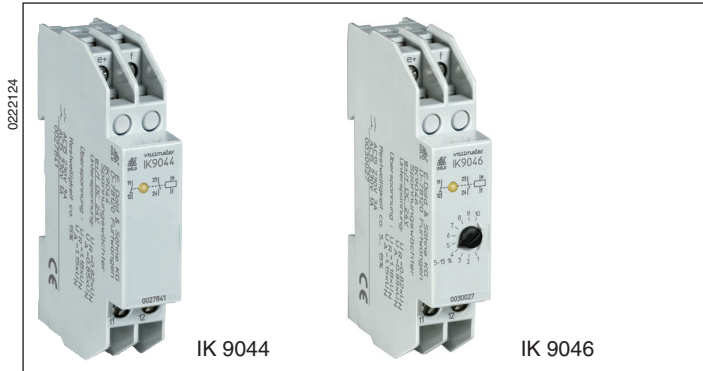


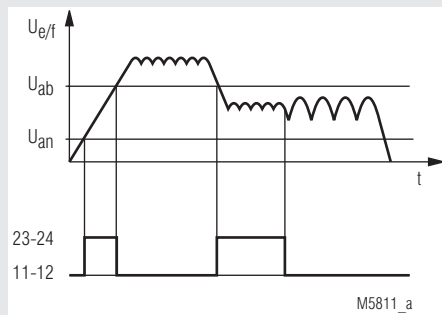
VARIMETER Voltage Monitor IK 9044, IK 9046

Translation
of the original instructions



- 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



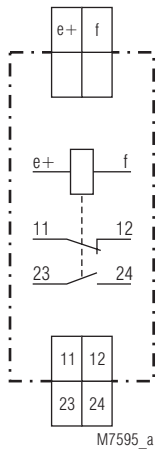
Application

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 1A, 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 60068-2-6
Climate resistance:	25 / 070 / 04 IEC/EN 60068-1
Terminal designation:	EN 50005
Wire connection:	
Cross section:	2 x 2.5 mm ² solid or 2 x 1.5 mm ² stranded ferruled DIN 46228-1/-2/-3/-4
Stripping length:	10 mm
Wire fixing:	Flat terminals with self-lifting clamping piece IEC/EN 60999-1
Fixing torque:	0.8 Nm
Mounting:	DIN rail IEC/EN 60715 or screw attachment
Weight:	67 g

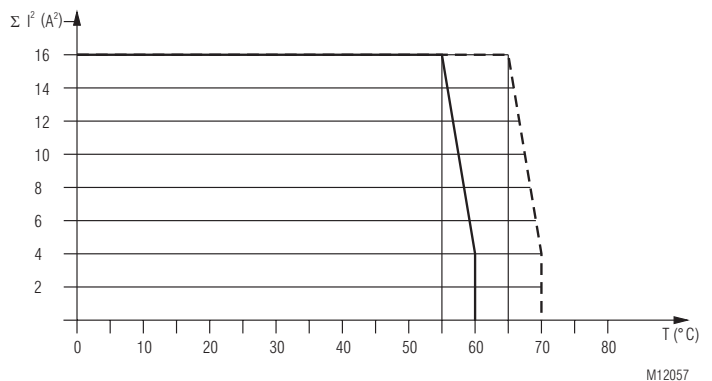
Dimensions

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



Connection Example

