

B1-Sensor®

PHOTO ELECTRIC SENSOR

MANUAL



Thanks for using B1-Sensor electrical, for your safety, please read the following before using.

Caution for your safety

Please keep these instructions and review them before using this unit. Please observe the cautions that follow;
Warning : Serious injury may result if instructions are not followed. Caution : Product may be damaged, or injury may result if instructions are not followed.
The following is an explanation of the symbols used in the operation manual.
Caution : Injury or danger may occur under special conditions

Warning

In case of using this unit with machinery (Ex: nuclear power control, medical equipment, ship, vehicle, train, airplane, combustion apparatus, safety device, crime/disaster prevention equipment, etc) which may cause damages to human life or property, it is required to install fail-safe device. It may cause a fire, human injury or damage to property.

Caution

- Do not use this unit in place where there are flammable, explosive gas, chemical or strong alkalis, acids. It may cause a fire or explosion.
- Do not impact on this unit. It may result in malfunction or damage to the product.
- Do not apply AC power and observe the rated specification.
It may result in serious damage to the product.

Specification

Model	Diffuse-reflective type D	Retro-reflective type R	Through-bethod type T
Sensing distance	Square50: 30cm Square70: 50cm	Square50: 4m Square70: 7m	Square50: 10m Square70: 15m
Hysteresis	3-20%		
Standard sensing target	20 * 20 * 1 mm (Iron)		
Power supply (Operating voltage)	24-240VDC/AC		
Response time	< 8.2ms		
Reflector	/ TD-08 / TD-05 /		
Residual voltage	Max. 3.5V		
Affection by Temp.	Max. ± 10% for sensing distance at ambient temperature 20°C		
Control output	200mA		
Insulation resistance	Min. 50MO(at 500VDC megger)		
Dielectric strength	1500VAC 50/60Hz for 1 minute		
Vibration	1 mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y Z directions for 2 hours		
Shock	500m/s ² (approx. 50G) X, Y Z directions for 3 times		
Indicator	Operation indicator (red LED)		
Ambient	-15~+55°C (No icing)		
Storage	-15~+55°C (No icing)		
Ambient humidity	35~95%RH (No condensation)		
Protection circuit	Surge protection circuit, Overcurrent protection circuit		
Protection	IP65 (IEC Standard)		
Material	Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PC, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Gray): Oil resistant Polyvinyl chloride(PVC)		

Specification

Model	Diffuse-reflective type D	Retro-reflective type R	Through-bethod type T
Sensing distance	M18: 30cm M30: 70cm	M18: 2m M30: 5m	M18: 5m M30: 10m
Hysteresis	3-20%		
Standard sensing target	15 * 15 * 1 mm (Iron)		
Power supply (Operating voltage)	10-30VDC		
Response time	< 8.2ms		
Reflector	/ TD-08 /		
Residual voltage	Max. 3.5V		
Affection by Temp.	Max. ± 10% for sensing distance at ambient temperature 20C		
Control output	200mA		
Insulation resistance	Min. 50MO(at 500VDC megger)		
Dielectric strength	1500VAC 50/60Hz for 1 minute		
Vibration	1mm amplitude at frequency of 10 to 55Hz(for 1 min.) in each of X, Y Z directions for 2		
Shock	500m/s ² (approx. 50G) X, Y Z directions for 3 times		
Indicator	Operation indicator (red LED)		
Ambient temperature	-15~+55°C (No icing)		
Storage temperature	-15~+55°C (No icing)		
Ambient humidity	35~95%RH (No condensation)		
Protection circuit	Surge protection circuit, Overcurrent protection circuit		
Protection	IP65 (IEC Standard)		
Material	Case/Nut: Nickel plated Brass, Washer: Nickel plated Iron, Sensing surface: PMMA, Standard cable(Gray): Polyvinyl chloride(PVC), Oil resistant cable(Gray): Oil resistant Polyvinyl chloride(PVC)		

Ordering Information

