

ø22 HW Key Switch

Key features:

- Key Selector Switches with Direct Opening Action Mechanism
- High-security Pin Tumbler Key
- The NC contact is opened by direct opening action mechanism ⊖. Mode selection enables easy construction of safety systems.
- The single key enables the hostage control of combining HW series key selector switch (pin tumbler type) and HS5E-K interlock key switch. High-security pin tumbler key is used. Sixteen types of key numbers are available.
- Selection of 2-position and 3-position, maintained, spring-return types and key retained variety is available.
- Degree of Protection: IP65 (IEC60529)



Applicable Standards	Mark	File No. or Organization
UL508		UL Listing File No. E68961
CSA C22.2 No.14		CSA166730 (LR92374)
EN60947-5-1		TÜV Rheinland R50054316
		Self-declaration Low Voltage Directive of Europe

Two-position Key Switch (90°)

Contact Code	Contact Block		Standard Logic			Inverse Logic		
			Logic Table		Maintained 1 2	Logic Table		Maintained 2 1
			Mounting Position	Contact		1	2	
1NO (10)	①	NO		●	HW1K-2PA10	●		HW1K-2JPA10
	②	-	Dummy Block			Dummy Block		
1NC (01)	①	NC	●		HW1K-2PA01		●	HW1K-2JPA01
	②	-	Dummy Block			Dummy Block		
2NO (20)	①	NO		●	HW1K-2PA20	●		HW1K-2JPA20
	②	NO		●		●		
2NC (02)	①	NC	●		HW1K-2PA02		●	HW1K-2JPA02
	②	NC	●			●		
1NO-1NC (11)	①	NO		●	HW1K-2PA11	●		HW1K-2JPA11
	②	NC	●				●	
2NO-2NC (22)	①	NO		●	HW1K-2PA22	●		HW1K-2JPA22
	②	NC	●				●	
	③	NO		●		●		
	④	NC	●				●	

Contact Block Mounting Position



For contact block mounting position, see the figure to the right of the table.
 Each key selector switch is supplied with two keys.
 Key number 500 is supplied as the default key in table above (500 not added to part number).
 To order additional key types, specify key number at end of part number (special order).
 Example: HS5E-KVA003-2A501

501 to 515

Note: The key number is engraved on the cylinder.

Overview

XW Series E-Stops

Interlock Switches

Enabling Switches

Safety Control Relays

Light Curtains

AS-Interface Safety at Work

Three-position Key Switch (45°)

Contact Code	Contact Block		Logic Table			Cam Code	Maintained 1 0 2
	No.	Contact	1	0	2		
2NC (02)	①	NC		■		-	HW1K-3PA02
	②	NC	■				
2NO-2NC (22N1)	①	NO	●			-	HW1K-3PA22N1
	②	NO			●		
	③	NC		■			
	④	NC	■				
2NO (02)	①	NO	●			-	HW1K-3PA20
	②	NO			●		
2NO-1NC (21N1)	①	NO	●			J	HW1K-3JPA21N1
	②	NO			●		
	③	NC		●			
	☆ ④	-	Dummy Block				
2NO-2NC (22N9)	①	NC			●	S	HW1K-3SPA22N9
	②	NC	●				
	③	NO	■				
	☆ ④	NO			●		
4NC (04)	①	NC			●	S	HW1K-3SPA04
	②	NC	●				
	③	NC			●		
	☆ ④	NC	●				

Contact Block Mounting Position



On the contact arrangement marked with ☆ in the table above, the rated current (load switching current) is reduced to a half of the rated current of the contact block. The rated insulation voltage and the rated thermal current remain unchanged.

For models with ☆, contacts may overlap when the operator position is changed.

For contact block mounting position, see the figure on the right.

Each key selector switch is supplied with two keys.

15 types of key numbers are available in addition to standard (500) key.

Key number 500 is supplied as the default key in table above (500 not added to part number).

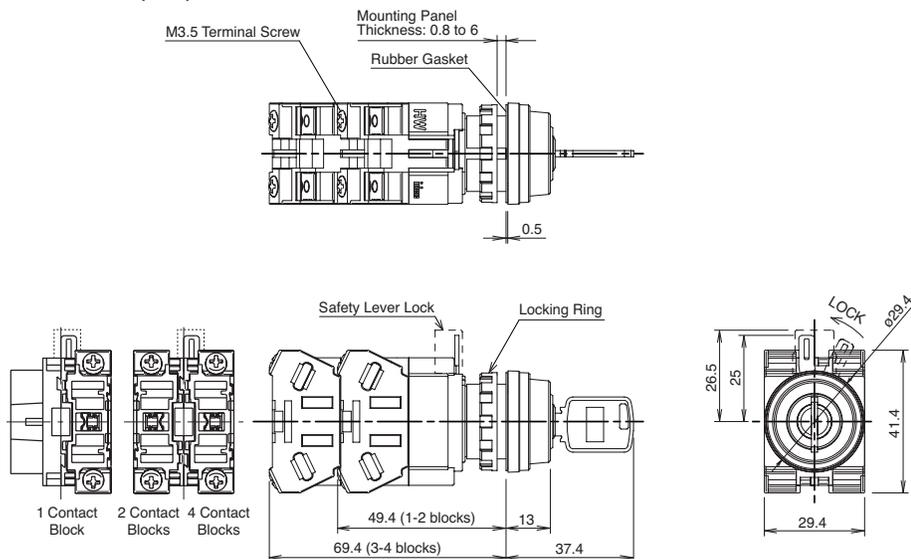
To order additional key types, specify key number at end of part number (special order).

Example: HS5E-KVA003-2A501

501 to 515

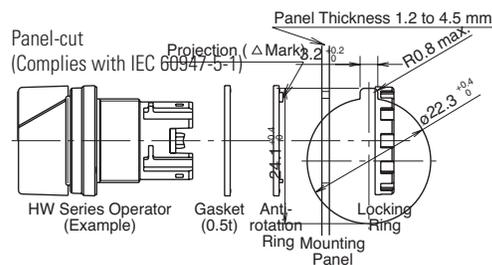
Note: The key number is engraved on the cylinder.

Dimensions (mm)



Anti-rotation Ring and Panel cut-out

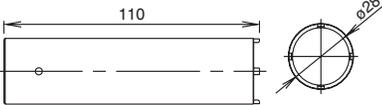
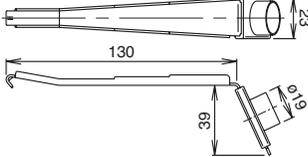
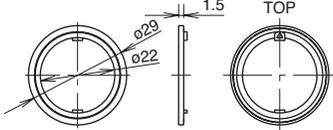
Align the TOP marking on the operator and the TOP mark on the anti-rotation ring with the recess in the mounting panel.



Replacement Parts

Item	Material	Part No.	Remarks
Contact Block 	1NO contact 	HW-G10	Housing color: blue Push rod: green
	1NC contact 	HW-G01	Housing color: purple Push rod: red
Dummy Block 	Nylon	TW-DB	Used when using contact blocks in odd numbers.
Spare Key 	Metal (nickel-plated brass)	LW9Z-SK-500	Standard key number
		LW9Z-SK- <input type="text"/>	Key number 501 to 515
Locking Ring 	Polyamide	HW9Z-LN	Black
Safety Lever Lock 	Polyacetal	HW9Z-LS	Yellow One safety lever lock is supplied as standard.
Gasket 	Polyacetal	HW9Z-WM	Black

Accessories

Item	Material	Part No.	Dimensions
Locking Ring Wrench 	Metal (brass) Weight: approx. 150g	MW9Z-T1	Used to tighten the locking ring when installing the HW switch onto a panel. Tighten the locking ring to a torque of 2.0 N·m. 
Contact Block Removal Tool 	Metal (copper-zinc plating) / Nitrile Rubber	TW-KC1	Used to remove the contact block and the transformer, and also to install or remove the pilot light lens. Also used to adjust the panel thickness (1, 1.6, 2, 2.3, 3.2, and 5 mm). 
Anti-rotation Ring 	Ring: Nylon Gasket: Nitrile Rubber	HW9Z-RL	Used to prevent the operator from turning. 

Overview

XW Series E-Stops

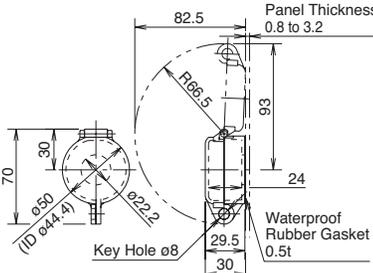
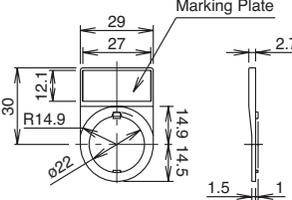
Interlock Switches

Enabling Switches

Safety Control Relays

Light Curtains

AS-Interface Safety at Work

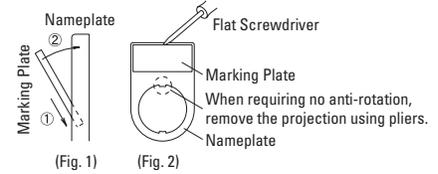
Item	Material	Part No.	Dimensions								
 <p>Padlock Cover</p>	Body: Polyarylate Gasket: Nitrile Rubber	HW9Z-KL1	 <p>Panel Thickness 0.8 to 3.2 Waterproof Rubber Gasket 0.5t Key Hole ø8 R66.5 82.5 63 24 29.5 30 70 ø60 (ID ø44.4) ø22.2</p>								
 <p>Nameplate</p>	Plastic (black) 1.5 mm thick	HWAM	Order marking plate (HWNP-□) separately.  <p>Marking Plate 29 27 2.7 30 13.1 R14.9 ø22 14.9 14.5 1.5 1</p>								
 <p>Marking Plate</p>	Aluminum (black) 1.0 mm thick	HWNP-□	White letters on black background  <p>27 12</p> Specify a legend code in place of □ in the Type No. <table border="1"> <thead> <tr> <th>Code</th> <th>Legend</th> </tr> </thead> <tbody> <tr> <td>31</td> <td>OFF-ON</td> </tr> <tr> <td>35</td> <td>HAND-AUTO</td> </tr> <tr> <td>53</td> <td>HAND-OFF-AUTO</td> </tr> </tbody> </table>	Code	Legend	31	OFF-ON	35	HAND-AUTO	53	HAND-OFF-AUTO
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53	HAND-OFF-AUTO										

To install the marking plate on a nameplate, see Fig. 1.

To remove the marking plate, insert a flat screwdriver between the marking plate and nameplate as shown in Fig. 2.

When using a nameplate, mounting panel thickness is decreased by 1.5 mm.

When an anti-rotation ring on the nameplate is not required, remove the projection using pliers as shown in Fig. 2.



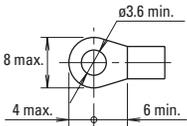
Operating Instructions

Applicable Wiring

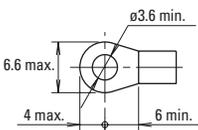
1. The applicable wire size is 14 AWG maximum (Solid wire 16 AWG max.). One or two wires can be connected.

Applicable Crimping Terminal

Crimping Terminal for ①

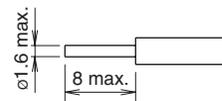


Crimping Terminal for ②



Be sure to use an insulation tube or cover on the crimping part of the crimping terminal to prevent electrical shocks.

Solid Wire



2. Tighten the M3.5 terminal screw to a recommended tightening torque of 1.0 to 1.3 N·m.