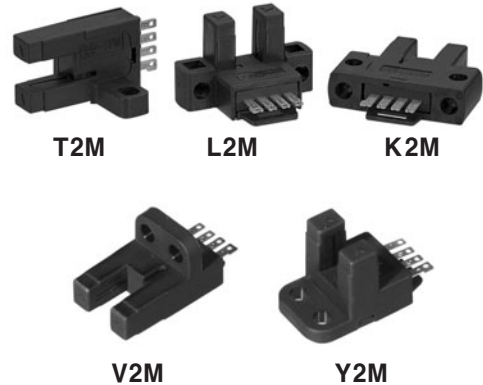


BS5 Series

Micro photo sensor

■ Features

- Built-in amplifier, NPN open collector output
- Various selection by installation position (Appearance: K, T, L, Y, V type)
- Light ON / Dark ON mode 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.

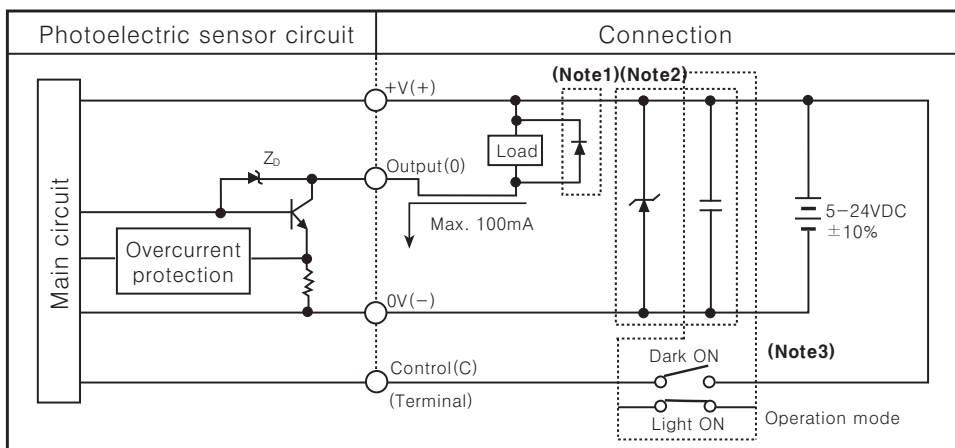


■ Specifications

Type	Micro photo sensor				
Model	BS5-K2M	BS5-T2M	BS5-L2M	BS5-Y2M	BS5-V2M
Sensing distance	5mm fixed				
Sensing type	Through-beam (Not modulated)				
Sensing target	Min. 0.8×1mm opaque materials				
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 • Load voltage : Max. 30VDC • Load current : Max. 100mA • Residual voltage : Max. 1.2V				
Operation mode	Light ON / Dark ON mode selectable by control terminal				
Operation indicator	Red LED				
Response time	Received light : Max. 20μs, Interrupted light : Max. 100μs				
Response frequency	2kHz (Please see the measuring range of frequency response)				
Connection	Connector type				
Light emitting element	Infrared LED				
Light receiving element	Photo transistor				
Vibration	1.5mm or 300m/s ² amplitude at frequency of 10 to 55Hz in each of X, Y, Z directions for 2 hours				
Shock	500m/s ² (50G) in X, Y, Z directions for 3 times				
Noise strength	±240V the square wave noise (pulse width:1μs) by the noise simulator				
Dielectric strength	1,000VAC 50/60Hz for 1minute				
Insulation resistance	Min. 20MΩ (at 250VDC megger)				
Ambient illumination	Fluorescent lamp : Max. 1000lx (Receiver illumination)				
Ambient temperature	-20 to 55°C (at non-freezing status), Storage : -25 to 85°C				
Ambient humidity	Operation & Storage : 35 to 85%RH (at non-dew status)				
Protection	IP50 (IEC standard)				
Material	PBT				
Approval	CE				
Unit weight	Approx. 30g				

Micro Photo Sensor

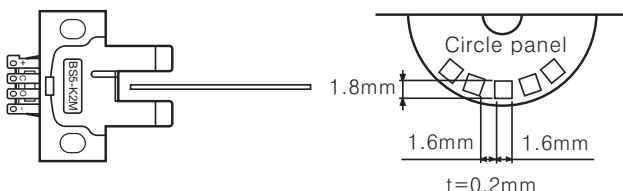
Control output diagram



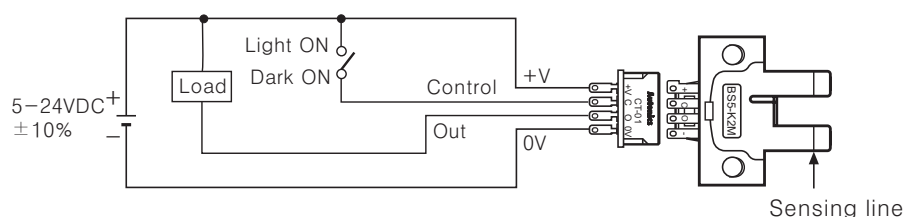
- ※ **(Note1)** There is Z_D (Zener Diode) absorbing the surge in output circuit, connect diode absorbing the surge at both terminals of load to protect the unit when connecting large inductive load.
- ※ **(Note2)** If there are surge in power line, connect Z_D (30 to 35V) or Condenser (0.1 to $1\mu F$ / 400 to 600V) to remove the surge.
- ※ **(Note3)** Operation mode selection : Connect Control (C) terminal into terminal +V(+) to operate Light ON mode. Dark ON mode is available with disconnection status. Please connect a condenser (Over 0.1 to $1\mu F$ / 50V) between terminal +V(+) and 0V for stable status in case of Light ON mode.

How to measure response frequency

Response frequency is the value getting from revolving the circle panel below.

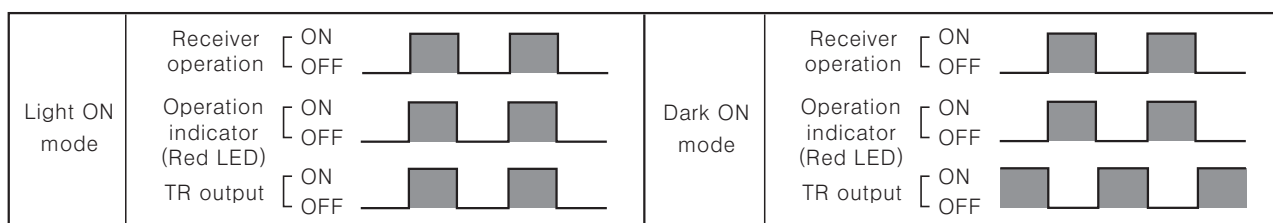


Connections



- ※ Connect the unit using socket.
- If it is soldered on terminal pin, product damage may result.

Operation mode



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

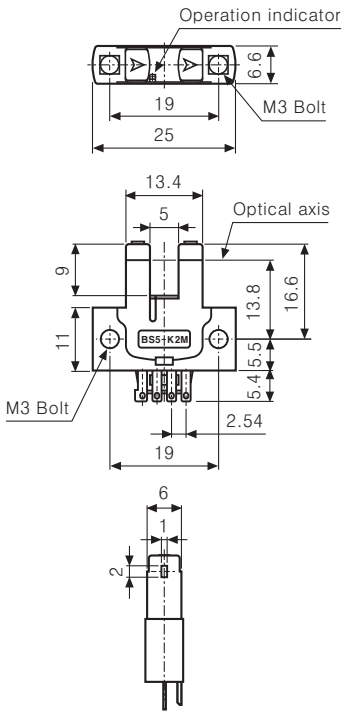
(A)	Photo electric sensor
(B)	Fiber optic sensor
(C)	Door/Area sensor
(D)	Proximity sensor
(E)	Pressure sensor
(F)	Rotary encoder
(G)	Connector/Socket
(H)	Temp. controller
(I)	SSR/Power controller
(J)	Counter
(K)	Timer
(L)	Panel meter
(M)	Tacho/Speed/Pulse meter
(N)	Display unit
(O)	Sensor controller
(P)	Switching power supply
(Q)	Stepping motor & Driver & Controller
(R)	Graphic/Logic panel
(S)	Field network device
(T)	Production stoppage models & replacement

BS5 Series

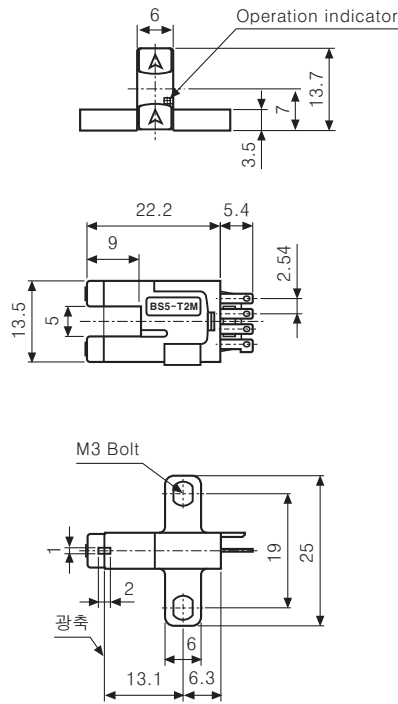
Dimensions

(Unit:mm)

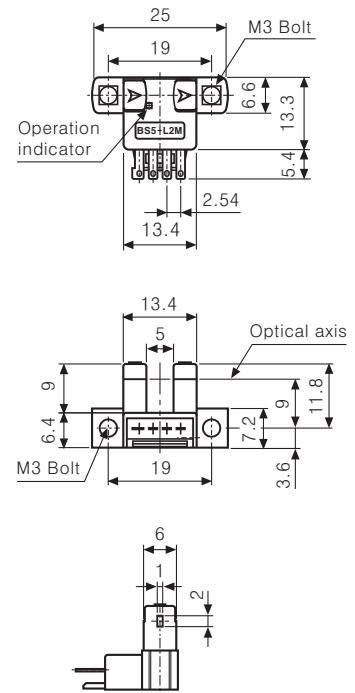
●BS5-K2M



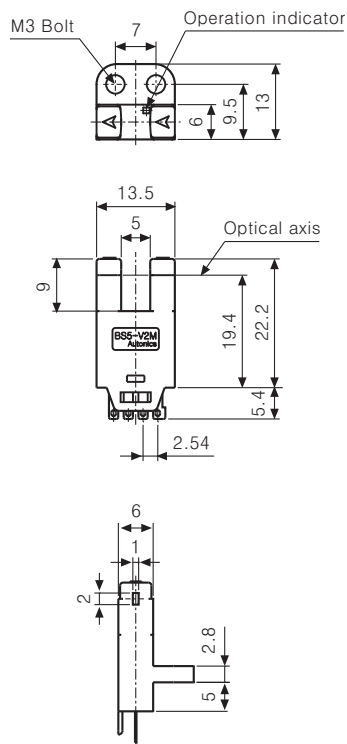
●BS5-T2M



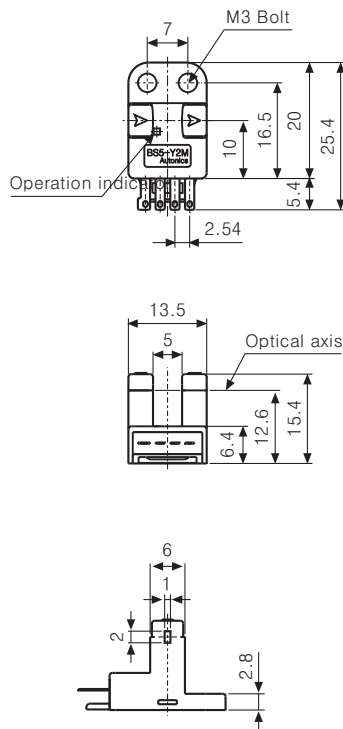
●BS5-L2M



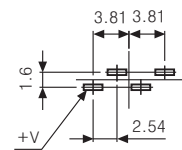
●BS5-V2M



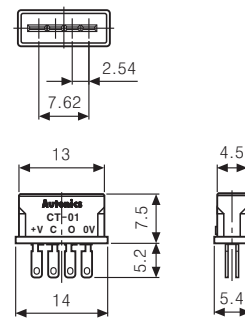
●BS5-Y2M



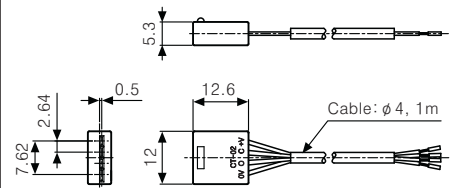
●PCB mounting hole



●Socket : CT-01(Sold separately)



●Socket : CT-02(Sold separately)



※Cable length is customizable.