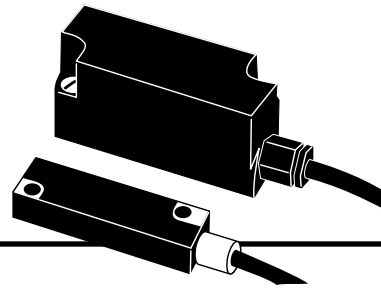


# Ferrous/Magnet Actuated Switches



- 14° to 122°F
- High-shock resistant
- Water, oil, and dust tight
- Fully submersible to 200 psi

Namco's Maglock proximity switches are small, tough, and versatile. They are ideal for use in signal circuits and similar applications up to 5A, 250 volts. They are operated by an actuator which is either a permanent magnet (in the case of magnetically actuated types) or a piece of ferrous material such as ordinary mild steel (in the case of ferro-actuated models).

The switching elements comprise fast-acting, hermetically sealed, dry reed switches, permanently mounted in brass, glass-filled nylon, or stainless steel housings.

## Operating Principles

The actuation procedure depends on the particular function to be performed.

The successful selection of switch and actuator requires an understanding of the techniques employed.

## Magnetically Actuated Switches

The switch and its actuator must be brought within a specific proximity to each other (operating distance). The actual distance in any particular case will depend on their relative attitudes, sensitivity, and direction of closing.

When the actuator (magnet) is brought close enough, the switch will operate. When it is withdrawn, it will reset itself. The gap between the switch and the actuator when the switch operates is always less than the gap at which the switch resets. The difference between the two is referred to as the "operating differential".

## Ferro-Actuated Switches

The fundamental difference between a Maglock magnetically actuated switch

and a ferro-actuated type is that the latter has a built-in system of permanent magnets. Unlike magnetically actuated switches that require the approach of an external permanent-magnet actuator before they will operate, ferro-actuated switches operate upon the approach of a simple piece of ferrous material, i.e., mild steel.

The effect of the ferro-magnetic material is to modify or shunt a part of the internal magnetic field surrounding the switch contacts allowing the switch to operate.

## Typical Applications

Proximity switches, limit switches, door interlock switches, machine tool control, liquid level control, weight and measurement control, material handling programming, machine guard interlocks, systems interlocks, alarm systems, batching and timing mechanisms, instrument counters, valve position indicators, and all types of automatic control devices.

Voltage	Current	Power (Max.)	Contact Arrangement	Switch Model No.	Actuator Model No.	Operating Range	On-Off Diff.	Minimum Target Size
<b>Ferrous Actuated, Rectangular</b>								
250V, AC/DC	0.25A DC, 1A AC	15W DC 15VA AC	SPST, NO	EE960-10000	—	.25"	.50"	2" x .50" x .125"
250V, AC/DC	2A DC, 2A AC	40W DC 40VA AC	SPST, NO	EE960-20000	—	.12" .37" .71"	.75"	1/2" dia. x 3/16" 5/8" dia. x 1/4" 3-1/4" dia. x 1-1/4" x 1/16"
<b>Magnet Actuated, Tubular</b>								
300V, DC	1A DC	20W DC	SPST, NO	EE960-00100	EE961-03800 EE961-03900 EE961-04000	.25" .39" .98"	.24" .27" .47"	—
250V, AC	1.5A AC	24VA AC	SPST, NO	EE960-00100	EE961-03800 EE961-03900 EE961-04000	.25" .39" .98"	.24" .27" .47"	—
250V, AC/DC	1.25A AC/DC	20W DC 20VA AC	SPDT NO/NC	EE960-00200	EE961-03900 EE961-04000	.08" .69"	.27" .27"	—
<b>Magnet Actuated, Rectangular</b>								
250, AC/DC	1.25A DC, 1.35A AC	20W DC 20VA AC	SPDT NO/NC	EE960-02000	EE961-02000 EE961-03000	.37" .87"	.44" .69"	—
200V, AC 250V, DC	.5A, AC/DC	12VA AC 10W DC	SPST, NO	EE960-03000	EE961-02000 EE961-03000	.62" 1.00"	.38" .69"	—
110V, AC 250V, AC	3A AC, 2A AC	—	SPST, NO	EE960-16000*	EE961-01600 EE961-02500	.20"	.45"	—

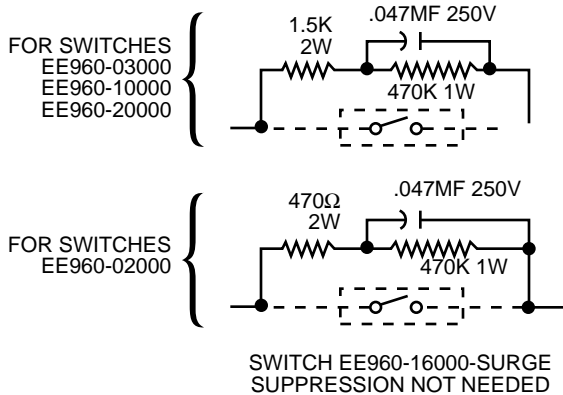
\* The EE960-16000 Magnet Actuated Proximity Switch is designed for power applications, such as motor starters. This SPST NO switch has double contacts: one for breaking circuit current, the other for ensuring continuity at low currents. Typical life of this series is 100 million operations (at or below rated load).

**Circuit Drawings**

**CONTACT PROTECTION**

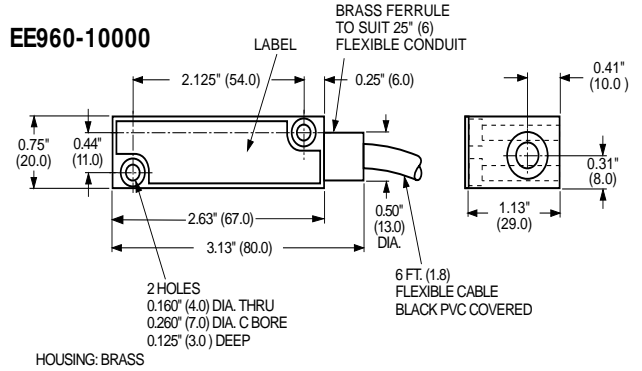
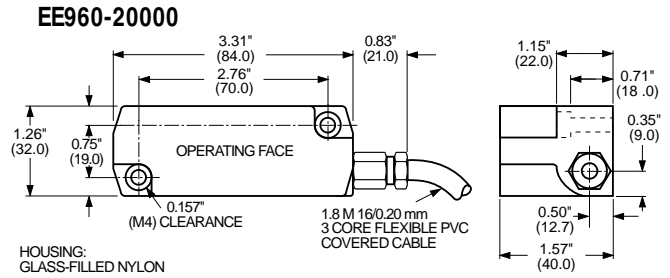
Voltage and current values given are maximum values of each but must not be construed to be a Volt-Amp rating. Switch capacity is listed as wattage or V-A except in the case of the EE960-16000 where switch capacity is the product of the applied voltage and the break-current.

All switch capacities are resistive (except for the EE960-16000) ratings, and surge protection should be used when switching inductive loads.

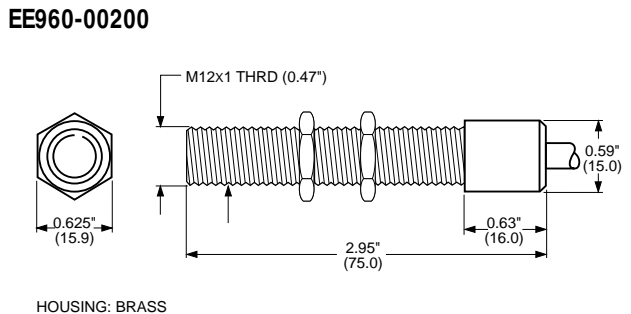
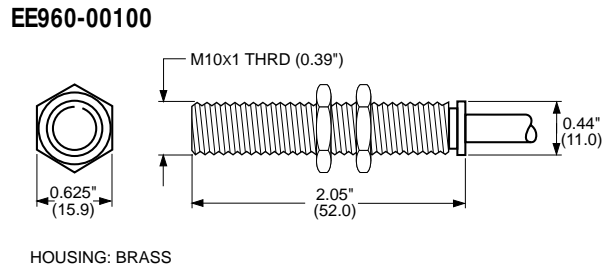


**Dimensional Drawings**

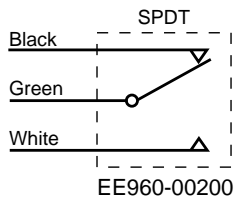
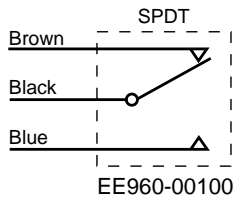
**FERROUS ACTUATED SWITCHES, RECTANGULAR**



**MAGNET ACTUATED SWITCHES, TUBULAR**



**Wiring Diagrams**



Special Application Solutions

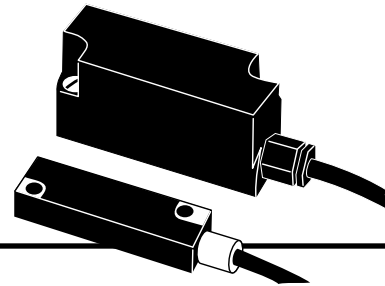
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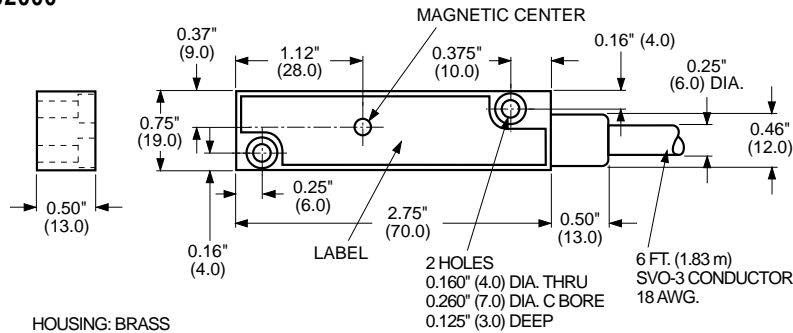
# Ferrous/Magnet Actuated Switches



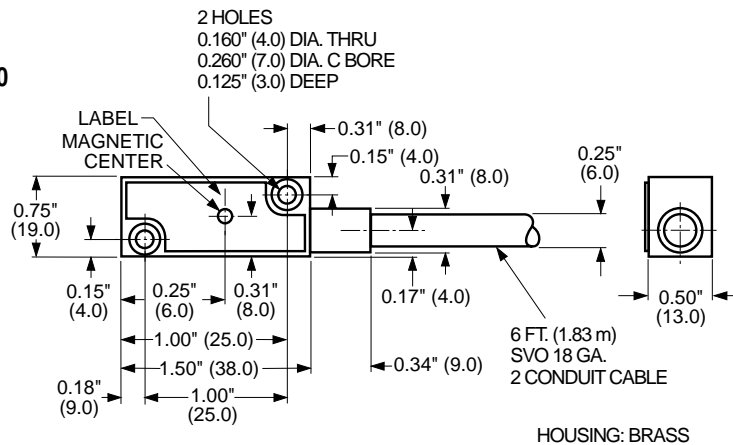
## Dimensional Drawings

### MAGNET ACTUATED SWITCHES, RECTANGULAR

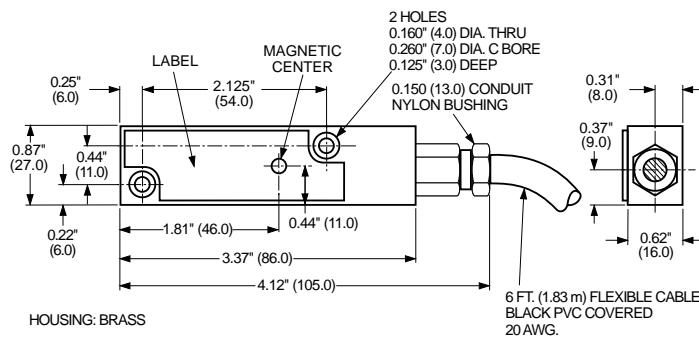
EE960-02000



EE960-03000



EE960-16000

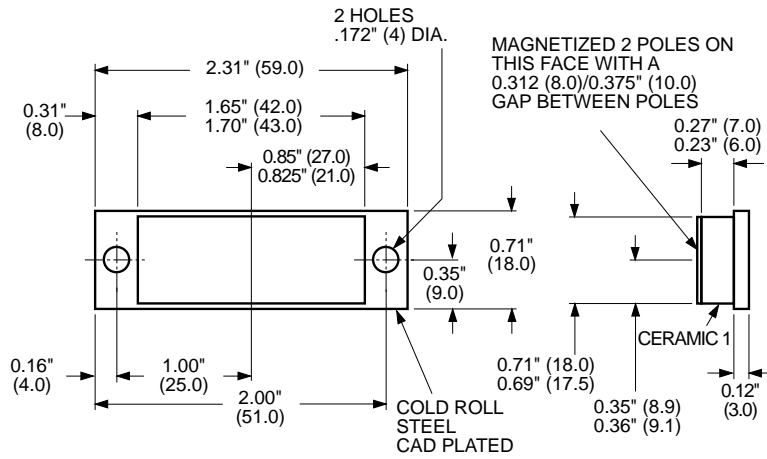


# Dimensional Drawings

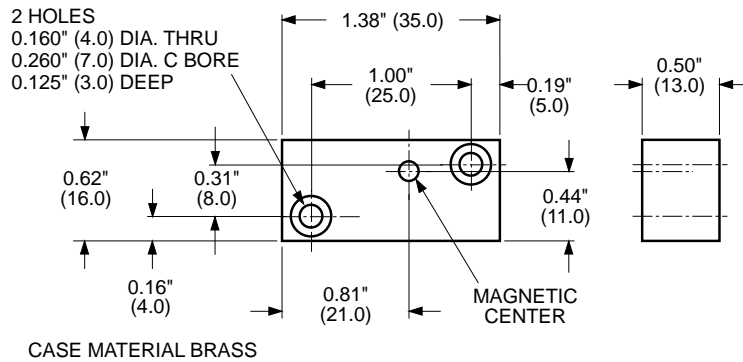
# Ferrous/Magnet Actuated

## MAGNET ACTUATED SWITCHES, RECTANGULAR

EE961-02500



EE961-02000



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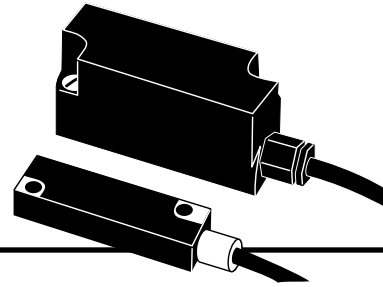
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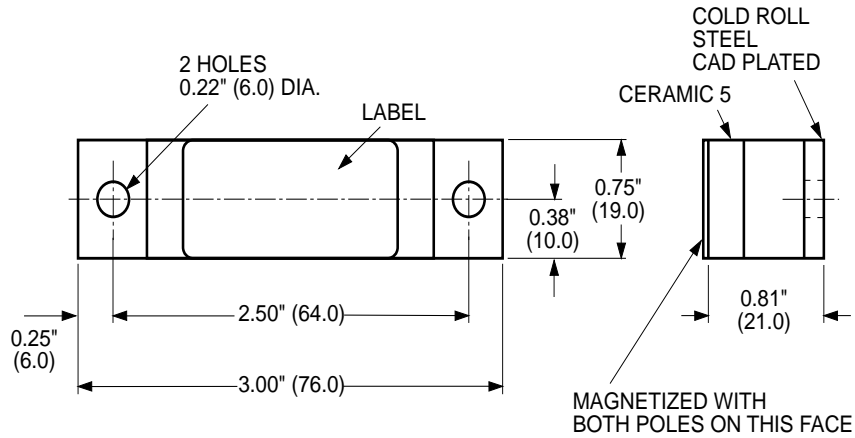
# Ferrous/Magnet Actuated Switches



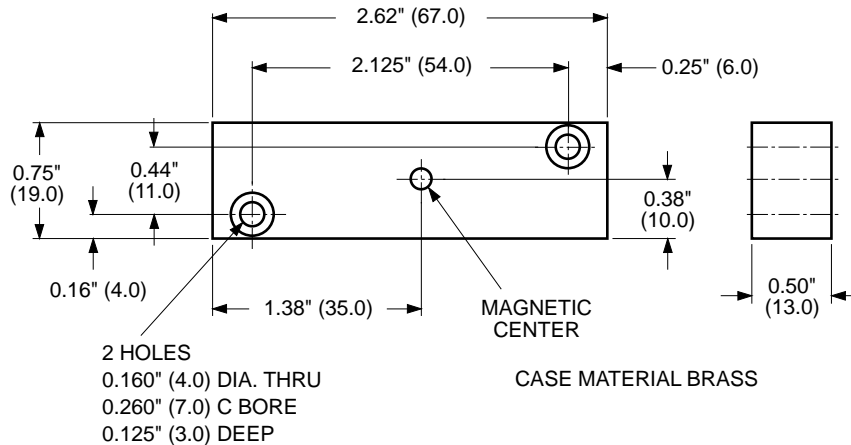
## Dimensional Drawings

### MAGNETIC ACTUATORS, RECTANGULAR

EE961-01600



EE961-03000

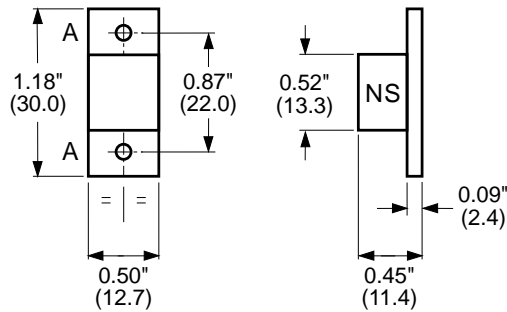


## Dimensional Drawings

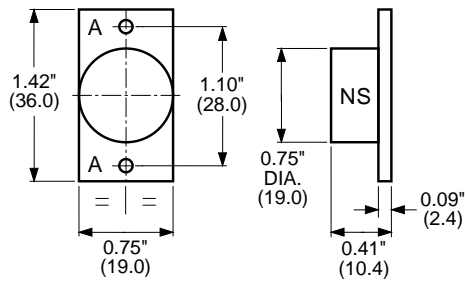
## Ferrous/Magnet Actuated

### MAGNETIC ACTUATORS, TUBULAR

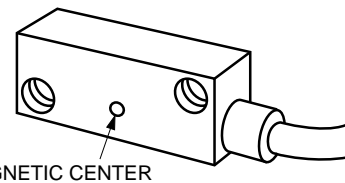
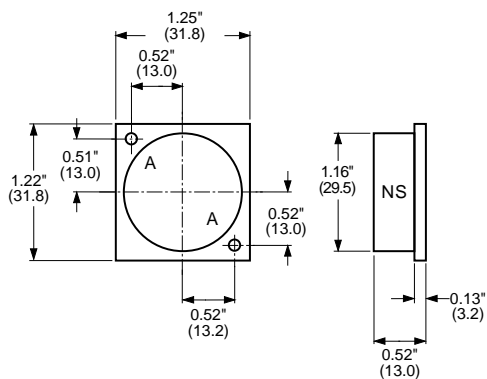
EE961-03800



EE961-03900



EE961-04000



The magnetic center of a MAGLOCK SWITCH or an ACTUATOR is denoted by the mark "O" on its housing.

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