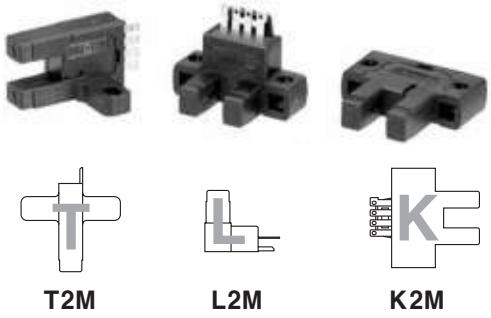
Photo micro sensor

▣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



T2M L2M K2M

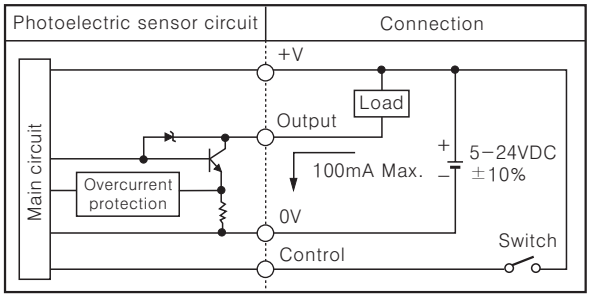
⚠ **Please read "Caution for your safety" in operation manual before using.**

CE

▣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 ☞ 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㎲, Interrupted light : Max. 100㎲		
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/s² (50G) in X, Y, Z directions for 3 times		
Noise strength	±240V the square wave noise(pulse width:1㎲) by the noise simulator		
Dielectric strength	1,000VAC 50/60Hz for 1minute		
Insulation resistance	Min. 20MΩ(at 250VDC mega)		
Ambient illumination	Fluorescent lamp : Max. 1000ℓx		
Ambient temperature	-20 ~ + 55℃(at non-freezing status), Storage : -25 ~ + 85℃		
Ambient humidity	35 ~ 85%RH(Storage : 35 ~ 85%RH)		
Protection	IP50(IEC standard)		
Material	PA-6		
Approval	CE		
Unit weight	Approx. 30g		

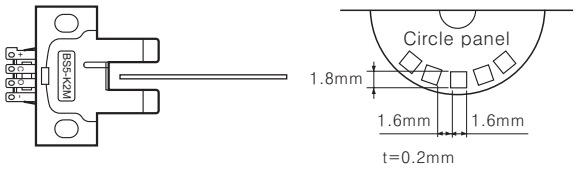
▣Control output diagram



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

▣How to measure response frequency

Response frequency value is from revolving of below circle panel.

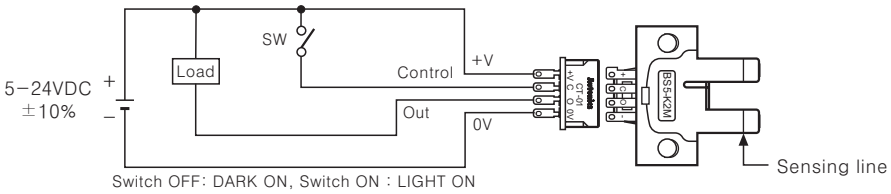


▣Operation mode

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

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

▣Connections



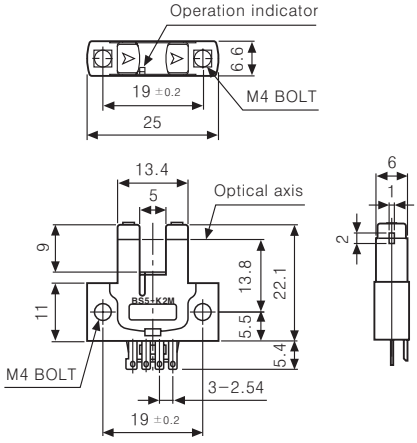
Switch OFF: DARK ON, Switch ON : LIGHT ON

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

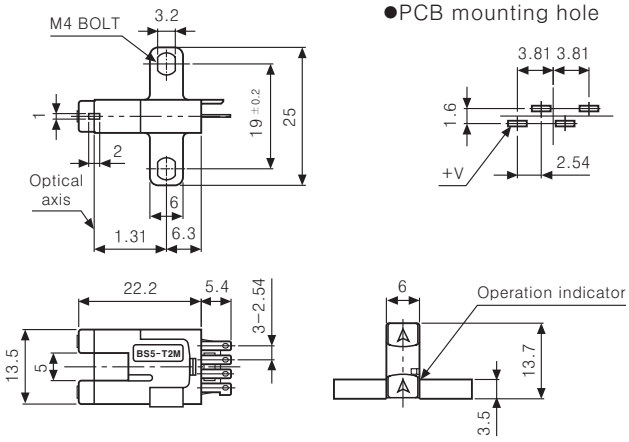
▣Dimensions

(Unit:mm)

●BS5-K2M

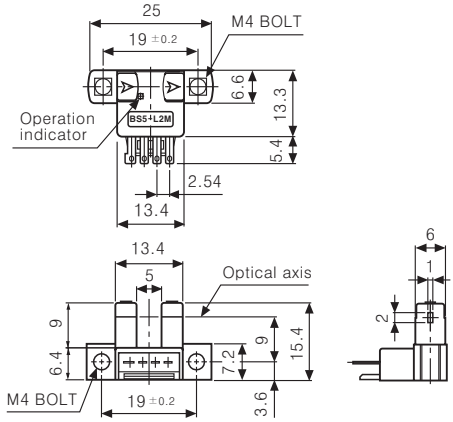


●BS5-T2M

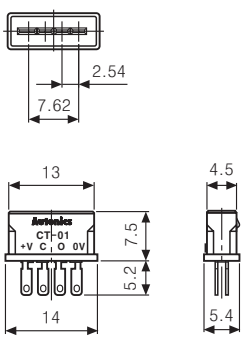


●PCB mounting hole

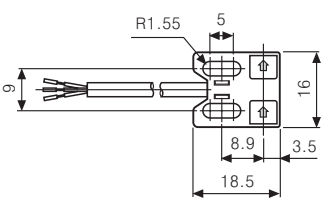
●BS5-L2M



●Socket : **CT-01**(Separately)



●Socket : **CT-02**(Separately)



※Cable : 4P, ϕ4, 1m
※Cable length is customizable.