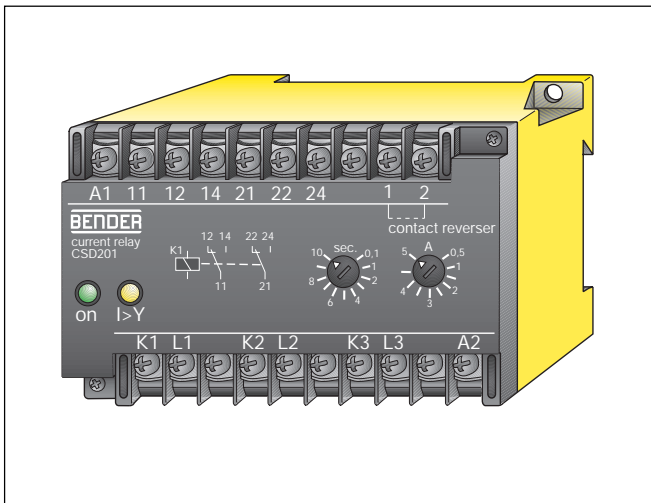
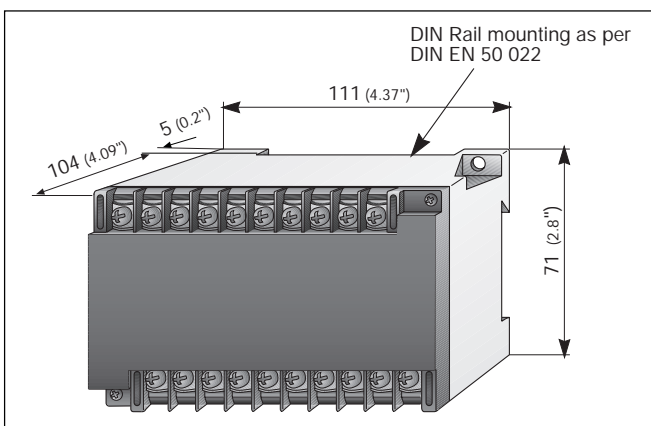


- Current monitoring in 3 AC or 3 N/AC systems



- electronic measuring relay
- signals overcurrent in three-phase systems
- impulse-voltage proof and HF-noise resistant in accordance with IEC
- output relay with two change-over contacts
- built-in LED
- adjustable alarm set points
- adjustable response time
- connection terminals for easy assembly

### Dimension diagram



### Function

The relay is designed to detect increasing current (operation as overcurrent-relay). When the system current of one or more conductors exceeds the adjusted response value  $Y$ , the output relay changes state and the LED " $I > Y$ " lights up. The time delay is adjustable from 0,1...10 s. The time delay is fixed to approx. 0, 2 sec for currents decreasing the alarm threshold.

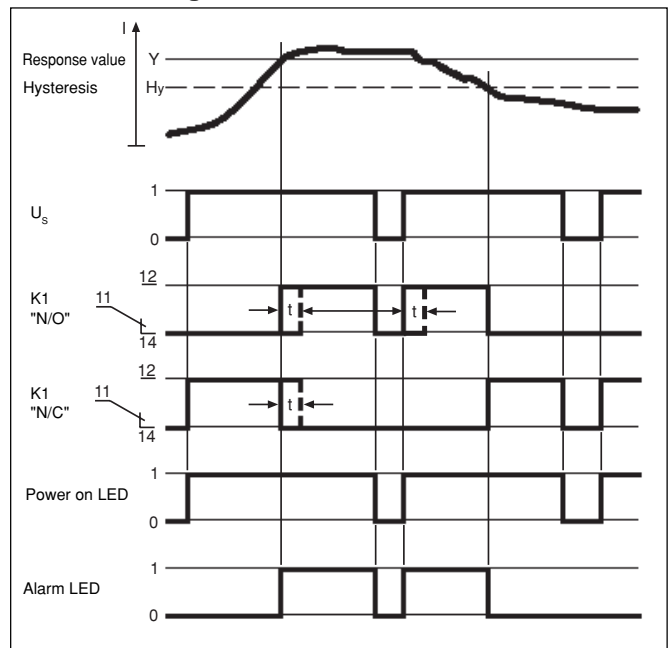
Response values:

- Type CSD200 = 0,1...1 A steplessly.
- Type CSD201 = 0,5...5 A steplessly.
- Type CSD202 = 1...10A steplessly.

The unit needs an auxiliary voltage, which has to be connected to the terminals A1 and A2.

The function of the output relay is selectable and can operate in N.O. and N.C. (normally open / close) condition (see wiring diagram).

### Functional diagram



### Legend

- Hy switching Hysteresis
- K1 output relay
- LED built-in light emitting diode
- $I$  current
- $U_H$  auxiliary voltage (supply voltage)
- $Y$  adjusted response value
- $t$  adjusted response retardation
- 0 relay de-energized
- 1 relay energized

## Technical Data

<b>Nominal insulation voltage:</b>	
Measuring circuit	500 V
Auxiliary voltage circuits	250 V
Contact circuits	250 V
Insulation group	C
Test voltage	2500/2000 V

<b>Rated mains current:</b>	
CSD200	1 A
CSD201	5 A
CSD202	10 A
Overload capacity	12 A (permanent operation) 40 A (1 s)
Frequency range	40...70 Hz

<b>Load:</b>	
CSD200/CSD201	3 x < 0,5 VA
CSD202	3 x < 1,5 VA
Auxiliary voltage $U_H$	AC 240/220/127/110/100/42/24 V
Voltage range of $U_H$	80...115%
Frequency range of $U_H$	40...70 Hz
Max. self-consumption	2,5 VA

<b>Response value (adjustable):</b>	
CSD200	0,1...1 A
CSD201	0,5...5 A
CSD202	1...10 A
Temperature influence	< 0,05% / °C
Frequency influence	< 0,1% / Hz
Switching hysteresis	ca. 4%

<b>Response time:</b>	
Time delay (adjustable)	0,1...10 s
Ready to trip time (max.)	0,2 s
Off-delay	ca. 0,1...0,2 s
Repeat accuracy	< +/- 1,5%
Temperature influence	< 0,2% / °C

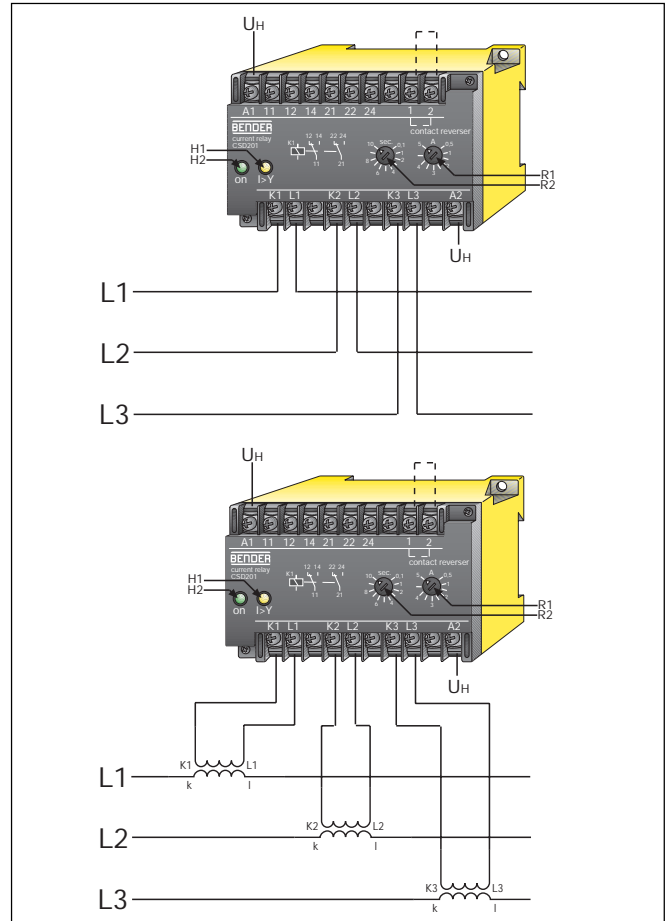
<b>Output relay:</b>	
Switch components	two change-over contacts
Nominal contact voltage	220 V
Switch capacity max.	1100 VA, 55W
at AC 220 V and $\cos. \Phi = 0,4$	3 A
at DC 110 V and $L/R = 0$	0,3 A
Make current / Permanent current	6 A / 5 A
Operating principle,	N.O. / N.C. Selectable

<b>Other details:</b>	
Admissible ambient temperature	
when operating	-15°...+60°C (258...333 K)
when stored	-20°...+70°C (253...343 K)

<b>Tests according to VDE 0435, part 303 and IEC 255-4:</b>	
Impulse voltage strength	class III
HF-noise resistance	class III
Vibration resistance	0,7 mm, 55 Hz
Climatic class according to DIN 40 040	F
Mounting	indifferent
Type of connection	terminal screws M 3,5 with self-lifting clamp-washers clip up terminal covers

<b>Wire cross section</b>	
Single wire	2 x (1...1,5 mm <sup>2</sup> )
Fine braid with end sleeve	2 x (0,75...1,5 mm <sup>2</sup> )
Protection class according to DIN 40 050	
Internal components	IP 50
Terminals	IP 10
with terminal covers	IP 20
Mounting in accordance to DIN EN 50 022	
Weight	approx. 550 g

## Wiring diagram



## Legend to wiring diagram

R1	Adjustment potentiometer for response value
R2	Adjustment potentiometer for time delay
H1	LED (signals I > Y)
H2	LED (signals "operation")
K1	Output relay with two free change-over contacts
$U_H$	Auxiliary voltage on terminal A1 and A2

The function of the output relay K1 is free selectable by the terminals 1 and 2.

Bridge 1-2: N/C operation

Open 1-2: N/O operation

## Notes

Please check the correct auxiliary voltage!

## Ordering Details

When ordering, please specify type, rated mains voltage  $U_N$ , rated mains current  $I_N$ , auxiliary voltage  $U_H$  and the rated frequency of rated mains current and auxiliary voltage!

Example: "Current relay type CSD201,  
 $U_N = 3$  AC 380 V, 60 Hz;  $I_N = 5$  A  
 $U_H = 24$  V, 60 Hz."

## BENDER Industrial Products

700 Fox Chase, Coatesville, PA 19320  
 Tel. (800) 356-4266 - Fax. (610) 383-7100  
[www.benderrelay.com](http://www.benderrelay.com)