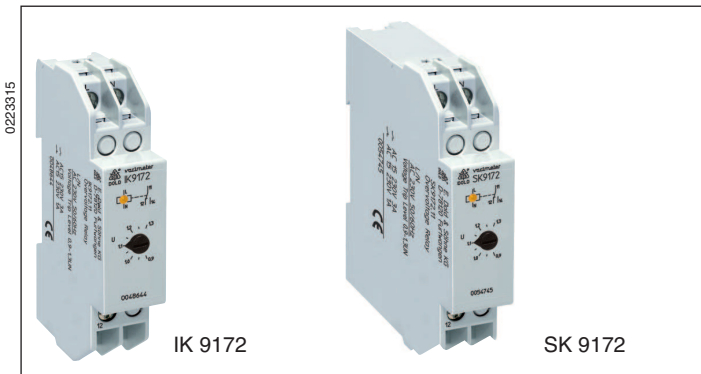


## VARIMETER

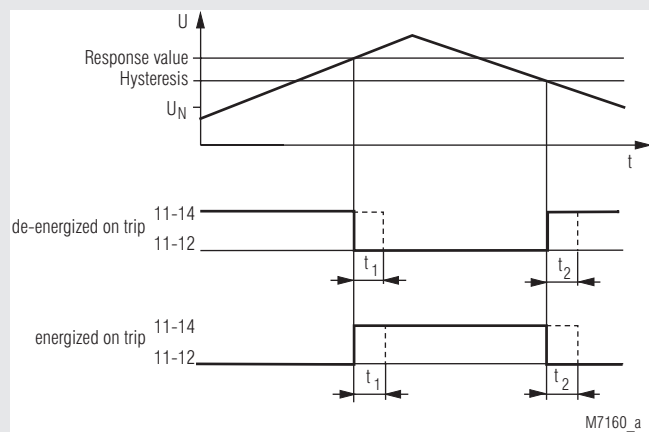
### Overvoltage Relay, Single Phase

IK 9172, SK 9172



- According to IEC/EN 60 255, DIN VDE 0435-303
- Monitoring of overvoltage
- Without auxiliary supply
- Settable response value
- De-energized on trip
- LED indicator for state of output relay
- 1 changeover contact
- As option energized on trip
- As option with delay t1 on trip
- As option with delay t2 on reset
- **Devices available in 2 enclosure versions:**
  - IK 9171:** depth 59 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43 880
  - SK 9171:** depth 98 mm, with terminals at the top for cabinets with mounting plate and cable duct
- Width 17.5 mm

### Function Diagram



### Approvals and Markings



### Applications

Monitors overvoltage, in single-phase voltage systems

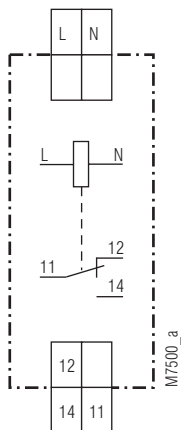
### Function

The arithmetic mean value of the voltage L-N ist measured.

### Indicators

Yellow LED: output contact active (11-14 closed)

### Circuit Diagram



IK 9172.11, SK 9172.11

### Technical Data

#### Input Circuit

**Nominal voltage  $U_N$ :** AC 24, 42, 110, 230 V  
DC 24, 48, 60, 110 V  
**Voltage range:** 0.7 ... 1.3  $U_N$   
**Max. overload:** 1.35  $U_N$  continuously  
**Nominal consumption:** max. 5 VA / DC 1 W  
**Frequency range:** 45 ... 65 Hz

#### Setting Ranges

**Response value:** adjustable: 0.9 ... 1.3  $U_N$   
**Hysteresis:** approx. 4 % of setting value  
**Time delay  $t_1$  /  $t_2$ :** 0.5 ... 20 s

#### Output

#### Contacts

IK 9172.11, SK 9172.11: 1 changeover contact  
**Thermal current  $I_{th}$ :** 4 A  
**Switching capacity**  
to AC 15  
NO contact: 3 A / AC 230 V IEC/EN 60 947-5-1  
NC contact: 1 A / AC 230 V IEC/EN 60 947-5-1  
**Electrical contact life** IEC/EN 60 947-5-1  
at AC 230 V, 1 A ( $\cos \varphi = 0.5$ )  $\geq 3 \times 10^5$  switching cycles  
**Short circuit strength**  
**max. fuse rating:** 4 A gL IEC/EN 60 947-5-1  
**Mechanical life:**  $\geq 30 \times 10^6$  switching cycles

## Technical Data

### General Data

**Operating mode:** Continuous operation  
**Temperature range:** - 20 ... + 60 °C

### Clearance and creepage distances

rated impulse voltage /  
pollution degree: 4 kV / 2 IEC 60 664-1

### EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2  
HF irradiation  
80 MHz ... 1 GHz: 20 V / m IEC/EN 61 000-4-3  
1 GHz ... 2 GHz: 20 V / m IEC/EN 61 000-4-3  
2 GHz ... 2.7 GHz: 1 V / m IEC/EN 61 000-4-3  
Fast transients: 4 kV IEC/EN 61 000-4-4

### Surge voltages between

wires for power supply: 1 kV IEC/EN 61 000-4-5  
between wire and ground: 2 kV IEC/EN 61 000-4-5  
Interference suppression: Limit value class B EN 55 011

### Degree of protection

Housing: IP 40 IEC/EN 60 529  
Terminals: IP 20 IEC/EN 60 529

### Housing:

Thermoplastic with V0 behaviour  
according to UL subject 94

### Vibration resistance:

Amplitude 0.35 mm,  
frequency 10 ... 55 Hz, IEC/EN 60 068-2-6  
20 / 060 / 04 IEC/EN 60 068-1

### Climate resistance:

Terminal designation: EN 50 005

### Wire connection:

2 x 2.5 mm<sup>2</sup> solid or  
2 x 1.5 mm<sup>2</sup> stranded ferruled  
DIN 46 228-1/-2/-3/-4

### Wire fixing:

Flat terminals with self-lifting  
clamping piece IEC/EN 60 999-1  
DIN rail IEC/EN 60 715

### Mounting:

**Weight**  
IK 9171: 65 g  
SK 9171: 83 g

## Dimensions

### Width x height x depth

IK 9172: 17.5 x 90 x 59 mm  
SK 9172: 17.5 x 90 x 98 mm

## Standard Types

IK 9172.11 AC 230 V 50/60 Hz 0.9 ... 1.3 U<sub>N</sub>  
Article number: 0048644  
SK 9172.11 AC 230 V 50/60 Hz 0.9 ... 1.3 U<sub>N</sub>  
Article number: 0054745  
• Adjustable response value: 0.9 ... 1.3 U<sub>N</sub>  
• Without time delay  
• De-energized on trip  
• Output: 1 changeover contact  
• Nominal voltage U<sub>N</sub>: AC 230 V  
• Width: 17.5 mm

## Variants

IK 9172/001

- 0 De-energized on trip
- 1 Energized on trip
- 0 Without time delay
- 3 Settable time delay t<sub>1</sub>
- 4 Settable time delay t<sub>2</sub>
- 0 Settable response value

## Ordering example for variants

IK 9172 .11 / \_ \_ \_ AC 230 V 50/60 Hz 0.9 ... 1.3 U<sub>N</sub> 0.5 ... 20 s

Time delay t<sub>1</sub>  
Setting range  
Nominal frequency  
Nominal voltage  
Variant, if required  
Contact  
Type