

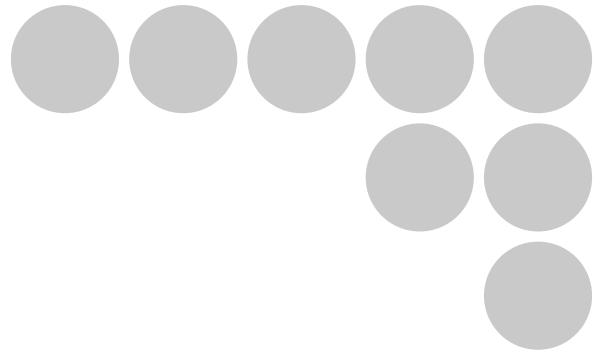
NEW

OMRON

D4SL-mounting Slide Key

D4SL-SK10-LK

sti SAFETY,
TECHNOLOGY
& INNOVATION



The Lockout key
safeguards workers.

**For Safe and Secure Work
in Hazardous Areas**

realizing

D4SL-SK10-LK

D4SL Door-mounting Accessory with Lockout Key to Prevent Workers from Becoming Trapped inside Hazardous Area

- The vertical D4SL Guard Lock Safety-door Switch can be easily mounted on 40 × 40 mm aluminum frames.
- The plastic material makes the Slide Key suitable for lightweight doors.



NEW



Be sure to read the "Safety Precautions" on page 6.

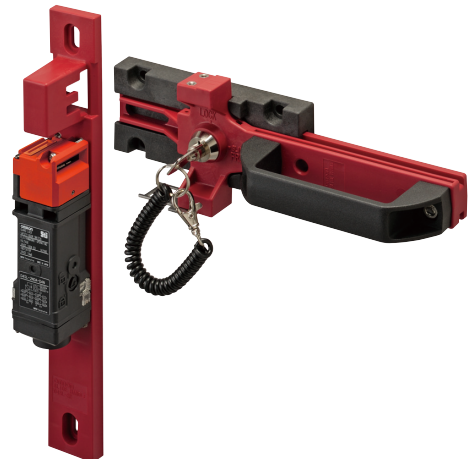
Configuration



D4SL-SK10-LK



D4SL (sold separately)

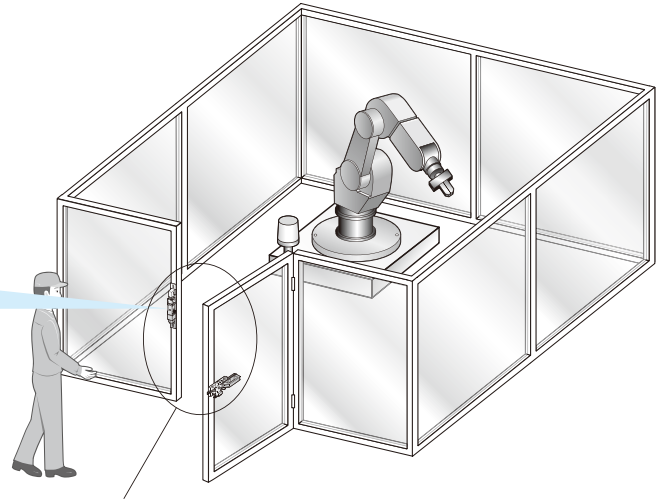


Features

●The lockout key prevents workers from becoming trapped without using a padlock.

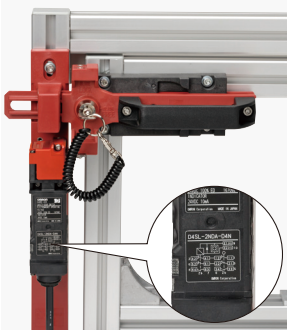
Note: Using LEDs enables confirming whether the door is locked or unlocked.

Example: D4SL-4NDA-D4N with mechanical lock and solenoid release

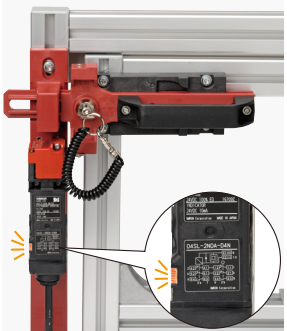


The handle-shaped fixture makes it easy to use the Door Switch.

Close door. Locked (power not supplied to solenoid)
The slide handle is closed.



Close door. Unlocked (power supplied to solenoid)
The slide handle is closed.



The slide handle can be pulled.



Open door. The slide handle is open.

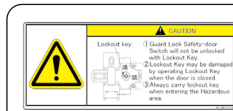


When the slide handle is open, the lockout key can be pulled regardless of whether power is being supplied to the solenoid or not.

Lockout Key

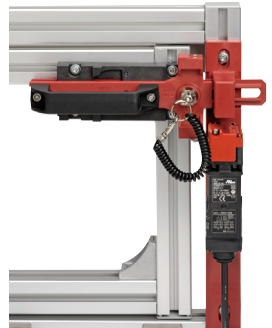


Do not turn the key as in the figure above if the slide handle is closed.

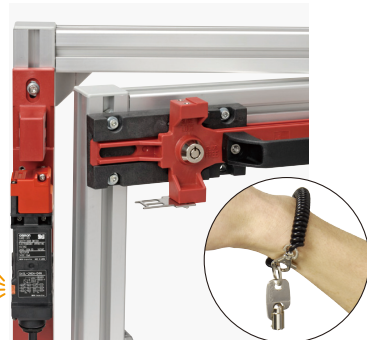


Attach the supplied caution labels for display.

Left door Door Opening to the Left.

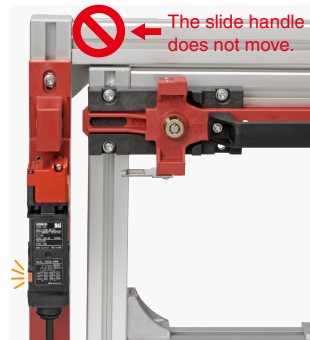


Open door. The slide handle is open.



The slide handle is secured at the position shown in the figure. A worker holding the lockout key will not be trapped locked inside the hazardous area by another person.


Open door. The slide handle is open.



If the lockout key is not mounted, the slide handle will not move and the door will not close.

D4SL-SK10-LK

Ordering Information

Type	Specifications	Contents	Model	Applicable Door Switch
	Weight: Approx. 0.6 kg Mechanical durability: 20,000 operations min.	Slide Key: 1 (not yet mounted) D4SL mounting plate: 1 Door Switch special mounting screws: 3 D4SL-K1S (operation key): 1 D4SL-K1S special mounting screws: 2 Lockout keys: 2 Lockout key strap: 1 Caution labels (stickers): 2 sheets (English and Japanese)	D4SL-SK10-LK	D4SL

- Note:** 1. The Door Switch is not included. Select the Door Switch depending on the necessary number of contacts and the conduit size. The contents are provided as a total set, individual contents cannot be ordered separately.
2. Perform risk assessment for the equipment in question, configure relay units and other safety circuits, and use properly.

Applicable Door Switches

Guard Lock Safety-door Switch D4SL



World Smallest Class 6-contact Guard Lock Safety-door Switch

- Two types are available: a connector type that reduces wiring time and a detachable terminal block type.
- Robust and durable metal head
- Key holding force of 1,300 N.
- The wider key slot is less susceptible to movement from doors, and can handle doors with a small radius.
- By rotating the mounting part, it is possible, both to change the key insertion point and to enable mounting on various devices.
- Easy view LED indicators
- By utilizing the 6-contact type, both the door open/closed status and the solenoid ON/OFF status can be monitored independently.
- A cost-effective 5-contact model is also available.

Model Number Legend

Switch

D4SL- □ □ □ □ - □ □ □ □
 1 2 3 4 5 6 7

1. Conduit Size

- 2: G1/2 (1 conduit)
- 3: 1/2-14NPT (1 conduit) *1
- 4: M20 (1 conduit)

2. Built-in Switch *2

5-contact Model

- J: 1NC/1NO + 2NC/1NO
- K: 1NC/1NO + 3NC
- L: 2NC + 2NC/1NO
- M: 2NC + 3NC

6-contact Model

- N: 2NC/1NO + 2NC/1NO
- P: 2NC/1NO + 3NC
- Q: 3NC + 2NC/1NO
- R: 3NC + 3NC

3. Head Material

- D: Metal

*1. M20, includes M20-to-1/2-14NPT conversion adapter. (To be released.)

*2. For the solenoid lock model with built-in switch N, P, Q, and R, the door will not be locked when the solenoid is turned ON before the door is closed. Be sure to close the door before turning ON the solenoid.

*3. Connector cables are not included with the connector type and are to be purchased separately.

4. Door Lock and Release

- A: Mechanical lock/24 VDC solenoid release
- G: 24 VDC solenoid lock/mechanical release

5. Indicator

- D: 24 VDC (orange LED indicator)

6. Release Key Type

- Blank: Standard release key
- 4: Special release key
(Note: Release keys are provided.)

7. Connection Method

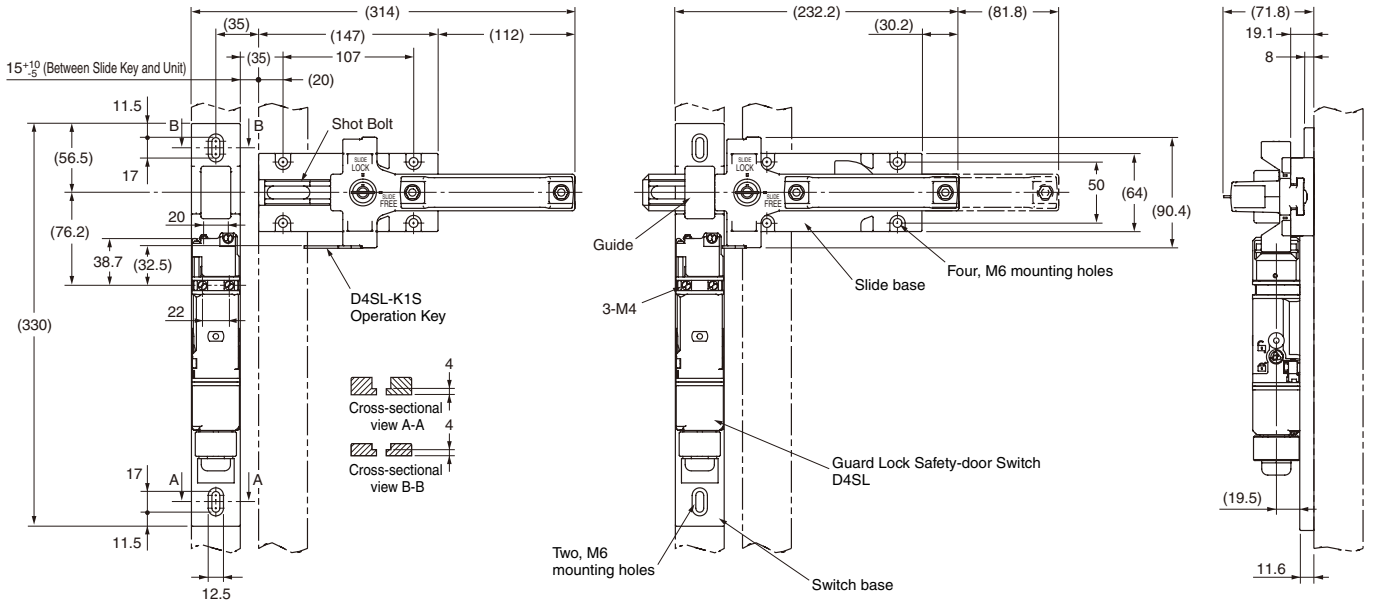
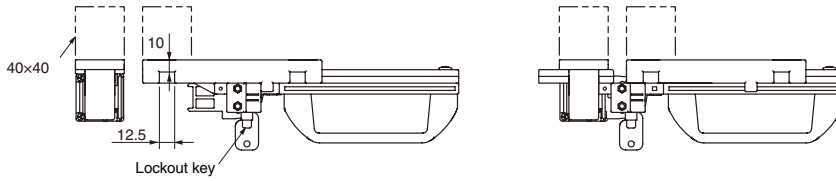
- Blank: Terminal
- N: Connector *3

Dimensions

D4SL-SK10-LK

Open door.

Close door.



D4SL-SK10-LK

Safety Precautions

CAUTION

Do not use this product mounted so that it slides vertically. This may cause malfunction, resulting in personal injury.

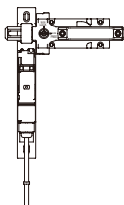


Do not insert the operation key with the door open. Devices may start to operate, resulting in injury.



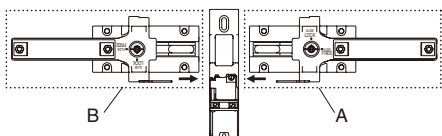
Precautions for Safe Use

- Do not drop the Product. Doing so may prevent the Product from functioning to full capacity.
- Mount the Product securely to prevent it from falling. Otherwise, injury may occur.
- Do not attempt to disassemble or modify the Switch. Doing so may cause the Switch to malfunction.
- Make sure that the gap between the shot bolt and the guide is ± 0.5 mm. Otherwise, excessive wear or damage may cause malfunction.
- To ensure safety, do not operate the Switch with anything other than the Slide Key Unit.
- Your hand may be injured by being pinched between the Operation Key and Switch when closing the door with your hand on the Product.
- Be careful to avoid pinching your hand when operating the Slide Handle.
- Do not impose a force of exceeding 1 N·m when operating the Lockout Key. Otherwise, the Product may be damaged and may not operate properly.
To prevent damage, attach the supplied labels for display near the Product.
- Do not force the slide handle to move when the lockout key is not inserted. Doing so may damage the product and make operation impossible.
- Do not force the slide handle to move when the door is locked. Doing so may damage the product and make operation impossible.
- Do not close the door with the shot bolt removed. Doing so may damage the product and make operation impossible.
- Turn the Lockout Key to the "SLIDE LOCK" position and remove it when opening the door to prevent a third party from operating the Slide Handle.
- The durability of the Switch varies considerably depending on the switching conditions. Always confirm the usage conditions by using the Switch in an actual application, and use the Switch only for the number of switching operations given in the performance specifications.
- The user must not maintain or repair equipment incorporating the Switch. Contact the manufacturer of the equipment for any maintenance or repairs required.
- Refer to the *D4SL Guard Lock Safety-door Switch Datasheet and Instruction Sheet* about storage conditions, ambient conditions, Switch details, and handling methods.
- Do not apply excessive force in the direction of the slide. This may damage the product and cause it to malfunction.
- Do not force the switch or cable. This may damage the product. The cable should be fixed at a point separate from the switch.



Precautions for Correct Use

- Use this product for a lightweight door (20 kg max). Otherwise the product may be damaged.
- This product is for D4SL Guard Lock Safety-door Switch only. This product cannot be used with any other manufacturer's door switches.
- Use the Slide Handle in the direction A or B in the following figure.



- Loose screws may result in malfunction. Use washers and tighten the screws to the specified torques. Mount the Slide Base at four points with screws. Adding adhesive is recommended for preventing the screws from loosening.
- Also, when mounting the Product to a door for disable-prevention purposes, purchase and use tamper-resistant screws.

Appropriate Tightening Torque

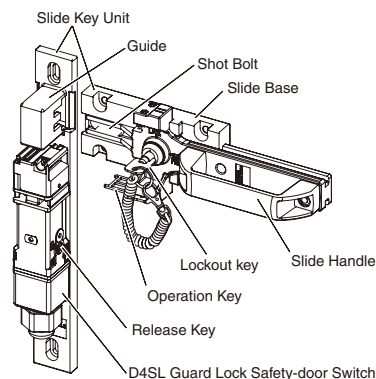
Slide Key mounting screw (M6)	6.0 to 7.0 N·m
Operation key special mounting screw (screws supplied)	2.4 to 2.8 N·m
Switch special mounting screw (screws supplied)	0.75 to 1.15 N·m

Technical Specifications

Ambient operating temperature	-10 to 55°C (with no icing)
Ambient operating humidity	95% max.
Mechanical durability	20,000 operations min.
Weight	Approx. 0.6 kg (not including D4SL Guard Lock Safety-door Switch)

- Do not store the Switch where corrosive gases (e.g., H₂S, SO₂, NH₃, HNO₃ or Cl₂) or dust is present, or in locations subject to high temperature or humidity.
- Perform maintenance inspections periodically.
- When the lockout key is attached to your wrist, be careful that the strap does not get stuck in equipment.

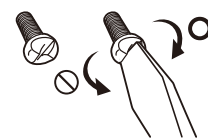
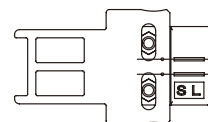
Nomenclature



Differences between Lockout Key and Trapped Key (Reference)

	Lockout key	Trapped key (Refer to information on the D4JL-□□□A-□7-□□)
Closing the door	The door cannot be closed unless the lockout key is inserted in the slide and turned.	The door cannot be closed unless the trapped key is inserted in the Switch and turned.
Opening the door	The door can be opened by supplying power to the Switch solenoid without operating the lockout switch.	The door can never be opened without both supplying power to the Switch solenoid and operating the trapped key.

- When mounting the operation key, line up the inside edges of the long operation key holes with the outer edges of the slide handle as in the following figure to ensure easy position adjustment.
- Use the supplied special screws to mount the operation key and D4SL Guard Lock Safety-door Switch.
- To tighten the screws, use the tip of a flat-head screwdriver on the screw heads as shown in the following figure.
- The special screws cannot be removed once they are tightened.



Note: The special screws are designed so that they cannot be turned counter-clockwise using a flat-head screwdriver.

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