



□Model List

Sensitivity adjustment potentiometer	MGP-EW301V
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Application

- Magnet detection

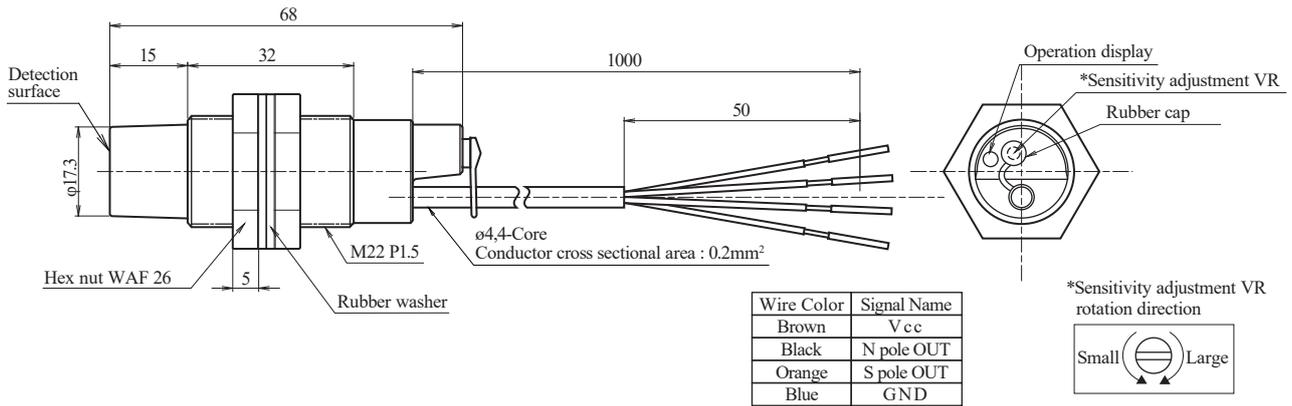
Characteristics

- The sensitivity can be adjusted using a potentiometer within the range of 300 to 6000 μ T.
- High-sensitivity sensor that can detect targets from a long distance.
- Highly stable operation even when the ambient temperature varies thanks to its magnetism focusing construction (patented).
- The magnetism focusing construction is very useful as the sensor can detect at a long distance targets with a wide surface but a weak magnetic flux, like belt-shaped rubber magnets.

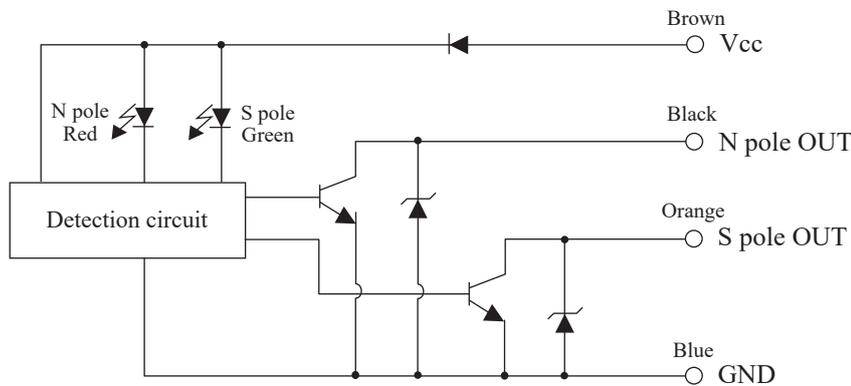
Rating / Performance

Model	MGP-EW301V
Detection Surface	Front side detection
Detection Sensitivity	Max detection sensitivity : 300 μ T, min detection sensitivity 6000 μ T (With a rubber plate magnet of 30 × 30 × t1.5 mm)
Power Supply Voltage	12 V to 24 V DC (Operating voltage range : 10 V to 30 V DC), Ripple 1% or less
Power Consumption	20 mA DC or less
Output	30 V DC 50 mA DC or less NPN transistor open collector
Output Residual Voltage	1 V DC or less (Load current 50 mA DC)
Operation Configuration	Normally open (On with magnetic field)
Operation Display	LED : Red with N pole detection, Green with S pole detection
Response Time	300 μ s or less
Hysteresis	50 μ T or less (With a rubber plate magnet of 30 × 30 × t1.5 mm)
Detection Polarity	N-pole and S-pole
Reference Detection Distances	80 mm at max detection sensitivity (*For the MG50-1 series)
Operating Set Distance	5 to 55 mm at max detection sensitivity (*For the MG50-1 series)
Operating Temperature Range	-10 to 60 °C (-20 to 65 °C during storage)(Without dew condensation or freezing)
Operating Humidity Range	90% RH or less (90% RH or less during storage)(Without dew condensation)
Withstand Voltage	1 min at 500 V AC 50/60 Hz (Between the live part and case)
Insulation Resistance	100 M Ω 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 500 m/s ² (approx. 50 G) in each X, Y, Z direction (At power off)
Protection Rating	IP65
Case Material	ABS (Hex nut: PBT, Rubber washer : NBR)
Cable	ϕ 4, 4-core round cord of 0.2 mm ² and 1 m in length (Oil and heat resistant)
Weight	Approx. 51 g
Accessories	2 hex nuts (plastic), 2 rubber washers, 1 slotted screwdriver for adjustment

External Dimensions Diagram

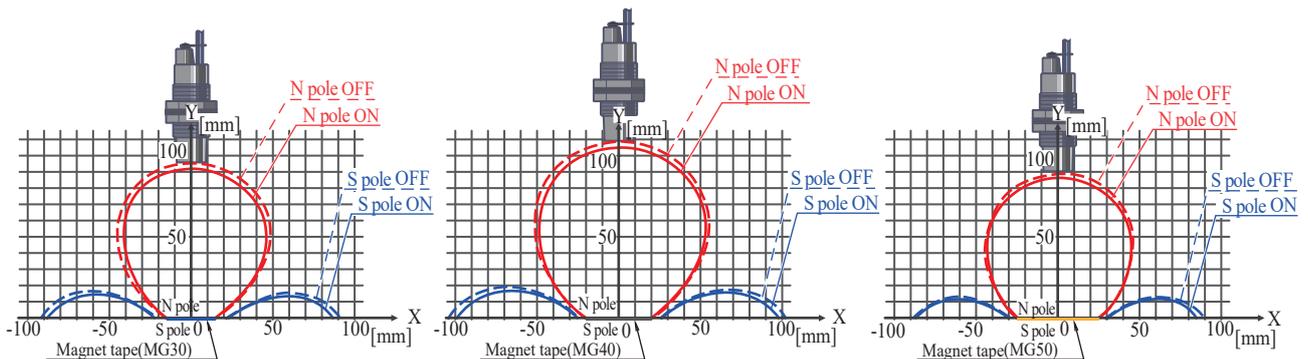


Output Circuit



Precautions with Detection Area Diagram and Reverse Polarity Flux (Typical Example)

When used for bipolar detection, separate sufficiently the sensor from the tape to avoid detecting the reverse polarity magnetic flux output from both sides of the magnet tape.



*If the MGP-EW301 is used at a height of 25 m or less, the wrong pole may be detected.

Usage Precautions

1. If there are magnetic objects on or around the installation location of the electromagnetic sensor, keep a distance between the sensor and these objects greater than the distance between the sensor and the magnet tape. Check also carefully 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. See Electromagnetic sensor general usage precautions for other precautions.

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