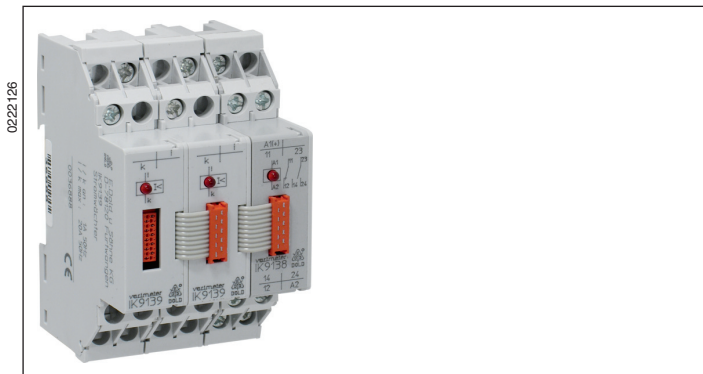
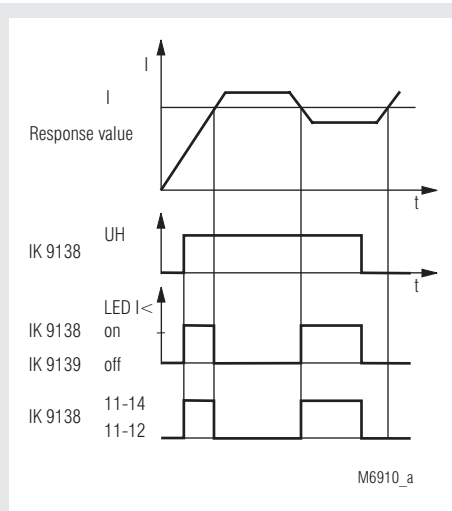


VARIMETER Current Monitoring System IK 9138, IK 9139



- According to IEC/EN 60 255, DIN VDE 0435-303
- Modular system, extension possible
- For measuring currents of 0.175 to 16 A
- Small amount of wiring required
- Compact design
- LED display
- Width 17.5 mm

Function Diagram



Approvals and Marking



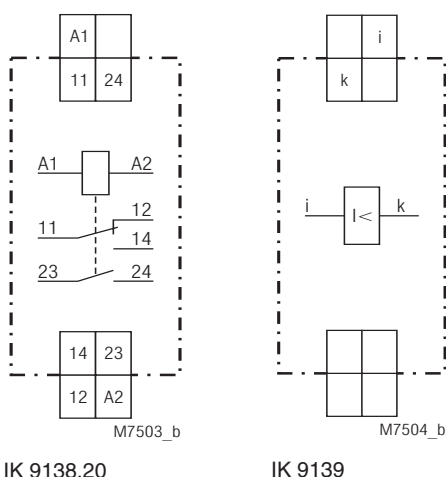
Application

- For monitoring the current consumption levels of different electricity consumers
- For identifying cable breakages and burned-out heating cartridges

Function

The IK 9138 / IK 9139 varimeter is a modular current monitoring system that consists of a reporting unit IK 9138 and 1 to 30 current monitors IK 9139. This means that the current consumption levels of different electricity consumers can be monitored. If one of the currents that is being monitored drops below the fixed current setting, the LEDs on the relevant current monitor and the reporting unit go on. The central reporting relay in the reporting unit is actuated. The reporting unit needs to be connected to an auxiliary voltage supply. The current monitors obtain their supply voltage from the reporting unit via a plug-in bus line.

Circuit Diagrams



Indicator

LED: on, when the current drops below the setting

Technical Data

Input

Auxiliary voltage U_H : AC/DC 24 V
Voltage range
 at < 10% residual ripple: AC 0.8 ... 1.1 U_H
 DC 0.9 ... 1.2 U_H
 at 10 ... 48% residual ripple: DC 0.8 ... 1.1 U_H
Nominal consumption: 0.5 W + n x 0.45 W
 (n = number of IK 9139)
 15 mA + n x 15 mA via IK 9138
Current consumption: 50 Hz
Nominal frequency: ± 5 %
Frequency range:
Switching point (fixed):

Switching points (available)*	Maximum overload, permanent	Maximum overload, 2 s
0.175 A	5 A	7.5 A
0.75 A	20 A	150 A
1 A	20 A	150 A
5 A	20 A	150 A
10 A	40 A	150 A
16 A	40 A	150 A

* Other switching points possible on request

Hysteresis:

< 10 %

Technical Data

Output

Contacts

IK 9138.20: 1 changeover contact, 1 NO contact
5 A

Thermal current I_{th} :

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 IEC/EN 60 947-5-1

to AC 15 at 3 A, AC 230 V: 5 x 10⁵ switching cycles

Short circuit strength

max. fuse rating: 6 A gL IEC/EN 60 947-5-1

Mechanical life: 20 x 10⁶ switching cycles

General Data

Operating mode: Continuous operation

Temperature range: - 20 ... + 60°C

Clearance and creepage distances

rated impuls voltage/

pollution degree

Input/output: 4 kV / 2 IEC 60 664-1

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: 1 kV IEC/EN 61 000-4-5

between wire and ground: 2 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

20 / 060 / 04 IEC/EN 60 068-1

Climate resistance:

EN 50 005

Terminal designation:

Wire connection:

2 x 2.5 mm² solid or

2 x 1.5 mm² 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 9138: 70 g

IK 9139: 52 g

Dimensions

Width x height x depth: 17.5 x 89 x 58 mm

Standard Types

IK 9138.20 AC/DC 24 V

Article number: 0036887

• Output: 1 changeover contact, 1 NO contact

• Auxiliary voltage U_H : AC/DC 24 V

• Width: 17.5 mm

IK 9139 1 A

Article number: 0036888

• Switching point: 1 A

• Width: 17.5 mm

Ordering example

IK 9138 .20 AC/DC 24 V

Nominal voltage

Contacts

Type

IK 9139 AC 175 mA

Response value

Type