

Model MGD-F8-5 / F8U-5 Electromagnetic Sensor



MGD-F8-5

MGD-F8U-5

Model List

Model	Operation configuration	Detection surface
MGD-F8-5	Normally open	Front side
MGD-F8U-5		Upper side
MGD-F8I-5	Normally closed	Front side
MGD-F8U1-5		Upper side

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

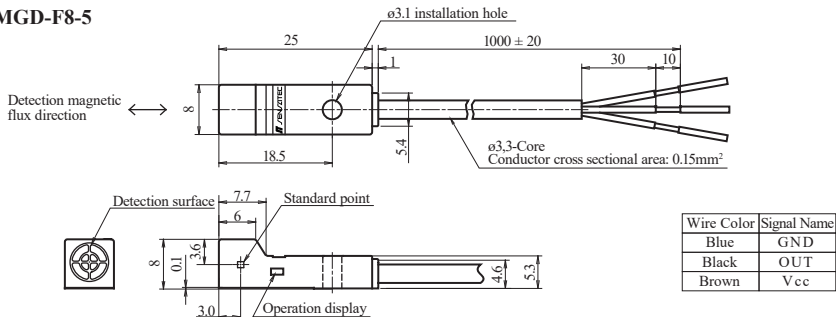
- Simple installation with a single M3 screw.
- Molded type that can be used safely even in places where water may splash.
- Small flat electromagnetic sensor that can be installed easily in small places.

Rating / Performance

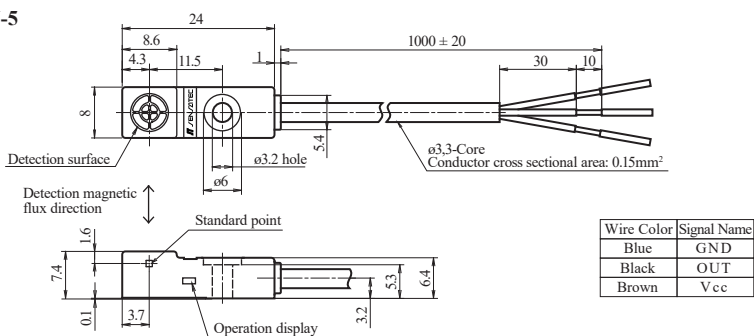
Model	MGD-F8-5	MGD-F8I-5	MGD-F8U-5	MGD-F8U1-5
Detection Surface	Front side detection		Upper side detection	
Detection Sensitivity	Detection : 3.5 mT (35 G) or more (At the standard point), Reset : 0.3 mT (3 G) or less (At the standard point)			
Power Voltage	5 V to 24 V DC (Operating voltage range : 4.5 V to 30 V DC)			
Power Consumption	15 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 at magnetic detection)	Normally closed (Output OFF at magnetic detection)	Normally open (Output ON at magnetic detection)	Normally closed (Output OFF at magnetic detection)
Operation Indication	Red LED (Lit when On output)			
Response Frequency	400 Hz or more			
Temperature Range	-10 to 70 °C (-25 to 80 °C during storage)(Without dew condensation or freezing)			
Humidity Range	35 to 95 % RH (35 to 95 % RH during storage)(Without dew condensation)			
Breakdown Voltage	1000 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 : 1000 m/s ² (Approx. 100 G) in X-, Y-, and Z-direction, each 10 times (Device not powered)			
Ingress Protection	IP67			
Case Material	Polyarylate			
Cable	ø3, 3-core round cord of 0.15 mm ² and 1 m in length (Oil and heat resistant)			
Weight	Approx. 17 g			
Options (Sold Separately)	Mounting bracket : PMS-F2R5S			

Dimensions

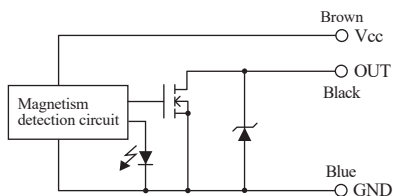
MGD-F8-5



MGD-F8U-5

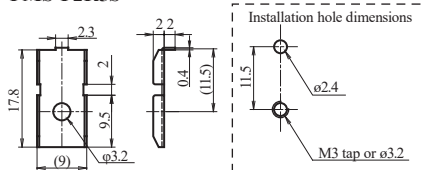


Output Circuit



Mounting Bracket (Sold Separately)

PMS-F2R5S



Reference Detection Distances

Model	Material	Detection distance	Reset distance
MG10-10-T	Neodymium	Approx. 34 mm	Approx. 35 mm
MG10-10-F	Ferrite	Approx. 21 mm	Approx. 22 mm

*MG10-10 series , refer to the option pages.

Precautions During Use

1. The back-flow prevention diode is not attached. Pay ample attention at wiring connection.
2. Do not place magnetic metal within 15 mm from the detection surface at the extremity.
3. 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.
4. 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.
5. For other precautions during use, refer to the General Precautions for electromagnetic sensor.

*For a detailed specification of the other, please refer to specifications.