

CSM\_ZAP\_DS\_E\_4\_1

# 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	36 dia. 25 dia.	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
	36 dia. 25 dia.	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
	40 dia.	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		Non-inductive load (A)			Inductive load (A)				
	Rated voltage (V)	Resistive load		Lamp load		Inductive load		Motor load	
Built-in Switch		NC	NO	NC	NO	NC	NO	NC	NO
	125 VAC 200 VAC 500 VAC	1	5 5 0	3 2.5 1.5	1.5 1.25 0.75	1	-	5 3 1.5	2.5 1.5 0.75
Z-15G5-B	8 VDC 14 VDC 30 VDC 125 VDC 250 VDC	1	5 5 6 0.5 0.25	3 3 3 0.5 0.25	1.5 1.5 1.5 0.5 0.25		-	5 5 5 0.05 0.03	2.5 2.5 2.5 0.05 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 ±2°C
  - (2) Ambient humidity: 65% ±5%RH
  - (3) Operating frequency: 20 times/min

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# **Specifications**

# **Characteristics**

Operat-	Mechanical	60 operations/min		
ing fre- quency	Electrical	20 operations/min		
Insulation resistance		100 MΩ min. (at 500 VDC)		
Contact resistance		30 m $Ω$ 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 termi- nal and non-current-carrying metal part	2,000 VAC, 50/60 Hz for 1 minute		
Vibra- tion re- sistance	Malfunction	10 to 55 Hz, 1.5-mm double amplitude (1 ms max.)		
Shock re- sistance	Destruction	500 m/s <sup>2</sup>		
	Malfunction	200 m/s <sup>2</sup> max. (1 ms max.)		
Durabili- ty	Mechanical	1,000,000 operations min.		
	Electrical	500,000 operations min.		
Weight		Approx. 130 to 210 g		
Inrush	NC	30 A max.		
current	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 of	degree	3 (IEC947-5-1)		

# **Operating Characteristics**

Model Operating characteristics	ZAP-□□	2ZAP-□□	
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.

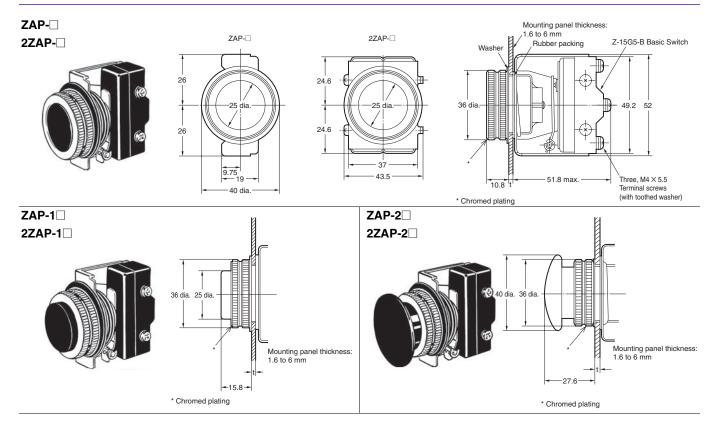
# **Contact Form**

Name	Contact form		
Double-throw contacts	COM		
Double-tillow contacts	NO		

# **Approved Safety Standards**

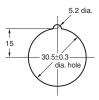
• The built-in Z-15G5-B Switch is approved for UL and CSA.

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



Dimensions (Unit: mm)

# **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

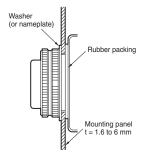
• After wiring the Switch, ensure an appropriate insulating distance.

#### Wiring

 $\bullet$  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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