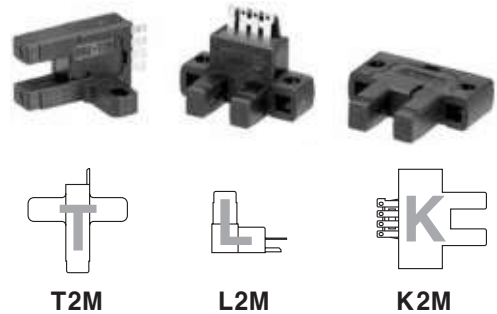


# BS5 Series

## Photo micro sensor

### ■ Features

- Built-in miniature amplifier, NPN open collector output
- Various selection by installation position  
(Appearance: K, T, L Type)
- Light ON / Dark ON selectable
- High speed response frequency : 2kHz
- Wide range of power source: 5-24VDC  
(Easy to connect with various IC, Relay, Programmable Controller etc)
- Dust resistance structure: Protecting by window of Emitter/Receiver
- Red LED status indication



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

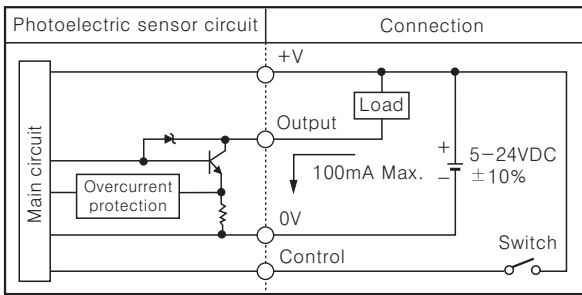


### ■ Specifications

Type	Photo micro sensor		
Model	BS5-K2M	BS5-T2M	BS5-L2M
Sensing distance	Fixed 5mm		
Sensing type	Transmitted beam (Not modulated)		
Sensing target	Opaque material of Min. 0.8×1.8mm		
Hysteresis	0.05mm		
Power supply	5-24VDC ±10% (Ripple P-P : Max. 10%)		
Current consumption	Max. 30mA (at 26.4VDC )		
Control output	NPN open collector output $\Rightarrow$ Load voltage : Max. 30VDC, Load current : Max. 100mA Residual voltage : Max. 1.2V		
Operation mode	Light ON / Dark ON mode selectable by control wire		
Operation indicator	Red LED		
Response time	Received light : Max. 20 $\mu$ s, Interrupted light : Max. 100 $\mu$ s		
Response frequency	2kHz (Please see the measuring range of frequency response)		
Connection	Connector type		
Light emitting element	RED		
Light receiving element	Photo TR		
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		
Noise strength	±240V the square wave noise (pulse width: 1 $\mu$ s) by the noise simulator		
Dielectric strength	1,000VAC 50/60Hz for 1minute		
Insulation resistance	Min. 20M $\Omega$ (at 250VDC mega)		
Ambient illumination	Fluorescent lamp : Max. 1000lx		
Ambient temperature	-20 ~ + 55 $^{\circ}$ C (at non-freezing status), Storage : -25 ~ + 85 $^{\circ}$ C		
Ambient humidity	35 ~ 85%RH (Storage : 35 ~ 85%RH)		
Protection	IP50 (IEC standard)		
Material	PA-6		
Approval	<b>CE</b>		
Unit weight	Approx. 30g		

# Photo Micro Sensor

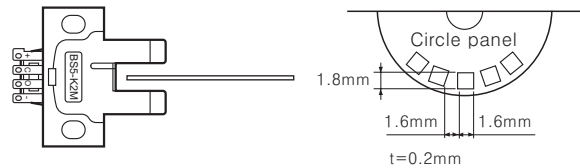
## Control output diagram



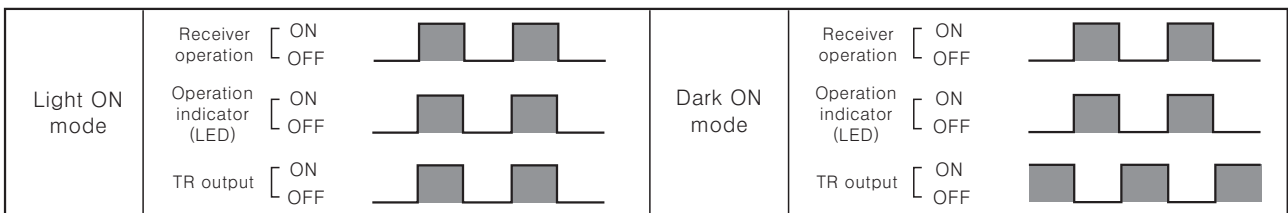
※Switch OFF : Dark ON, Switch ON : Light ON

## How to measure response frequency

Response frequency value is from revolving of below circle panel.

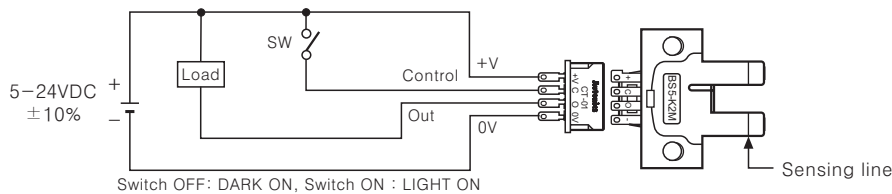


## Operation mode



※If the control output terminal is short-circuited or overcurrent condition is existed, the control output will turn off due to protection circuit.

## Connections

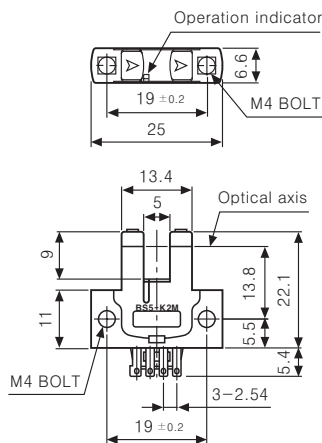


Switch OFF : DARK ON, Switch ON : LIGHT ON

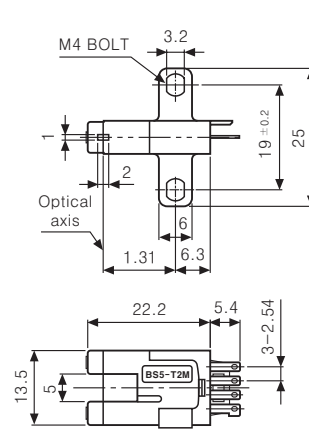
※Connect the unit by socket or, if it is soldered on terminal pin, it can be broken.

## Dimensions

### ●BS5-K2M

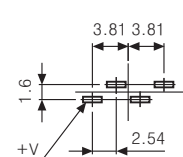


### ●BS5-T2M

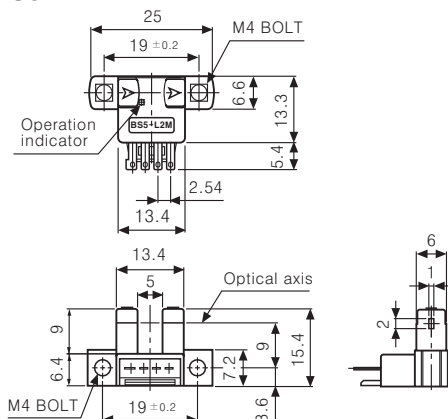


(Unit:mm)

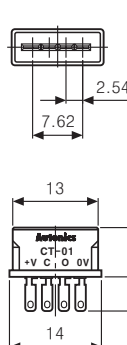
### ●PCB mounting hole



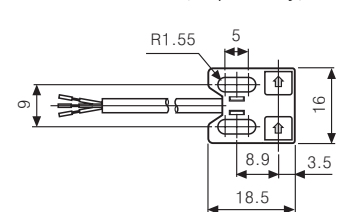
### ●BS5-L2M



### ●Socket : CT-01 (Separately)



### ●Socket : CT-02 (Separately)



※Cable : 4P,  $\phi$ 4, 1m  
※Cable length is customizable.

- (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