

# Safety Door Lock Switch



## SFDL Series CATALOG

For your safety, read and follow the considerations written in the instruction manual, other manuals and Autonics website.

The specifications, dimensions, etc. are subject to change without notice for product improvement. Some models may be discontinued without notice.

### Main Features

- Available to change the direction of inserting the operation key by rotating head : Inserting the operation key from 5 directions in the top and side
- Various kinds of contact composition : 4-contact (connected), 4-contact (not connected), 5-contact, 6-contact
- Selectable between connector type which reduces working process and separable terminal type which is useful for maintenance
- Manual unlock function to handle the emergency : Cross type/special type release key line-up
- Minimized solenoid heat with stable current supply
- Excellent solidity/durability of metallic head
- Applicable to various applications using the slide key unit accessory

### Ordering Information

This is only for reference, the actual product does not support all combinations. For selecting the specified model, follow the Autonics website.

SFDL	-	①	②	③	-	④	⑤	⑥
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**① Lock/Release method**  
M: Mechanical Lock/Solenoid Release  
S: Solenoid Lock/Mechanical Release

**② Contact**  
No-mark: 4-contact (connected)  
C: 4-contact (not connected)  
5: 5-contact  
6: 6-contact

**④ Connection type**  
No-mark: Terminal type  
C: Connector type

**⑤ Connection outlet specification**  
M20: M20 thread  
G1/2: G1/2 thread

**⑥ Release key type**  
No-mark: Cross type  
K: Special type

#### ③ Contact composition

	4-contact	5-contact	6-contact
<b>A</b>	Lock 1 N.C. / 1 N.O. + Door 1 N.C. / 1 N.O.	Lock 1 N.C. / 1 N.O. + Door N.C. 2 / N.O. 1	Lock 2 N.C. / 1 N.O. + Door 2 N.C. / 1 N.O.
<b>B</b>	Lock N.C. 2 + Door N.C. 1 / N.O. 1	Lock N.C. 2 + Door N.C. 2 / N.O. 1	Lock N.C. 3 + Door N.C. 2 / N.O. 1
<b>C</b>	Lock N.C. 1 / N.O. 1 + Door N.C. 2	Lock N.C. 1 / N.O. 1 + Door N.C. 3	Lock N.C. 2 / N.O. 1 + Door N.C. 3
<b>D</b>	Lock N.C. 2 + Door N.C. 2	Lock N.C. 2 + Door N.C. 3	Lock N.C. 3 + Door N.C. 3

### Specifications

Model	SFDL-□□□□□□	SFDL-□□□□-C□□
Directing opening force	≥ 80 N	
Directing opening distance	≥ 10 mm	
Locking pullout strength	≥ 1,300 N	
Operating speed	0.05 to 1 m/s	
Operating frequency	≤ 20/min	
Mechanical life cycle	≥ 1,000,000 operations (20/min)	
Vibration (malfunction)	0.35mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 10 min	
Shock	1,000 m/s <sup>2</sup> (≈ 100 G) in each X, Y, Z direction for 3 times	
Shock (malfunction)	80 m/s <sup>2</sup> (≈ 8 G) in each X, Y, Z direction for 3 times	
Ambient temperature	-10 to 55°C <sup>01)</sup> , storage: -25 to 65 °C (a non freezing or condensation environment)	
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (a non freezing or condensation environment)	
Protection structure	IP67 <sup>02)</sup> (IEC standard, except for head)	
Material	Head: zinc, case: polyamide 66, operation key: stainless steel 304	
Approval	CE, UL, VDE, TÜV, etc.	
Accessory	SFDL-□□□□□□□□□□ (Special type release key): rotating key	
Applicable cable	AWG22	-
Connection type	Terminal type	Connector type
Unit weight (packaged)	≈ 375 g (≈ 440 g)	≈ 325 g (≈ 395 g)

01) UL approved ambient temperature: 50°C

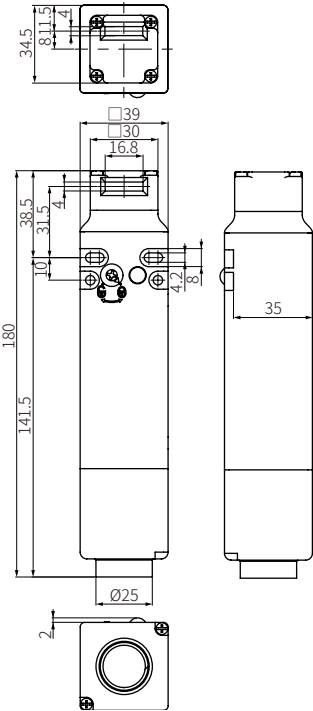
02) Rated protection structure is for the switch body. Be cautious about preventing the head part from entering the foreign materials such as dust and water.

Contact block	
Rated voltage/current for load	Resistive load: 1 A/120 VAC~, 0.22 A/125 VDC= Inductive load (IEC): AC-15 1 A/120 VAC~, DC-13 0.22 A/125 VDC= Inductive load (UL): C150, R150
Impulse dielectric strength	Between the terminals of same polarity: 1.5 kV Between the terminals of different polarity: 1.5 kV Between each terminal and non-live part: 2.5kV
Insulation resistance	≥ 100 MΩ (500 VDC= megger)
Contact resistance	≤ 200 mΩ
Electrical life cycle	≥ 100,000 operations (125 VAC~/1 A)
Conditional short-circuit current	100 A
Solenoid	
Rated voltage	24 VDC= class 2
Current consumption	Supplying power: 0.26A Normal: max. 0.2A (approx. 3 seconds after supplying power)
Insulation class	Class E

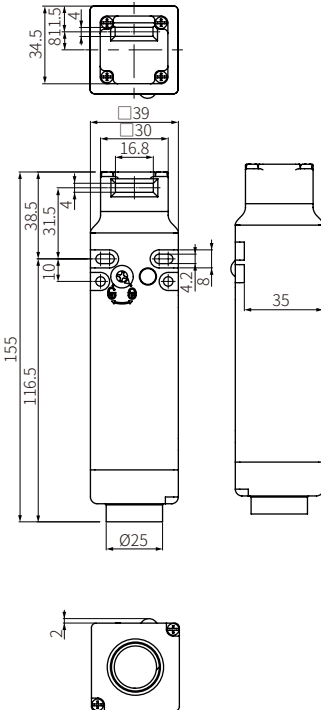
## Dimensions

• Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

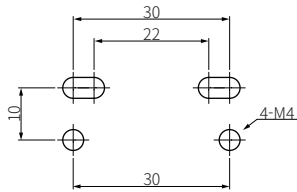
### Terminal type



### Connector type



### Panel cut out



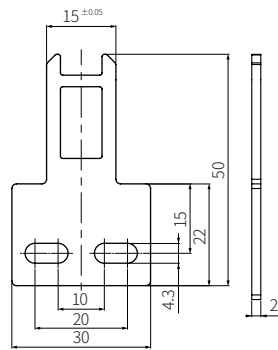
## Sold Separately

- Operation key: SFD-K□
- Slide key unit: SFDL-SDK
- Connector cable for the connector type: SFDL-CND10□

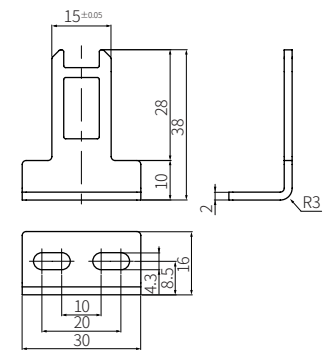
## Sold Separately: Operation Key

• Unit: mm, For the detailed dimensions of the product, follow the Autonics web site.

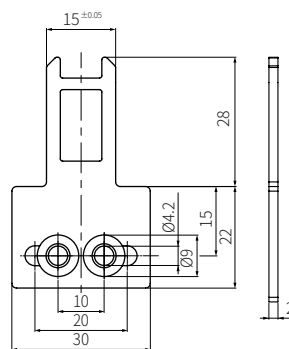
### SFD-KH



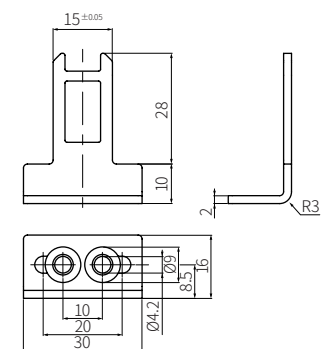
### SFD-KL



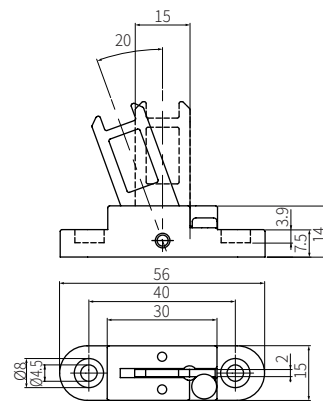
### SFD-KHR



### SFD-KLR



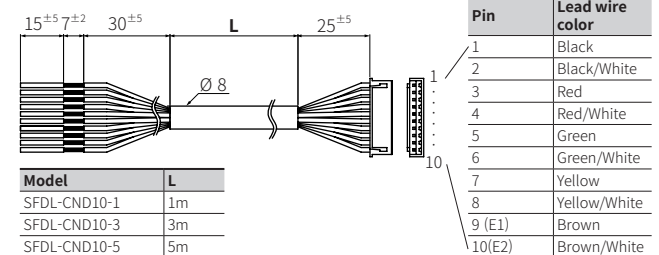
### SFD-KLF, SFD-KLF2



Model	Material
SFD-KLF	Operation key: stainless steel 304, base: polyamide
SFD-KLF2	Operation key: stainless steel 304, base: zinc

## Sold Separately: Connector Cable

• Connector cable is the separately sold accessory for the connector type model.



Model	L
SFDL-CND10-1	1m
SFDL-CND10-3	3m
SFDL-CND10-5	5m

Pin	Lead wire color
1	Black
2	Black/White
3	Red
4	Red/White
5	Green
6	Green/White
7	Yellow
8	Yellow/White
9 (E1)	Brown
10 (E2)	Brown/White