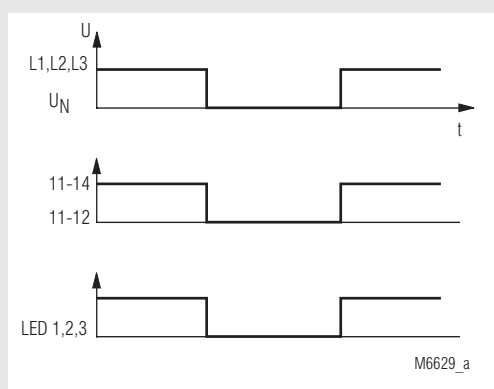


## Phase monitor IK 9169, RK 9169, SK 9169 varimeter



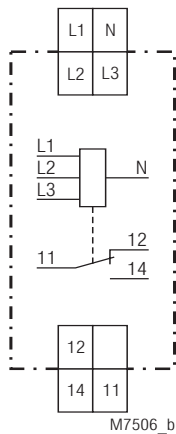
- According to IEC/EN 60 255, DIN VDE 0435-303
- Detection of phase failure in 3-phase systems
- Single phase connection possible
- Closed circuit operation
- Independent of phase sequence
- LED indicator for each phase
- Output 1 changeover contact
- **Devices available in 2 enclosure versions:**
  - I- and R-versions, 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-version, 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



M6629\_a

### Circuit diagram



M7506\_b

IK 9169, RK 9169, SK 9169

### Approvals and marking



### Applications

Detection of phase failure in 3-phase systems

### Indicators

LED L1, L2, L3: on, when phase is present

### Notes

On broken or disconnected neutral the LEDs are off although the 3 phases are present. In this case measurement is necessary to prove that no voltage is present.

### Technical data

#### Input

**Nominal voltage  $U_N$ :** 3/N AC 380 ... 415 / 220 ... 240 V  
**Voltage range:** 0,8 ... 1,1  $U_N$   
**Nominal frequency:** 50 / 60 Hz  
**Frequency range:** 45 ... 65 Hz  
**Response value:** 0,7  $U_N \pm 10 \%$

#### Output

##### Contact

IK 9169, RK 9169, SK 9169: 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**  
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

### General data

**Operating mode:** Continuous operation

**Temperature range:** -20 ... +60°C

#### Clearance and creepage distances

overvoltage category /

contamination level

(between L1-L2-L3-N): 4 kV / 2

IEC 60 664-1

input / output: 4 kV / 2

IEC 60 664-1

## Technical data

### 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:	2 kV	IEC/EN 61 000-4-5
between wire and ground:	4 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 mm<sup>2</sup> solid or  
2 x 1,5 mm<sup>2</sup> stranded ferruled  
DIN 46 228-1/-2/-3/-4

**Wire fixing:** Flat terminals with self-lifting  
clamping piece IEC/EN 60 999-1  
DIN rail IEC/EN 60 715

### Mounting:

**Weight**

IK 9169:	60 g
RK 9169:	75 g
SK 9169:	80 g

## Dimensions

### Width x height x depth

IK 9169:	17,5 x 90 x 59 mm
RK 9169:	17,5 x 90 x 71 mm
SK 9169:	17,5 x 90 x 98 mm

## Standard type

IK 9169.11	3/N AC 380 ... 415 / 220 ... 240 V	50/60 Hz
Article number:	0049177	
RK 9169.11	3/N AC 380 ... 415 / 220 ... 240 V	50/60 Hz
Article number:	0060316	
SK 9169.11	3/N AC 380 ... 415 / 220 ... 240 V	50/60Hz
Article number:	0054713	
• Output:	1 changeover contact	
• Nominal voltage U <sub>N</sub> :	3/N AC 380 ... 415 / 220 ... 240 V	
• Width:	17,5 mm	