

# K8 Series Monitoring Relays

Complete range in 22.5mm wide housing



» Full Installation details on the side of the product

» Function selection by dip switches  
» LED status indication

Omron's K8 series of monitoring products provides you with first-class quality products, all in compact 22.5mm wide DIN-rail housing! This new monitoring range can be split into models for single-phase current and voltage control, three-phase voltage control and conductive level control. Designed for use worldwide, they are based on a line of monitoring products that has already given Omron an established and leading market share, especially in Japan.

## A complete product range to fulfill all your monitoring requirements!

Just eight models make up the range which, together with all of Omron's other products, allows us to offer you a flexible and complete one-stop-shopping solution! There are many application possibilities for the K8 series. In this brochure you will find some typical application examples for these excellent monitoring products.



			
<p><b>1</b> <b>K8AB-AS</b> Single-phase current relay</p> <ul style="list-style-type: none"> <li>• Overcurrent or undercurrent</li> <li>• Manual/automatic reset</li> <li>• Normal ON/normal OFF</li> <li>• ON delay and operation time function</li> </ul>	<p><b>2</b> <b>K8AB-VS</b> Single-phase voltage relay</p> <ul style="list-style-type: none"> <li>• Overvoltage or undervoltage</li> <li>• Manual/automatic reset</li> <li>• Normal ON/normal OFF</li> <li>• Operation time function</li> <li>• Available in AC and DC</li> </ul>	<p><b>3</b> <b>K8AB-VW</b> Single-phase voltage relay</p> <ul style="list-style-type: none"> <li>• Overvoltage and undervoltage</li> <li>• Manual/automatic reset</li> <li>• Normal ON/normal OFF</li> <li>• Operation time function</li> <li>• Two separate outputs</li> </ul>	<p><b>4</b> <b>K8AB-PH</b> Three-phase-sequence, phase-loss relay</p> <ul style="list-style-type: none"> <li>• 200 to 500VAC with a single K8AB-PH</li> <li>• Power supply/output relay status indicators</li> </ul>

## Application examples

### 1 Electrical load



Are you drawing too much power or is the load too heavy?  
Use a K8AB-AS to control the maximum current to prevent a motor from overloading.

The K8AB-AS offers you:

- A wide current measuring range
- Selectable reset mode: automatic or manual
- Adjustable start-up lock-time and alarm delay time up to 30s

### 2 Battery control



Is your battery in good condition?  
Use a K8AB-VS! This type measures the battery supply voltage (12VDC or 24VDC) and gives an alarm when the voltage drops below the set value.

The K8AB-VS offers you:

- Continuous checking of the voltage
- Input voltage from 6mV up to 660VAC/VDC
- Process signal input from 0-10V

### 3 Communication base station



Do you want to prevent communication failure when the power drops?  
Use a K8AB-VW to control the power voltage within set limits to prevent communication down-time.

The K8AB-VW offers you:

- Two separate outputs for undervoltage and overvoltage
- High/high or low/low control can also be selected
- Selectable manual or automatic reset; selectable start-up lock-time
- Alarm delay time from 0.1s to 30s

### 4 Escalators



Are all three phases present?  
Use a K8AB-PH to constantly check that all three phases are present and in the correct sequence, which protects the motor and ensures that the escalator moves in the right direction.

The K8AB-PH offers you:

- Universal input range from 200-500VAC
- LED indicators that show power supply/output relay status



5

#### K8AB-PA

*Three-phase asymmetry, phase-sequence, phase-loss relay*

- Asymmetry rate: 2% to 22%
- 3-wire/4-wire selection for three-phase power supply
- Input range selection

6

#### K8AB-PM

*Three-phase voltage, phase-sequence, phase-loss relay*

- Overvoltage and undervoltage
- All-in-one configuration
- 3-wire/4-wire selection for three-phase power supply
- Input range selection
- Two separate outputs

7

#### K8AB-PW

*Three-phase voltage relay*

- Overvoltage and undervoltage
- 3-wire/4-wire selection for three-phase power supply
- Input range selection
- Two separate outputs

8

#### 61F-D21T

*Conductive level controller*

- Variable operating resistance
- Water supply/draining selection
- Operation time setting

## 5 Swimming pool – ensuring correct pump operation



**Are all three phases present and in balance?**

Use a K8AB-PA to ensure that the three phases are present and in line, which prevents overheating due to phase loss or faulty pumping.

**The K8AB-PA offers you:**

- Wide setting of the voltages from phase-to-phase (380 to 480V)
- Can be used with a three-phase supply with neutral connection
- Asymmetry alarm delay time from 0.1s to 30s

## 6 Mobile crane



**Is the voltage supply in the right condition?**

Use a K8AB-PM to check that the three phases are in line, and that the amplitude of the three voltages is within set values. This ensures a longer working life of your generator and crane.

**The K8AB-PM offers you:**

- All-in-one configuration
- Phase-sequence and phase-loss control

## 7 Wind power



**Is the windmill providing the correct supply voltage?**

Use a K8AB-PW to monitor the overvoltage and undervoltage of all three phases for upper and lower limits to ensure that the energy generated by the windmill is properly connected to the power network.

**The K8AB-PW offers you:**

- 2 separate outputs for undervoltage and overvoltage
- Wide setting of the voltages from phase-to-phase (380 to 480V)
- Can be used with a three-phase supply with neutral connection

## 8 Swimming pool – maintaining water level



**Is there enough water in the swimming pool?**

Use a 61F-D21T level controller! With this unit you can be sure of a safe voltage on the sensors thanks to the 100% sine wave voltage sensor supply.

**The 61F-D21T offers you:**

- Sensitivity setting
- Charging or discharging
- Delay timer up to 10s
- Safe sensor voltage of only 6VAC

# Features at a glance



## LED status indication

All devices are equipped with an LED to indicate the presence of a power supply (green LED), activity of the output relays (yellow LED), and whether there is an over or under alarm (red LED).



## Easy-to-set parameters

Enables clear setting of SV, HYS, output ON, delay timer and start-up timer. Time settings are in absolute values, and the other settings are in percentages. All required adjustments can be made on the front of the device. Settings can be changed using a suitable standard or crosshead screwdriver.

## Dimensions

These units are available in compact 22.5mm wide DIN-rail housing, with a depth of 100mm and a height of 90mm.



## Space saving design

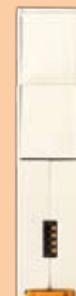
The K8AB-PA, -PM, and -PW models take up 50% less space than most similar models in the market.

## Full installation details on side of product

Ready-to-install! Details include a working diagram, DIP switch settings, wiring diagram, part number/function description and relay output specifications.

## Configuration DIP switches

The range of functionality provided by these DIP switches significantly reduces the number of models required to cover diverse applications. Once the device is mounted to the DIN-rail and wired up the DIP switches cannot be easily accessed for safety reasons.



## Current transformer

The K8AC-CT200L (up to 100A or 200A) is designed especially for use in combination with Omron's K8AB-AS3.



## Approvals and markings

This new range has been certified for CE approval; UL certification is pending.



Measurement	Function	Model	Nominal input	Supply voltage	Ordering code	Supply voltage	Ordering code
1-phase	Current relay (overcurrent or underrcurrent)	K8AB-AS1	20mA, 100mA, 500mA	24VDC	K8AB-AS1 24VDC	100-115VAC	K8AB-AS1 100-115VAC
				24VAC	K8AB-AS1 24VAC	200-230VAC	K8AB-AS1 200-230VAC
		K8AB-AS2	1A, 5A, 8A	24VDC	K8AB-AS2 24VDC	100-115VAC	K8AB-AS2 100-115VAC
				24VAC	K8AB-AS2 24VAC	200-230VAC	K8AB-AS2 200-230VAC
	Voltage relay (overvoltage or undervoltage)	K8AB-AS3	CT transformer (K8AC-CT200L) 100/200A	24VDC	K8AB-AS3 24VDC	100-115VAC	K8AB-AS3 100-115VAC
				24VAC	K8AB-AS3 24VAC	200-230VAC	K8AB-AS3 200-230VAC
		K8AB-VS1	60mV, 100mV, 300mV	24VDC	K8AB-VS1 24VDC	100-115VAC	K8AB-VS1 100-115VAC
				24VAC	K8AB-VS1 24VAC	200-230VAC	K8AB-VS1 200-230VAC
	Voltage relay (window comparator)	K8AB-VS2	10V, 30V, 150V	24VDC	K8AB-VS2 24VDC	100-115VAC	K8AB-VS2 100-115VAC
				24VAC	K8AB-VS2 24VAC	200-230VAC	K8AB-VS2 200-230VAC
		K8AB-VS3	200V, 300V, 600V	24VDC	K8AB-VS3 24VDC	100-115VAC	K8AB-VS3 100-115VAC
				24VAC	K8AB-VS3 24VAC	200-230VAC	K8AB-VS3 200-230VAC
3-phase	Phase-sequence & phase-loss	K8AB-PH1	AC200-500V	Same as input voltage	K8AB-PH1		
	Phase asymmetry, phase-sequence, and phase-loss relay	K8AB-PA1	AC200, 220, 230, 240V		K8AB-PA1		
		K8AB-PA2	AC380, 400, 415, 480V		K8AB-PA2		
	Voltage relay (window comparator)	K8AB-PW1	AC200, 220, 230, 240V		K8AB-PW1		
		K8AB-PW2	AC380, 400, 415, 480V		K8AB-PW2		
	Voltage relay (multi function + window comparator)	K8AB-PM1	AC200, 220, 230, 240V		K8AB-PM1		
		K8AB-PM2	AC380, 400, 415, 480V		K8AB-PM2		
Level	Conductive level controller	61F-D21 T-V1	1 to 100kΩ	24VAC	61F-D21 T-V1 24VAC	200-230VAC	61F-D21 T-V1 220-230VAC
				115VAC	61F-D21 T-V1 115VAC		

## OMRON INDUSTRIAL AUTOMATION • THE AMERICAS HEADQUARTERS

Schaumburg, IL USA • 847.843.7900 • 800.556.6766 • [www.omron247.com](http://www.omron247.com)

### OMRON CANADA, INC. • HEAD OFFICE

Toronto, ON, Canada • 416.286.6465 • 866.986.6766 • [www.omron247.com](http://www.omron247.com)

### OMRON ARGENTINA • SALES OFFICE

Cono Sur • 54.11.4783.5300

### OMRON ELECTRONICS DE MEXICO • HEAD OFFICE

México DF • 52.55.59.01.43.00 • 001.800.556.6766 • [mela@omron.com](mailto:mela@omron.com)

### OMRON CHILE • SALES OFFICE

Santiago • 56.9.9917.3920

### OMRON ELECTRONICS DE MEXICO • SALES OFFICE

Apodaca, N.L. • 52.81.11.56.99.20 • 001.800.556.6766 • [mela@omron.com](mailto:mela@omron.com)

### OTHER OMRON LATIN AMERICA SALES

54.11.4783.5300

### OMRON ELETRÔNICA DO BRASIL LTDA • HEAD OFFICE

São Paulo, SP, Brasil • 55.11.2101.6300 • [www.omron.com.br](http://www.omron.com.br)