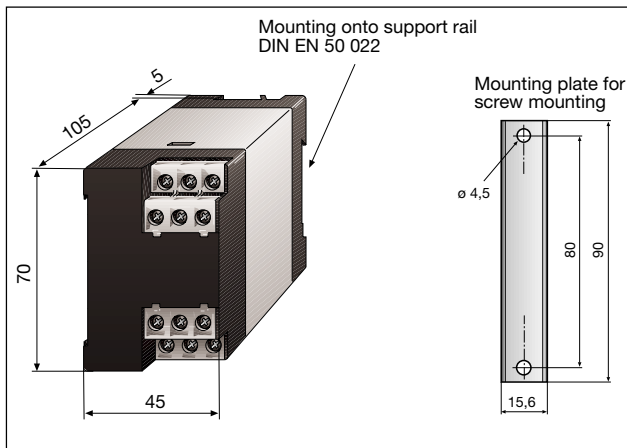




- ⇒ electronic measuring relay
- ⇒ indicates under- or overvoltage
- ⇒ impulse-voltage proof and HF-noise resistant
- ⇒ output relay with two change-over contacts
- ⇒ built-in operation-LED
- ⇒ built-in indication-LED
- ⇒ steplessly adjustable response value
- ⇒ compact 45 mm casing
- ⇒ Response values:
  - 10 ... 30V
  - 20 ... 60 V
  - 50 ... 150 V
  - 120 ... 300 V

### Dimension Diagram

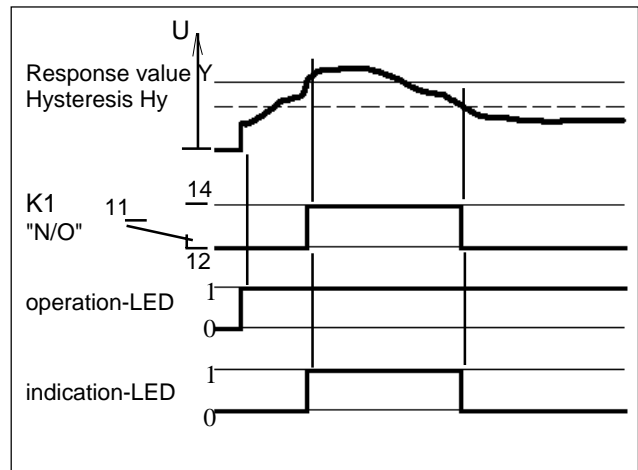


### Function

#### 1. Use as overvoltage relay

At nominal duty the output relay K1 is de-energized and the indication-LED "V>Y" not illuminated.

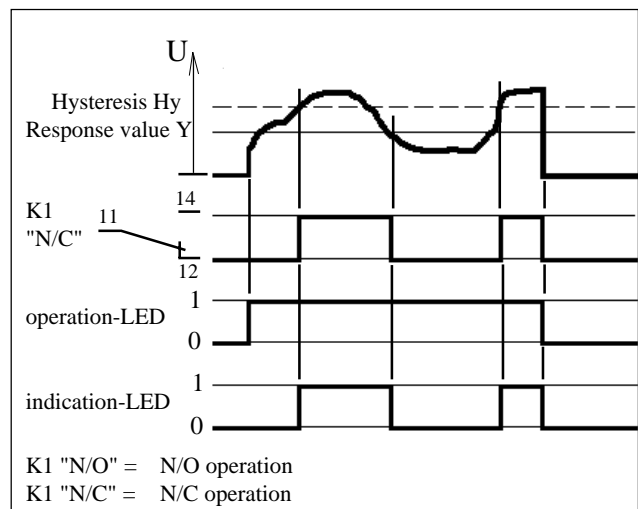
When the system voltage  $U$  exceeds the adjusted response value "Y", the output relay K1 operates and the indication-LED "V>Y" lights up.



#### 2. Use as undervoltage relay

At nominal duty the output relay K1 is energized and the indication-LED "V>Y" is lit up.

When the system voltage  $U$  falls below the adjusted response value "Y", the output relay drops out and the indication-LED "V>Y" extinguishes.



## Technical data SUA143

### Insulation coordination acc. to DIN 664-1:

Rated insulation voltage	AC 250 V
Rated impulse withstand voltage/contamination level	2.5 kV/3
Dielectric test acc. to IEC 255-5	2 kV

### System to be monitored

Nominal voltage of the system $U_n$ max. DC or AC 40...400 Hz	
120 - 300 V	300 V
50 - 150 V	170 V
20 - 60 V	80 V
10 - 30 V	35 V
Self-consumption max.	3 W, 3 VA

### Response values

Response value steplessly adjustable	10-30 V, 20-60 V, 50-150 V or 120-300 V
Repeat accuracy	$\leq \pm 1.5\%$
Temperature influence	$< 0.05\% / ^\circ\text{C}$
Switching hysteresis approx.	3 %
Delay on response	see wiring diagram
Delay on release	approx. 120 ms

### Contact circuit

Switching components	2 change over contacts
Contact class acc. to DIN IEC 255 Teil 0-20	IIB
Rated contact voltage	AC 250 V/DC 300 V
Admissible number of operations	12000 cycles
Limited making capacity	UC 5 A
Limited breaking capacity	
at AC 230 V and $\cos \phi = 0.4$	AC 2 A
at DC 220 V and $L/R = 0.04$ s	DC 0.2 A
Operating principle, overvoltage relay	N/O operation
Undervoltage relay	N/C operation

### Type tests

#### Test of the Electromagnetic Compatibility (EMC):

#### Immunity against electromagnetic

#### Interferences acc. prEN 50082-2:

#### Impulse voltage and electrical disturbance test acc. to IEC 60255:

Impulse voltage test acc. to IEC 255-5	class III
Electrical disturbance test acc. to IEC 255-5	class III

#### Emissions acc. to EN 50081-2:

Emissions acc. to EN 55011/CISPR11	class B <sup>1)</sup>
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#### Mechanical tests:

Shock resistance acc. to IEC 68-2-27	15 g/11 ms
Bumping acc. to IEC 68-2-29	40 g/11 ms
Vibration strength acc. to IEC 68-2-6	10 ... 150 Hz/0.15 mm - 2 g

#### Environmental conditions

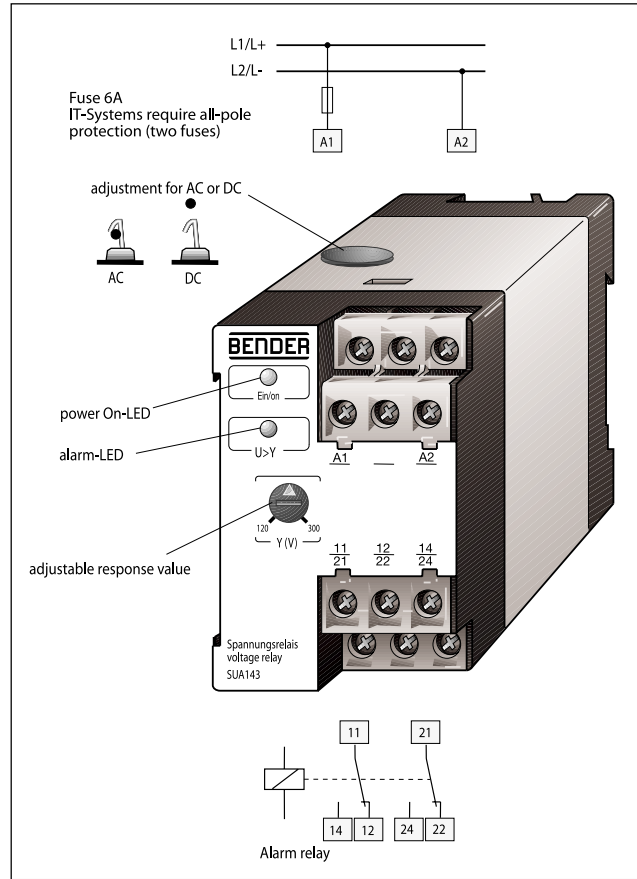
Ambient temperature, during operation	-15°C ... +50°C
Storage temperature range	-20°C ... +70°C
Climatic class acc. to IEC 721	3K5, except condensation and formation of ice

#### General data

Operation class	continuous operation
Mounting position	any position
Type of connection	terminal screws with self-lifting clamp-washers
Wire cross section	
single wire	2 x (1 ... 1.5 mm <sup>2</sup> )
fine braid	2 x (0.75 ... 1.5 mm <sup>2</sup> )
Rapid mounting	according to DIN EN 50022 or screw mounting
Protection class acc. to EN 60529	
Internal components	IP 50
Terminals/with terminal covers	IP 10 / IP 20
Type of casing	X 140
Flammability class	UL94V-0
Weight approx.	170 g

1) Class B devices are suitable for household and industrial use

## Wiring diagram



## Safety instructions



Please check for correct mains voltage!

**Caution**

Electrical equipment shall only be installed by qualified personal in consideration of the safety regulations.



For short-circuit protection, the network coupling has to be equipped with a protective device according to IEC 364-4-473 (A fuse of 6 A is recommended).



Supplementary to this data sheet you will find enclosed "important safety instructions on the proper use of BENDER products".

## Ordering details

Type	Response value	Art. No.
SUA143	UC 10...30 V	B 932 802
	UC 20...60 V	B 932 803
	UC 50...150 V	B 932 801
	UC 120...300 V	B 932 800

## Ordering details for screw mounting

Type	Art. No.
Mounting plate	R 300 102

Right to modifications reserved