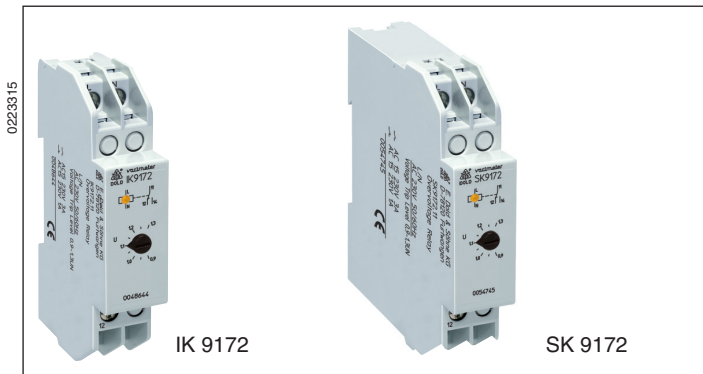


VARIMETER

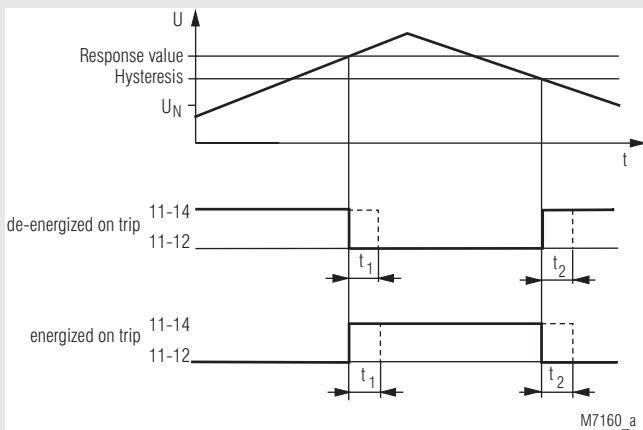
Overvoltage Relay, Single Phase
IK 9172, SK 9172

Translation
of the original instructions



- According to IEC/EN 60255-1
- 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 t_1 on trip
- As option with delay t_2 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 43880
 - 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

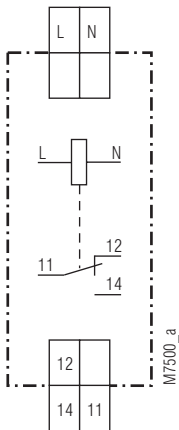
Function

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

Connection Terminals

Terminal Designation	Signal Description
L(+), N(-)	Voltage supply / measuring inputs AC/DC
11, 12, 14	Changeover contacts (output relays)

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 60947-5-1
NC contact:	1 A / AC 230 V IEC/EN 60947-5-1
Electrical contact life	IEC/EN 60947-5-1
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 gG / gL IEC/EN 60947-5-1
Mechanical life:	$\geq 30 \times 10^6$ switching cycles

General Data

Operating mode:	Continuous operation
Temperature range	
Operation:	- 20 ... + 60 °C
Storage:	- 20 ... + 60 °C
Relative air humidity:	93 % at 40 °C
Altitude:	< 2000 m
Clearance and creepage distances	
Rated impulse voltage / pollution degree:	4 kV / 2 IEC 60664-1
EMC	
Electrostatic discharge:	8 kV (air) IEC/EN 61000-4-2
HF irradiation	
80 MHz ... 1 GHz:	20 V / m IEC/EN 61000-4-3
1 GHz ... 2 GHz:	20 V / m IEC/EN 61000-4-3
2 GHz ... 2.7 GHz:	1 V / m IEC/EN 61000-4-3
Fast transients:	4 kV IEC/EN 61000-4-4
Surge voltages	
Between	
wires for power supply:	1 kV IEC/EN 61000-4-5
Between wire and ground:	2 kV IEC/EN 61000-4-5
HF-wire guided:	30 V IEC/EN 61000-4-6
Interference suppression:	Limit value class B EN 55011
Degree of protection	
Housing:	IP 40 IEC/EN 60529
Terminals:	IP 20 IEC/EN 60529
Housing:	Thermoplastic with V0 behaviour according to UL subject 94
Vibration resistance:	Amplitude 0.35 mm, frequency 10 ... 55 Hz, IEC/EN 60068-2-6 20 / 060 / 04 IEC/EN 60068-1
Climate resistance:	
Terminal designation:	EN 50005
Wire connection:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded ferruled DIN 46228-1/-2/-3/-4
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60999-1
Mounting:	DIN rail mounting (IEC/EN 60715) or screw mounting M4, 90 mm hole pattern, with additional clip available as accessory
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	
• De-energized on trip	
• Output:	1 changeover contact
• Nominal voltage U_N :	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_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

Accessories

ET 4086-0-2:	Additional clip for screw mounting Article number: 0046578
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