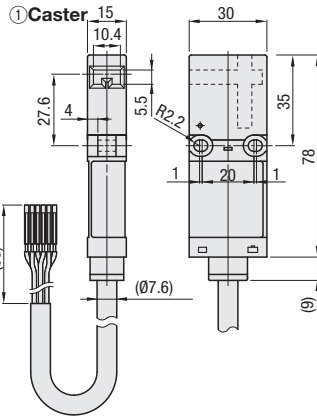


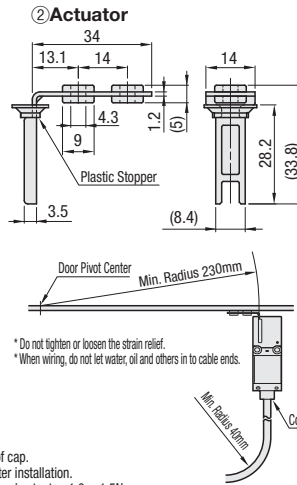
Safety Door Switches / Locks for Aluminum Extrusions

Safety Door Switches

HSWCA (Contact Type 1N0 / 1NC)
HSWCC (Contact Type 3NC)

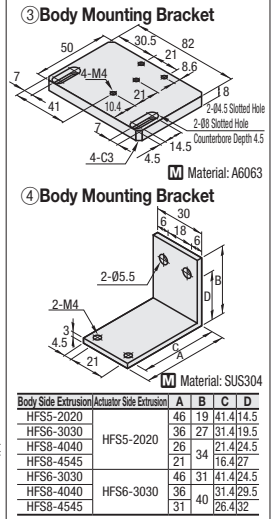


- * Cable length is 1000mm. * One dust seal cap is included.
- * Cover the unused insertion slot of two-way actuator with a dust proof cap.
- * Plastic stopper is for actuator positioning, and should be removed after installation.
- * Recommended tightening torque for mounting screws of main body and actuator: 1.0 ~ 1.5N · m



- * Do not tighten or loosen the strain relief.
- * When wiring, do not let water, oil and others in to cable ends.

Component



Body Side Extrusion	Actuator Side Extrusion	A	B	C	D
HFS5-2020		46	19	41	14.5
HFS6-3030		36	27	31	19.5
HFS8-4040	HFS5-2020	26	24	21	24.5
HFS8-4545		21	34	16	27
HFS6-3030		46	31	41	24.5
HFS8-4040	HFS6-3030	36	31	41	29.5
HFS8-4545		31	40	26	32

Part Number	Body Mounting Side	Actuator Mounting Side	Accessory				HSWCA		HSWCC			
			Body Mounting Extrusion Side		Actuator Mounting Door Side		Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate		
Type	No.		Body Mounting Bracket	⑤ Screw	⑥ Nut	⑦ Mounting Screw for Body	⑧ Screw	⑨ Nut	1 ~ 9 (pc/s)	10 ~ 30	1 ~ 9 (pc/s)	10 ~ 30
HSWCA HSWCC	5	HFS5-2020	Panel (3mm or 5mm)	SCB4-8	HNTASN5-4	SCB4-18	SCB4-12	SLBNR4	2	2	2	2
	6	HFS6-3030	Panel (3mm or 5mm)	SCB4-10	HNTASN6-4							
	8	HFS8-4040 HFS8-4545	Panel (3mm or 5mm)	SCB4-12	HNTASN8-4							
	5-5	HFS5-2020	HFS5-2020	SCB5-8	HNTASN5-5	SCB4-15	SCB4-10	HNTFSN5-4				
	6-5	HFS6-3030		SCB5-10	HNTASN6-5							
	8-5	HFS8-4040		SCB5-14	HNTFSN8-5							
	845-5	HFS8-4545		SCB5-15	HNTASN6-5							
	6-6	HFS6-3030		SCB5-10	HNTASN6-5							
	8-6	HFS8-4040		SCB5-15	HNTFSN6-4							
	845-6	HFS8-4545	HFS6-3030	SCB5-15	HNTFSN8-5							

Contact Rating

Rated Insulation Voltage (Ui)		300V			
Rated Current (Ith)		2.5A			
Rated Operating Voltage (Ue)		30V	125V	250V	
Rated Operating Current (Iop)	AC	Resistive Load (AC-12)	-	2.5A	1.5A
		Inductive Load (AC-15)	-	1.5A	0.75A
DC	Resistive Load (DC-12)	2.5A	1.1A	0.55A	
	Inductive Load (DC-13)	2.3A	0.55A	0.27A	

- * Min. Load (Reference Values) = AC/DC3V, 5mA (Useable operating range may change depending on load conditions and types.)
- * Safety Standard Certification C300: AC-15 0.75A/240V Q300: DC-13 0.27A/250V

Performance Specifications

Applicable Standards	ISO14119, EN1088, IEC60947-5-1, EN60947-5-1 (DEMCO Certification), GS-ET-15 (BG Certification), UL508 (UL Listing Certification), CSA C22.2 No.14 (c-UL Listing Certification)
Applicable Directives	IEC60204-1/EN60204-1 73 / 23 / EEC (Low Voltage Directive)
Standard Use Condition	Operating Ambient Temperature: -25 ~ 70°C (No Freezing) Relative Humidity: 45 ~ 85% (No Condensation) Storage Ambient Temperature: -40 ~ 80°C (No Freezing) Operating Environment: Pollution Level 3
Impulse Withstand Voltage	4kV
Insulation Resistance	Charged part and non-charged part: 100MΩ or more (with DC 500V mega) Between Polar Charged Parts: 100MΩ or more (with DC 500V mega)
Contact Resistance	Less than 300mΩ (Initial Value, Cable Length 1m)
Appliance Class	Class III(IEC61140)
Degree of Protection	IP67(IEC60529)
Impact Resistance	Malfunction: 300m/s ² Endurance: 1000m/s ²
Vibration Resistance	Malfunction: 5 ~ 55Hz, Amplitude 0.5mm or more Endurance: 30Hz, Amplitude 1.5mm or more
Actuator Operating Speed	0.05 ~ 1.0m/s
Direct Opening Action Stroke	8mm or more
Direct Opening Force	60N or more
Operating Frequency	1200 times/h
Mechanical Durability	Over 1,000,000 times (GS-ET-15)
Electrical Durability	Over 100,000 times (Operating Frequency 1200 times/h, Load Condition: AC-12 250V 1.5A, DC-12 250V 0.2A)
Conditional Short-Circuit Current	50A (250V) (Note)
Body Color	Black
Cable	UL2464 No.20 AWG (6-Conductors)
Mass	Approx. 120g (for HSWCC Body)

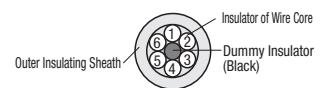
Note) Please use 250V/10A fast-blow fuse as short-circuit protection device.

Contact Config. and Operation Characteristics

Type	Contact Structures	Operating Characteristic
HSWCA	1NC-1N0	0.8(Actuator Installation Standard)
HSWCC	3NC	0.8(Actuator Inserted) (Actuator Pulled Out)

Please refer to insulation colors and white lines for conductor identification.

No.	Insulator Color	No.	Insulator Color
1	Orange / White	4	Brown
2	Blue / White	5	Blue
3	Brown / White	6	Orange



Safety Cautions

- Shut off the power before attaching, detaching, wiring, maintaining and examining. There is a possible risk of fire or electric shock.
- If a relay is to be placed between an emergency stop switch and a potentially hazardous load, use special safety relays to make the system redundant. Standard relay contacts may fuse and lose safety assurance.
- Do not place a PLC between the safety switch and potentially hazardous load. PLC may malfunction and not provide safety assurance.
- Do not disassemble, modify, or interfere with the safety switch functions in any means. Doing so may cause malfunctions and accidents.
- Mount an actuator in places where human body does not come in contact with the opened or closed door. There is a risk of injury.

Cautions for Use

- Regardless of the door type, do not use the safety switch as door stoppers. Provide adequate door stoppers at door travel limits to prevent excessive forces on the safety switches.
- Do not apply excessive shocks on the safety switches by rough open/close of doors. Applying more than 300m/s² shock may cause failures.
- Prevent any foreign objects from getting into the safety switch through actuator's insertion slot. Excessive dusts and foreign substances entered may negatively affect the mechanical elements and cause failures.
- Safety switches should not be stored in dusty or wet locations, or locations which are subject to organic gas or direct sunlight.
- Operation without an actuator designed for the safety switch may cause switch failures.