

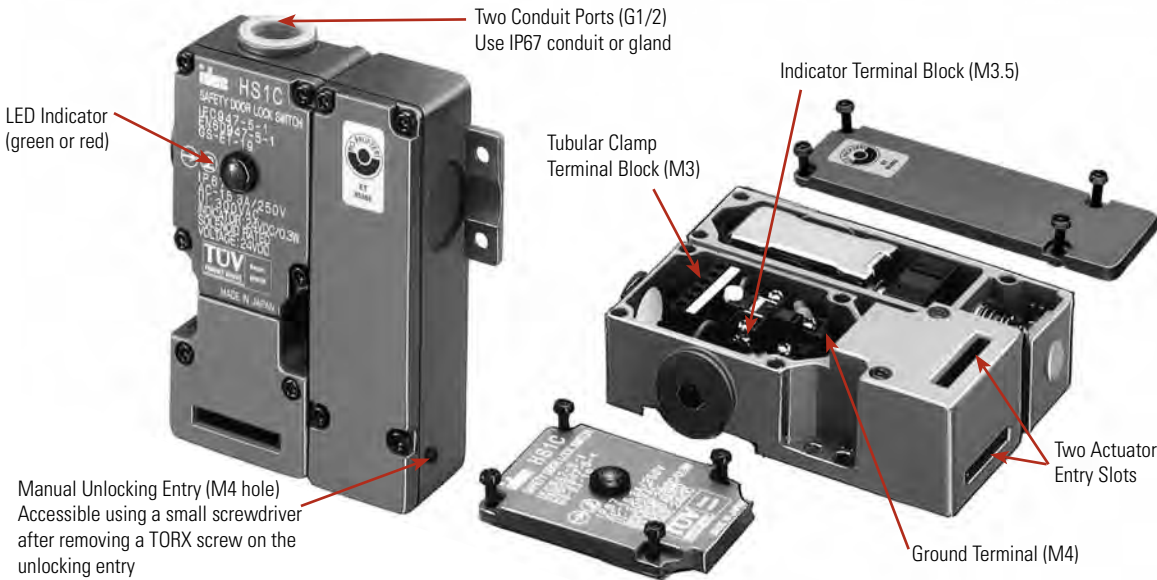
HS1C Full Size Solenoid Locking Switches

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








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Part Numbers (Mechanical Spring Lock Only)

Contact Configuration	Indicator LED	Part Number	Contact Configuration	Indicator LED	Part Number
<p>Contacts are linked to the solenoid mechanically.</p>	Green	HS1C-R44R-G	<p>Contacts are linked to the solenoid mechanically.</p>	Green	HS1C-R244R-G
<p>Contacts are linked to the solenoid mechanically.</p>	Red	HS1C-R44R-R	<p>Contacts are linked to the solenoid mechanically.</p>	Red	HS1C-R244R-R
<p>Contacts are linked to the solenoid mechanically.</p>	Green	HS1C-R144R-G	<p>Contacts are linked to the solenoid mechanically.</p>	Green	HS1C-R344R-G
<p>Contacts are linked to the solenoid mechanically.</p>	Red	HS1C-R144R-R	<p>Contacts are linked to the solenoid mechanically.</p>	Red	HS1C-R344R-R

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 _i)	300V (between LED or solenoid and ground: 60V)	
Impulse Withstand Voltage (U _{imp})	4 kV (between LED or solenoid and ground: 2.5 kV)	
Insulation Resistance	Between live and dead metal parts: 100 MΩ minimum Between live metal part and ground: 100 MΩ minimum Between live metal parts: 100 MΩ minimum 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 ² (approx. 6G)
Shock Resistance	1,000 m/s ² (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 _{th})	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)	

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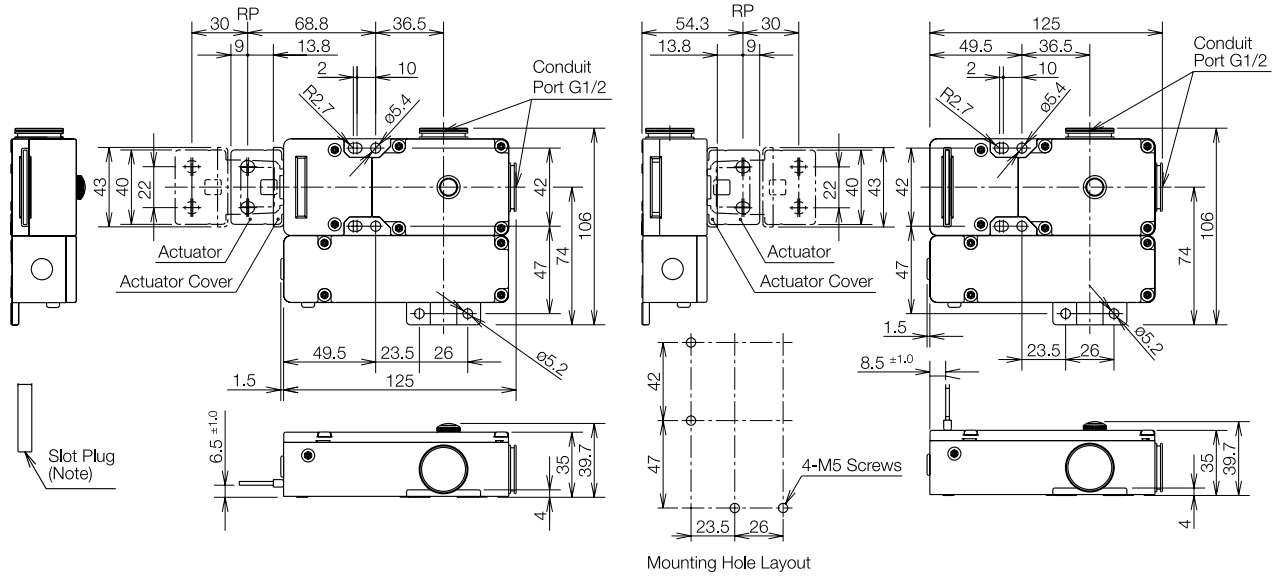
Solenoid Unit	Operating Voltage	24V DC (100% duty cycle)
	Current	415mA (initial value)
	Coil Resistance	58Ω (at 20°C)
	Energizing Voltage	Rated voltage x 85% maximum (at 20°C)
	De-energizing Voltage	Rated voltage x 10% minimum (at 20°C)
	Continuous Applicable Voltage	Rated voltage x 110%
	Insulation 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

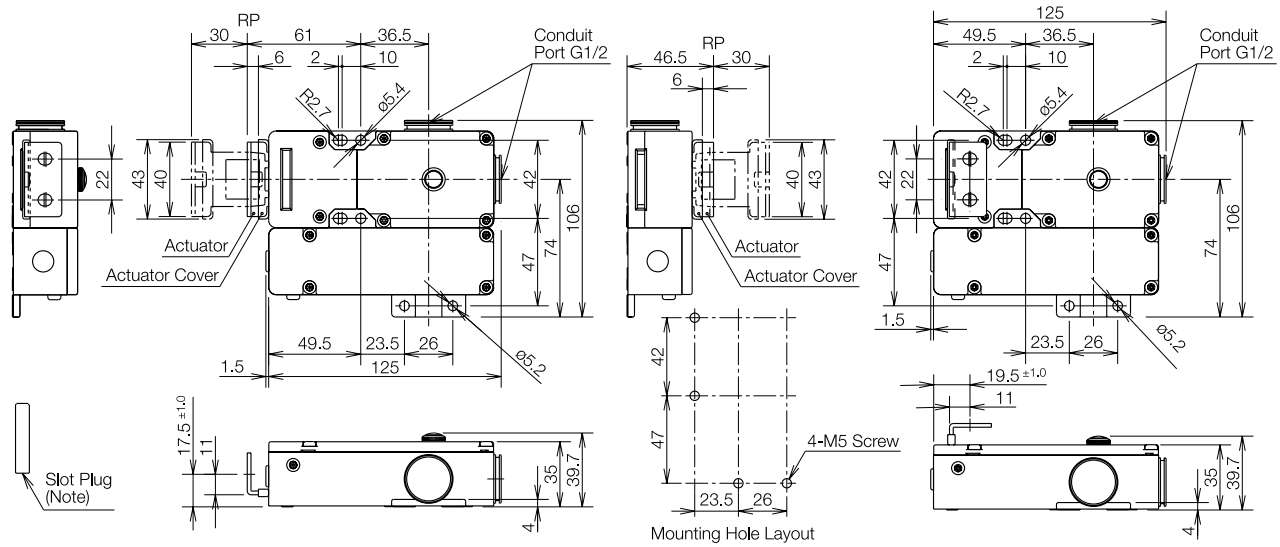
Rated Operating Current (Ie)	Operating Voltage (Ue)		30V	125V	250V	
	Main Circuit	AC	Resistive load (AC12)	10A	10A	6A
Inductive load (AC15)			10A	5A	3A	
DC		Resistive load (DC12)	6A	–	–	
		Inductive load (DC13)	3A	0.9A	–	
Auxiliary Circuit		AC	Resistive load (AC12)	–	3A	3A
			Inductive load (AC15)	–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



Overview

XW Series E-Stops

Interlock Switches

Enabling Switches

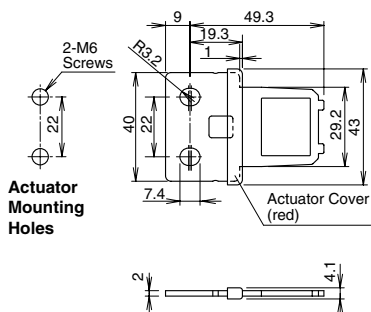
Safety Control Relays

Light Curtains

AS-Interface Safety at Work

Accessories

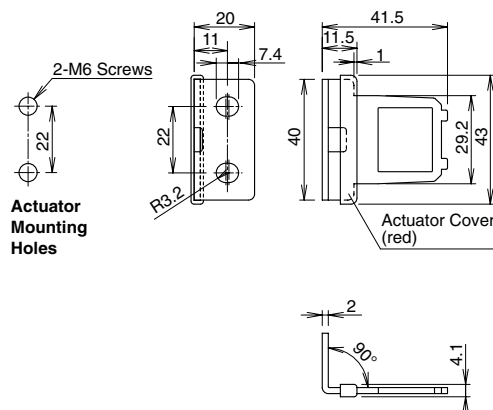
Straight Actuator (mainly for sliding doors) HS9Z-A1



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



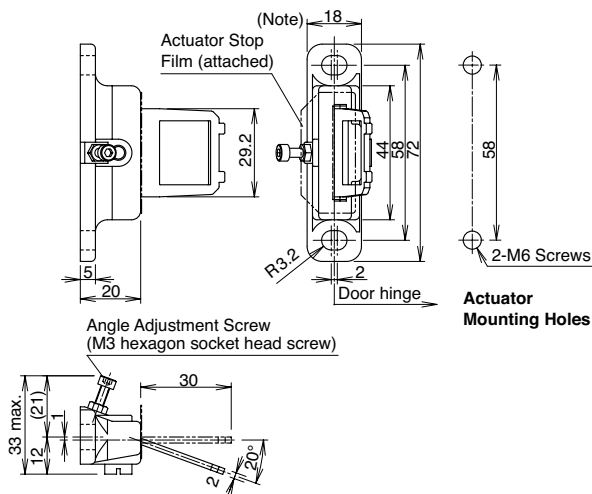
*After installing the actuator, remove the actuator cover.



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.

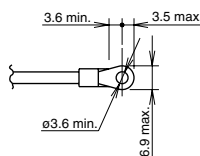
For HS1/HS2 Series (HS9Z-A3)



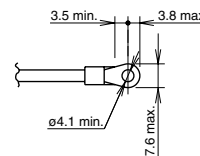
All dimensions in mm.

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.

