

INSTRUCTION SHEET

Slide Handle Actuator

HS5 Series/Type HS1T

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

Applicable Type	HS9Z-EH5L	Rear Lever
	5 : HS5 Series Interlock switch	L : With Rear Lever
	1 : HS1T Interlock switch	

2 Specifications and Ratings

Applicable Type	HS9Z-EH5L	HS9Z-EH1L
• HS5D Interlock switch Type No. HS5D-□□**		
• HS5E-K Interlock switch with key Type No. HS5E-K□□L**-△■		
• HS5L Interlock switch with solenoid Rear unlock button type Type No. HS5L-□44L**G		
• HS1T Interlock switch with solenoid Rear unlock button type Type No. HS1T-□44ZL**G		
Weight (approx.)	Approx.1800g (HS9Z-EH5L) Approx.2000g (HS9Z-EH1L)	
Operating Temperature	-30 to +70°C	
Mechanical Durability	100,000 operations minimum	
Applicable Shackle Diameter of Padlock	Φ6 to 13mm	
Withstand Load of Padlock	50N minimum	
Handle Stroke	Approx.80mm	
Thickness of Mounting Part	30 to 65mm (HS5E-K / HS5L / HS1T) 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.

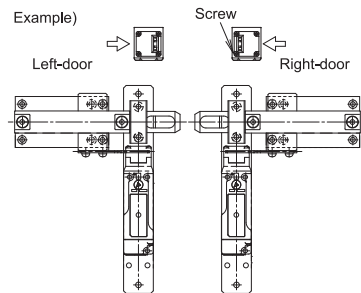
3 Mounting Examples

- Confirm that the package contains the following parts.

Parts	HS5 Series	Q'ty	
		HS9Z-EH5L	HS9Z-EH1L
① Switch Base Unit	HS5 Series	1	0
	HS1T	0	1
② Handle Unit		1	1
③ Actuator	HS5 Series	1	0
	HS1T	0	1
④ Actuator Stop		1	0
⑤ One-way Screw (M5)		2	2
⑥ Spring Washer		2	2
⑦ Rear Lever		1	1

Mounting Directions of the Head

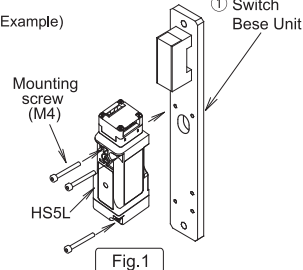
Before installing the interlock switch, change the head direction according to the door type (right-hand or left-hand) as shown at right figure. For the changing of head direction, see the instruction sheet of the interlock switches used.



Installing the Switch Base Unit

- Using mounting screws, fasten the interlock switch on ①Switch with Base Unit. Mounting screws are not supplied and must be provided by the user. (Fig.1)

Interlock switch	Mounting screw		
	Size	Q'ty	Thread length
HS5L	M4	3	36~40mm
HS5E-K		4	
HS5D	M5	2	27~31mm
HS1T		3	



Note1: When using on 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).

- 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-K□□L / HS5L-□□L / HS1T-□□L Interlock switch in order to install the rear unlock button kit for mounting frame(Fig.2).

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

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

- 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.

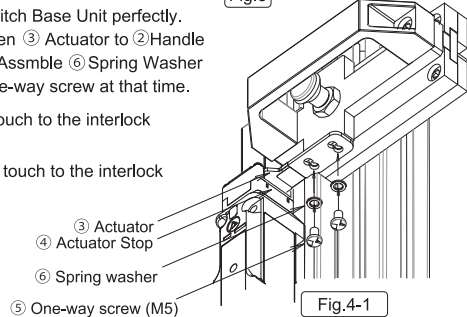
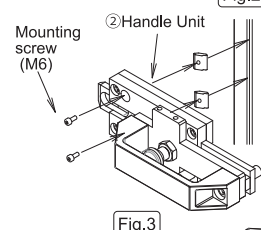
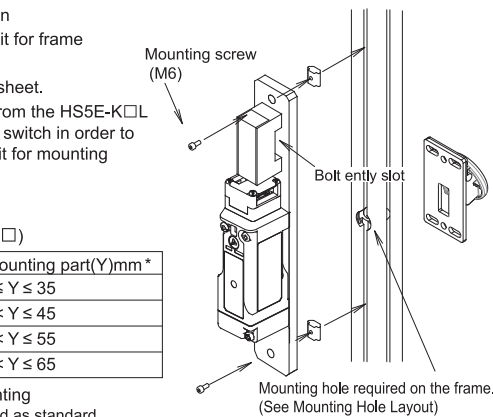
- See 5. Adjustment (Fig.3)

Installing the Actuator

- Insert ②Handle Unit into ① Switch Base Unit perfectly. According to the following, fasten ③ Actuator to ②Handle Unit using ⑤One-way screws. Assemble ⑥ Spring Washer between ③ Actuator and ⑤ One-way screw at that time.

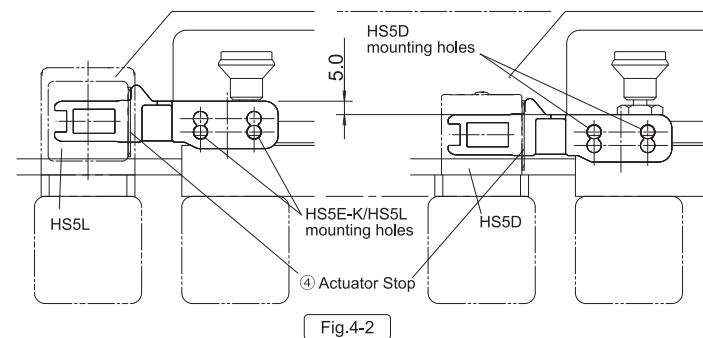
HS9Z-EH5L: ④ Actuator Stop touch to the interlock switch lightly

HS9Z-EH1L: ③ Actuator do not touch to the interlock switch



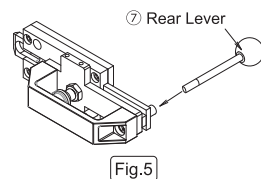
*When mounting, do not mount the actuator on an angle.

*HS5E-K□□L, HS5L-□□L 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 SAIMA CORPORATION)(Sold separately)(Fig.4-2)
*After mounting the actuator, remove the actuator stop from the interlock switch. (Only for HS9Z-EH5L)



Installing the Rear Lever

- Fasten ⑦ Rear Lever on ② Handle 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 interlock 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

- Do not use with other than applicable interlock switches.
- Read instruction sheet before starting operation
- HS5 Series / HS1T Interlock 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.

Padlocking

- Mount the padlock or hasp in the padlock hole.
- Make sure that the total weight of padlocks and hasp does not exceed 50N maximum. Otherwise the slide handle actuator will be deformed or damaged

Rear Lever

- The actuator cannot be inserted using the rear lever.

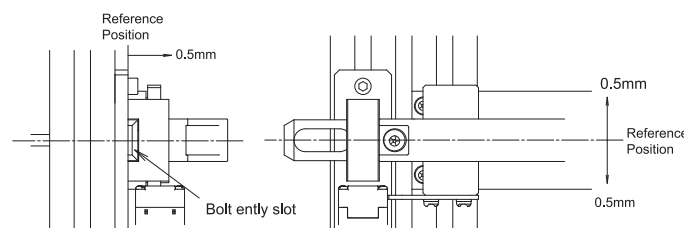
CAUTION

- Do not attempt to insert the actuator using the rear lever. Otherwise the actuator may be damaged.

5 Adjustments

Actuator Mounting Reference Position

- The mounting reference position and allowable mounting range are as shown on the below.



Recommended Tightening Torques

	Tightening Torque
To install HS5D interlock switch (Two M4 screws)*	1.8 to 2.2N • m
To install HS5E-K□□L interlock switch (Four M4 screws)*	
To install HS5L-□□L interlock switch (Three M4 screws)*	
To install HS1T interlock switch (Three M5 screws)*	3.2 to 3.8N • m
To install Switch Base Unit (Two M6 screws)*	4.5 to 5.5N • m
To install Handle Unit (Two M6 screws)*	4.5 to 5.5N • m
To install Actuator (Two M5 ⑤ one-wayscrews)	2.7 to 3.3N • m

* When the torque is not enough to recommended screw tightening torque, make sure that the screw do not become loose by using adhesive sealants etc.

6 Dimensions and Mounting (mm)

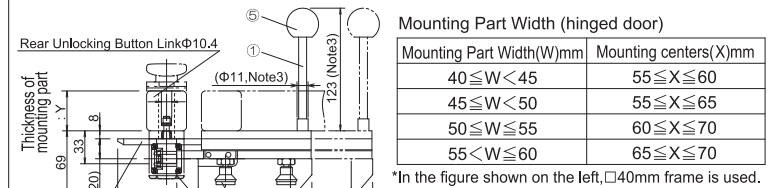
Mounting Hole Layout

	Interlock switch	Mounting centers:	
		Z1[mm]	Z2[mm]
HS9Z-EH5L	HS5L	225	106.6
	HS5E-K		111
	HS5D		-
HS9Z-EH1L	HS1T	270	122.5

Note 2:
Required when using the HS5E-K□□L / HS5L-□□L / HS1T-□□L. Not required when using the HS5D because rear unlocking button is not necessary.

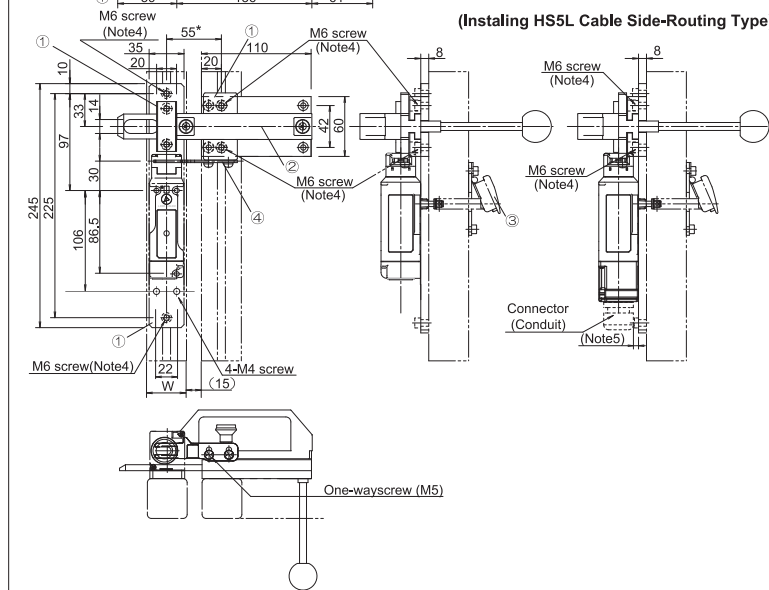
Dimensions

• HS9Z-EH5L

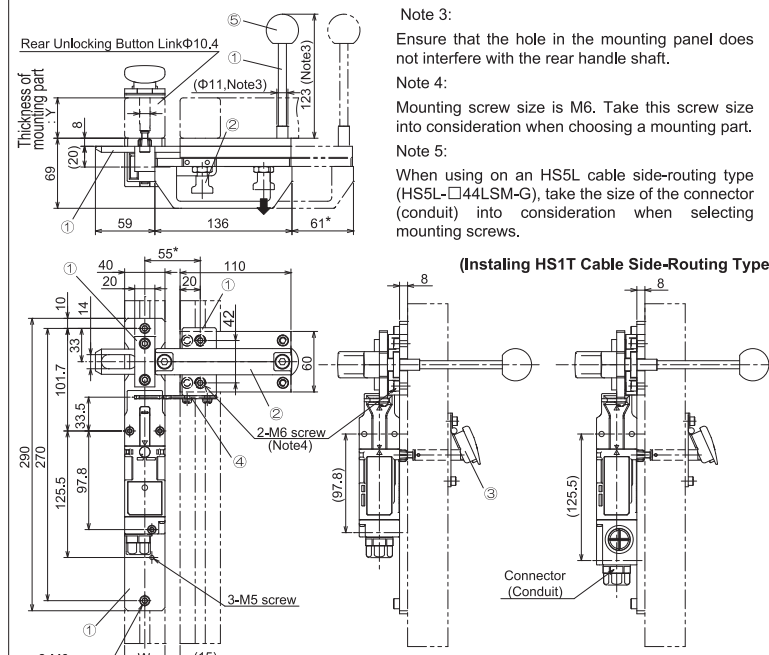


Mounting Part Width (hinged door)	
Mounting Part Width(W)mm	Mounting centers(X)mm
40 ≤ W < 45	55 ≤ X ≤ 60
45 ≤ W < 50	55 ≤ X ≤ 65
50 ≤ W ≤ 55	60 ≤ X ≤ 70
55 < W ≤ 60	65 ≤ X ≤ 70

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



• HS9Z-EH1L



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

Material

①	ST37 zinc plated
②	PA6 (Black)
③	PA66 (Red)
④	SUS
⑤	PF

7 Precaution for Disposal

Dispose of the HS9Z-EH slide handle actuator as an industrial waste.