

## Guard Locking Switches

440G-MT



## Description

The 440G-MT solenoid switch is a positive mode, tongue operated guard locking interlock switch that locks a machine guard closed until power is isolated and ensures that it remains isolated while the guard is open. The guard may only be opened when a signal is applied to the internal solenoid which releases the lock mechanism. The 440G-MT locking mechanism withstands forces up to 1600N (360lbs) and the die-cast alloy housing is ideal for use in harsh environments.

The 440G-MT solenoid switch is designed for machines that do not stop immediately or where premature interruption of the machine could cause damage to tooling and components or cause an additional hazard.

## Features

- Mechanical lock
- High locking force—1600N (360lbs.)
- Heavy duty die-cast alloy housing ideal for harsh environments

## Specifications

|                                      |                                                                                                      |
|--------------------------------------|------------------------------------------------------------------------------------------------------|
| Standards                            | EN954-1, ISO13849-1, IEC/EN60204-1, NFPA79, EN1088, ISO14119, IEC/EN60947-5-1, ANSI B11.19, AS4024.1 |
| Category                             | Cat. 1 Device per EN954-1<br>Dual channel interlocks suitable for Cat. 3 or 4 systems                |
| Approvals                            | cULus, TUV                                                                                           |
| Safety Contacts                      | 4 N.C., 3 N.C., 2 N.C. direct opening action                                                         |
| Auxiliary Contacts                   | 1 N.O., 2 N.O.                                                                                       |
| Utilisation Category                 | AC (Ue) 15<br>(Ie) 250V<br>DC 2A<br>250V 0.5A, 24V 2A                                                |
| Max. Switched Current/Volt/Load      | 500V 500VA                                                                                           |
| Thermal Current (Ith)                | 5A                                                                                                   |
| Min Current                          | 5V, 5mA DC                                                                                           |
| Safety Contact Gap                   | > 2mm contact block                                                                                  |
| Rtd. Insulation Voltage              | (Ui) 500V                                                                                            |
| Rtd. Impulse withstand Voltage       | (Uimp) 2500V                                                                                         |
| Auxiliary Contacts                   | 1 N.O.                                                                                               |
| Pollution Degree                     | 3                                                                                                    |
| Actuator Travel for Positive Opening | 15mm (0.59in)                                                                                        |
| Break Contact Min Force              | 6N (1.35lbs)                                                                                         |
| Max Actuation Speed                  | 160mm per sec (6.3 in. per sec)                                                                      |
| Max Actuation Frequency              | 2 Cycle per sec                                                                                      |
| Case Material                        | Painted zinc alloy                                                                                   |
| Actuator Material                    | Stainless Steel                                                                                      |
| Protection                           | IP67                                                                                                 |
| Conduit Entry                        | 3 x M20, 3 x 1/2in NPT or quick disconnect style                                                     |
| Operating Temperature                | -25°C to +60°C (13°F to +140°F)                                                                      |
| Fixing                               | 4 x M5                                                                                               |
| Mechanical Life                      | 1,000,000 cycles                                                                                     |
| Electrical Life                      | 1,000,000 cycles                                                                                     |
| Weight                               | 1400g (3.08lbs)                                                                                      |
| Colour                               | Red                                                                                                  |
| Torque Settings                      | Fixing Bolts 1.6Nm<br>Lid Screws 1.6Nm<br>Terminal Screws 1.6Nm                                      |
| Max Holding Force                    | 1600N (360lbs)                                                                                       |
| Min Operating Radius                 | 60mm (2.36in)                                                                                        |
| Power Supply                         | 24V AC/DC or 110V AC or 230V AC                                                                      |
| Solenoid Power                       | 13W typical 100% ED                                                                                  |
| Solenoid Rating                      | 100%                                                                                                 |

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**Product Selection**

| Solenoid Voltage                                                                    | BBM/MBB | Contacts                                                                        |        | Actuator   | Catalogue Number    |                     |                       |
|-------------------------------------------------------------------------------------|---------|---------------------------------------------------------------------------------|--------|------------|---------------------|---------------------|-----------------------|
|                                                                                     |         | Safety                                                                          | Aux.   |            | M20 Conduit         | 1/2in NPT Adaptor   | Quick Disconnect      |
| 24V AC/DC                                                                           | BBM     | 3 N.C.                                                                          | 1 N.O. | Standard   | <b>440G-MT47037</b> | <b>440G-MT47039</b> | <b>440G-MT47041</b>   |
|                                                                                     |         |                                                                                 |        | Fully-Flex | <b>440G-MT47038</b> | <b>440G-MT47040</b> | <b>440G-MT47042</b>   |
|                                                                                     |         |                                                                                 |        | —          | <b>440G-MT47007</b> | <b>440G-MT47008</b> | <b>440G-MT47043</b>   |
|                                                                                     |         | 2 N.C.                                                                          | 2 N.O. | Standard   | <b>440G-MT47044</b> | <b>440G-MT47046</b> | <b>440G-MT47048</b>   |
|                                                                                     |         |                                                                                 |        | Fully-Flex | <b>440G-MT47045</b> | <b>440G-MT47047</b> | <b>440G-MT47049</b>   |
|                                                                                     |         |                                                                                 |        | —          | <b>440G-MT47010</b> | <b>440G-MT47011</b> | <b>440G-MT47050</b>   |
|                                                                                     | —       | 4 N.C.                                                                          | —      | —          | <b>440G-MT47031</b> | <b>440G-MT47032</b> | <b>440G-MT47069</b>   |
| 110V AC/DC                                                                          | BBM     | 3 N.C.                                                                          | 1 N.O. | Standard   | <b>440G-MT47070</b> | <b>440G-MT47073</b> | <b>440G-MT47075</b>   |
|                                                                                     |         |                                                                                 |        | Fully-Flex | <b>440G-MT47071</b> | <b>440G-MT47074</b> | <b>440G-MT47076</b>   |
|                                                                                     |         |                                                                                 |        | —          | <b>440G-MT47013</b> | <b>440G-MT47009</b> | <b>440G-MT47072</b>   |
|                                                                                     |         | 2 N.C.                                                                          | 2 N.O. | Standard   | <b>440G-MT47077</b> | <b>440G-MT47079</b> | <b>440G-MT47081</b>   |
|                                                                                     |         |                                                                                 |        | Fully-Flex | <b>440G-MT47078</b> | <b>440G-MT47080</b> | <b>440G-MT47082</b>   |
|                                                                                     |         |                                                                                 |        | —          | <b>440G-MT47012</b> | <b>440G-MT47014</b> | <b>440G-MT47083</b>   |
|                                                                                     | —       | 4 N.C.                                                                          | —      | —          | <b>440G-MT47033</b> | <b>440G-MT47034</b> | <b>440G-MT47106</b>   |
| 230V AC/DC                                                                          | BBM     | 3 N.C.                                                                          | 1 N.O. | —          | <b>440G-MT47016</b> | <b>440G-MT47017</b> | <b>440G-MT47107</b>   |
|                                                                                     |         | 2 N.C.                                                                          | 2 N.O. | —          | <b>440G-MT47015</b> | <b>440G-MT47024</b> | <b>440G-MT47108</b>   |
|                                                                                     | —       | 4 N.C.                                                                          | —      | —          | <b>440G-MT47035</b> | <b>440G-MT47036</b> | <b>440G-MT47111</b>   |
|  |         | M23 mating cable 2m (6.5ft). See page 15-13 for details and additional lengths. |        |            |                     |                     | <b>889M-F12X9AE-2</b> |

**Accessories**

| Description                                                                         |                                                | For Dimensions refer to page | Catalogue Number    |
|-------------------------------------------------------------------------------------|------------------------------------------------|------------------------------|---------------------|
|  | TLS-GD2 Standard Actuator                      | 14-4                         | <b>440G-A27011</b>  |
|  | Flat Actuator                                  | 14-5                         | <b>440K-A11112</b>  |
|  | Fully-Flexible Actuator                        | 14-4                         | <b>440G-A27143</b>  |
|  | Sliding Bolt Actuator                          | 14-4                         | <b>440G-A27163</b>  |
|  | Extended Flat Actuator                         | 14-5                         | <b>440K-A17116</b>  |
|  | Replacement Cover<br>No LED<br>No Override Key | —                            | <b>440G-MT47120</b> |

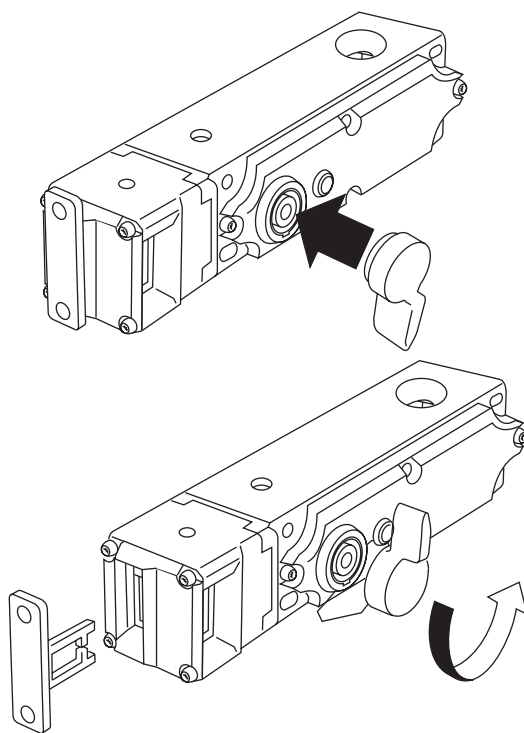
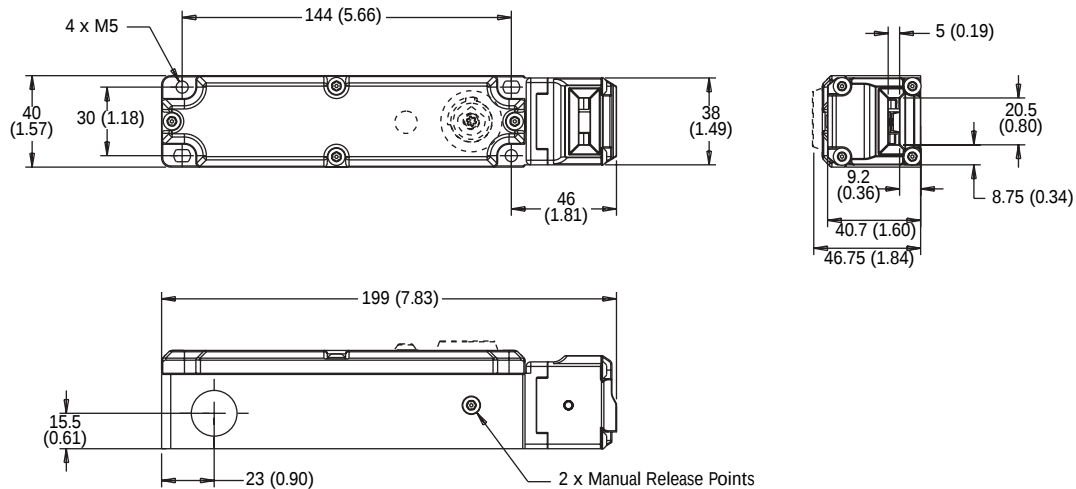
## Interlock Switches

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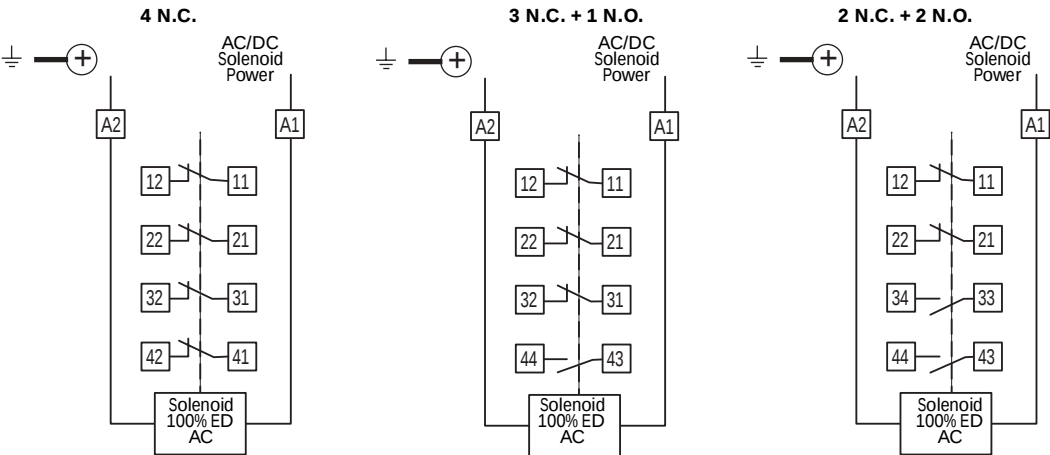
## 440G-MT

### Approximate Dimensions—mm (inches)

*Dimensions are not intended to be used for installation purposes.*



Typical Wiring Diagrams



| Connector Pinout                                                                  |        | 4 N.C.   |                | 3 N.C. + 1 N.O. |                | 2 N.C. + 2 N.O. |                |
|-----------------------------------------------------------------------------------|--------|----------|----------------|-----------------|----------------|-----------------|----------------|
|                                                                                   |        | Terminal | Contact        | Terminal        | Contact        | Terminal        | Contact        |
|  | 1      | A1       | Solenoid Power | A1              | Solenoid Power | A1              | Solenoid Power |
|                                                                                   | 3      | A2       |                | A2              |                | A2              |                |
|                                                                                   | 4      | 11       | N.C.           | 11              | N.C.           | 11              | N.C.           |
|                                                                                   | 6      | 12       |                | 12              |                | 12              |                |
|                                                                                   | 7      | 21       | N.C.           | 21              | N.C.           | 21              | N.C.           |
|                                                                                   | 8      | 22       |                | 22              |                | 22              |                |
|                                                                                   | 2      | 31       | N.C.           | 31              | N.C.           | 33              | N.O.           |
|                                                                                   | 5      | 32       |                | 32              |                | 34              |                |
|                                                                                   | 9      | 41       | N.C.           | 43              | N.O.           | 43              | N.O.           |
|                                                                                   | 10     | 42       |                | 44              |                | 44              |                |
| 12                                                                                | Ground |          |                |                 |                |                 |                |

Contact Action

□ Contact Open    ■ Contact Closed

Actuator withdrawal distance  
from full insertion

