RCD residual current circuit breaker



8530/1-RCCB-STAA3N-500-40-000-4 Art. No. 293688



- · Modular component for residual current monitoring
- Can be used for pulsating direct currents and alternating currents
- Fault protection, protection of persons and protection against electrical fires caused by residual currents to earth

MY R. STAHL 8530B



The R. STAHL Series 8530 residual current circuit breaker is a component for residual current monitoring and switches off systems in the event of residual currents – for reliable protection of persons, even in hazardous areas. It is suitable for pulsating direct currents and alternating currents and is designed for rated operational currents of 16, 25, 40, or 63 A and rated residual currents of 10, 30, 100, 300 and 500 mA. 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	
Certificates	ATEX (FM), Brazil (ULB), China (CQST), IECEx (FM)
Declaration of conformity	Certificate of conformity (ATEX), China (CCC)
Electrical Data	
Rated operational voltage AC	230/400 V
Rated operational current	40 A
Frequency	50/60 Hz
Rated breaking capacity max	1 kA
Rated short-circuit current	10 kA
Electrical service life	10⁴
Mechanical service life	2 x 10 ⁴
Rated residual current	0.5 A
1st auxiliary function	without
1st auxiliary function for AC rated voltage	-
1st auxiliary function for rated current	-
max.	
2nd auxiliary function	without
2nd auxiliary function voltage AC	<u> -</u>

RCD residual current circuit breaker



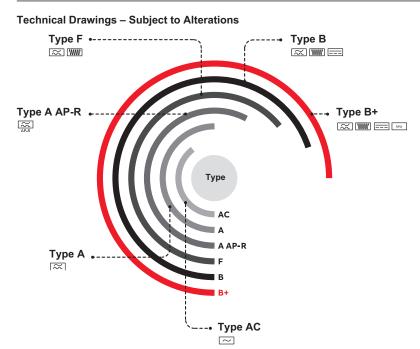
8530/1-RCCB-STAA3N-500-40-000-4 Art. No. 293688

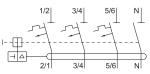
Release type Sensitive to alternating/pulse current No. of poles 3-pole + N Back-up fuse max. 100 A gG Ambient Conditions Ambient temperature -25 °C 55 °C Ambient temperature note Different ambient temperatures are possible on request based on the current certificates Mechanical Data Degree of protection (IP) (IEC 60529) IP2X Enclosure material Thermoplast Connection cross-section max. 25 mm² Connection cross-section AWG min. 16 AWG Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 nin. 1.6 AWG Connection cross-section 2 nin. 1.7 pm² Connection cross-section 2 nin. 1.8 AWG Connection cross-section 2 nin. 1.9 Nim Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm	Electrical Data	
No. of poles 3, pole + N max. 100 A gG Ambient Conditions Ambient temperature -25 °C 55 °C Ambient temperature -13°F +131°F Ambient temperature object of the current certificates Mechanical Data Degree of protection (IP) (IEC 60529) IP2X Enclosure material Thermoplast Connection cross-section min. 1.5 mm² Connection cross-section max. 25 mm² Connection cross-section AWG min. 1.5 mm² Connection cross-section 2 min. 1.5 mm	2nd auxiliary function voltage max. DC	-
Back-up fuse max. 100 A gG Ambient Conditions Ambient temperature -25 °C 55 °C Ambient temperature 1-13 °F +131 °F Ambient temperature note Different ambient temperatures are possible on request based on the current certificates Machanical Data Degree of protection (IP) (IEC 60529) IP2X Enclosure material Thermoplast Connection cross-section min. 1.5 mm² Connection cross-section max. 25 mm² Connection cross-section AWG min. 4AWG Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 MWG min. 16 AWG Connection cross-section 2 MWG min. 16 AWG Connection cross-section 2 MWG min. 16 AWG Connection cross-section 2 MWG max. 8 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note clamped between the top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 ib Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque 2 – 3 Nm Tightening torque auxiliary contact 0.4 – 0.6 Nm	Release type	Sensitive to alternating/pulse current
Ambient Conditions Ambient temperature	No. of poles	3-pole + N
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 Thermoplast Connection cross-section min 1.5 mm² Connection cross-section max 25 mm² Connection cross-section AWG min 1.5 mm² 4 AWG	Back-up fuse	max. 100 A gG
Ambient temperature	Ambient Conditions	
Ambient temperature note Mechanical Data Degree of protection (IP) (IEC 60529) IP2X Enclosure material Connection cross section min. Connection cross-section max. Connection cross-section AWG min. ACROSS AWG Connection cross-section 2 min. 1.5 mm² 2 min. 1.5 mm² 2 min. 2 min. 2 min. 3 Nm Connection cross-section 2 min. 2 min. 2 min. 3 Nm Connection cross-section note 2 conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length 165 mm Length in inches 6.5 in Depth of cut-out 188.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque bif in 17.7 to 26.6 lbf-in Tightening torque bif in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Ambient temperature	-25 °C 55 °C
Degree of protection (IP) (IEC 60529) Enclosure material Connection cross-section min. 1.5 mm² Connection cross-section max. 25 mm² Connection cross-section AWG min. 4 AWG Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 AWG min. 1.6 AWG Connection cross-section 2 AWG min. 1.6 AWG Connection cross-section 2 AWG min. 1.7 mm² Connection cross-section 2 AWG min. 1.8 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length Length 165 mm Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque 15 in 17.7 to 26.6 lbf-in Tightening torque but in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact	Ambient temperature	-13°F +131°F
Degree of protection (IP) (IEC 60529) Enclosure material Thermoplast Connection cross section min. ACROSS 4 AWG Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 min. 1.6 AWG Connection cross-section 2 max. 10 mm² Connection cross-section 2 AWG min. Connection cross-section 2 AWG min. 16 AWG Connection cross-section 2 AWG min. Connection cross-section 2 Nation and section 2 AWG min. Connection cross-section 2 AWG min. Connection cross-section note 2 Nm Max. tightening torque 3 Nm Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length 165 mm Length 165 mm Length 165 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque Tightening torque 2 – 3 Nm Tightening torque 2 – 3 Nm Tightening torque 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Ambient temperature note	Different ambient temperatures are possible on request based on the current certificates
Enclosure material Thermoplast Connection cross section min. 1.5 mm² Connection cross-section max. 25 mm² Connection cross-section AWG min. 16 AWG ACROSS 4 AWG Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 max. 10 mm² Connection cross-section 2 AWG min. 16 AWG Connection cross-section 2 AWG min. 17 Min. 18 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length 165 mm Length 165 mm Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 12 – 3 Nm Tightening torque 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Mechanical Data	
Connection cross section min. 25 mm² Connection cross-section AWG min. ACROSS 4 AWG Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 min. Connection cross-section 2 min. Connection cross-section 2 max. 10 mm² Connection cross-section 2 MWG min. 16 AWG Connection cross-section 2 AWG min. Connection cross-section 2 AWG min. 16 AWG Connection cross-section 2 AWG max. 8 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 1.7 kg Weight 1.7 kg Mounting Installation Tightening torque 2 – 3 Nm Tightening torque 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Degree of protection (IP) (IEC 60529)	IP2X
Connection cross-section max. 25 mm² Connection cross-section AWG min. 16 AWG ACROSS 4 AWG Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 max. 10 mm² Connection cross-section 2 AWG min. 16 AWG Connection cross-section 2 AWG min. 16 AWG Connection cross-section 2 AWG min. 16 AWG Connection cross-section 2 AWG max. 8 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length 165 mm Length 165 mm Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 - 3 Nm Tightening torque 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 - 0.6 Nm	Enclosure material	Thermoplast
Connection cross-section AWG min. ACROSS 4 AWG Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 AWG min. Connection cross-section 2 AWG min. Connection cross-section 2 AWG min. Connection cross-section 2 AWG max. 8 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note - Top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length 165 mm Length 165 mm Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 1.7 kg Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque auxiliary contact 0.4 – 0.6 Nm	Connection cross section min.	1.5 mm²
ACROSS 4 AWG Connection cross-section 2 min. 1.5 mm² Connection cross-section 2 MWG min. 16 AWG Connection cross-section 2 AWG min. 2 Nm Connection cross-section 2 AWG max. 8 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length 165 mm Length 165 mm Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 12 – 3 Nm Tightening torque auxiliary contact 0.4 – 0.6 Nm	Connection cross-section max.	25 mm²
Connection cross-section 2 min. Connection cross-section 2 max. Connection cross-section 2 AWG min. Connection cross-section 2 AWG min. Connection cross-section 2 AWG max. 8 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 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 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque auxiliary contact 0.4 – 0.6 Nm	Connection cross-section AWG min.	16 AWG
Connection cross-section 2 max. 10 mm² Connection cross-section 2 AWG min. 16 AWG Connection cross-section 2 AWG max. 8 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 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 1.7 kg Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	ACROSS	4 AWG
Connection cross-section 2 AWG min. Connection cross-section 2 AWG max. 8 AWG Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 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 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 - 3 Nm Tightening torque auxiliary contact 0.4 - 0.6 Nm	Connection cross-section 2 min.	1.5 mm²
Connection cross-section 2 AWG max. Min. tightening torque Ax. tightening torque Connection cross-section note Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Connection cross-sections Connection cross-section note Connection (top and bottom chambers at the same time): Connection cross-section note Connection	Connection cross-section 2 max.	10 mm²
Min. tightening torque 2 Nm Max. tightening torque 3 Nm Connection cross-section note Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 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 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 - 3 Nm Tightening torque bl in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 - 0.6 Nm	Connection cross-section 2 AWG min.	16 AWG
Max. tightening torque Connection cross-section note Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 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 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 - 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 - 0.6 Nm	Connection cross-section 2 AWG max.	8 AWG
Connection cross-section note 2-conductor connection (top and bottom chambers at the same time): - Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length 165 mm Length 165 mm Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque auxiliary contact 0.4 – 0.6 Nm	Min. tightening torque	2 Nm
- Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the connection cross-sections. Width 110 mm Width, inches 4.33 in Length 165 mm Length 165 mm Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 12 – 3 Nm Tightening torque auxiliary contact 0.4 – 0.6 Nm	Max. tightening torque	3 Nm
Width, inches 4.33 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 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Connection cross-section note	- Top and bottom chambers max. 16/10 mm² (the maximum difference that can be clamped between the top and bottom chambers is equal to the cross-section.) Refer to the operating instructions for the approved combination possibilities of the con-
Length 165 mm Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 - 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 - 0.6 Nm	Width	110 mm
Length in inches 6.5 in Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 - 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 - 0.6 Nm	Width, inches	4.33 in
Depth of cut-out 138.3 mm Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Length	165 mm
Mounting depth in inches 5.44 in Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Length in inches	6.5 in
Weight 1.7 kg Weight 3.749 lb Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Depth of cut-out	138.3 mm
Weight 3.749 lb Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Mounting depth in inches	5.44 in
Mounting / Installation Tightening torque 2 – 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Weight	1.7 kg
Tightening torque 2 – 3 Nm Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Weight	3.749 lb
Tightening torque lbf in 17.7 to 26.6 lbf-in Tightening torque auxiliary contact 0.4 – 0.6 Nm	Mounting / Installation	
Tightening torque auxiliary contact 0.4 – 0.6 Nm	Tightening torque	2 – 3 Nm
	Tightening torque lbf in	17.7 to 26.6 lbf-in
Tightening torque auxiliary contact lbf in 3.5 to 5.3 lbf in	Tightening torque auxiliary contact	0.4 – 0.6 Nm
	Tightening torque auxiliary contact lbf in	3.5 to 5.3 lbf in

RCD residual current circuit breaker



8530/1-RCCB-STAA3N-500-40-000-4 Art. No. 293688

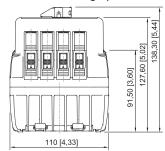


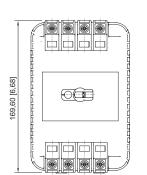


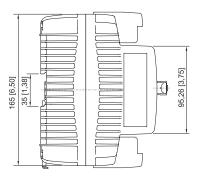
3-pole + N, without auxiliary contact

Release type (see type code)

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







8530/1; 4 horizontal pitches

Accessories

4-way locking devic	ee e	Art. No.
200	A lock-out/tag-out hasp for individually locking the component using up to four cylinder locks.	227232

RCD residual current circuit breaker



8530/1-RCCB-STAA3N-500-40-000-4 Art. No. 293688

Cylinder lock		Art. No.
	for closing (bracket Ø 3)	107115
Fastening set		Art. No.
	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.