

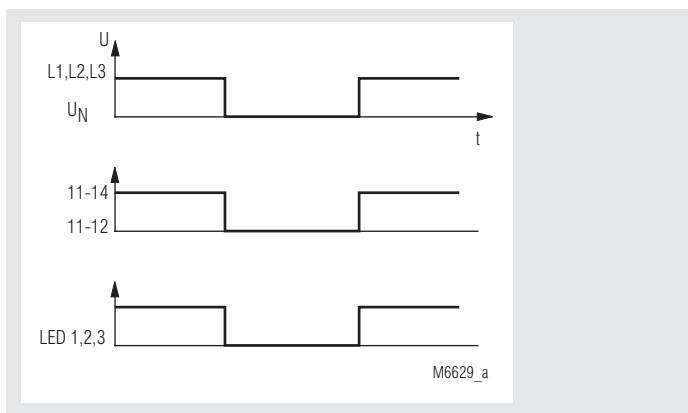
## VARIMETER Phase Monitor IK 9169, RK 9169, SK 9169



0225117

- 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 43880
  - 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

### Approvals and Marking



### Applications

Detection of phase failure in 3-phase systems

### Indicators

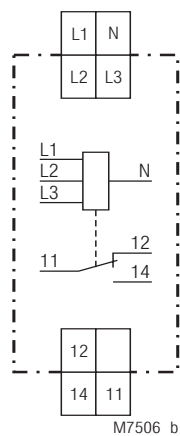
LED L1, L2, L3: on, when phase is present

### 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.

### Circuit Diagram



M7506\_b

IK 9169, RK 9169, SK 9169

### 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

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

## Technical Data

### General Data

<b>Operating mode:</b>	Continuous operation	
<b>Temperature range:</b>	- 20 ... + 60°C	
<b>Clearance and creepage distances</b>		
rated impuls voltage / pollution degree		
(between L1-L2-L3-N):	4 kV / 2	IEC 60 664-1
input / output:	4 kV / 2	IEC 60 664-1
<b>EMC</b>		
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
<b>Degree of protection</b>		
Housing:	IP 40	IEC/EN 60 529
Terminals:	IP 20	IEC/EN 60 529
<b>Housing:</b>	Thermoplastic with V0 behaviour according to UL subject 94	
<b>Vibration resistance:</b>	Amplitude 0.35 mm frequency 10 ... 55 Hz IEC/EN 60 068-2-6	
<b>Climate resistance:</b>	20 / 060 / 04	IEC/EN 60 068-1
<b>Terminal designation:</b>	EN 50 005	
<b>Wire connection:</b>	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	
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1	
<b>Mounting:</b>	DIN rail IEC/EN 60 715	
<b>Weight</b>		
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 Types

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	