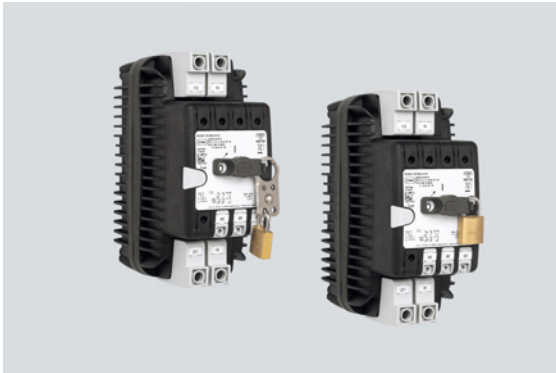


# RCBO Residual Current Circuit Breaker

## Series 8530 with integrated overcurrent protection

STAHL



- Fault current monitoring and tripping in the event of overcurrent and short circuit
- Combination of residual current circuit breaker and miniature circuit breaker: Saves space, reduces installation effort
- Safe functional test using the integrated test button
- Can be used globally thanks to international approvals
- Simple replacement or expansion of your system thanks to a modular circuit breaker design
- Simple installation – it snaps onto the mounting rail in Ex e enclosures
- Padlocks provide protection against being switched on again during maintenance work
- Ergonomically shaped operating lever guarantees that the system can be switched on and off safely

E9

### MY R. STAHL 8530C



The RCD/MCB 8530 series from R. STAHL is a residual current circuit breaker and a miniature circuit breaker in one:

It monitors residual currents and triggers in the event of large residual currents. In addition, it protects against overvoltage, switches off short circuits up to 10 kA and therefore protects the cables in their systems in the event of an earth fault, overload or short circuit. The excellent current limiting feature reduces the cable load in the event of a short circuit. The residual current tripping variants A, AS, AP-R, B, BS, B+ and F, as well as an A110V version, are available.

	IECEX / ATEX					
Zone	0	1	2	20	21	22
Installation in		•	•			

Selection Table						
Product variant	with auxiliary contacts					
No. of poles	1-pole + N					
1st auxiliary function	Fault signal contact 1 change-over contact					
1st auxiliary function for AC rated voltage	230 V					
1st auxiliary function for rated current max.	2 A					
Rated operational current	Rated residual current	Tripping characteristic	Product Type	Art. No.	Weight	
6 A	0.03 A	C	8530/1-RCBO-STAA101N-30-C6-300-3	317451	1.45 kg	
10 A	0.03 A	C	8530/1-RCBO-STAA101N-30-C10-300-3	313940	1.3 kg	
16 A	0.03 A	B	8530/1-RCBO-STAA101N-30-B16-303	277965	1.3 kg	
		C	8530/1-RCBO-STAA101N-30-C16-303	288948	1.3 kg	
	0.3 A	B	8530/1-RCBO-STAA101N-300-B16-300-3	299430	1.3 kg	
		C	8530/1-RCBO-STAA101N-300-C16-300-3	299451	1.3 kg	
25 A	0.03 A	C	8530/1-RCBO-STAA101N-30-C25-303	275697	1.3 kg	

## Selection Table

Product variant	No. of poles	1st auxiliary function	without auxiliary contacts	1-pole + N	without	Rated operational current	Rated residual current	Tripping characteristic	Product Type	Art. No.	Weight
20 A							0.03 A	B	8530/1-RCBO-STAA101N-30-B20-000-2	316882	1.45 kg
								C	8530/1-RCBO-STAA101N-30-C20-000-2	316883	1.45 kg

For additional variants, e.g. auxiliary and signal contacts, please refer to the following type code.

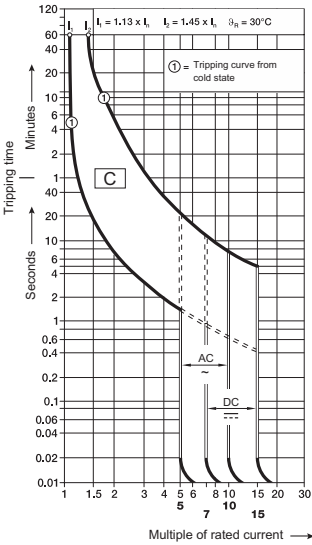
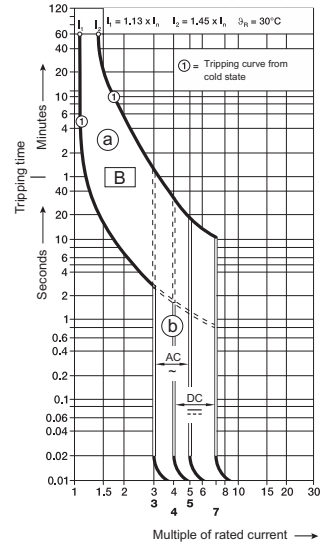
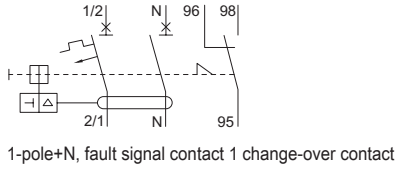
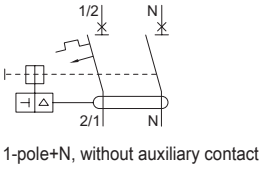
## Technical Data

<b>Explosion Protection</b>	
Application range (Zone) note	For use in Zone 21/22 when protected by Ex tb/tc enclosure
IECEX gas explosion protection	Ex db eb IIC Gb
ATEX gas explosion protection	Ⓜ II 2 G Ex db eb IIC Gb
Certificates	ATEX (FM), Brazil (ULB), China (CQST), IECEX (FM)
Declaration of Conformity	Certificate of conformity (ATEX), China (CCC)
<b>Electrical Data</b>	
Rated operational voltage AC	230 V
Frequency	50/60 Hz
Rated switching capacity	10 kA
Electrical service life	2 x 10 <sup>4</sup>
Mechanical service life	2 x 10 <sup>4</sup>
2nd auxiliary function	without
Release type	Sensitive to alternating/pulse current
<b>Ambient Conditions</b>	
Ambient temperature	-25 °C ... 55 °C
Ambient temperature	-13°F ... +131°F
Ambient temperature note	Deviating ambient temperatures based on current certificates available on request
<b>Mechanical Data</b>	
Degree of protection (IP) (IEC 60529)	IP2X
Enclosure material	Thermoplast
Connection cross section min.	1,5 mm <sup>2</sup>
Connection cross-section max.	25 mm <sup>2</sup>
Connection cross-section AWG min.	16 AWG
Connection cross-section AWG max.	4 AWG
Connection cross-section 2 min.	1.5 mm <sup>2</sup>
Connection cross-section 2 max.	10 mm <sup>2</sup>
Connection cross-section 2 AWG min.	16 AWG
Connection cross-section 2 AWG max.	8 AWG
Connection cross-section of auxiliary contact min.	0.5 mm <sup>2</sup>
Connection cross-section of auxiliary contact max.	4 mm <sup>2</sup>
Connection cross-section note	<b>2-conductor connection (upper and lower chamber at the same time):</b> - upper and lower chamber max. 16 / 10 mm <sup>2</sup> (A maximum difference of one cross section may be clamped between the upper and lower chamber.)  The permitted combinations of connection cross-sections can be found in the operating instructions.
<b>Mounting / Installation</b>	
Tightening torque	2 – 3 Nm
Tightening torque lbf in	17.7 ... 26.6 lbf-in
Tightening torque auxiliary contact	0.4 – 0.6 Nm

## Technical Data

Mounting / Installation	
Tightening torque auxiliary contact lbf in	3.5 to 5.3 lbf in

## Technical Drawings – Subject to Alterations



Tripping characteristic C

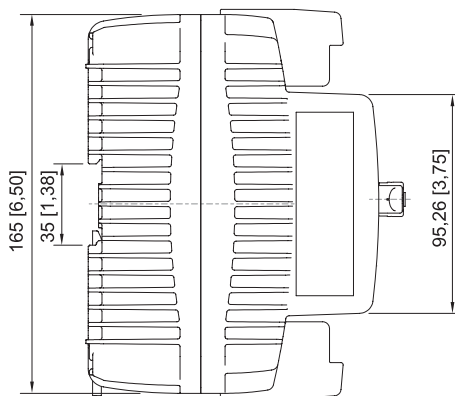
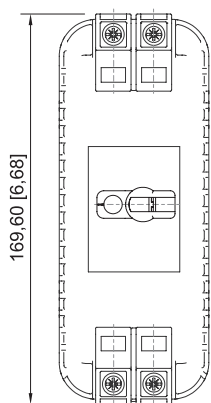
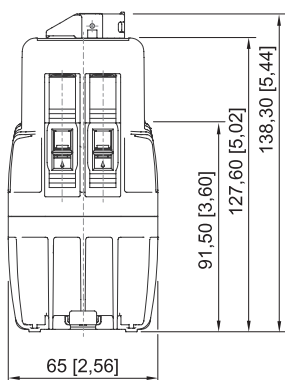
## Accessories

Figure	Description	Art. No.	Weight
	for closing (bracket Ø 3)	107115	15 g

## Accessories

Figure	Description	Art. No.	Weight
<b>Fastening set</b>			
	A fastening set for attaching the component to the mounting plate without a DIN rail.	276618	55 g
<b>Locking device quadruple</b>			
	A lock-out / tag-out scissor for individual locking of the component using up to 4 cylinder locks.	227232	-

## Dimensional Drawings (All Dimensions in mm [inches]) – Subject to Alterations



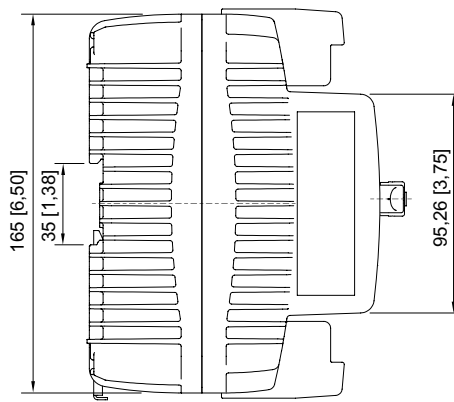
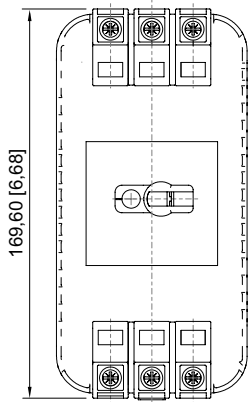
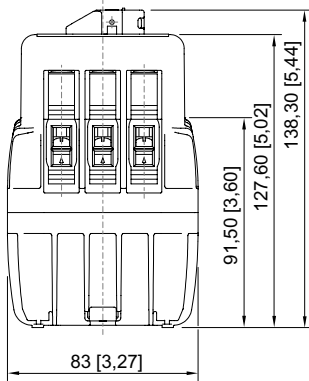
8530/1; 2 partition units

# RCBO Residual Current Circuit Breaker

Series 8530 with integrated overcurrent protection



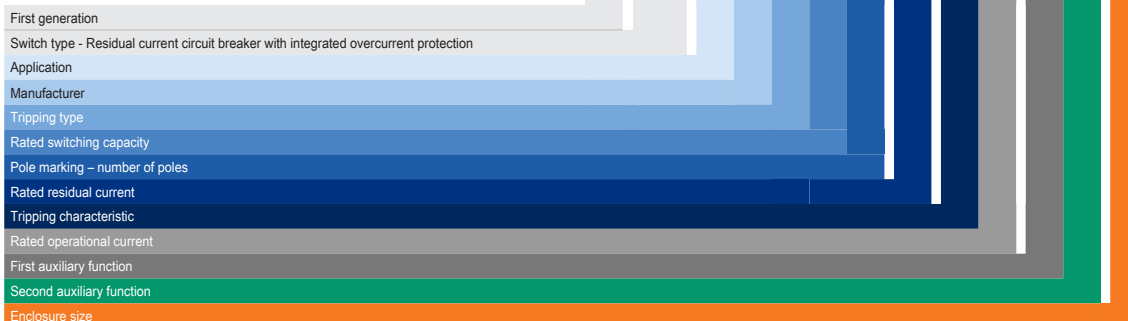
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8530/1; 3 partition units

## Type Code

8530 / 1 - RCBO - ST A A 10 1N - 300 - C 10 - 0 00 - 2



Code	Application
ST	IEC
NA	NEC

Code	Manufacturer
A	ABB
S	Siemens

Code	Tripping type
A	Independent of line voltage – tripping with AC residual currents and pulsating DC residual currents
AS	Independent of line voltage – tripping with AC residual currents and pulsating DC residual currents – with time delay „S“
AP	Short-time-delayed – high resistance to inadvertent tripping
A110V	Standard type A for special 110 V AC and 230 V AC applications, due to the minimum test button voltage of 95 V AC
F	Wechselfehlerströme mit Mischfrequenzen (50...400 Hz) und pulsierenden Gleichfehlerströmen

Code	Rated switching capacity
10	10 kA

Code	Pole marking – number of poles
1N	1-polig + N – Zweipoliger RCBO mit einem geschützten Pol

Code	Rated residual current
10	10 mA
30	30 mA
300	300 mA

Code	Tripping characteristic
B	B-Charakteristik
C	C-Charakteristik

Code	Rated operational current
0,5	0.5 A
1	1 A
1,6	1.6 A
2	2 A
3	3 A
4	4 A
5	5 A
6	6 A
8	8 A
10	10 A
13	13 A
15	15 A
16	16 A
20	20 A
25	25 A
30	30 A
32	32 A
40	40 A
50	50 A
63	63 A

Code	First auxiliary function
0	without
1	1 W auxiliary contact
2	2 W auxiliary contact
3	1 W fault signal contact
4	1 W fault signal contact with reset button
5	1 W auxiliary contact + 1 W fault signal contact
6	1 W auxiliary contact + 1 W fault signal contact with reset button

Code	Second auxiliary function
00	without
10	12 V AC undervoltage release
11	12 V DC undervoltage release
12	24 V AC undervoltage release
13	24 V DC undervoltage release
14	48 V AC undervoltage release
15	48 V DC undervoltage release
16	110 V AC undervoltage release
17	110 V DC undervoltage release
18	230 V AC undervoltage release
19	230 V DC undervoltage release
20	400 V AC undervoltage release
40	12 to 60 V AC + 12 to 60 V DC shunt trip
41	24 to 60 V AC + 24 to 48 V DC shunt trip
42	24 to 48 V AC + 24 to 48 V DC shunt trip
43	110 to 415 V AC + 110 V DC shunt trip
44	110 to 415 V AC + 110 to 125 V DC shunt trip
45	110 to 415 V AC + 110 to 250 V DC shunt trip
46	110 to 480 V AC shunt trip
50	3 A 230 V AC relay coupler

Code	Enclosure size
2	2 horizontal pitches/2-pole (depending on the built-in components)
3	3 horizontal pitches/3-pole (depending on the built-in components)
4	4 horizontal pitches/4-pole (depending on the built-in components)

**Note:**

- Please consult our technical sales department regarding the technical availability of configured variants.
- Please contact the Technical sales department for non-configurable variants.