

MULTIVERT® 160A/185mm

Size 00, 690VAC, single pole switching

IEC FUSE SWITCH DISCONNECTORS

NH VERTICAL FUSE SWITCH DISCONNECTOR



MULTIVERT® NH vertical fuse switch disconnectors meet all functions of NH fuse switch disconnectors. They are designed for installation on to bus bars in triple pole arrangements.

MULTIVERT® 160A 185 mm single pole switching are for installation on to 185 mm bus bar systems.

MULTIVERT® 160A are designed for NH fuse-links in accordance with IEC/EN 60269-2, VDE 0636-2, size 00: 160A.

The system is a modular system, that allows the installation of individual components. MULTIVERT® offer the user the possibility of fast and easy installation as well as a high degree of protection during installation and maintenance.

TECHNICAL DATA OVERVIEW

Voltage AC	690 VAC
Amper (A)	160 A
Size per Standard	00
SCCR	Ue = AC 500 V; Ie = 160 A 80kA
Mounting	bus bar system 185 mm
Switchability	3 x single pole
Number of poles	3

FEATURES & BENEFITS

- Installation on to 185mm bus bar system
- Symmetrical switch - top/bottom cable terminal connection
- Parking position of switch operating cover even with fuse-links inserted
- Varieties of cable termination: screw, clamp strap, Al/Cu clamp, frame clamp, V-terminal
- Electronic fuse monitoring or indicator for switch door position - optional
- Safe on load connection/disconnection in accordance with IEC 60947-3

APPLICATIONS

- House incoming units
- Meter distribution units
- Switch boards for industrial applications
- Residential and industrial distribution units
- Cable distribution cabinets
- Feeder pillars

STANDARDS

- IEC/EN 60 947-3
For NH-fuse links size 000/00 in accordance with IEC/EN 60 269-2, VDE 0636-2



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PRODUCT RANGE

MULTIVERT® 160 A size 00 185 mm 3 x single pole switching



M01N0G

1.001.725

Catalog number	Item number	Cable termination components	Design	Package	Weight
M01N0G	Y228756	3 M8 terminal screws	with cover shroud MZ00KH	1 piece	1.9 kg
M01S0G	X1023152	3 clamp straps Cu 4-70 mm ²	with cover shroud MZ00KH	1 piece	1.9 kg
M01A0G	Q1023146	3 Al/Cu clamps 1,5-70 mm ²	with cover shroud MZ00KH	1 piece	1.9 kg
1.000.910	G1023138	with V-terminal for V-terminal clamps size 00	with cover shroud 1.000.915	1 piece	1.9 kg
1.001.725	M1023143	V-terminal with 3 V-terminal clamps size 00	with cover shroud 1.000.915	1 piece	1.1 kg
M01N0E11G	R1023147	3 M8 terminal screws	MULTIVERT® M01N0G with cabling of instrument leads	1 piece	2.25 kg
M01S0E11G	W1023151	3 clamp straps Cu 4-70 mm ²	MULTIVERT® M01S0G with cabling of instrument leads	1 piece	2.25 kg
M01A0E11G	P1023145	3 Al/Cu clamps 1,5-70 mm ²	MULTIVERT® M01A0G with cabling of instrument leads	1 piece	2.25 kg
1.000.911	L1023142	with V-terminal for V-terminal clamps size 00	MULTIVERT® 1.000.910 with cabling of instrument leads	1 piece	2.25 kg



M01N0E11G

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TECHNICAL DATA IN ACCORDANCE WITH EN / IEC 60947

160 A, 185 mm
3 x single pole switching

Number of poles/phases	3
Size	00
Conventional free air thermal current with NH-fuse links I_{th}	160 A
Max. power dissipation of fuse links P_n	12 W
Conventional free air thermal current with solid links I_{th}	200 A
Max. power dissipation of solid links P_n	1,2 W
Rated operational voltage U_e	690 V
Utilization category to IEC/EN 60947-3 $U_e = AC 400 V; I_e = 160 A$ $U_e = AC 690 V; I_e = 160 A$	AC 22 B AC 20 B
Rated insulation voltage U_i	1000 V
Rated impulse withstand voltage U_{imp}	4 kV
Rated frequency	50 ... 60 Hz
Degree of protection	IP 20
Degree of pollution	3
Rated duty	uninterrupted duty
Rated short circuit making capacity with solid links I_{cm}	6.3
Rated short-time withstand current I_{cw}	4.2 kA / 1 s
Power dissipation by I_{th} without NH-fuse links	22 W
Power dissipation by I_{th} 200A without solid links	34 W
Cable terminal connection	
Standard cable terminal	M8
for cable lugs Cu max.	70 mm ²
for cable lugs Al max.	70 mm ²
for copper bars with max. dimensions	20 x 5 mm
V-shaped lugs for V-terminal clamps	10 - 95 mm ²
Bus bar terminal connection	
Standard bus bar terminal	M8
Hooked clamp for bus bar with thickness	5 ... 10 mm
Bus bar system	185 mm
Installation mode	bus bar installation

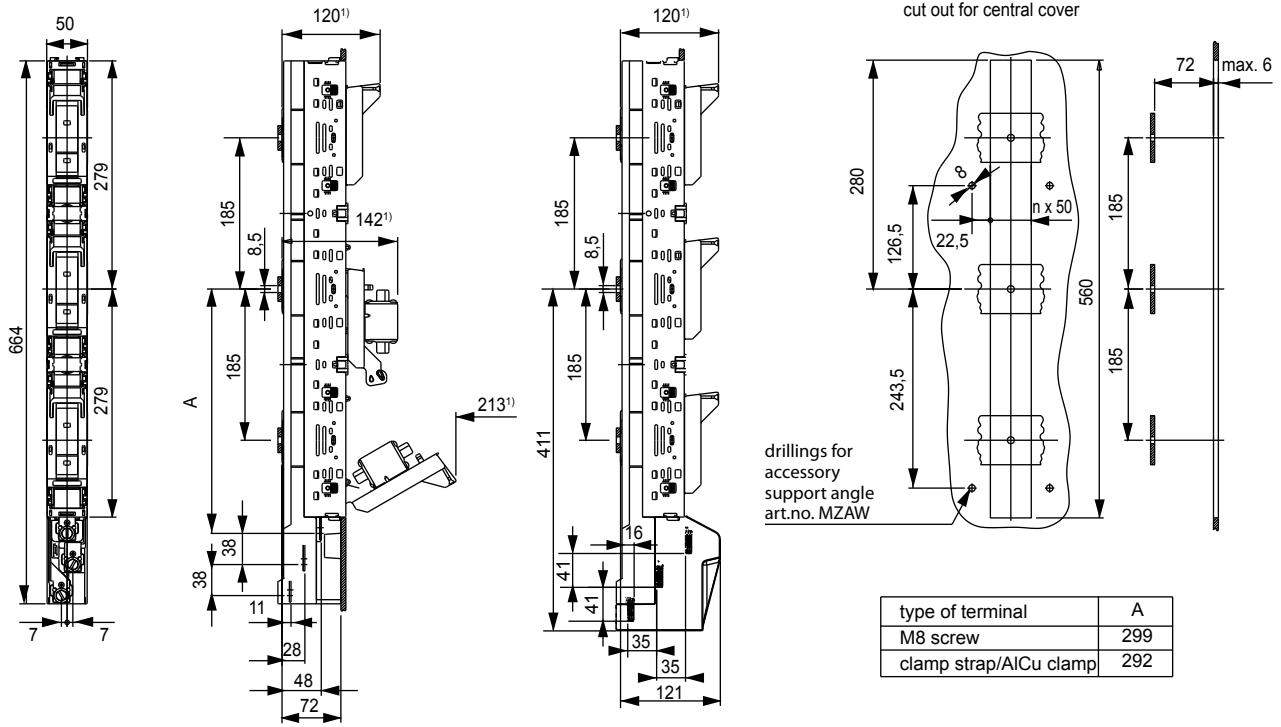
MULTIVERT® 160A/185mm

Size 00, 690VAC, single pole switching

DIMENSIONS

MULTIVERT® 160A/185mm NH-vertical fuse switch disconnecter
direct installation with screws on to 185mm bus bar system

(M01092b)



1) dimensions from upper edge of bus bar

n ... number of units

Dimensions in mm

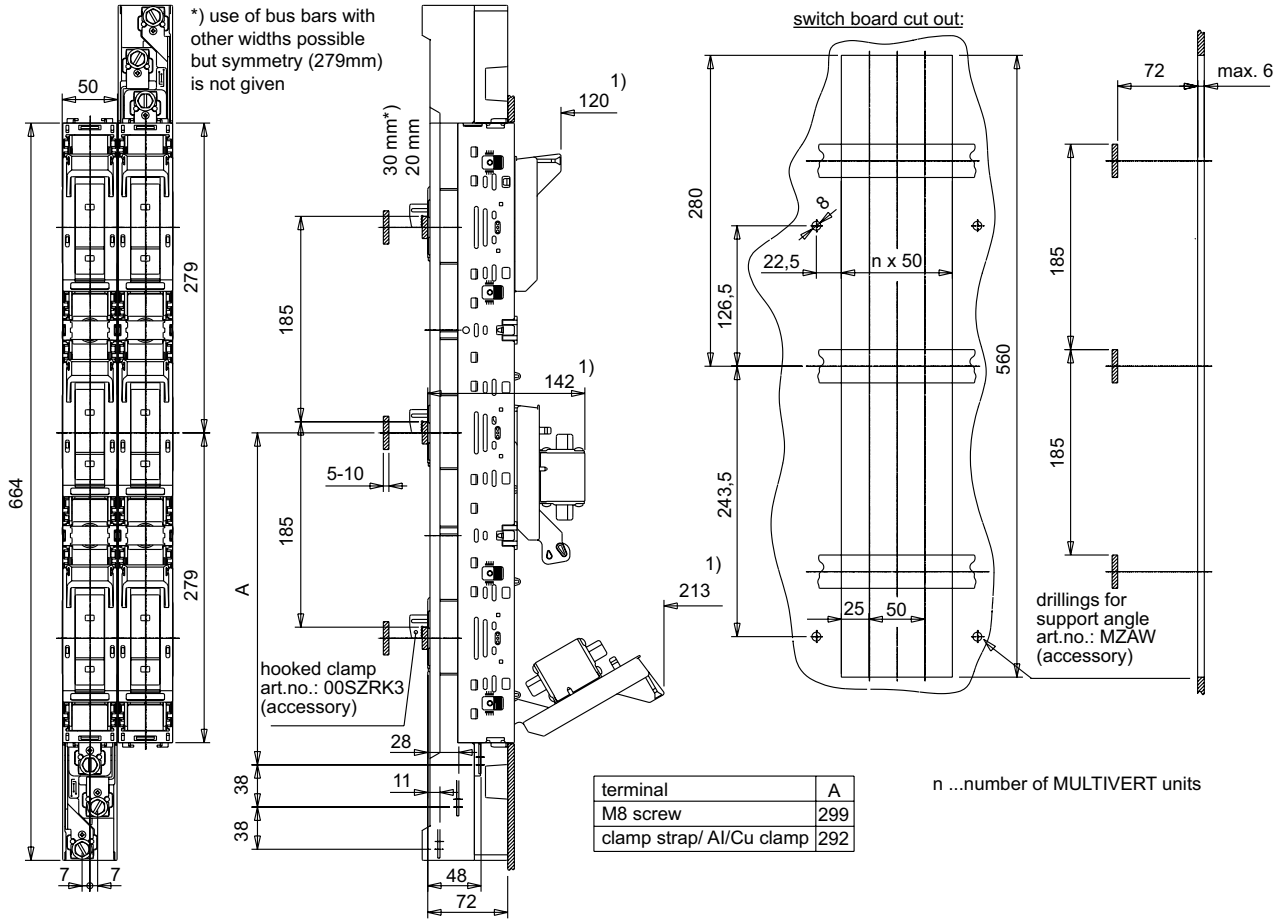
MULTIVERT® 160A/185mm

Size 00, 690VAC, single pole switching

DIMENSIONS

MULTIVERT® 160A/185mm NH-vertical fuse switch disconnecter
direct installation without drilling
with hooked clamps on to 185mm bus bar system

(M01093d)



1) dimensions from upper edge of bus bar

Dimensions in mm

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DIMENSIONS

Cable termination MULTIVERT® 160A (MA107d)

reference	N	S	A	V	R	K
article number	00SZS	00SZESK	00SZA70	00SZVK1 ((accessory))	*	1.003.433
type of terminal	screw	clamp strap	Al/Cu clamp	V-clamp	frame clamp	clamping block
cross section	Cu 16-70	Cu 4-70	Cu 1,5-70	Cu 10-50	Cu 2,5-70	Cu 1,5-16
[mm ²]	Al 16-95	-	Al 1,5-70/95 se	Al 35-70/95 se	-	-
M [Nm]	11	3-4	3-4	5-6	6	3,4

*) installed on to MULTIVERT 160A, 1x triple pole switching
 art. no. 1.000.904 (for 100mm bus bar system) and art. no. 1.002.489 (for 60mm bus bar system)

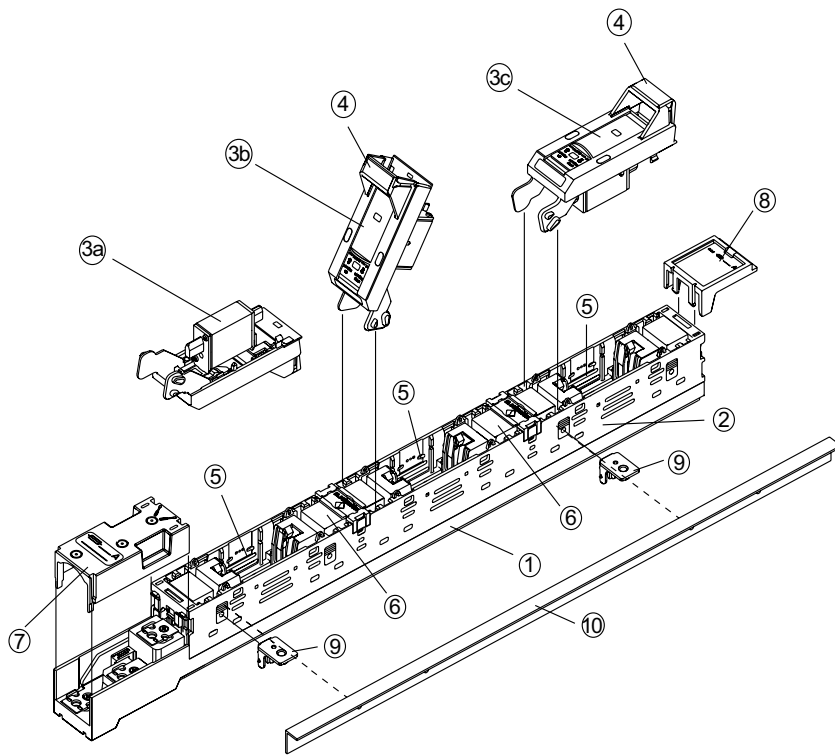
Dimensions in mm

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EXPLODED SKETCH

MULTIVERT® 160A 3x single pole switching (E 1.002.098)



no.	articlenumber	short Description
1		Main base
2		Protection cover
3		Switch operating cover: 3a. parking position; 3b. open; 3c closed
4		Handle
5		Bus bar fixing access/protective door
6		Labelling area/label
7	MZ00KH	Cover shroud 106mm
8	MZ00BT2	Label holder
9	MZAW	Support angle, 1 set = 4 pieces
10	1.001.510	cover shield, length 605mm, set=2 pieces

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ACCESSORIES



MZ00KA



MZ00KAD



MZ00KH



MZ01AS



MZA W



1.002.493



1.002.830



MZ01LPAP



00SZRK3



1.002.646

Covers/shrouds for cable termination

Catalog number	Item number	Design	Package	Weight
1.000.915	H1023300	cover shroud for MULTIVERT®/BSL 160 A with V-terminal	1 piece	50 g
MZ00KA	L1023464	extended cover shroud for cover shroud MZ00KH	1 piece	40 g
MZ00KAD	G1023299	cover shroud length 156 mm for MULTIVERT®/BSL 160 A	1 piece	60 g
MZ00KH	F1023298	cover shroud length 106 mm for MULTIVERT®/BSL 160 A	1 piece	20 g

Covers/level & system adjustment covers

Catalog number	Item number	Design	Package	Weight
MZ01AS	F228763	adjustment to adapt to MULTIVERT® 250 A, 400 A, 630 A (top terminal)	1 piece	10 g
MZA W	D218687	support angle for support of cover plate 1 set = 4 pieces	1 set	27 g

Covers/spare way covers

Catalog number	Item number	Application	Design	Package	Weight
1.002.493	N1002283	bus bar system 185 mm	spare way cover width 50 mm, length 630 mm for covering of open installation spaces in distribution units with central cover	1 piece	0.14 kg
1.002.830	E1023412	bus bar system 185 mm	spare way cover width 50 mm, length 630 mm with level adjustment 123 mm for bus bar installation, set = cover + fixing set (2 distance pieces, 2 screw rivets)	1 set	0.20 kg
MZ01LPAP	C1023410	bus bar system 185 mm	spare way cover without level adjustment width 50 mm, length 500 mm including fixing material	1 piece	60 g

Installation devices/bus bar installation

Catalog number	Item number	Design	Package	Weight
00SZRK3	K215105	hooked clamp size 00, M = 5 Nm 1 set = 3 pieces	1 set	0.10 kg
1.002.646	W1023450	M10 insert nut, size 00 1 set = 30 pieces	1 set	0.12 kg

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1.001.300

Adapter for installation on to bus bars with clamp terminal

Catalog number	Item number	Application	Design	Package	Weight
1.001.300	Z1023292	MULTIVERT® 160 A/185 mm 3x1-pole	double adapter 185/185 mm with increased touch protection to obtain uniform profile in height for combined installation with MULTIVERT 250 A, 400 A, 630 A	1 piece	0.75 kg



MZ01DSA

MZ01ESA

Adapter for installation on to bus bars with screw terminal

Catalog number	Item number	Application	Design	Package	Weight
MZ01DSA	G228764	MULTIVERT® 160 A/185 mm 1x3-pole	double adapter 185/185 mm with increased touch protection to obtain uniform profile in height for combined installation with MULTIVERT®/BSL 250 A, 400 A, 630 A	1 piece	0.7 kg
MZ01ESA	H228765	MULTIVERT® 160 A/185 mm 1x3-pole	single adapter 185/185 mm (for installation of MULTIVERT®/BSL with screws M8) to obtain uniform profile in height for combined installation with MULTIVERT®/BSL 250 A, 400 A, 630 A	1 piece	0.39 kg



1.002.939



MZHD

Indication facilities

Catalog number	Item number	Design	Package	Weight
1.002.939	Y1023452	electronic fuse monitoring ESÜ size 00 for MULTIVERT® 160 A with cabling of instrument leads (rated voltage 525VAC)	1 piece	0.66 kg
MZHD	M1023442	indicator for switch door position 1 "a" contact/ 1 "b" contact, 5 A, 250 V for MULTIVERT® 160 A/bus bar system 185 mm 3 x single pole switching	1 piece	10 g

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ACCESSORIES



1.000.101



1.000.107

Amperemeter units

Catalog number	Item number	Design	Package	Weight
1.000.100	K1023279	size 00, 100 A, with drag indicator, single pole measurement	1 piece	0.34 kg
1.000.101	L1023280	size 00, 150 A, with drag indicator, single pole measurement	1 piece	0.34 kg
1.000.106	R1023285	size 00, 100 A, with drag indicator, triple pole measurement (optional L1, L2, L3)	1 piece	0.34 kg
1.000.107	S1023286	size 00, 150 A, with drag indicator, triple pole measurement (optional L1, L2, L3)	1 piece	0.34 kg



1.000.119 + 1.000.123



1.000.120 + 1.000.124

Current transformers in combination with adapter

Catalog number	Item number	Design	Package	Weight
Current transformers in combination with adapter				
1.000.117	R1023446	single adapter 100/185 mm for circuit transformer	1 piece	0.34 kg
1.000.119	A1023293	double adapter 100/185 mm for circuit transformer	1 piece	0.58 kg
1.000.120	B1023294	double adapter 185/185 mm for circuit transformer	1 piece	0.56 kg
1.000.121	F1024609	current transformer for adapter for single pole measurement up to 100/5A, class 1 set = 1 piece current transformer + 3 pieces distance tubes art. no. 1.000.125 for level adjustment, 1 piece installed, 2 pieces additionally packed	1 set	0.51 kg
1.000.122	G1024610	current transformer for adapter for triple pole measurement up to 100/5A, class 1 set = 3 pieces current transformer with distance tubes art.no. 1.000.125 for level adjustment 3 pieces installed	1 set	0.78 kg
1.000.123	H1024611	current transformer for adapter for single pole measurement up to 150/5A, class 1 set = 1 piece current transformer + 3 pieces distance tubes art. no. 1.000.125 for level adjustment, 1 piece installed, 2 pieces additionally packed	1 set	0.52 kg
1.000.124	J1024612	current transformer for adapter for triple pole measurement up to 150/5A, class 1 set = 3 pieces current transformer with distance tubes art.no. 1.000.125 for level adjustment 3 pieces installed	1 set	0.81 kg
1.000.125	V1024599	distance tube for adapter for level adjustment supplementary set for neighbouring MULTIVERT® without measurement to obtain uniform profile in height 1 set = 3 pieces	1 set	0.37 kg

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ACCESSORIES



MZ003SW100



MZ00PR150



SZ1SW100



MZ00BT2

Current transformers/external current transformers

Catalog number	Item number	Design	Package	Weight
MZ001SW100	C1024606	current transformer up to 100 A for single pole measurement between bus bar and MULTIVERT® set = 1 piece current transformer + 3 pieces distance tubes for level adjustment, 1 piece installed in the current transformer, 2 pieces additionally packed	1 set	0.55 kg
MZ001SW150	E1024608	current transformer up to 150 A for single pole measurement between bus bar and MULTIVERT® set = 1 piece current transformer + 3 pieces distance tubes for level adjustment, 1 piece installed in the current transformer, 2 pieces additionally packed	1 set	0.55 kg
MZ003SW100	B1024605	current transformer up to 100/5A for triple pole measurement between bus bar and MULTIVERT®, class 1 set = 3 pieces current transformer with distance tubes for level adjustment, 3 pieces installed in the current transformer	1 set	1.84 kg
MZ003SW150	D1024607	current transformer up to 150/5A for triple pole measurement between bus bar and MULTIVERT®, class 1 set = 3 pieces current transformer with distance tubes for level adjustment, 3 pieces installed in the current transformer	1 set	1.85 kg
MZ00PR150	R1024596	distance tube for level adjustment, up to 150/5A, supplementary set for neighbouring MULTIVERT® without measurement to obtain uniform profile in height 1 set = 3 pieces	1 set	0.4 kg
SZ1SW100	H1024565	current transformer up to 100/5A for single pole measurement between bus bars, class 1 (incoming and outgoing bar)	1 piece	0.32 kg
SZ1SW150	J1024566	current transformer up to 150/5A for single pole measurement between bus bars, class 1 (incoming and outgoing bar)	1 piece	0.33 kg

Labelling facilities

Catalog number	Item number	Design	Package	Weight
MZ00BT2	K215611	label holder size 00	1 piece	10 g

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ACCESSORIES



00SZESK



00SZS



00SZVK1



1.000.098



1.003.433

Varieties of cable termination

Catalog number	Item number	Design	Package	Weight
00SZA70	R211523	Al/Cu clamp 1,5–70 mm ² for switch gear size 00 1 set = 3 pieces	1 set	75 g
00SZESK	E214594	clamp strap Cu 4–70 mm ² for switch gear size 00 1 set = 3 pieces	1 set	35 g
00SZS	M229298	M8 terminal screw for switch gear size 00 1 set = 3 pieces	1 set	35 g
00SZVK1	D1023434	V-terminal clamp taille 00, 10–70 mm ² round stranded, 10–95 mm ² round solid, 35–95 mm ² simple stranded, 50–95 mm ² simple solid, M = 12 Nm	30	40 g
1.000.098	E1023435	insulation cap for V-terminal clamp size 00	12/120	2 g
1.003.433	L1022958	triple clamp per pole 1.5 up to 16 mm ² 1 set = 3 pieces	1 set	0.14 kg
1.003.571	V1033684	Al/Cu clamp 50–95 mm ² round stranded for switch gear size 00 1 set = 3 pieces	1 set	88 g