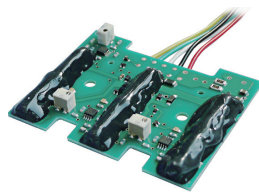


Model **MGM-3*4013-MC/PC** High-sensitivity Multi-type Magnetic Guide Sensor



MGM-3N4013-MC
MGM-3S4013-MC



MGM-3N4013-PC
MGM-3S4013-PC

Model List	Appearance	Detection Polarity
MGM-3N4013-MC	Case	N-pole
MGM-3S4013-MC		S-pole
MGM-3N4013-PC	PCB	N-pole
MGM-3S4013-PC		S-pole

Application

- Automatic guided vehicles guidance

Features

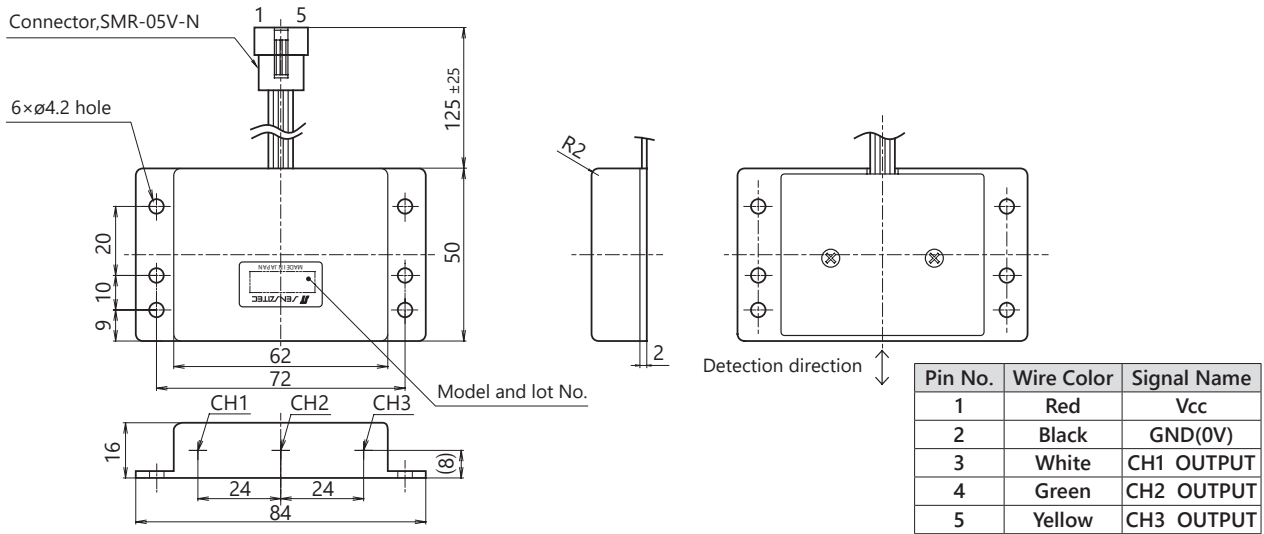
- High-sensitivity magnetic sensor that detects the magnetism at three points.
- Perfect as a guide sensor for automatic guided vehicles (AGV). The sensitivity can be lowered to adapt to the usage environment.
- Open drain output to output directly to digital circuits.
- MC type : Can be used in a variety of environments thanks to its superior dust-proof plastic case filled with urethane.
- PC type : PCB not enclosed in a case to increase the mounting possibilities.

Rating / Performance

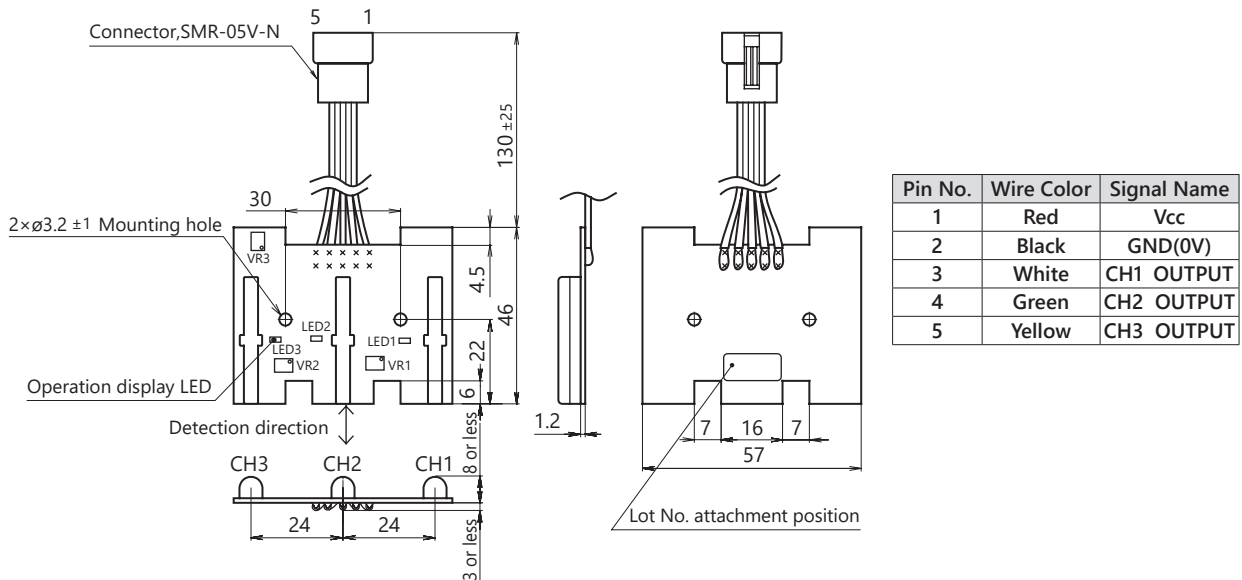
Model	MGM-3N4013-MC	MGM-3S4013-MC	MGM-3N4013-PC	MGM-3S4013-PC
Detection Surface	Front side detection			
Detection Sensitivity	400 μ T \pm 100 μ T (With a magnet tape of 30×30×t1.5mm)			
Detection Polarity	N-pole	S-pole	N-pole	S-pole
Typical Detection Distances	64 mm (*The MG50-1 series)			
Operating Set Distance	5 to 45 mm (*The MG50-1 series)			
Power Supply Voltage	12 V to 24 V DC (Operating voltage range: 10 V to 30 V DC)			
Current Consumption	50 mA DC or less			
Output	Pch MOSFET Open drain 30V DC, 100mA DC or less			
Output Residual Voltage	1 V DC or less (Load current 100 mA DC)			
Operation Status	Normally open (Output ON with magnetic field)			
Operation Indicator				Red LED (lit when On output)
Number of Detection Points / Pitch	3 point / 24 mm			
Response Time	500 μ s or less			
Hysteresis	30 μ T or less (With a magnet tape of 30×30×t1.5mm)			
Temperature Range	-10 to 60 °C (-20 to 70 °C storage temperature range) (Without dew condensation or or icing)			
Humidity Range	95 % RH or less (95 % RH or less storage humidity range) (Without dew condensation)		90 % RH or less (90 % RH or less storage humidity range)(Without dew condensation)	
Dielectric Strength	500 V AC for 1 minute (Between the live part and case)			
Insulation Resistance	100 M Ω or more at 500 V DC megger (Between the live part and case)			
Vibration Resistance	10 to 55 Hz, 1.5mm double amplitude in X, Y, and Z directions for 2 hours each (at power off)			
Shock Resistance	500 m/s ² (Approx. 50 G) in X, Y, and Z directions 3 times each (at power off)			
Protection	IP67 (Except for the connector part)			
Case Material	ABS resin			
Connector	Connector : SMR-05V-N (5-pin) (from J.S.T. Mfg. Co., Ltd.) [Connections] Housing : SMP-05V, Contact : SHF-001T-0.8BS (from J.S.T. Mfg. Co., Ltd.)			

Outline Dimensions

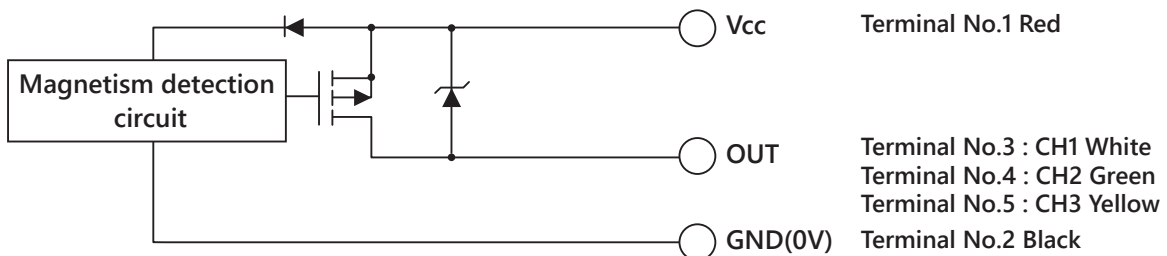
■MGM-3*4013-MC



■MGM-3*4013-PC



Output Circuit



Precautions During Use

1. The detection characteristics will vary if magnetism generating devices, such as inverters or motors, are near the magnetic sensor mounting location. Check the characteristics before using the sensor.
2. MGM-3*4013-PC: Use non-magnetic metal for the mounting screw and the casing.
3. MGM-3*4013-PC: When using a metal casing, pay attention that the PCB and the parts do not contact.
4. MGM-3*4013-PC: Note that the sensor may not operate correctly when the sensitivity is high due to ambient temperature change and electromagnetic noise.
5. For other precautions, refer to "General Precautions" for automatic guided vehicles magnetic sensors.

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