

Single-phase Overvoltage/Undervoltage Relay


K8AK-VW

Ideal for Voltage Monitoring for Industrial Facilities and Equipment.

- Monitor for overvoltages and undervoltages simultaneously. Separate settings and outputs supported for overvoltages and undervoltages.
- Manual resetting and automatically resetting supported by one Relay.
- Pre-alarm Monitoring Mode.
- Two SPDT output relays, 5 A at 250 VAC (resistive load).
- 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.



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

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

Ordering Information

List of Models

Setting range	Power supply voltage	Model
1 to 10 V AC/DC	24 VAC/DC	K8AK-VW2 24 VAC/DC
3 to 30 V AC/DC	100 to 240 VAC	K8AK-VW2 100-240 VAC
15 to 150 V AC/DC		
20 to 200 V AC/DC	24 VAC/DC	K8AK-VW3 24 VAC/DC
30 to 300 V AC/DC	100 to 240 VAC	K8AK-VW3 100-240 VAC
60 to 600 V AC/DC		

Ratings and Specifications

Input Range

Model	Range*	Connection terminal	Setting range	Input impedance	Overload capacity
K8AK-VW2	0 to 10 V AC/DC	V1-COM	1 to 10 V AC/DC	Approx. 120 k Ω	Continuous input at 115% of maximum input. 10 s at 125% (up to 600 VAC)
	0 to 30 V AC/DC	V2-COM	3 to 30 V AC/DC	Approx. 320 k Ω	
	0 to 150 V AC/DC	V3-COM	15 to 150 V AC/DC	Approx. 1.6 M Ω	
K8AK-VW3	0 to 200 V AC/DC	V1-COM	20 to 200 V AC/DC	Approx. 1.2 M Ω	
	0 to 300 V AC/DC	V2-COM	30 to 300 V AC/DC	Approx. 1.7 M Ω	
	0 to 600 V AC/DC	V3-COM	60 to 600 V AC/DC	Approx. 3.1 M Ω	

* 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 (AL1 and AL2)		10% to 100% of the maximum value of the setting range K8AK-VW2: 1 to 10 V AC/DC 3 to 30 V AC/DC 15 to 150 V AC/DC K8AK-VW3: 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		5% of operating value (fixed)
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 (AL1, AL2): Red
Input impedance		Refer to <i>Input Range</i> on previous page.
Output relays		Two SPDT relays (NC operation)
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)