

Long Service Life with Built-in Z-series Basic Switch

- Using a Basic Switch enables direct switching of large-capacity loads
- Shock-absorbing construction of Operation Unit protects the Switch
- Drip-proof Pushbutton construction enables use in locations subject to splashing water and oil and scattering dust.
- Pushbuttons are available in three shapes and six colors.



! Refer to *Safety Precautions for All Pushbutton Switches/Indicators and Safety Precautions* on page 3.

Ordering Information

| Classification | Shape of Operation Unit | Output | Operation Unit color | | | | | |
|---------------------|-------------------------|--------|----------------------|------------|------------|----------|------------|-------------|
| | | | Blue (-A) | Black (-B) | Green (-G) | Red (-R) | White (-W) | Yellow (-Y) |
| Momentary operation | | 1 | ZAP-A | ZAP-B | ZAP-G | ZAP-R | ZAP-W | ZAP-Y |
| | | 2 | 2ZAP-A | 2ZAP-B | 2ZAP-G | 2ZAP-R | 2ZAP-W | 2ZAP-Y |
| | | 1 | ZAP-1A | ZAP-1B | ZAP-1G | ZAP-1R | ZAP-1W | ZAP-1Y |
| | | 2 | 2ZAP-1A | 2ZAP-1B | 2ZAP-1G | 2ZAP-1R | 2ZAP-1W | 2ZAP-1Y |
| | | 1 | ZAP-2A | ZAP-2B | ZAP-2G | ZAP-2R | ZAP-2W | ZAP-2Y |
| | | 2 | 2ZAP-2A | 2ZAP-2B | 2ZAP-2G | 2ZAP-2R | 2ZAP-2W | 2ZAP-2Y |

Note: Models with special specifications are available for use in environments with high humidity or outdoors. Contact your OMRON representative for information.

Specifications

Ratings

| Item | Rated voltage (V) | Non-inductive load (A) | | | | Inductive load (A) | | | |
|-----------------|-------------------|------------------------|----|-----------|------|--------------------|----|------------|------|
| | | Resistive load | | Lamp load | | Inductive load | | Motor load | |
| | | NC | NO | NC | NO | NC | NO | NC | NO |
| Built-in Switch | 125 VAC | 15 | | 3 | 1.5 | 15 | | 5 | 2.5 |
| | 200 VAC | 15 | | 2.5 | 1.25 | 15 | | 3 | 1.5 |
| | 500 VAC | 10 | | 1.5 | 0.75 | 6 | | 1.5 | 0.75 |
| | 8 VDC | 15 | | 3 | 1.5 | 15 | | 5 | 2.5 |
| | 14 VDC | 15 | | 3 | 1.5 | 10 | | 5 | 2.5 |
| | 30 VDC | 6 | | 3 | 1.5 | 5 | | 5 | 2.5 |
| | 125 VDC | 0.5 | | 0.5 | 0.5 | 0.05 | | 0.05 | 0.05 |
| | 250 VDC | 0.25 | | 0.25 | 0.25 | 0.03 | | 0.03 | 0.03 |

Note: 1. The above values are for steady-state currents.

2. Inductive load: Power factor = 0.4 (AC); time constant = 7 ms (DC).

3. The lamp load has an inrush current of 10 times the steady-state current.

4. The motor load has an inrush current of 6 times the steady-state current.

5. Standard testing condition.

(1) Ambient temperature: 20 $\pm 2^{\circ}\text{C}$

(2) Ambient humidity: 65% $\pm 5\%$ RH

(3) Operating frequency: 20 times/min

Specifications

Characteristics

| | | |
|---------------------------------|---|--|
| Operating frequency | Mechanical | 60 operations/min |
| | Electrical | 20 operations/min |
| Insulation resistance | | 100 MΩ min. (at 500 VDC) |
| Contact resistance | | 30 mΩ max. (initial value) |
| Dielectric strength | Between terminals of same polarity | 1,000 VAC, 50/60 Hz for 1 min |
| | Between current-carrying metal part and ground, and between each terminal and non-current-carrying metal part | 2,000 VAC, 50/60 Hz for 1 minute |
| Vibration resistance | Malfunction | 10 to 55 Hz, 1.5-mm double amplitude (1 ms max.) |
| Shock resistance | Destruction | 500 m/s ² |
| | Malfunction | 200 m/s ² max. (1 ms max.) |
| Durability | Mechanical | 1,000,000 operations min. |
| | Electrical | 500,000 operations min. |
| Weight | | Approx. 130 to 210 g |
| Inrush current | NC | 30 A max. |
| | NO | 15 A max. |
| Ambient operating temperature | | -25 to 80°C (with no icing or condensation) |
| Ambient operating humidity | | 35% to 85%RH |
| Ambient storage temperature | | -25 to 80°C (with no icing or condensation) |
| Degree of protection | | IP65 (Operation Unit only) |
| Electric shock protection class | | Class II |
| PTI (proof tracking index) | | 175 |
| Pollution degree | | 3 (IEC947-5-1) |

Operating Characteristics

| Model | ZAP-□□ | 2ZAP-□□ |
|---------------------------|-------------------------|-------------------------|
| Operating characteristics | | |
| Operating force OF | Approx. 5.88 to 14.71 N | Approx. 9.81 to 17.70 N |

Note: Operating force may vary depending on thickness of mounting panel.

Contact Form

| Name | Contact form |
|-----------------------|--------------|
| Double-throw contacts | COM NC NO |

Approved Safety Standards

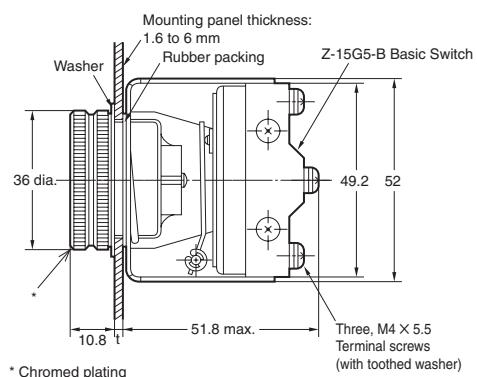
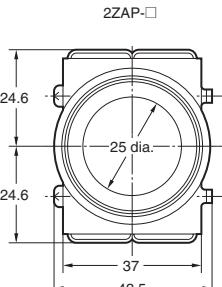
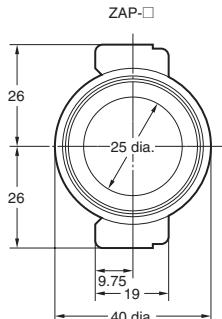
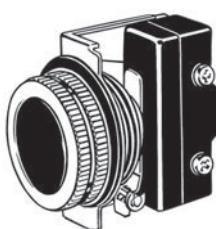
- The built-in Z-15G5-B Switch is approved for UL and CSA.

Dimensions

Insert one of the following letters into the box (□) at the end of the model number. Refer to Ordering Information for color symbols. (Unit: mm)

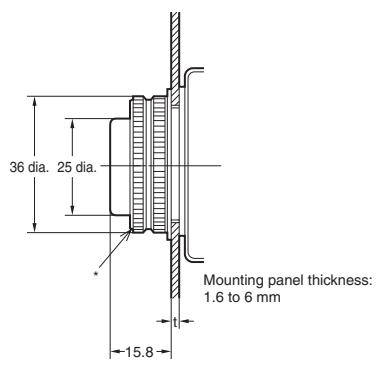
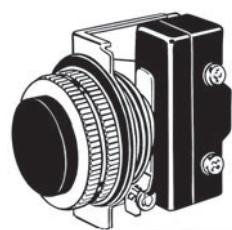
ZAP-□

2ZAP-□



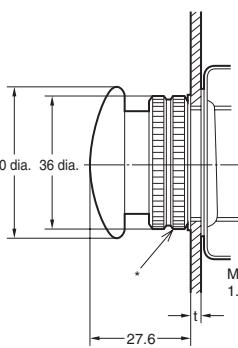
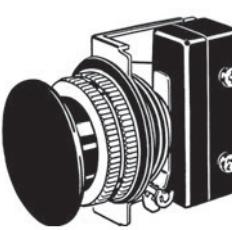
ZAP-1□

2ZAP-1□



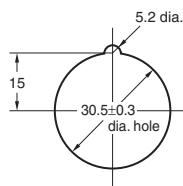
ZAP-2□

2ZAP-2□



Dimensions

Panel Cutouts



Accessories

Rubber Cap

- Use the special rubber cap to use the Switch in locations subject to significant splashing water and oil or scattering dust.
- Cannot be used, however, with the (2) ZAP-2.

| Color | Model |
|-------------|-------|
| Blue (-A) | ZB-A |
| Black (-B) | ZB-B |
| Green (-G) | ZB-G |
| Red (-R) | ZB-R |
| White (-W) | ZB-W |
| Yellow (-Y) | ZB-Y |

Safety Precautions

Refer to *Safety Precautions for All Pushbutton Switches/Indicators*.

Precautions for Correct Use

Insulation

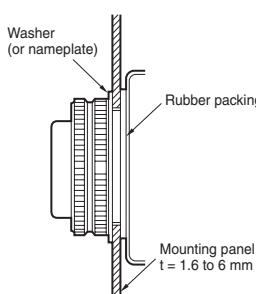
- After wiring the Switch, ensure an appropriate insulating distance.

Wiring

- Tighten the terminal screws to a torque of 0.78 to 1.18 N·m.

Mounting

- Tighten the face nut to a torque of 0.98 to 1.76 N·m.
- For panel mounting, always use a washer (or a nameplate) and rubber packing.



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