

INSTRUCTION SHEET

HS5D / 5E / 5E-K / 5L Slide Handle Actuator

HS5 Series

Confirm that the delivered product is what you have ordered. Read this instruction sheet to make sure of correct operation. Make sure that the instruction sheet is kept by the end user.

SAFETY PRECAUTIONS

In this operation instruction sheet, safety precautions are categorized in order of importance to Warning and Caution :

WARNING

Warning notices are used to emphasize that improper operation may cause severe personal injury or death.

CAUTION

Caution notices are used where inattention might cause personal injury or damage to equipment.

1 Type

HS9Z-EH5L
Rear Lever
L : With Rear Lever

2 Specifications and Ratings

Applicable Type	• HS5D Interlock switch Type No. HS5D-□□** • HS5E Interlock switch with solenoid Rear unlock button type Type No. HS5E-□44L**-G • HS5E-K Interlock switch with key Type No. HS5E-K□0L**-△-■ • HS5L Interlock switch with solenoid Rear unlock button type Type No. HS5L-□44L**-G
Weight (approx.)	Approx.1800g (HS9Z-EH5L)
Operating Temperature	-30 to +70°C
Mechanical Durability	10,000 operations minimum
Applicable Shackle Diameter of Padlock	Φ6 to 13
Withstand Load of Padlock	50N minimum
Handle Stroke	Approx.80mm
Thickness of Mounting Part	30 to 65mm (HS5E / HS5E-K / HS5L) 70mm maximum (HS5D)

- Interlock switches are not supplied with the slide handle actuator and must be ordered separately.
- For the interlock switch, see the specifications of the interlock switches used.

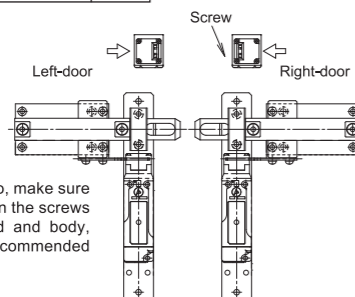
3 Mounting Examples

• Confirm that the package contains the following parts.

Unit	Parts	Q'ty
HS9Z-EH5L	① Switch Base Unit	1
	② Handle Unit	1
	③ Actuator	1
	④ Stopper	1
	⑤ Onside Screw (M5)	2
	⑥ Spring Washer	2
	⑦ Rear Lever	1
	⑧ Instruction Sheet	1

Mounting Directions of the HS5L Head

Before installing the HS5L, change the head direction according to the door type (right-hand or left-hand) as shown at right. The head direction can be changed by removing the four screws from the corners of the HS5E head and turning the head. Make sure to turn the manual unlock to UNLOCK when changing the head direction after wiring. Also, make sure that no foreign object enters into the HS5E. Tighten the screws tightly, without leaving space between the head and body, otherwise the safety switch may malfunction. Recommended tightening torque: 0.9 to 1.1 Nm.



Installing the Switch Base Unit

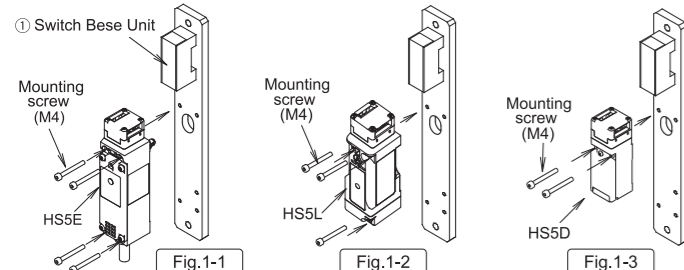
(1) <When using the HS5E-□□ / HS5E-K□□ / HS5L-□□□□ Interlock switch>

Using M4 mounting screws, fasten the HS5E-□□ / HS5E-K□□ / HS5L-□□□□ interlock switch on ①S with Base Unit. (note 1) Mounting screws are not supplied and must be provided by the user. (Fig.1-1) (Fig.1-2)

*Mounting screw thread length : 36 to 40mm

<When using the HS5D interlock switch> Using M4 mounting screws, fasten the HS5D interlock switch on ①Switch Base Unit. Mounting screws are not supplied and must be provided by the user. (Fig.1-3)

*Mounting screw thread length : 27 to 31mm



Note 1 : When using an HS5L cable side-routing type (HS5L-□44LSM-G), install the switch base unit onto an frame, etc. before installing the Safety Switch. For details on installing the switch base unit, see step 2).

(2) Fasten ①Switch Base Unit on the mounting frame or panel. Mounting screws and nuts are not supplied and must be provided by the user.

*Installing the rear unlock button Install the rear unlock button kit for frame mounting (HS9Z-FL5□).

For detail, see the instruction sheet. Remove the standard button from the HS5E-□□□□ / HS5E-K□□□□ / HS5L-□□□□ safety switch in order to install the rear unlock button kit for mounting frame (Fig.2).

Remove the standard button from the HS5E-□□□□ / HS5E-K□□□□ / HS5L-□□□□ safety switch in order to install the rear unlock button kit for mounting frame (Fig.2).

Rear Unlock Button Kits for Frame Mounting (HS9Z-FL5□)

Type	Thickness of mounting part(Y)mm*
HS9Z-FL54	30 ≤ Y ≤ 35
HS9Z-FL55	35 < Y ≤ 45
[HS9Z-FL56]	45 < Y ≤ 55
[HS9Z-FL57]	55 < Y ≤ 65

*See 6. Dimensions and Mounting

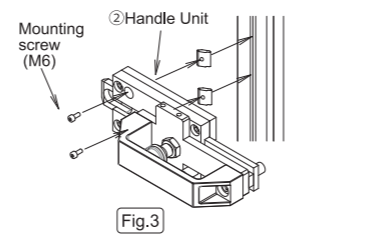
Type Nos. in [] are not supplied as standard. Contact IDEC if required.

Installing the Handle Unit

(3) Fasten ②Handle Unit on the mounting frame or panel. Mounting screws and nuts are not supplied and must be provided by the user.

*Make sure that the bolt should fits the bolt port on ①Switch Base Unit.

(See 5. Adjustment) (Fig.3)



Installing the Actuator

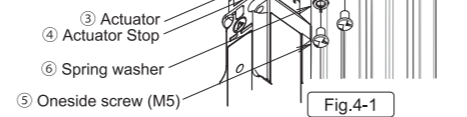
(4) Insert the Handle Unit into ①Switch Base Unit perfectly. With ④Actuator stop lightly touching the interlock switch, install ③Actuator on the handle unit using ⑥Spring washers and ⑤Onside screws. (Fig. 4-1)

*Make sure that the actuator is installed straight.

Using ⑤Onside screw, fasten ③Actuator on ②Handle Unit.

Assemble ⑥Spring Washer between ③Actuator and ⑤Onside screw at that time. (Fig. 4-1)

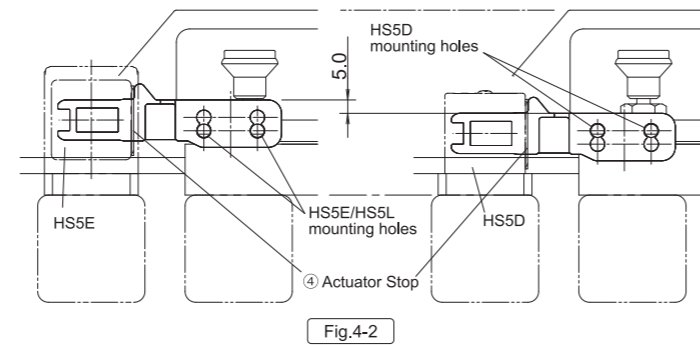
*When mounting, do not mount the actuator on an angle.



*HS5E-□□□□, HS5E-K□□□□, HS5L-□□□□□□ and HS5D have different actuator mounting holes. See the figure below and the label on the actuator for mounting holes, and fasten the actuator using the attached mounting screws.

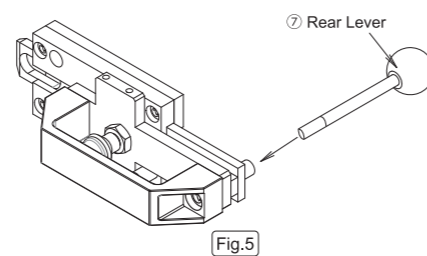
(Mounting screws are one-way screws and require special tool for removal. Removal tool OW510 (Made by SAJIMA CORPORATION)(Sold separately))(Fig.4-2)

*After mounting the actuator, remove the actuator stop from the interlock switch.



Installing the Rear Lever

(5) Fasten ⑦Rear Lever on ②Handle Unit. (Fig.5)



*After mounting the screw, apply loctite or the like on the adjustment screw to prevent loosening. Use screw locking agent that is compatible with the base material.

*Mounting screws and nuts are not supplied and must be provided by the user.

4 Precautions for Operation

WARNING

- Turn off the power to the safety switch before starting installation, removal, wiring, maintenance, and inspection on the safety switch. Failure to turn power off may cause electrical shocks or fire hazard.
- Do not disassemble or modify the switch. Also do not attempt to disable the interlock switch function, otherwise a breakdown or an accident will result.

CAUTION

- The slide handle actuator can be used with HS5D, HS5E-□□□□ interlock switch rear unlocking button type, HS5E-K□□□□ interlock switch rear unlocking button type and HS5L-□□□□□□ interlock switch rear unlocking button type only. Do not use with other interlock switches.
- Read instruction sheet before starting operation.
- HS5 Series Safety Switches are Type 2 low-level coded interlocking devices (EN ISO / ISO14119). When using the slide handle actuator in the safety-related part of the system, make sure of proper operation while observing the safety standards and the latest regulations of the relevant country or region where the actual machine/system is used. Also, perform risk assessment before operation.

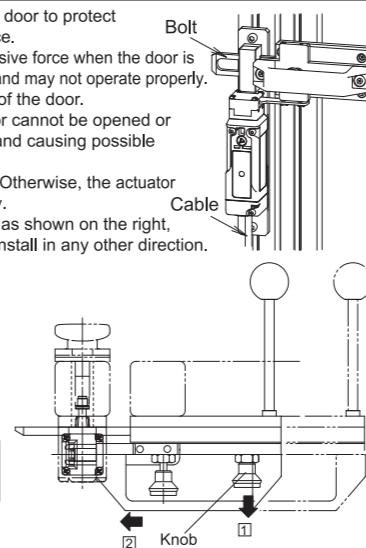
- Install a mechanical door stop to the end of the door to protect the slide handle actuator against excessive force.
- Do not move the slide handle actuator with excessive force when the door is locked. Otherwise, the actuator may be damaged and may not operate properly.
- Install the slide handle actuator on the outside of the door. Do not install inside the door, otherwise the door cannot be opened or closed by the operator, affecting the operation and causing possible danger to the operator.
- Do not close the door when the bolt is slid out. Otherwise, the actuator may be damaged and may not operate properly.
- Install the slide handle actuator in the direction as shown on the right, so that the cable hub faces downward. Do not install in any other direction.

Handle Operation

- Lift the knob completely before operating the handle as shown on the right. Make sure to lift the knob first, otherwise damage may be caused.

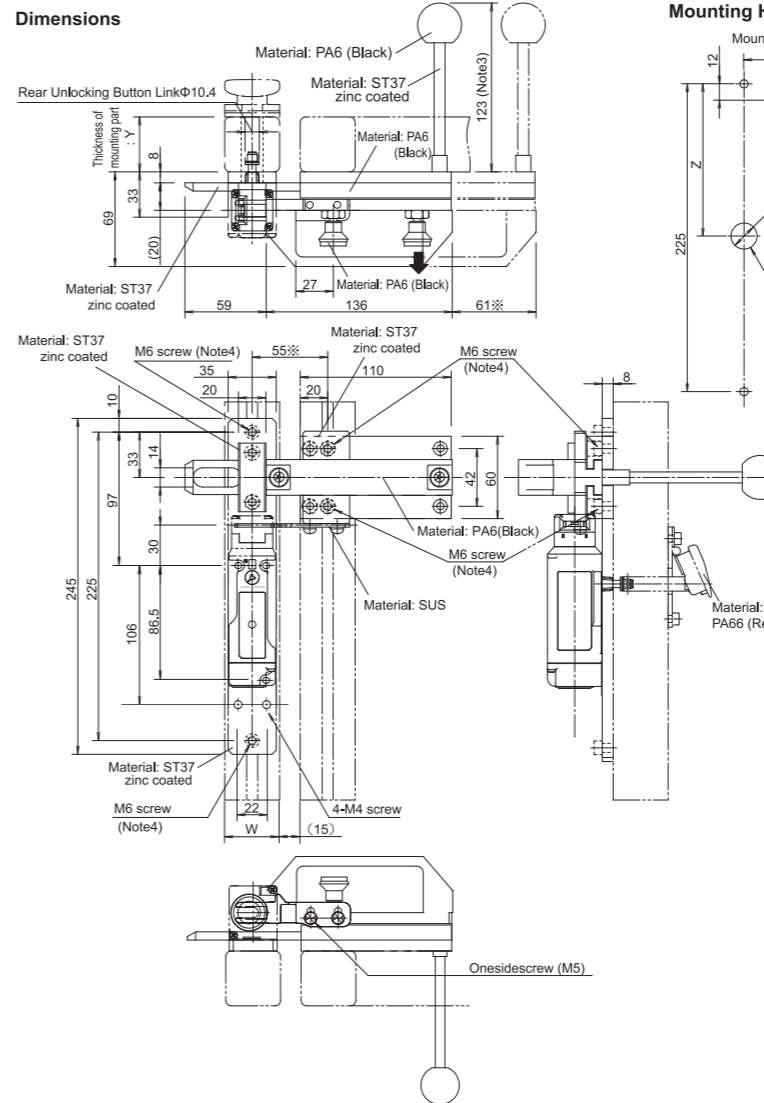
CAUTION

- When operating the handle, be careful so that your hand or finger is not caught.

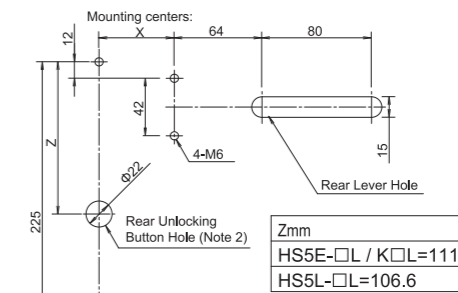


6 Dimensions and Mounting (mm)

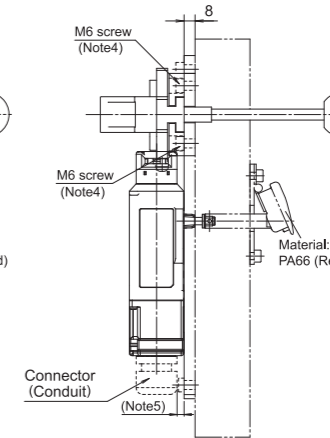
Dimensions



Mounting Hole Layout



(Installing HS5L Cable Side-Routing Type)



Mounting Part Width (hinged door)

Mounting Part Width(W)mm	Mounting centers(X)mm
40 ≤ W < 45	55 ≤ X ≤ 60
45 ≤ W < 50	55 ≤ X ≤ 65
50 ≤ W ≤ 55	60 ≤ X ≤ 70
55 < W ≤ 60	65 ≤ X ≤ 70

*In the figure shown on the right, □40mm frame is used.

Note 2: Required when using the HS5E-□□□□ / HS5E-K□□□□ / HS5L-□□□□□□. Not required when using the HS5D because rear unlocking button is not necessary.

Note 3: Ensure that the hole in the mounting panel does not interfere with the rear handle shaft.

Note 4: Mounting screw size is M6. Take this screw size into consideration when choosing a mounting part.

Note 5: When using an on HS5L cable side-routing type (HS5L-□44LSM-G), take the size of the connector (conduit) into consideration when selecting mounting screws.

7 Precaution for Disposal

Dispose of the HS5 slide handle actuator as an industrial waste.

IDEC CORPORATION