BPS Series

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)

CE

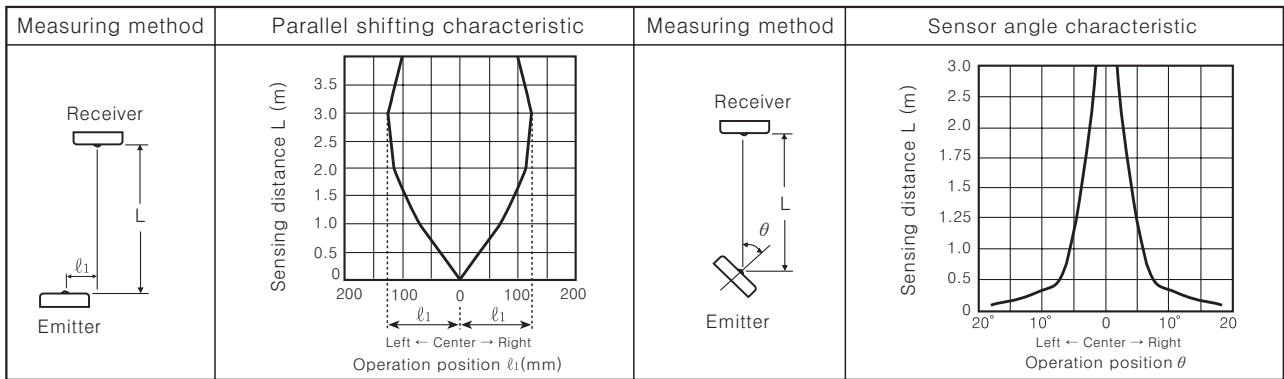Please read "Caution for your safety" in operation manual before using.

▣Specifications

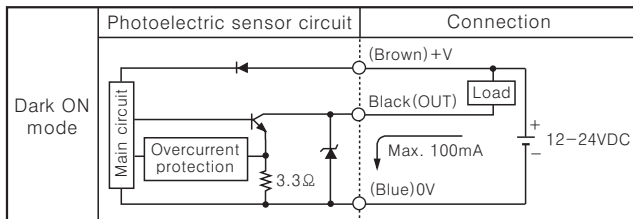| Model	BPS3M-TDT	BPS3M-TDTL	BPS3M-TDT-P	BPS3M-TDTL-P
Sensing type	Transmitted beam			
Sensing target	Opaque materials of Min. φ5mm			
Operation mode	Dark ON	Light ON	Dark ON	Light ON
Sensing distance	3m			
Response time	Max. 1ms			
Power supply	12−24VDC ±10%(Ripple P−P : Max. 10%)			
Current consumption	Max. 20mA			
Light source	Infrared LED(modulated)			
Control output	NPN open collector output ☞ Load voltage : Max. 30VDC, Load current : Max.100mA, Residual voltage : Max.1V		PNP open collector output ☞ Output voltage : (Min. Power supply−2.5V), 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. 20MΩ (at 500VDC mega)			
Noise strength	±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 ~ 55Hz in each of X, Y, Z directions for 2 hours			
Shock	500m/s² (50G) in X, Y, Z directions for 3 times			
Ambient illumination	Sunlight : Max. 11,000lx , Incandescent lamp : Max. 3,000lx			
Ambient temperature	−25 ~ +65℃(at non−freezing status), Storage : −25 ~ +70℃			
Ambient humidity	35~ 85%RH, Storage : 35 ~ 90%RH			
Protection	IP67(IEC standard)			
Material	Case : PC			
Cable	• Emitter : φ3mm, 2P • Receiver : φ3mm, 3P • Length : 2m			
Approval	CE			
Unit weight	Approx. 66g			

Slim and Amplifier Built-in Type

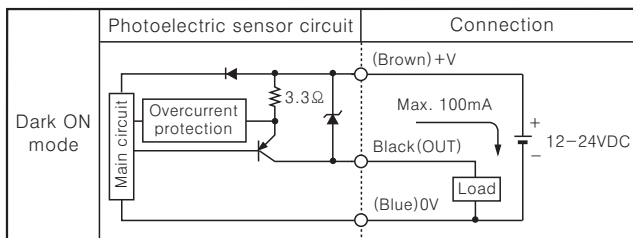| (A) Counter |
|---|
| (B) Timer |
| (C) Temp. controller |
| (D) Power controller |
| (E) Panel meter |
| (F) Tacho/ Speed/ Pulse meter |
| (G) Display unit |
| (H) Sensor controller |
| (I) Switching power supply |
| (J) Proximity sensor |
| **(K) Photo electric sensor** |
| (L) Pressure sensor |
| (M) Rotary encoder |
| (N) Stepping motor & Driver & Controller |
| (O) Graphic panel |
| (P) Production stoppage models & replacement |

▣ Feature data

Measuring method	Parallel shifting characteristic	Measuring method	Sensor angle characteristic

▣ Control output diagram

● NPN open collector output

	Photoelectric sensor circuit	Connection
Dark ON mode	Main circuit / Overcurrent protection / 3.3Ω	(Brown)+V / Black(OUT) — Load / Max. 100mA / (Blue)0V / 12–24VDC

● PNP open collector output

	Photoelectric sensor circuit	Connection
Dark ON mode	Main circuit / Overcurrent protection / 3.3Ω	(Brown)+V / Max. 100mA / 12–24VDC / Black(OUT) / (Blue)0V — Load

▣ Operation mode

	Light ON mode	Dark ON mode
Receiver operation	ON / OFF	ON / OFF
Operation indicator (LED)	ON / OFF	ON / OFF
Output TR	ON / OFF	ON / OFF

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

NPN open collector output	PNP open collector output
BPS3M-TDT1 (Emitter) — (Brown)+V / (Blue)0V / 12–24VDC	**BPS3M-TDT1** (Emitter) — (Brown)+V / (Blue)0V / 12–24VDC
BPS3M-TDT2 / BPS3M-TDTL2 (Receiver) — (Brown)+V / (Black)Output — Load / (Blue)0V / 12–24VDC	**BPS3M-TDT2-P / BPS3M-TDTL2-P** (Receiver) — (Brown)+V / (Black)Output / (Blue)0V — Load / 12–24VDC
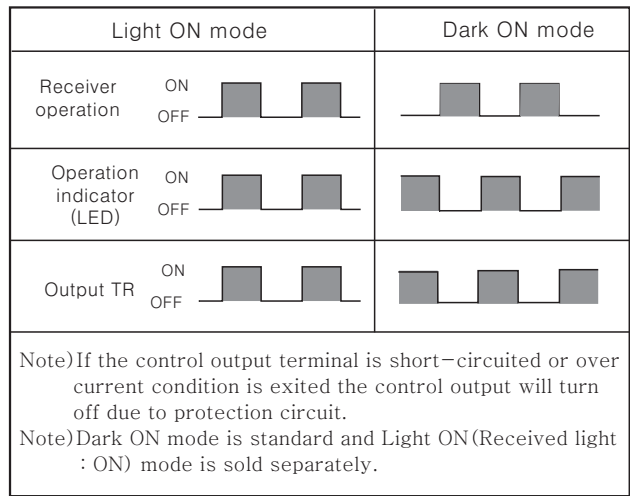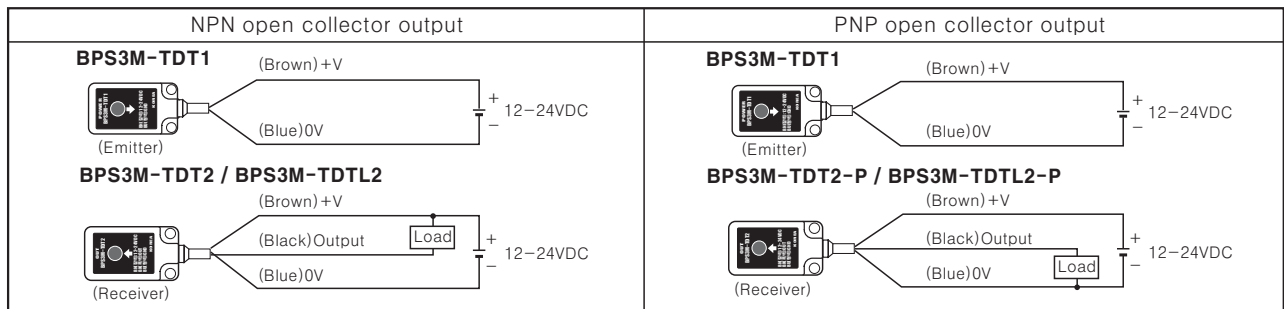
▣ Dimensions

● Cover(Sold separately)

Optical axis
Emitter : Power indicator
Receiver : Operation indicator
M3 BOLT
ø3 Cable:2m
4−R4
2−M4 BOLT
(Unit : mm)