# **Safety Interlock Switches**

# **A22E**



# Emergency Stop Switch (22-dia. or 25-dia.)

- Install in 22-dia. or 25-dia. panel cutout
- 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.
- Oil-resistant to IP65 (non-lighted models)/IP65 (lighted models)
- A lock plate is provided as a standard feature to ensure that the control box and switch are not easily separated.



#### **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	Datad	Rated current (A)				
carry current (A)	current voltage		AC12 (resistive load)	DC13 (inductive load)	DC12 (resistive load)	
	24 VAC	10	10			
	110 VAC	5	10			
	220 VAC	3	6			
	380 VAC	2	3			
10	440 VAC	1	2			
	24 VDC			1.5	10	
	110 VDC		0.5	0.5	2	
	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.
- (1) Ambient temperature: 20°±2°C
- (2) Ambient humidity: 65±5%
- (3) Operating frequency: 20 operations/minute
- 2. 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%

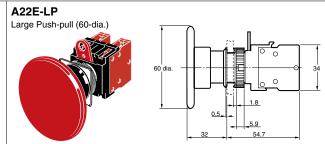


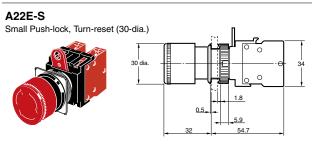


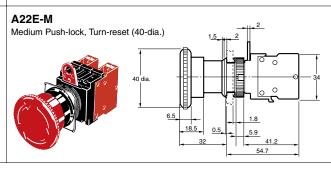
**Dimensions** (mm)

#### **Non-lighted Models**

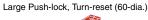
# A22E-MP Medium Push-pull (40-dia.)



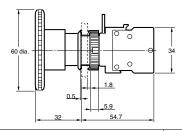






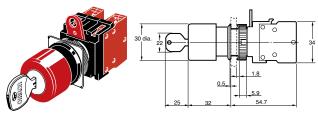






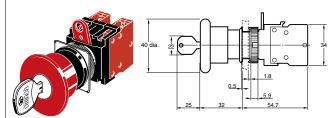
A22E-SK

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



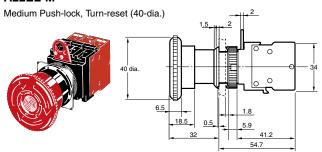
#### A22E-MK

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

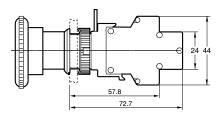


#### **Lighted Models**

#### A22EL-M



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.







#### **Ordering**

#### **Model Number Structure (Completely Assembled)**

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

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0 0 0 0 0

• Lighted/Non-lighted (none): Non-lighted

L: Lighted

\*Lighted emergency stop switches are available only for the medium (M) push-lock turn-reset models

4 Head Size

MP: Medium 40 dia., push-pull

LP: Large, 60 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 SK: Small, 30 dia., push-lock key rest

MK: Medium, 40 dia., push-lock key reset

 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

• 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	SPST-NC	A22E-MP-01		
Medium Push-pull	SPST-NO/SPST-NC	A22E-MP-11		
A22E-MP	DPST-NC	A22E-MP-02		
60-dia. head	SPST-NC	A22E-LP-01		
Large Push-pull	SPST-NO/SPST-NC	A22E-LP-11		
A22E-LP	DPST-NC	A22E-LP-02		
30-dia. head	SPST-NC	A22E-S-01 *		
Small Push-lock Turn-reset	SPST-NO/SPST-NC	A22E-S-11 *		
A22E-S	DPST-NC	A22E-S-02 *		
	DPST-NC + SPST-NO	A22E-S12 *		
	TPST-NC	A22E-S-03 *		
40-dia. head	SPST-NC	A22E-M-01 *		
Medium Push-lock Turn-reset	SPST-NO/SPST-NC	A22E-M-11 *	Red	
A22E-M	DPST-NC	A22E-M-02 *		
	DPST-NC + SPST-NO	A22E-M-12 *		
	TPST-NC	A22E-M-03 *		
60-dia. head	SPST-NC	A22E-L-01 *		
Large Push-lock Turn-reset	SPST-NO/SPST-NC	A22E-L-11 *		
A22E-L	DPST-NC	A22E-L-02 *		
30-dia. head	SPST-NC	A22E-SK-01		
Small Push-lock Key-reset	SPST-NO/SPST-NC	A22E-SK-11		
A22E-SK	DPST-NC	A22E-SK-02		
40-dia. head	SPST-NC	A22E-MK-01		
Medium Push-lock Key-reset	SPST-NO/SPST-NC	A22E-MK-11		
A22E-MK	DPST-NC	A22E-MK-02		

<sup>\*</sup>Models with Korean S-mark certification.

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

= Highlighted Rapid Delivery products are available for shipment today or within FIVE days





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

	Operating	Operating			
Appearance	Contact configuration	Lighting	Rated voltage	Set Model	Color of cap
40-dia. head			6 VDC	A22EL-M-6D-01 *	
Push-lock Turn-reset without Voltage	ODOTAIO		6 VAC	A22EL-M-6A-01 *	
Reduction Unit	SPST-NC		12 VAC/VDC	A22EL-M-12A-01 *	
A22E			24 VAC/VDC	A22EL-M-24A-01 *	
			6 VDC	A22EL-M-6D-11 *	
	ODOT NO (ODOT NO		6 VAC	A22EL-M-6A-11 *	
	SPST-NO/SPST-NC	LED	12 VAC/VDC	A22EL-M-12A-11 *	Red
			24 VAC/VDC	A22EL-M-24A-11 *	
			6 VDC	A22EL-M-6D-02 *	
	DDOTNO		6 VAC	A22EL-M-6A-02 *	
	DPST-NC		12 VAC/VDC	A22EL-M-12A-02 *	
			24 VAC/VDC	A22EL-M-24A-02 *	
40-dia. head	ODOTNO		100 VAC	A22EL-M-T1-01	
Push-lock Turn-reset with Voltage Reduction Unit A22E	SPST-NC		200 VAC	A22EL-M-T2-01	
	CDCT NO/CDCT NO		100 VAC	A22EL-M-T1-11	
	SPST-NO/SPST-NC		200 VAC	A22EL-M-T2-11	
	DDOTA10		100 VAC	A22EL-M-T1-02	
	DPST-NC		200 VAC	A22EL-M-T2-02	

<sup>\*</sup>Models with Korean S-mark certification.

#### With EMO/EMS Indication

Operating				
Appearance		Contact Configuration	Set Model	Color of cap
40-dia. head		SPST-NC	A22E-M-01-EMO*	
Medium Push-lock		SPST-NO/SPST-NC	A22E-M-11-EMO*	
Turn reset With EMO Indication		DPST-NC	A22E-M-02-EMO*	
EMOL	EMO)	DPST-NC + SPST-NO	A22E-M-12-EMO*	
		TPST-NC	A22E-M-03-EMO*	D- 4
40-dia, head		SPST-NC	A22E-M-01-EMS*	Red
Medium Push-lock	Medium Push-lock	SPST-NO/SPST-NC	A22E-M-11-EMS*	
Turn reset With EMS Indication	DPST-NC	A22E-M-02-EMS*		
	EMS	DPST-NC + SPST-NO	A22E-M-12-EMS*	
		TPST-NC	A22E-M-03-EMS*	

<sup>\*</sup>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 *
SOP	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

<sup>\*</sup>Models with Korean S-mark certification.

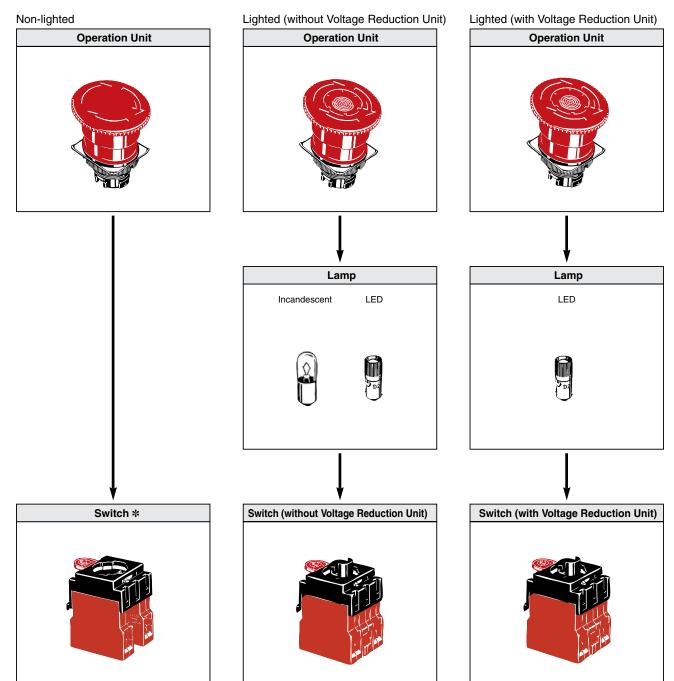




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#### **Subassembled**

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



<sup>\*</sup>Up to three Switch Units can be mounted for multiple contacts.

#### **Operation Units**

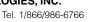
#### Non-lighted

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

#### Lighted

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

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#### Lamp

#### LED

Appearance	LED light		Rated voltage	Model
			6 VAC	A22-6AR
	Red	Standard	12 VAC/VDC	A22-12AR
U			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
<b>)</b>	130 VAC	A22-H1

#### Switch (Standard Load)

#### Without Voltage Reduction Unit

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

#### With Voltage Reduction Unit

Classification Appearance		Lighted (110 VAC)	Lighted (220 VAC)	
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.  $\label{eq:continuous}$ 



#### **Accessories (Order Separately)**

Item	Appearance	Classification	Model	Remarks
Legend Plates for Emergency Stop	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	
	OFF	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	EMERQUE OF STATE OF S		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	EMEROS O		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.

<sup>\*</sup>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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