Current and Voltage Controls 1-Phase Over/Under Voltage Type EUK

- **AC monitoring relay for over/under voltage control (closed circuit)**
- **Measures if power supply is within set limits**
- **Measures on own power supply**
- **3-position rotary switch for selection of measuring range**
- **Measuring range: 24-115-230, ±13% VAC (RMS)**
- **Upper and lower limits separately adjustable**
- **Adjustable time function (0.1-10 s)**
- **Output: 5 A SPDT**
- **For mounting on DIN-rail in accordance with DIN/EN 50 022**
- **45 mm Euronorm housing**
- **LED-indication for power supply ON**
- **Two LED's indicating fault and/or status of the relay output (flashing when timing)**

Product Description

EUK is a single-phase monitoring relay for separate over and under voltage control. Built-in time function 0.1-10 s. Often used in applications where it is essential to monitor that the fluctuation of the delivered power is kept within set limits so that the connected equipment will not be damaged.

Ordering Key

EUK C T23

Housing
Function
Type
Output
Power supply

Type Selection

Mounting	Output	Measuring ranges	Supply: 24/115/230 VAC
For DIN-rail	SPDT	24,115 or 230 VAC	**EUK C T23**

Input Specifications

Input		
Through terminals A1 & A2	Measures on own supply	
Measuring ranges	**Upper level**	**Lower level**
Selectable by rotary switch	-10%-13%	-13%-10%
24 VAC	21.6-27.1 V	20.9-26.4 V
115 VAC	103.5-130 V	100-126.5 V
230 VAC	207-260 V	200-253 V
	measuring range equals rms value of a sinusoidal voltage	
Hysteresis	< 2%	

Output Specifications

Output	SPDT relay	
Rated insulation voltage	250 VAC (contact/elect.)	
Contact ratings (AgCdO)	μ (micro gap)	
Resistive loads	AC 1	5 A, 250 VAC
	DC 1	5 A, 24 VDC
Small inductive loads	AC 15	2 A, 250 VAC
	DC 13	3 A, 24 VDC
Mechanical life	≥ 40 x 10^6 operations	
Electrical life	≥ 10^5 operations (at max. load)	
Operating frequency	≤ 7200 operations/h	
Dielectric strength		
Dielectric voltage	2 kVAC (rms)	
Rated impulse withstand volt.	4 kV (1.2/50 μs)	

Supply Specifications

Power supply	Overvoltage cat. III (IEC 60664) (IEC 60038)
Rated operational voltage	
Through term. A1 & A2 T23	115-230 VAC, ±15% 50/60 Hz, -5/+5 Hz
Through term. A1 &A2 T23 (Interconnec. term. A1 & A3)	24 VAC, ±15% 50/60 Hz, -5/+5 Hz
Voltage interruption	≤ 40 ms
Dielectric voltage	None
Rated impulse withstand voltage	4 kV (1.2/50 μs)
Rated operational current	55 mA @ 24 VAC 25 mA @ 115 VAC 50 mA @ 230 VAC

General Specifications

Power ON delay	< 2 s
Reaction time	τ < 200 ms, worst case reaction time may be up to 5 x τ adjustable delay on release built-in (0.1-10 s)
Accuracy	
Input	±5%
OFF-delay	10 s, -1/+3 s on max. ≤ 0.1 s on min.
Temperature drift	≤ 0.2%/°C (≤ 0.11%/°F)
Indication for	
Power supply ON	LED, green
Output ON	2 LED's, yellow (indicating upper/lower level)
Environment	
Degree of protection	IP 20
Pollution degree	3
Operating temperature	-20° to +50°C (-4° to +122°F)
Storage temperature	-50° to +85°C (-58° to +185°F)
Weight	165 g
Screw terminals	
Tightening torque	Max. 0.5 Nm acc. to IEC 60947
Approvals	UL, CSA

Mode of Operation

EUK measures the rms value of its own sinusoidal power supply.

The relay operates and both yellow LED's are ON as long as the measured voltage is within the upper and lower limits.

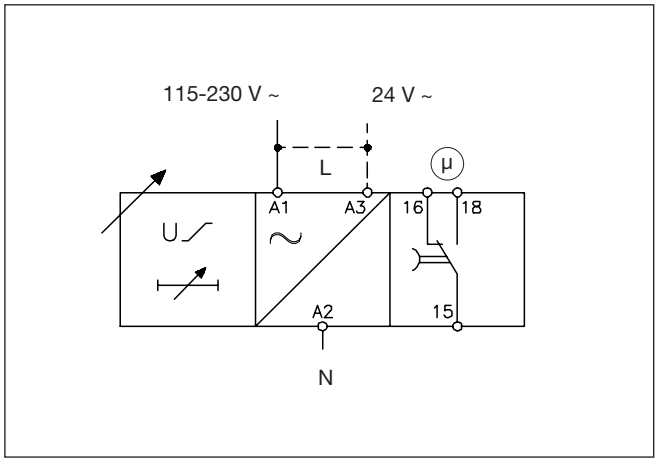
The relay releases after an adjustable time delay of 0.1-10 s when the measured voltage is above the upper level or below the lower level.

The yellow LED indicating upper/lower level is flashing until the time delay has expired.

When the relay has released, the flashing LED is switched OFF.

EUK has a power-up delay of approx. 2 s to prevent the relay from operating if the measured voltage is above/below the set limits when power supply is applied.

Wiring Diagram



Range/Level/Time Setting

Level setting
Upper left knob :
Setting of upper limit on relative scale in % (-10 to +13%).

Lower left knob:
Setting of lower limit on relative scale in % (-13 to +10%).

Range setting
Upper right knob:
Setting of voltage measuring range on rotary switch.

Time setting
Lower right knob:
Setting of time delay on absolute scale (0.1-10 s).

Operation Diagram