



## ● Single Phase AC Systems



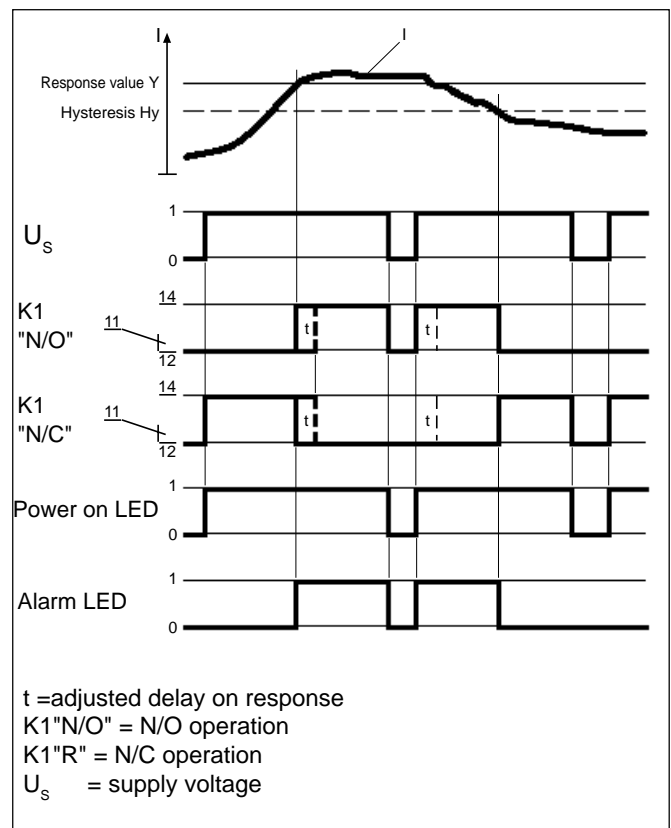
- electronic measuring relay
- indicates increasing current
- impulse voltage and electrical disturbance proof according to VDE and IEC
- alarm relay with two change-over contacts
- built-in power on LED and alarm LED
- compact 45 mm casing
- steplessly adjustable : response value, response time, hysteresis

### Function

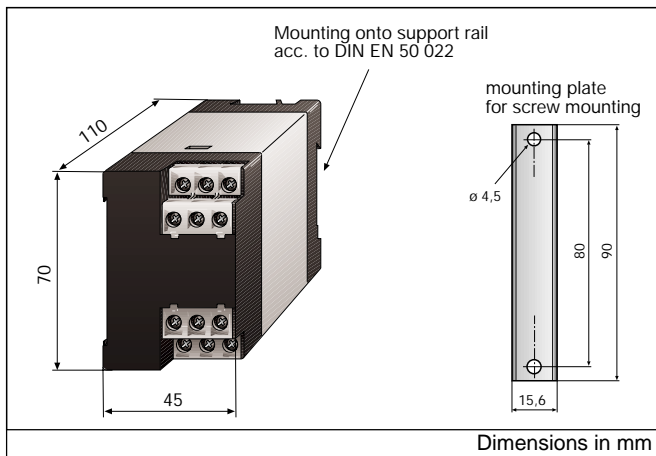
If the monitored current exceeds the adjusted response value "Y" the red alarm LED signals "I>Y" and after the adjusted delay on response "t" the alarm relay K1 reacts.

If the current decreases below the adjusted response value and additional the adjusted hysteresis "Hy" the alarm relay reacts and the red alarm LED extinguishes at the end of the delay on release of approx. 70 ms.

The function of the alarm relay is selectable between N/O operation and N/C operation (see wiring diagram).



### Dimension Diagram



## Technical Data CSE141

Insulation coordination acc. to IEC 664-1	
Rated insulation voltage	AC 440 V
Rated impulse withstand voltage/contamination level	4 kV / 3
Voltage test acc. to IEC 255-5	2.5 kV

Supply voltage	
Supply voltage $U_s$	AC 50...60Hz 85...125 V, 100...145 V, 185...275 V
Max. power consumption	ca. 3 VA

Response values	
Response value (steplessly adjustable)	0.1-1A, 0.5-5A, 1-10A, *5-50A
Overload capacity	40 A 1s / 12 A DB <sup>1)</sup> , *5-50 A DB <sup>1)</sup> 10 x $I_N$
Influence of ambient temperature	<0.05% / °C
Load	< 1.5 VA
Switching hysteresis (steplessly adjustable)	2 ... 10 %
Delay on response t (steplessly adjustable)	0.1 ... 10 sek
Recovery time max.	0.2 sek
Delay on release	ca. 70 ms
Repeat accuracy	< ± 1.5 %
Influence of ambient temperature	<0.2 % / °C

Contact circuits	
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	
AC 230 V, cos phi = 0.4	AC 2 A
DC 220 V, L/R = 0.04s	DC 0.2 A
Operating principle, adjustable	N/O or N/C operation
Pre-set by factory	N/O operation

### Type tests

Test of the Electromagnetic Compatibility (EMC):

Immunity against electromagnetic

Interferences acc. EN 50082-2:

Impulse voltage and electrical disturbance test acc. to IEC 255:

Impulse voltage test acc. IEC 255-5 class III

Electrical disturbance test acc. to IEC 255-4 class III

Emissions acc. to EN 50 081:

Emissions acc. to EN 55 011/CISPR11 class B<sup>1)</sup>

Mechanical tests:

Shock resistance acc. to IEC 68-2-27 15 g / 11 ms

Bumping acc. to IEC 68-2-29 40 g / 6 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 terminals with self-lifting clamp-washers

Wire cross section

single wire 2x (1 ... 1.5 mm<sup>2</sup>)

fine braid 2x (0.75 ... 1.5 mm<sup>2</sup>)

DIN rail acc. to DIN EN 50 022 or screw mounting

Protection class acc. to EN 60 529

Internal components IP 30

Terminals/with terminal covers IP 20

Type of casing X140

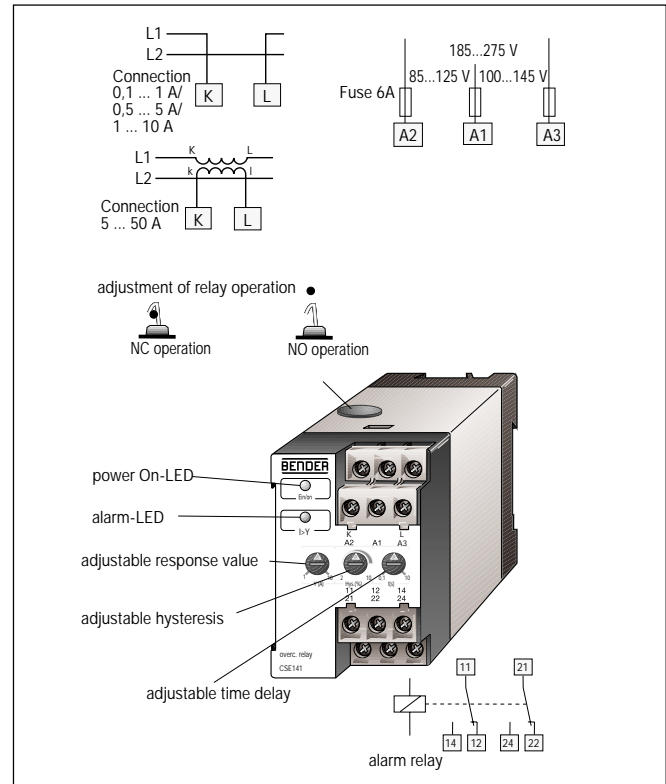
Flammability class UL94V-0

Weight approx. 250 g

<sup>1)</sup> DB = continuous operation

<sup>2)</sup> Class B devices are suitable for household and industrial use.

## Wiring Diagrams



## Safety instructions

Please check for correct mains voltage !

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

For short-circuit protection, the connection to the supply voltage has to be equipped with a protective device according to IEC 364-4-473 (A fuse of 6A 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.
CSE141	0,1 ... 1 A	942 615
	0,5 ... 5 A	942 613
	1 ... 10 A	942 611
CSE141	5 ... 50 A	942 191
*ext. current transformer		942 709

Other values on request.

## Ordering details for screw mounting

Type	Art. No.
Mounting plate	300 102

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