambient illumination  | Sunlight : Max. 11,000lx, Incandescent lamp : Max. 3,000lx  |            |  |              |
| Ambient temperature   | -25 ~ +65 $^{\circ}$ C (at non-freezing status), Storage : -25 ~ +70 $^{\circ}$ C                                     |            |  |              |
| Ambient humidity      | 35 ~ 85%RH, Storage : 35 ~ 90%RH  |            |  |              |
| Protection            | IP67 (IEC standard)   |            |  |              |
| Material              | Case : PC   |            |  |              |
| Cable                 | • Emitter : $\phi$ 3mm, 2P • Receiver : $\phi$ 3mm, 3P • Length : 2m  |            |  |              |
| Approval              | CE  |            |  |              |
| Unit weight           | Approx. 66g   |            |  |              |

(A)  
Counter

(B)  
Timer

(C)  
Temp.  
controller

(D)  
Power  
controller

(E)  
Panel  
meter

(F)  
Tacho/  
Speed/  
Pulse  
meter

(G)  
Display  
unit

(H)  
Sensor  
controller

(I)  
Switching  
power  
supply

(J)  
Proximity  
sensor

(K)  
Photo  
electric  
sensor

(L)  
Pressure  
sensor

(M)  
Rotary  
encoder

(N)  
Stepping  
motor &  
Driver &  
Controller

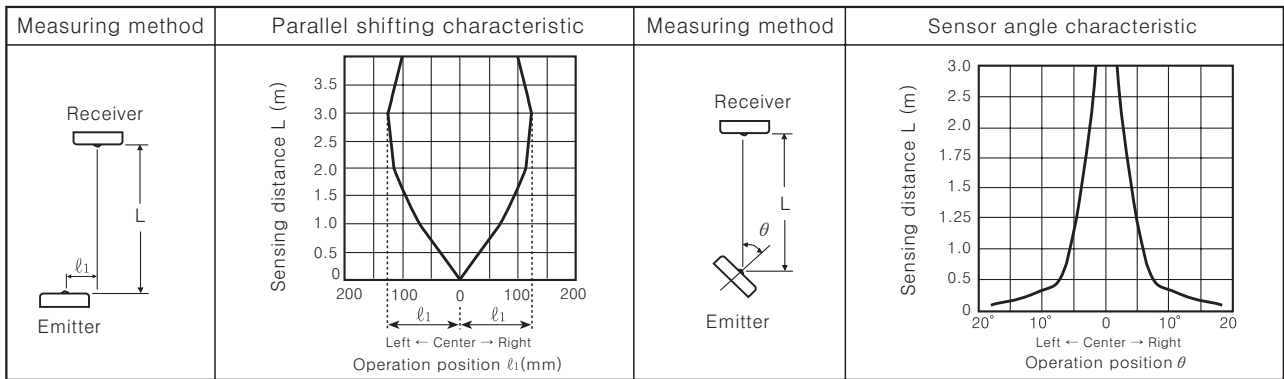
(O)  
Graphic  
panel

(P)  
Field  
network  
device

(Q)  
Production  
stoppage  
models &  
replacement

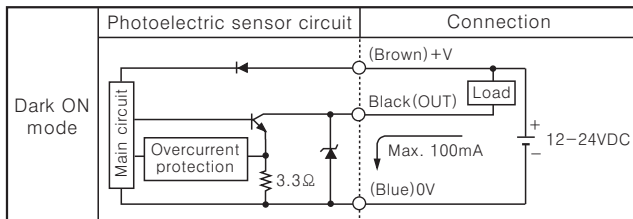
# BPS Series

## Feature data

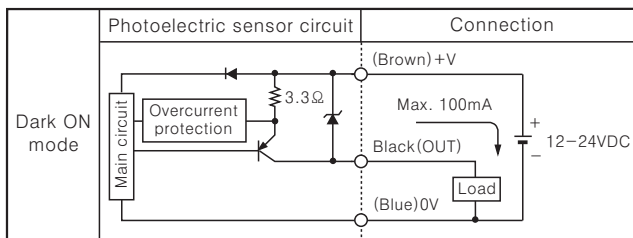


## Control output diagram

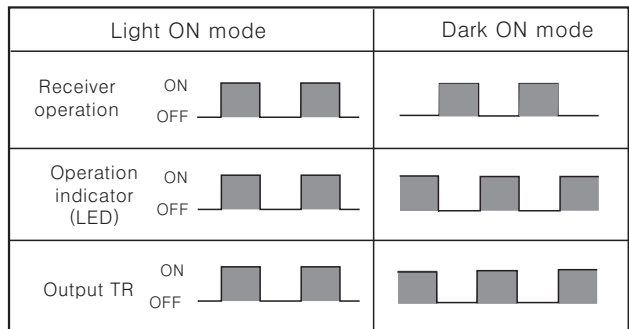
- NPN open collector output



- PNP open collector output

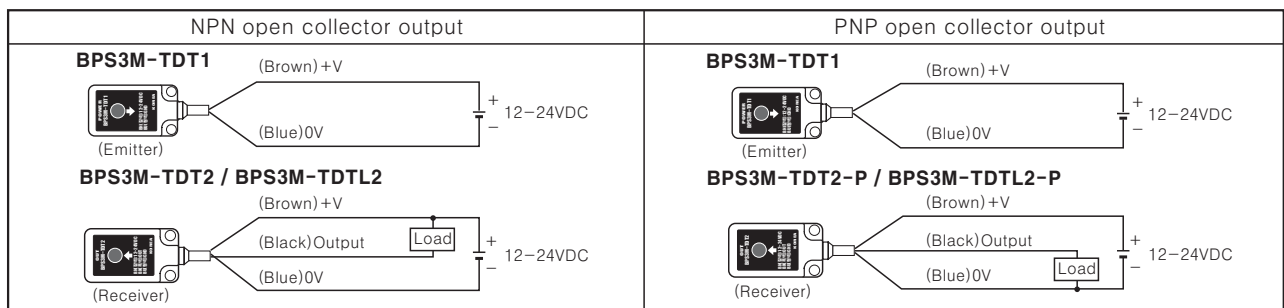


## Operation mode

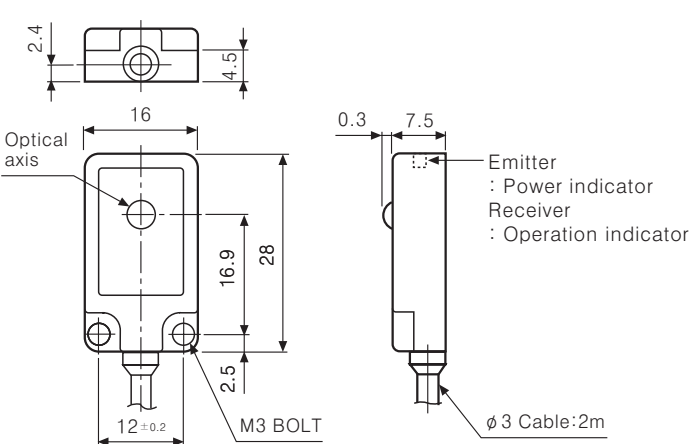


Note) If the control output terminal is short-circuited or over current condition is exited the control output will turn off due to protection circuit.  
 Note) Dark ON mode is standard and Light ON (Received light : ON) mode is sold separately.

## Connections



## Dimensions



### ●Cover (Sold separately)

