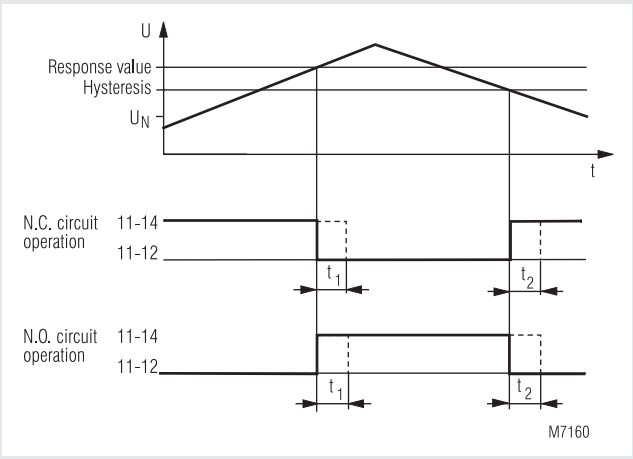
Monitoring technique

Overvoltage relay IK 9172, SK 9172, single phase varimeter

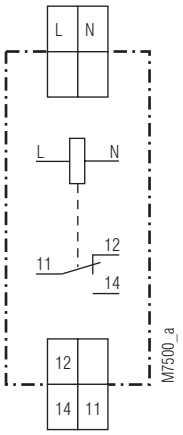
0223315

- According to IEC/EN 60 255, DIN VDE 0435-303
- **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
- 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
- Width 17,5 mm

Function diagram



Circuit diagram



IK 9172.11, SK 9172.11

Approvals and marking

CE

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)

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 φ = 0,5):≥ 3 x 10^5 switching cycles

Short circuit strength		
max. fuse rating:	4 A gL	IEC/EN 60 947-5-1
Mechanical life:	≥ 30 x 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
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 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 type

IK 9172.11 AC 230 V 50/60 Hz 0,9 ... 1,3 U_N
Article number: 0048644
SK 9172.11 AC 230 V 50/60Hz 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 t_1
- 4 settable time delay t_2
- 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 t_1
- Setting range
- Nominal frequency
- Nominal voltage
- Variant, if required
- Contact
- Type