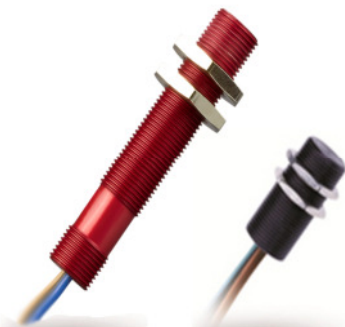


Magnetic Proximity Sensors (Hall Effect)

MP1005 - MP1007 Sensors

Solid state magnetic proximity sensor
with electrical immunity protection



Description

The MP1 Series sensors are one-piece non-contact solid-state position sensors. The sensors operate through the use of Hall Effect technology with magnetic fields generated by permanent magnets. They provide a sinking current output.

Features

- Solid state reliability
- Stable output over operating temperature range
- Compatible with unregulated power supply
- South pole activated
- Open collector (sinking or NPN) output can be used with bipolar or CMOS logic circuits with suitable pull-up resistor
- RoHS compliant
- IP67

Typical Applications

- Door position & interlock
- Limit switch
- Flow/speed
- Home security
- Pedal switch

Environmental Specifications

| | |
|----------------------------------|-------------------------------------|
| Operating Temperature (MP100502) | -40 °C to 85 °C (-40 °F to 185 °F) |
| Operating Temperature (MP100701) | -40 °C to 150 °C (-40 °F to 302 °F) |
| Storage Temperature (MP100502) | -40 °C to 85 °C (-40 °F to 185 °F) |
| Storage Temperature (MP100701) | -40 °C to 150 °C (-40 °F to 302 °F) |
| Ingress Protection | IP67 |

Electrical Specifications

| | |
|------------------------------|--------------------------|
| Operating Supply Voltage | 5 to 24 VDC |
| Supply Current | 4.1 mA typ., 7.5 mA max. |
| Output Current (Sink) | 25 mA max. |
| Output Off Voltage | 30 VDC |
| Maximum Input Voltage | 30 VDC |
| Maximum Reverse Voltage | 30 VDC |
| Recommended Pull-up Resistor | See chart |

Mechanical Specifications

| | |
|-----------------------------------|----------------------|
| Housing Material | Aluminium |
| Maximum Installation Torque Limit | 50 in lbs on threads |
| Turn on / off | 245 Gauss / 60 Gauss |

Products

| Part Number | Housing Color | Termination |
|-------------|---------------|--------------|
| MP100502* | Red | 20 AWG x 1 m |
| MP100701 | Black | 20 AWG x 1 m |

*Not commonly stocked; please contact the factory or your distributor.

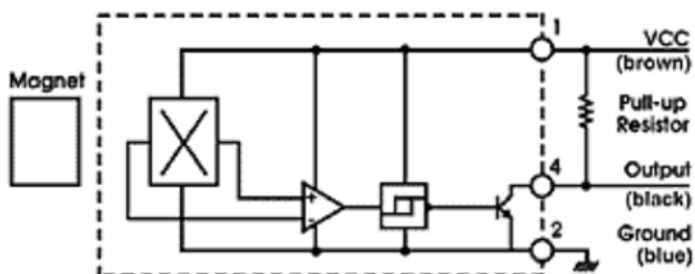


Note: An external pull-up resistor is required, the value of which is dependent on the supply voltage. The resistor should be connected between the output and Vcc. Refer to the wiring diagram for lead colors or pin numbering as applicable.

Recommended External Pull-Up Resistor

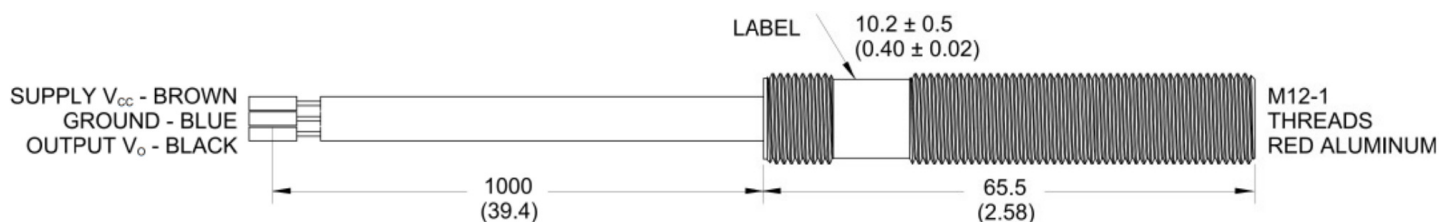
| Volts DC | 5 | 9 | 12 | 15 | 24 |
|----------|----|------|------|----|----|
| Ohms | 1k | 1.8k | 2.4k | 3k | 3k |

Open Collector Sinking Block Diagram



Dimensions mm (inches)

MP100502



MP100701

