

MULTIVERT® 160A/60mm

Size 00, 690VAC, Triple 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 60mm triple pole switching are for installation on to 60 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 400 V; Ie = 160 A 80kA Ue = AC 500 V; Ie = 160 A 80kA Ue = AC 690 V; Ie = 100 A 50kA
Mounting	bus bar system 60 mm
Switchability	1 x triple pole
Number of Poles	3

FEATURES & BENEFITS

- Installation on to 60mm bus bar system
bus bar width 20 - 30mm, bus bar thickness 10mm
- Design for bottom or top cable terminal connection
- Touch protection IP 30 with central cover
- Parking position of switch operating cover even with fuse-links inserted
- Varieties of cable termination: screw, clamp strap, AlCu clamp, frame clamp, V-terminal
- Safe on load connection/disconnection in accordance with IEC 60947-3

APPLICATIONS

- House incoming units
- Meter distribution units
- Measuring transformer cabinets
- Transmitting stations for telecommunications
- 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 60 mm bus bar system 1 x triple pole switching



1.000.909



1.003.307

Catalog number	Item number	Cable termination components	Design	Package	Weight
1.000.909	E1002183	3 M8 terminal screws/3 clamp straps 4-70 mm ²	bottom terminal with cover shroud MZ00KH	1 piece	1.45 kg
1.002.489	Z1023154	3 frame clamps Cu 2,5-70 mm ²	bottom terminal with cover shroud MZ00KH	1 piece	1.3 kg
1.003.140	A1023155	3 M8 terminal screws/3 clamp straps 4-70 mm ²	bottom terminal MULTIVERT® 1.000.909 with cabling of instrument leads	1 piece	1.5 kg
1.003.307	C1023157	3 M8 terminal screws/3 clamp straps 4-70 mm ²	top terminal with cover shroud MZ00KH	1 piece	1.5 kg
1.003.308	D1023158	3 M8 terminal screws/3 clamp straps 4-70 mm ²	top terminal MULTIVERT® 1.003.307 with cabling of instrument leads	1 piece	1.5 kg
1.003.309	E1023159	3 frame clamps Cu 2,5-70 mm ²	top terminal with cover shroud MZ00KH	1 piece	1.3 kg

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TECHNICAL DATA IN ACCORDANCE WITH EN / IEC 60947

160 A, 60 mm
1 x triple 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}	250 A
Max. power dissipation of solid links P_n	1,2 W
Utilization category to IEC/EN 60947-3 $U_e = AC 400 V; I_e = 160 A$ $U_e = AC 500 V; I_e = 160 A$ $U_e = AC 690 V; I_e = 100 A$ $U_e = DC 220 V; I_e = 160 A$ $U_e = DC 440 V; I_e = 100 A$	AC 23 B AC 22 B AC 22 B DC 21 B DC 21 B
Rated operational voltage U_e	690 V
Rated insulation voltage U_i	1000 V
Rated impulse withstand voltage U_{imp}	8 kV
Rated frequency	50 ... 60 Hz
Degree of protection	IP 30
Degree of pollution	3
Rated duty	uninterrupted duty
Rated conditional short-circuit current with fuse links $U_e = AC 400 V; I_e = 160 A$ $U_e = AC 500 V; I_e = 160 A$ $U_e = AC 690 V; I_e = 100 A$	80 kA 80 kA 50 kA
Rated short circuit making capacity with solid links I_{cm}	4.5 kA _{sw}
Rated short-time withstand current I_{cw}	4.5 kA / 1 s
Power dissipation by I_{th} without NH-fuse links	18 W
Power dissipation by I_{th} 250A without solid links	44 W
Installation mode	bus bar installation
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	ready fitted hooked clamps
Hooked clamp for bus bar with thickness	10 mm
Bus bar thickness (bus bar system = 60 mm)	20 ... 30 mm
Bus bar system	60 mm

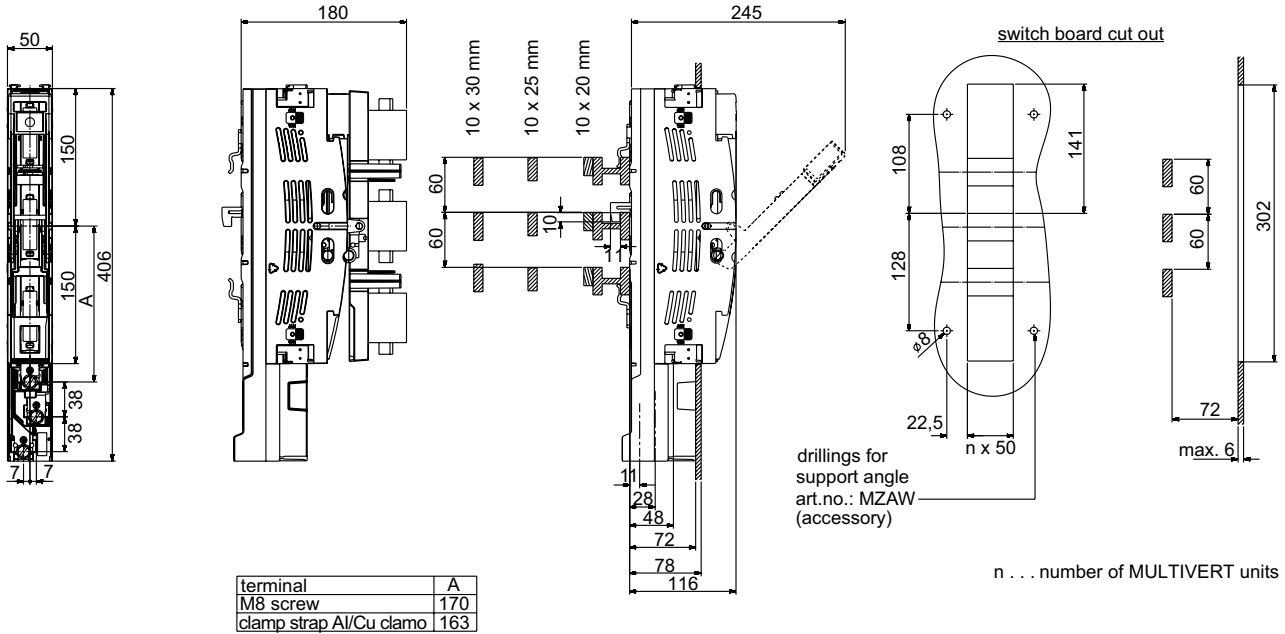
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DIMENSIONS

MULTIVERT® NH-vertical fuse switch disconnecter 160A/60mm
direct installation without drilling on to 60mm bus bar system (M01147a)



Dimensions in mm

Cable termination MULTIVERT® 160A (MA107d)

reference	N	S	A	V	R	K
article number	00SZS	00SZESK	00SA70	00SZVK1 ((accessory))	*	1.003.433
type of terminal	screw	clamp strap	Al/Cu clamp	V-clamp	frame clamp	clamping block
cross section	Cu 16-17	Cu 4-70	Cu 1,5-70	Cu 10-50	Cu 2,5-70	Cu 1,5-16
[mm²]	Al 16-95	-	Al 1,5-70/95 se	Al 35-70/95 se	-	-
M [Nm]	15-17	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)

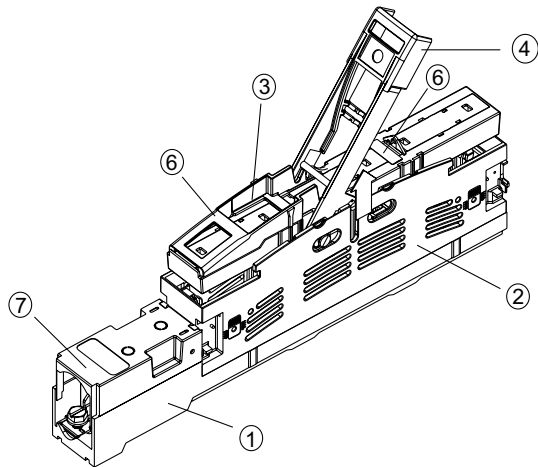
Dimensions in mm

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EXPLODED SKETCH

MULTIVERT® 160A 1x triple pole switching (E 1.000.857)



no.	articlenumber	short Description
1		Main base
2		Protection cover
3		Switch operating cover
4		Handle
5		-
6		Labelling area/label
7	MZ00KH	Cover shroud 106mm

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ACCESSORIES



MZ00KH



MZ00KA

Cover/shrouds for cable termination

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



1.000.915



MZ00AAD



MZAW

Covers/level & system adjustment covers

Catalog number	Item number	Design	Package	Weight
MZ00AAD	X214081	2 piece adjustment, with integrated area for labeling to adapt to MULTIVERT® for 185 mm bus bar system	1 set	0.1 kg
MZAW	D218687	support angle for support of cover plate 1 set = 4 pieces	1 set	27 g



Indication facilities



1.002.939



MZ00ESM

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
MZ00ESM	D228761	Electronic System Monitor ESM size 00 for MULTIVERT® 160 A with cabling of instrument leads	1 piece	0.35 kg
1.000.852	Q1002285	indicator for switch door position micro switch, 1 change-over contact 5 A, 250 V	1 piece	90 g



1.000.852

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ACCESSORIES



1.000.106



1.000.107



1.000.100



1.000.101



MZ00BT2

Amperemeter units

Catalog number	Item number	Design	Package	Weight
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
1.000.100	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

Labelling facilities

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

Varieties of cable termination



00SZS



00SZESK



00SZA70



1.003.571



1.003.433



00SZVK1



1.000.098

Catalog number	Item number	Design	Package	Weight
00SZS	M229298	M8 terminal screw for switch gear size 00 1 set = 3 pieces	1 set	35 g
00SZESK	E214594	clamp strap Cu 4–70 mm ² for switch gear size 00 1 set = 3 pieces	1 set	35 g
00SZA70	R211523	Al/Cu clamp 1,5–70 mm ² for switch gear size 00 1 set = 3 pieces	1 set	75 g
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
1.003.433	L1022958	triple clamp per pole 1.5 up to 16 mm ² 1 set = 3 pieces	1 set	0.14 kg
00SZVK1	D1023434	V-terminal clamp size 00, 10–70 mm ² round stranded, 10–95 mm ² round solid, 35–95 mm ² single stranded, 50–95 mm ² single solid, M = 12 Nm	30	0.4 kg
1.000.098	E1023435	insulation cap for V-terminal clamp size 00	12/120	2 g

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