



for current monitoring in DC networks



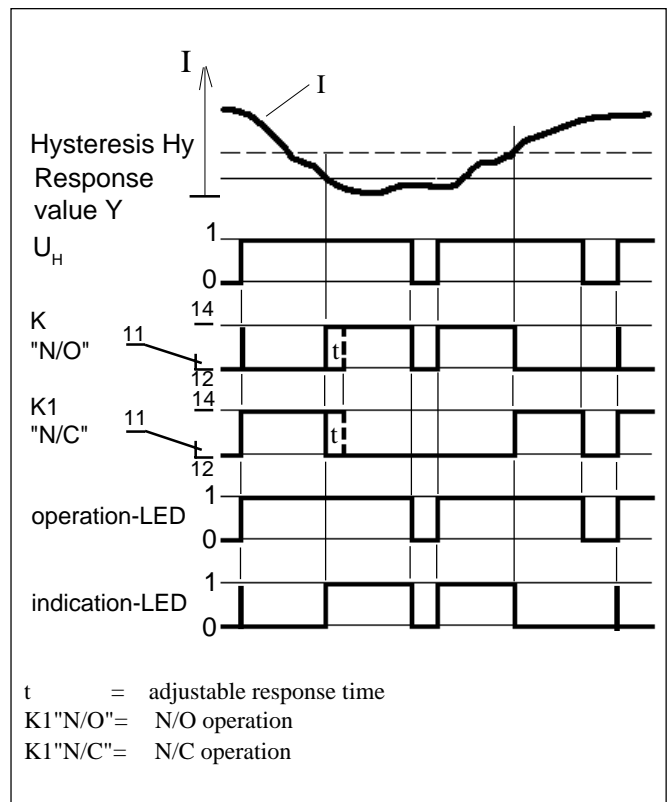
- ⇒ **electronic measuring relay**
- ⇒ **indicates decreasing current**
- ⇒ **impulse-voltage proof and HF-noise resistant**
- ⇒ **output relay with two change-over contacts**
- ⇒ **built-in operation-LED**
- ⇒ **built-in indication-LED**
- ⇒ **steplessly adjustable: response value**
- response time**
- hysteresis**
- ⇒ **compact 45 mm casing**
- ⇒ **response values:** 2 ... 20 mA / 0,5 ... 5 mA
- 6 ... 60 mV / 50 ... 500 mV
- 0,5 ... 5 A
- 1 ... 10 A

### Function

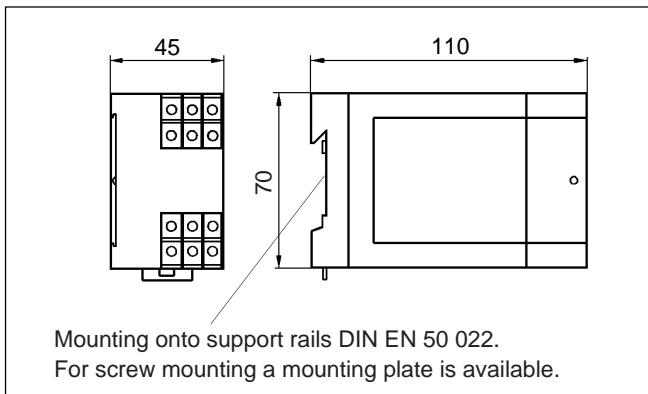
If the monitored current falls below the adjusted response value "Y" the red indication-LED signals "I<Y" and at the end of the adjustable response time "t" the output relay K1 reacts.

If the value exceeds the adjusted response value together with the adjustable hysteresis "Hy" the output relay reacts and the red indication-LED extinguishes at the end of the switch-back retardation of approx. 70 ms.

The function of the output relay is selectable between circuit-closing and circuit-opening connection (see wiring diagram).



### Dimension diagram



## Technical Data CSG140

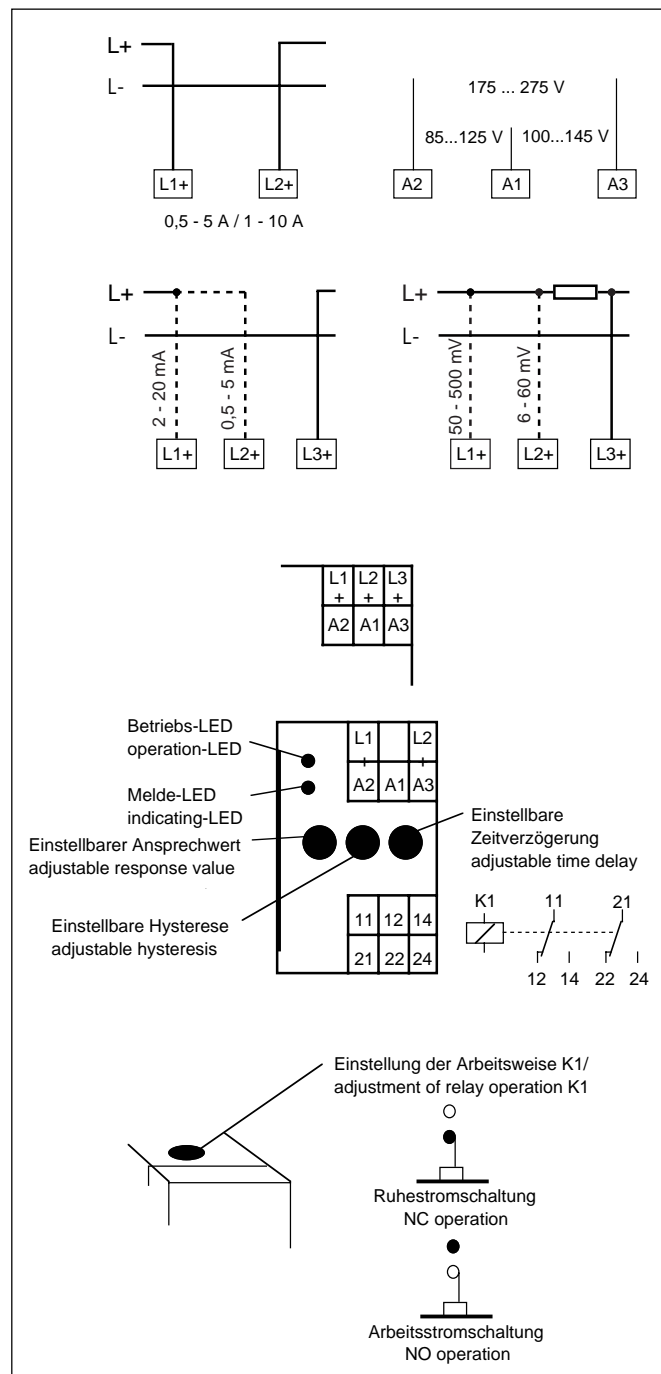
Nominal insulation voltage	DC 300 V			
Contact circuit	AC 250 V			
Insulation group	C			
Test voltage	2000 V			
Auxiliary voltage $U_H$ (other values on request)	AC 50...60 Hz 85...125 V/100...145 V/ 185...275 V			
Max. self-consumption	3 VA			
Response value (steplessly adjustable)	0,5-5mA	2-20mA	6-60mV	50-500mV
Load	0,5-5A	1-10A		
12 $\Omega$	3 $\Omega$	1 k $\Omega$	8,2 k $\Omega$	10 m $\Omega$
10 m $\Omega$				
Overload capacity				
0,5 A 1s	0,5A 1s	30V 1s	50V 1s	40A 1s
40A 1s				
Continuous working				
0,2A	0,2A	6V	10V	12A
12A				
Temperature influence	<0.05% / °C			
Switching hysteresis steplessly adjustable	2 ... 10 %			
Response retardation steplessly adjustable	0.1 ... 10 sec			
Ready to trip time max.	0.2 sec			
Off-delay	ca. 70 ms			
Repeat accuracy	< $\pm$ 1.5 %			
Temperature influence	<0.2 % / °C			
Switch components	two free change over contacts			
Switch capacity max.	33 W, 1100 VA			
Nominal contact voltage	230 V			
Permanent current	5 A			
Break capacity				
at AC 230 V and cos. phi = 0,4	3 A			
at DC 110 V and L/R = 0	0.3 A			
Operating principle	N/C or N/O operation			
Adjustment by factory	N/O operation			
Wiring diagram	0,5-5mA/2-20mA	Z 320 114		
	6-60mV/50-500mV	Z 320 113		
	0,5-5A / 1-10A	Z 320 115		
Admissible ambient temperature				
when operating	-15°C ... +50°C / 258 K ... 323 K			
when stored	-20°C ... +70°C / 253 K ... 343 K			
Impulse voltage strength	class III			
HF-noise resistance	class III			
Climatic class according to DIN 40 040	F			
Mounting	indifferent			
Type of connection	terminal screws with self-lifting clamp-washers			
Terminal screws	M 3.5			
Wire cross section				
single wire	2x (1 ... 1.5 mm <sup>2</sup> ) 16 AWG			
fine braid with end sleeve	2x (0.75 ... 1.5 mm <sup>2</sup> ) 16 AWG			
Protection class according to DIN 40 050				
Internal components	IP 50			
Terminals	IP 10			
with terminal covers	IP 20			
Casing				
Behaviour in fire according to	UL 94 V - 0			
Fixing	on support rail according to DIN EN 50 022 or screw mounting*			
Weight approx.	250 g			

\* Accessories for screw mounting:  
Mounting plate art.-no.: 300 102

## Ordering details

Type	Response value	Art. No.
CSG140	0,5...5 A	943 606
	0,5...5 mA/2...20 mA	943 601
	1...10 mA	943 604
	6...60 mV/50...500 mV	943 608

## Wiring diagrams



## Legend to wiring diagram

K1 Output relay with two change over contacts

The auxiliary voltage for the internal electronics has to be connected to the terminals A1/A2/A3.

$U_H$	Terminal
85...125 V	A2 - A1
100...145 V	A1 - A3
175...275 V	A2...A3