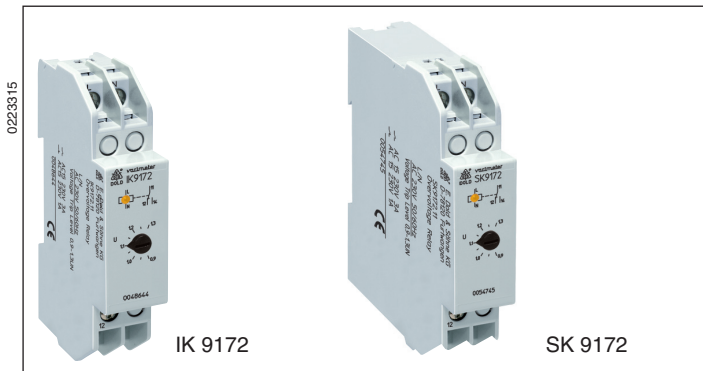


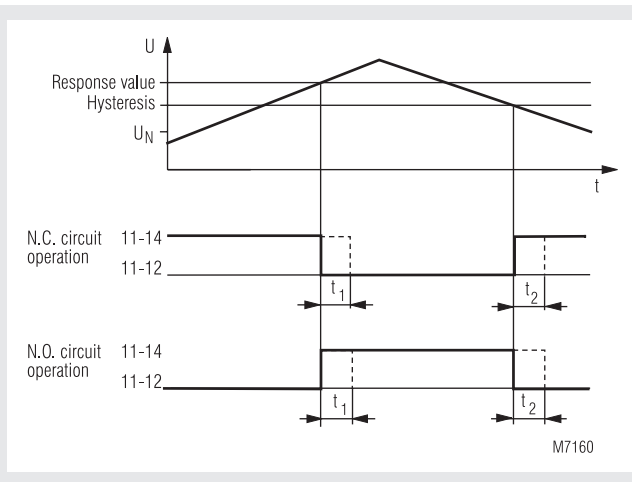
VARIMETER

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
- NC circuit operation (optionally NO circuit operation)
- Optionally with delay t1 on trip
- Optionally with delay t2 on reset
- LED indicator for state of output relay
- 1 changeover contact
- **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 Marking



Applications

Monitors overvoltage, in single-phase voltage systems

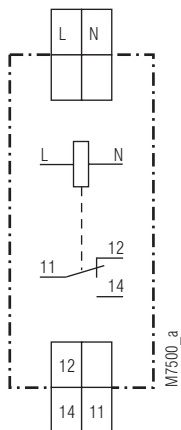
Function

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

EMC

Electrostatic discharge: 8 kV (air) IEC/EN 61 000-4-2
HF irradiation: 10 V / m IEC/EN 61 000-4-3
Fast transients: 2 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:

Wire connection:

EN 50 005
2 x 2.5 mm² solid or
2 x 1.5 mm² 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_N
Article number: 0048644
SK 9172.11 AC 230 V 50/60 Hz 0.9 ... 1.3 U_N
Article number: 0054745

- Adjustable response value: 0.9 ... 1.3 U_N
- Without time delay
- Closed circuit operation
- Output: 1 changeover contact
- Nominal voltage U_N: AC 230 V
- Width: 17.5 mm

Variants

IK 9172/001

- 0 N.C. circuit operation
- 1 N.O. circuit operation
- 0 without time delay
- 3 settable time delay t₁
- 4 settable time delay t₂
- 0 settable response value

Ordering example for variants

IK 9172 .11 / _ _ _ AC 230 V 50/60 Hz 0.9 ... 1.3 U_N 0.5 ... 20 s

- Time delay t₁
- Setting range
- Nominal frequency
- Nominal voltage
- Variant, if required
- Contact
- Type