



SWITCHGEAR

RBK

Fuse switch disconnectors

intended for distribution of electricity and protection of electrical equipment against short-circuits and overloads, with industrial fuse links







APPLICATIONS

RBK fuse switch disconnectors are designed for distribution of electricity and protection of electrical equipment against short-circuits and overloads with industrial fuse links. They are conforming to EN 60947-1, EN 60947-3, IEC 60947-1, IEC 60947-3 standards. They are intended for installation in low voltage distribution boards, cable and metering cabinets.

CONSTRUCTION

- thermoplastic parts of RBK fuse switch disconnectors are made of fibre glass strengthened polyamide with halogen free flame retardant added and flammability class V2
- RBK fuse switch disconnectors consist of following parts:
 - three pole main base with spring-loaded contacts designed for connection of circular or sector-shaped conductors, conductors with lug terminals or bars
 - removable cover with fuse links
- arc chutes with steel deionization plates over top contacts
- silver plated contacts providing low power loss

MOUNTING

- on mounting plate
 - RBK 000, RBK 00, RBK 1
- on to busbar systems
 - 60 mm busbar system
 - RBK 000-S – installation on to busbar system with hooked clamps

OPERATING CONDITIONS

- to be installed in the room free of any dust, aggressive or explosive gases,
- altitude up to 2000 meters above sea level,
- outdoor – in cabinets with protection degree > IP 34,
- ambient temperature from -25 °C to +55 °C,
- relative humidity of the air should not be higher than 50% at temperature of +40°.

FUNCTIONALITY:

- making and breaking operations should be done with determined movement
- possible connection of circular or sector-shaped conductors with bare ends (V-terminals, 2V-terminals) or conductors with lug terminals (screw terminals)
- voltage test is performed through test holes in fuse link cover

CONFORMITY WITH STANDARDS

EN 60947-1 EN 60947-3 HD 60269-2

Table 101. RBK FUSE SWITCH DISCONNECTORS TECHNICAL DATA

Parameters			RBK 00	RBK 1
Rated thermal current $I_{th}^{1)}$		A	160	250
Rated voltage U_n		V	690	690
Utilization category		-	AC-22B	AC-22B
Rated switching current I_e		A	160	250
Rated switching voltage U_e		V	690	690
Rated short circuit making current	690 V	kA	80	80
	400 V		100	100
Rated short circuit withstand current	690 V	kA	80	80
	400 V		100	100
Rated insulation voltage U_i		V	1000	1000
Rated power dissipation		W	12	32
Rated impulse withstand voltage $U_{imp.}$		kV	8	8
Rated frequency		Hz	50-60	50-60
Mechanical durability		Number of cycles	1600	1600
Electrical durability			200	200
IP degree of protection		IP	20	30 ³⁾
Weight		kg	~0,65	~2
size of fuse links PN/IEC		-	00	1

¹⁾ I_{th} - thermal current of fuse switch disconnecter without external enclosure, installed outdoors (In case of the installation of fuse switch disconnectors in enclosures then load factor should be considered)

RBK 00 (160 A, 690 V)

Table 102. TECHNICAL DATA

Parameters		RBK 00	
Rated thermal current $I_{th}=I_n$	A		160
Rated voltage U_n	V		690
Utilization category	-		AC-22B
Rated switching voltage U_e	V		690
Rated switching current I_e	A		160
Rated short circuit making current	690 V	kA	80
	400 V		100
Rated short circuit withstand current	690 V	kA	80
	400 V		100
Rated insulation voltage U_i	V		1000
Rated impulse withstand voltage U_{imp}	kV		8
Rated power dissipation	W		12
Rated frequency	Hz		50-60
Mechanical durability	Number of cycles		1600
Electrical durability			200
IP degree of protection			IP 20
Size of fuse links			00

Accessories on page 122



RBK 00
for installation on mounting plate

Table 103. VERSIONS

RBK 00/160 A		Cable terminal	Article No.
RBK 00	for connection of round conductors	S-bridge clamps	63-823333-011
RBK 00-M	for connection of conductors with lug terminals	M8 screws	63-823333-021
RBK 00-V	for connection of sectorshaped conductors	V-shape clamps	63-823333-031
RBK 00-W	for connection of round conductors, lengthened terminal shrouds	S-bridge clamps	63-823333-041
RBK 00-M-W	for connection of conductors with lug terminals, lengthened terminal shrouds	M8 screws	63-823333-051
RBK 00-V-W	for connection of sectorshaped conductors, lengthened terminal shrouds	V-shape clamps	63-823333-061

Table 104. RBK 00 TERMINAL CLAMPS

Description	Clamp	Drawing of clamp	Cross-section of conductors	Cu bar	Tightening torque	Dimensions and spacing of holes for installation of RBK 00 on mounting plate
RBK 00	S-bridge clamp 2 x M5 x 16		Cu/Al conductor 4 ÷ 50 mm ²	maximum bar width 20 mm	3 Nm*	
	M8 x 16 screw		conductor with lug terminal up to 70 mm ²		10 Nm*	
	V-shape clamp 2 x M5 x 20		2) 4 mm ² - 70 mm ² 4 mm ² - 95 mm ² 1) 1,5 mm ² - 2,5 mm ²		3 Nm*	

For stranded conductors using cable ferrules is recommended

*using of tension wrench is recommended

RBK 1 (250 A, 690 V)

Table 105. TECHNICAL DATA

Parameters		RBK 1	
Rated thermal current $I_{th}=I_n$	A	250	
Rated voltage U_n	V	690	
Utilization category	-	AC-22B	
Rated switching voltage U_e	V	690	
Rated switching current I_e	A	250	
Rated short circuit making current	690 V	kA	80
	400 V		100
Rated short circuit withstand current	690 V	kA	80
	400 V		100
Rated insulation voltage U_i	V	1000	
Rated impulse withstand voltage U_{imp}	kV	8	
Rated power dissipation	W	32	
Rated frequency	Hz	50-60	
Mechanical durability	Number of cycles	1600	
Electrical durability		200	
IP degree of protection	-	30	
Size of fuse links	-	1	
Weight	kg	~2	

[Accessories on page 123](#)




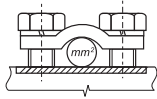
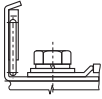
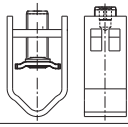




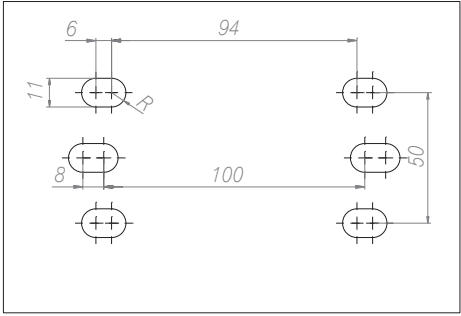


RBK 1
for installation on mounting plate

Table 106. VERSIONS

RBK 1/250 A			
For installation on mounting plate	Cable terminals	Version	Article No.
For connection of round conductors	S-bridge clamps	RBK 1	63-811779-011
For connection of conductors with lug terminals	Screws	RBK 1-M	63-811779-021
For connection of sector-shaped conductors	V-clamps	RBK 1-V	63-811779-031
For connection of round conductors, top terminals -V-terminals, bottom terminals - S-bridge terminals	V-clamps / S-bridge clamps	RBK 1 VG	63-811784-051
For connection of round conductors, top terminals -V-terminals, bottom terminals - screw terminals	V- clamps / screws	RBK 1 VG-M	63-811784-061
For connection of round conductors, top terminals -S-bridge terminals, bottom terminals - V-terminals	S-bridge clamps / V-clamps	RBK 1 VD	63-811784-071
For connection of round conductors, top terminals-screw terminals, bottom terminals - V-terminals	screw terminals / V-clamps	RBK 1 VD-M	63-811784-081

Table 107. RBK 1 TERMINAL CLAMPS

Description	RBK 1	RBK 1-M	RBK 1-V
Clamp	S-bridge clamp 2 x M8 x 30	M10x25 screw	V-clamp HS 35-300-C
Picture of a clamp			
Drawing of a clamp			
Cross-section of conductors	Cu/Al conductor 35 ÷ 120 mm ²	conductor with lug terminal up to 120 mm ²	V-clamp for direct fixing of conductor with bare end with cross-section of: 35 - 185 mm ²  35 - 240 mm ²  35 - 240 mm ²  35 - 300 mm ² 
Cu bar	maximum bar width 35 mm		
Tightening torque	10 Nm*	20 Nm*	30 Nm*
Dimensions and spacing of holes for installation of RBK 1 pro on mounting plate			

For stranded conductors using cable ferrules is recommended
*using of tension wrench is recommended



RBK 1
for installation on mounting
plate

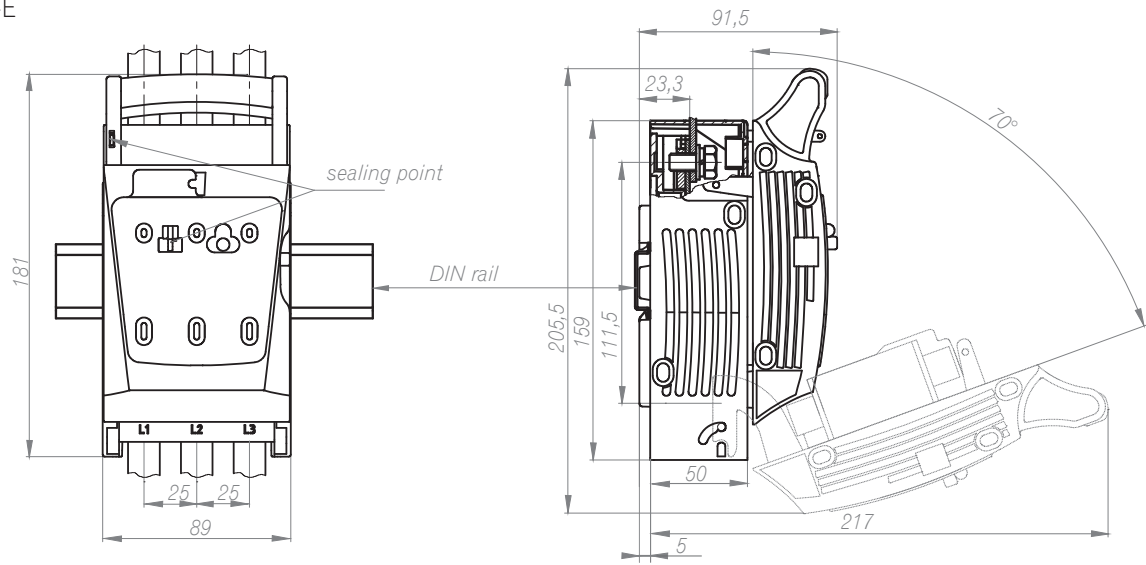


RBK 1
for installation on mounting plate,
with additional terminal shrouds

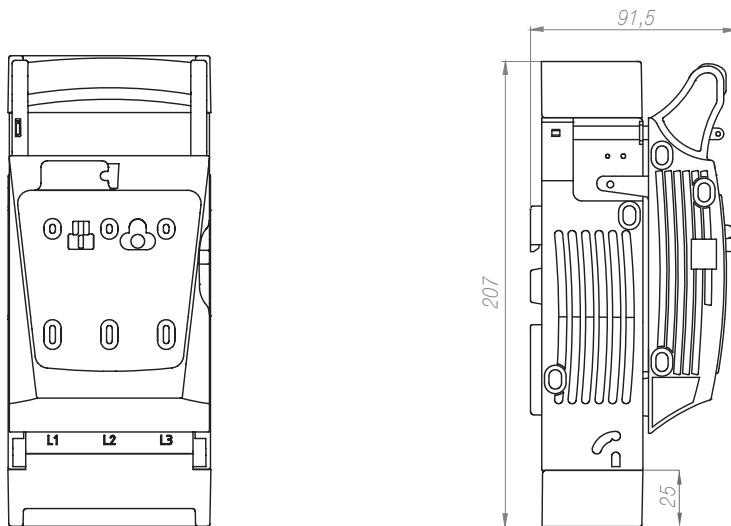


RBK 1 VD-M
for installation on mounting plate,
picture of fuse switch disconnecter
without fuse links cover and terminal
shrouds, top cable terminal - M
screws, bottom cable terminal -
V-clamps, (RBK 1 VG-M - bottom
cable terminal - M screws, top
cable terminal - V-clamps)

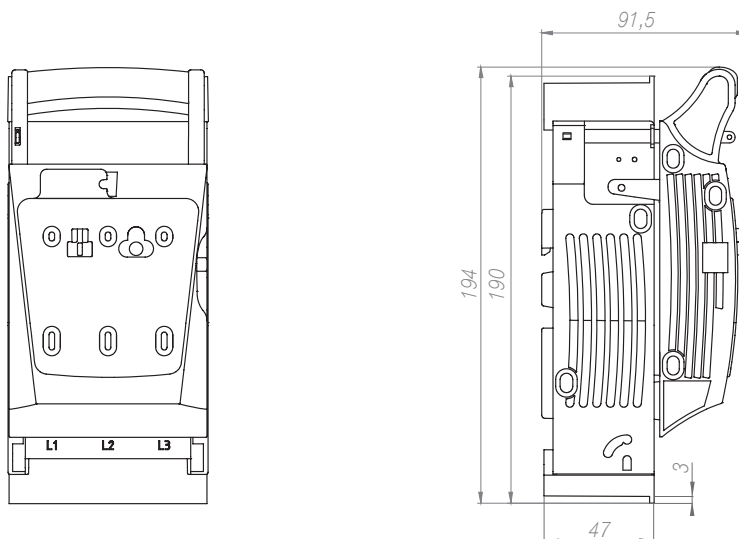
RBK 000
RBK 000-E



RBK 000-O

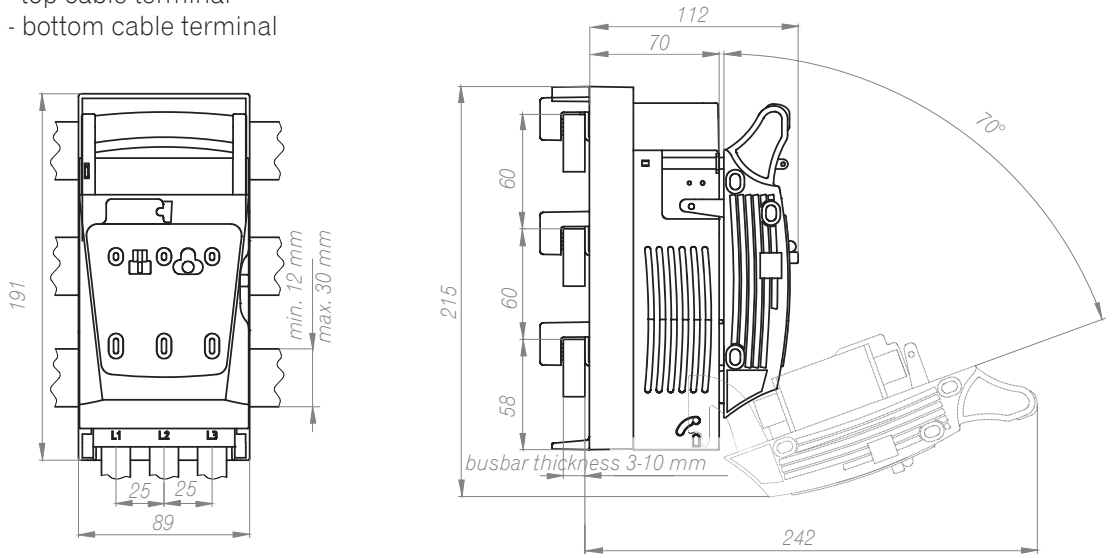


RBK 000-W

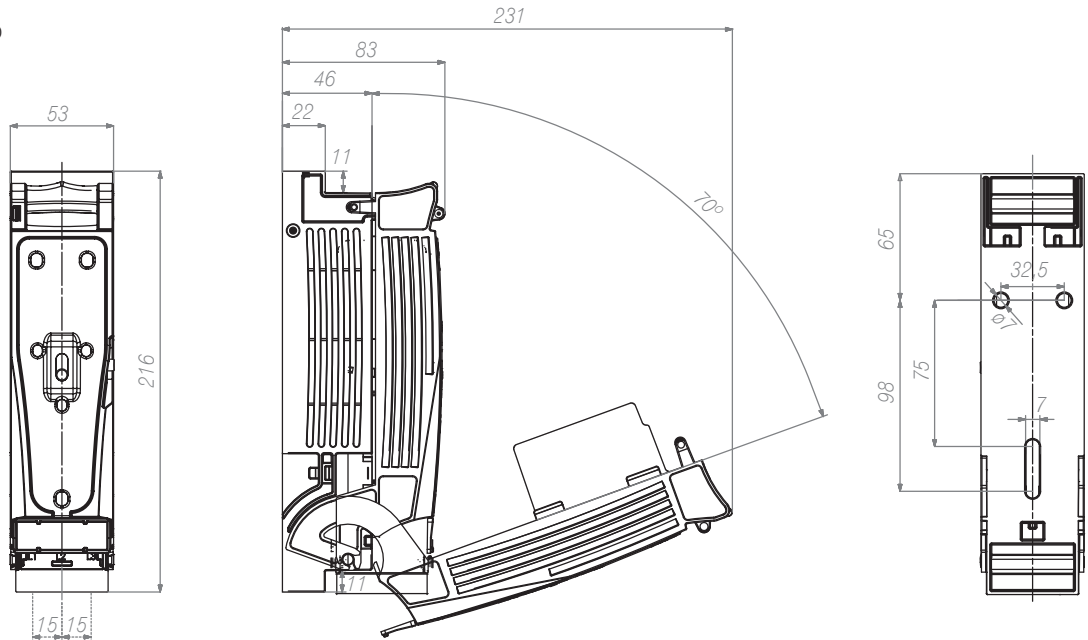




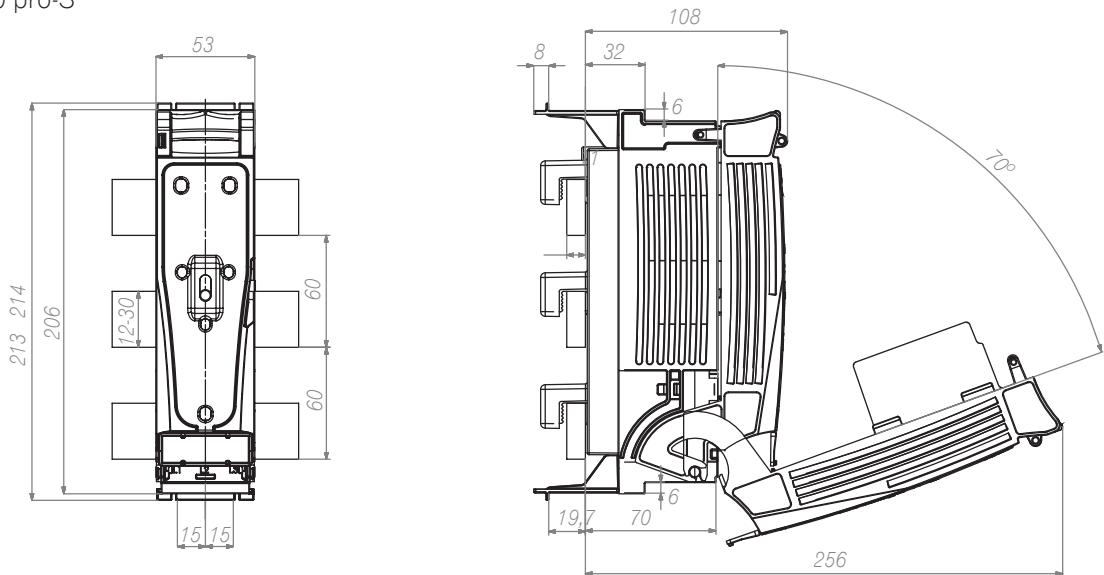
RBK 000-SG - top cable terminal
RBK 000-SD - bottom cable terminal



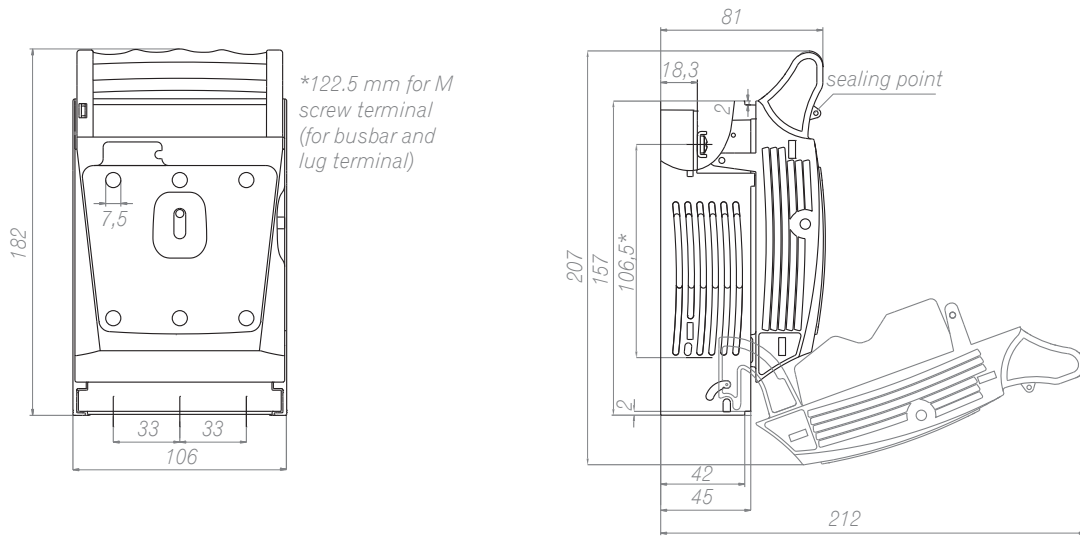
RBP 000 pro



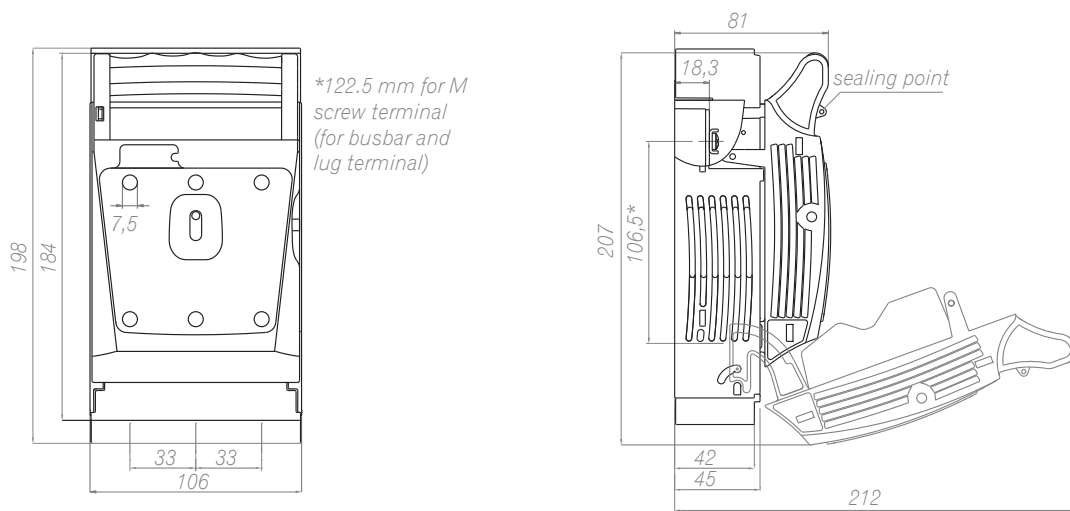
RBP 000 pro-S



RBK 00 / RBK 00 pro

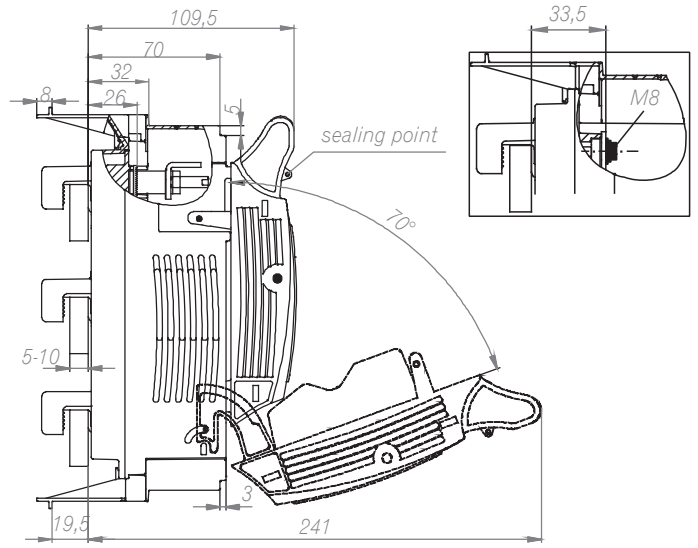
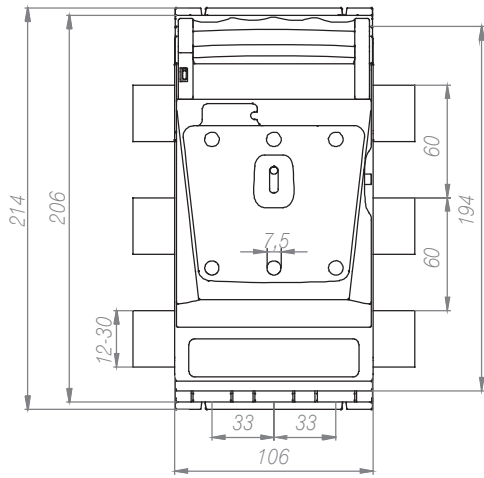


RBK 00-W / RBK 00 pro-W,

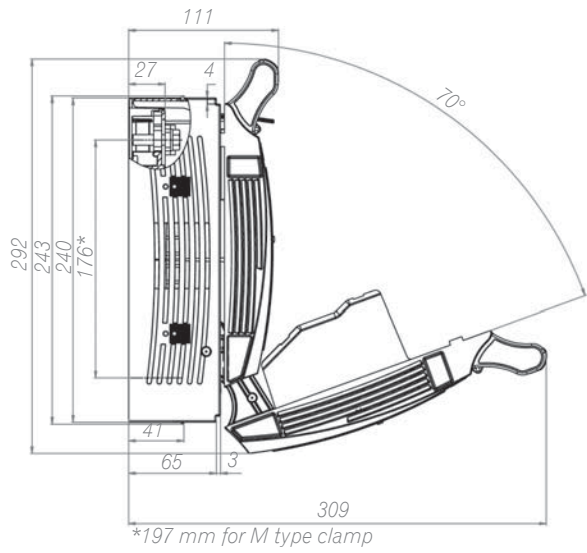
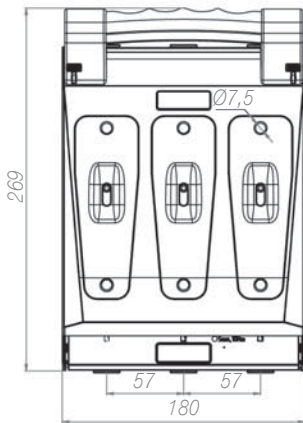




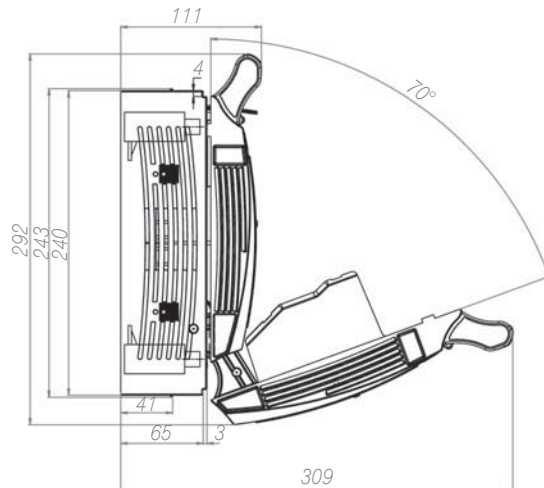
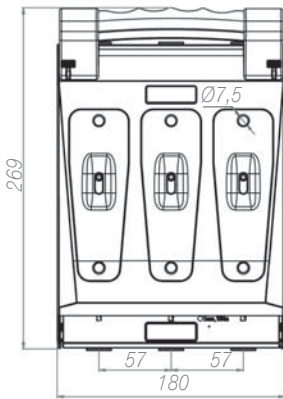
RBK 00 pro-S



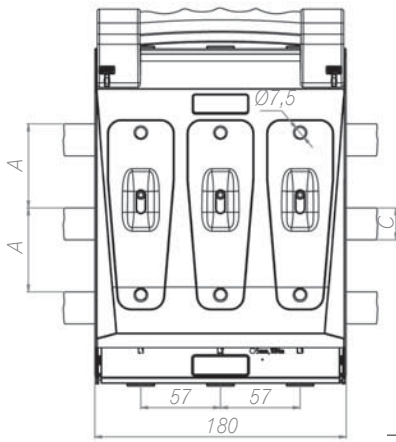
RBK 1, RBK 1 pro



RBK 1 pro-V

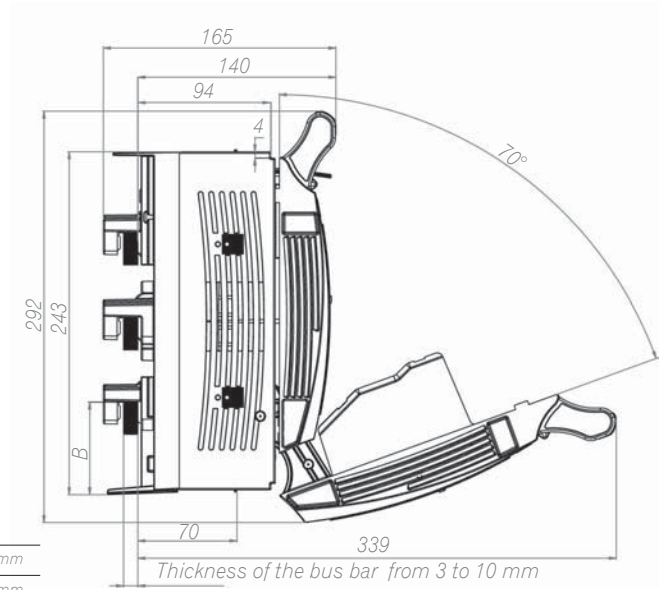


RBK 1 pro-SD, RBK 1 pro-SG

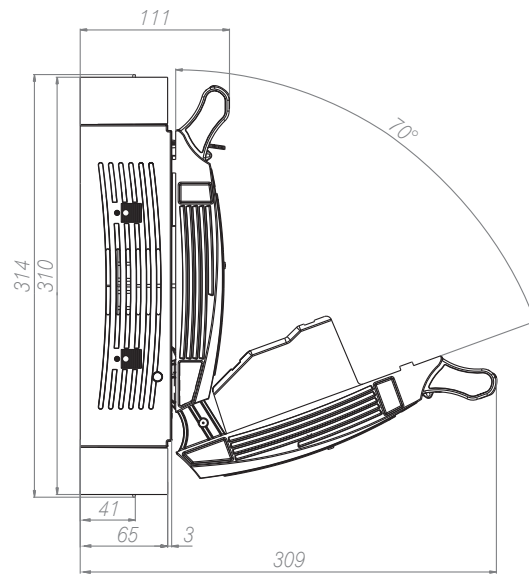
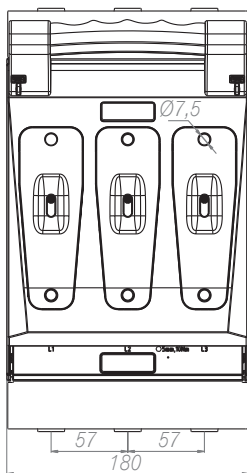


A	B	C
60 mm	66 mm	max 30 mm
100 mm	27-66 mm	max 60 mm

M,S,V types of clamps

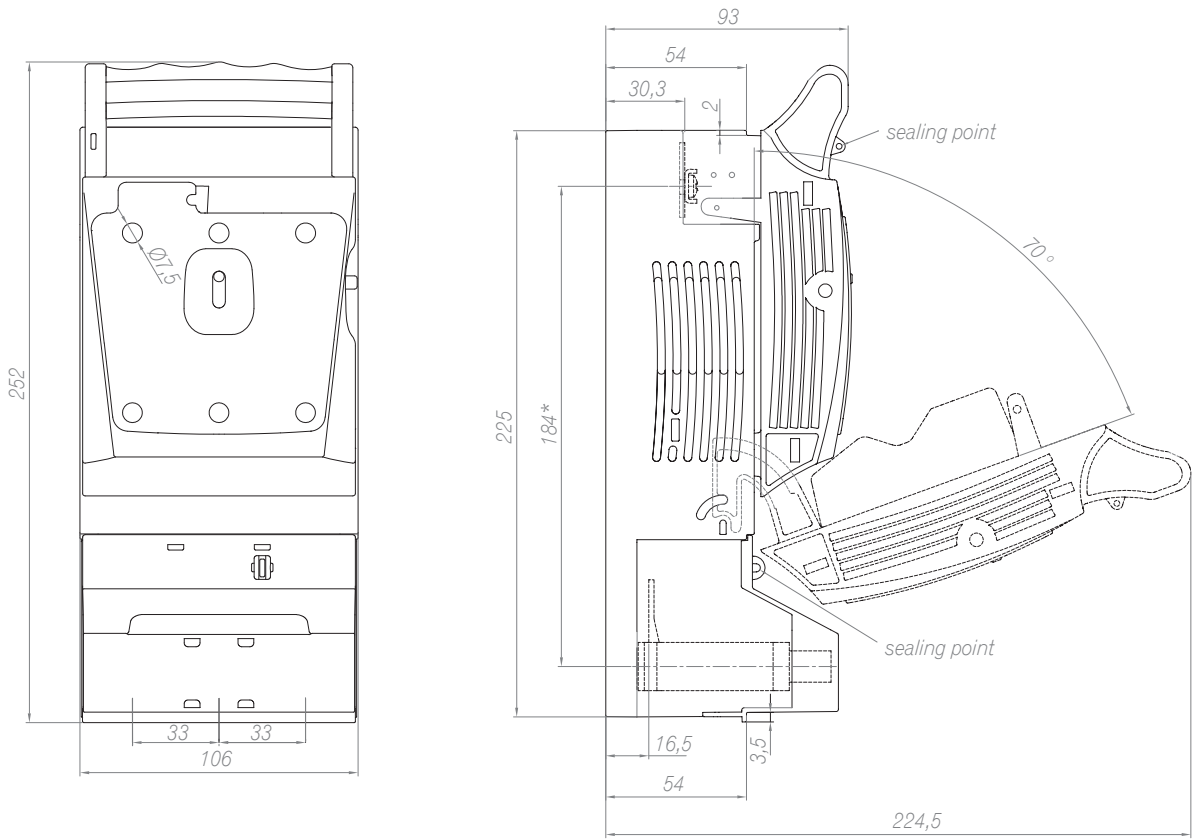


RBK 1 pro-O

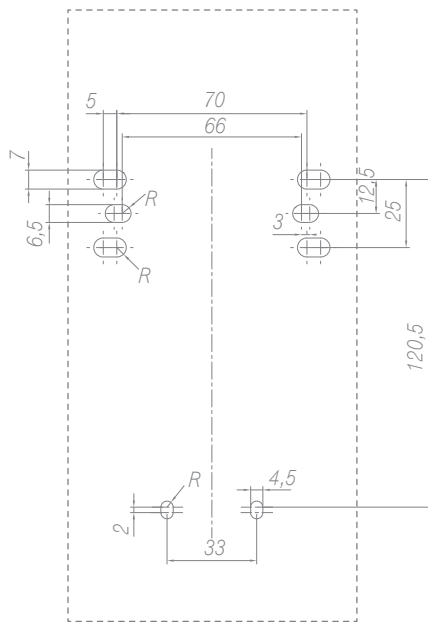




RBK 00 pro-V 120

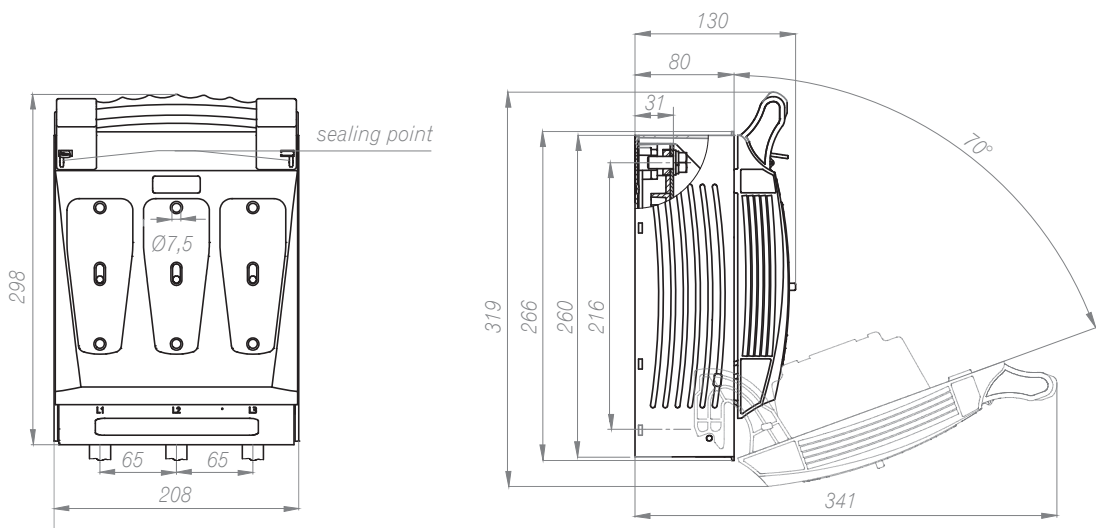


*197 mm for M screw terminal
(for busbar and lug terminal)

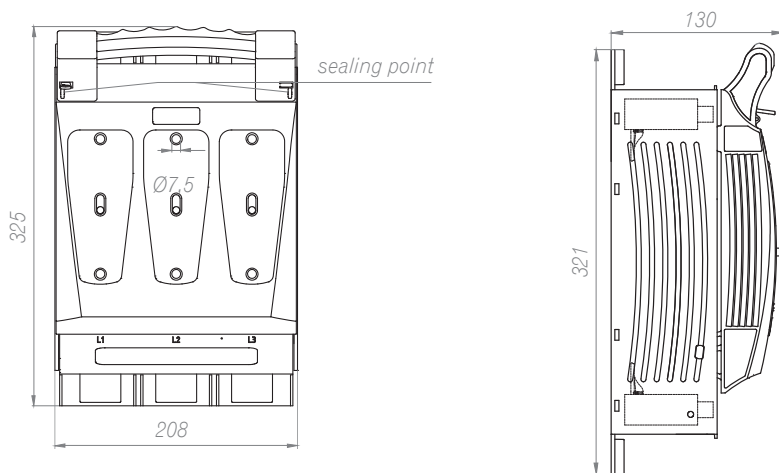


spacing of holes for installation
of RBK 00 pro-V120 on mounting plate

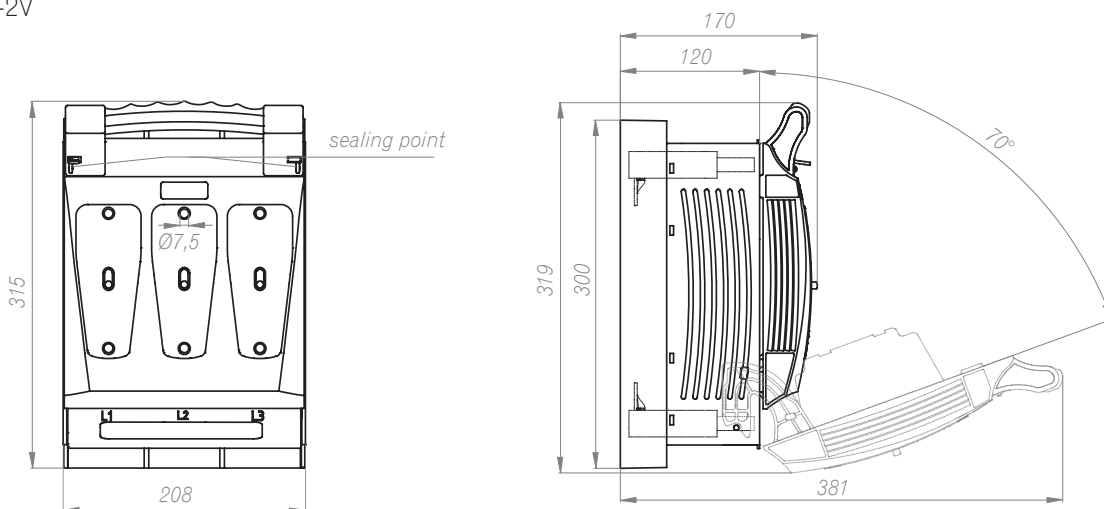
RBK 2 pro



RBK 2 pro-V

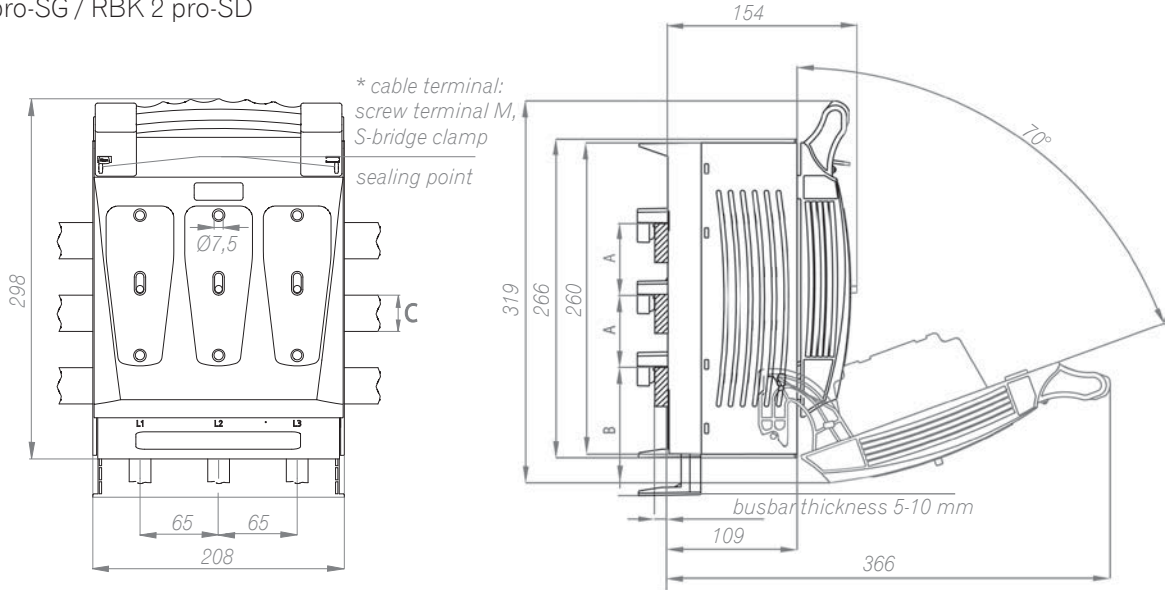


RBK 2 pro-2V

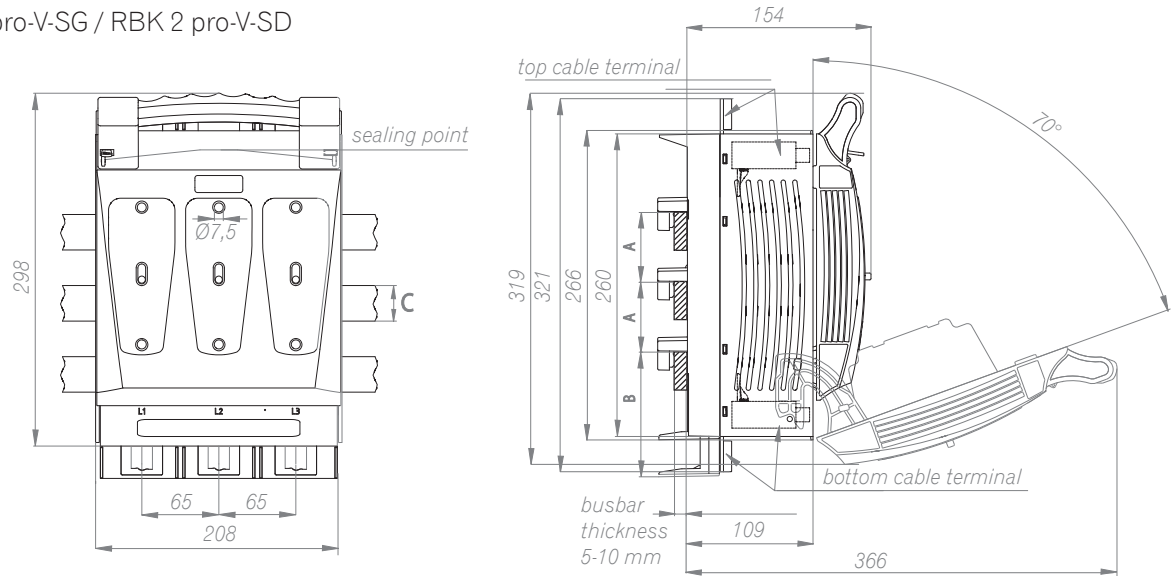




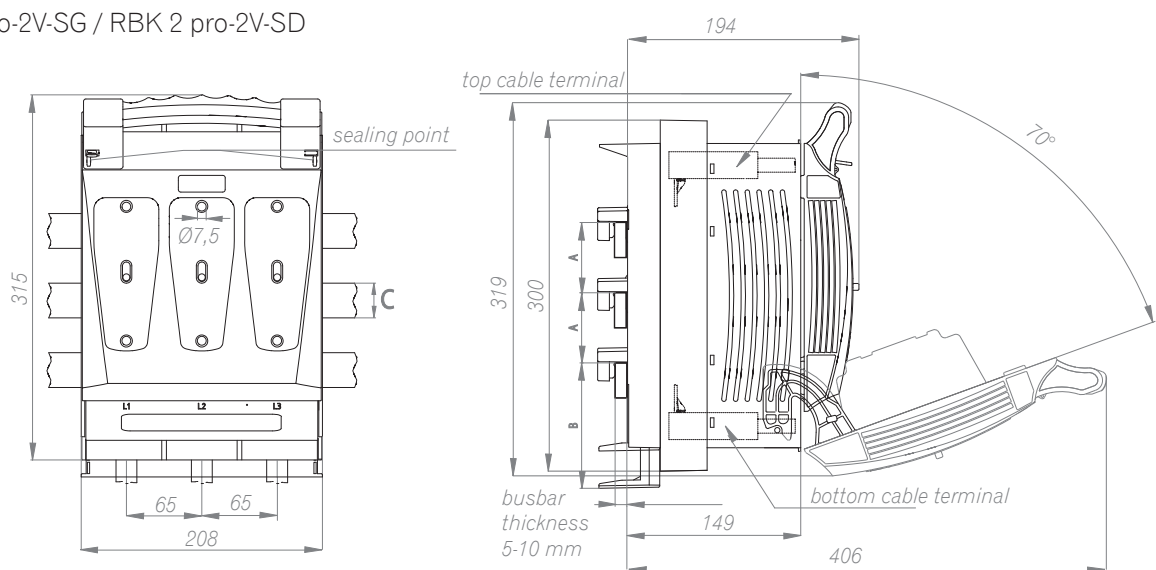
RBK 2 pro-SG / RBK 2 pro-SD



RBK 2 pro-V-SG / RBK 2 pro-V-SD

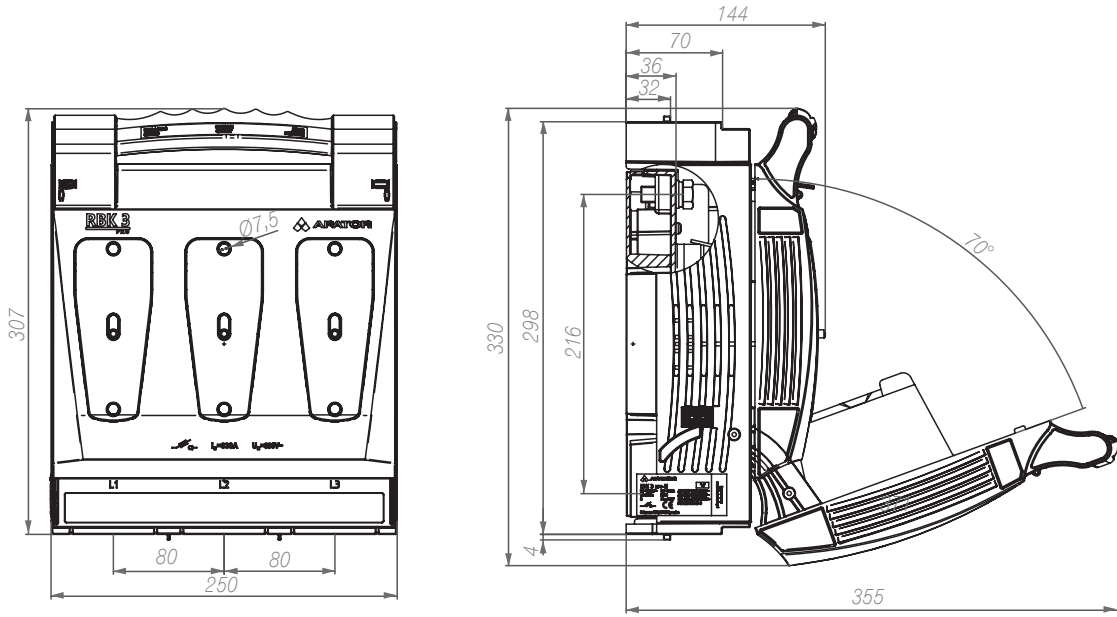


RBK 2 pro-2V-SG / RBK 2 pro-2V-SD

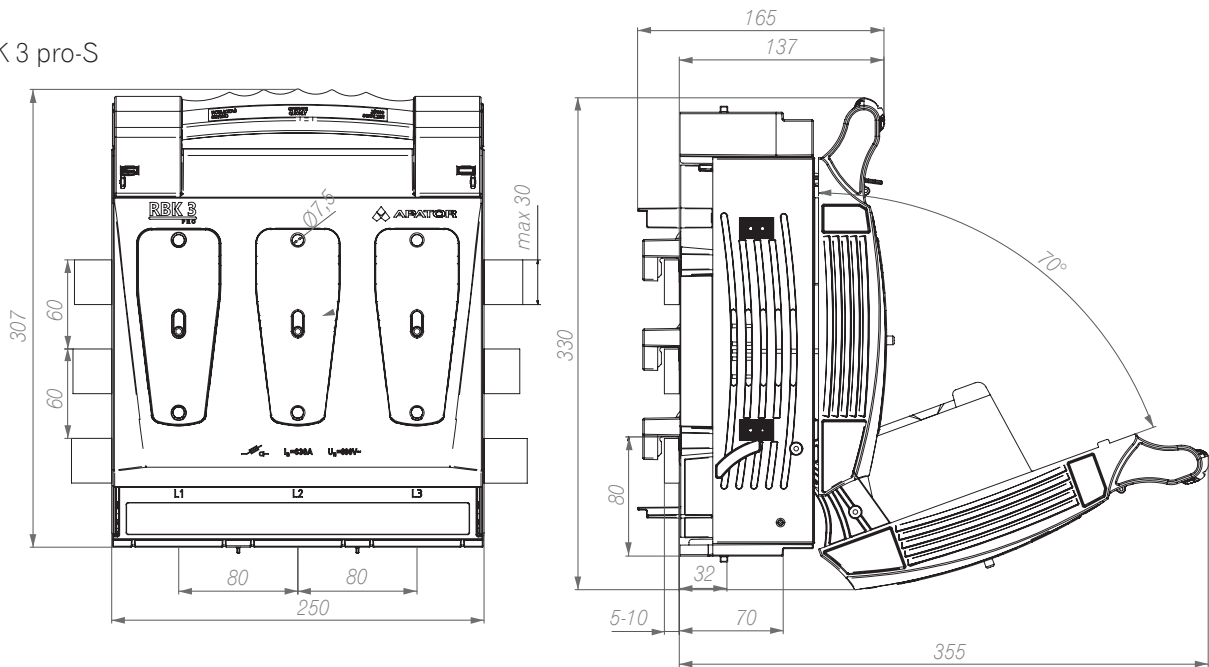


A	B	C
60 mm	75 mm	maks. 30 mm
100 mm	35-67 mm	maks. 60 mm

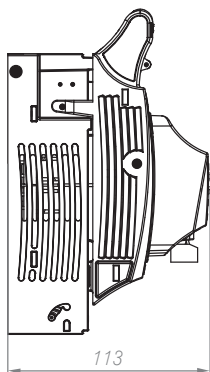
RBK 3 pro



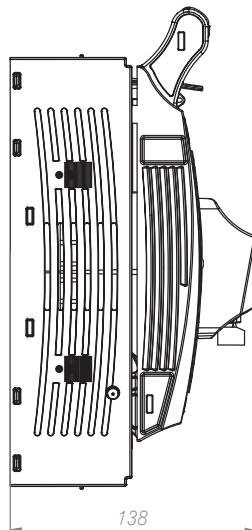
RBK 3 pro-S



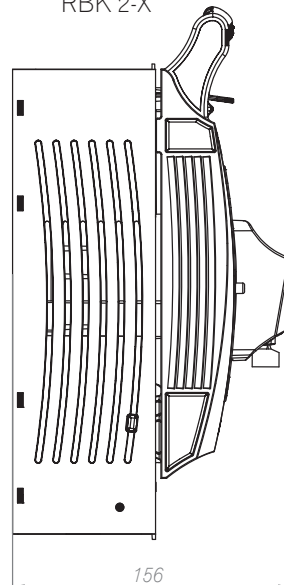
RBK 00-X



RBK 1-X



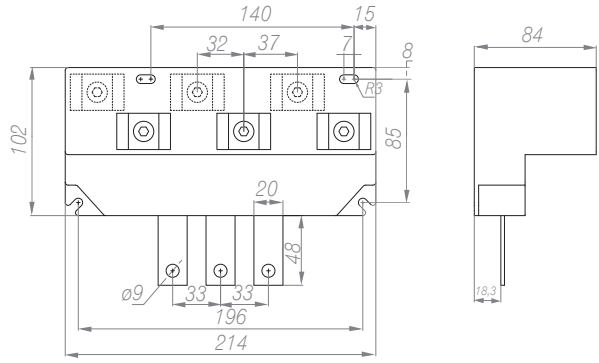
RBK 2-X



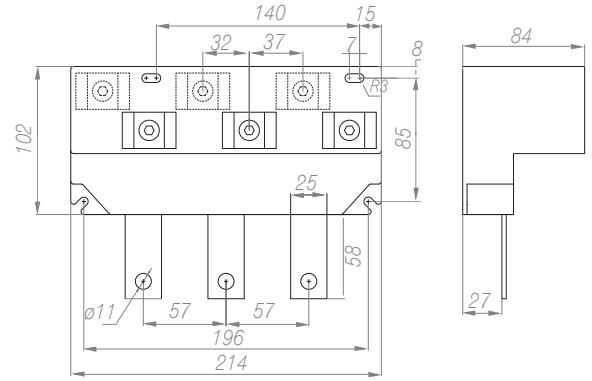


Terminal adapters:

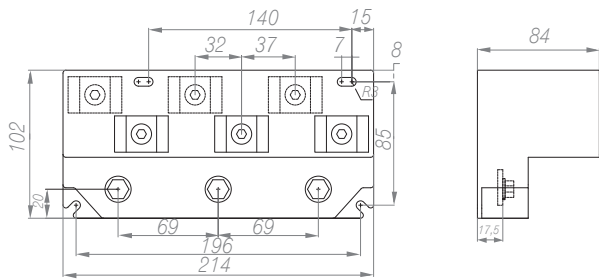
RBK 00



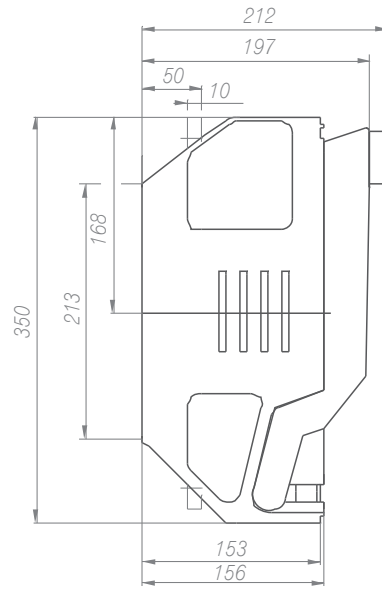
RBK 1



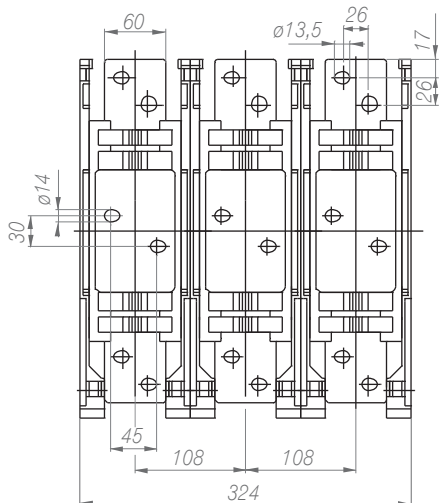
RBK 2



RBK 4a



RBK 4a 1600



RBK 4a 1250

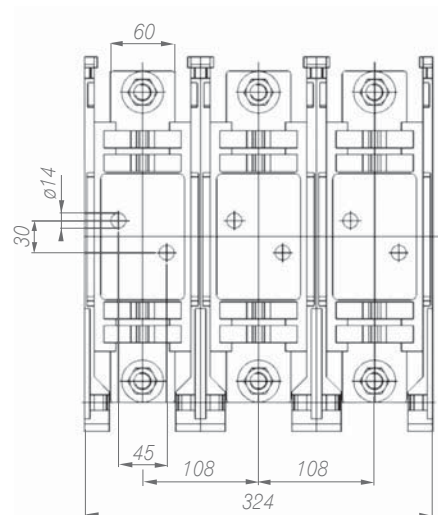


Table 108. RBK 000 - ACCESSORIES

Description	Size	Article No.	Picture
Feeding bridge 2 x RBK 000, 35 mm ²	000	1119510055T	
Feeding bridge 3 x RBK 000, 35 mm ²	000	1119510056T	
Feeding bridge 4 x RBK 000, 35 mm ²	000	1119510057T	
Feeding bridge 5 x RBK 000, 35 mm ²	000	1119510058T	
Feeding bridge 2 x RBK 000, 50 mm ²	000	1119510059T	
Feeding bridge 3 x RBK 000, 50 mm ²	000	1119510060T	
Feeding bridge 4 x RBK 000, 50 mm ²	000	1119510061T	
Feeding bridge 5 x RBK 000, 50 mm ²	000	1119510062T	
Feeding bridge RBK 000 25-95 mm ² (1 set - 3 pcs.) for connection of conductor of cross-section	000	1119510071T	
25 - 70 mm ²  25 - 95 mm ² 			
Auxiliary contacts (microswitch) AC-15 U _e 230 V~ I _e 2,5 A DC-13 U _e 230 V~ I _e 0,3 A	000	1115296311T	
Additional terminal shroud „O” extends shroud length of 25 mm	000	51-930160-011	





Table 109. RBK 00 - ACCESSORIES

Description	Size	Article No.	Picture
Feeding bridge 2 x RBK 00, 35 mm ²	00	1119510063T	
Feeding bridge 3 x RBK 00, 35 mm ²	00	1119510064T	
Feeding bridge 4 x RBK 00, 35 mm ²	00	1119510065T	
Feeding bridge 5 x RBK 00, 35 mm ²	00	1119510066T	
Feeding bridge 2 x RBK 00, 50 mm ²	00	1119510067T	
Feeding bridge 3 x RBK 00, 50 mm ²	00	1119510068T	
Feeding bridge 4 x RBK 00, 50 mm ²	00	1119510069T	
Feeding bridge 5 x RBK 00, 50 mm ²	00	1119510070T	
Feeding bridge clamp RBK 00 25-95 mm ² (1 set - 3 pcs.) for connection of conductor of cross-section	00	1119510072T	
25 - 70 mm ²  25 - 95 mm ² 			
Clamp for RBK 00 2x25 mm ² 1x16 mm ²	00	1119510073T	
Clamp for RBK 00 4x10 mm ²	00	1119510074T	




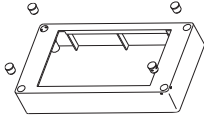

Description	Size/Version	Article No.	Picture
Auxiliary contacts (microswitch) AC-15 U_e 230 V~ I_e 2,5 A DC-13 U_e 230 V~ I_e 0,3 A	00	1115296311T	
Additional terminal shroud „O” extends shroud length of 25 mm	00	51-930499-011	
Full cover (matt)	00	1361399021T	
Terminal adapter + 3 x V-clamp + terminal shroud	RBK 00	1119510048T	
	RBK 00 W	1119510043T	

Table 110. RBK 1, RBK 2, RBK 3 - ACCESSORIES







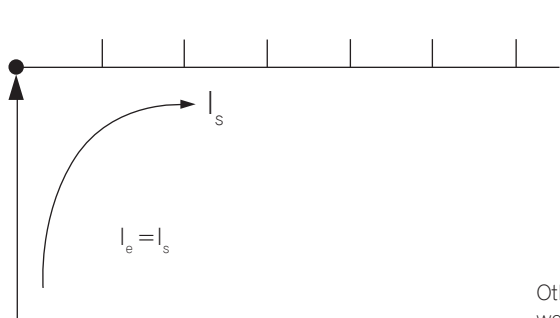
Description	Version	Article No.	Picture
Auxiliary contacts (microswitch) AC-15 U_e 230 V~ I_e = 2,5 A DC-13 U_e 230 V~ I_e = 0,3 A	RBK 1 RBK 1 pro RBK 2	1115296316	
Auxiliary contacts (microswitch) AC-15 U_e 110/230/400 V~ I_e = 1 A DC-13 U_e 48/110/220 V~ I_e = 0,5 A screw terminals conductors cross-section: – solid – 1 x 0,5 = 1,0 mm ² – stranded – 1 x 0,5 = 0,75 mm ²	RBK 3	1115296037	
Additional terminal shroud „O” extends shroud length of 35 mm	RBK 1 pro-O	51-823278-011	
Additional terminal shroud „O” extends shroud length of 60 mm	RBK 2-O	51-822405-011	
Terminal adapter RBK 1 + 3 x V-clamp + terminal shroud	RBK 1	1119510046T	
Terminal adapter RBK 2 + 3 x V-clamp + terminal shroud	RBK 2	1119510047T	



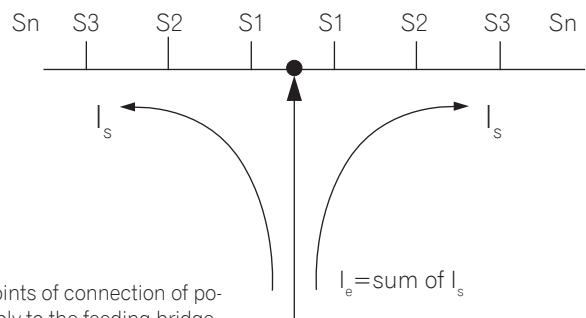
Table 111. RBK 00, RBK 000 FEEDING BRIDGES TECHNICAL DATA

Materials	Cu busbar
	Insulating parts, pressed PC/ABS RAL7035
	Cover, injection molded PC/ABS RAL7035
	Shroud, injection molded PC/ABS RAL7035
Temperature range	>80 °C UL94V0
Glow wire flammability index	pressed PC/ABS
	960 °C / 3.2 mm
	850 °C / 1 mm
	injection molded PC/ABS 960 °C / 1 mm
Insulation properties	Overvoltage category III/Pollution degree rating II
CTI	pressed PC/ABS 600 V
	injection molded PC/ABS 250 V
Short-circuit strength	25 kA/0.1 s
Dielectric strength	>32 kV / mm
Rated impulse withstand voltage 35 mm ² / 50 mm ²	>6.5 kV / >8.5 kV
Minimal insulating distance in air 35 mm ² / 50 mm ²	>6 mm / >8 mm
Minimal creepage distance 35 mm ² / 50 mm ²	>8.5 mm / >9 mm
Rated switching voltage	690 V

Feeding bridge length	Max. 1000 mm	Max. 300 mm	Max. 1000 mm	Max. 300 mm
Cross-section	35 mm ²	35 mm ²	50 mm ²	50 mm ²
Power supply connection point at the end or at the beginning of feeding bridge				
Maximum I _s current / phase	125 A	200 A	160 A	250 A
Feeding conductors crosssection	35 mm ²	70 mm ²	50 mm ²	95 mm ²
Other points of connection of power supply to the feeding bridge				
Maximum feeding current I _e	160 A	250 A	160 A	250 A
Feeding conductors crosssection	70 mm ²	95 mm ²	70 mm ²	95 mm ²



Power supply connection point at the end or at the beginning of bridge



Other points of connection of power supply to the feeding bridge

In case of connection of power supply in the middle of feeding bridge sum of output currents S_1, \dots, S_n cannot be greater than corresponding maximum current I_s .

APPLICATION EXAMPLES

Fuse switch disconnectors RBK 00 connected with feeding bridge , power supply cables connected to feeding bridge clamps





Article No. 1119510048T

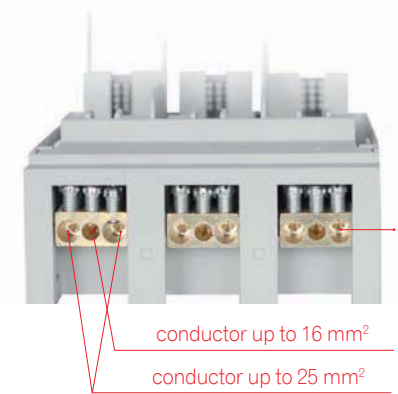


Article No. 1119510073T

RBK 00-W with terminal adapter for connection of sector-shaped conductors with cross-section up to 240 mm²

RBK 00-W with terminal clamp 1x16 mm², 2x25 mm² (view of fuse switch disconnector without fuse-link cover and terminal shrouds)

35 - 95 mm ²	35 - 120 mm ²
50 - 185 mm ²	50 - 240 mm ²



Article No. 1119510073T

conductor up to 16 mm²
conductor up to 25 mm²



Article No. 51-930499-011

Article No. 51-930499-011

RBK 00-W with terminal clamp 1x16 mm², 2x25 mm² (view of fuse switch disconnector without fuse-link cover)

RBK 00-O for installation on mounting plate, version with additional terminal shrouds „O“



Article No. 51-930160-011

Article No. 51-930160-011

RBK 000-O for installation on mounting plate, version with additional terminal shrouds „O“

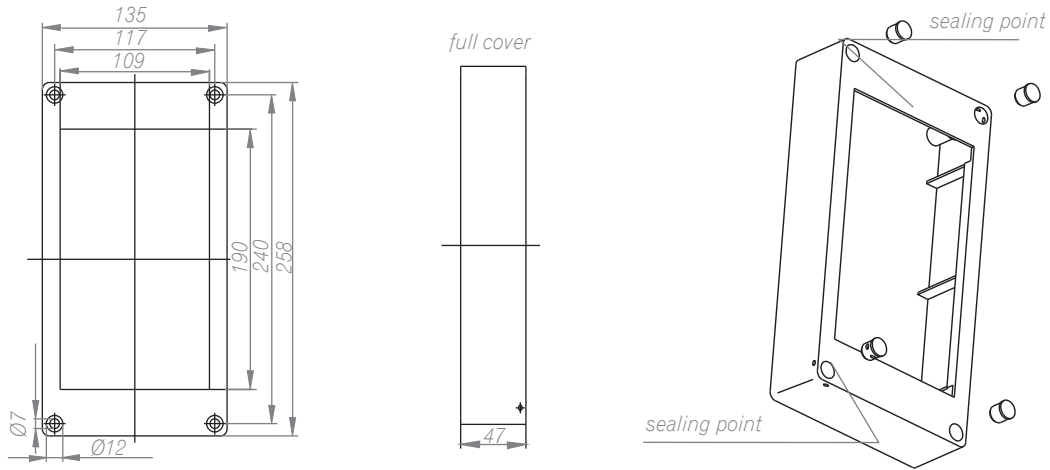


Article No. 51-823278-011

Article No. 51-823278-011

RBK 1-O for installation on mounting plate, version with additional terminal shrouds „O“

FULL COVER FOR RBK 00



TERMINAL ADAPTER FOR RBK 00 / RBK 1



CONFORMING TO STANDARDS:

1. PN-EN 60947-7-1: 2010
2. EN 60947-7-1: 2009



COVERING OF RBK FUSE SWITCH DISCONNECTORS (REAR INSTALLATION)

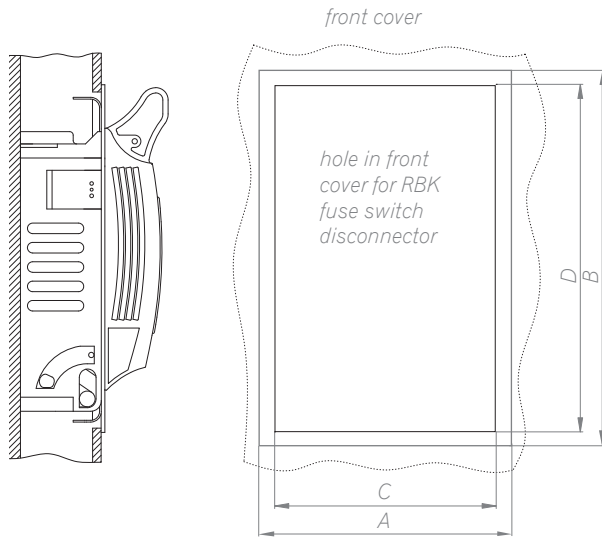
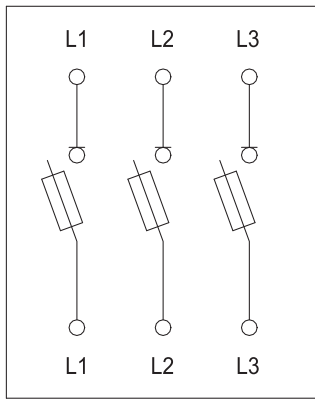


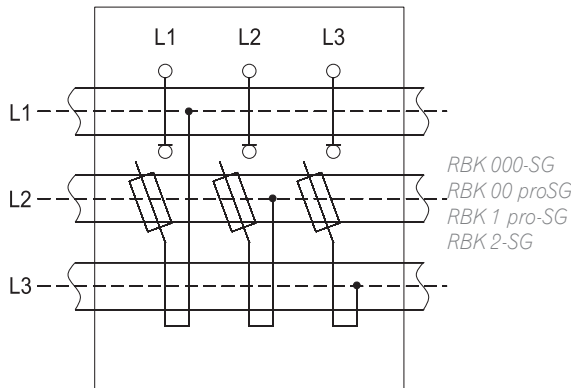
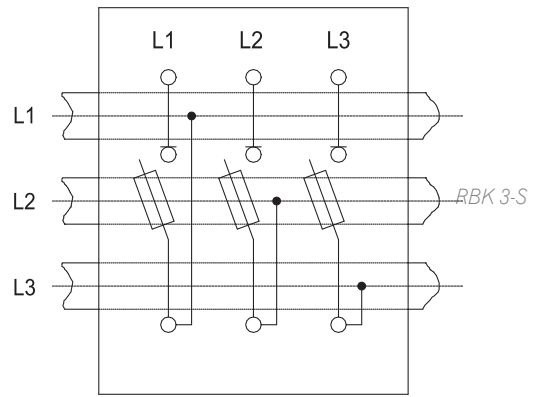
TABLE 112. FRONT COVER DIMENSIONS

Typ	A	B	C	D
RBK 000	104	166	94	156
RBK 000-S, RBK 000-W	104	205	94	195
RBK 00, RBK 00 pro, RBK 00 pro-S	120	207	110	197
RBK 00-W	120	207	110	182
RBK 1, RBK 1-S	198	262	186	250
RBK 2, RBK 2-S	230	285	209	255
RBK 2-V, RBK 2-2V	230	340	209	255
RBK 3, RBK 3-S	272	328	258	316

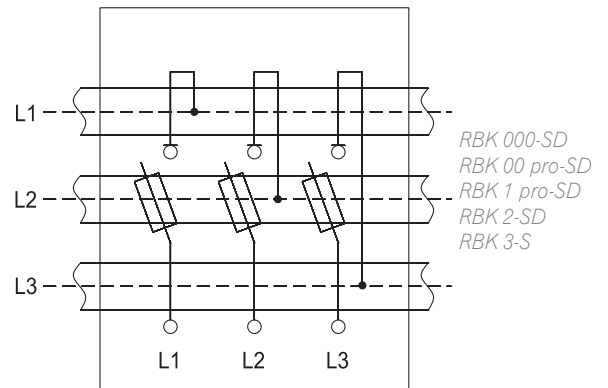
ELECTRICAL DIAGRAMS (RBK 1-S, RBK 3-S - POSSIBLE BOTTOM CABLE TERMINAL CONNECTION)



RBK 000
 RBK 00
 RBK 00 pro
 RBK 1
 RBK 2
 RBK 3



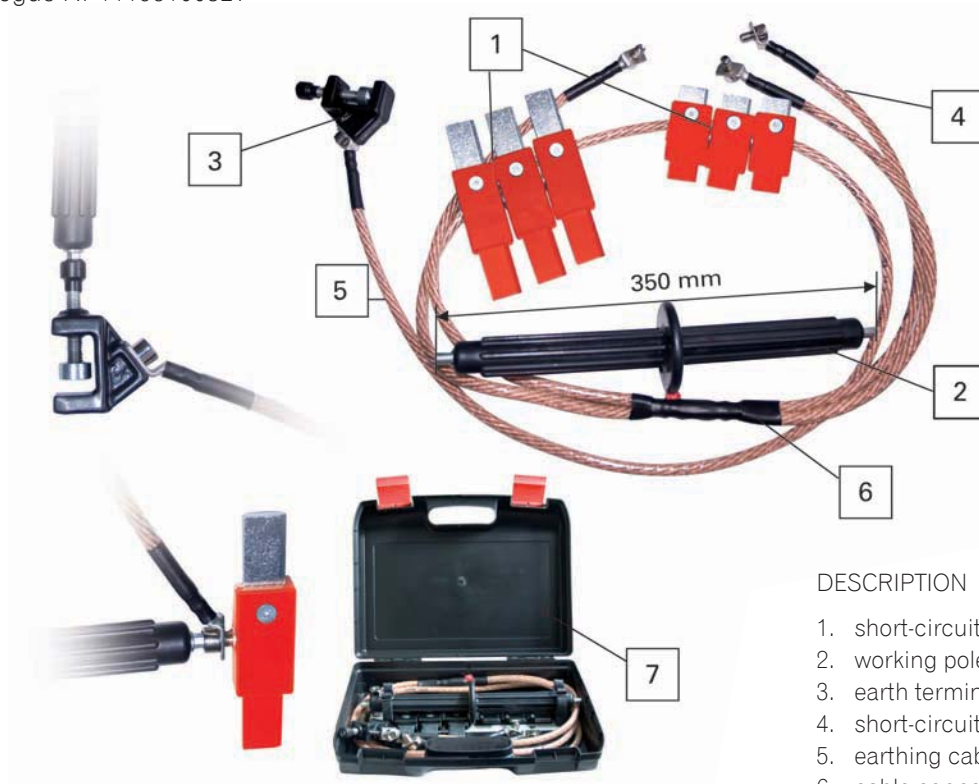
RBK 000-SG
 RBK 00 proSG
 RBK 1 pro-SG
 RBK 2-SG



RBK 000-SD
 RBK 00 pro-SD
 RBK 1 pro-SD
 RBK 2-SD
 RBK 3-S

UNIVERSAL EARTHING DEVICE FOR RBK 000, 00, 1, 2, 3

Catalogue Nr 1119510032T



DESCRIPTION

1. short-circuiting links
2. working pole
3. earth terminal
4. short-circuiting cable
5. earthing cable
6. cable connection point
7. case

EXAMPLE OF THE ORDER OF RBK 2 - V - SD - 100

Fuse switch disconnecter	160 A	RBK 000, RBK 00, RBK 00 pro	
	250 A	RBK 1	
	400 A	RBK 2	RBK 2
	630 A	RBK 3	
Terminal clamps	V	Typ V	V
	2V	Typ 2V	
	M	screw terminal	
	S	S-bridge clamps	
For installation on to busbar system	S		S
Cable terminal	D	bottom	D
	G	top	
Busbar system	60 mm	60	
	100 mm	100	100