

# 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 <sup>2</sup>	bottom terminal with cover shroud MZ00KH	1 piece	1.45 kg
1.002.489	Z1023154	3 frame clamps Cu 2,5-70 mm <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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 <sup>2</sup>	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 <sub>sw</sub>
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
<b>Cable terminal connection</b>	
Standard cable terminal	M8
for cable lugs Cu max.	70 mm <sup>2</sup>
for cable lugs Al max.	70 mm <sup>2</sup>
for copper bars with max. dimensions	20 x 5 mm
V-shaped lugs for V-terminal clamps	10 - 95 mm <sup>2</sup>
<b>Bus bar terminal connection</b>	
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

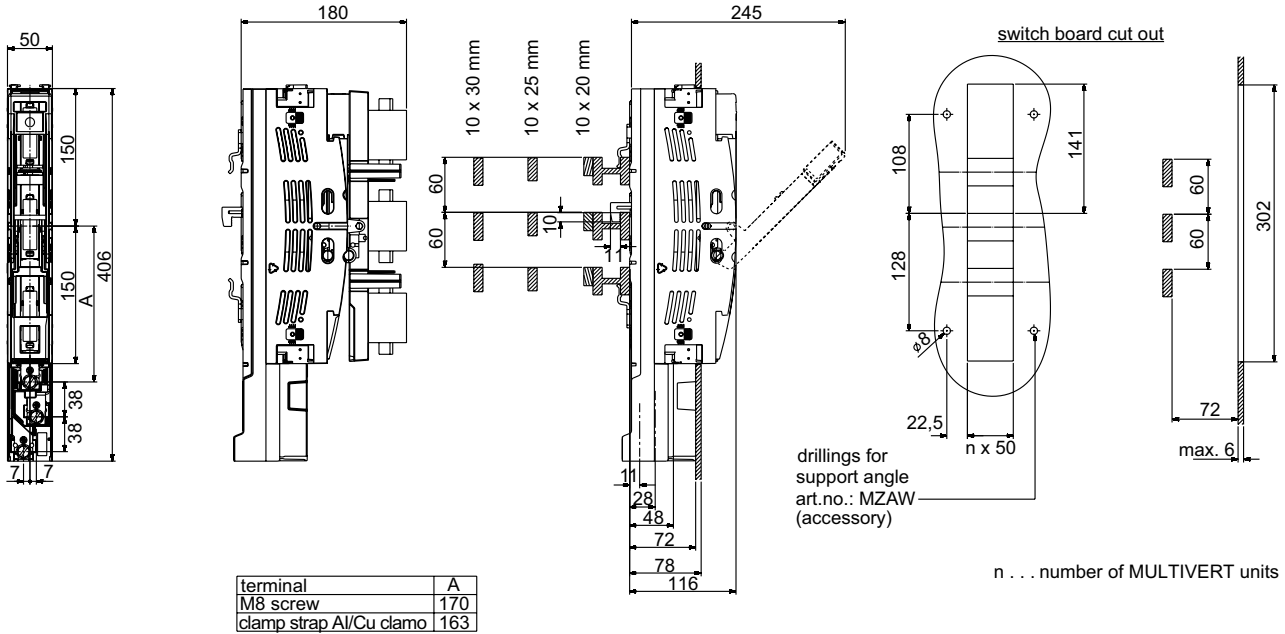


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## DIMENSIONS

**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

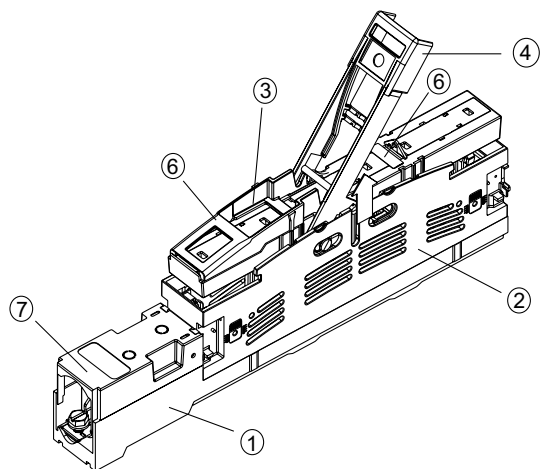
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## EXPLODED SKETCH

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

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 <sup>2</sup> for switch gear size 00 1 set = 3 pieces	1 set	35 g
00SZA70	R211523	Al/Cu clamp 1,5–70 mm <sup>2</sup> for switch gear size 00 1 set = 3 pieces	1 set	75 g
1.003.571	V1033684	Al/Cu clamp 50–95 mm <sup>2</sup> 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 <sup>2</sup> 1 set = 3 pieces	1 set	0.14 kg
00SZVK1	D1023434	V-terminal clamp size 00, 10–70 mm <sup>2</sup> round stranded, 10–95 mm <sup>2</sup> round solid, 35–95 mm <sup>2</sup> single stranded, 50–95 mm <sup>2</sup> 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



1.000.098

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