□Model List

Cable of 1 m in length	MGD-35U
Cable of 3 m in length	MGD-35U-3M
Cable of 8 m in length	MGD-35U-8M

Application

- Positioning of the machine or the like using a magnet
- Positioning of the moving object, such as in an atmosphere of intense shock
- Position detection of the moving table or the like and workpiece

Characteristics

- Does not use the reed switch method to prevent poor contact problems and contact welding caused by wiring capacity.
- Resistant also to impacts and vibrations for better reliability.
- DC two-wire type that can be used the same as the reed switch method (Load resistance required).
- Detects the N pole and the S pole with exactly the same sensitivity.
- Molded type that can be used safely even in places where water or oil may splash.

Rating / Performance

Model	**MGD-35U**
Detection Surface	Upper side detection
Detection Distance	25 mm or more (*When using the neodymium magnet MG10-10-T)
Detection Sensitivity	Detection : 3.5 mT (35 G) or more (At the standard point)
Power Supply Voltage	12 V to 24 V DC (Operating voltage range : 10 V to 30 V DC)
Power Consumption	Leakage current : 1 mA DC or less when Off (With 24 V DC, 25°C)
Load Current	5 to 20 mA DC (At 25 °C)
Output	2-wire : + Brown, - Blue
Output Residual Voltage	4.5 V DC or less (Load current 20 mA DC)
Operation Configuration	Normally open (On with magnetic field)
Operation Display	None
Response Frequency	400 Hz or more
Operating Temperature Range	-10 to 60 °C (-10 to 60 °C during storage) (Without dew condensation or freezing)
Operating Humidity Range	35 to 95% RH (35 to 95% RH during storage) (Without dew condensation)
Withstand Voltage	1 min at 1000 V AC 50/60 Hz (Between the live part and case)
Insulation Resistance	50 MΩ or more measured with an ohmmeter at 500 V DC (Between the live part and case)
Vibration Resistance	Durability : 2 hours in each X, Y, Z direction at 10 to 55 Hz and with peak-to-peak amplitude of 1.5 mm (At power off)
Shock Resistance	Durability : 3 times at 1000 m/s^2 (approx. 100 G) in each X, Y, Z direction (At power off)
Protection Rating	IP67
Case Material	ABS
Cable	ø4, 2-core round cord of 0.2 mm^2 and 1 m in length (Oil and heat resistant)
Weight	Approx. 31 g (1 m in cable length)

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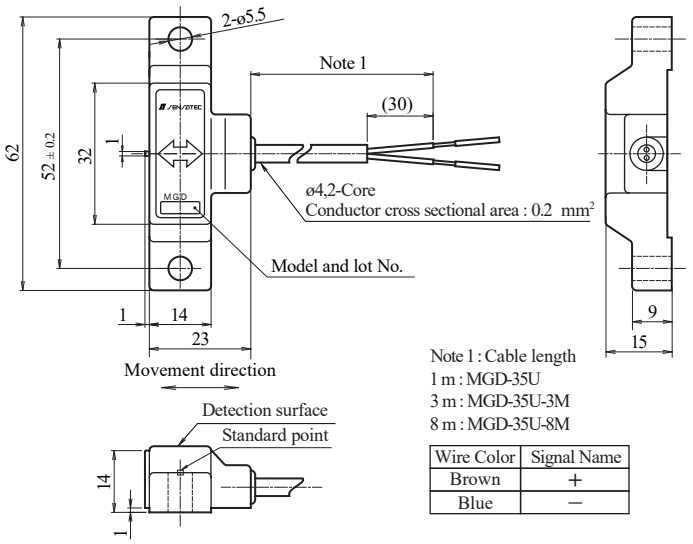
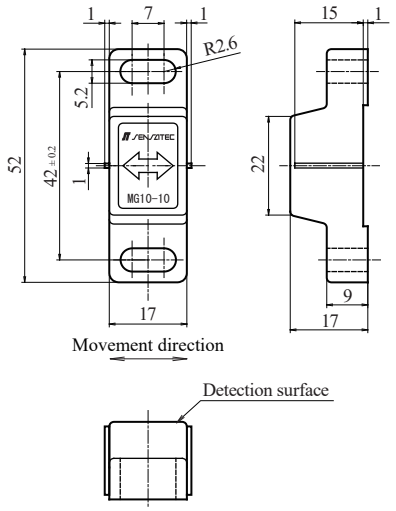
External Dimensions Diagram



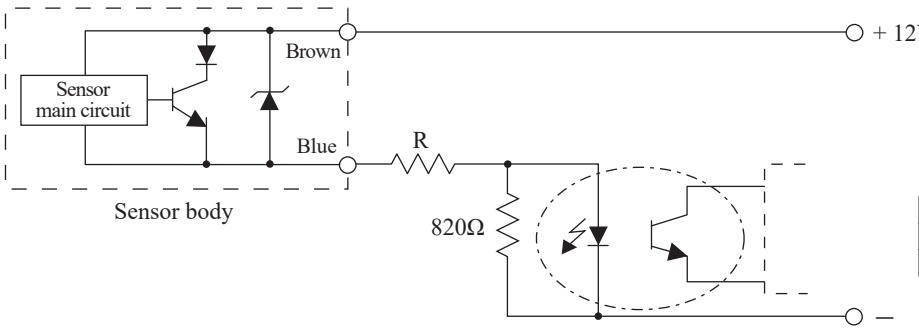
Note 1 : Cable length
1 m : MGD-35U
3 m : MGD-35U-3M
8 m : MGD-35U-8M

Wire Color	Signal Name
Brown	+
Blue	−

Magnet : MG10-10series (Sold Separately)

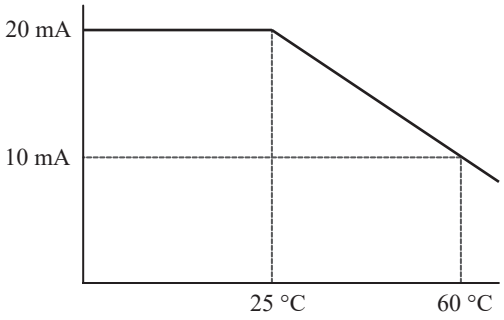


Output Circuit and Connections



R Value	
DC12V	2.2kΩ1/4W
DC24V	3.3kΩ1/4W

Load Current Curve



Reference Detection Distances

Model	Material	Detection Distance	Reset Distance
MG10-10-T	Neodymium	Approx. 36mm	Approx. 37mm
MG10-10-F	Ferrite	Approx. 21mm	Approx. 22mm

Usage Precautions

1. Do not place magnetic metal within 15 mm from the detection surface at the extremity.
2. 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.
3. 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.
4. See Electromagnetic sensor general usage precautions for other precautions.

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