



SI-MAG Series Magnetic Style Switch Features

- Non-contact safety switches are the best choice for washdown applications; the switch components are sealed and rated NEMA 4X, IEC IP67
- Tolerant of dirt buildup, sensing distance, and alignment
- System consists of three components:
 - Coded magnet
 - Reed switch sensor
 - Controller module
- Magnet contains several differently-polarized magnets, and sensor contains pole-stable reed contacts to minimize any possibility of defeat
- Easy installation; can be concealed for added defeat resistance
- Sensor reed switches provide diverse input to the controller module

Magnetic Style Safety Switch Models

Magnet Sensor*		Coded Magnet		Controller	Sensor Cable	Switching Distance	
						Min. ON	Max OFF
SI-MAG1SM SI-MAG1SMCO†		SI-MAG1MM		SI-MAG1C	3 m (10 ft)	3 mm (0.12")	14 mm (0.55")
		SI-MAG1MMHF				8 mm (0.31")	16 mm (0.63")
SI-MAG2SM		SI-MAG2MM				4 mm (0.16")	8 mm (0.32")
SI-MAG3SM		SI-MAG3MM				3 mm (0.12")	7 mm (0.28")

*NOTES: • 9 m (30') cables are available for magnet sensors by adding suffix "**W/30**" to the model number of the cabled version (e.g., **SI-MAG1SM w/30**).

† Cable Opposite



Machine Safety Switches – Magnet Style



Important Information Regarding the Use of Safety Switches

In the United States, the functions that Banner safety switches are intended to perform are regulated by the Occupational Safety and Health Administration (OSHA). Whether or not any particular safety switch installation meets all applicable OSHA requirements depends upon factors that are beyond the control of Banner Engineering Corp. These factors include the details of how the safety switches are applied, installed, wired, operated, and maintained.

Banner Engineering Corp. has attempted to provide complete application, installation, operation, and maintenance instructions. This information is found in the instruction manual packaged with each safety switch. In addition, we suggest that any questions regarding the use or installation of safety switches be directed to the factory applications department at the telephone numbers or address shown, below.

Banner Engineering Corp. recommends that safety switches be applied according to the guidelines set forth in international (ISO/IEC) standards listed, below. Specifically, Banner Engineering Corp. recommends application of safety switches in a configuration which meets safety category 4, per ISO 13849 (EN954-1).

In addition, the user of Banner safety switches has the responsibility to ensure that all local, state, and national laws, rules, codes, and regulations relating to the use of Banner safety switches in any particular application are satisfied. Extreme care is urged that all legal requirements have been met and that all installations and maintenance instructions are followed.

Application Assistance

Toll Free: 1-888-3-SENSOR (1-888-373-6767)
Email: sensors@bannerengineering.com
Address: 9714 Tenth Avenue North
Minneapolis, MN 55441

U.S. Regulations Applicable to Use of Banner Safety Switches

OSHA Code of Federal Regulations: Title 29, Parts 1900 to 1910

Available from: Superintendent of Documents
Government Printing Office
P.O. Box 371954
Pittsburgh, PA 15250-7954
Tel: 202-512-1800

U.S. Standards Applicable to Use of Banner Safety Switches

ANSI B11 "Standards for Construction, Care, and Use of Machine Tools"
Available from: Safety Director
AMT - The Association for Manufacturing Technology
7901 Westpark Drive
McLean, VA 22102
Tel: 703-893-2900

Applicable European and International Standards

ISO/TR 12100-1 "Safety of Machinery - Basic Concepts, General Principles for Design"
(EN292-18-2)
ISO 13852 (EN 294) "Safety of Machinery - Safety Distances to Prevent Danger Zones Being Reached by the Upper Limbs"
ISO 13853 (EN 811) "Safety of Machinery - Safety Distances to Prevent Danger Zones Being Reached by the Lower Limbs"
ISO 13849 (EN 954-1) "Safety of Machinery - Safety Related Parts of Control Systems"
ISO 13855 (EN 999) "Safety of Machinery - The Positioning of Protective Equipment in Respect to Approach Speeds of Parts of the Human Body"
ISO 14119 (EN 1088) "Safety of Machinery - Interlocking Devices Associated with Guards - Principles for Design and Selection"
IEC/EN 60204-1 "Safety of Machinery - Electrical Equipment of Machines"
IEC/EN 60947-5-1 "Low Voltage Switchgear -Electromechanical Control Circuit Devices"

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