

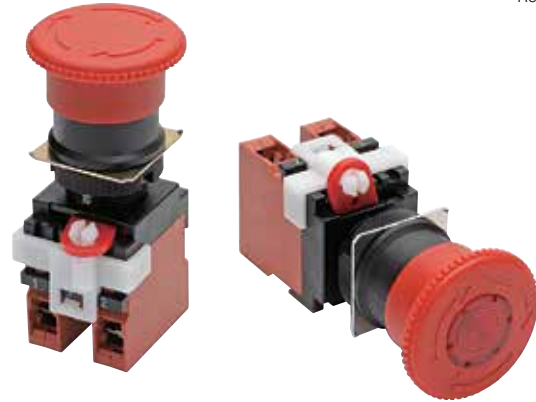


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Rev. 4.13

## Emergency Stop Switch (22 mm or 25 mm diameter)

- Install in 22-dia. or 25-dia. panel cutout
- Direct opening mechanism to open the circuit when the contact welds  $\ominus$ .
- Safety lock mechanism prevents operating errors.
- Easy mounting and removal of Switch Blocks using a lever.
- Mount three Switch Units in series to improve wiring efficiency (with non-lighted Switch Units, three Units can be mounted for multiple contacts).
- Finger protection mechanism on Switch Unit provided as a standard feature.
- Install using either round, or forked crimp terminals.
- Non-lighted versions are IP65 (oil resistant).  
Lighted versions are IP65.
- A lock plate is provided as a standard feature to ensure that the control box and switch are not easily separated.
- A Rapid Delivery Product: Select models are available for shipment today or within 3 to 5 days



## Specifications

### Certified Standard Ratings

- UL, cUL (File No.E41515)  
6A at 220 VAC, 10 A at 110 VAC
- TÜV (EN60947-5-1) (Low Voltage Directive)  
3 A at 220 VAC
- CCC (GB14048.5)  
3 A at 240 VAC, 1.5 A at 24 VDC

### Certified Standards

Certification body	Standard	File No.
UL *1	UL 508, CSA C22.2 No.14	E41515
TÜV SÜD	EN60947-5-1, EN60947-5-5 (certified direct opening mechanism)	Consult your representative for details.
CQC (CCC)	GB14048.5	2003010303070635
KOSHA *2	EN60947-5-1	2004-220, 2007-27

Note: Only models with NC contacts have a direct opening mechanism.  
\*1.Certification for CSA C22.2 No. 14 is authorized by the UL mark.  
\*2.Some models have been certified. Certification has been obtained for the Switch Unit and the Lamp Socket.

### Ratings

#### Contacts (Standard Load)

Rated carry current (A)	Rated voltage (V)	Rated current (A)					
		AC15 (inductive load)	AC12 (resistive load)	DC13 (inductive load)	DC12 (resistive load)		
10	24 VAC	10	10	---	---		
	110 VAC	5	10				
	220 VAC	3	6				
	380 VAC	2	3				
	440 VAC	1	2	1.5	10		
	24 VDC	---	---			0.5	2
	110 VDC						
	220 VDC					0.2	0.6
380 VDC	0.1			0.2			

Note:

- Rated current values are determined according to the testing conditions. The above ratings were obtained by conducting tests under the following conditions.
  - Ambient temperature: 20°±2°C
  - Ambient humidity: 65±5%
  - Operating frequency: 20 operations/minute
- Minimum applicable load: 10 mA at 5 VDC

#### LED Indicators without Voltage Reduction Unit

Rated voltage	Rated current	Operating voltage
6 VDC	60 mA	6 VDC±5%
6 VAC	60 mA	6 VAC±5%
12 VAC/VDC	30 mA	12 VAC/VDC±5%
24 VAC/VDC	15 mA	24 VAC/VDC±5%

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## Specifications (continued)

### Characteristics

Item	Emergency Stop Switch	
	Non-lighted model: A22E	Lighted Model: A22EL
Allowable operating frequency	Mechanical	30 operations/minute max. *3
	Electrical	30 operations/minute max. *3
Insulation resistance	100 M $\Omega$ min. (at 500 VDC)	
Dielectric strength	Between terminals of same polarity	2,500 VAC, 50/60 Hz for 1 min.
	Between each terminal and ground	2,500 VAC, 50/60 Hz for 1 min.
Vibration resistance *2	10 to 55 Hz, 1.5-mm double amplitude (within 1 ms)	
Shock resistance	Destruction	1,000 m/s <sup>2</sup>
	Malfunction *2	250 m/s <sup>2</sup> max.
Durability	Mechanical	300,000 operations min. *3
	Electrical	300,000 operations min. *3
Ambient operating temperature *1	-20 to 70°C	-20 to 55°C
Ambient operating humidity	35% to 85%	
Ambient storage temperature	-40 to 70°C	
Degree of protection	IP65 Oil-resistant *4	IP65 *4
Electric shock protection class	Class II	
PTI (tracking characteristic)	175	
Degree of contamination	3 (EN60947-5-1)	

\*1. With no icing or condensation.

\*2. Malfunction within 1 ms.

\*3. Setting and resetting once is counted as one operation.

\*4. Degree of protection from the front of the panel.

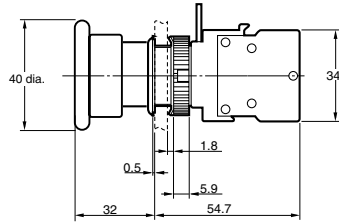
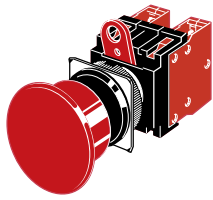
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## Dimensions

### Non-lighted Models

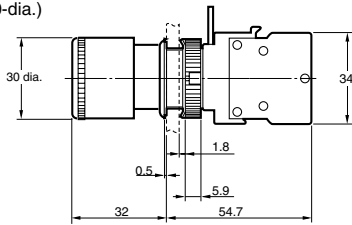
#### A22E-MP

Medium Push-pull (40-dia.)



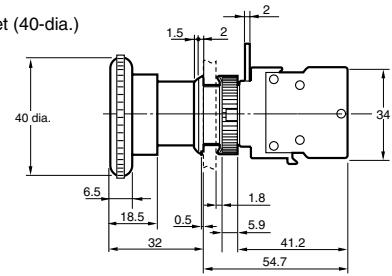
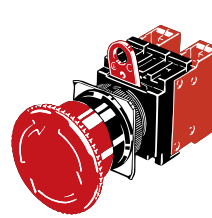
#### A22E-S

Small Push-lock, Turn-reset (30-dia.)



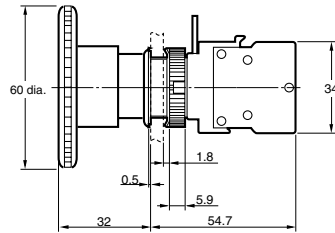
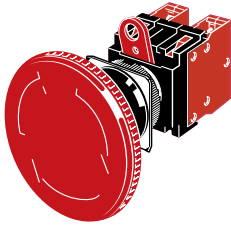
#### A22E-M

Medium Push-lock, Turn-reset (40-dia.)



#### A22E-L

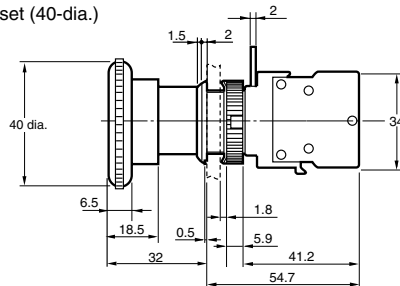
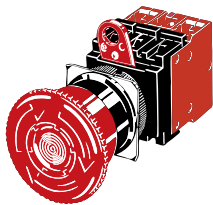
Large Push-lock, Turn-reset (60-dia.)



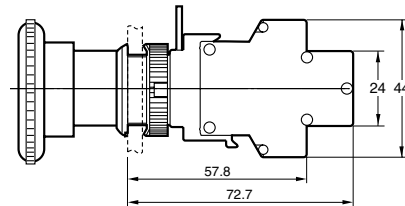
### Lighted Models

#### A22EL-M

Medium Push-lock, Turn-reset (40-dia.)



Switch dimensions when mounted to a DPST-NO (or DPST-NC) one-piece Switch Block.



Note: The operation unit is an example for the A22E-M.

Select models are available for Rapid Delivery.

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## Ordering

### Model Number Structure (Completely Assembled)





Shipped as a set that includes the Operation Unit, Lamp (lighted models only), and Switch.

A22E - □ - □ - □ - □ - □  
 ① ② ③ ④ ⑤

- ① Lighted/Non-lighted  
 (none): Non-lighted  
 L: Lighted  
 \*Lighted emergency stop switches are available only for the medium (M) push-lock turn-reset models
- ② Head Size  
 MP: Medium 40 dia., push-pull  
 S: Small, 30 dia., push-lock turn-reset  
 M: Medium, 40 dia., push-lock turn-reset  
 L: Large, 60 dia., push-lock turn-reset
- ③ Light Source Without Voltage Reduction Unit  
 Without Voltage Reduction Unit —  
 (none): Non-lighted  
 6A: LED, 6 VAC  
 12A: LED, 12 VAC/VDC  
 24A: LED, 24 VAC, VDC  
 With Voltage Reduction Unit —  
 T1: LED, 100 VAC  
 T2: LED, 200 VAC  
 Equipped with 24-VAC/DC LED.
- ④ Contacts  
 01: SPST-NC  
 11: SPST-NO + SPST-NC  
 02: DPST-NC  
 12: DPST-NC + SPST-NO  
 03: TPST-NC
- ⑤ Configuration  
 (none): Switch only  
 B Switch with integrated control box

### List of Models (Completely Assembled)

#### Non-lighted Models

Operating Appearance		Contact Configuration	Set Model	Color of cap
40-dia. head Medium Push-pull A22E-MP 	SPST-NC	A22E-MP-01	Red	
	SPST-NO/SPST-NC	A22E-MP-11		
	DPST-NC	A22E-MP-02		
30-dia. head Small Push-lock Turn-reset A22E-S 	SPST-NC	A22E-S-01 *		
	SPST-NO/SPST-NC	A22E-S-11 *		
	DPST-NC	A22E-S-02 *		
	DPST-NC + SPST-NO	A22E-S12 *		
	TPST-NC	A22E-S-03 *		
40-dia. head Medium Push-lock Turn-reset A22E-M 	SPST-NC	A22E-M-01 *		
	SPST-NO/SPST-NC	A22E-M-11 *		
	DPST-NC	A22E-M-02 *		
	DPST-NC + SPST-NO	A22E-M-12 *		
	TPST-NC	A22E-M-03 *		
60-dia. head Large Push-lock Turn-reset A22E-L 	SPST-NC	A22E-L-01 *		
	SPST-NO/SPST-NC	A22E-L-11 *		
	DPST-NC	A22E-L-02 *		

\*Models with Korean S-mark certification.

Note: Yellow cap models are also available (not for emergency stop use). Contact your representative.



 Select models are available for Rapid Delivery.

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## Ordering (continued)

### List of Models (Completely Assembled) (continued)



#### Lighted Models

Appearance	Operating			Push-lock turn-reset system	Color of cap
	Contact configuration	Lighting	Rated voltage	Set Model	
40-dia. head Push-lock Turn-reset without Voltage Reduction Unit A22E 	SPST-NC	LED	6 VAC	A22EL-M-6A-01 *	Red
			12 VAC/VDC	A22EL-M-12A-01 *	
			24 VAC/VDC	A22EL-M-24A-01 *	
	SPST-NO/SPST-NC		12 VAC/VDC	A22EL-M-12A-11 *	
			24 VAC/VDC	A22EL-M-24A-11 *	
			DPST-NC	6 VAC	
	12 VAC/VDC			A22EL-M-12A-02 *	
	24 VAC/VDC			A22EL-M-24A-02 *	
	40-dia. head Push-lock Turn-reset with Voltage Reduction Unit A22E 		SPST-NC	100 VAC	
200 VAC		A22EL-M-T2-01			
SPST-NO/SPST-NC		100 VAC	A22EL-M-T1-11		
		200 VAC	A22EL-M-T2-11		
DPST-NC		100 VAC	A22EL-M-T1-02		
		200 VAC	A22EL-M-T2-02		

\*Models with Korean S-mark certification.

#### With EMO/EMS Indication


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Operating		Set Model	Color of cap
Appearance	Contact Configuration		
40-dia. head Medium Push-lock Turn reset With EMO Indication 	SPST-NC	A22E-M-01-EMO*	Red
	SPST-NO/SPST-NC	A22E-M-11-EMO*	
	DPST-NC	A22E-M-02-EMO*	
	DPST-NC + SPST-NO	A22E-M-12-EMO*	
	TPST-NC	A22E-M-03-EMO*	
40-dia. head Medium Push-lock Turn reset With EMS Indication 	SPST-NC	A22E-M-01-EMS*	
	SPST-NO/SPST-NC	A22E-M-11-EMS*	
	DPST-NC	A22E-M-02-EMS*	
	DPST-NC + SPST-NO	A22E-M-12-EMS*	
	TPST-NC	A22E-M-03-EMS*	

\*Models with Korean S-mark certification.

Note: "Emergency Off (EMO)" shroud sold separately.

#### Switch with Integrated Control Box

Appearance	Contact configuration	Model
	SPST-NC	A22E-M-01B *
	SPST-NO/SPST-NC	A22E-M-11B *
	DPST-NC	A22E-M-02B *
	DPST-NC/SPST-NO	A22E-M-12B
	DPST/NC-SPST-NO	A22E-MP-12B
	DPST-NC	A22E-M-24A-02B

\*Models with Korean S-mark certification.

 Select models are available for Rapid Delivery.

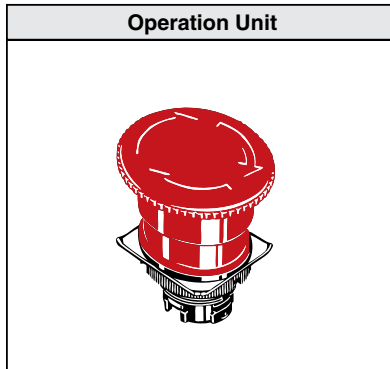
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## Ordering (continued)

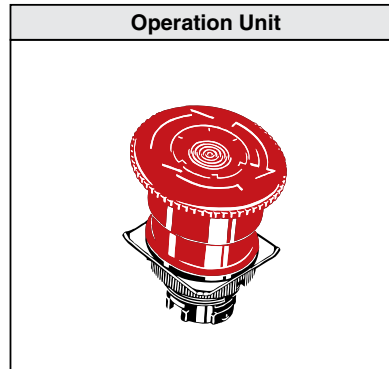
### Subassembled

The Operation Unit, Lamp, or Switch can be ordered separately. Use them in combination for models that are not available as assembled units. These can also be used as inventory for maintenance parts.

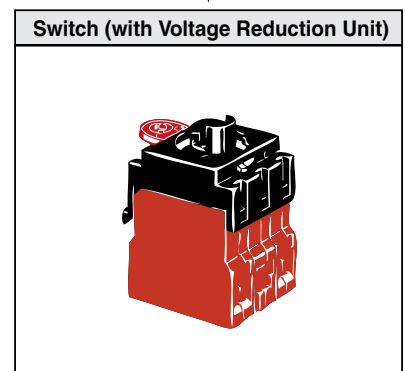
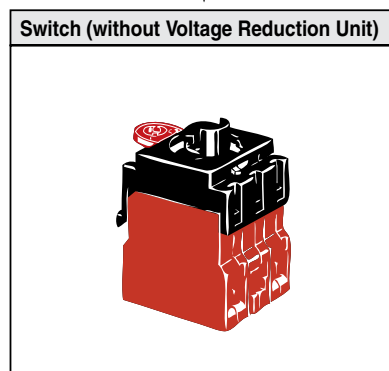
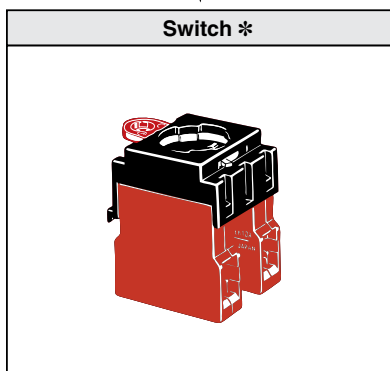
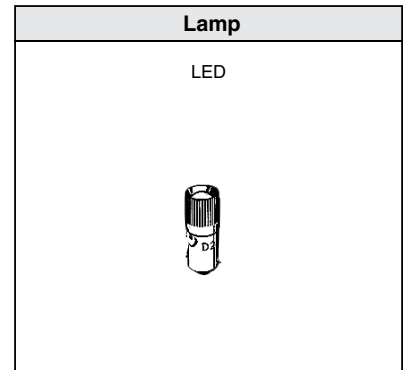
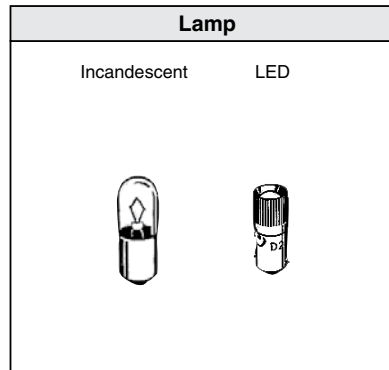
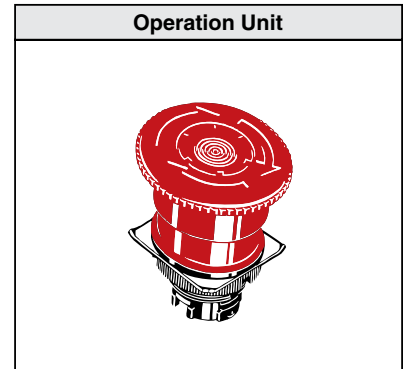
#### Non-lighted



#### Lighted (without Voltage Reduction Unit)



#### Lighted (with Voltage Reduction Unit)



\*Up to three Switch Units can be mounted for multiple contacts.





 Select models are available for Rapid Delivery.

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## Ordering (continued)

### Operation Units

#### Non-lighted

Sealing capability		IP65 oil-resistant models		
Function	Size	Small (30 dia.)	Medium (40 dia.)	Large (60 dia.)
Push-pull		---	A22E-MP 	---
Push-lock, turn-reset		A22E-S 	A22E-M 	A22E-L 



#### Lighted

Sealing capability		IP65
Function	Size	Medium (40 dia.)
Push-lock, turn-reset		A22EL-M 



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### Switch (Standard Load)

#### Without Voltage Reduction Unit

Classification		Non-lighted	Lighted
Appearance			
Switch Action		Momentary	Momentary
Contacts		Model	Model
For standard loads	SPST-NC	A22-01M	A22L-01M
	SPST-NO + SPST-NC	A22-11M	A22L-11M
	DPST-NC	A22-02M	A22L-02M

#### With Voltage Reduction Unit

Classification		Lighted (110 VAC)	Lighted (220 VAC)
Appearance			
Switch Action		Momentary	Momentary
Contacts		Model	Model
For standard loads	SPST-NC	A22L-01M-T1	A22L-01M-T2
	SPST-NO + SPST-NC	A22L-11M-T1	A22L-11M-T2
	DPST-NC	A22L-02M-T1	A22L-02M-T2

Note: When using with a Voltage Reduction Unit, use the A22-24AR.


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## Ordering (continued)


### Lamp

#### LED






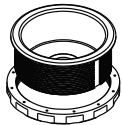
Appearance	LED light		Rated voltage	Model
	Red	Standard	6 VAC	A22-6AR
			12 VAC/VDC	A22-12AR
			24 VAC/VDC	A22-24AR

Note: For voltage-reduction lighting, use the A22-24AR.

#### Incandescent

Appearance	Rated voltage	Model
	6 VDC	A22-5
	14 VAC	A22-12
	28 VAC	A22-24
	130 VAC	A22-H1

### Accessories (Order Separately)

Item	Appearance	Classification	Model	Remarks
Legend Plates for Emergency Stop		60-dia. black letters on yellow back-ground	A22Z-3466-1	"EMERGENCY STOP" is indicated on the plate.
		90-dia. black letters on yellow back-ground	A22Z-3476-1	
		60-dia. black letters on yellow back-ground	A22Z-3466-2	"EMERGENCY OFF" is indicated on the plate.
Control Boxes (Enclosures)		One hole, yellow box (for emergency stop)	A22Z-B101Y	Material: Polycarbonate resin
E-stop Shroud for EMO, Yellow		---	A22Z-EG1	Provides SEMI-S2/SEMATECH Application Guide for SEMI-S2 compatibility. The SEMI-S2-compatible Shroud and legend plate for EMERGENCY OFF come as a set. Use with an A22E Emergency Stop Switch. (for emergency shutoff) *
E-stop Shroud for EMS, White		---	A22Z-EG1-W	Provides SEMI-S2/SEMATECH Application Guide for SEMI-S2 compatibility. The SEMI-S2-compatible Shroud and legend plate for EMERGENCY STOP come as a set. Use with an A22E Emergency Stop Switch. (for emergency stop) *
E-stop Shroud, Yellow		---	A22Z-EG2	SEMI-S2/SEMATECH Application Guide for SEMI S2-compatible Shroud. (for emergency shutoff) * Use together with an A22E Emergency Stop Switch.

\*These Shrouds are for use with semiconductor manufacturing equipment only. Do not use them for any other applications (e.g. emergency stop switches for machines or devices such as Machine tools, Printing presses, Industrial machinery, etc).

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