

Single-phase Voltage Relay

K8AK-VS

Ideal for Voltage Monitoring for Industrial Facilities and Equipment.

- Monitor for overvoltages or undervoltages.
- Manual resetting and automatically resetting supported by one Relay.
- One SPDT output relay, 5 A at 250 VAC (resistive load).
- Output relay can be switched between normally open and normally closed.
- Process control signal (0 to 10 V) and current splitter input supported.
- Output status can be monitored using LED indicator.
- Input frequency of 40 to 500 Hz supported.
- Inputs are isolated from the power supply.



Refer to *Safety Precautions* on page 9.
Refer to page 8 for commonly asked questions.



For the most recent information on models that have been certified for safety standards, refer to your OMRON website.

Ordering Information

List of Models

Setting range	Power supply voltage	Model
1 to 10 V AC/DC	24 VAC/DC	K8AK-VS2 24 VAC/DC
3 to 30 V AC/DC		
15 to 150 V AC/DC	100 to 240 VAC	K8AK-VS2 100-240 VAC
20 to 200 V AC/DC	24 VAC/DC	K8AK-VS3 24 VAC/DC
30 to 300 V AC/DC		
60 to 600 V AC/DC	100 to 240 VAC	K8AK-VS3 100-240 VAC

Ratings and Specifications

Input Range

Model	Range*	Connection terminal	Setting range	Input impedance	Overload capacity
K8AK-VS2	0 to 10 V AC/DC	V1-COM	1 to 10 V AC/DC, 3 to 30 V AC/DC, 15 to 150 V AC/DC	Approx. 120 kΩ	Continuous input at 115% of maximum input 10 s at 125% (up to 600 VAC)
	0 to 30 V AC/DC	V2-COM		Approx. 320 kΩ	
	0 to 150 V AC/DC	V3-COM		Approx. 1.6 MΩ	
K8AK-VS3	0 to 200 V AC/DC	V1-COM	20 to 200 V AC/DC, 30 to 300 V AC/DC, 60 to 600 V AC/DC	Approx. 1.2 MΩ	
	0 to 300 V AC/DC	V2-COM		Approx. 1.7 MΩ	
	0 to 600 V AC/DC	V3-COM		Approx. 3.1 MΩ	

* The range is selected using connected terminals.

Ratings

Power supply voltage	Isolated power supply	24 VAC/DC 100 to 240 VAC
Power consumption		24 VAC/DC: 2.0 VA/1.1 W max. 100 to 240 VAC: 4.6 VA max.
Operating value setting range (SV)		10% to 100% of maximum setting range K8AK-VS2: 1 to 10 V AC/DC 3 to 30 V AC/DC 15 to 150 V AC/DC K8AK-VS3: 20 to 200 V AC/DC 30 to 300 V AC/DC 60 to 600 V AC/DC
Operating value		100% operation at set value
Reset value setting range (HYS.)		5% to 50% of operating value
Reset method		Manual reset/automatic reset (switchable) Note: Manual reset: Turn OFF power supply for 1 s or longer.
Operating time setting range (T)		0.1 to 30 s
Power ON lock time (LOCK)		1 s or 5 s (Switched using DIP switch.)
Indicators		Power (PWR): Green, Relay output (RY): Yellow, Alarm outputs (ALM): Red
Input impedance		Refer to <i>Input Range</i> on previous page.
Output relays		One SPDT relay (NO/NC switched using DIP switch.)
Output relay ratings		Rated load Resistive load 5 A at 250 VAC 5 A at 30 VDC Maximum switching capacity: 1,250 VA, 150 W Minimum load: 5 VDC, 10 mA (reference values) Mechanical life: 10 million operations min. Electrical life: 5 A at 250 VAC or 30 VDC: 50,000 operations 3 A at 250 VAC or 30 VDC: 100,000 operations
Ambient operating temperature		–20 to 60°C (with no condensation or icing)
Storage temperature		–25 to 65°C (with no condensation or icing)
Ambient operating humidity		25% to 85% (with no condensation)
Storage humidity		25% to 85% (with no condensation)
Altitude		2,000 m max.
Terminal screw tightening torque		0.49 to 0.59 N·m
Terminal wiring method		Recommended wire Solid wire: 2.5 mm ² Twisted wires: AWG16, AWG18 Note: 1. Ferrules with insulating sleeves must be used with twisted wires. 2. Two wires can be twisted together. Recommended ferrules Al 1,5-8BK (for AWG16) manufactured by Phoenix Contact Al 1-8RD (for AWG18) manufactured by Phoenix Contact Al 0,75-8GY (for AWG18) manufactured by Phoenix Contact
Case color		N1.5
Case material		PC and ABS, UL 94 V-0
Weight		Approx. 150 g
Mounting		Mounts to DIN Track.
Dimensions		22.5 × 90 × 100 mm (W×H×D)