

Pushbutton Switch (Cylindrical 16.5-dia.)

VAP

Built-in V-series Basic Switch for Compatibility with General Industrial Equipment

- Rubber cap enables use in locations subject to splashing water and scattering dust (with front panel protection).
- Pushbuttons are available in five colors.



Refer to Safety Precautions for All Push Buttons/Indicator Lamps on page 1344 and Safety Precautions on page 1464.

Ordering Information

Classification	Pushbutton appearance	Output	Operation Unit color				
			Black (-B)	Green (-G)	Red (-R)	White (-W)	Yellow (-Y)
Momentary operation		1	1VAP-1B	1VAP-1G	1VAP-1R	1VAP-1W	1VAP-1Y
		2	2VAP-1B	2VAP-1G	2VAP-1R	2VAP-1W	2VAP-1Y

Specifications

Ratings

Item	Rated voltage (V)	Non-Inductive load (A)		Inductive load (A)	
		Resistive load	Lamp load	Inductive load	Motor load
Built-in Switch V-15-1A5	125 VAC	15	2	10	3
	200 VAC	15	2	10	3
	8 VDC	15	4	10	6
	30 VDC	10	4	10	4
	125 VDC	0.6	0.1	0.6	0.1
	250 VDC	0.3	0.05	0.3	0.05

- 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 has an inrush current of 6 times the steady-state current.
 5. The rated values above are for testing conducted under the following conditions:
 (1) Ambient temperature: 20 ± 2°C
 (2) Ambient humidity: 65% ± 5% RH
 (3) Operating frequency: 20 times/min

Contact Form

Name	Contact form
Double-throw contacts	

Approved Standard Ratings

The built-in V-15-1A5 Switch is approved for UL and CSA.

Characteristics

Operating frequency	Mechanical	60 operations/min
	Electrical	20 operations/min
Insulation resistance		100 MΩ min. (at 500 VDC)
Contact resistance		15 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	1,500 VAC, 50/60 Hz for 1 minute
Vibration resistance	Malfunction	10 to 55 Hz, 1.5 mm double amplitude *
	Destruction	500 m/s ² max.
Shock resistance	Malfunction	200 m/s ² max. *
	Durability	
Weight	Mechanical	1,000,000 operations min.
	Electrical	100,000 operations min.
Inrush current		Approx. 48 to 62 g
Ambient operating temperature	NC	36 A max.
	NO	36 A max.
Ambient operating humidity		-25 to 80°C (with no icing or condensation)
Ambient storage temperature		35% to 85% RH
Degree of protection		-25 to 80°C (with no icing or condensation)
Electric shock protection class		IP00
PTI (proof tracking index)		Class II
Pollution degree		175
		3 (IEC947-5-1)

* Malfunction within 1 ms

Operating Characteristics

Model	1VAP-1□	2VAP-1□	
Operating force	OF	Approx. 4.91 N	Approx. 5.89 N

Push Buttons / Indicator Lamps

Push Buttons / Indicator Lamps

Thumbwheel Switches

Other Switches

Product Selections

Common Precautions

Plateau Head

16 dia. Type: Lighted or Non-Lighted

22 (25) dia. Type: Lighted or Non-Lighted

Non-lighted

ZAP

VAP

VAD

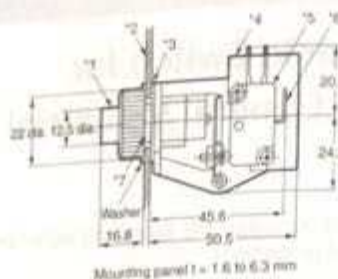
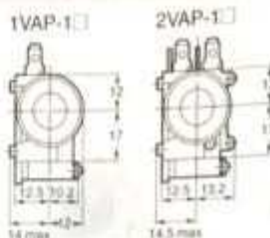
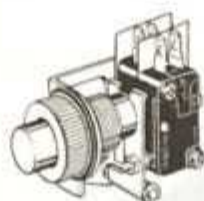
AZA

Square / Rectangular

VAP

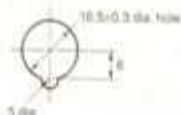
Dimensions Insert one of the following letters into the box () at the end of the model number. Refer to Ordering Information for color symbols.

- 1VAP-1 ()
- 2VAP-1 ()



- *1 Pushbutton
- *2 Mounting panel thickness: 1.6 to 6.3 mm
- *3 Rubber packing
- *4 Separator (t = 0.16 mm)
- *5 V-15-1A5 Basic Switch
- *6 Three #167 tab/cable terminals
- *7 Lock ring colour

Panel Cutouts (Unit: mm)



Note: Use a mounting panel thickness of 1.6 to 6.3mm.

Accessories


Rubber Cap

Use the special rubber cap to use the Switch in locations subject to significant splashing water and oil or scattering dust.

Color	Model
Black	VAP-0B
Green	VAP-0G
Red	VAP-0R
White	VAP-0W
Yellow	VAP-0Y



- Note: 1. The rubber cap is for use with the 1VAP-1 and 2VAP-1 Series.
- 2. The rubber cap is made of chromoprene rubber.
- 3. The rubber cap is available six colors: black (B), green (G), red (R), yellow (Y), and white (W).

Pushbutton	Color	Model	Product code
	Green	VAP HEADKAN 1G	VAP-0011F
	Red	VAP HEADKAN 1R	VAP-1209B

Safety Precautions

For common precautions, refer to *Safety Precautions for All Push Buttons/Indicator Lamps* on page 1344.

Precautions for Correct Use

Insulation

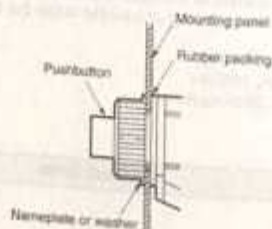
- After wiring the Switch, ensure an appropriate insulating distance.

Wiring

- Twist the conductors through the terminal holes before soldering. To perform soldering on solder terminals, use a soldering iron with a capacity of 60 W maximum and complete soldering within for 5 seconds. Wait for one minute after soldering before exerting any external force on the solder.
- To connect to tab terminals, gently insert receptacles for #167 tabs in the terminal push-out direction. The Switch does not have a ground terminal.

Mounting

- Tighten the face nut to a torque of 0.49 to 0.77 N·m.
- For panel mounting, always use a washer (or nameplate) and rubber packing.
- The panel thickness that can be used depends on the shape of the Pushbutton.



Refer to the *Service & Support* on your OMRON website for technical descriptions and FAQs on the product.