

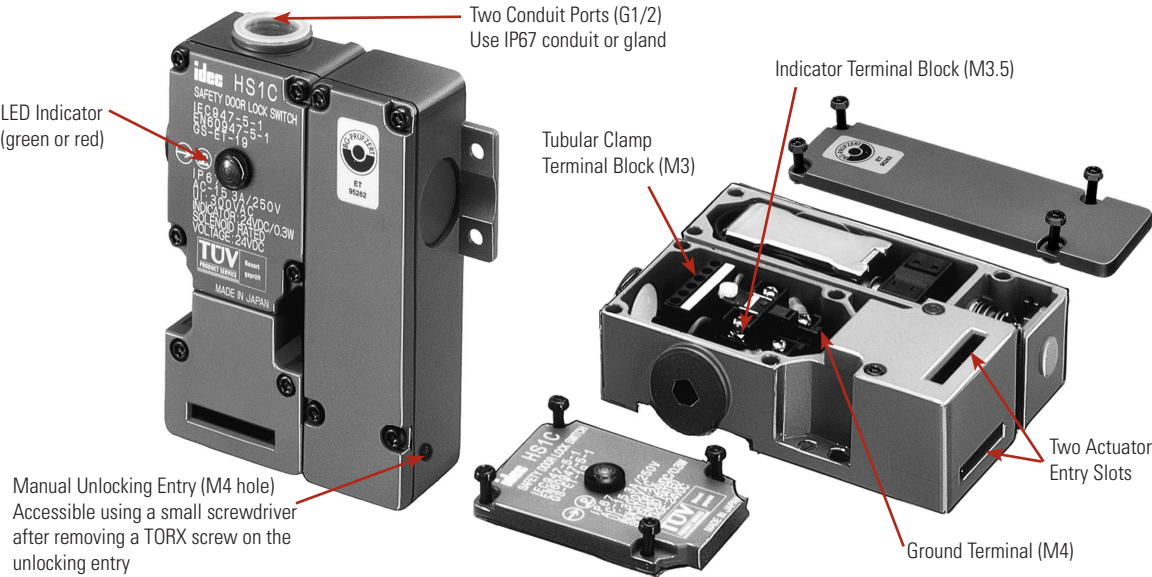
HS1C Full Size Solenoid Locking Switches

Key features:

- Rugged aluminum die-cast housing
- 1500N locking retention force
- Flexible Installation: The actuator can be accessed from two directions
- Select from four different circuit configurations
- IP67

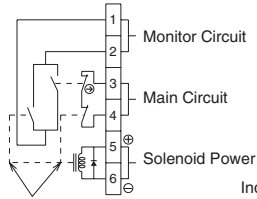
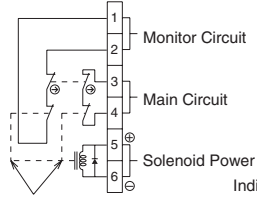
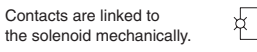
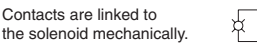
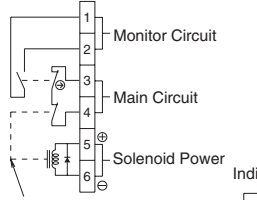
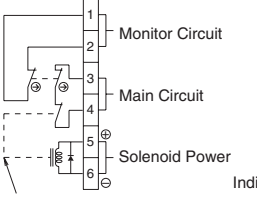
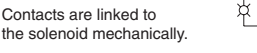
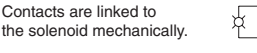


HS1C Series Functionality



 TORX is a registered trademark of Camcar Textron.

Part Numbers (Mechanical Spring Lock Only)

| Contact Configuration                                                               | Indicator LED | Part Number         | Contact Configuration                                                                | Indicator LED | Part Number         |
|-------------------------------------------------------------------------------------|---------------|---------------------|--------------------------------------------------------------------------------------|---------------|---------------------|
|  | Green         | <b>HS1C-R44R-G</b>  |  | Green         | <b>HS1C-R244R-G</b> |
|  | Red           | <b>HS1C-R44R-R</b>  |  | Red           | <b>HS1C-R244R-R</b> |
|  | Green         | <b>HS1C-R144R-G</b> |  | Green         | <b>HS1C-R344R-G</b> |
|  | Red           | <b>HS1C-R144R-R</b> |  | Red           | <b>HS1C-R344R-R</b> |

 Standard stock items in bold

Overview

XW Series E-Stops

Interlock Switches

Enabling Switches

Safety Control Relays

Light Curtains

AS-Interface Safety at Work

Actuator Keys & Accessories

| Appearance                                                                        | Part Number | Description          | Appearance                                                                        | Part Number | Description                       |
|-----------------------------------------------------------------------------------|-------------|----------------------|-----------------------------------------------------------------------------------|-------------|-----------------------------------|
|  | HS9Z-A1     | Straight Actuator    |  | HS9Z-T1     | Key Wrench (included with switch) |
|  | HS9Z-A2     | Right-angle Actuator |  | HS9Z-P1     | Conduit Opening Plug (G1/2)       |
|  | HS9Z-A3     | Adjustable Actuator  |                                                                                   |             |                                   |

Specifications

|                                               |                    |                                                                                                                                                                                                           |
|-----------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Conforming to Standards                       |                    | EN1088, IEC60947-5-1, EN60947-5-1, GS-ET-19, UL508, GB 140485.5 (CCC approval), CSA C22.2 No. 14                                                                                                          |
| Operating Temperature                         |                    | −20 to +40°C (no freezing)                                                                                                                                                                                |
| Storage Temperature                           |                    | −40 to +80°C                                                                                                                                                                                              |
| Relative Humidity                             |                    | 40 to 85% (no condensation)                                                                                                                                                                               |
| Altitude                                      |                    | 2,000m maximum                                                                                                                                                                                            |
| Rated Insulation Voltage (U <sub>i</sub> )    |                    | 300V (between LED or solenoid and ground: 60V)                                                                                                                                                            |
| Impulse Withstand Voltage (U <sub>imp</sub> ) |                    | 4 kV (between LED or solenoid and ground: 2.5 kV)                                                                                                                                                         |
| Insulation Resistance                         |                    | Between live and dead metal parts: 100 MΩ minimum<br>Between live metal part and ground: 100 MΩ minimum<br>Between live metal parts: 100 MΩ minimum<br>Between terminals of the same pole: 100 MΩ minimum |
| Electric Shock Protection Class               |                    | Class 1 (IEC61140)                                                                                                                                                                                        |
| Pollution Degree                              |                    | 3 (IEC60947-5-1)                                                                                                                                                                                          |
| Degree of Protection                          |                    | IP67 (IEC60529)                                                                                                                                                                                           |
| Vibration Resistance                          | Operating Extremes | 10 to 55 Hz, amplitude 0.5 mm                                                                                                                                                                             |
|                                               | Damage Limits      | 60 m/sec <sup>2</sup> (approx. 6G)                                                                                                                                                                        |
| Shock Resistance                              |                    | 1,000 m/s <sup>2</sup> (approx. 100G)                                                                                                                                                                     |
| Actuator Retention Force                      |                    | 1,500N minimum                                                                                                                                                                                            |
| Actuator Operating Speed                      |                    | 0.05 to 1.0m/s                                                                                                                                                                                            |
| Direct Opening Travel                         |                    | 11mm minimum                                                                                                                                                                                              |
| Direct Opening Force                          |                    | 20N minimum                                                                                                                                                                                               |
| Thermal Current (I <sub>th</sub> )            |                    | Main circuit: 10A, Auxiliary circuit: 3A                                                                                                                                                                  |
| Contact Opening Distance                      |                    | Main circuit: 1.7 mm max., Auxiliary circuit: 1.2 mm min.                                                                                                                                                 |
| Operating Frequency                           |                    | 900 operations/hour max.                                                                                                                                                                                  |
| Mechanical Life                               |                    | 1,000,000 operations                                                                                                                                                                                      |
| Electrical Life                               |                    | 100,000 operations (rated load)                                                                                                                                                                           |
| Conditional Short-circuit Current             |                    | 100A (IEC60947-5-1)                                                                                                                                                                                       |
| Recommended Short Circuit Protection          |                    | 250V, 10A fuse (Type D01 based on IEC60269-1, 60269-2)                                                                                                                                                    |

## Specifications, con't

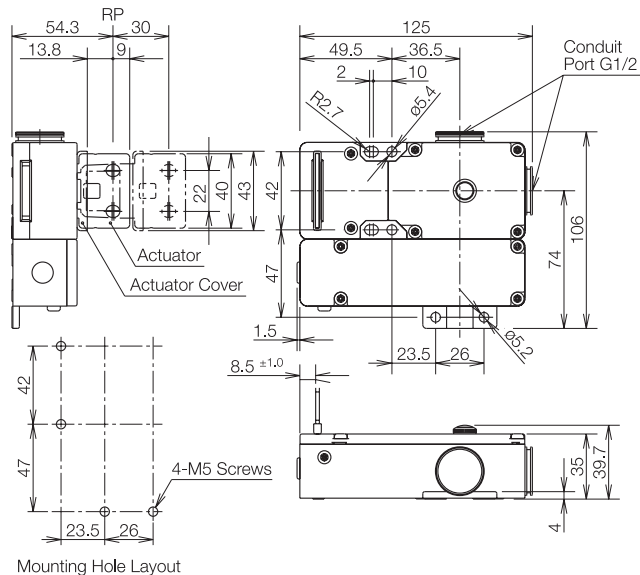
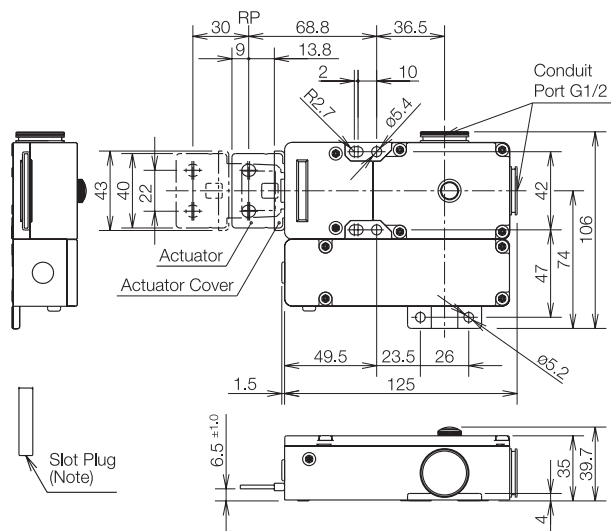
|                  |                               |                                       |
|------------------|-------------------------------|---------------------------------------|
| Solenoid Unit    | Operating Voltage             | 24V DC (100% duty cycle)              |
|                  | Current                       | 415mA (initial value)                 |
|                  | Coil Resistance               | 58Ω (at 20°C)                         |
|                  | Energizing Voltage            | Rated voltage x 85% maximum (at 20°C) |
|                  | De-energizing Voltage         | Rated voltage x 10% minimum (at 20°C) |
|                  | Continuous Applicable Voltage | Rated voltage x 110%                  |
|                  | Insulation Class              | Class B                               |
| Indicator        | Operating Voltage             | 24V DC                                |
|                  | Current                       | 10 mA                                 |
|                  | Light Source                  | LED lamp                              |
|                  | Lens Color                    | Red or Green                          |
| Weight (approx.) |                               | 660g                                  |

## Contact Ratings

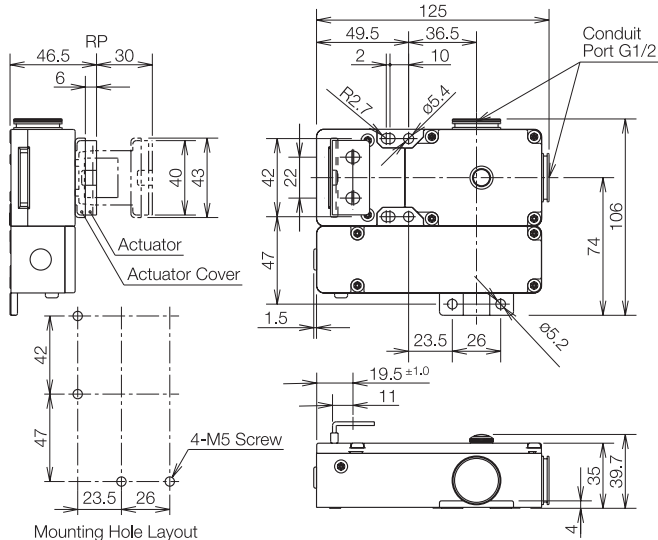
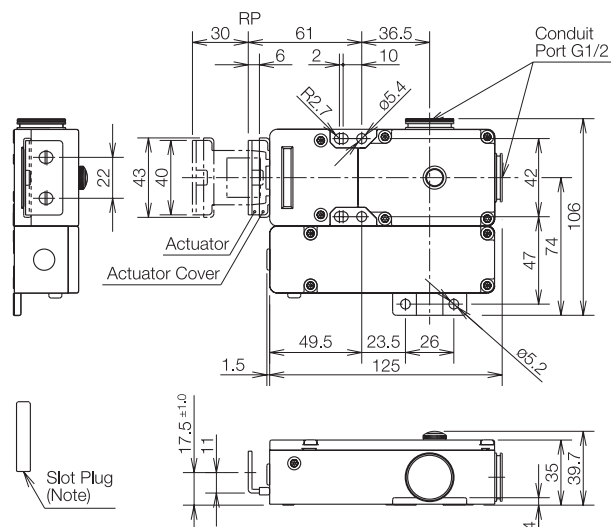
| Rated Operating Current (Ie) | Operating Voltage (Ue) |    |                       | 30V | 125V | 250V |
|------------------------------|------------------------|----|-----------------------|-----|------|------|
|                              | Main<br>Circuit        | AC | Resistive load (AC12) | 10A | 10A  | 6A   |
|                              |                        |    | Inductive load (AC15) | 10A | 5A   | 3A   |
|                              |                        | DC | Resistive load (DC12) | 6A  | —    | —    |
|                              |                        |    | Inductive load (DC13) | 3A  | 0.9A | —    |
|                              | Auxiliary<br>Circuit   | AC | Resistive load (AC12) | —   | 3A   | 3A   |
|                              |                        |    | Inductive load (AC15) | —   | —    | 3A   |
|                              |                        | DC | Resistive load (DC12) | 3A  | —    | —    |
|                              |                        |    | Inductive load (DC13) | —   | 0.9A | —    |

## Dimensions (mm)

## HS1C-R44R-\* - using the straight actuator (HS9Z-A1)

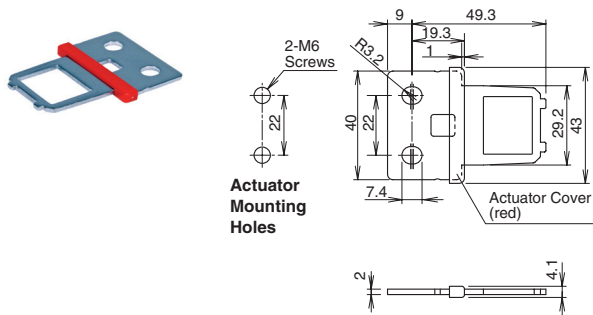


## HS1C-R44R-\* - using the Right-angle actuator (HS9Z-A2)

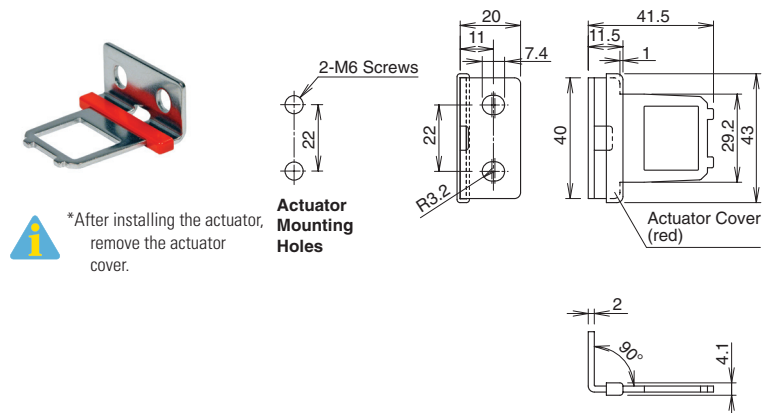


## Accessories

### Straight Actuator (mainly for sliding doors) HS9Z-A1



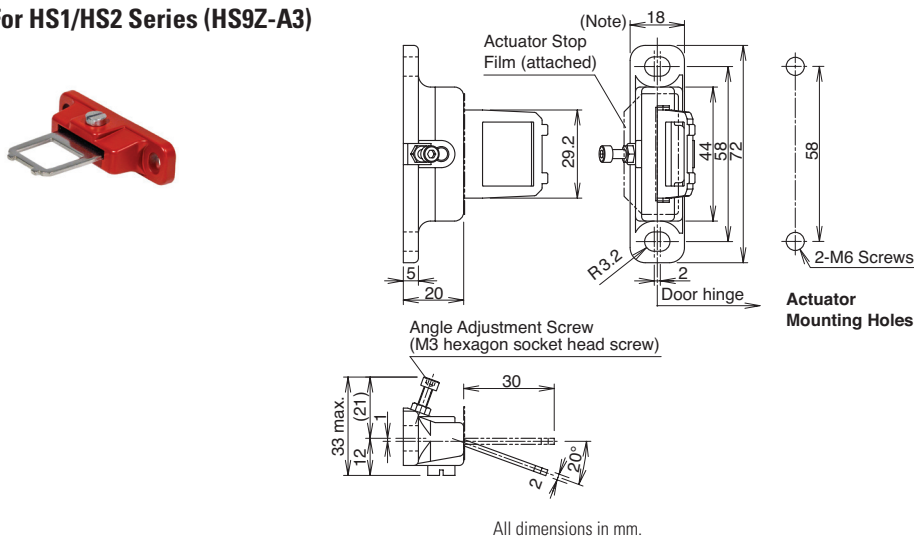
### Right-angle Actuator (mainly for hinged doors) HS9Z-A2



### Adjustable Actuator

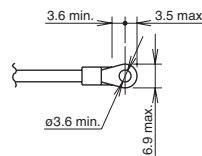
- The actuator angle is adjustable (0° to 20°) for hinged doors.
- The minimum radius of the door opening can be as small as 100mm.

### For HS1/HS2 Series (HS9Z-A3)

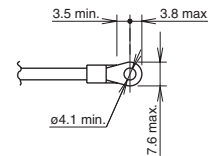


### Applicable Crimping Terminals

- (Refer to the Crimping Terminal 1 or 2 shown in the drawing below.)
- HS1C  
Terminals No. 1 to 6: Use solid or stranded wires only (crimping terminals not applicable).  
Terminals No. 7 and 8: Crimping Terminal 1  
Ground Terminal: Crimping Terminal 2
- HS1B  
Ground Terminal: Crimping Terminal 2  
Other Terminals: Crimping Terminal 1  
HS2B, HS5B, and HS1E  
Crimping Terminal 1



Crimping Terminal 1



Crimping Terminal 2



Use an insulation tube on the crimping terminal.

