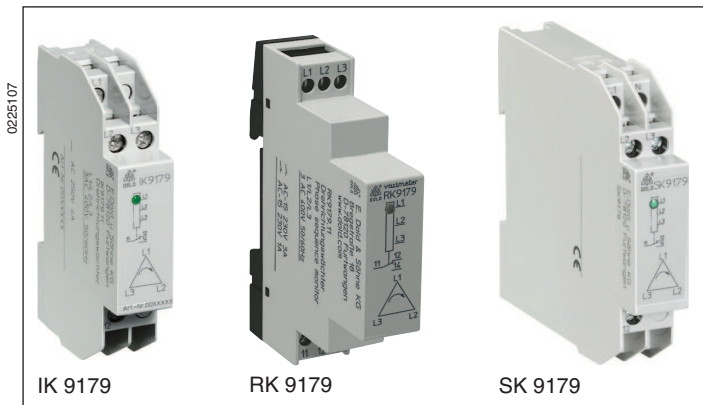


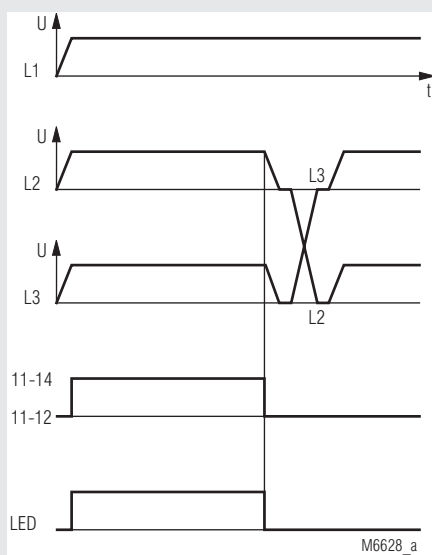
## VARIMETER

### Phase Sequence Monitor (Phase Sequence Relay) IK 9179, RK 9179, SK 9179



- According to IEC/EN 60255-1
- Detection of phase sequence in 3-phase systems
- Without auxiliary voltage
- Closed circuit operation
- LED indicator for phase sequence
- Output 1 changeover contact
- Devices available in 2 enclosure versions:
  - I- and R-model, e.g. IK 9169 with depth 61 mm or RK 9169 with depth 71 mm with terminals at the bottom for installation systems and industrial distribution systems according to DIN 43 880
  - S-model, e.g. SK 9169 depth 100 mm, with terminals at the top for cabinets with mounting plate and cable duct
- Width 17.5 mm

### Function Diagram



### Approvals and Markings



### Applications

Detection of phase sequence in 3-phase systems. Disable start of motors with fixed direction of rotation in the case of wrong phase sequence

### Indicators

LED: on, when output relay active (contact 11-14 closed)

### Technical Data

#### Input

**Nominal voltage  $U_N$ :** 3 AC 400 V  
**Voltage range:** 0.8 ... 1.1  $U_N$   
**Nominal frequency:** 50 / 60 Hz  
**Frequency range:** 45 ... 65 Hz

#### Output

#### Contact:

IK 9179.11, RK 9169, SK 9179: 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 life** IEC/EN 60 947-5-1

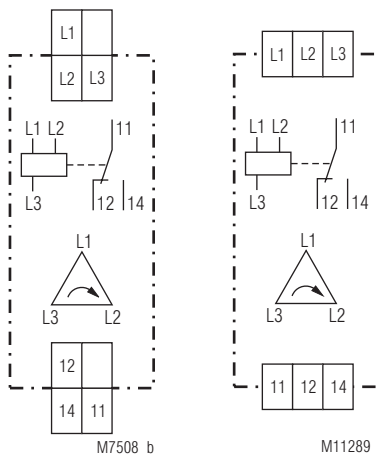
to AC 15 at 1 A, AC 230 V: typ. 300 000 switching cycles

#### 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 9179, SK 9179

RK 9179

### Connection Terminals

Terminal designation	Signal designation
L1, L2, L3	Measuring input or. supply voltage
11, 12, 14	Changeover contact

## Technical Data

### General Data

<b>Operating mode:</b>	Continuous operation	
<b>Temperature range:</b>	- 20 ... + 60°C	
<b>Clearance and creepage distances</b>		
rated impulse voltage / pollution degree		
(between L1-L2-L3):	4 kV / 2	IEC 60 664-1
input/output:	4 kV / 2	IEC 60 664-1

### EMC

Electrostatic discharge:	8 kV (air)	IEC/EN 61 000-4-2
HF irradiation		
80 MHz ... 2,7 GHz:	10 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:	2 kV	IEC/EN 61 000-4-5
between wire and ground:	4 kV	IEC/EN 61 000-4-5
HF wire guided:	20 V	IEC/EN 61 000-4-6
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 IEC/EN 60 068-2-6 frequency 10 ... 55 Hz

The 1 MHz slow damped oscillator test according to IEC/EN 60255-1 has not been made.

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

**Terminal designation:** EN 50 005

**Wire connection:** DIN 46 228-1/-2/-3/-4

### IK 9179, SK 9179

**Cross section:** 2 x 0,6 ... 2,5 mm<sup>2</sup> solid or 2 x 0,28 ... 1,5 mm<sup>2</sup> stranded wire with and without ferrules

**Stripping length:** 10 mm

**Leiterbefestigung:** Plus-Minus-terminal screws M3,5 with self-lifting clamping piece

**Fixing torque:** 0.8 Nm

### RK 9179

**Cross section:** 0,34 ... 2,5 mm<sup>2</sup> solid or 0,34 ... 2,5 mm<sup>2</sup> stranded wire with and without ferrules

**Stripping length:** 7 mm

**Wire fixing:** Captive slotted screw / M2,5

**Fixing torque:** 0.5 Nm

**Mounting:** DIN rail IEC/EN 60 715

### Weight

IK 9179: 60 g

RK 9179: 74 g

SK 9179: 77 g

## Dimensions

### Width x height x depth

IK 9179: 17.5 x 90 x 61 mm

RK 9179: 17.5 x 90 x 71 mm

SK 9179: 17.5 x 90 x 100 mm

## Standard Types

IK 9179.11	3 AC 400 V	50/60 Hz
Article number:	0049182	
RK 9179.11	3 AC 400 V	50/60 Hz
Article number:	0060282	
SK 9179.11	3 AC 400 V	50/60 Hz
Article number:	0051576	
• Output:	1 changeover contact	
• Nominal voltage U <sub>N</sub> :	3 AC 400 V	
• Width:	17.5 mm	