X6 Series Emergency Stop Switches (Unibody) ø16

Nameplate (for ø16 Emergency Stop Switches)
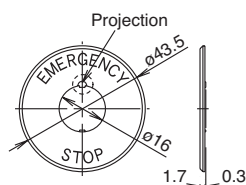
Package quantity: 1

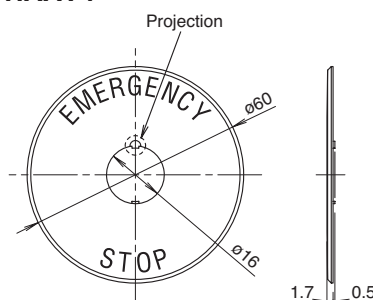| Description	Legend	Part No.	Material	Background Color	Legend Color
For ø30mm Button	Blank	**HAAV-0**	Polyamide	Yellow	Black
	EMERGENCY STOP	**HAAV-27**			
For ø40mm Button	Blank	**HAAV4-0**			
	EMERGENCY STOP	**HAAV4-27**			

• Cannot be used with switch guard.

Dimensions

Nameplate for ø30mm Button
**HAAV-∗**

Nameplate for ø40mm Button
HAAV4-∗

• Remove the projection from the nameplate using pliers, otherwise the switch cannot be installed.
• Panel thickness when using a nameplate: 0.5 to 3 mm

SEMI S2 Compliant Switch Guard

Package quantity: 1

Shape	Material	Part No.	Remarks
Switch Guard	Polyamide (PA6)	**XA9Z-KG1**	• IP65 degree of protection • Color: yellow (Munsell 2.5Y8/10 or equivalent) • Cannot be used with nameplate.

Switch Guard
XA9Z-KG1
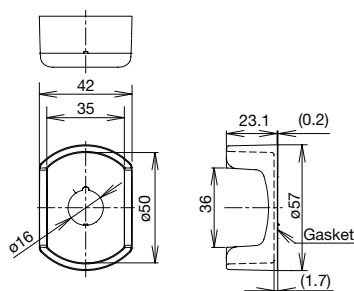
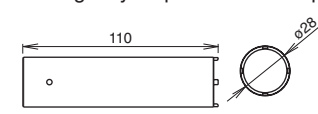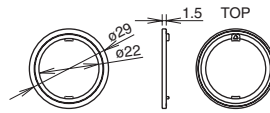• Panel thickness when using a nameplate: 0.5 to 3 mm
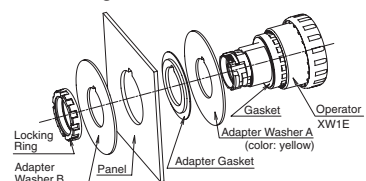
Note:
Switch guards have been designed for applications in semiconductor manufacturing equipment only. Do not use the switch guards with emergency stop switches which are installed on other machines such as machine tools or food processing machines. Machinery Directive of the European Commission and IEC 60204-1 require that emergency stop switches be installed in a readily accessible area, and the usage of switch guards is not permitted.
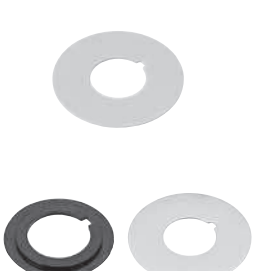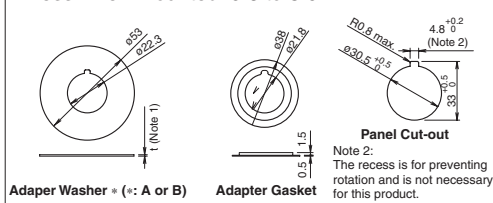
Nameplates (white)

Shape	Description	Part No.	Material	Plate Color	Legend
For ø16mm Series	For ø29mm Mushroom	**HAAV-0-W**	Polyamide	White (Munsell N9.5)	Blank
	For ø49mm Mushroom	**HAAV4-0-W**			

XW Series Emergency Stop Switches ø22

Accessories

Description & Shape	Material	Part No.	Ordering No.	Package Quantity	Remarks
Ring Wrench	Metal (nickel-plated brass) (weight: approx. 150g)	**MW9Z-T1**	MW9Z-T1	1	• Used to tighten the locking ring when installing the XW emergency stop switch onto a panel.
Anti-rotation Ring	Ring: Polyamide Gasket: Nitryl rubber	**HW9Z-RL**	HW9Z-RLPN10	10	• The anti-rotation ring is used for preventing the operator from turning.
Terminal Cover	PBT	**XA9Z-VL2**	XA9Z-VL2PN02	2	• White • Used for solder terminals.
Terminal Cover	PPE	**XW9Z-VL2M**	XW9Z-VL2MPN02	2	• Black • Used for screw terminals. • Attached to IP20 protection cover units.
IP20 Protection Cover	Polyamide	**XW9Z-VL2MF**	XW9Z-VL2MFPN02	2	• Black • Used on terminals for IP20 finger protection. • Only solid wires can be used. • The IP20 protection cover cannot be removed once installed.
Ring Adapter	Rubber on metal base	**XW9Z-A30E**	XW9Z-A30EPN02	2	• Yellow panel surface • Used for installing XW1E emergency stop switches in ø30mm mounting hole. • Can be used for XW1E emergency stop switches only. • IP65 protection. • Cannot be used with nameplates. Panel thickness when mounted: 0.8 to 3.0 mm

Adaper Washer ∗ (∗: A or B)   **Adapter Gasket**

Note 1: Adapter washer thickness (t)
A = 1.2 mm
B = 0.8 mm

Panel Cut-out
Note 2:
The recess is for preventing rotation and is not necessary for this product.

• Panel Mounting

Locking Ring
Adapter Washer B
Panel
Adapter Gasket
Gasket
Operator XW1E
Adapter Washer A (color: yellow)

Notes:
• XW emergency stop switches of screw terminal are provided with a terminal cover.
• All dimensions in mm.

Nameplate (for ø22 Emergency Stop Switches)

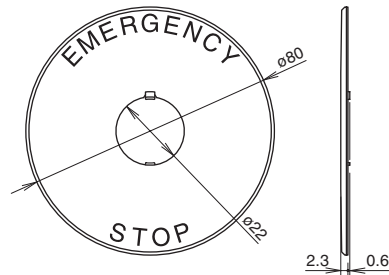| Description	Legend	Part No.	Ordering No.	Package Quantity	Material	Plate Color	Legend Color
For ø40mm Operator	(blank)	**HWAV-0**	**HWAV-0**	1	Polyamide	Yellow	Black
	EMERGENCY STOP	**HWAV-27**	**HWAV-27**				
For ø60mm Operator	(blank)	**HWAV5-0**	**HWAV5-0**		PBT		
	EMERGENCY STOP	**HWAV5-27**	**HWAV5-27**				
	EMERGENCY STOP	**HWAV5F-27**	**HWAV5F-27PN10**	10	PET film sticker		

• EMERGENCY OFF and white nameplates (blank) also available. See page 61 and 64 for details.

For ø40mm Operator
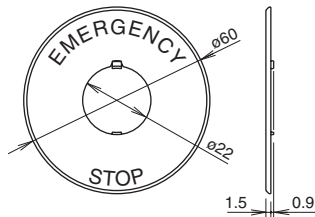
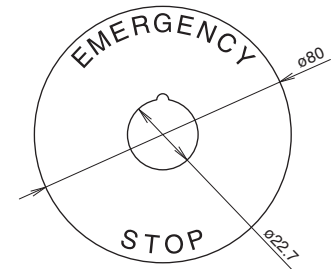• Panel thickness when using the nameplate: 0.8 to 4.5 mm

For ø60mm Operator

• Panel thickness when using the nameplate: 0.8 to 4 mm
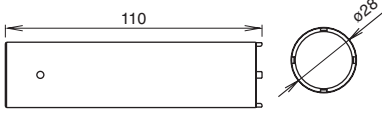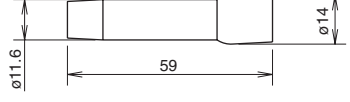
Sticker Nameplate for ø60mm Operator
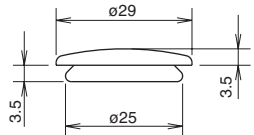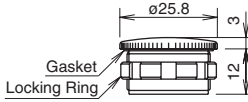
Maintenance Parts

Description & Shape	Material	Part No.	Ordering No.	Package Quantity	Remarks
Locking Ring	Polyamide	**HW9Z-LN**	**HW9Z-LNPN05**	5	• Black
Washer	Nitryl rubber	**HW9Z-WM**	**HW9Z-WMPN10**	10	• Black

IDEC

HW Series Emergency Stop Switches ø22

Accessories

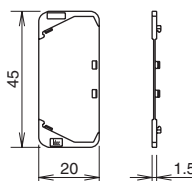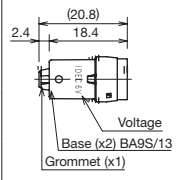| Shape	Material	Part No.	Ordering No.	Package Quantity	Description & Dimensions (mm)
Locking Ring Wrench	Metal (weight: approx. 150g)	**MW9Z-T1**	**MW9Z-T1**	1	• Used to tighten the locking ring when installing the HW switch onto a panel. • Tighten the locking ring to a torque of 2.0 N·m. 110 ø28
Lamp Holder Tool	Rubber	**OR-55**	**OR-55**	1	• Used to install and remove the LED lamps. ø11.6 59 ø14
Rubber Mounting Hole Plug	Rubber (black)	**OB-31**	**OB-31PN05**	5	• Used to plug the unused ø22.2mm mounting holes. ø29 3.5 3.5 ø25
Metallic Mounting Hole Plug	Diecast Metal (locking ring: plastic)	**LW9Z-BM**	**LW9Z-BM**	1	• Used to plug the unused ø22.2mm mounting holes. • Tighten the locking ring to a torque of 1.2 N·m. • IP66 • Mounting panel thickness: 0.8 to 6 mm ø25.8 3 12 Gasket Locking Ring
Barrier	Plastic	**HW-VG1**	**HW-VG1PN10**	10	• Used to prevent contact between adjacent lead wires when units are mounted closely. Barriers should always be used in close mounting. 45 20 1.5
Ring Adapter	Rubber	**HW9Z-A25**	**HW9Z-A25PN05**	5	• Used to install the HW/TW units into ø25 mounting holes. • IP65 • Cannot be used with anti-rotation ring and nameplate. • Mounting panel thickness: 1.2 to 6.0 mm
Ring Adapter	Adapter: Plastic Washer: Metal	**HW9Z-A30**	**HW9Z-A30PN02**	2	• Used to install the HW units into ø30 mounting holes (except for HW1E and HW1B-M5/V5). • IP65 • Cannot be used with anti-rotation ring, nameplate, full-shroud illuminated pushbuttons, pushbutton selectors, and mono-lever switches. • Mounting panel thickness: 1.6 to 4.0 mm
Ring Adapter	Adapter: Rubber Washer: Metal	**HW9Z-A30E**	**HW9Z-A30EPN02**	2	• Used to install the HW1E units into ø30 mounting holes. • IP65 • Cannot be used with anti-rotation ring and nameplate. • Mounting panel thickness: 1.6 to 3.8 mm

Maintenance Parts

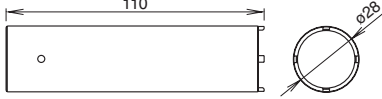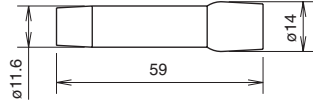| Shape	Material	Part No.	Ordering No.	Package Quantity	Description & Dimensions (mm)
Safety Lever Lock	Plastic	**HW9Z-LS**	HW9Z-LSPN10	10	• Yellow • 1 piece included as standard
Locking Ring	Polyamide	**HW9Z-LN**	HW9Z-LNPN05	5	• Black
Gasket	Nitryl rubber	**HW9Z-WM**	HW9Z-WMPN10	10	
Spare Key	Metal Brass, nickel-plated	**HW9Z-SK-231**	HW9Z-SK-231PN02	2	• For pushlock key reset switches

LED Lamps (LSTD)
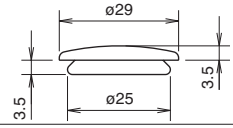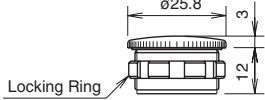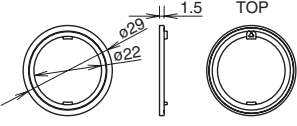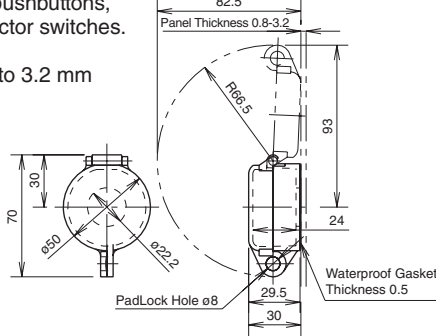
Shape	Rated Operating Voltage	Current Draw		Part No.	Ordering No.	Package Quantity	Base	Dimensions (mm)
		AC	DC					
	6V AC/DC	17 mA (A, R, W, Y) 8 mA (G, PW, S)	14 mA (A, R, W, Y) 5.5 mA (G, PW, S)	**LSTD-6R**	**LSTD-6R**	1	BA9S/13	
					LSTD-6RPN10	10		
	12V AC/DC	11 mA	10 mA	**LSTD-1R**	**LSTD-1R**	1		
					LSTD-1RPN10	10		
	24V AC/DC	11 mA	10 mA	**LSTD-2R**	**LSTD-2R**	1		
					LSTD-2RPN10	10		

Incandescent Lamps (LS)

Shape	Rated Operating Voltage	Lamp Ratings	Part No.	Package Quantity	Dimensions (mm)
	6V AC/DC	1W (6.3V)	**LS-6**	1	
	12V AC/DC	1W (18V)	**LS-8**		
	18V AC/DC	1W (24V)	**LS-2**		
	24V AC/DC	1W (30V)	**LS-3**		
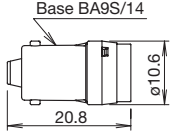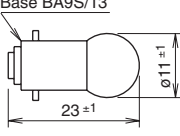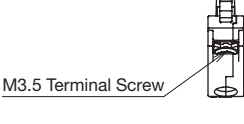
Accessories

Name & Shape	Part No.	Description & Dimensions (mm)	Package Quantity
Locking Ring Wrench	MW9Z-T1	Metallic tool used to tighten the plastic locking ring when installing the YW series control unit on a panel.	1
Lamp Holder Tool	OR-55	Made of rubber. Used for replacing lamps.	1
Rubber Mounting Hole Plug	OB-31PN05	Used for plugging unused mounting holes in the panel. Color: Black	5
Metallic Mounting Hole Plug	LW9Z-BM	Used for plugging unused mounting holes in the panel. Weight: Approx. 18g	1
Anti-Rotation Ring	HW9Z-RLPN10	Prevents rotation of switches in panel. Mainly used with selector switches when no nameplate is used. With waterproof gasket (IP65). Made of plastic (black). Applicable panel thickness: 1.2 to 4.5 mm	10
Padlock Cover	HW9Z-KL1	Plastic hinged cover to protect pushbuttons, illuminated pushbuttons, or selector switches. Degree of protection: IP65. Applicable panel thickness: 0.8 to 3.2 mm	1

YW Series **Emergency Stop Switches** ø22

Maintenance Parts
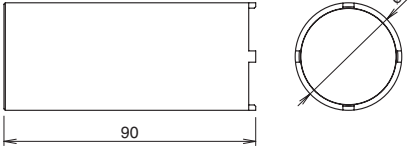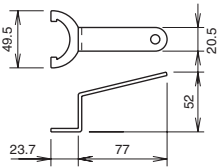
Name & Shape	Part No.		Description & Dimensions (mm)		Package Quantity
LED Lamp	**LSED-6R**	6V AC/DC		Base BA9S/14 ø10.6 20.8	1
	LSED-1R	12V AC/DC			
	LSED-2R	24V AC/DC			
	LSED-HR	110/120V AC/DC			
	LSED-M3R	230/240V AC/DC			
Incandescent Lamp	**LS-T6P**	6.3V, 1W	One pack contains 100 incandescent lamps.	Base BA9S/13 ø11 ±1 23 ±1	100
	LS-T8P	18V, 1W			
	LS-T3P	30V, 1W			
Single Contact Block	**YW-E10P**	Contact: 1NO	M3.5 Terminal Screw	5 22.3 41.4	10
	YW-E01P	Contact: 1NC			

Nameplate (for ø22 Emergency Stop Switches)

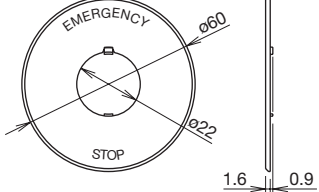| Description	Legend	Material	Part No.	Ordering No.	Package Quantity	Dimensions (mm)
HWAV	Blank	Plastic (yellow) 1.5 mm thick	HWAV-0	HWAV-0	1	EMERGENCY ø60 ø22 STOP 1.6 0.9
	EMERGENCY STOP		HWAV-27	HWAV-27	1	• Legend "Emergency Stop" is indicated outside a ø44mm circle.

XN Series **Emergency Stop Switches** ⌀30

Accessories and Replacement Parts

Name & Shape	Material	Part No.	Ordering No.	Package Quantity	Remarks
Terminal Cover	PPE	**XW9Z-VL2M**	XW9Z-VL2MPN02	2	• Black • Used for screw terminals. • Attached to IP20 protection cover units.
IP20 Fingersafe Terminal Cover	Polyamide	**XW9Z-VL2MF**	XW9Z-VL2MFPN02	2	• Black • Used to change terminal cover to IP20 fingersafe terminal. • Only solid wires can be used. Once installed, IP20 terminal cover cannot be removed.
Ring Wrench	Brass	**XN9Z-T1**	XN9Z-T1	1	• Used to tighten the locking ring when installing the XN emergency stop switch onto a panel. ⌀38 90
Ring Wrench	Steel Trivalent chromate plating	**TWST-T1**	TWST-T1	1	• Used to tighten the locking ring when installing the XN emergency stop switch onto a panel. 49.5 20.5 52 23.7 77

• The XN series emergency stop switches are supplied with either terminal cover or IP20 fingersafe terminal cover.
• Padlocks and hasps are not supplied and must be ordered separately.
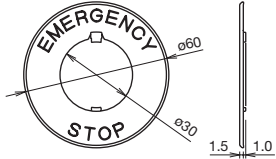
Nameplates (for ⌀30 Emergency Stop Switches)

Description & Shape	Legend	Part No.	Package Quantity	Dimensions (mm)
EMERGENCY STOP	(blank)	HNAV-0	1	Polyamide Mounting panel thickness XN4E-☐L4: 1.0 to 4.5 mm XN☐E-☐V4: 1.0 to 3.5 mm ⌀60 ⌀30 1.5 1.0
	EMERGENCY STOP	HNAV-27		

Plate color: Yellow (Munsell 2.5Y 8/10 or equivalent),
Legend: Black

Padlock and Hasp

Padlocks and hasps of the following specifications can be used with padlockable emergency stop switches.

Padlock Size

a	b	c	d
7 mm maximum	19 mm minimum	39 mm minimum	15 mm minimum (Note)

Note: When the padlock is installed from the side of the bezel, dimension d requires a minimum of 6 mm. When the padlock is installed from the front of the button, dimension d requires a minimum of 15 mm.
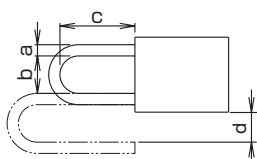
Recommended Hasp

Maker	Part No.
PANDUIT CORP.	PSL-HD3 PSL-1A
Master Lock® Company LLC	420, 421

Use only padlocks or hasps that satisfy the specifications shown on the left. The maximum total weight for padlocks and hasps is 1500g.
Make sure that the total weight does not exceed 1500g, otherwise the XN emergency stop switch may be damaged.
Make sure that locking and unlocking of the padlock and hasp do not interfere with other devices.
Padlocks and hasps are available from the following manufacturers.

Manufacturer	URL
PANDUIT CORP.	http://www.panduit.com/
Master Lock® Company LLC	http://www.masterlock.com/

Dimensions

HN1E-BV4

M3.5 Terminal Screw
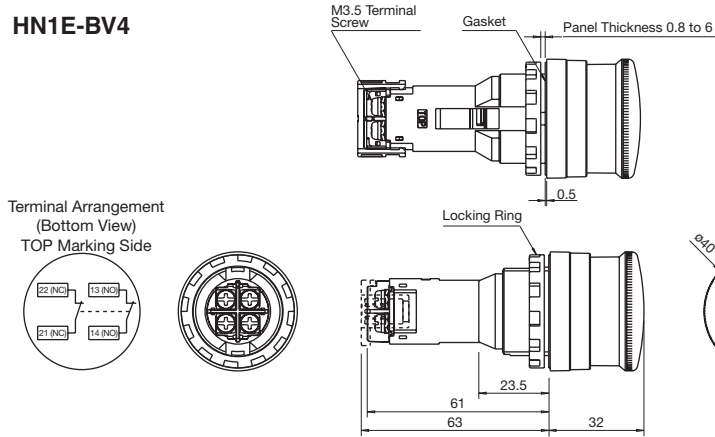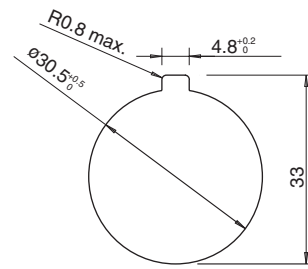Gasket
Panel Thickness 0.8 to 6

Terminal Arrangement (Bottom View) TOP Marking Side

22 (NC) 13 (NO)
21 (NC) 14 (NO)

Locking Ring

ø40

0.5

61
63
23.5
32

HN1E-LV4

M3.5 Terminal Screw
Gasket
Panel Thickness 0.8 to 6

Terminal Arrangement (Bottom View) TOP Marking Side

LAMP ⊗

X1
22 (NC) 13 (NO)
21 (NC) 14 (NO)
X2

M3.5 Terminal Screw
Lamp Terminal

Locking Ring

ø40

0.5

61
63
23.5
32

Panel Cut-Out

R0.8 max.
ø30.5$^{+0.5}_{0}$
4.8$^{+0.2}_{0}$
33
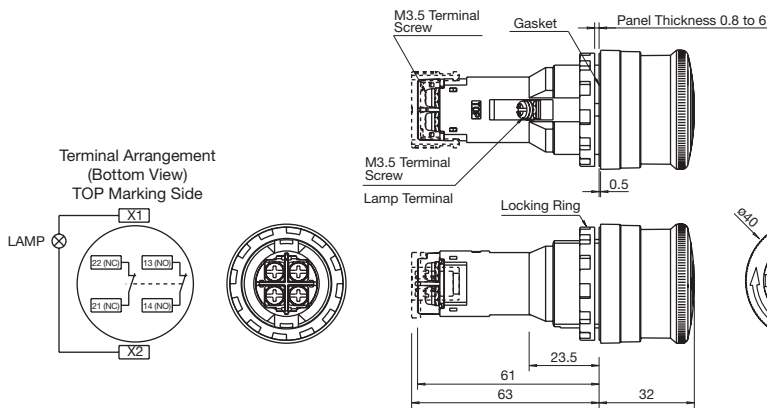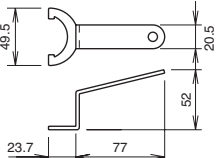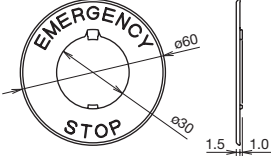
All dimensions in mm.

Accessories

Shape	Material	Part No.	Package Quantity	Remarks
Ring Wrench	Metal	**TWST-T1**	1	Used for tightening the locking nut. Tighten the locking nut to a torque of 2.0 to 2.5 N·m. 49.5 / 20.5 / 52 / 23.7 / 77
Ring Wrench	Brass	**XN9Z-T1**	1	• Used to tighten the locking ring when installing the XN emergency stop switch onto a panel. 90 / ø38

Nameplates (for ø30 Emergency Stop Switches)

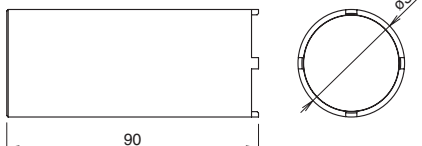| Shape	Part No.	Legend	Package Quantity	Remarks
EMERGENCY STOP	**HNAV-0**	(blank)	1	Background: Yellow Legend: Black Applicable panel thickness: 0.8 to 4.5 mm Material: Polyamide Legend "EMERGENCY STOP" is indicated outside a ø44mm circle. ø60 / ø30 / 1.5 / 1.0
	HNAV-27	EMERGENCY STOP		

IDEC

SEMI EMO Switch Guards

SEMI S2 Compliant Switch Guards

Switch Guards   **Package Quantity: 1**

Series	Description & Shape	Part No.	Applicable Switches	Remarks
ø16mm XA Series	ø16 mm EMO Switch Guard	**XA9Z-KG1**	**XA1E-BV3** **XA1E-BV4** **XA1E-LV3** **XA1E-LV4**	• SEMI S2 compliant (The combination of IDEC's emergency stop switches and EMO switch guards are approved by TÜV Rheinland for compliance with SEMI S2 standard.)
ø22mm HW/XW Series	ø22 mm EMO Switch Guard	**HW9Z-KG1**	**XW1E-BV4** **XW1E-LV4** **XW1E-TV4** **HW1B-V3** **HW1B-V4** **HW1B-X4** **HW1B-Y2** **HW1E-BV4** **HW1E-LV4**	• SEMI S2-0703, 12.5.1 compliant. • Widely used switch guard in many applications.
	ø22 mm EMO Switch Guard	**HW9Z-KG2**	**XW1E-BV4** **XW1E-LV4** **XW1E-TV4** **HW1B-V3** **HW1B-V4** **HW1B-X4** **HW1B-Y2** **HW1E-BV4** **HW1E-LV4**	• SEMI S2-0703, 12.5.1 compliant. • SEMATECH Application Guide for SEMI S2-93, 12.4. compliant. • The round shape is effective to prevent inadvertent operation from any direction.
	ø22 mm EMO Switch Guard	**HW9Z-KG3**	**XW1E-BV4** **XW1E-LV4** **XW1E-TV4** **HW1B-V3** **HW1B-V4** **HW1B-X4** **HW1B-Y2**	• SEMI S2 compliant (The combination of IDEC's emergency stop switches and EMO switch guards are approved by TÜV Rheinland for compliance with SEMI S2 standard.) • The smallest switch guard for ø22 series switches. • Can be installed on FB control boxes.
	ø22 mm EMO Switch Guard	**HW9Z-KG4**∗	**XW1E-BV4** **XW1E-BV5** **XW1E-LV4** **XW1E-TV4** **HW1B-V3** **HW1B-V4** **HW1B-X4** **HW1B-Y2** **HW1E-BV4** **HW1E-LV4**	• SEMI S2 compliant (The combination of IDEC's emergency stop switches and EMO switch guards are approved by TÜV Rheinland for compliance with SEMI S2 standard.) • SEMATECH Application Guide for SEMI S2-93, 12.4. compliant. • Narrower than HW9ZKG5. Saves more space. • Can be installed on FB control boxes. • Available in white.
	ø22 mm EMO Switch Guard	**HW9Z-KG5**∗	**XW1E-BV4** **XW1E-LV4** **XW1E-TV4** **XW1E-BV5** **HW1B-V3** **HW1B-V4** **HW1B-X4** **HW1B-Y2** **HW1E-BV4** **HW1E-LV4**	• SEMI S2 compliant (The combination of IDEC's emergency stop switches and EMO switch guards are approved by TÜV Rheinland for compliance with SEMI S2 standard.) • SEMATECH Application Guide for SEMI S2-93, 12.4. compliant. • A nameplate can be installed. • Available in white.

• Specify a color code in place of ∗. Blank: yellow (Munsell 2.5Y8/10 or equivalent), -W: white (Munsell N9.5)
• Material: polyamide (PA6), degree of protection: IP65 (IEC 60529)