a.c. voltage monitoring in 1-phase mains

K3UM230VAC02

Monitoring relays - KAPPA series

Multifunction

2 change over contacts

Plug-in housing

Width 38mm

Read and understand these instructions before installing, operating or maintaining the equipment.

Danger!
Never carry out work on live parts! Danger of fatal injury! The product must not be used in case of obvious damage. To be installed by an authorized person.

Technical data

1. Functions
a.c. voltage monitoring in 1-phase mains with adjustable thresholds, and 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 U ON/OFF:	indication of supply voltage
Red LED Min/Max 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:	-30% to +20% of U_N
Rated consumption:	8VA (0.8W)
Rated frequency:	a.c. 48 to 63Hz
Duration of operation:	100%
Reset time:	500ms
Wave form:	a.c. Sinus
Hold-up time:	-
Drop-out voltage:	determined by undervoltage detection (see measured circuit)
Overvoltage 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 10^6 operations
Electrical life:	2 x 10^5 operations at 1000VA resistive load
Switching frequency:	max. 6/min at 1000VA resistive load (in accordance with IEC 60947-5-1)
Overvoltage category:	III (in accordance with IEC 60664-1)
Rated surge voltage:	4kV

7. Measuring circuit

Measuring variable:	a.c. Sinus, 48 to 63Hz
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 120% of U_N Min: 70% to 110% of U_N
Hysteresis H:	adjustable
Overvoltage category:	III (in accordance with IEC 60664-1)
Rated surge voltage:	4kV

8. Accuracy

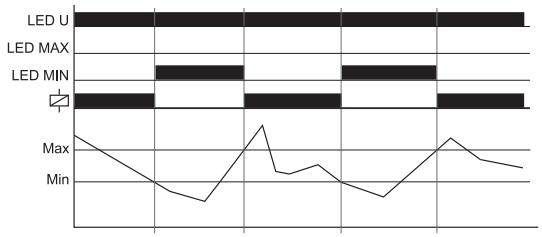
Base accuracy:	±5% of nominal value
Adjustment accuracy:	±5% of nominal value
Repetition accuracy:	≤2% of nominal value
Voltage influence:	-
Temperature influence:	0.05% / °C

9. Ambient conditions

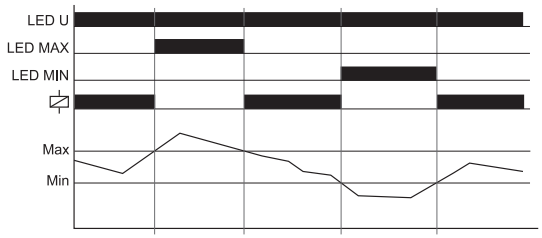
Ambient temperature:	-25 to +55°C
Storage temperature:	-25 to +70°C
Transport temperature:	-25 to +70°C
Relative humidity:	15% to 85% (in accordance with IEC 60721-3-3 class 3K3)
Pollution degree:	2 (in accordance with IEC 60664-1)

Functions

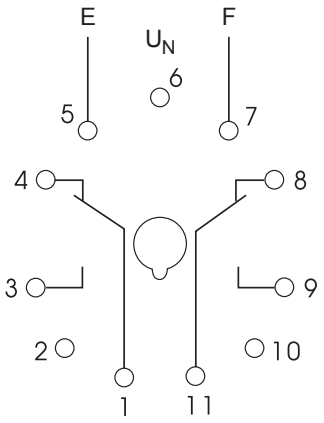
Undervoltage monitoring (UNDER)
When the supply voltage U is applied, the output relay R switches into on-position, if the measured voltage is beyond the Min-value.
When the measured voltage falls below the Min-value the output relay R switches into off-position. The output relay R switches into on-position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



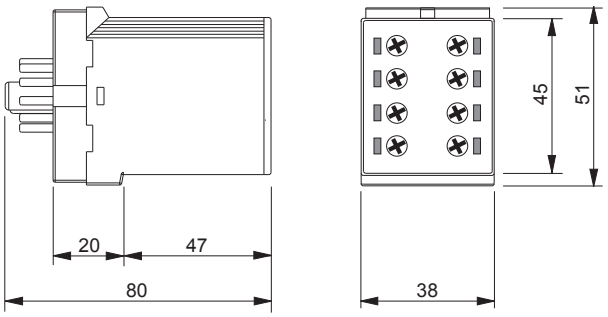
Window function (WIN)
When the supply voltage U is applied, the output relay R switches into on-position, if the measured voltage is within the adjusted window.
When the measured voltage left the window between Min and Max the output relay R switches into off-position. The output relay R switches into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



Connections



Dimensions



Ordering Information

Type	Rated voltage U_N	Functions	Switching thresholds U_S	Hysteresis	Part. No.
K3UM230VAC02	230V a.c.	U, W	Max: 80% to 120% of U_N Min: 70% to 110% of U_N	adjustable	1380107