



### Product Description

The combined under and overvoltage relay SUA1000Z monitors the voltage in DC networks.

The response values for the under and overvoltage relay are steplessly adjustable. An adjustable time delay allows an alarm delay to suppress short interval voltage fluctuations.

The device is supplied by the network to be monitored.

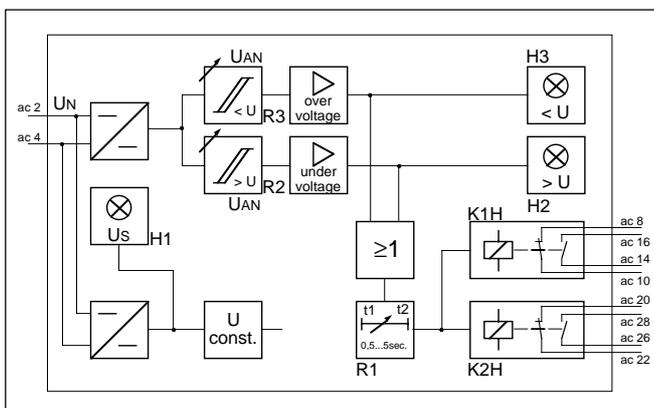
### Function

When operating under normal network voltage  $U_{Nv}$ , the green alarm LED illuminates. In the normal voltage range, the relays K1 and K2 are activated, the contacts ac14-ac16 and ac26-ac28 are closed, the red LED's H2 and H3 do not illuminate. Using potentiometers R2 and R3, adjust the response values for under and overvoltage. A suitable time delay can be preselected acc. to the network conditions via the potentiometer R1. When the response value is reached, an immediate alarm illuminates the red LED H2, resp. H3.

The alarm relays K1 and K2 drop acc. to the set delay time  $t_v$  (N/C operation). This allows unwanted indications to be suppressed; i.e. short term voltage drops. The delay operates even in case of complete network black out.

- built-in operation and alarm LED
- two adjustable response values
- adjustable time delay
- output relay with two change over contacts
- plug-in Euro card module

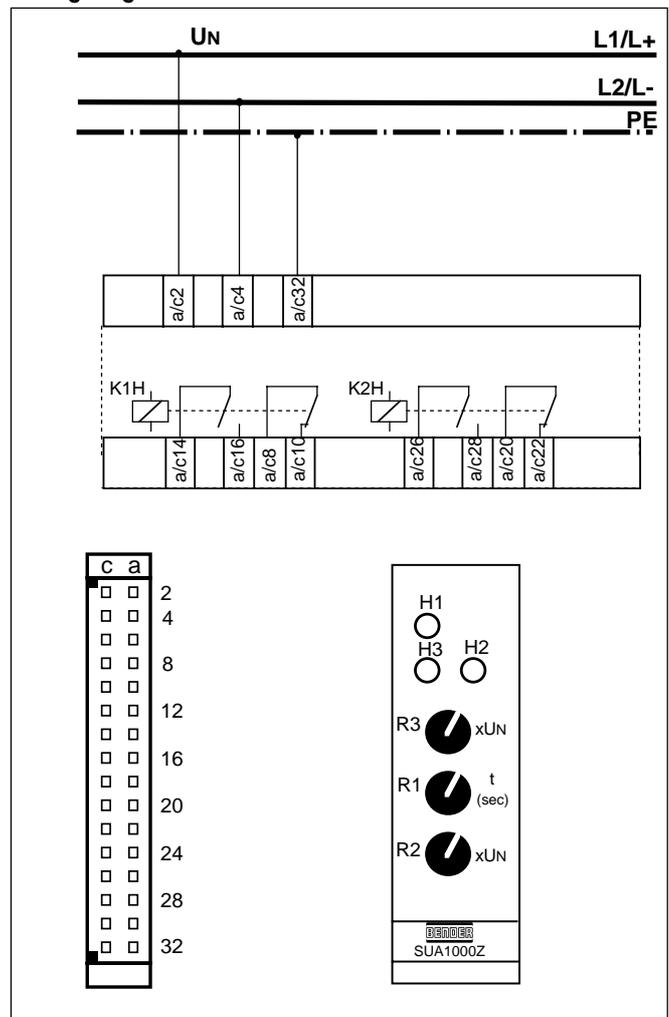
### Function diagram



## Technical data SUA1000Z

<b>Insulation</b>	
Nominal insulation voltage	250 V
Insulation class acc. to DIN VDE 0110	C
Dielectric test	2000 V
Operation class	permanent operation
<b>Network being monitored</b>	
Rated mains voltage $U_N$	DC 220 V
Operating range	0.7 ... 1.3 $U_N$
Self-consumption max.	3 W
<b>Response values (steplessly adjustable)</b>	
Undervoltage.	0.7 ... 0.95 $U_N$
Overvoltage	1.05 ... 1.3 $U_N$
Switching hysteresis (+10°C ... +40°C)	approx. 3% of response value
Time delay	0.5 ... 5 sec
<b>Contact circuit</b>	
Switching components	
Switching capacity max.	330 VA
Rated contact voltage	220 V
Permanent current	1.5 A
Break capacity	
DC 110 V and L/R = 40 ms	0.3 A
Operating principle	N/C operation
<b>Environmental conditions</b>	
Ambient temperature, during operation	-5°C ... +55°C
Storage temperature range	-20°C ... +60°C
Climatic class acc. to DIN 40040	F
<b>General data</b>	
Front plate width	6 TE
Type of connection	plugs according to DIN 41 612; Type C32
Protection class acc. to DIN 40050	
Internal components	IP 00
Weight approx.	200 g
Wiring diagram	Z 320 050

## Wiring diagram



## Legend to wiring diagram

- H1 operation LED, green, "on"
- H2 alarm LED, red: overvoltage
- H3 alarm LED, red: undervoltage
- K1H, K2H output relays with one n.c. contact and one n.o. contact in N/C operation
- R1 potentiometer for adjusting the desired time delay
- R2, R3 potentiometer for adjusting the response value
- $U_N$  connection to the DC network to be monitored

## Ordering details

Type	Rated mains voltage $U_N$	Art. No.
SUA1000Z	UC 48 V	B 932 321
	UC 60 V	B 932 257
	UC 100 V	B 932 229
	UC 110 V	B 932 230
	UC 220 V	B 932 170

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