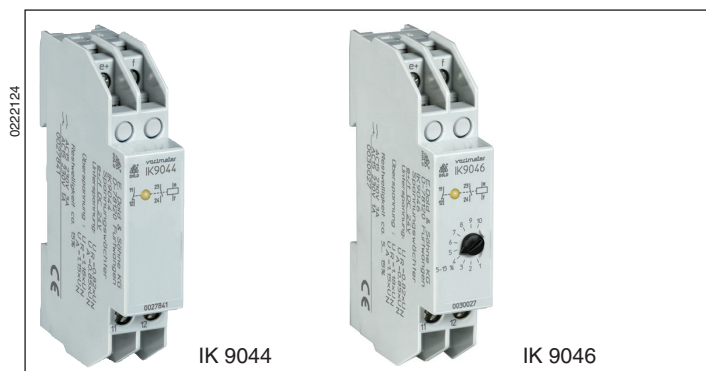
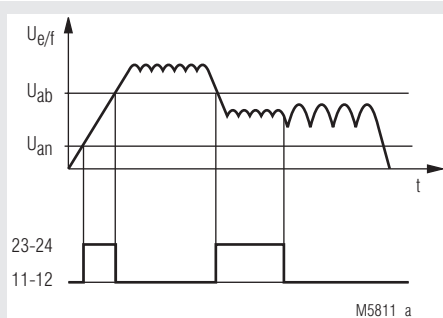


VARIMETER Voltage Monitor IK 9044, IK 9046



- According to IEC/EN 60255-1
- 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



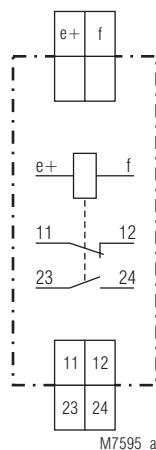
Application

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

Connection Terminals

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

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
Nominal consumption:	0.6 W

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: 5 ... 15 %, adjustable

Output

Contacts:	1 NC contact, 1 NO contact
Thermal current I_{th}:	4 A (see quadratic total current limit curve)

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

at 1 A, AC 230 V $\cos \varphi = 1$: 5×10^5 switching cycles

Short circuit strength

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

Mechanical life: 30×10^6 switching cycles

General Data

Operating mode: Continuous operation

Temperature range

Operation: - 20 ... + 70 °C

Storage: - 20 ... + 70 °C

Altitude: < 2000 m

Clearance and creepage distances

rated impulse voltage/
pollution degree: 4 kV / 2 IEC 60664-1

EMC

Electrostatic discharge: 6 kV (air) IEC/EN 61000-4-2

HF irradiation 80 MHz ... 2.7 GHz: 10 V / m IEC/EN 61000-4-3

Fast transients: 2 kV IEC/EN 61000-4-4

Surge voltages between

wires for power supply: 1 kV IEC/EN 61000-4-5

between wire and ground: 2 kV IEC/EN 61000-4-5

HF wire guided: 10 V IEC/EN 61000-4-6

Interference suppression: Limit value class B EN 55011

Degree of protection

Housing: IP 40 IEC/EN 60529

Terminals: IP 20 IEC/EN 60529

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

25 / 070 / 04 IEC/EN 60 068-1

Climate resistance: EN 50005

Terminal designation:

Wire connection:

Cross section: $2 \times 2.5 \text{ mm}^2$ solid or $2 \times 1.5 \text{ mm}^2$ stranded ferruled DIN 46228-1/-2/-3/-4

10 mm

Stripping length: Flat terminals with self-lifting clamping piece IEC/EN 60999-1

Wire fixing: 0.8 Nm

Fixing torque: DIN rail IEC/EN 60715

Mounting: or screw attachment

Weight: 67 g

Dimensions

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

Standard Type

Standard Type

IK 9044 DC 24 V

Article number: 0027841

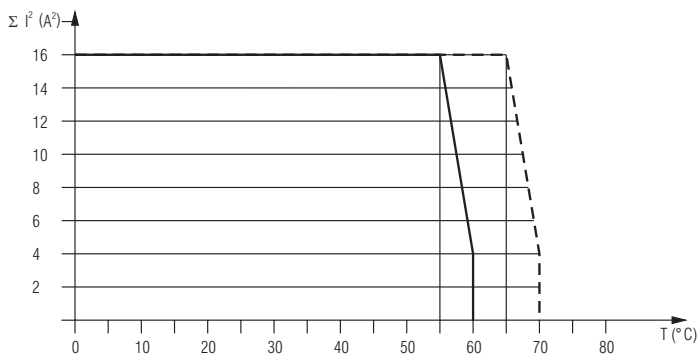
- Residual ripple actuation: approx. 15 %, fixed
- Output: 1 NC contact, 1 NO contact
- Nominal voltage U_N : DC 24 V
- Width: 17.5 mm

IK 9046 DC 24 V

Article number: 0030027

- Residual ripple actuation: 5 ... 15 %, adjustable
- Output: 1 NC contact, 1 NO contact
- Nominal voltage U_N : DC 24 V
- Width: 17.5 mm

Characteristic



--- device mounted away from heat generation components.

— device mounted without distance heated by devices with same load.

Connection Example

