

# Overcurrent relay CSD230/CSD231/CSD232

for 3AC systems





### Device features

- Overcurrent relay for 3AC systems
- For direct or indirect measurement
- 3 device variants, adjustable response values
 

CSD230	0.1...1 A
CSD231	0.5...5 A
CSD232	1...10 A
- Response delay 0.1...10 s
- Direct reading scale
- Power On LED, Alarm LED
- Alarm relay per phase with one changeover contact each

### Approvals



### Product description

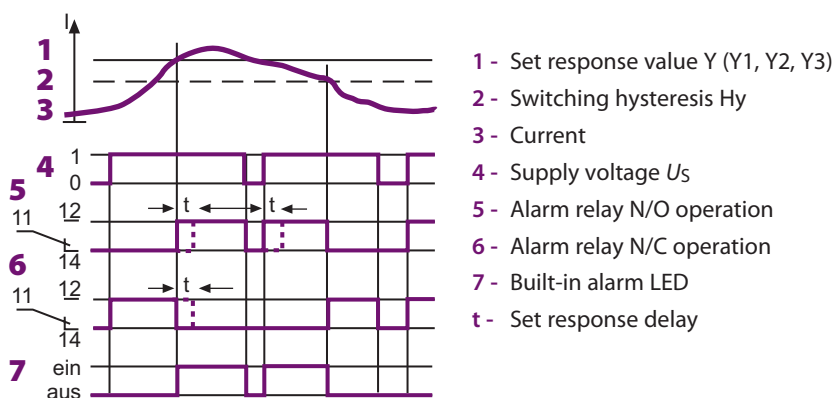
The relays of the CSD23x series are designed to monitor the overcurrent directly and indirectly with measuring current transformers in three-phase systems. External supply voltage is required.

### Typical applications

- Monitoring the load and functionality of electric loads
- Power consumption monitoring
- Monitoring of lighting circuits, screw conveyors, dust removal etc.
- On/off switching of loads when a certain voltage value is reached

### Function

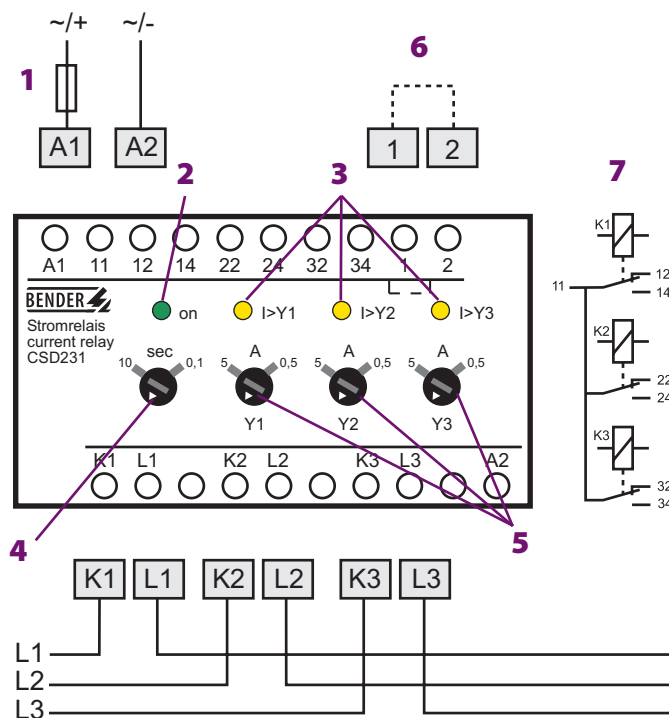
The current to be monitored is connected to the terminals K 1...K3 and L1...L3. If the value of one input current exceeds the response value "Y", a switching command is sent to the alarm relay assigned to the respective phase and the alarm LED signals "I>Y". The adjustable response delay only is effective in the event of current rise. The switching function in the event of current drop is activated within approx. 0.1...0.2 s. The operating mode of the alarm relay can be set to N/C or N/O operation.





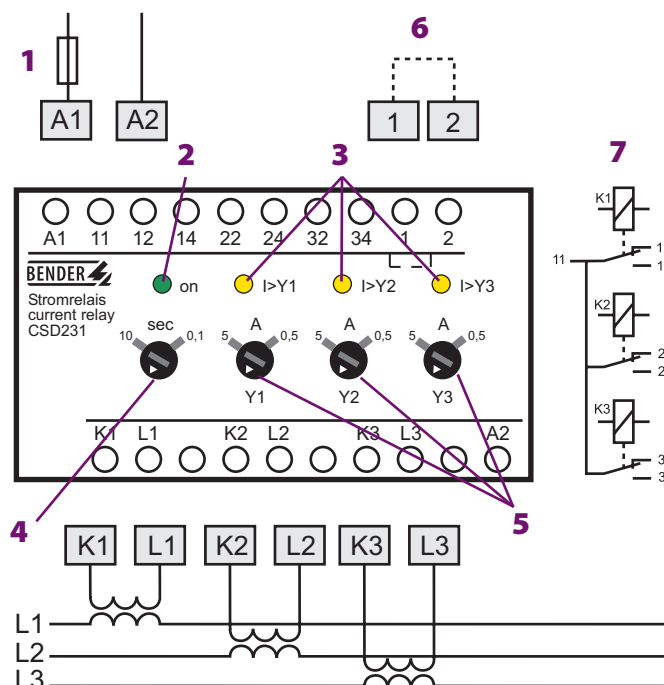
## Wiring diagram

### Direct current measurement



- 1 - 6 A fuse
- 2 - Power ON LED "on"
- 3 - Alarm-LEDs I>Y1, I>Y2, I>Y3"
- 4 - Adjustable response delay "sec"

### Indirect current measurement via current transformers



- 5 - Adjustable response value "A"
- 6 - Terminal 1/2 open: N/O operation  
Terminal 1/2 bridged: N/C operation
- 7 - Alarm relay per phase with one changeover contact each

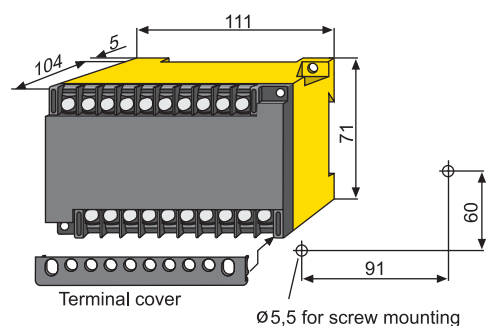
## Wiring diagram

Supply voltage $U_s$	Response value	Type	Art. No.
AC 230 V, 40...70 Hz	0,1...1 A	CSD230	B 942 182
	0,5...5 A	CSD231	B 942 183
	1...10 A	CSD232	B 942 184

Other supply voltages on request.

## Dimension diagram X200

Dimensions in mm



## Technical data

### Insulation coordination acc. to IEC 60664-1

Rated insulation voltage	AC 500 V
Rated impulse voltage/pollution degree	2.5 kV/3

### Supply voltage

Supply voltage $U_S$	see ordering information
Operating range of $U_S$	0.8 ... 1.15 x $U_S$
Power consumption	≤ 4.5 VA

### Measuring circuit

Frequency $f_n$	40 ... 400 Hz
Response values	0.1 ... 1 A (CSD230) 0.5 ... 5 A (CSD231) 1 ... 10 A (CSD232)
Overload capability	12 A continuous operation/40 A-1 s
Response delay $t$	0.1 ... 10 s
Hysteresis	approx. 4 %
Delay on release	approx. 0.1 ... 0.2 s
Repetition accuracy	±1.5 %
Recovery time $t_b$	≤ 0.2 s
Temperature influence	< 0.05 %/°C

### Switching elements

Number of changeover contacts	3 x 1
Operating principle	N/C operation/N/O operation (N/C operation)*
Electrical service life, number of cycles	12000
Contact class IEC 60255 Part 0-20	IIB
Rated contact voltage	AC 250 V/DC 300 V
Limited making capacity	AC/DC 5 A
Breaking capacity	2 A, AC 230 V, cos phi 0.4 0.2 A, DC 220 V, L/R = 0.04 s

### Environment/EMC

EMC immunity	acc. to IEC 61000-6-2
EMC emission	acc. to IEC 61000-6-4
Shock resistance IEC 60068-2-27 (during operation)	15 g/11 ms
Bumping IEC 60068-2-29 (during transport)	40 g/6 ms
Vibration resistance IEC 60068-2-6 (during operation)	1 g/10 ... 150 Hz
Vibration resistance IEC 60068-2-6 (during transport)	2 g/10 ... 150 Hz
Ambient temperature (during operation)	-15 ... +50 °C
Ambient temperature (during storage)	-20 ... +70 °C
Climatic class acc. to IEC 60721-3-3	3K5 (except condensation and formation of ice)

### Connection

Connection	Flat terminals with self-lifting clamp washers
Connection properties	
single wire	2 x (1 ... 1.5) mm <sup>2</sup>
flexible with end ferrules	2 x (0.75 ... 1.5) mm <sup>2</sup>

### Other

Operating mode	continuous operation
Mounting	any position
Degree of protection, internal components (IEC 60529)	IP50
Degree of protection, terminals/with terminal covers (IEC 60529)	IP10/IP20
Screw fixing	refer to dimension diagram
DIN rail mounting acc. to	IEC 60715
Flammability class	UL94V-0
Product standard	IEC 60255-6
Operating manual	BP306001
Weight	≤ 650 g
( ) * factory setting	



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