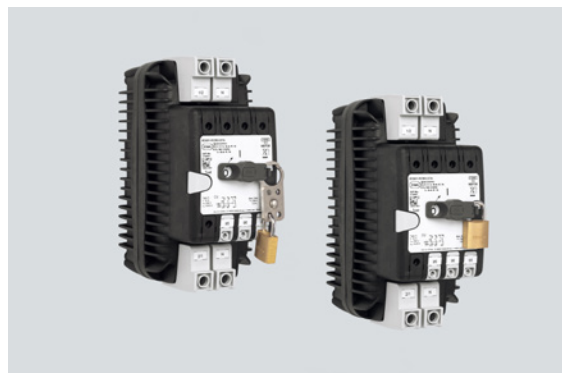


# Components for system solutions

## RCD/MCB residual current circuit breaker with integr. overvoltage prot.

STAHL

8530/1-RCBO-STAA101N-300-B16-300-3 Art. No. 299430



- Residual current monitoring and tripping in the event of over-voltage and short circuit
- Combination of residual current circuit breaker and miniature circuit breaker: Saves space, reduces installation requirements
- Reliable functional test using the integrated test button
- International approvals for worldwide use
- Simple replacement or expansion of your system thanks to a modular circuit breaker design
- Simple installation – it snaps onto the mounting rail of 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

MY R. STAHL 8530C



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

It monitors residual currents and triggers in the event of excessive residual currents. In addition, it protects against overvoltage, switches off short circuits up to 10 kA and therefore protects the conductors in your systems in the event of an earth fault, overload or short circuit. Its excellent current limiting feature reduces the load on the conductor 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 A110 V version, are available.

## Technical Data

### Explosion Protection

|                                |  |
|--------------------------------|--|
| Application range (zones)      | 1, 2   |
| Application range (Zone) note  | For use in Zone 21/22 when protected by Ex tb/tc enclosure |
| IECEX gas certificate          | IECEX FMG 19.0029U   |
| IECEX gas certificate          | IECEX FMG 19.0029U   |
| IECEX gas explosion protection | Ex db eb IIC Gb  |
| ATEX gas certificate           | FM19ATEX0191U  |
| ATEX gas certificate           | FM19ATEX0191U  |
| ATEX gas explosion protection  | Ex 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)              |

### Electrical Data

|   |  |
|---|--|
| Rated operational voltage AC                  | 230 V                                      |
| Rated operational current                     | 16 A                                       |
| 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>                        |
| Rated residual current                        | 0.3 A                                      |
| 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  |

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## Electrical Data

|  |  |
|--|--|
| 2nd auxiliary function                 | without                                |
| 2nd auxiliary function voltage AC      | -                                      |
| 2nd auxiliary function voltage max. DC | -                                      |
| Release type                           | Sensitive to alternating/pulse current |
| Tripping characteristic                | B                                      |
| No. of poles                           | 1-pole + N                             |

## Ambient Conditions

|                          |  |
|--------------------------|--|
| Ambient temperature      | -25 °C ... 55 °C   |
| Ambient temperature      | -13°F ... +131°F   |
| Ambient temperature note | Different ambient temperatures are possible on request based on the current certificates |

## Mechanical Data

|  |   |
|--|---|
| 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  |
| Max. conn. cross-section 1 AWG                         | 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>   |
| Max. aux. cont. conn. cr.-sec.                         | 4 mm <sup>2</sup>   |
| Connection cross-section of auxiliary contact AWG min. | 18 (unece.unit.AWG)   |
| Connection cross-section of auxiliary contact AWG max. | 14 (unece.unit.AWG)   |
| Min. tightening torque                                 | 2 N · m   |
| Max. tightening torque                                 | 3 N · m   |
| Connection cross-section note                          | <b>2-conductor connection (top and bottom chambers at the same time):</b><br>- Top and bottom chambers max. 16/10 mm <sup>2</sup> (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.)<br><br>Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. |
| Width  | 83 mm   |
| Width, inches  | 3.27 in   |
| Length   | 165 mm  |
| Length in inches                                       | 6.5 in  |
| Depth of cut-out                                       | 138.3 mm  |
| Mounting depth in inches                               | 5.44 in   |
| Weight   | 1.3 kg  |
| Weight   | 2.867 lb  |

## Mounting / Installation

|                   |             |
|-------------------|-------------|
| Tightening torque | 2 – 3 N · m |
|-------------------|-------------|

Components for system solutions



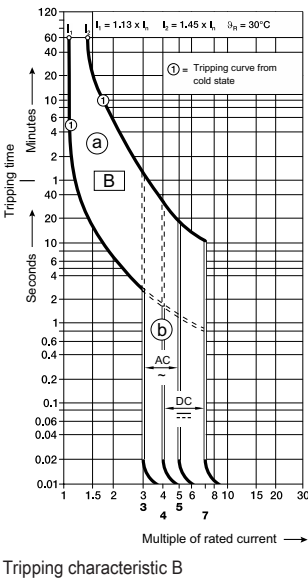
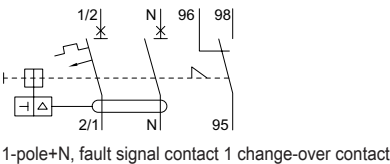
RCD/MCB residual current circuit breaker  
with integr. overvoltage prot.

8530/1-RCBO-STAA101N-300-B16-300-3    Art. No. 299430

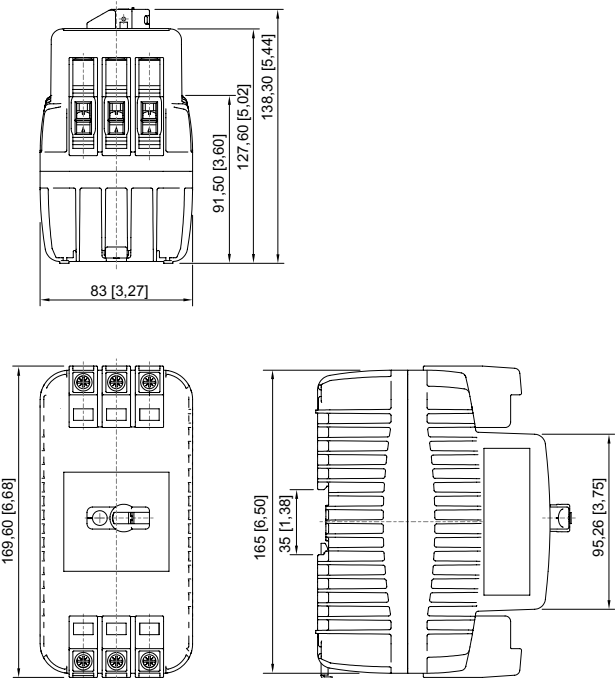
Mounting / Installation

|  |                     |
|--|---------------------|
| Tightening torque lbf in                   | 17.7 to 26.6 lbf-in |
| Tightening torque auxiliary contact        | 0.4 – 0.6 N · m     |
| Tightening torque auxiliary contact lbf in | 3.5 to 5.3 lbf in   |

Technical Drawings – Subject to Alterations



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



8530/1; 3 horizontal pitches

Accessories

4-way locking device




Art. No.

Components for system solutions



RCD/MCB residual current circuit breaker  
with integr. overvoltage prot.

8530/1-RCBO-STAA101N-300-B16-300-3    Art. No. 299430

|  |   |                 |
|--|---|-----------------|
|  | A lock-out/tag-out hasp for individually locking the component using up to four cylinder locks. | 227232          |
| <b>Cylinder lock</b>   |   | <b>Art. No.</b> |
|  | for closing (bracket Ø 3)   | 107115          |
| <b>Fastening set</b>   |   | <b>Art. No.</b> |
|  | A fastening set for fastening the component on the mounting plate without a DIN rail            | 276618          |

We reserve the right to make alterations to the technical data, dimensions, weights, designs and products available without notice. The illustrations cannot be considered binding.