



Monitoring relays - KAPPA series

Multifunction

2 change over contacts

Plug-in housing

Width 38mm



## Technical data

### 1. Functions

d.c. voltage monitoring in 1-phase mains with adjustable thresholds and adjustable hysteresis.

UNDER	Undervoltage monitoring
WIN	Monitoring the window between Min and Max

### 2. Time ranges

	Adjustment range
Start-up suppression time (Start):	-
Tripping delay (Delay):	-

### 3. Indicators

Green LED ON:	indication of supply voltage
Red LED ON/OFF:	indication of failure of the corresponding threshold
Yellow LED ON/OFF:	indication of relay output

### 4. Mechanical design

Self-extinguishing plastic housing, IP rating IP40  
 Mounted on screw terminal socket 11-pols in accordance with IEC 60067-1-18a (type R11x or PF-113BE/M)  
 Mounting position: any

### 5. Input circuit

Supply voltage:	(= measuring voltage)
Pins:	S5-S7 / E(+)-F
Rated voltage $U_N$ :	see table ordering information or printing on the unit
Tolerance:	-25% to +30% of $U_N$
Rated consumption:	8VA (2W)
Rated frequency:	a.c. 48 to 63Hz
Duration of operation:	100%
Reset time:	500ms
Hold-up time:	-
Drop-out voltage:	>20% of supply voltage
Oversvoltage category:	III (in accordance with IEC 60664-1)
Rated surge voltage:	4kV

### 6. Output circuit

2 potential free change over contacts	
Rated voltage:	250V a.c.
Switching capacity:	1250VA (5A / 250V)
Fusing:	5A fast acting
Mechanical life:	20 x 10 <sup>6</sup> operations
Electrical life:	2 x 10 <sup>5</sup> operations at 1000VA resistive load
Switching frequency:	max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1)
Oversvoltage capacity:	III (in accordance with IEC 60664-1)
Rated surge voltage:	4kV

### 7. Measuring circuit

Measuring variable:	d.c.
Measuring input:	(= supply voltage)
Pins:	S5-S7 / E(+)-F

Overload capacity: determined by tolerance specified for supply voltage

Input resistance: -

Switching threshold  $U_S$ :

Max: 80% to 130% of  $U_N$

Min: 75% to 125% of  $U_N$

Hysteresis H: adjustable

Oversvoltage category: III (in accordance with IEC 60664-1)

Rated surge voltage: 4kV

### 8. Accuracy

Base accuracy: ±5% of rated value

Adjustment accuracy: ±5% of rated value

Repetition accuracy: ≤2% of rated value

Voltage influence: -

Temperature influence: 0,05% / °C

### 9. Ambient conditions

Ambient temperature: -25 to +55°C

Storage temperature: -25 to +70°C

Transport temperature: -25 to +70°C

Relative humidity: 15% to 85%

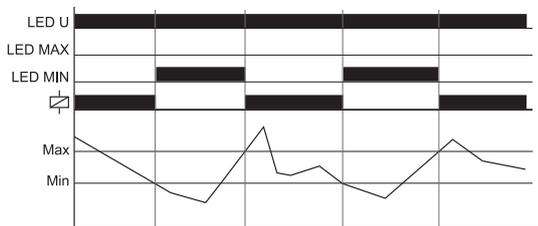
(in accordance with IEC 60721-3-3 class 3K3)

Pollution degree: 2 (in accordance with IEC 60664-1)

## Functions

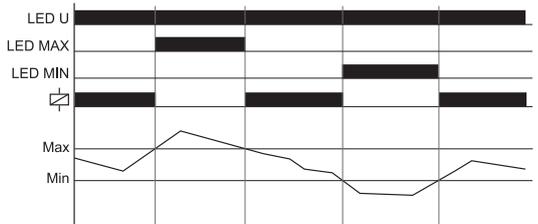
### Undervoltage monitoring (UNDER)

When the supply voltage U is applied, the output relay R switches into on-position, if the measured voltage is beyond the Min-value. When the measured voltage falls below the Min-value, the output relay R switches into off-position. The output relay R switches into on-position again, if the voltage exceeds the Max-value.

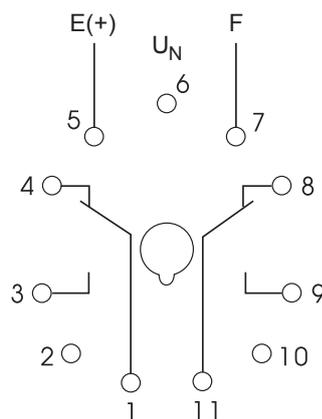


### Window function (WIN)

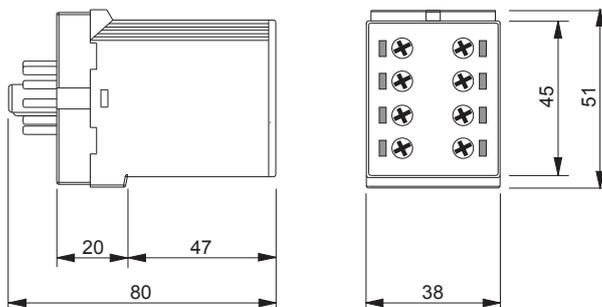
When the supply voltage U is applied, the output relay R switches into on-position, if the measured voltage is within the adjusted window. When the measured voltage left the window between Min and Max, the output relay R switches into off-position. The output relay R switches into on-position again, if the voltage re-enter the adjusted window.



## Connections



## Dimensions



## Ordering Informations

Types	Rated voltage $U_N$	Functions	Switching thresholds $I_s$	Hysteresis	Part. No.
K3UM24VDC02	24V d.c.	U, W	Max: 80% to 130% of $I_N$ Min: 75% to 125% of $I_N$	adjustable	1380106