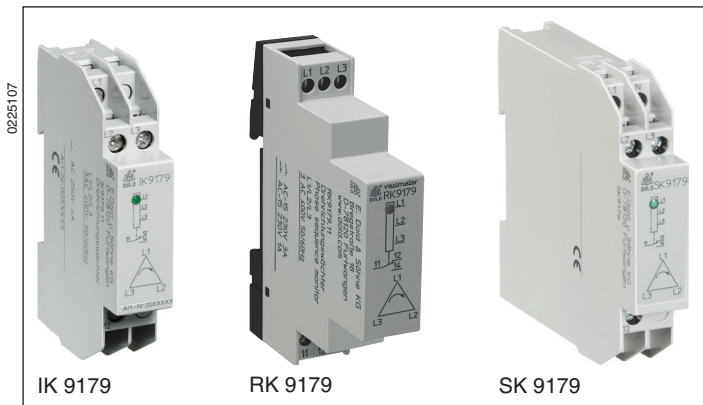


## VARIMETER

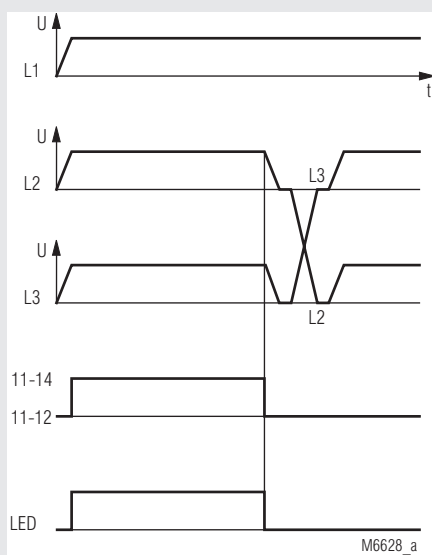
Phase Sequence Monitor (Phase Sequence Relay)  
IK 9179, RK 9179, SK 9179

Translation  
of the original instructions



- 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 43880
  - 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 60947-5-1

NC contact: 1 A / AC 230 V IEC/EN 60947-5-1

Electrical life IEC/EN 60947-5-1

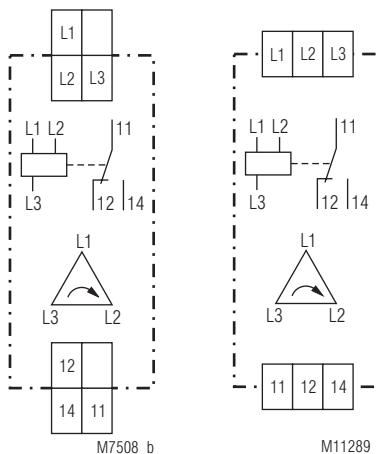
To AC 15 at 1 A, AC 230 V: Typ. 300 000 switching cycles

#### Short-circuit strength

max. fuse rating: 4 A gG / gL IEC/EN 60947-5-1

Mechanical life:  $\geq 30 \times 10^6$  switching cycles

### Circuit Diagram



IK 9179, SK 9179

RK 9179

### Connection Terminals

Terminal designation	Signal description
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 60664-1
input/output:	4 kV / 2	IEC 60664-1
<b>EMC</b>		
Electrostatic discharge:	8 kV (air)	IEC/EN 61000-4-2
HF irradiation		
80 MHz ... 2,7 GHz:	10 V/m	IEC/EN 61000-4-3
Fast transients:	4 kV	IEC/EN 61000-4-4
Surge voltages		
Between		
wires for power supply:	2 kV	IEC/EN 61000-4-5
Between wire and ground:	4 kV	IEC/EN 61000-4-5
HF wire guided:	20 V	IEC/EN 61000-4-6
Interference suppression:	Limit value class B	EN 55011
<b>Degree of protection</b>		
Housing:	IP 40	IEC/EN 60529
Terminals:	IP 20	IEC/EN 60529
<b>Housing:</b>	Thermoplastic with V0 behaviour according to UL subject 94	
<b>Vibration resistance:</b>	Amplitude 0.35 mm IEC/EN 60068-2-6 frequency 10 ... 55 Hz	

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

<b>Climate resistance:</b>	20 / 060 / 04	IEC/EN 60 068-1
<b>Terminal designation:</b>	EN 50005	
<b>Wire connection:</b>	DIN 46228-1/-2/-3/-4	
<b>IK 9179, SK 9179</b>		
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	
<b>RK 9179</b>		
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	
<b>Wire fixing:</b>	Captive slotted screw / M2,5	
<b>Fixing torque:</b>	0.5 Nm	
<b>Mounting:</b>	DIN rail	IEC/EN 60715
<b>Weight</b>		
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	