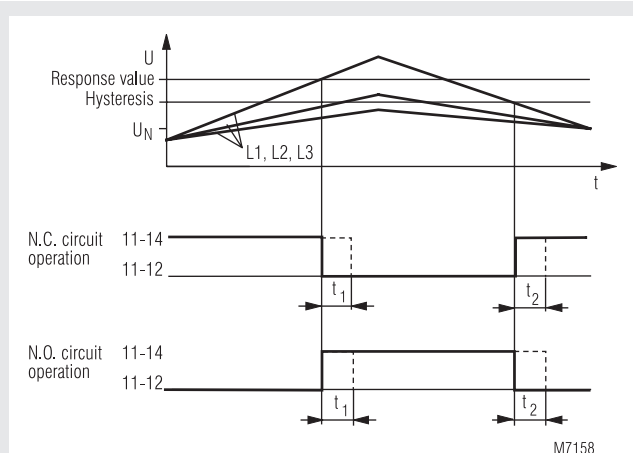


VARIMETER Overvoltage Relay IK 9170, SK 9170



- According to IEC/EN 60 255, DIN VDE 0435-303
- Monitoring of overvoltage in 3-phase systems
- Also for single phase
- Without auxiliary supply
- Settable response value
- N.C. circuit operation (optionally N.O. circuit operation)
- Optionally with or without N
- Optionally with delay t₁ on trip
- Optionally with delay t₂ on reset
- LED indicator for state of output relay
- Independent of phase sequence
- 1 changeover contact
- **Devices available in 2 enclosure versions:**
 - IK 9170:** depth 59 mm, with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43 880
 - SK 9170:** 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



*) only IK 9170

Applications

Monitors overvoltage, in 3-phase voltage systems

Notes

The arithmetic mean value of each phase is measured against N. The variants without N measure L1 and L3 against L2.

Indicators

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

Technical Data

Input Circuit

Nominal voltage U_N : 3/N AC 400/230 V (with neutral)
3 AC 400 V (without neutral)
Voltage range: 0.7 ... 1.3 U_N
Max. overload: 1.35 U_N , continuously
Nominal consumption: approx. 4 VA
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 9170.11, SK 9170.11: 1 changeover contact
Thermal current I_{th} : 4 A

Switching capacity

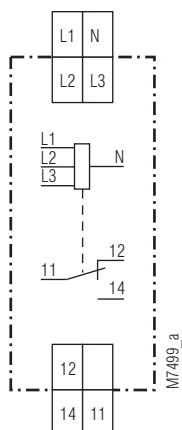
to AC 15
NO contact: 3 A / AC 230 V IEC/EN 60 947-5-1
NC contact: 1 A / AC 230 V IEC/EN 60 947-5-1

Electrical contact life
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

Circuit Diagram



IK 9170.11, SK 9170.11

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

Climate resistance: 20 / 060 / 04 IEC/EN 60 068-1

Terminal designation: EN 50 005

Wire connection: 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

Mounting: DIN rail IEC/EN 60 715

Weight

IK 9170: 65 g

SK 9170: 83 g

Dimensions

Width x height x depth

IK 9170: 17.5 x 90 x 59 mm

SK 9170: 17.5 x 90 x 98 mm

Standard Types

IK 9170.11 3/N AC 400/230V 50/60 Hz 0.9 ... 1.3 U_N

Article number: 0048645

SK 9170.11 3/N AC 400/230V 50/60Hz 0.9 ... 1.3 U_N

Article number: 0054743

• Adjustable response value: 0.9 ... 1.3 U_N

• Without time delay

• with N

• Closed circuit operation

• Output: 1 changeover contact

• Nominal voltage U_N: 3/N AC 400/230 V

• Width: 17.5 mm

Variants

IK 9170/001

0 N.C. circuit operation with N

1 N.C. circuit operation without N

2 N.O. circuit operation with N

3 N.O. circuit operation without N

0 without time delay

3 settable time delay t₁

4 settable time delay t₂

0 settable response value

Ordering example for variants

IK 9170 .11 /031 3 AC 400 V 0.9 ... 1.3 U_N 0.5 ... 20 s

Time delay t₁

Setting range

Nominal voltage

Variant, if required

Contact

Type