chanhvinh.com

OMRON

Emergency Stop Switch

A165E

Mounting Aperture of 16 mm



- Modular construction, easy installation
- Direct opening mechanism with minimum contact separation of 3 mm in accordance with EN60947-5-1, ⊖. (only for NC contacts)
- Conforms to EN418, EN60947-5-1.
- Includes a safety lock to prevent misuse.
- Features separate construction that allows the Switch to be separated for easier wiring and one-piece-like construction that allows easier handling.
- High reliability, IP65
- Short mounting depth, less than 28.5 mm below panel
- Quick and easy assembly, snap-in Switch.
- A165E is identifiable, clearly visible and will stop a dangerous process, without creating additional hazards.

Model Number Structure

Model Number Legend

A165E-□□-□-□
1 2 3 4

1. **Lighted/Non-lighted**
   None: Non-lighted
   L: Lighted
2. **Head Size**
   S: 30 mm dia.
   M: 40 mm dia.
3. **Illumination (Operation Voltage/Rated Voltage)**
   None: Non-lighted
   24D: LED (24 VDC)
4. **Contacts**
   01: SPST (NC)
   02: DPST (NC)
   03U: TPST (NC)
   One-body, non-lighted models only

chanhvinh.com

Ordering Information

List of Models

Illumination	Rated voltage	Pushbutton color	Pushbutton size	Terminal	Contact	Standard load (125 VAC at 5 A, 250 VAC at 3 A, 30 VDC at 3 A)
LED	24 VDC	Red	30 dia.	Solder terminal	SPST-NC	A165E-LS-24D-01
					DPST-NC	A165E-LS-24D-02
None	---				SPST-NC	A165E-S-01
					DPST-NC	A165E-S-02
					TPST-NC	A165E-S-03U
LED	24 VDC		40 dia.		SPST-NC	A165E-LM-24D-01
					DPST-NC	A165E-LM-24D-02
None	---				SPST-NC	A165E-M-01
					DPST-NC	A165E-M-02
					TPST-NC	A165E-M-03U

Note: The above models have a surface indication of “RESET.” Models with “STOP” indication are also available. For further information, contact your OMRON representative.

Accessories (Order Separately)

Item	Appearance	Type	Model	Precautions
Yellow Plate		Yellow, 45 dia.	A16Z-5070	Use this as an emergency stop nameplate.
Panel Plug		Rectangular	A16ZJ-3003	Used for covering the panel cutouts for future panel expansion.
		Square	A16ZA-3003	
		Round	A16ZT-3003	
Tightening Tool		---	A16Z-3004	Useful for repetitive mounting. Be careful not to tighten excessively.
Extractor		---	A16Z-5080	Convenient for extracting the Switch and Lamp.

Specifications

Approved Standards

Recognized Organization	Standards	File No.
UL, cUL (see note)	UL508	E41515
AZCO	EN60947-5-1	C9805501

Note: UL: UL508, cUL: CSA C22 No. 14

Approved Standard Ratings

UL, cUL

Rated voltage	Rated current	
	A165E series	A165E-U series
125 VAC 250 VAC 30 VDC	5 A (General use) 3 A (General use) 3 A (Resistive)	1 A (General use) 0.5 A (General use) 1 A (Resistive)

chanhvinh.com

Ratings

Switch Ratings

Rated voltage	Resistive load	
	A165E series	A165E□-U series
125 VAC 250 VAC 30 VDC	5 A 3 A 3 A	1 A 0.5 A 1 A
Minimum applicable load	150 mA at 5 VDC	1 mA at 5 VDC

Characteristics

Item		Emergency Stop Switch
Allowable operating frequency	Mechanical	20 operations/minute max.
	Electrical	10 operations/minute max.
Insulation resistance		100 MΩ min. (at 500 VDC)
Dielectric strength		1,000 VAC, 50/60 Hz for 1 min between terminals of same polarity 2,000 VAC, 50/60 Hz for 1 min between terminals of different polarity and also between each terminal and ground 1,000 VAC, 50/60 Hz for 1 min between lamp terminals (see note)
Vibration resistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude (malfunction within 1 ms)
Shock resistance	Destruction	500 m/s^2
	Malfunction	300 m/s^2 max. (malfunction within 1 ms), 150 m/s^2 max. In case of A165E□U series
Durability	Mechanical	100,000 operations min.
	Electrical	100,000 operations min.
Ambient temperature		Operating:-10°C to 55°C (with no icing or condensation) Storage:-25°C to 65°C (with no icing or condensation)
Ambient humidity		Operating:35% to 85%
Electric shock protection class		Class II
PTI (tracking characteristic)		175
Degree of contamination		3
Weight		Approx. 16 g (in case of DPDT Switches)

Note: LED not mounted. Test them with the LED removed.

Operating Characteristics

Features	Characteristics
Operating force (OF) max.	14.7 N
Releasing force (RF) min.	0.1 N·m
Pretravel (PT)	3.5±0.5 mm (3±0.5 mm In case of A165E□U series)

chanhvinh.com

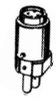
Nomenclature



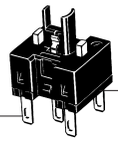
Illumination Colors
- LED Illumination
  Red
- Non-lighted
  Red

Illumination Method
- LED

Protective Structure and Terminal Type
- **Protective Structure**
  Oil-resistant IP65
- **Terminal Type**
  Solder terminals
  (tab terminals #110)



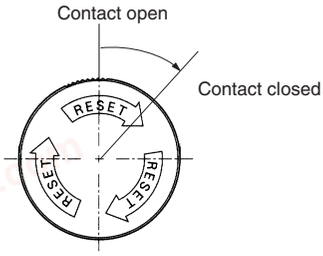
Lamp
- LED lamp



Switch Specifications
- **Standard Loads**
  5 A at 125 VAC
  3 A at 250 VAC
  3 A at 30 VDC

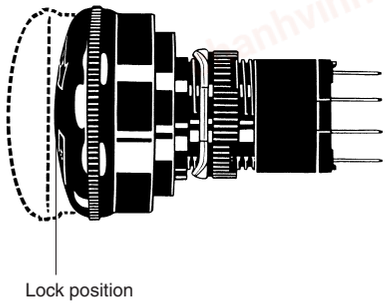
Note: A165E Emergency Stop Switch must be ordered as a set.
No LED is installed for the non-lighted model.

Push-lock, Turn-reset System Prevents Misuse



Safety Lock Prevents Misuse

Even if an object or person touches the pushbutton by mistake, the contact will not be released unless the pushbutton reaches the lock position.



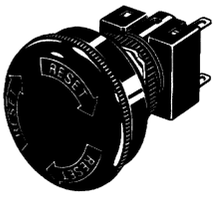
chanhvinh.com

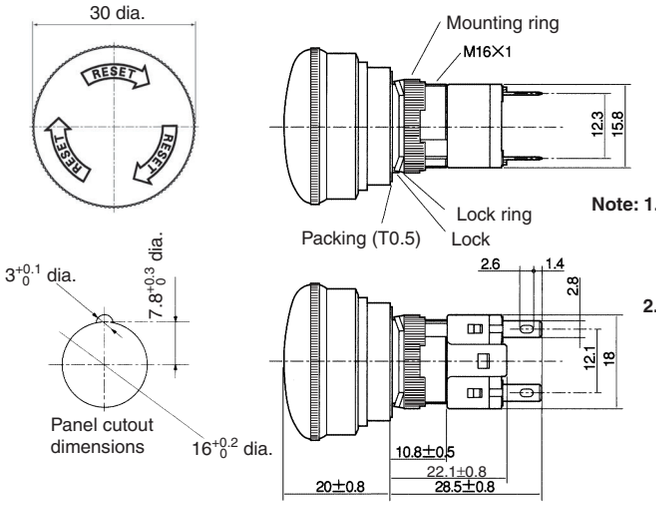
Dimensions

Note: All units are in millimeters unless otherwise indicated.

A165E

Non-lighted models
30 mm diameter



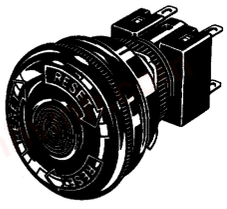


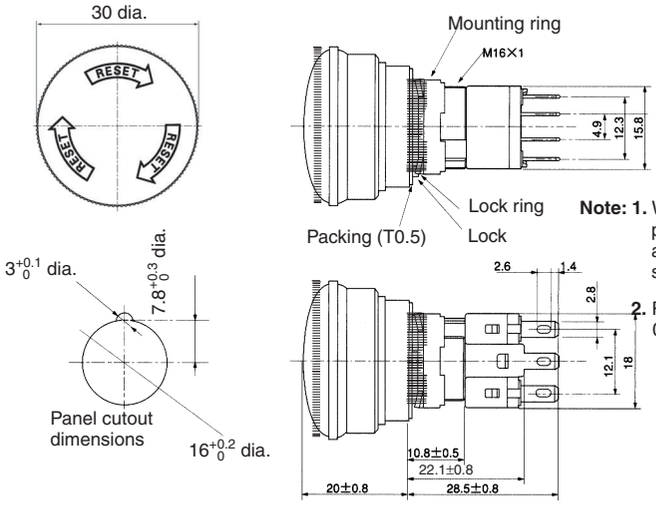
Note: 1. When applying a coating such as paint to the panel, dimensions after the coating must satisfy the specified dimensions.

2. Recommended panel thickness: 0.5 to 3.2 mm.

A165E

Lighted models
30 mm diameter



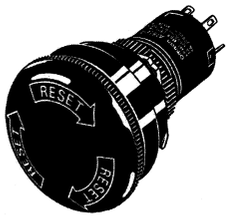


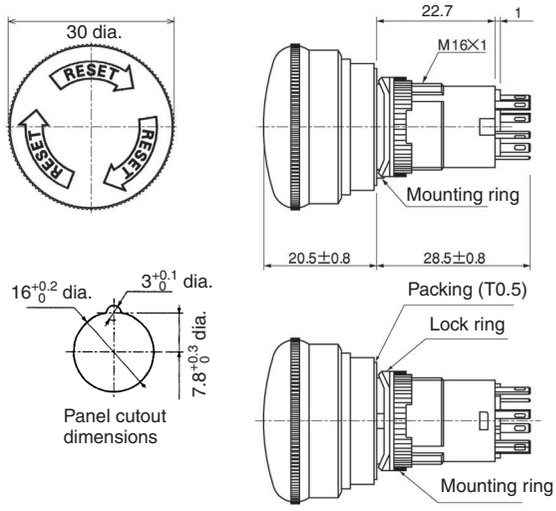
Note: 1. When applying a coating such as paint to the panel, dimensions after the coating must satisfy the specified dimensions.

2. Recommended panel thickness: 0.5 to 3.2 mm.

A165E□U

One-body models
30 mm diameter





Note: 1. When applying a coating such as paint to the panel, dimensions after the coating must satisfy the specified dimensions.

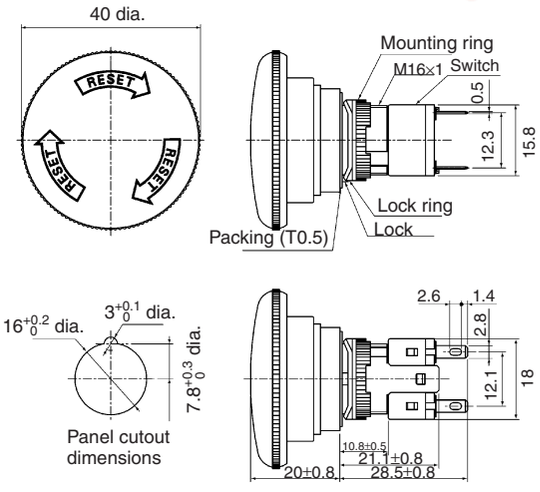
2. Recommended panel thickness: 0.5 to 3.2 mm.

chanhvinh.com

A165E

Non-lighted models
40 mm diameter





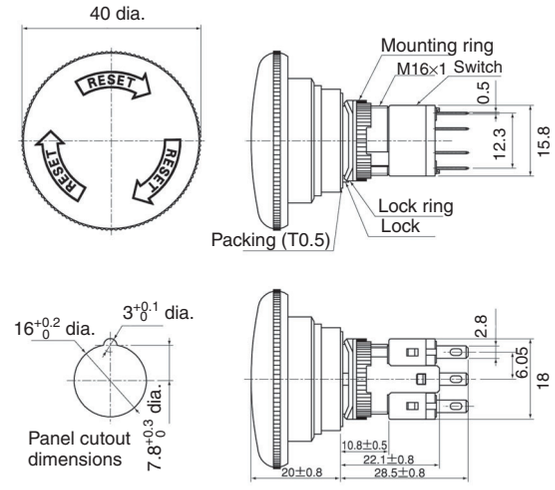
Note: 1. When applying a coating such as paint to the panel, dimensions after the coating must satisfy the specified dimensions.

2. Recommended panel thickness: 0.5 to 3.2 mm.

A165E

Lighted models
40 mm diameter



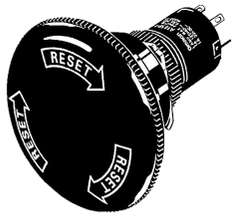


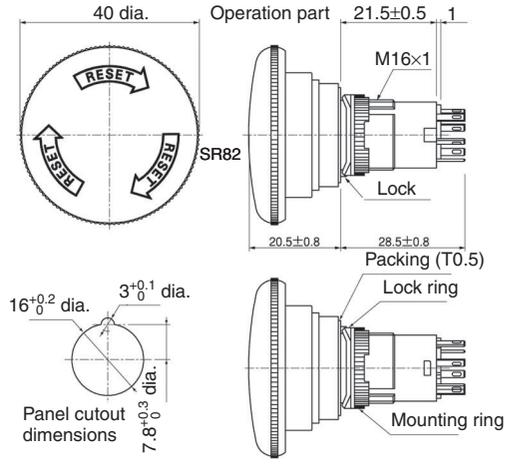
Note: 1. When applying a coating such as paint to the panel, dimensions after the coating must satisfy the specified dimensions.

2. Recommended panel thickness: 0.5 to 3.2 mm.

A165E□U

Non-lighted,
one-body models
40 mm diameter





Note: 1. When applying a coating such as paint to the panel, dimensions after the coating must satisfy the specified dimensions.

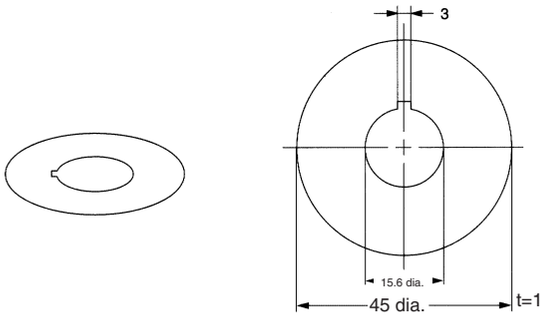
2. Recommended panel thickness: 0.5 to 3.2 mm.

chanhvinh.com

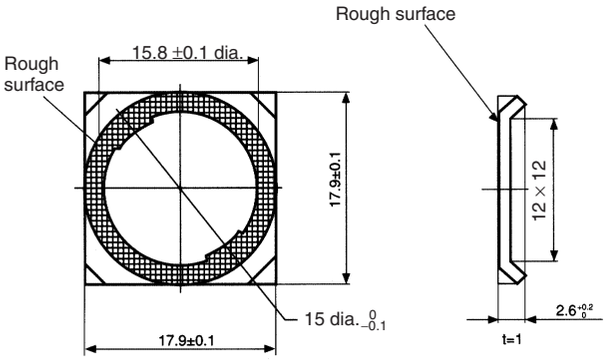
Accessories

Yellow Plate (Vinyl Chloride)

A16Z-5070

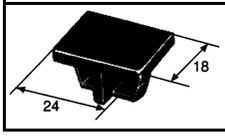
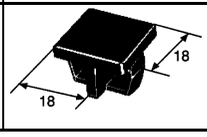
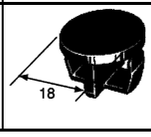


Lock Ring



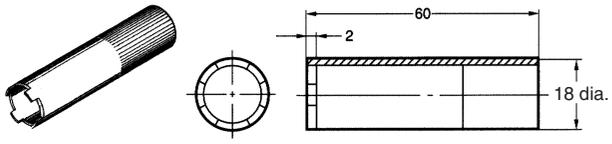
Panel Plugs

Select an appropriate Panel Plug according to the panel design and mount from the front side of the panel. Panel cutout dimensions are the same as those for the Switch.

Rectangular	Square	Round
		

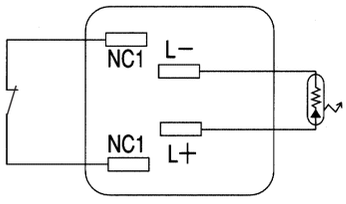
Screw Fitting

A16Z-3004

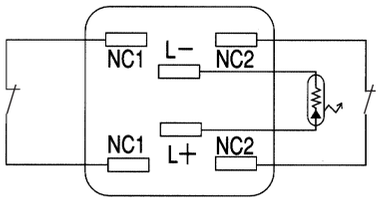


Terminal Arrangement

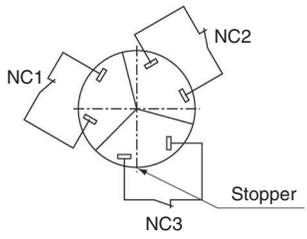
SPST Switches



DPST Switches



TPST Switches



Note: The L+ and L− terminals are not available with the non-lighted models.

chanhvinh.com

ALL DIMENSIONS SHOWN ARE IN MILLIMETERS.
To convert millimeters into inches, multiply by 0.03937. To convert grams into ounces, multiply by 0.03527.

Cat. No. A120-E2-03A-X In the interest of product improvement, specifications are subject to change without notice.