

Magnetic Sensors

Description

A magnetic sensor is a simple, inexpensive sensing device that can be used in very harsh environments because its completely sealed housing makes it unaffected by heavy dust or corrosive atmospheres.

The basic sensor system consists of a sensor and a magnet and can be typically used in food production, printing, and packaging industries. Their rugged construction also makes magnetic sensors suitable for agricultural applications.

The operating component in the magnetic sensor is a reed switch.



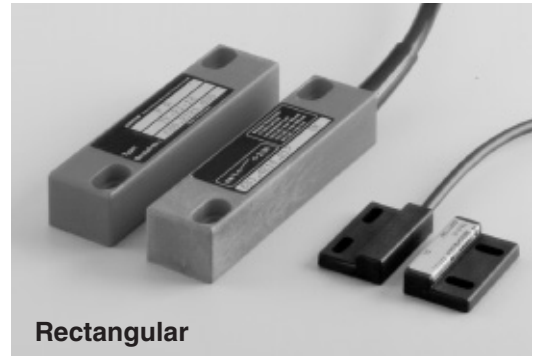
Cylindrical

Operation of a Magnetic Sensor

These sensors are used mainly as proximity switches. The magnet and sensor must be positioned correctly so the strength of the flux magnet and the sensitivity of the sensor operate to the specified sensing distance. Sensor operation does not depend on direction or angle of travel.

Features

- NEMA 4, 4X
- Temperature range -13°F + 158°F
- Cable length, 3 feet (standard length)
- Extremely stable switching point
- Repeatability better than 0.025 inch
- Life expectancy 10⁷ switching operations
- Extremely cost effective
- Operating voltage up to 250 VAC



Rectangular

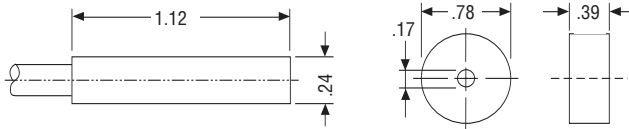
Sensor Selection

Sensor and Magnet Combination	*Sensing Range	Max Supply Volts	**Switching Function	Max Power/Current	Output Current At 120VAC	Model	Part Number
Smooth Plastic Barrel/MA-30 Magnet T-67 N/S	0.1 inch	250 VAC	NO	10 VA/0.5 A	80 mA	MAK-3012-B T-67 N/S	631-1230-571 630-1167-054
Threaded Metal Barrel/MA-08 Magnet T-62 N/S	0.6 inch	250 VAC	NO	10 VA/0.5 A	80 mA	MAN-0812-B T-62 N/S	631-1208-596 630-1262-039
Threaded Metal Barrel/MA-23 Magnet T-62 N/S	0.3 inch	250 VAC	NO	100 VA/3 A	830 mA	MAM-2312-F T-62 N/S	631-4223-268 630-1262-039
Rectangular Plastic/MA-11 Magnet TK-11-11	0.4 inch	250 VAC	NO	10 VA/0.5 A	80 mA	MAK-1112-B TK-11-11	631-1211-541 630-2111-047
Rectangular Plastic/MA-12 Magnet TK-21-12	0.8 inch	250 VAC	NO	100 VA/0.3 A	830 mA	MAK-1212-F TK-21-12	631-4212-217 630-2121-030
Rectangular Plastic/MA-45 Magnet TK-45	0.4 inch	250 VAC	NO	10 VA/0.5 A	80 mA	MAK-4512-B TK-45	631-1245-539 630-2145-048
Rectangular Plastic/MA-42 Magnet TK-42	1.0 inch	250 VAC	NO	100 VA/3 A	830 mA	MAK-4212-F TK-42	631-4242-533 630-2142-049

*Sensing range is based on the use of the specified magnet.

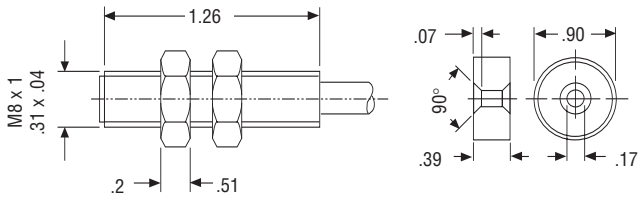
**NO = Normally Open

Mechanical Data (Dimensions are in inches)



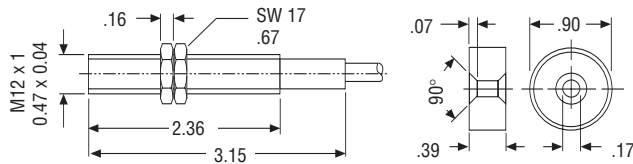
Sensor MA-30
Part # 631-1230-571

Magnet T-67 N/S
Part # 630-1167-054



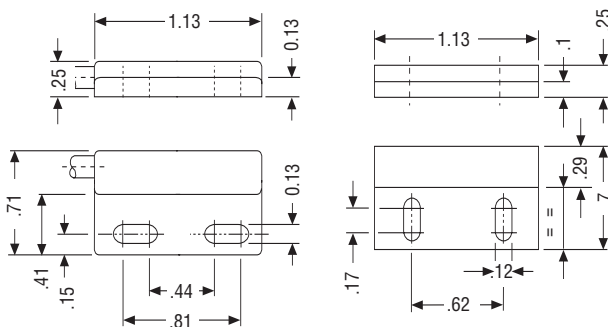
Sensor MA-08
Part # 631-1208-596

Magnet T-62 N/S
Part # 630-1262-039



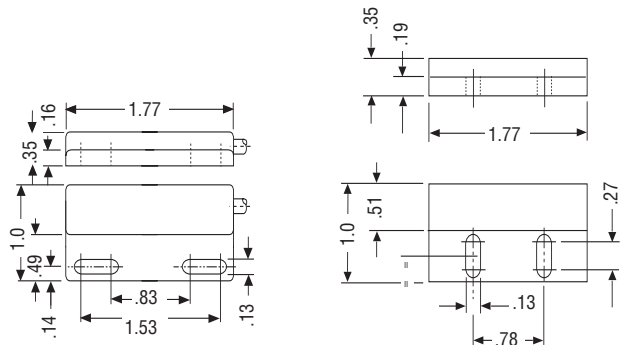
Sensor MA-23
Part # 631-4223-268

Magnet T-62 N/S
Part # 630-1262-039



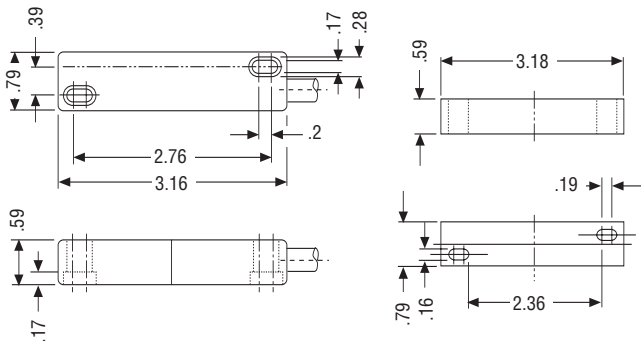
Sensor MA-11
Part # 631-1211-541

Magnet TK-11-11
Part # 630-2111-047



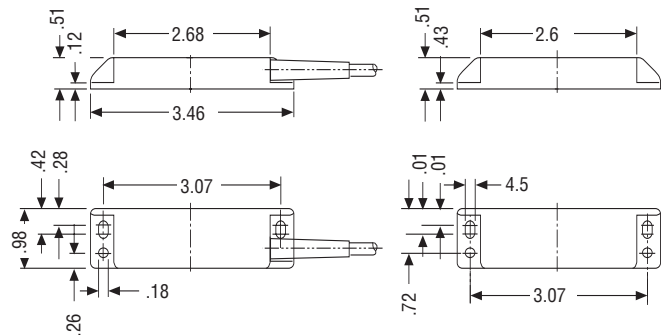
Sensor MA-45
Part # 631-1245-539

Magnet TK-45
Part # 630-2145-048



Sensor MA-12
Part # 631-4212-217

Magnet TK-21-12
Part # 630-2121-030



Sensor MA-42
Part # 631-4242-533

Magnet TK-42
Part # 630-2142-049

Mounting Instructions for Mounting a Magnetic Sensor on Ferrous Materials

If a magnet and magnetic sensor are mounted on ferrous materials, the specified sensing distance will be reduced. To ensure good operation, the magnet and switch should be a minimum of 0.6 inch from the ferrous material.

Sensor and Magnets are purchased independently.