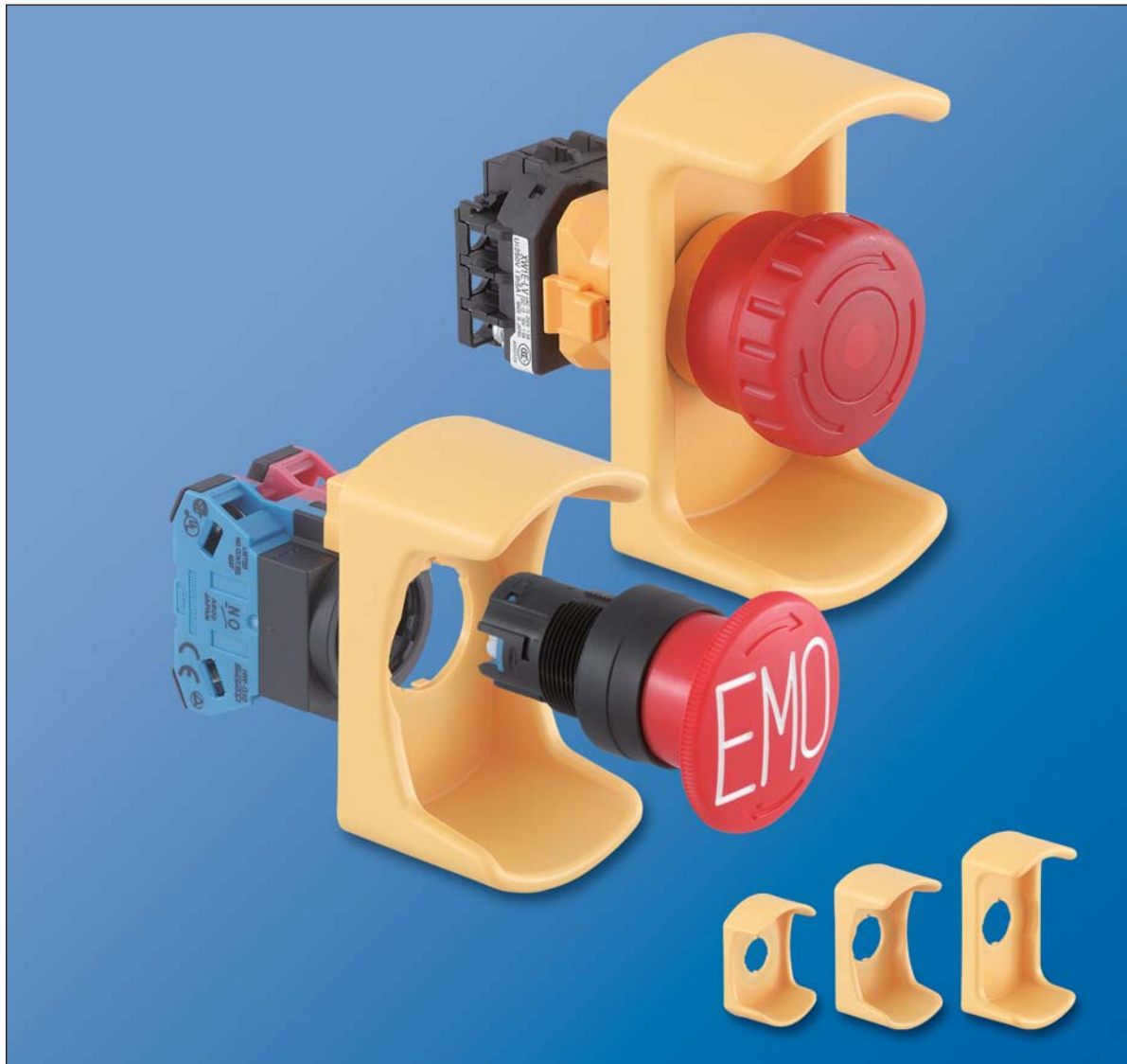


Ø16mm XA Series
Ø22mm HW/XW Series
SEMI S2 Compliant EMO Switch Guards



New EMO (Emergency Off) Switch Guards

SEMI S2 compliant

New

Additions to the switch guards for \varnothing 22mm HW/XW series control units

- Type No.: HW9Z-KG3
Smaller than the existing HW9Z-KG1.
- Type No.: HW9Z-KG4
Narrower than the existing HW9Z-KG2, yet large enough to install \varnothing 60mm mushroom buttons.

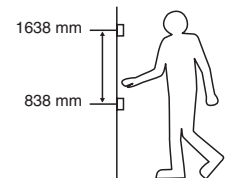
New

New switch guard for \varnothing 16mm XA emergency stop switches

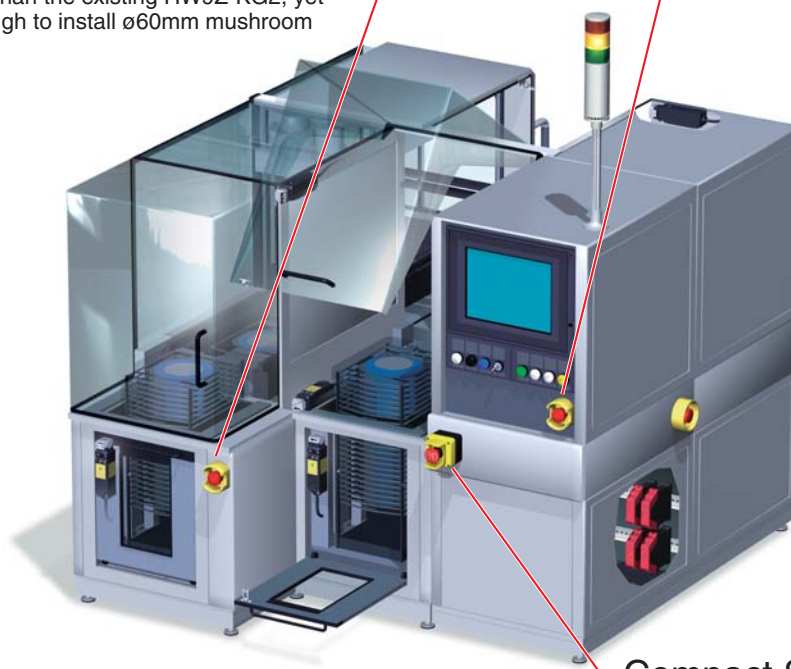
- Type No.: XA9Z-KG1
Used for XA1E emergency stop switches.

• **Location of EMO switches on semiconductor manufacturing equipment (SEMI S8-0705, 9.1.2)**

EMO switches should not be located above 1638 mm (64.5 in.) or below 838 mm (33 in.).



Also, EMO switches should be located within 3 m of the operator (SEMI S2-0703, 12.5.2).



Compact Size

- HW9Z-KG3 and -KG4 can be used with FB series control boxes.
- EMO switches engraved with EMO legend is also available.

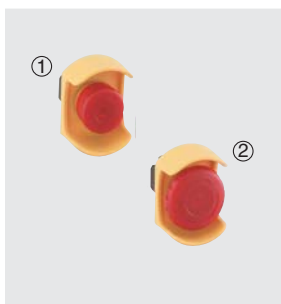


SEMI S2 Compliant

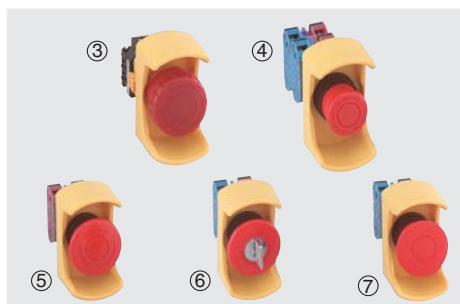
- The combinations of EMO switches and XA9Z-KG1, HW9Z-KG3, or -KG4 switch guards are TÜV approved for compliance with SEMI S2 standards. See page 3 for combinations.

Combination Examples of SEMI S2-compliant Switches and Switch Guards

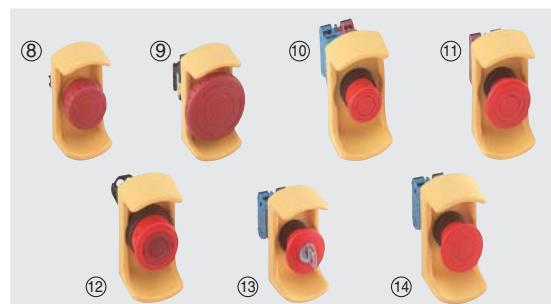
• XA9Z-KG1



• HW9Z-KG3


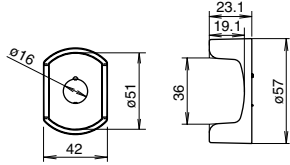

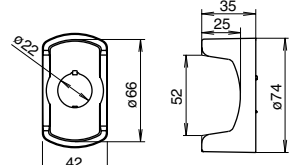

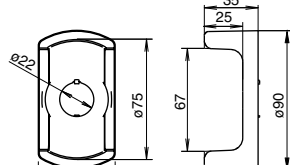

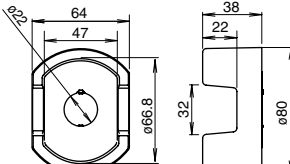

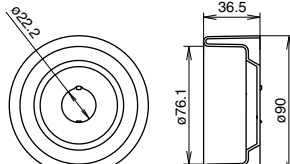


• HW9Z-KG4



SEMI EMO Switch Guards

Types

Series	Description & Appearance	Type No.	Specifications	Dimensions (mm)
ø16mm XA	EMO Switch Guard SEMI S2 compliant (Note 1) <i>New</i> 	XA9Z-KG1	Polyamide (PA6) Color: Yellow, Munsell 2.5Y 8/10 equivalent Degree of protection: IP65	
	EMO Switch Guard SEMI S2 compliant (Note 1) <i>New</i> 	HW9Z-KG3		
EMO Switch Guard SEMI S2 compliant (Note 1) SEMATECH compliant (Note 3) <i>New</i> 	HW9Z-KG4			
EMO Switch Guard SEMI S2 compliant (Note 2) 	HW9Z-KG1			
EMO Switch Guard SEMI S2 compliant (Note 2) SEMATECH compliant (Note 3) 	HW9Z-KG2			

Note 1: The combinations of IDEC's emergency stop switches and EMO switch guards are approved by TÜV Rheinland for compliance with SEMI S2 standard.

Note 2: SEMI S2-0703, 12.5.1 compliant.

Note 3: SEMATECH Application Guide for SEMI S2-93, 12.4.c. compliant.

- Degree of protection IP65 applies to the combination of an emergency stop switch and an EMO switch guard.
- HW9Z-KG1 and HW9Z-KG2 can be used with ø29mm or ø40mm mushroom buttons. ø60mm mushroom buttons cannot be installed.

SEMI S2-compliant Combinations

EMO Switch Guard	Applicable Emergency Stop Switches
XA9Z-KG1	①: XA1E-BV3, XA1E-LV3; ②: XA1E-BV4, XA1E-LV4
HW9Z-KG3	③: XW1E-BV4, XW1E-LV4, XW1E-TV4; ④: HW1B-V3; ⑤: HW1B-V4; ⑥: HW1B-X4; ⑦: HW1B-Y2
HW9Z-KG4	⑧: XW1E-BV4, XW1E-LV4, XW1E-TV4; ⑨: XW1E-BV5; ⑩: HW1B-V3, ⑪: HW1B-V4; ⑫: HW1E; ⑬: HW1B-X4; ⑭: HW1B-Y2

• The circled numbers above correspond to those in "Combination Examples of SEMI S2-compliant Switches and Switch Guards" on page 2.

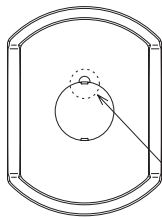
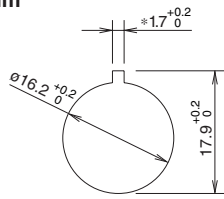
Note:

EMO switch guards have been designed for applications in semiconductor manufacturing equipment only. Do not use the EMO switch guards with emergency stop switches which are installed on 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.)

SEMI EMO Switch Guards

Panel Cut-out

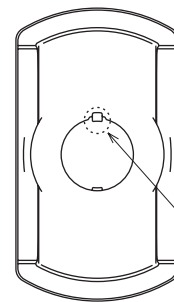
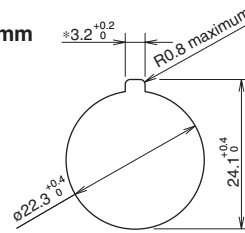
• $\phi 16$ mm



Projection

The $\ast 1.7^{+0.2}_0$ recess is for preventing rotation and not necessary when anti-rotation is not used.

• $\phi 22$ mm



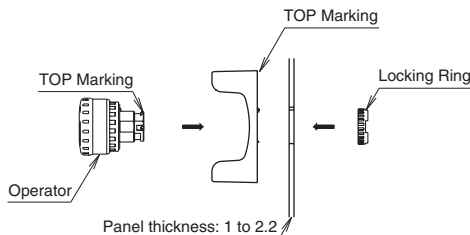
Projection

The $\ast 3.2^{+0.2}_0$ recess is for preventing rotation and not necessary when anti-rotation is not used.

When anti-rotation is not required or when the panel cut-out does not have anti-rotation recess, remove the projection using pliers.

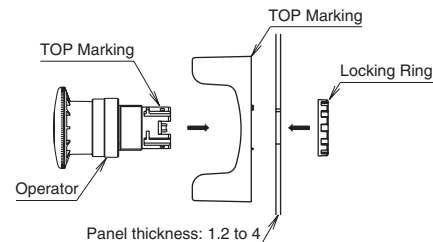
Installation

• $\phi 16$ mm



To tighten the locking ring, use locking ring wrench MT-100 and tighten to a torque of 0.88 N·m.

• $\phi 22$ mm



To tighten the locking ring, use locking ring wrench MW9Z-T1 and tighten to a torque of 2.0 N·m.

All dimensions in mm.

Emergency Off Switch ($\phi 40$ mm Pushlock Turn Reset Switch) with EMO Marking

Appearance	Contact Arrangement	Type No.	Button Color	Dimensions (mm)
	1NC	HW1B-V401R-EMO	Red (R) only	
	1NO-1NC	HW1B-V411R-EMO		
	2NC	HW1B-V402R-EMO		
	2NO-2NC	HW1B-V422R-EMO		

EMO Sticker

Type No.: HW9Z-EMO-NPP
Color: Yellow (red legend)
Package Quantity: 10



Safety Precautions

Read operating instructions to ensure correct operation before starting installation, wiring, operation, maintenance, and inspection of the switch guards.

Specifications and other descriptions in this brochure are subject to change without notice.



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