

HS1B Full Size Interlock Switches

Key features:

- Rugged aluminum die-cast housing
- Direct Opening Action
- Available with or without an indicator (red or green)
- Flexible Installation: Two actuator entries and three conduit ports are provided
- Select from two circuit configurations (1NO-1NC or 2NC).
- IP67



Part Numbers

Body

Model	Contact Configuration	Pilot Light	Part Number
	1NC-1NO	Without	HS1B-11R
		Red LED	HS1B-114R-R
		Green LED	HS1B-114R-G
	2NC	Without	HS1B-02R
		Red LED	HS1B-024R-R
		Green LED	HS1B-024R-G

Standard stock items in bold.

Actuator Keys and Accessories (order separately)

Appearance	Part Number	Description
	HS9Z-A1	Straight Actuator (Mainly for sliding doors)
	HS9Z-A2	Right-angle Actuator (Mainly for rotating doors)
	HS9Z-A3	Adjustable Actuator
	HS9Z-T1	Key Wrench (included with switch)
	HS9Z-P1	Conduit Opening Plug

Actuators are not included and must be ordered separately.

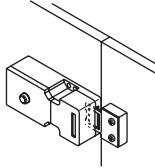
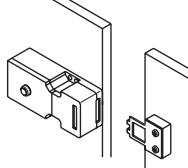
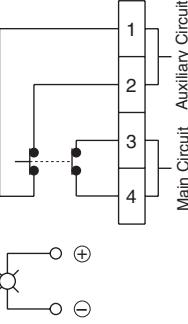
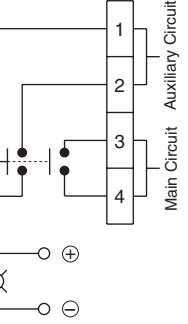
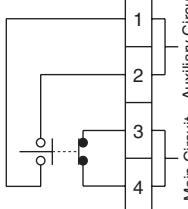
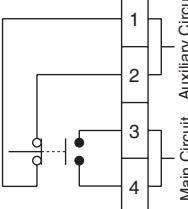
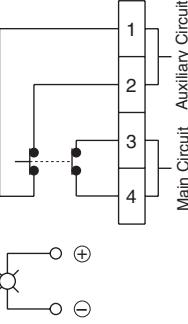
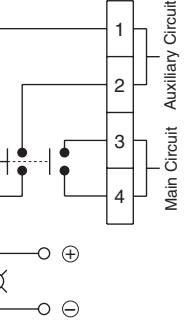
Specifications

Conforming to Standards	IEC60947-5-1, EN60947-5-1, GS-ET-15, UL508, CSA C22.2 No. 14
Operating Temperature	-20 to +70°C (no freezing)
Storage Temperature	-40 to +80°C
Relative Humidity	45 to 85% (no condensation)
Altitude	2,000m maximum
Rated Insulation Voltage (U _i)	300V (between LED and ground: 60V)
Impulse Withstand Voltage (U _{imp})	4 kV (between LED 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 I (IEC61140)
Pollution Degree	3 (IEC60947-5-1)
Degree of Protection	IP67 (IEC60529)
Vibration Resistance	10 to 55 Hz, amplitude 0.5mm p-p
Operating Extremes	60 m/sec ² (approx. 6G)

Shock Resistance	1,000 m/sec ² (approx. 100G)								
Actuator Operating Speed	0.05 to 1.0m/s								
Direct Opening Travel	11 mm minimum								
Direct Opening Force	20N minimum								
Thermal Current (I _{th})	10A								
Operating Frequency	900 operations/hour								
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)								
Indicator	<table border="1"> <tr> <td>Operating Voltage</td> <td>24V DC</td> </tr> <tr> <td>Current</td> <td>10 mA</td> </tr> <tr> <td>Light Source</td> <td>LED lamp</td> </tr> <tr> <td>Lens Color</td> <td>Red or Green (12 mm dia. Lens)</td> </tr> </table>	Operating Voltage	24V DC	Current	10 mA	Light Source	LED lamp	Lens Color	Red or Green (12 mm dia. Lens)
Operating Voltage	24V DC								
Current	10 mA								
Light Source	LED lamp								
Lens Color	Red or Green (12 mm dia. Lens)								
Weight	Approx. 280g								

Contact Ratings

Rated Operating Current (I _e)	Operating Voltage (U _e)		30V	125V	250V
	AC	Resistive load (AC12) Inductive load (AC15)	10A 10A	10A 5A	6A 3A
	DC	Resistive load (DC12) Inductive load (DC13)	8A 4A	2.2A 1.1A	1.1A 0.6A

Door/Switch Status	Status 1		Status 2		Door/Switch Status	Status 1		Status 2	
	Door Closed	Machine ready to operate	Door opened	Machine cannot be started		Door Closed	Machine ready to operate	Door opened	Machine cannot be started
Door									
HS1B-11 (1NO-1NC)					HS1B-02 (2NC)				
Light Curtains									
Main Circuit	3-4: Closed		3-4: Open		Main Circuit	3-4: Closed		3-4: Open	
Aux. Circuit	1-2: Open		1-2: Closed		Aux. Circuit	1-2: Closed		1-2: Open	



1. Main Circuit: used to enable the machine to start only when the main circuit is closed. Auxiliary Circuit: used to indicate whether the main circuit or door is open or closed.
2. Terminals + and - are used for the LED indicator, and are isolated from door status. Wire the terminals only when needed.

