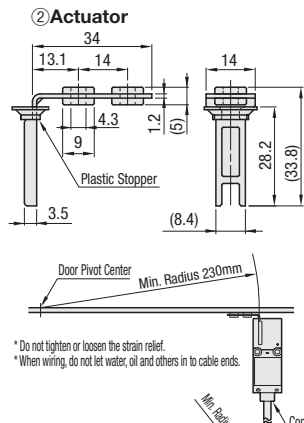
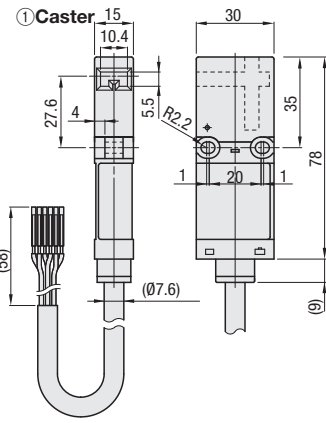


# Safety Door Switches / Locks for Aluminum Extrusions

## Safety Door Switches

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



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

- \* 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

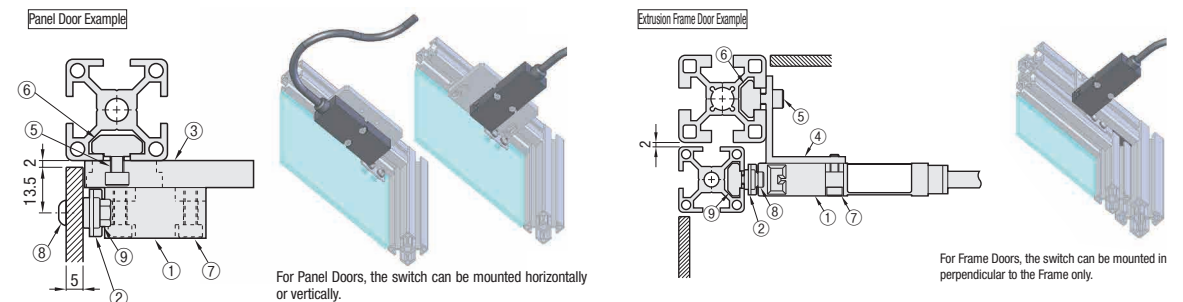
### Component

**3 Body Mounting Bracket**  
Dimensions: 50, 30.5, 82, 21, 8.6, 18, 7, 41, 10.4, 21, 14.5, 4.5, 4-C3, 2-Ø4.5 Stotted Hole, 2-Ø8 Stotted Hole, Counterbore Depth 4.5. Material: A6063.

**4 Body Mounting Bracket**  
Dimensions: 30, 18, 6, 2-Ø5.5, 21, 4.5, 3, 4. Material: SUS304.

Body Side Extrusion	Actuator Side Extrusion	A	B	C	D
HFS5-2020		46	19	41	414.5
HFS6-3030		36	27	31	419.5
HFS8-4040	HFS5-2020	26	34	21	424.5
HFS8-4545		21	34	16	427
HFS6-3030		46	31	41	424.5
HFS8-4040	HFS6-3030	36	31	41	429.5
HFS8-4545		31	40	26	432

## Example



Ordering Example  
Part Number: **HSWCA6**

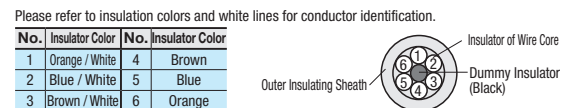
Part Number	Body Mounting Side	Actuator Mounting Side	Accessory						HSWCA		HSWCC		
			Body Mounting Extrusion Side			Actuator Mounting Door Side			Unit Price	Volume Discount Rate	Unit Price	Volume Discount Rate	
HSWCA HSWCC	5	HFS5-2020	Panel (3mm or 5mm)	SCB4-8	HNTASN5-4	SCB4-18	SCB4-12	SLBNR4	1 ~ 9 pc(s)	10~30	1 ~ 9 pc(s)	10~30	
	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	2	2	2	2	2
	6-5	HFS6-3030		SCB5-10	HNTASN6-5								
	8-5	HFS8-4040		SCB5-14	HNTFSN8-5								
	845-5	HFS8-4545		SCB5-15	HNTFSN8-5								
	6-6	HFS6-3030		SCB5-10	HNTASN6-5								
	8-6	HFS8-4040		SCB5-10	HNTFSN8-4								
	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
	AC		
	DC		
Resistive Load (AC-12)	-	2.5A	1.5A
	Inductive Load (AC-15)		
Resistive Load (DC-12)	2.5A	1.1A	0.55A
	Inductive Load (DC-13)		
	2.3A	0.55A	0.27A

### Contact Config. and Operation Characteristics

Type	Contact Structures	Operating Characteristic
1NC-1NO		0.8(Actuator Installation Standard)
HSWCA	(Blue) 11 --- 12 (Blue / White) (Orange) 33 --- 34 (Orange / White)	11-12 33-34
		0, 5.5 5.8 28.2(Stroke: mm)
HSWCC	(Blue) 11 --- 12 (Blue / White) (Brown) 21 --- 22 (Brown / White) (Orange) 31 --- 32 (Orange / White)	11-12 21-22 31-32
		(Actuator Inserted) (Actuator Pulled Out)



### 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/s<sup>2</sup> shock may cause failures.
- Prevent any foreign objects from getting inside 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.

### Performance Specifications

Applicable Standards	ISO14119, EN1088, IEC60947-5-1, EN60947-5-1 (DEMKO 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
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)
Contact Resistance	Between Polar Charged Parts: 100MΩ or more (with DC 500V mega)
Appliance Class	Less than 300mΩ (Initial Value, Cable Length 1m)
Degree of Protection	IP67(IEC60529)
Impact Resistance	Malfunction: 300m/s <sup>2</sup> Endurance: 1000m/s <sup>2</sup>
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.

## Locks for Aluminum Extrusions

### HFLOCK

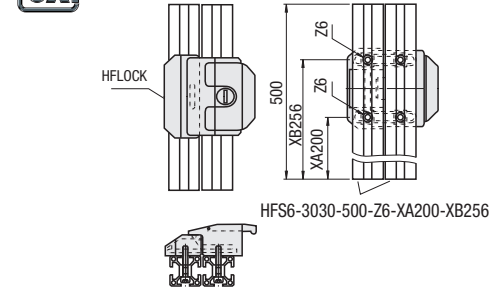
Ⓜ Material: ADC12

Ⓜ Cannot be used for sliding doors.

Part Number	Extrusion (Series)	Accessory			Unit Price	Volume Discount Rate
		Screw	Nut	Key		
HFLOCK	5	HFS5	CBM6-20	4 pcs.	Dedicated M6 Nut	4 pcs.
	6	HFS6	CBM6-30			
	8	HFS8	CBM6-35			
	8-45	HFS8-45	CBM6-40			

Ordering Example  
Part Number: **HFLOCK5**

## Extrusion Installation Example



### Alteration examples of counterbore machining on extrusions for HFLOCK mounting

Extrusion Square	Alternation Instruction	Quantity
20	HFS5-2020-500-Z6-XA200-XB256	2
30	HFS6-3030-500-Z6-XA200-XB256	2
40	HFS8-4040-500-Z6-XA200-XB256	2
45	HFS8-4545-500-Z6-XA200-XB256	2

HFLOCK is a lock for aluminum extrusions. The lock is mounted on the counterbored extrusion using the included screws, as shown on the Alteration Examples above.