

Model MGD-L45U Electromagnetic Sensor



Model List	Detection Polarity	Operation Status
MGD-L45UD	N-pole and S-pole (Both poles)	Normally open
MGD-L45UD1		Normally closed
MGD-L45US	S-pole	Normally open
MGD-L45US1		Normally closed

Application

- Positioning of the machine or the like using a magnet
- There is little space, the magnetic detection of a narrow place
- Position detection of metal pallets or moving tables using magnets

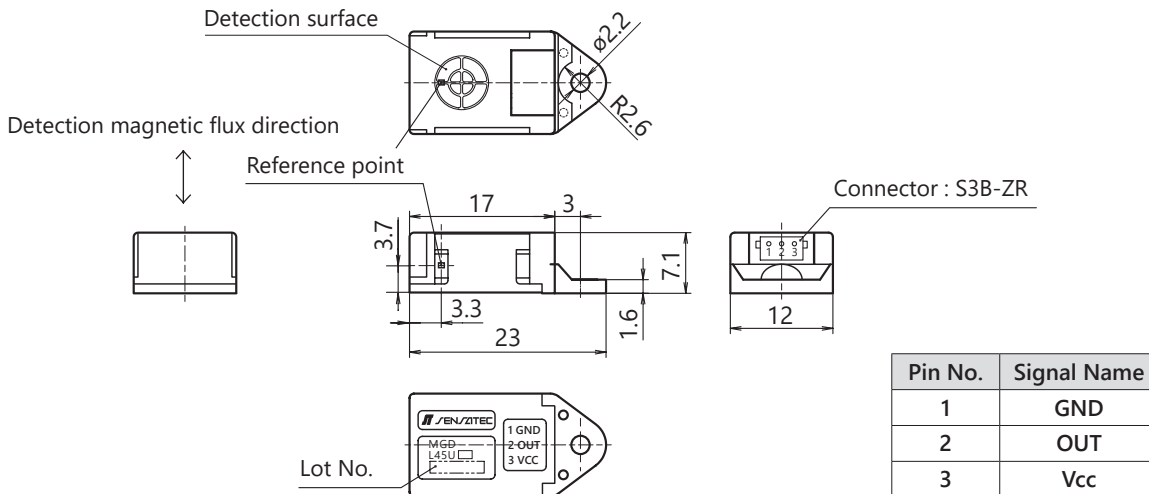
Features

- Simple installation with a single M2 screw.
- Small flat electromagnetic sensor that can be installed easily in small places.
- Can be used in a wide range of power supply voltage from 5 V DC to 24 V DC.

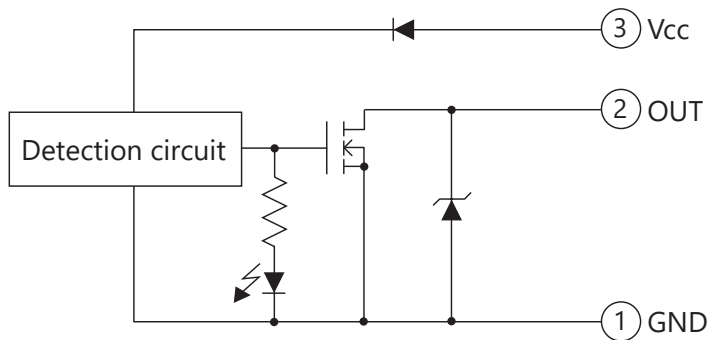
Rating / Performance

Model	MGD-L45UD	MGD-L45UD1	MGD-L45US	MGD-L45US1
Detection Surface	Upper side detection			
Detection Polarity	N-pole and S-pole (Both poles)		S-pole	
Detection Sensitivity	Detection : 4.5 mT (45 G) or more (At the standard point) Rese : 0.6 mT (6 G) or less (At the standard point)			
Power Voltage	5 V to 24 V DC (Operating voltage range : 4.75 V to 30 V DC)			
Power Consumption	5 mA DC or less			
Output	N-channel MOSFET Open drain 30 V DC 50 mA DC or less			
Output Residual Voltage	1 V DC or less (Load current 50 mA DC)			
Operation Status	Normally open (Output ON with magnetic field)	Normally closed (Output OFF with magnetic field)	Normally open (Output ON with magnetic field)	Normally closed (Output OFF with magnetic field)
Status Indication	Red LED : ON at output ON			
Response Frequency	1 kHz or more			
Temperature Range	-10 to 60 °C (-20 to 70 °C during storage)(Without dew condensation or freezing)			
Humidity Range	35 to 85 % RH (35 to 85 % RH or less during storage)(Without dew condensation)			
Breakdown Voltage	500 V AC, 50/60 Hz for 1 min (Between live parts and the case)			
Insulation Resistance	50 MΩ or more, at 500 V DC megger (Between live parts and the case)			
Vibration Resistance	Durability : 10 to 55 Hz, Double amplitude: 1.5 mm in X-, Y-, and Z-direction, each 2 hours (Device not powered)			
Shock Resistance	Durability : 500 m/s ² (Approx. 50 G) in X-, Y-, and Z-direction, each 3 times (Device not powered)			
Ingress Protection	IP50			
Case Material	Polyarylate resin			
Connector	Connector : S3B-ZR-SM4A-TF (3-pin)(from J.S.T. Mfg. Co., Ltd.) [Connections] Housing : ZHR-3, Contact : SZH-002T-P0.5 (from J.S.T. Mfg. Co., Ltd.)			
Weight	Approx. 2 g			
Options (Sold Separately)	Connector harness : SZH-3-300			

Dimensions



Output Circuit



Reference Detection Distances

Model	Material	Detection Distance	Reset Distance
MG10-10-T	Neodymium	Approx. 27 mm	Approx. 31 mm
MG10-10-F	Ferrite	Approx. 16 mm	Approx. 18 mm

Precautions During Use

1. If the object on which the electromagnetic sensor is installed is made of magnetic metal, the detection sensitivity may greatly vary. Ensure sufficient distance with magnetic metal and always verify the detection characteristics before using the sensor.
2. If there is magnetic metal with residual magnetism in the surroundings of the electromagnetic sensor installation location, the detection characteristics may greatly vary. Verify the detection characteristics before using the sensor.
3. For other precautions, refer to "General Precautions" for electromagnetic sensors.

*For other detailed specifications, refer to the specification sheet of the corresponding model.