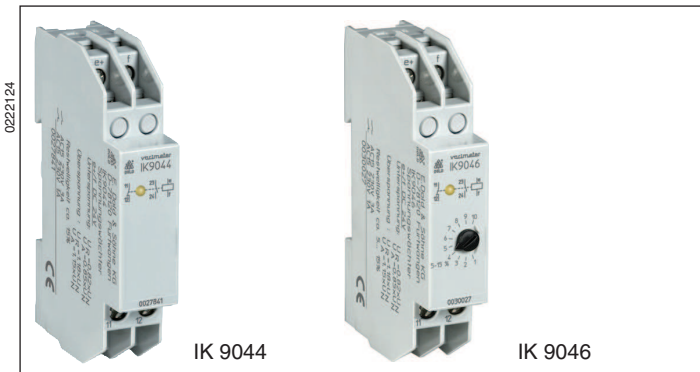
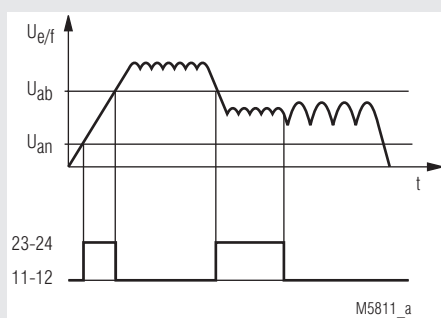


## VARIMETER Voltage Monitor IK 9044, IK 9046



- According to IEC/EN 60 255-1
- For monitoring direct current voltage supply systems to detect undervoltage, overvoltage and residual ripple
- For DC 24 V
- IK 9046 with adjustable residual ripple
- Width 17.5 mm

### Function Diagram



### Approvals and Markings



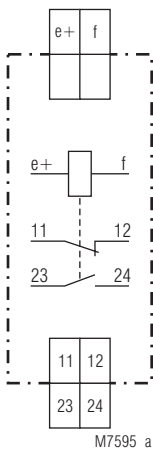
### Application

For monitoring direct current voltage supply systems, e.g. of PLC (three-phase bridges), automobile industry, welding.

### Indicator

Yellow LED: on, when there are no faults in the supply system

### Circuit Diagram



IK 9044

### Technical Data

#### Input

**Nominal voltage  $U_N$ :** DC 24 V  
**Maximum overload:** DC 33 V permanent  
 DC 35 V 0.5 s  
 DC 45 V 10 ms  
 0.6 W

#### Nominal consumption:

**Overvoltage**  
 setting value:  $0.82 \times U_N$

**Undervoltage**  
 setting value:  $1.18 \times U_N$

**Hysteresis:**  $< 4 \% \times U_N$

#### Residual ripple actuation

IK 9044: approx. 15 %  
 IK 9046: 0 ... 15 %, adjustable

#### Output

**Contacts:** 1 NC contact, 1 NO contact  
**Thermal current  $I_{th}$ :** 4 A

#### Switching capacity

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  
 AC 15 at 1 A, AC 230 V:  $5 \times 10^5$  switching cycles

**Short circuit strength**  
**max. fuse rating:** 4 AgL IEC/EN 60 947-5-1

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

### Connection Terminals

Terminal designation	Signal designation
e+, f	Measuring- and supply voltage DC 24 V
11, 12	NC contact
23, 24	NO contact

## Technical Data

### General Data

<b>Operating mode:</b>	Continuous operation	
<b>Temperature range</b>		
Operation:	- 25 ... + 70 °C	
Storage:	- 25 ... + 85 °C	
<b>Altitude:</b>	< 2,000 m	
<b>Clearance and creepage distances</b>		
rated impulse voltage/ pollution degree:	4 kV / 2 (basis insulation) IEC 60 664-1	
<b>EMC</b>		
Electrostatic discharge:	6 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:	2 kV	IEC/EN 61 000-4-4
Surge voltages		
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>	25 / 070 / 04 IEC/EN 60 068-1	
<b>Terminal designation:</b>	EN 50 005	
<b>Wire connection:</b>		
Cross section:	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	
Stripping length:	10 mm	
<b>Wire fixing:</b>	Flat terminals with self-lifting clamping piece IEC/EN 60 999-1	
<b>Fixing torque:</b>	0.8 Nm	
<b>Mounting:</b>	DIN rail IEC/EN 60 715 or screw attachment	
<b>Weight:</b>	67 g	

### Dimensions

**Width x height x depth:** 17.5 x 90 x 58 mm

### Standard Type

#### IK 9044 DC 24 V

Article number:	0027841
• Residual ripple actuation:	approx. 15 %
• Nominal voltage $U_N$ :	DC 24 V
• Width:	17.5 mm

#### IK 9046 DC 24 V

Article number:	0030027
• Residual ripple actuation:	0 ... 15 %, adjustable
• Nominal voltage $U_N$ :	DC 24 V
• Width:	17.5 mm

## Connection Example

