PSELECTRIC®

ПАПКА 13

ПРИЛОЖЕНИЕ 10 Други документи за Позиция1 и Позиция 2

ПРИЛОЖЕНИЕ 10.4 Вертикални разединители 400 А

Приложение 1

Приложение 2

Приложение 3

Приложение 4

Приложение 5

Приложение 6

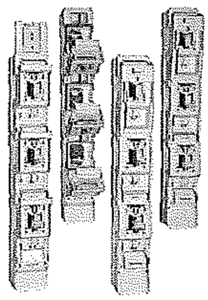
Приложение 7

MULTIVERT® 400A

Size 2, 690VAC

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® 400A are for installation on to 185mm bus bar systems.

MULTIVERT® 400A are designed for NH fuse-links in accordance with IEC/EN 60269-2, VDE 0636-2, size 2: 400A.

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)	400 A
Size per Standard	2
SCCR	Ue = AC 400 V; Ie = 400 A 120kA Ue = AC 500 V; Ie = 400 A 120kA Ue = AC 690 V; Ie = 315 A 120kA Ue = AC 690 V; Ie = 400 A 100kA
Mounting	bus bar system 185 mm
Switchability	1 x triple pole, 3 x single pole
Number of Poles	3

FEATURES & BENEFITS

- Installation on to 185 mm bus bar system
  Standard design with M 12 screws: M = 35 ±3Nm
  Direct installation without drilling with hooked clamps possible
- Symmetrical switch - top/bottom cable terminal connection
- Touch protection IP 30 with central cover
- Varieties of cable termination: bolt, insert nut, V-terminal
- Integrated measuring transformer (optional) with unchanged installation depth
- Safe on load connection/disconnection in accordance with IEC 60947-3

APPLICATIONS

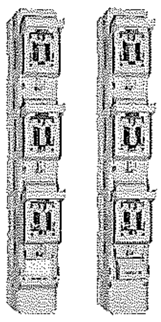
- Feeder pillars
- Transformer substations
- Switch boards for industrial applications
- Residential and industrial distribution units
- Cable distribution cabinets

STANDARDS

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

ВЯРНО С ОРИГИНАЛА

PRODUCT RANGE



1.200.000 1.220.000

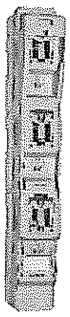
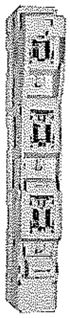
MULTIVERT® 400 A size 2 185 mm 3 x single pole switching

Catalog number	Item number	Cable termination components	Design	Weight kg[1]	Package
1.200.000	J1002187	3 M12 bolts	-	4.60	1 piece
1.210.000	Z1023200	3 M12 insert nuts	-	4.52	1 piece
1.220.000	A1023201	V-terminal for V-terminal clamps size 1,2,3	-	4.38	1 piece
1.220.900	B1023202	V-terminal, 2 terminals per phase for V-terminal clamps size 1,2,3	-	5.45	1 piece
1.200.100	Y1023199	3 M12 bolts	MULTIVERT® 1.200.000 with cabling of instrument leads for indication facilities	5.10	1 piece
1.200.084	E1023205	3 M12 bolts	MULTIVERT® 1.200.000 with integrated C.T. 400/5A, 3,75 VA, class 1 for single pole measurement (ready fitted in pole 1)	4.70	1 piece
1.200.064	C1023203	3 M12 bolts	MULTIVERT® 1.200.000 with integrated C.T. 400/5A, 3,75 VA, class 0,5; calibrated, for single pole measurement (ready fitted in pole 1)	-	1 piece
1.200.094	F1023206	3 M12 bolts	MULTIVERT® 1.200.000 with integrated C.T. 400/5A, 3,75 VA, class 1 for triple pole measurement	5.40	1 piece
1.200.074	D1023204	3 M12 bolts	MULTIVERT® 1.200.000 with integrated C.T. 400/5A, 3,75 VA, class 0,5; calibrated, for triple pole measurement	-	1 piece
1.230.000	T1023218	M12 bus bar terminal	MULTIVERT® with lateral bus bar terminals bus bar coupler switch cable terminal connection to right or left side possible	4.46	1 piece

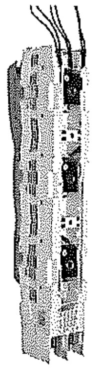
[1] weight in kg per piece or set including package

ВЯРНО С
ОРИГИНА

PRODUCT RANGE

1.250.000 1.270.000



1.270.094
rear

MULTIVERT® 400 A size 2 185 mm 1 x triple pole switching

Catalog number	Item number	Cable termination components	Design	Weight kg [1]	Package
1.250.000	M1002190	3 M12 bolts	-	4.76	1 piece
1.260.000	G1023207	3 M12 insert nuts	-	4.68	1 piece
1.270.000	H1023208	V-terminal for V-terminal clamps size 1,2,3	-	4.78	1 piece
1.270.600	K1023210	V-terminal + 3 V-terminal clamps size 1,2,3	-	4.70	1 piece
1.270.900	L1023211	V-terminal, 2 terminals per phase for V-terminal clamps size 1,2,3	-	6.08	1 piece
1.250.100	X1002199	3 M12 bolts	MULTIVERT® 1.250.000 with cabling of instrument leads for indication facilities	5.20	1 piece
1.270.100	J1023209	V-terminal for V-terminal clamps size 1,2,3	MULTIVERT® 1.270.000 with cabling of instrument leads for indication facilities	5.10	1 piece
1.250.084	P1023214	3 M12 bolts	MULTIVERT® 1.250.000 with integrated C.T. 400/5A, 3,75 VA, class 1 for single pole measurement (ready fitted in pole 1)	4.90	1 piece
1.250.064	M1023212	3 M12 bolts	MULTIVERT® 1.250.000 with integrated C.T. 400/5A, 3,75 VA, class 0,5; calibrated, for single pole measurement (ready fitted in pole 1)	-	1 piece
1.250.094	Q1023215	3 M12 bolts	MULTIVERT® 1.250.000 with integrated C.T. 400/5A, 3,75 VA, class 1 for triple pole measurement	5.60	1 piece
1.250.074	N1023213	3 M12 bolts	MULTIVERT® 1.250.000 with integrated C.T. 400/5A, 3,75 VA, class 0,5; calibrated, for triple pole measurement	-	1 piece
1.270.094	S1023217	V-terminal for V-terminal clamps size 1,2,3	MULTIVERT® 1.270.000 with integrated C.T. 400/5A, 3,75 VA, class 1 for triple pole measurement	5.41	1 piece
1.270.074	R1023216	V-terminal for V-terminal clamps size 1,2,3	MULTIVERT® 1.270.000 with integrated C.T. 400/5A, 3,75 VA, class 0,5; calibrated, for triple pole measurement	-	1 piece
1.280.000	V1023219	M12 bus bar terminal	MULTIVERT® with lateral bus bar terminals bus bar coupler switch cable terminal connection to right or left side possible	4.53	1 piece

[1] weight in kg per piece or set including package

ВЯРНО С
ОРИГИНАЛА

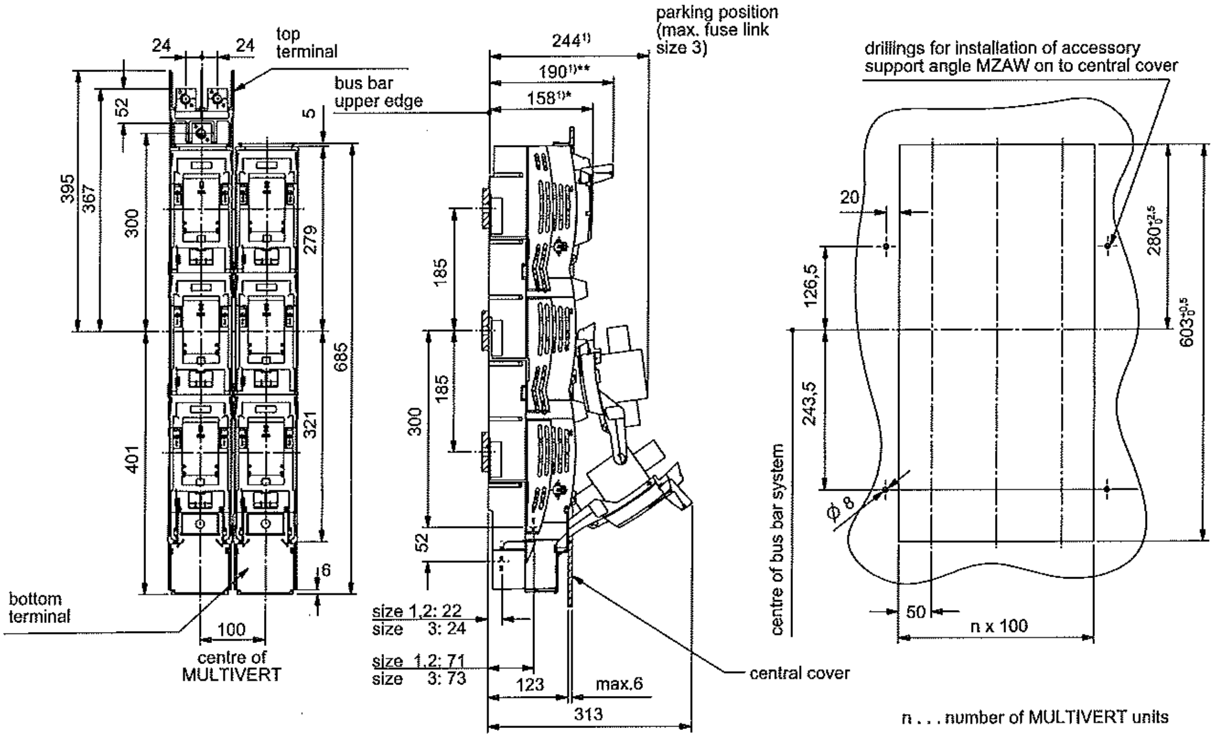
TECHNICAL DATA IN ACCORDANCE WITH EN / IEC 60947

	400 A 3 x single pole switching	400 A 1 x triple pole switching
Number of poles/phases	3	3
Size	2	2
Conventional free air thermal current with NH-fuse links I_{th}	400 A	400 A
Max. power dissipation of fuse links P_n	34 W	34 W
Conventional free air thermal current with solid links I_{th}	630 A	630 A
Max. power dissipation of solid links P_n	9 W	9 W
Utilization category to IEC/EN 60947-3 U_e = AC 400 V; I_e = 400 A U_e = AC 500 V; I_e = 400 A U_e = AC 690 V; I_e = 400 A	 AC 23 B AC 22 B AC 21 B	 AC 23 B AC 22 B AC 21 B
Rated operational voltage U_e	690 V	690 V
Rated insulation voltage U_i	1000 V	1000 V
Rated impulse withstand voltage U_{imp}	12 kV	12 kV
Rated frequency	50 ... 60 Hz	50 ... 60 Hz
Degree of protection	IP 30	IP 30
Degree of pollution	3	3
Rated duty	uninterrupted duty	uninterrupted duty
Rated conditional short-circuit current with fuse links U_e = AC 400 V; I_e = 400 A U_e = AC 500 V; I_e = 400 A U_e = AC 690 V; I_e = 315 A U_e = AC 690 V; I_e = 400 A	 120 kA 120 kA 120 kA 100 kA	 120 kA 120 kA 120 kA 100 kA
Rated short circuit making capacity with solid links I_{cm}	16 kAsw	16 kAsw
Rated short-time withstand current I_{cw}	8 kA / 1 s	8 kA / 1 s
Power dissipation by I_{th} without NH-fuse links	61 W	61 W
Power dissipation by I_{th} 630A without solid links	151 W	151 W
Installation mode	bus bar installation	bus bar installation
Cable terminal connection		
Standard cable terminal	M12	M12
for cable lugs Cu max.	300 mm²	300 mm²
for cable lugs Al max.	300 mm²	300 mm²
for copper bars with max. dimensions	40 x 10 mm	40 x 10 mm
V-shaped lugs for V-terminal clamps	35 - 240 mm²	35 - 240 mm²
Bus bar terminal connection		
Standard bus bar terminal	M12	M12
Hooked clamp for bus bar with thickness	5 ... 10 mm	5 ... 10 mm
Bus bar system	185 mm	185 mm

ВЯРНО С ОРИГИНАЛА

DIMENSIONS

MULTIVERT® 250A, 400A, 630A NH-vertical fuse switch disconnector, 3 x single pole switching direct installation with screws on to 185mm bus bar system (M01152b)

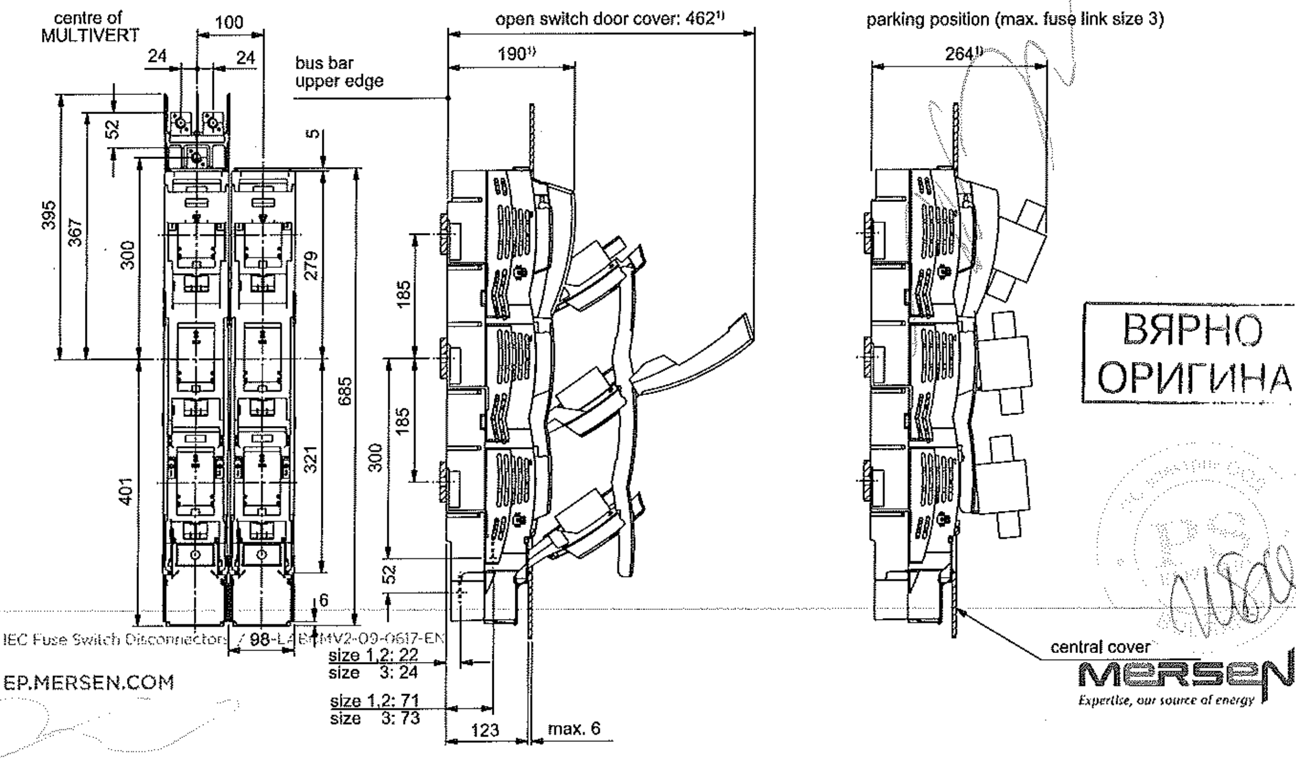


1) dimension from upper edge of bus bar

* 158 mm handle in closed position (folded) = total installation depth of MULTIVERT
** 190 mm handle in open position (fixed) = switching position

Dimensions in mm

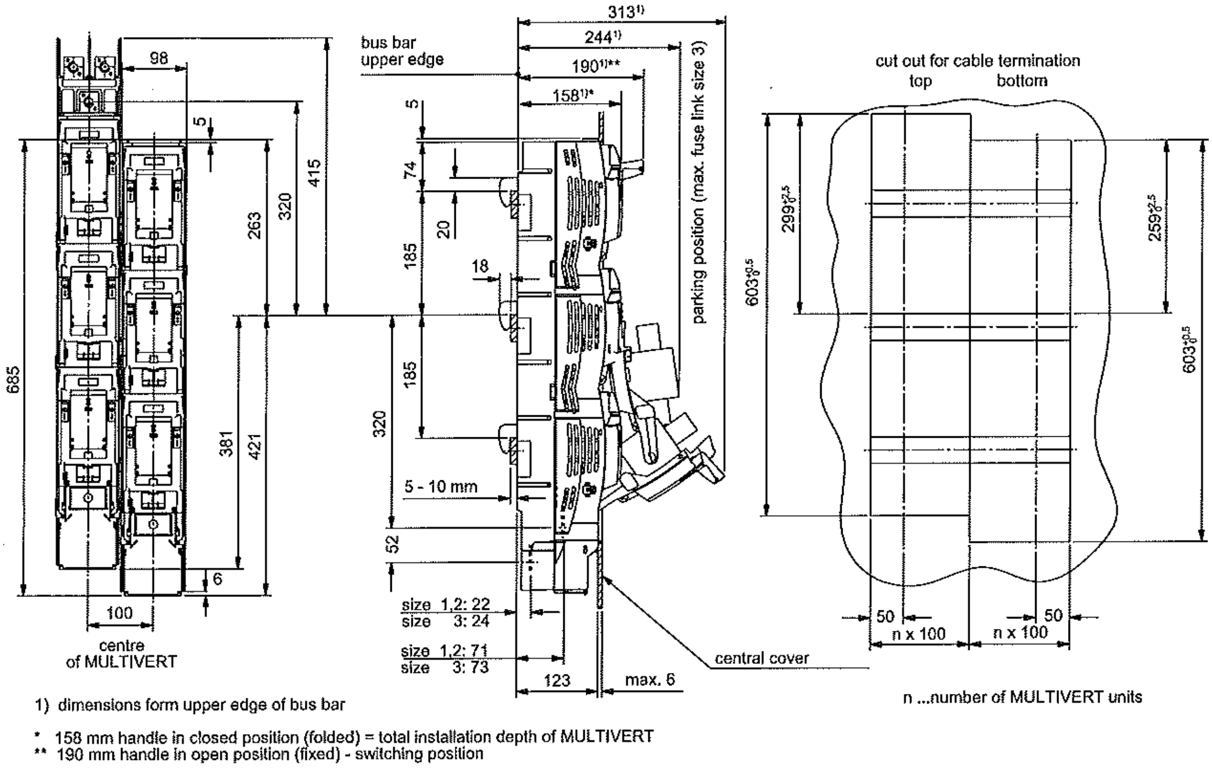
MULTIVERT® 250A, 400A, 630A NH-vertical fuse switch disconnector, 1 x triple pole switching direct installation with screws on to 185mm bus bar system (M01153b)



ВЯРНО С
ОРИГИНАЛА

DIMENSIONS

MULTIVERT* 250A, 400A, 630A NH-vertical fuse switch disconnector, 3 x single pole switching direct installation without drilling with hooked clamps on to 185mm bus bar system (M01154b)

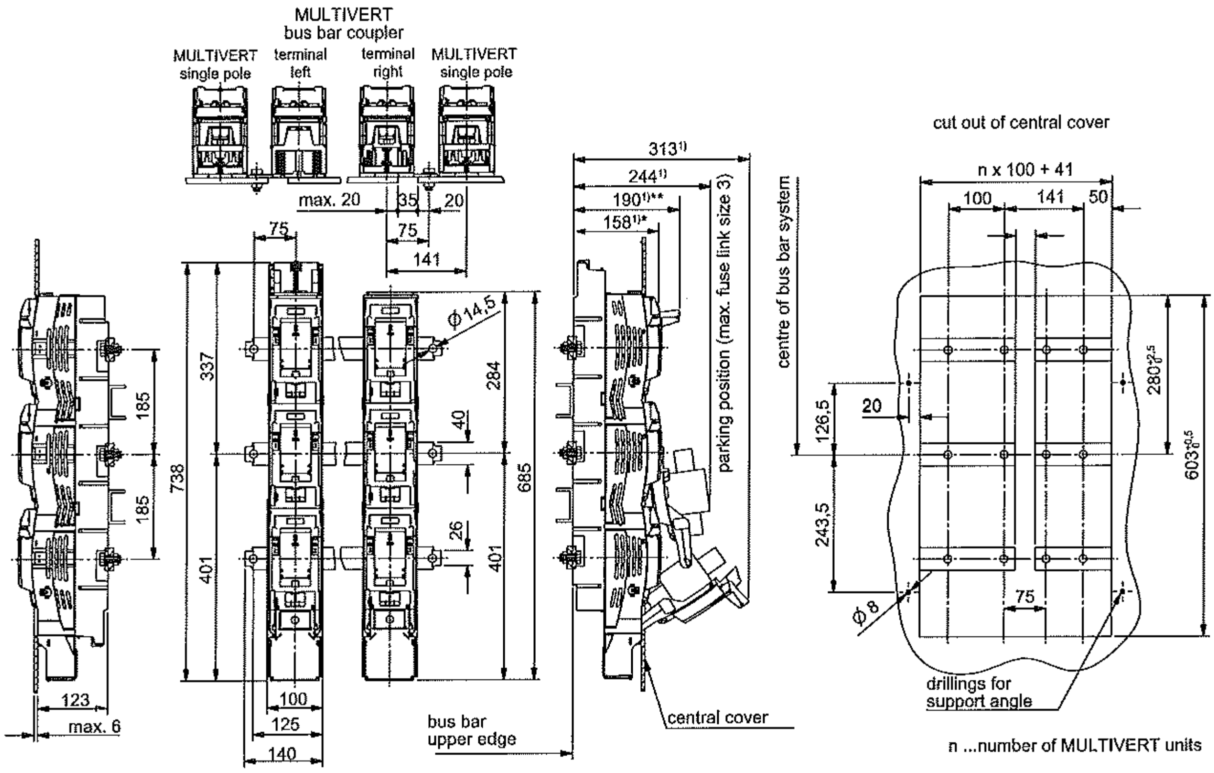


Dimensions in mm

ВЯРНО С
ОРИГИНАЛ

DIMENSIONS

MULTIVERT® 250A, 400A, 630A bus bar coppler switch with lateral terminals
3 x single pole switching (MO1159a)



1) dimensions form upper edge of bus bar

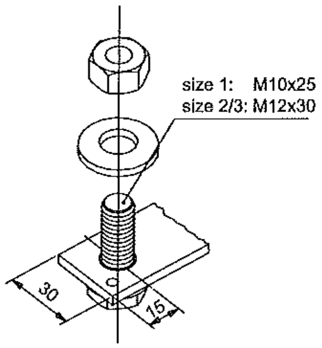
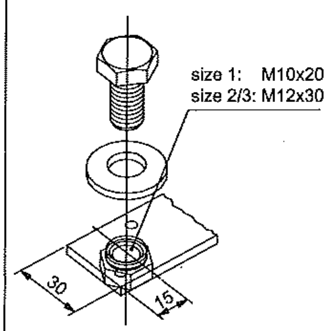
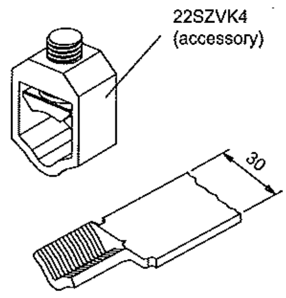
* 158 mm handle in closed position (folded) = total installation depth of MULTIVERT
** 190 mm handle in open position (fixed) - switching position

Dimensions in mm

ВЯРНО С ОРИГИНАЛА

DIMENSIONS

Cable termination MULTIVERT® 250A, 400A, 630A (M01105b)

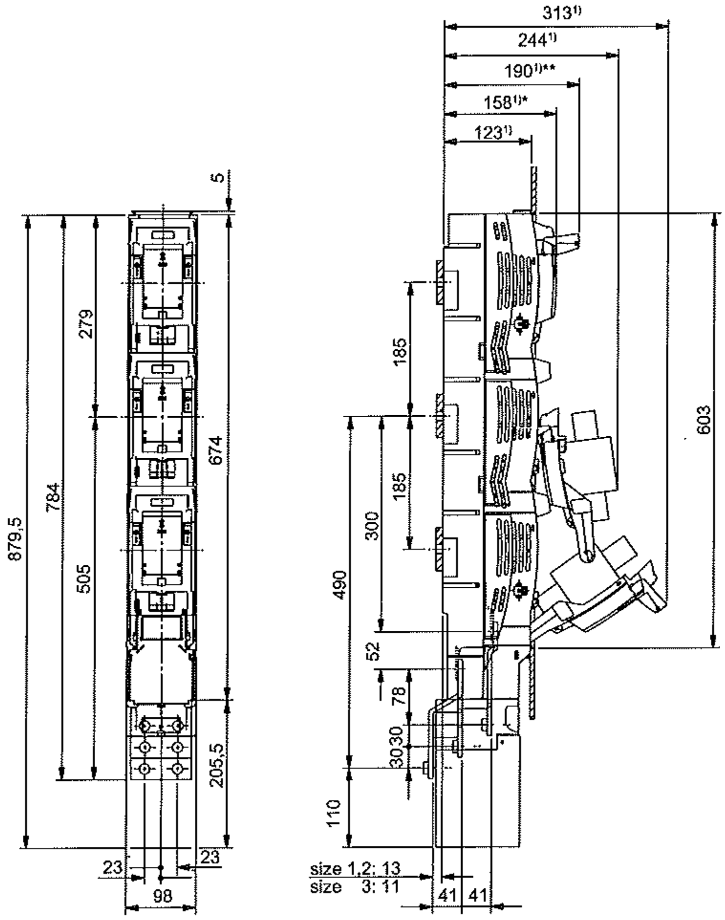
reference	B	E	V	
type of terminal	bolt	insert nut	V-terminal	
accessory	cable lug max. width 45 mm	cable lug max. width 45 mm	V-clamp (accessory) 22SZVK4	22SZVK41
cross section [mm²]	max. 300	max. 300	50 - 240 sectoral solid 50 - 185 sectoral stranded 35 - 70 round stranded 35 - 50 round solid	95 - 300 sectoral solid 70 - 240 sectoral stranded 50 - 185 round stranded 70 - 240 round solid
M [Nm]	35 ±3	35 ±3	25 ±2	25 ±2
				

Dimensions in mm

ВЯРНО С
ОРИГИНАЛА

DIMENSIONS

Cable termination MULTIVERT® 250A, 400A, 630A multiple termination (M01156a)



1) dimensions form upper edge of bus bar

* 158 mm handle in closed position (folded) = total installation depth of MULTIVERT
** 190 mm handle in open position (fixed) - switching position

Dimensions in mm

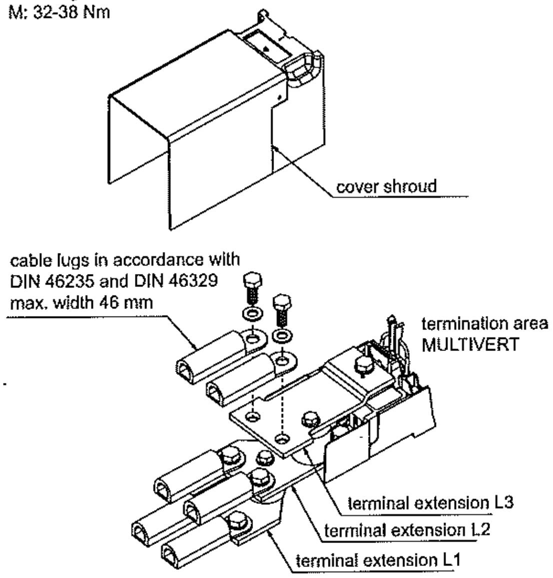
ВЯРНО С ОРИГИНАЛА

DIMENSIONS

Cable termination MULTIVERT® 250A, 400A, 630A multiple termination (MA88f)

terminal: 2 cable lugs

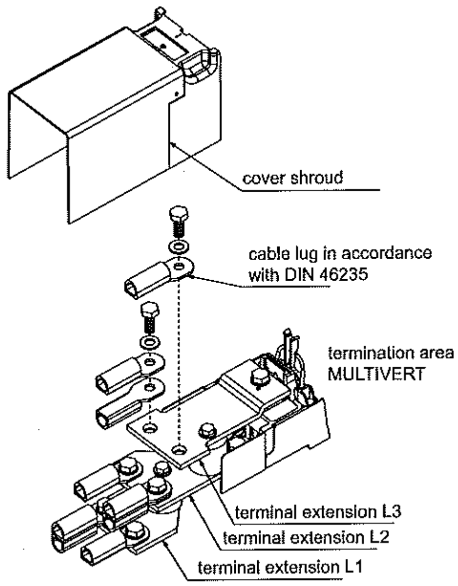
Cu: up to max. 300 mm² round stranded, sectoral stranded cable lugs in accordance with DIN 46235
Al: up to max. 300 mm2 round stranded, sectoral stranded cable lugs in accordance with DIN 46329
M: 32-38 Nm



NOTE:
Due to safety precautions we suggest to insulate the cable lugs (185, 240 und 300 mm²).

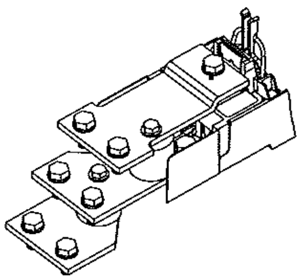
terminal: 3 cable lugs

Cu: up to max. 150 mm² round stranded, sectoral stranded cable lugs in accordance with DIN 46235
M: 32-38 Nm



NOTE:
Due to safety precautions we suggest to insulate the cable lugs (95, 120 und 150 mm²).

Position of terminals



tightening torque of screws: 32 - 38 Nm

ВЯРНО С
ОРИГИНАЛА

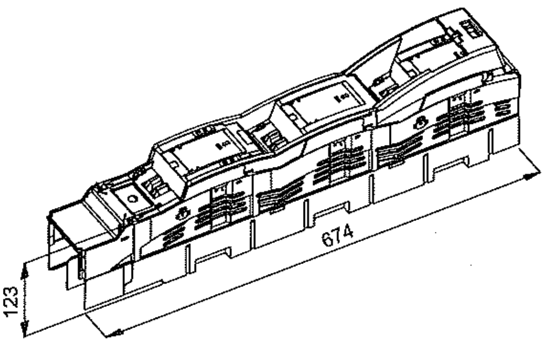
Dimensions in mm

DIMENSIONS

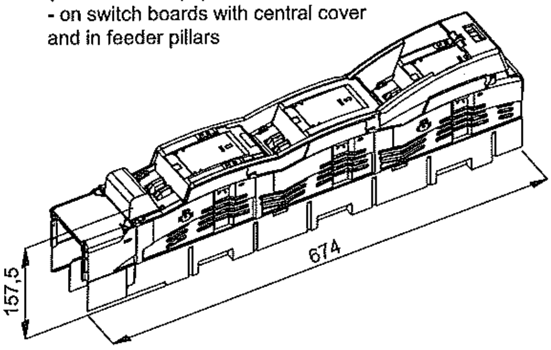
Cover shrouds for cable termination bottom terminal MULTIVERT® 250A, 400A, 630A (MO1160a-1)

standarddesign:
integrated shroud for bottom cable termination

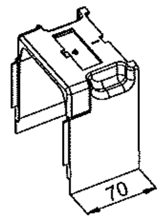
for terminal connections with cable lugs (bolt and insert nut)
- on switch boards with central cover



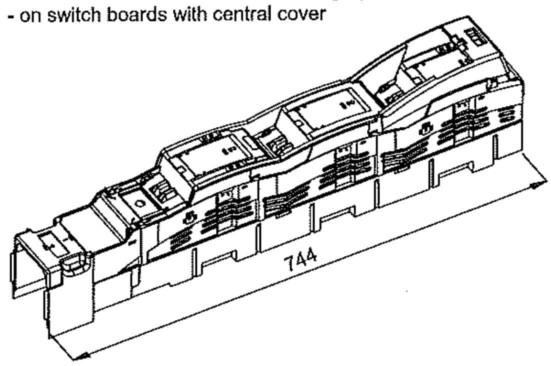
for clamp terminal connections (V-terminal)
for special "high" clamp terminal connections (double V-clamps)
- on switch boards with central cover
and in feeder pillars



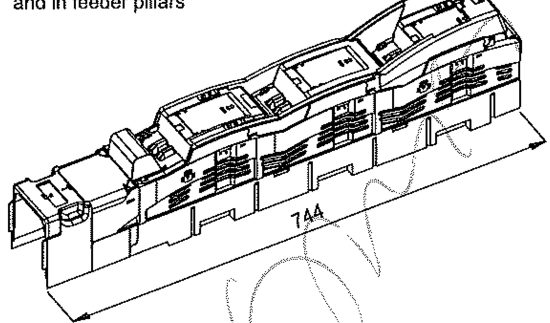
Extension shroud for bottom cable termination
article number 1.002.095 (accessory)



for extended cover
tor terminal connections with cable lugs (bolt and insert nut)
- on switch boards with central cover



for extended cover
for clamp terminal connections (V-terminal)
for special "high" clamp terminal connections(double V-clamps)
- on switch boards with central cover
and in feeder pillars

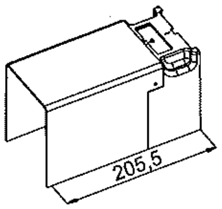


Dimensions in mm

ВЯРНО С
ОРИГИНАЛА

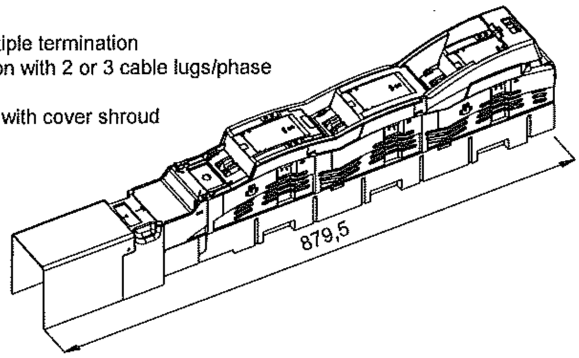
DIMENSIONS

Cover shrouds for cable termination bottom terminal MULTIVERT® 250A, 400A, 630A multiple termination (M01160b-2)

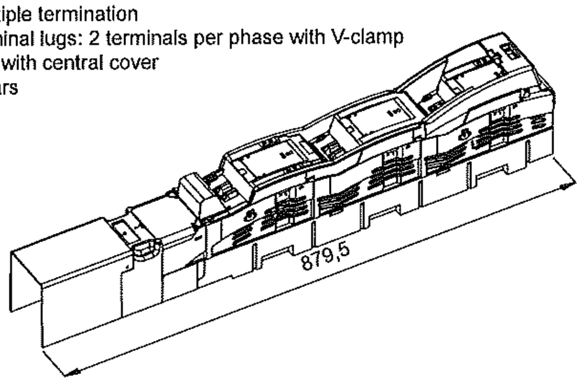


catalogue no. 1.002.458 - accessory

for application multiple termination
for cable termination with 2 or 3 cable lugs/phase
see MA 88
- on switch boards with cover shroud



for application multiple termination
for V-terminal: terminal lugs: 2 terminals per phase with V-clamp
- on switch boards with central cover
  and in feeder pillars



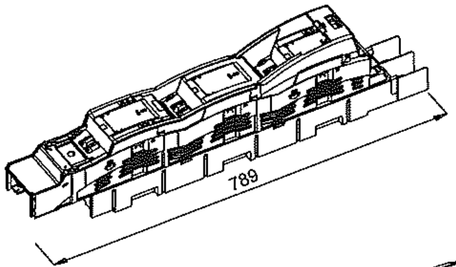
Dimensions in mm

ВЯРНО С
ОРИГИНАЛА

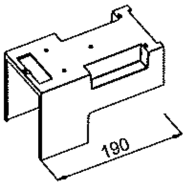
DIMENSIONS

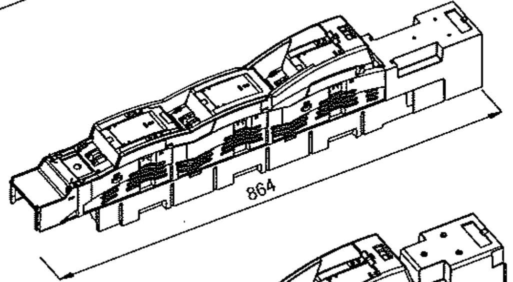
Cover shrouds for cable termination top terminal MULTIVERT® 250A, 400A, 630A (M01160a-3)

without shroud for cable termination

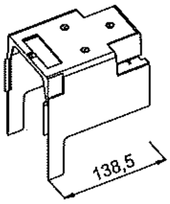


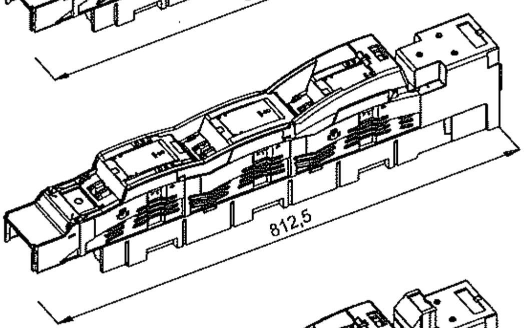
shroud for top cable termination
article number: MZKHO (accessory)
for terminal connections with
cable lugs (bolt and insert nut)
- on switch boards with central cover



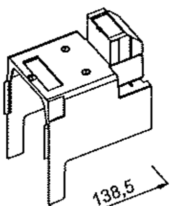


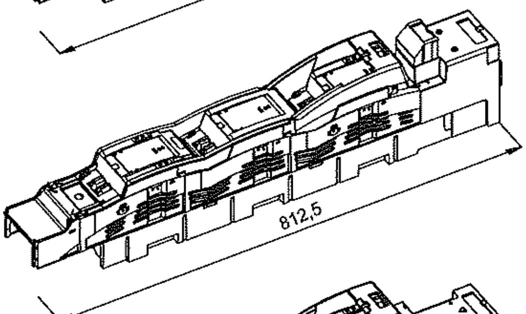
shroud for top cable termination
article number: MZKAB (accessory)
for clamp terminal connections
(V-terminal)
- in feeder pillars



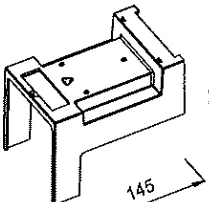


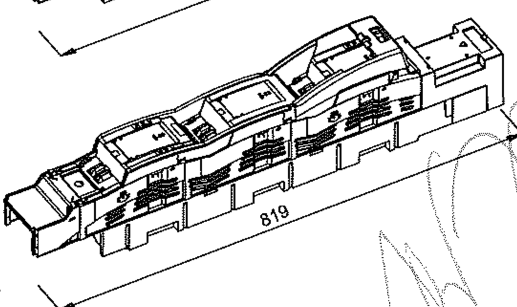
shroud for top cable termination
article number: MZKAB1 (accessory)
for special "high" clamp terminal
connections (double V-clamps)
- in feeder pillars





shroud for top cable termination
article number: MZKHV (accessory)
for terminal connections with cable lugs
for installation in distribution units
with central cover



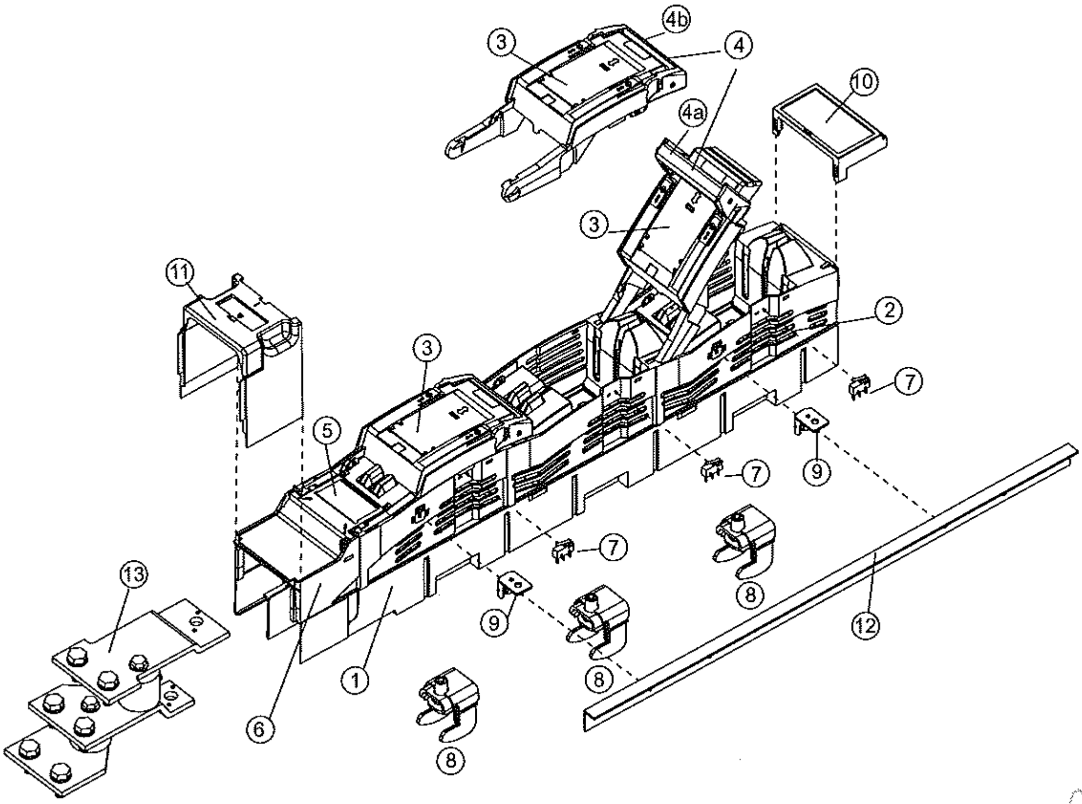


Dimensions in mm

ВЯРНО С
ОРИГИНА

EXPLODED SKETCH

MULTIVERT® 250A, 400A, 630A 3x single pole switching (E 1.002.265a)

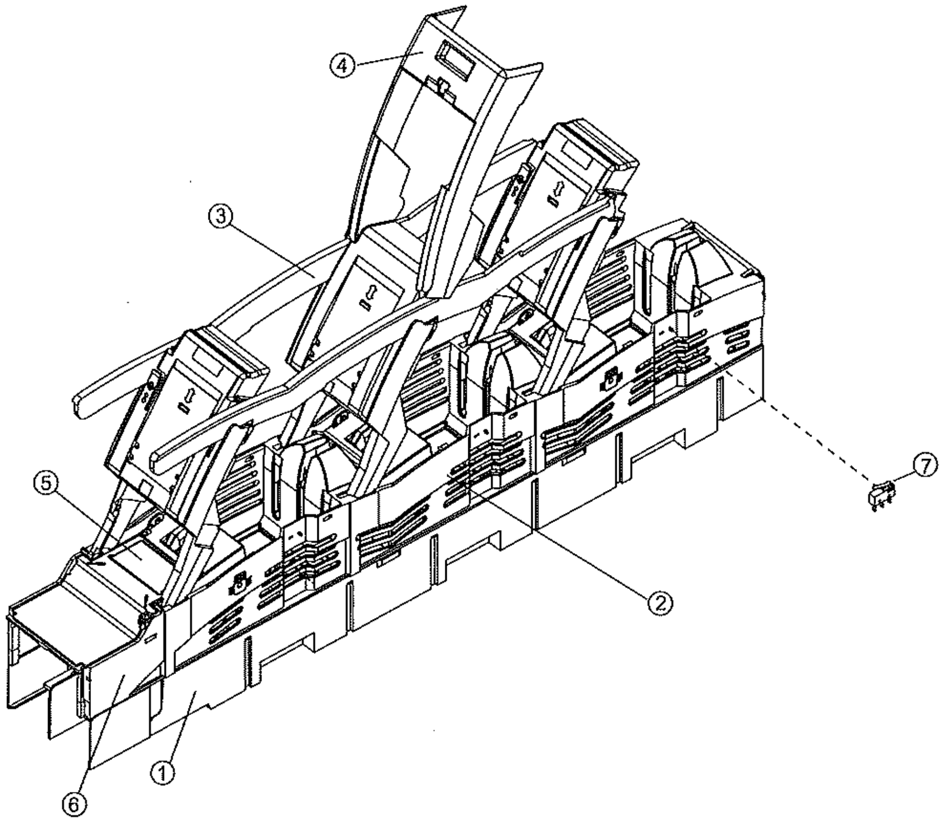


ВЯРНО С
ОРИГИНАЛА

no.	articlenumber	short Description
1		Main base
2		Protection cover (removable)
3		Switch operating cover triple pole
4		Combination handle: 4a. open - switching position; 4b. Closed - installation depth 158mm
5		Labelling area (label)
6		Integrated cover shroud
7	1.000.852	indicator for switch door position
8	1.000.192	Hooked clamp, 1 set = 3 pieces
9	MZAW	Support angle, 1 set = 4 pieces
10	MZBT	Label holder
11	1.002.095	Cover shroud, bottom terminal, 70mm
12	1.001.510	cover shield, length 605mm, set=2 pieces
13	1.002.255	Supplementary set for multiple terminal

EXPLODED SKETCH

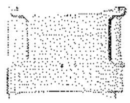
MULTIVERT® 250A, 400A, 630A 1x triple pole switching (E 1.002.266)



ВЯРНО С
ОРИГИНАЛА

no.	articlenumber	short Description
1		Main base
2		Protection cover (removable)
3		Switch operating cover triple pole
4		Handle
5		Labelling area (label)
6		Integrated cover shroud
7	1.000.852	indicator for switch door position

ACCESSORIES

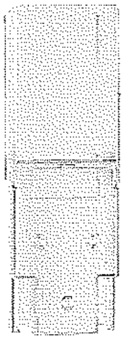

1.002.095

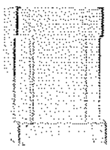

1.002.458


MZKAB


MZKHO

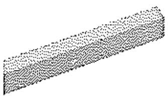

MZKAB1


MZVHB


MZKHV

Cover/shrouds for cable termination

Catalog number	Item number	Weight	Design	Application	Weight	Package
1.002.095	J1002279	0.116 kg	cover shroud for extended cover length 70 mm	bottom terminal	0.116 kg	1 piece
1.002.458	N1023305	0.164 kg	cover shroud for multiple termination length 205,5mm	bottom terminal	0.164 kg	1 piece
MZKAB	J1023301	0.174 kg	cover shroud for clamp terminal connection in feeder pillars length 138,5 mm	top terminal	0.101 kg	1 piece
MZKHO	G217655	0.126 kg	cover shroud for cable terminal connections with cable lugs on switchboards with central cover length 190 mm	top terminal	0.126 kg	1 piece
MZKAB1	K1023302	0.115 kg	cover shroud for special (high) clamp terminal connection in feeder pillars length 138,5 mm	top terminal	0.115 kg	1 piece
MZVHB	L1023303	0.225 kg	extended cover shroud length 257 mm	top terminal	0.225 kg	1 piece
MZKHV	A1002202	85 g	cover shroud for installation in distribution units with central cover (height of supporting edge reduced by 16 mm) length 145 mm	top terminal	85 g	1 piece


1.001.510


MZAW

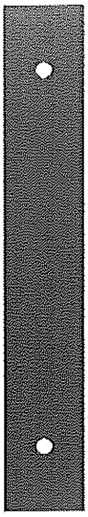
Covers/level & system adjustment covers

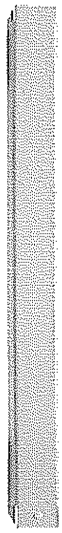
Catalog number	Item number	Weight	Design	Weight	Package
1.001.510	K1002280	0.15 kg	cover shield to support central cover 1 set = 2 pieces	0.15 kg	1 set
MZAW	D218687	27 g	support angle for support of cover plate 1 set = 4 pieces	0.027 kg	1 set

ВЯРНО С
ОРИГИНАЛА

ACCESSORIES


MZ01LPAP


MZLPAP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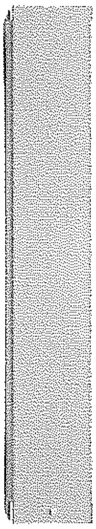
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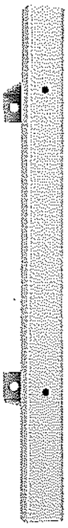
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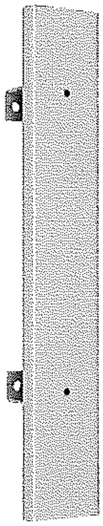

1.002.829

Covers/spare way covers

Catalog number	Item number	Weight	Design	Application	Weight	Package
MZ01LPAP	C1023410	60 g	spare way cover without level adjustment width 50 mm, length 500 mm including fixing material	bus bar system 185 mm	60 g	1 piece
MZLPAP	D1023411	0.56 kg	spare way cover width 100 mm, length 612 mm including 2 pieces M12 fixing screws (distance of fixing holes 185 mm)	bus bar system 185 mm	0.56 kg	1 piece
1.002.493	N1002283	0.136 kg	spare way cover width 50 mm, length 630 mm for covering of open installation spaces in distribution units with central cover	bus bar system 185 mm	0.136 kg	1 piece
1.002.492	M1002282	0.202 kg	spare way cover width 100 mm, length 630 mm for covering of open installation spaces in distribution units with central cover	bus bar system 185 mm	0.202 kg	1 piece
1.002.830	E1023412	0.203 kg	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)	bus bar system 185 mm	0.203 kg	1 set
1.002.829	F1023413	0.33 kg	spare way cover width 100 mm, length 630 mm with level adjustment 123 mm for bus bar installation set = cover + fixing set (2 distance pieces, 2 screw rivets)	bus bar system 185 mm	0.27 kg	1 set


1.002.648

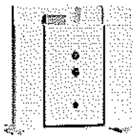

1.000.192

Installation devices/bus bar installation

Catalog number	Item number	Weight	Design	Weight	Package
1.002.648	T1023448	-	M12 insert nut, size 2 and 3 1 set = 30 pieces	0.28 kg	1 set
1.000.192	P1002284	0.467 kg	hooked clamp size 1, 2, 3, M = 15–20 Nm hexagon socket connection (inbus) for MULTIVERT®/BSL with top or bottom terminal 1 set = 3 pieces	0.467 kg	1 set

ВЯРНО С
ОРИГИНАЛА

ACCESSORIES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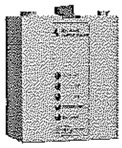
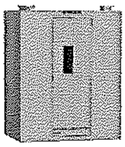
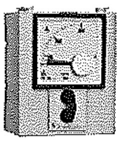

MZESM

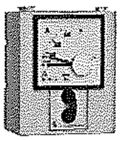

1.000.829


1.000.852

Indication facilities

Catalog number	Item number	Weight	Design	Weight	Package
1.002.940	Z1023453	0.159 kg	electronic fuse monitoring ESÜ size 1,2,3 for MULTIVERT® 250 A, 400 A, 630 A with cabling of instrument leads (rated voltage 525VAC)	0.85 kg	1 piece
MZESM	J228766	0.104 kg	Electronic System Monitor ESM size 1,2,3 for MULTIVERT® 250 A, 400 A, 630 A with cabling of instrument leads	0.104 kg	1 piece
1.000.829	L1023418	0.314 kg	electro-mechanical fuse monitoring (galvanic isolation) MZS size 1,2,3 for MULTIVERT® 250 A, 400 A, 630 A with cabling of instrument leads	0.314 kg	1 piece
1.000.852	Q1002285	9 g	indicator for switch door position micro switch, 1 change-over contact 5 A, 250 V	0.09 kg	1 piece


1.000.102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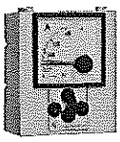
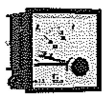

1.000.109

Amperemeter units

Catalog number	Item number	Weight	Design	Weight	Package
1.000.102	M1023281	0.44 kg	size 1, 2, 3, 250 A, with drag indicator, single pole measurement	83 g	1 piece
1.000.103	N1023282	0.44 kg	size 2, 3, 400 A, with drag indicator, single pole measurement	83 g	1 piece
1.000.108	T1023287	0.44 kg	size 1, 2, 3, 250 A, with drag indicator, triple pole measurement (optional L1, L2, L3)	83 g	1 piece
1.000.109	V1023288	0.44 kg	size 2, 3, 400 A, with drag indicator, triple pole measurement (optional L1, L2, L3)	83 g	1 piece


1.002.294


1.002.295

Amperemeter for direct frontal installation

Catalog number	Item number	Weight	Design	Weight	Package
1.002.294	G1023276	0.14 kg	size 2/3, 400 / 200 / 5A, with drag indicator, for NH-measuring fuse link, single pole measurement	0.14 kg	1 piece
1.002.295	H1023277	0.14 kg	size 2/3, 600 / 300 / 5A, with drag indicator, for NH-measuring fuse link, single pole measurement	0.14 kg	1 piece

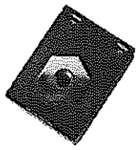

1.002.290

NH-measuring fuse links

Catalog number	Item number	Weight	Design	Weight	Package
1.002.290	J1023416	0.67 kg	size 2, 400 A C.T. current = 400/5A or 200/5A distance between plugs 50 mm	0.67 kg	1 piece

ВЯРНО С ОРИГИНАЛА

ACCESSORIES

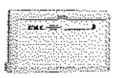


MZ3SW400

MZPR600

Current transformers/external current transformers

Catalog number	Item number	Weight	Design	Weight	Package
MZ1SW250	K1024567	0.88 kg	current transformer up to 250/5A for single pole measurement, class 1 set = 1 piece current transformer + 3 pieces distance tubes for level adjustment, 1 piece installed in the current transformer, 2 pieces additionally packed	0.88 kg	1 set
MZ1SW400	N1024570	0.89 kg	current transformer up to 400/5A for single pole measurement, class 1 set = 1 piece current transformer + 3 pieces distance tubes for level adjustment, 1 piece installed in the current transformer, 2 pieces additionally packed	0.89 kg	1 set
MZ3SW250	M1024569	1.38 kg	current transformer up to 250/5A for triple pole measurement, class 1 set = 3 pieces current transformer with distance tubes for level adjustment, 3 pieces installed in the current transformer	1.38 kg	1 set
MZ3SW400	Q1024572	1.43 kg	current transformer up to 400/5A for triple pole measurement, class 1 set = 3 pieces current transformer with distance tubes for level adjustment, 3 pieces installed in the current transformer	1.43 kg	1 set
SZ1SW250	L1024568	-	current transformer up to 250/5A, class 1, for single pole measurement	0.43 kg	1 piece
SZ1SW400	P1024571	-	current transformer up to 400/5A, class 1, for single pole measurement	0.46 kg	1 piece
MZPR600	S1024597	-	distance tube for level adjustment, up to 600/5A, supplementary set for neighbouring MULTIVERT® without measurement to obtain uniform profile in height 1 set = 3 pieces	0.62 kg	1 set



MZBT

Labelling facilities

Catalog number	Item number	Weight	Design	Weight	Package
MZBT	B222181	34 g	label holder size 1, 2, 3	0.03 kg	1 piece

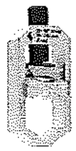
ПС електрик ООД
PS ELECTRIC
BULGARIA

ВЯРНО С
ОРИГИНАЛА

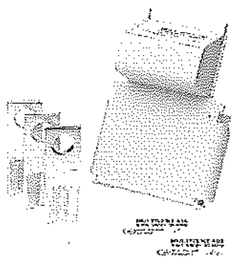
ACCESSORIES


1.002.909


1.002.910


22SZVK42


1.000.099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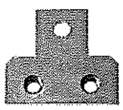
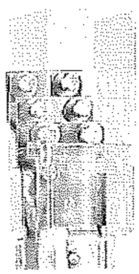
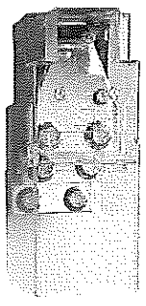

1.001.667


1.003.377


1.002.255

Varieties of cable termination

Catalog number	Item number	Weight	Design	Weight	Package
1.002.909	K1024613	0.243 kg	V-terminal clamp size 1,2,3, 95-240 mm² single solid, 70-240 mm² single stranded, 50-185 mm² round stranded, 70-240 mm² round solid, M = 23 -27 Nm 1 set = 3 pieces	0.243 kg	1 set
1.002.910	L1024614	0.26 kg	V-terminal clamp size 1,2,3, 95-300 mm² single solid, 70-240 mm² single stranded, 50-185 mm² round stranded, 70-240 mm² round solid, M = 23 -27 Nm 1 set = 3 pieces	0.258 kg	1 set
22SZVK42	Q1024618	0.1736 kg	V-terminal clamp size 1,2,3 for 2 conductors 50–240 mm²single solid, 50-185 mm² single stranded, 50-185 mm² round stranded, 70-240 mm² round solid M = 23–27 Nm	6.8 g	1 piece
1.000.099	E1023436	0.1 g	insulation cap for V-terminal clamp size 1,2,3	0.1 g	1 piece
1.003.286	Q1024595	0.311 kg	supplementaty set for V-terminal size 1,2,3 set = 3 pieces V-clamps, cover shroud and labels for size 1, 2 and 3	0.232 kg	1 set
1.001.667	F1023275	0.23 kg	adapter for double terminal L3	0.25 kg	1 piece
1.003.377	Y1024579	1.743 kg	supplementary set for multiple termination, top terminal 2 cable lugs Cu/Al: up to max. 300 mm² round stranded, sectoral stranded, 3 cable lugs Cu: up to max. 150 mm² round stranded, sectoral stranded, M = 32-38 Nm	1.743 kg	1 set
1.002.255	B1024582	1.682 kg	supplementary set for multiple termination, bottom terminal 2 cable lugs Cu/Al: up to max. 300 mm² round stranded, sectoral stranded, 3 cable lugs Cu: up to max. 150 mm² round stranded, sectoral stranded, M = 32-38 Nm	1.682 kg	1 set

ВЯРНО С ОРИГИНАЛА

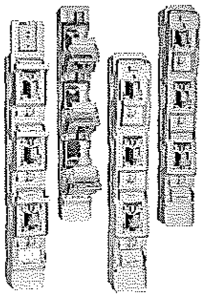
10.4.2

MULTIVERT® 400A

Size 2, 690VAC

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® 400A are for installation on to 185mm bus bar systems.

MULTIVERT® 400A are designed for NH fuse-links in accordance with IEC/EN 60269-2, VDE 0636-2, size 2: 400A.

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)	400 A
Size per Standard	2
SCCR	Ue = AC 400 V; Ie = 400 A 120kA Ue = AC 500 V; Ie = 400 A 120kA Ue = AC 690 V; Ie = 315 A 120kA Ue = AC 690 V; Ie = 400 A 100kA
Mounting	bus bar system 185 mm
Switchability	1 x triple pole, 3 x single pole
Number of Poles	3

FEATURES & BENEFITS

- Installation on to 185 mm bus bar system
  Standard design with M 12 screws: M = 35 ±3Nm
  Direct installation without drilling with hooked clamps possible
- Symmetrical switch - top/bottom cable terminal connection
- Touch protection IP 30 with central cover
- Varieties of cable termination: bolt, insert nut, V-terminal
- Integrated measuring transformer (optional) with unchanged installation depth
- Safe on load connection/disconnection in accordance with IEC 60947-3

APPLICATIONS

- Feeder pillars
- Transformer substations
- Switch boards for industrial applications
- Residential and industrial distribution units
- Cable distribution cabinets

STANDARDS

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

ВЯРН
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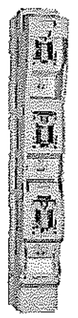
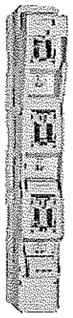
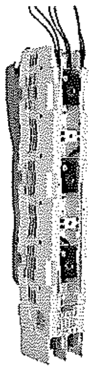
PRODUCT RANGE

1.250.000 1.270.000



1.270.094
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MULTIVERT® 400 A size 2 185 mm 1 x triple pole switching

Catalog number	Item number	Cable termination components	Design	Weight kg[1]	Package
1.250.000	M1002190	3 M12 bolts	-	4.76	1 piece
1.260.000	G1023207	3 M12 insert nuts	-	4.68	1 piece
1.270.000	H1023208	V-terminal for V-terminal clamps size 1,2,3	-	4.78	1 piece
1.270.600	K1023210	V-terminal + 3 V-terminal clamps size 1,2,3	-	4.70	1 piece
1.270.900	L1023211	V-terminal, 2 terminals per phase for V-terminal clamps size 1,2,3	-	6.08	1 piece
1.250.100	X1002199	3 M12 bolts	MULTIVERT® 1.250.000 with cabling of instrument leads for indication facilities	5.20	1 piece
1.270.100	J1023209	V-terminal for V-terminal clamps size 1,2,3	MULTIVERT® 1.270.000 with cabling of instrument leads for indication facilities	5.10	1 piece
1.250.084	P1023214	3 M12 bolts	MULTIVERT® 1.250.000 with integrated C.T. 400/5A, 3,75 VA, class 1 for single pole measurement (ready fitted in pole 1)	4.90	1 piece
1.250.064	M1023212	3 M12 bolts	MULTIVERT® 1.250.000 with integrated C.T. 400/5A, 3,75 VA, class 0,5; calibrated, for single pole measurement (ready fitted in pole 1)	-	1 piece
1.250.094	Q1023215	3 M12 bolts	MULTIVERT® 1.250.000 with integrated C.T. 400/5A, 3,75 VA, class 1 for triple pole measurement	5.60	1 piece
1.250.074	N1023213	3 M12 bolts	MULTIVERT® 1.250.000 with integrated C.T. 400/5A, 3,75 VA, class 0,5; calibrated, for triple pole measurement	-	1 piece
1.270.094	S1023217	V-terminal for V-terminal clamps size 1,2,3	MULTIVERT® 1.270.000 with integrated C.T. 400/5A, 3,75 VA, class 1 for triple pole measurement	5.41	1 piece
1.270.074	R1023216	V-terminal for V-terminal clamps size 1,2,3	MULTIVERT® 1.270.000 with integrated C.T. 400/5A, 3,75 VA, class 0,5; calibrated, for triple pole measurement	-	1 piece
1.280.000	V1023219	M12 bus bar terminal	MULTIVERT® with lateral bus bar terminals bus bar coupler switch cable terminal connection to right or left side possible	4.53	1 piece

[1] weight in kg per piece or set including package

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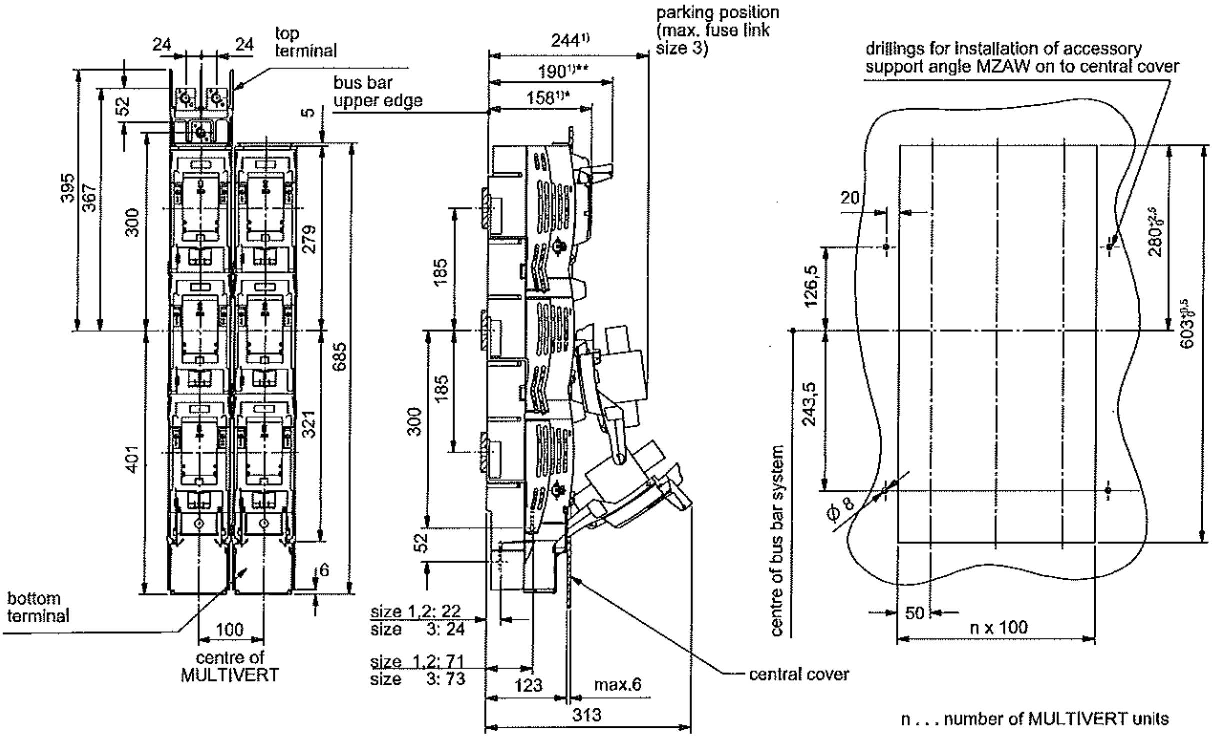
TECHNICAL DATA IN ACCORDANCE WITH EN / IEC 60947

	400 A 3 x single pole switching	400 A 1 x triple pole switching
Number of poles/phases	3	3
Size	2	2
Conventional free air thermal current with NH-fuse links I_{th}	400 A	400 A
Max. power dissipation of fuse links P_n	34 W	34 W
Conventional free air thermal current with solid links I_{th}	630 A	630 A
Max. power dissipation of solid links P_n	9 W	9 W
Utilization category to IEC/EN 60947-3 U_e = AC 400 V; I_e = 400 A U_e = AC 500 V; I_e = 400 A U_e = AC 690 V; I_e = 400 A	 AC 23 B AC 22 B AC 21 B	 AC 23 B AC 22 B AC 21 B
Rated operational voltage U_e	690 V	690 V
Rated insulation voltage U_i	1000 V	1000 V
Rated impulse withstand voltage U_{imp}	12 kV	12 kV
Rated frequency	50 ... 60 Hz	50 ... 60 Hz
Degree of protection	IP 30	IP 30
Degree of pollution	3	3
Rated duty	uninterrupted duty	uninterrupted duty
Rated conditional short-circuit current with fuse links U_e = AC 400 V; I_e = 400 A U_e = AC 500 V; I_e = 400 A U_e = AC 690 V; I_e = 315 A U_e = AC 690 V; I_e = 400 A	 120 kA 120 kA 120 kA 100 kA	 120 kA 120 kA 120 kA 100 kA
Rated short circuit making capacity with solid links I_{cm}	16 kAsw	16 kAsw
Rated short-time withstand current I_{cw}	8 kA / 1 s	8 kA / 1 s
Power dissipation by I_{th} without NH-fuse links	61 W	61 W
Power dissipation by I_{th} 630A without solid links	151 W	151 W
Installation mode	bus bar installation	bus bar installation
Cable terminal connection		
Standard cable terminal	M12	M12
for cable lugs Cu max.	300 mm²	300 mm²
for cable lugs Al max.	300 mm²	300 mm²
for copper bars with max. dimensions	40 x 10 mm	40 x 10 mm
V-shaped lugs for V-terminal clamps	35 - 240 mm²	35 - 240 mm²
Bus bar terminal connection		
Standard bus bar terminal	M12	M12
Hooked clamp for bus bar with thickness	5 ... 10 mm	5 ... 10 mm
Bus bar system	185 mm	185 mm

ВЯРНО С ОРИГИНАЛА

DIMENSIONS

MULTIVERT® 250A, 400A, 630A NH-vertical fuse switch disconnector, 3 x single pole switching direct installation with screws on to 185mm bus bar system (M01152b)

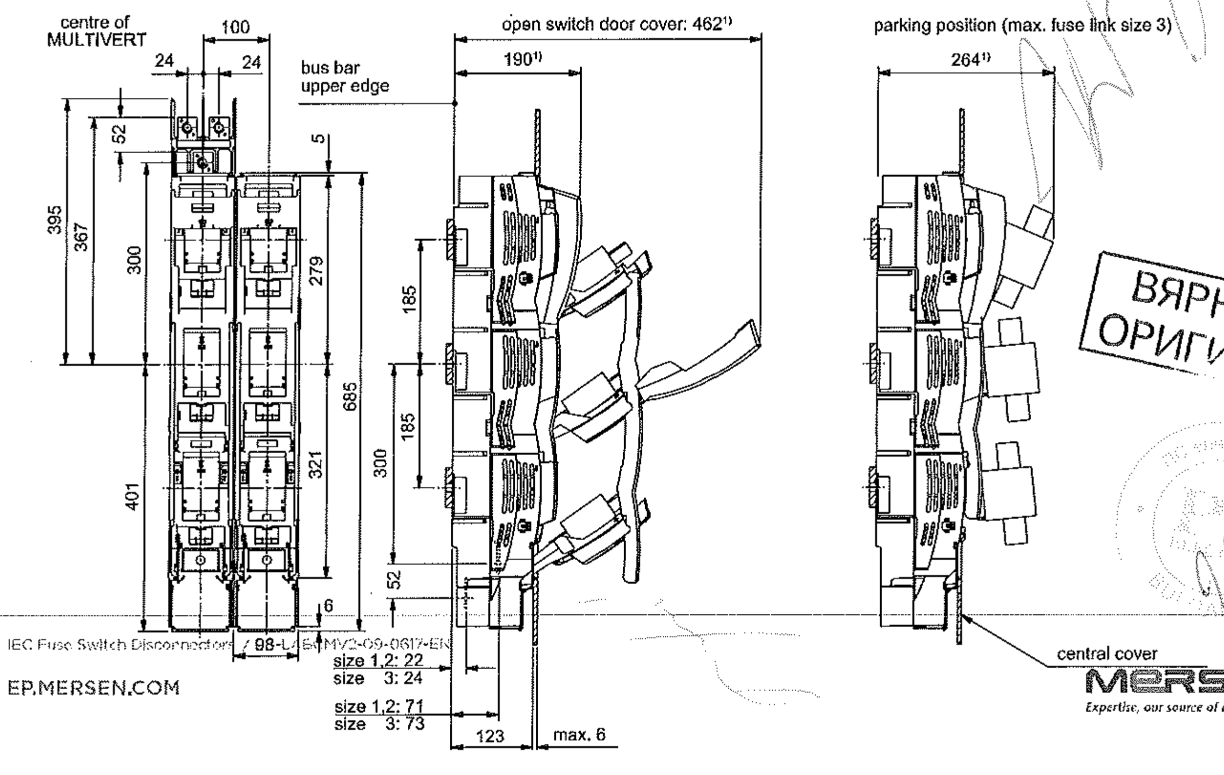


1) dimension from upper edge of bus bar

* 158 mm handle in closed position (folded) = total installation depth of MULTIVERT
** 190 mm handle in open position (fixed) = switching position

Dimensions in mm

MULTIVERT® 250A, 400A, 630A NH-vertical fuse switch disconnector, 1 x triple pole switching direct installation with screws on to 185mm bus bar system (M01153b)

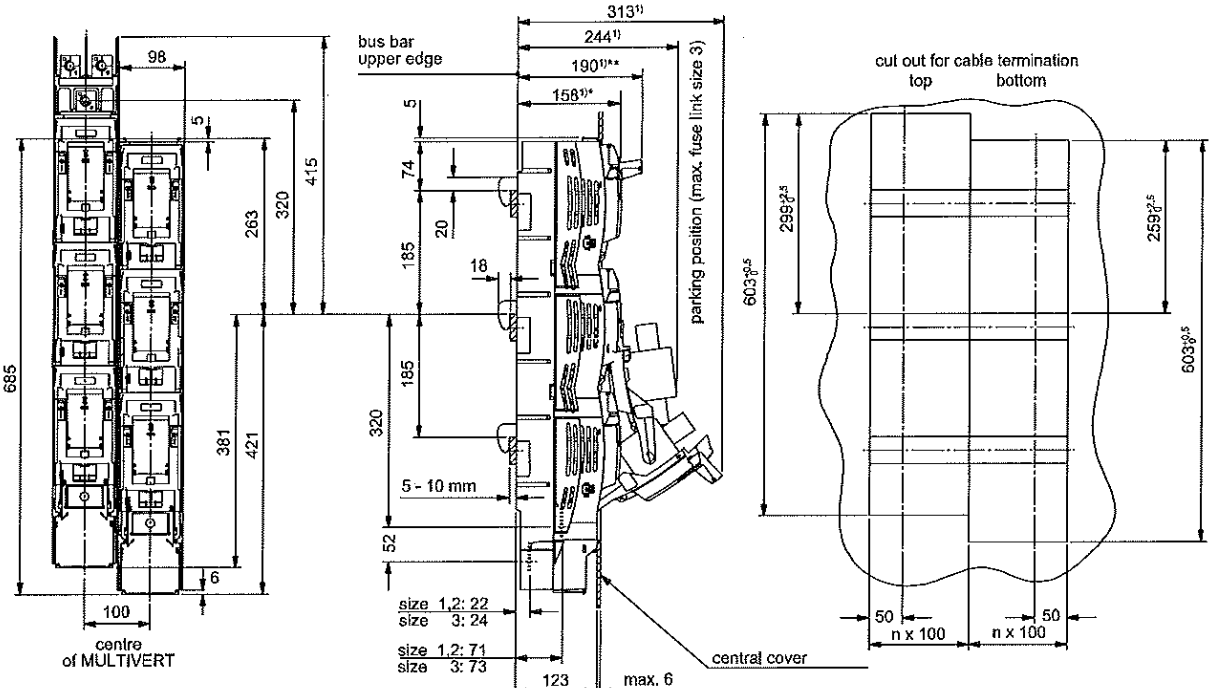


ВЯРНО С ОРИГИНАЛА

MERSEN reserves the right to change, update or correct, without notice, any information contained in this datasheet.

DIMENSIONS

MULTIVERT® 250A, 400A, 630A NH-vertical fuse switch disconnector, 3 x single pole switching direct installation without drilling with hooked clamps on to 185mm bus bar system (M01154b)



1) dimensions form upper edge of bus bar

n ...number of MULTIVERT units

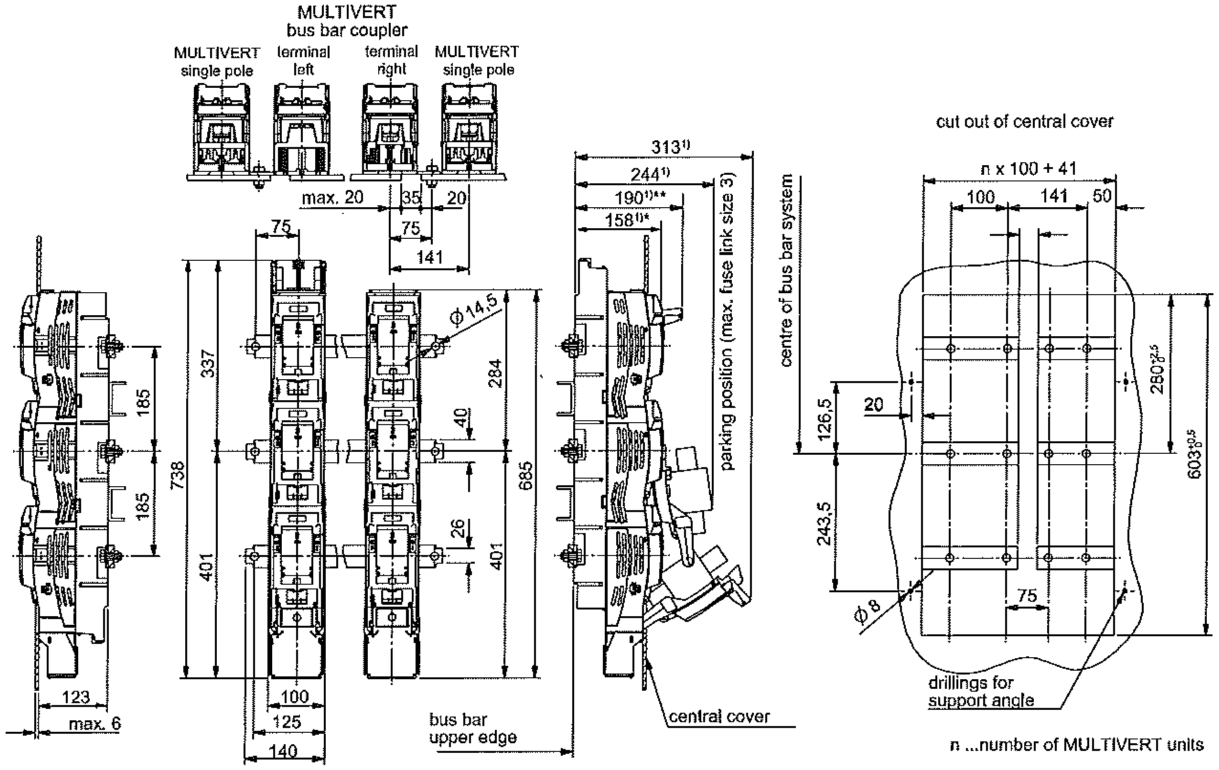
* 158 mm handle in closed position (folded) = total installation depth of MULTIVERT
** 190 mm handle in open position (fixed) - switching position

Dimensions in mm

ВЯРНО С ОРИГИНАЛА

DIMENSIONS

MULTIVERT® 250A, 400A, 630A bus bar coppler switch with lateral terminals
3 x single pole switching (M01159a)



1) dimensions form upper edge of bus bar

* 158 mm handle in closed position (folded) = total installation depth of MULTIVERT
** 190 mm handle in open position (fixed) - switching position

Dimensions in mm

ВЯРНО С ОРИГИНАЛА

10.4.3

„ПС Електрик“ ООД

Списък на отделните изпитания

Вертикален предпазител-разединител НН 400 А, с триполюсно управление - Mersen

8.3.3 Тест I: Характеристики при нормален режим на работа.

8.3.3.1 Проверка при нарастване на температурата.

8.3.3.2 Тест на диелектричните свойства.

8.3.3.3 Включвателна и изключвателна способност при ток на късо съединение.

8.3.3.3.5 Поведение на апаратурата по време на тестовете за включвателна и изключвателна способност при ток на късо съединение

8.3.3.3.6 Състояние на апаратурата след приключване на тестовете за включвателна и изключвателна способност при ток на късо съединение

8.3.3.4 Диелектрична проверка

8.3.3.5 Ток на утечка

8.3.3.6 Проверка при нарастване на температурата

8.3.3.7 Издръжливост на задвижващия механизъм

8.2.5.2.1 Зависимо и независимо ръчно управление

8.2.5.2.2 Зависимо моторно задвижване

8.2.5.2.3 Независимо моторно задвижване

8.3.4 Тест II: Издръжливост при номинални условия

8.3.4.1 Тест при номинални условия

8.3.4.2 Диелектрична проверка

8.3.4.3 Ток на утечка

8.3.4.4 Проверка при нарастване на температурата

8.3.5 Тест III: Издръжливост в режим на късо съединение

8.3.5.1 Тест за издръжливост при кратковременно късо съединение

8.3.5.2 Включвателна способност при късо съединение

8.3.5.3 Диелектрична проверка

8.3.5.4 Ток на утечка

8.3.5.5 Проверка при нарастване на температурата

8.3.6 Тест IV: Условен ток на късо съединение

8.3.6.2 Условия за проверка за условен ток на късо съединение

ВЯРНО С ОРИГИНАЛА

8.3.6.3 Диелектрична проверка

8.3.6.4 Ток на утечка

8.3.6.5 Проверка при нарастване на температурата

8.3.7 Тест V: Издръжливост в режим на претоварване

8.3.7.1 Тест при претоварване

8.3.7.2 Диелектрична проверка

8.3.7.3 Ток на утечка

8.3.7.4 Проверка при нарастване на температурата

8.4 Тест V: Тестове за електромагнитна съвместимост

8.4.1 Имунитет

8.4.2 Ем

Дата: 03

Състави

На основание чл. 2
от ЗЛД

ВЯРНО С ОРИГИНАЛА

Clause Requirement - Test Result - Remark Verdict

8.3.3 TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS

8.3.3.1 Temperature-rise

8.3.3.2 Test of dielectric properties

8.3.3.3 Making and breaking capacity

8.3.3.3.5 Behaviour of the equipment during making and breaking capacity tests

8.3.3.3.6 Condition of the equipment after making and breaking capacity tests

8.3.3.4 Dielectric verification

8.3.3.5 Leakage current

8.3.3.6 Temperature-rise verification

8.3.3.7 Strength of actuator mechanism

8.2.5.2.1 Dependent and independent manual operation

8.2.5.2.2 Dependent power operation

8.2.5.2.3 Independent power operation

8.3.4 TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY

8.3.4.1 Operational performance test

8.3.4.2 Dielectric verification

8.3.4.3 Leakage current

8.3.4.4 Temperature-rise verification

8.3.5 TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY

8.3.5.1 Short-time withstand current test

8.3.5.2 Short-circuit making capacity

8.3.5.3 Dielectric verification

8.3.5.4 Leakage current

8.3.5.5 Temperature-rise verification

ВЯРНО С ОРИГИНАЛА

8.3.6 TEST SEQUENCE IV: CONDITIONAL SHORT-CIRCUIT CURRENT

8.3.6.2 Test conditions for conditional short-circuit current test

8.3.6.3 Dielectric verification

8.3.6.4 Leakage current

8.3.6.5 Temperature-rise verification

8.3.7 TEST SEQUENCE V: OVERLOAD PERFORMANCE CAPABILITY

8.3.7.1 Overload test

8.3.7.2 Dielectric verification

8.3.7.3 Leakage current

8.3.7.4 Temperature-rise verification

8.4 ELECTROMAGNETIC COMPATIBILITY TESTS

8.4.1 Immunity

8.4.2 Emission

ВЯРНО С ОРИГИНАЛА

10.4.35

IEC IECEE CB SCHEME

Ref. Certif. No.

AT 3637

IEC SYSTEM FOR MUTUAL RECOGNITION OF TEST CERTIFICATES FOR ELECTRICAL EQUIPMENT (IECEE) CB SCHEME

CB TEST CERTIFICATE

Product	Low-Voltage Fuse-Switch-Disconnector
Name and address of the applicant	Mersen France SB SAS 15 Rue Jacques de Vaucanson, 69720 Saint Bonnet de Mure, France
Name and address of the manufacturer	Mersen France SB SAS 15 Rue Jacques de Vaucanson, 69720 Saint Bonnet de Mure, France
Name and address of the factory Note: *When more than one factory, please report on page 2*	Mersen CZ s.r.o. Pardubická 437, 53304 Sezemice, Czech Republic ☐ Additional Information on page 2
Ratings and principal characteristics	AC-21B: Ue = AC 690 V, Ie = 400 A; AC-22B: Ue = AC 500 V, Ie = 400 A; AC-23B: Ue = AC 400 V, Ie = 400 A; For use with fuse-links NH2/gG with power dissipation of max. 34 W. See also page 6 of test report.
Trademark (if any)	MERSEN
Customer's Testing Facility (CTF) Stage used	--
Model / Type Ref.	MULTIVERT 400
Additional information (if necessary may also be reported on page 2)	Vertical fuse-switch-disconnector, 1pole or 3pole operated. Also found to be in conformity with IEC 60947-3:2008+AMD1:2012+AMD2:2015 used in conjunction with IEC 60947-1:2007+AMD1:2010+AMD2:2014. ☐ Additional Information on page 2
A sample of the product was tested and found to be in conformity with	IEC 60947-1:2007 IEC 60947-1:2007/AMD1:2010 IEC 60947-3:2008 IEC 60947-3:2008/AMD1:2012
As shown in the Test Report Ref. No. which forms part of this Certificate	SGP-05833/Multivert/400/CB

This CB Test Certificate is issued by the National Cert

На основание чл. 2
от ЗЗЛД

OVE

AUSTRIAN ELECTROT
Kahlenberger Str. 2A
1190 Wien, Austria

artin
ve.at

A
0902
ISO/IEC 17065

Date: 2016-12-22

890 | DVR: 1055887

Test Report issued under the responsibility of:

OVE

TEST REPORT
IEC 60947-3

Low-voltage switchgear and controlgear Part 3: Switches, disconnectors, switch-disconnectors and fuse-combination units

Report Reference No. :	SGP-05833/Multivert/400/CB
Date of issue :	09.11.2016
Total number of pages :	68
CB Testing Laboratory :	AIT Austrian Institute of Technology GmbH
Address :	1210 Vienna, Giefingasse 2, AUSTRIA
Applicant's name :	MERSEN France SB S.A.S.
Address :	69720 Saint Bonnet de Mure, 15 Rue J. de Vaucanson, FRANCE
Test specification:	
Standard :	IEC 60947-3:2008 (Third Edition) + A1:2012 in conjunction with IEC 60947-1:2007 (Fifth Edition) + A1:2010
Test procedure :	CB-Scheme
Non-standard test method :	N/A
Test Report Form No. :	IEC60947_3C
Test Report Form(s) Originator :	OVE
Master TRF :	Dated 2013-05

This report is not valid as a CB Test Report unless signed by an approved CB Testing Laboratory and appended to a CB Test Certificate issued by an NCB in accordance with IECEE 02.

Test item description :	NH-VERTICAL-FUSE-SWITCH-DISCONNECTOR (1pole or 3pole operated)
Trademark :	Mersen
Manufacturer :	MERSEN France
Model/Type reference :	MULTIVERT 400 (for 185mm busbar system)
Ratings :	See page 6

ВЯРНО С ОРИГИНАЛА

Testing procedure and testing location:

☒ **CB/CCA Testing Laboratory:**

Testing location/ address ....: AIT Austrian Institute of Technology GmbH, 1210, Vienna, Giefinggasse 2, AUSTRIA

☐ **Associated CB Laboratory:**

Testing location/ address ....: --

На основание чл. 2
от ЗЗЛД

Tested by (name + signature)...: H ...

Approved by (+ signature)........: In ...

☐ **Testing procedure: TMP**

Tested by (name + signature)...: --- ....

Approved by (+ signature)........: --- ....

Testing location/ address ....: ---

☐ **Testing procedure: WMT**

Tested by (name + signature)...: --- ....

Witnessed by (+ signature).......: --- ....

Approved by (+ signature)........: --- ....

Testing location/ address ....: ---

☐ **Testing procedure: SMT**

Tested by (name + signature)...: --- ....

Approved by (+ signature)........: --- ....

Supervised by (+ signature) .....: --- ....

Testing location/ address ....: ---

☐ **Testing procedure: RMT**

Tested by (name + signature)...: --- ....

Approved by (+ signature)........: --- ....

Supervised by (+ signature) .....: --- ....

Testing location/ address ....: ---

ВЯРНО С ОРИГИНАЛА

List of Attachments:

Summary of testing:

Tests performed:

A type test has been performed according to

- IEC 60947-1 Ed. 5.1:2011
- IEC 60947-3 Ed. 3.1:2012.

Clause:	Test:	Sample No.
7	Constructional requirements	MV400/1
8.3.3	Test sequence I	
	- temperature-rise	MV400/2-5
	- dielectric properties	MV400/2-5
	- making and breaking capacity	MV400/6-9
8.3.4	Test sequence II	MV400/10-13
8.3.5	Test sequence III	MV400/14
8.3.6	Test sequence IV	MV400/15-16
8.3.7	Test sequence V	MV400/17-20

The NH-vertical-fuse-switch-disconnector, one pole or three pole operated

- MULTIVERT

has passed the type test successfully.

Remark:

The NH-vertical-fuse-switch-disconnector, one pole or three pole operated

- MULTIVERT

also comply with the requirements of

- IEC 60947-1 Ed. 5.2:2014
- IEC 60947-3 Ed. 3.2:2015.

Testing location:

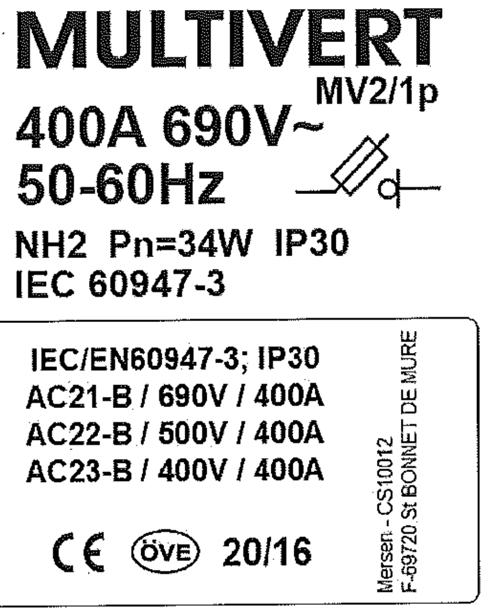
AIT Austrian Institute of Technology GmbH
Giefinggasse 2
1210 Vienna
AUSTRIA

The AIT Austrian Institute of Technology GmbH is a recognized CB Testing Laboratory under the responsibility of OVE as the National Certification Body.

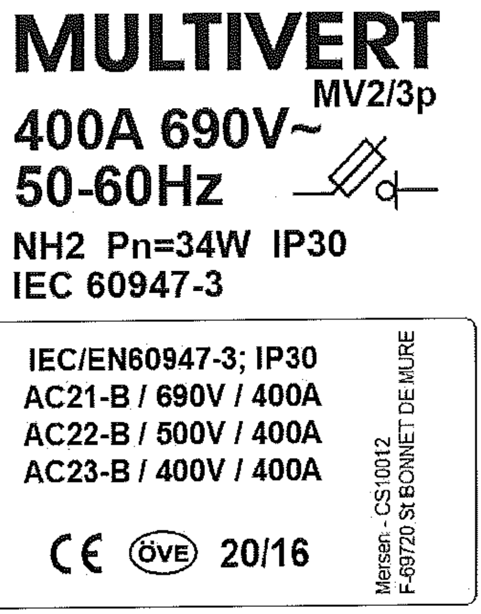
Summary of compliance with National Differences:

ВЯРНО С ОРИГИНАЛА

Copy of marking plate:



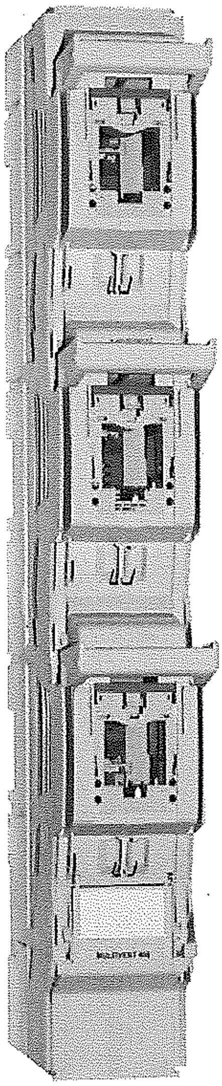
Multivert 400 one pole operated



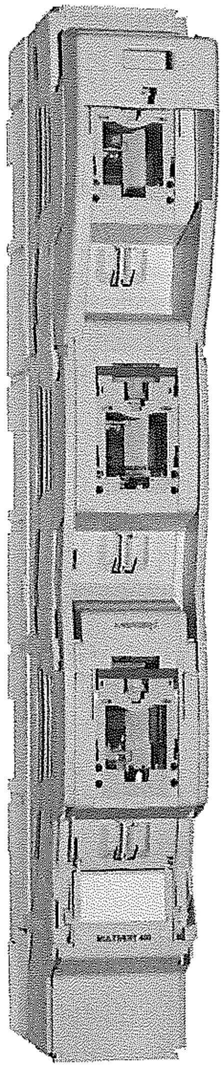
Multivert 400 one pole operated

ВЯРНО С ОРИГИНАЛА

Picture of test item:



Multivert 400 one pole operated



Multivert 400 three pole operated

ВЯРНО С ОРИГИНАЛА

Test item particulars:			
- method of operation :	Dependent manual operation (single pole or three pole operated)		
- method of mounting :	Busbar mounting (busbar system 185mm)		
- suitability for isolation :	Suitable		
- degree of protection :	IP 30 (in normal service, with protection covers)		
- number of poles :	3		
- kind of current :	AC		
- in the case of a.c., number of phases and rated frequency :	3, 50-60Hz		
- number of positions of the main contacts :	2		
- breaking arrangement for fused devices :	–		
Rated and limiting values, main circuit:			
- rated operational voltage Ue (V) :	400	500	690
- rated insulation voltage Ui (V) :	1000		
- rated impulse withstand voltage Uimp (kV) :	8		
- conventional free air thermal current Ith with fuse-links (A) :	400		
- conventional free air thermal current Ith with solid-links (A) :	630		
- rated operational current Ie (A) :	400	400	400
- rated uninterrupted current Iu (A) :	400 (max. power dissipation of fuse-links = 34W)		
- rated frequency (Hz) :	50-60		
- utilization category :	AC-23B	AC-22B	AC-21B
Short-circuit characteristic:			
- rated short-time withstand current Icw (A) :	8000 r.m.s. / 1s		
- rated short-time making capacity Icm (A) :	16000 peak		
- rated conditional short-circuit current (kA) :	120 (at 500V with 400A fuse-links) 120 (at 690V with 315A fuse-links)		
Control circuits :	-		
Auxiliary circuits :	-		
Relays and releases :	-		
Co-ordination of short-circuit protective devices:			
- kind of protective device :	Fuse-links NH2/gG, up to 400A		
Possible test case verdicts:			
- test case does not apply to the test object :	N/A (Not applicable)		
- test object does meet the requirement :	P (Pass)		
- test object does not meet the requirement :	F (Fail)		
Testing:			
Date of receipt of test item :	08/2006 + 08/2016		
Date(s) of performance of tests :	08-12/2006 + 08/2016		

ВЯРНО С ОРИГИНАЛА

General remarks:

The test results presented in this report relate only to the object tested.
This report shall not be reproduced, except in full, without the written approval of the Issuing testing laboratory.

"(see Enclosure #)" refers to additional information appended to the report.
"(see appended table)" refers to a table appended to the report.

Throughout this report a ☒ comma / ☐ point is used as the decimal separator.

Manufacturer's Declaration per sub-clause 4.2.5 of IECEE 02:

The application for obtaining a CB Test Certificate includes more than one factory location and a declaration from the Manufacturer stating that the sample(s) submitted for evaluation is (are) representative of the products from each factory has been provided .... :	☐ **Yes** ☒ **Not applicable**

When differences exist; they shall be identified in the General product information section.

Name and address of factory (ies).......................:	MERSEN CZ s.r.o. Pardubicka 437, 53304 Sezemice, Czech Republic

General product information:

NH-vertical-fuse-switch-disconnector, one pole or three pole operated, for busbar systems

type

MULTIVERT

ВЯРНО С ОРИГИНАЛА

Remark to test performance:

At all tests concerning making and breaking capacity, operational performance capability and performance under short-circuit conditions, a metallic screen were placed to the equipment, in accordance with the arrangements and distances specified by the manufacturer:

- ⇨ Distance above to metallic screen: 100mm
- ⇨ Distance lateral to metallic screen: 50mm

Remark for use of the fuse-switch-disconnectors:

The maximum power dissipation of the fuse-links suitable for use with the fuse-switch-disconnectors is 34W. Fuse-links with rated voltage 690V of the appropriate size (NH2) may have a power dissipation exceeding this value.

It has to be taken into consideration that the maximum power dissipation of

34W

will not be exceeded for use in uninterrupted duty.

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
5.2	MARKING		P
	Marking on equipment itself or on nameplate or nameplates attached to the equipment and legible from the front after mounting		P
	- indication of the open and closed position	Visible open and closed position	P
	- suitability for isolation	In open position	P
	- disconnectors AC-20 and DC-20 only: marked "Do not operate under load"		N/A
	Following marking is visible after mounting:		—
	- direction of movement of the actuator (see 7.1.5.2)		P
	- indication of the position of the actuator (see also 7.1.6.1 and 7.1.6.2)		P
	- approval or certification mark, if applicable		N/A
	- for miniaturized equipment, symbol, colour code or letter code		N/A
	- terminal identification and marking (see 7.1.8.4)		P
	- IP code and class of protection against electric shock, when applicable (marked preferably on the equipment as far as possible)		P
	- suitability for isolation, where applicable, with the isolation function symbol according to IEC 60617-7, reference 07-01-03, combined with the appropriate function symbol for the equipment		P
	- this symbols are clearly and unmistakably marked		P
	- this symbols are visible when the equipment is installed as in service and the actuator is accessible		P
	In the case of electronically controlled electromagnets, information other than that given in 5.1 may also be necessary (see also 4.5 and Annex U)		N/A
	The indication "s", "sol", "r" or "f" for non-universal screwless terminals shall be marked on the device or, if the space available is not sufficient, on the smallest package unit or in technical information provided with the product		N/A
	Marking on equipment not needed to be visible after mounting:		—
	- manufacturer's name or trademark	MERSEN	P
	- type designation or serial number	MULTIVERT	P
	- rated operational currents or rated powers	400A	P
	- rated operational voltage	690V~	P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- utilization category		N/A
	rated frequency or the indication "DC"	50-60Hz	P
	- manufacturer's claim for compliance with IEC 60947-3	IEC 60947-3	P
	- degree of protection	IP30	P
	Marking on fuse-combination units:		P
	- fuse type	NH2	P
	- maximum rated current	400A	P
	- power loss of the fuse-link	Pv=34W	P
	Identification of terminals:		P
	- line terminals, unless connection is immaterial	Yes	P
	- load terminals, unless connection is immaterial	Yes	P
	- neutral pole terminal		N/A
	- protective earth terminal		N/A
	Data in the manufacturer's published information:		P
	- rated insulation voltage	Ui=1000V	P
	- rated impulse withstand voltage for equipment suitable for isolation or when determined	Uimp=8kV	P
	- pollution degree, if different from 3	3	P
	- rated duty	Uninterrupted duty	P
	- rated short-time withstand current and duration	Icw=8000A/1s	P
	- rated short-circuit making capacity	Icm=16000 peak	P
	- rated conditional short-circuit current	120kA at 690V with 400A fuse-links	P
5.3	Instructions for installation, operation and maintenance		P
6	NORMAL SERVICE, MOUNTING AND TRANSPORT CONDITIONS		—
6.1	Normal service conditions		P
6.1.1	Ambient air temperature		P
6.1.2	Altitude		P
6.1.3	Atmospheric conditions		P
6.1.3.1	Humidity		P
6.1.3.2	Pollution degree		P
6.1.4	Shock and vibration		P
6.2	Conditions during transport and storage		P
6.3	Mounting		P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
7	CONSTRUCTIONAL AND PERFORMANCE REQUIREMENTS		—
7.1	Constructional requirements		—
7.1.1	General		—
7.1.2	Materials		—
7.1.2.1	General material requirements		—
	Parts of insulating materials which might be exposed to thermal stresses due to electrical effects within the equipment shall not be adversely affected by abnormal heat and by fire.		
	The manufacturer specifies which test method, 7.1.2.2 or 7.1.2.3, is to be used ....:	Test method acc. to 7.1.2.2	
7.1.2.2	Glow wire Testing		P
	The suitability of materials used is verified by making tests on ....: or	Sections taken from the equipment	P
	- providing data from the insulating material supplier fulfilling the requirements according to IEC 60695-2-12		N/A
	Glow-wire test according to IEC 60695-2-10 and IEC 60695-2-11		—
	Parts made of insulating material necessary to retain current-carrying parts in position: test temperature 960 °C		P
	No visible flame and no sustained glowing		N/A
	Flames and glowing extinguish within 30 s	Extinguishing within 3s after removing the glow-wire	P
	No ignition of the tissue paper		P
	Parts of insulating material not necessary to retain current-carrying parts in position, even though in contact with them: test temperature 650 °C		—
	No visible flame and no sustained glowing	No visible flame	P
	Flames and glowing extinguish within 30 s		N/A
	No ignition of the tissue paper		P
7.1.2.3	Test based on flammability category		—
	For parts of insulating materials, hot wire ignition and, where applicable, arc ignition tests as specified in 8.2.1.1.2, shall be made based on flammability category		N/A
	Tests on materials are made in accordance with Annex M		N/A
	The hot wire ignition (HWI) and arc ignition (AI) test value requirements related to the material flammability category shall conform to Table M.1 or M.2		N/A
	Alternatively, the manufacturer may provide data from the insulating material supplier fulfilling the requirements given in Annex M		N/A

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
7.1.3	Current-carrying parts and their connections		P
	Current-carrying parts have the necessary mechanical strength and current-carrying capacity for their intended use		P
	For electrical connections, no contact pressure is transmitted through insulating material other than ceramic or other material with characteristics not less suitable, unless there is sufficient resiliency in the metallic parts to compensate for any possible shrinkage or yielding of the insulation material		P
7.1.4	Clearances ....:	See appended table 7.1.4	P
	Creepage distances ....:	See appended table 7.1.4	P
	Pollution degree ....:	3	—
	Comparative tracking index (V) ....:	500	—
	Material group ....:	II	—
7.1.5	Actuator		P
7.1.5.1	Insulation		—
	Actuator insulated from live parts for		—
	- rated insulation voltage	1000V	P
	- rated impulse withstand voltage	8kV	P
	Actuator made of metal	No	—
	- connected to a protective conductor or provided with an additional insulation		N/A
	Actuator made of or covered by insulating material ....:	Made of insulating material	—
	- internal metal parts, which might become accessible in the event of an insulation failure, are also insulated from live parts for the rated insulation voltage		N/A
7.1.5.2	Direction of movement		P
	The direction of operation for actuators shall where applicable conform to IEC 60447		P
	There is no doubt of the "I" and "O" position and the direction of operation	Visible open and closed position	P
7.1.6	Indication of contact position		—
7.1.6.1	Indicating means	Actuator	P
7.1.6.2	Indication by the actuator	Yes	P
7.1.7	Additional safety requirements for equipment suitable for isolation		—
7.1.7.1	Additional constructional requirements		—
	- marking according to 5.2.1b	Yes	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- indication of the position of the contacts	See clause 7.1.5.2	P
	- construction of the actuating mechanism		P
	- minimum clearances across open contacts (see Table 13, Part 1) (mm) ....:	8	—
	- measured clearances (mm) ....:	> 10	P
	- test Uimp across gap (kV) ....:	12,3	P
7.1.7.2	Supplementary requirements for equipment with provision for electrical interlocking with contactors or circuit-breakers:		N/A
	Auxiliary switch is rated according to IEC 60947-5-1 (unless the equipment is rated AC-23)		N/A
	Time interval between opening of the contacts of the auxiliary contact and the contacts of the main poles: ≥20 ms ....:	-	—
	Measured time interval (ms) ....:	-	N/A
	During the closing operation the contacts of the auxiliary switch closes after or simultaneously with the contacts of the main poles		N/A
7.1.7.3	Supplementary requirements for equipment provided with means for padlocking the open position:		N/A
	The locking means is so designed that it cannot be removed with the appropriate padlock(s) installed		N/A
	Test force F applied to the actuator in an attempt to operate to the closed position (N) ....:	-	—
	Rated impulse withstand voltage (kV) ....:	-	—
	Test Uimp on open main contacts at the test force		N/A
7.1.8	Terminals		—
7.1.8.1	All parts of terminals which maintain contact and carry current are of metal having adequate mechanical strength	See 8.2.4 below	P
	Terminal connections are such that necessary contact pressure is maintained	See 8.2.4 below	P
	Terminals are so constructed that the conductor is clamped between suitable surfaces without damage to the conductor and terminal	See 8.2.4 below	P
	Terminals do not allow the conductor to be displaced or to be displaced themselves in a manner detrimental to the operator of equipment and the insulation voltage is not reduced below the rated value	See 8.2.4 below	P
	Screwless-type clamping units, unless otherwise specified by the manufacturer, shall accept rigid and flexible conductors as indicated in Table 1		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	On screwless-type clamping unit, the connection or disconnection of conductors shall be made as follows:		—
	– on universal clamping units by the use of a general purpose tool or a convenient device, integral with the clamping unit to open it for the insertion or withdrawal of the conductors		N/A
	– on push-wire clamping units by simple insertion. For the disconnection of the conductors an operation other than a pull only on the conductor shall be necessary. The use of a general purpose tool or of a convenient device, integral with the clamping unit is allowed in order to "open" it and to assist the insertion or the withdrawal of the conductor		N/A
8.2.4	Mechanical properties of terminals		P
	Mechanical strength of terminals		P
	Maximum cross-sectional area of conductor (mm²) ...:	2 x 240mm² *) / 2 x 40mmx10mm } (lug/busbar terminals) 2 x 240mm² *) (pillar terminals) *) by means of an adapter	—
	Diameter of thread (mm) ...:	12 (lug/busbar terminals) 14 (pillar terminals)	—
	Torque (Nm) ...:	38,5 (lug/busbar terminals) 27,5 (pillar terminals)	—
	5 times on 2 separate clamping units		P
	Testing for damage to and accidental loosening of conductor (flexion test)		P
	Conductor of the smallest cross-sectional area (mm²) ...:	50	—
	Number of conductor of the smallest cross section:	1	—
	Diameter of bushing hole (mm) ...:	15,9	—
	Height between the equipment and the platen ...:	343	—
	Mass at the conductor(s) (kg) ...:	9,5	—
	135 continuous revolutions: the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Pull-out test		P
	Force (N), applied for 1 min. ...:	236	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Conductor of the largest cross-sectional area (mm²) ...:	240	—
	Number of conductor of the largest cross section .:	2	—
	Diameter of bushing hole (mm) ...:	28,6	—
	Height between the equipment and the platen ...:	464	—
	Mass at the conductor(s) (kg) ...:	20	—

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Clause	Requirement + Test	Result - Remark	Verdict
	135 continuous revolutions: the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Pull-out test		P
	Force (N), applied for 1 min. .....:	578	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		P
	Conductor of the largest and smallest cross-sectional area (mm²) .....:	-	—
	Number of conductor of the smallest cross section, number of conductor of the largest cross section...:	-	—
	Diameter of bushing hole (mm) .....:	-	—
	Height between the equipment and the platen .....:	-	—
	Mass at the conductor(s) (kg) .....:	-	—
	135 continuous revolutions: the conductor neither slips out of the terminal nor breaks near the clamping unit		N/A
	Pull-out test		N/A
	Force (N), applied for 1 min. .....:	-	—
	During the test, the conductor neither slips out of the terminal nor breaks near the clamping unit		N/A
7.1.8.2	Connection capacity		P
	Type of conductors .....:	Cables (rigid or flexible) Busbars	—
	Minimum cross-sectional area of conductor (mm²) ...:	Cables: 50mm² Busbars: 30mmx5mm	—
	Maximum cross-sectional area of conductor (mm²)...:	Cables: 2 x 240mm² *) Busbars: 2 x 40mmx10mm *) by means of an adapter	—
	Number of conductors simultaneously connectable to the terminal .....:	1 (min. cross-section) 2 (max. cross-section)	—
7.1.8.3	Connection		P
	Terminals for connection to external conductors are readily accessible during installation		P
	Clamping screws and nuts do not serve to fix any other component		P

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Clause	Requirement + Test	Result - Remark	Verdict
7.1.8.4	Terminal identification and marking		P
	Terminal intended exclusively for the neutral conductor		N/A
	Protective earth terminal		N/A
	Other terminals		P
7.1.9	Additional requirements for equipment provided with a neutral pole		N/A
	Equipment provided with a pole intended for the connection of neutral, this pole shall be clearly marked by the letter "N"		N/A
	The switched neutral pole does not break before and does not make after the other poles except		N/A
	- a pole having the appropriate short-circuit breaking and making capacity is used as neutral pole, all poles may operate together		N/A
	Conventional thermal current of neutral pole		N/A
7.1.10	Provisions for protective earthing		N/A
7.1.10.1	The exposed conductive parts are electrically interconnected and connected to a protective earth terminal		N/A
7.1.10.2	Protective earth terminal is readily accessible		N/A
	Protective earth terminal is suitably protected against corrosion		N/A
	Electrical continuity between the exposed conductive parts of the protective earth terminal and the metal sheathing of connecting conductors		N/A
	Protective earth terminal has no other functions		N/A
7.1.10.3	Protective earth terminal marking and identification		N/A
7.1.11	Enclosure for equipment		N/A
7.1.11.1	Design		N/A
	When the enclosure is opened, all parts requiring access for installation and maintenance are readily accessible		N/A
	Sufficient space is provided inside the enclosure		N/A
	The fixed parts of a metal enclosure are electrically connected to the other exposed conductive parts of the equipment and connected to a terminal which enables them to be earthed or connected to a protective conductor		N/A
	Under no circumstances a removable metal part of enclosure is insulated from the part carrying the earth terminal when the removable part is in place		N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	The removable parts of the enclosure are firmly secured to the fixed parts by a device such that they cannot be accidentally loosened or detached owing to the effects of operation of the equipment or vibrations		N/A
	If an enclosure is designed as to allow the covers to be opened without the use of tools, means is provided to prevent loss of the fastening devices		N/A
	If the enclosure is used for mounting push-buttons, it is not possible to remove the buttons from the outside of the enclosure		N/A
7.1.11.2	Insulation		N/A
	If, in order to prevent accidental contact between a metallic enclosure and live parts, the enclosure is partly or completely lined with insulating material, then this lining is securely fixed to the enclosure		N/A
7.1.12	Degree of protection of enclosed equipment		P
	Degree of protection ....:	IP30	P
7.1.13	Conduit pull-out, torque and bending with metallic conduits		N/A
	Withstand the stress occurring during its installation ....:	-	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3	TEST SEQUENCE I: GENERAL PERFORMANCE CHARACTERISTICS		—
8.3.3.1	Temperature-rise		P
	MULTIVERT 400, three-pole operated: 400A with fuse-links		
	ambient temperature 10-40 °C ...:	25	—
	test enclosure W x H x D (mm x mm x mm) ...:	-	—
	material of enclosure ...:	-	—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) ...:	400	—
	- conventional enclosed thermal current Ithe (A) ...:	-	—
	- cable/busbar cross-section (mm²)/(mm x mm)...:	Incoming: 30mmx10mm Outgoing: 240mm²	—
	- cable/busbar length (mm)/(mm)...:	Incoming: 600mm Outgoing: 2000mm	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Measured temperature-rise ...:	See appended table 8.3.3.1-a	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) ...:	-	—
	- cable cross-section (mm²) ...:	-	—
	Measured temperature-rise ...:	-	N/A
8.3.3.2	Test of dielectric properties, impulse withstand voltage (Uimp indicated)		P
	Rated impulse withstand voltage (kV) ...:	8	—
	- test Uimp main circuits (kV) ...:	9,8	P
	- test Uimp auxiliary circuits (kV) ...:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) ...:	12,3	P
	Power-frequency withstand voltage (V) ...:	1000	—
	- main circuits, test voltage for 5 sec. (V) ...:	2200	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) ...:	-	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.1	Temperature-rise		P
	MULTIVERT 400, three-pole operated: 630A with solid-links		
	ambient temperature 10-40 °C ....:	24,5	—
	test enclosure W x H x D (mm x mm x mm) ....:	-	—
	material of enclosure ....:	-	—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) ....:	630	—
	- conventional enclosed thermal current Ithe (A) ...:	-	—
	- cable/busbar cross-section (mm²)/(mm x mm)....:	Incoming: 30mmx10mm Outgoing: 240mm²	—
	- cable/busbar length (mm)/(mm)..........................:	Incoming: 600mm Outgoing: 2000mm	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ....:		—
	- manufacturer's model or type reference ....:		—
	- rated voltage (V) ....:		—
	- rated current (A) ....:		—
	- power loss (W) ....:		—
	- rated breaking capacity (kA) ....:		—
	Measured temperature-rise ....:	See appended table 8.3.3.1-b	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) ....:	-	—
	- cable cross-section (mm²) ....:	-	—
	Measured temperature-rise ....:	-	N/A
8.3.3.2	Test of dielectric properties, impulse withstand voltage (Uimp indicated)		P
	Rated impulse withstand voltage (kV) ....:	8	—
	- test Uimp main circuits (kV) ....:	9,8	P
	- test Uimp auxiliary circuits (kV) ....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) ....:	12,3	P
	Power-frequency withstand voltage (V) ....:	1000	—
	- main circuits, test voltage for 5 sec. (V) ....:	2200	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) ....:	-	N/A

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.1	Temperature-rise		P
	MULTIVERT 400, single-pole operated:	**400A with fuse-links**	
	ambient temperature 10-40 °C ....:	24	—
	test enclosure W x H x D (mm x mm x mm) ....:	-	—
	material of enclosure ....:	-	—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) ....:	400	—
	- conventional enclosed thermal current Ithe (A) ....:	-	—
	- cable/busbar cross-section (mm²)/(mm x mm)....:	Incoming: 30mmx10mm Outgoing: 240mm²	—
	- cable/busbar length (mm)/(mm)...........................:	Incoming: 600mm Outgoing: 2000mm	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ....:	Eurofuse	—
	- manufacturer's model or type reference ....:	362 240	—
	- rated voltage (V) ....:	500	—
	- rated current (A) ....:	400	—
	- power loss (W) ....:	34 max.	—
	- rated breaking capacity (kA) ....:	120	—
	Measured temperature-rise ....:	See appended table 8.3.3.1-c	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) ....:	-	—
	- cable cross-section (mm²) ....:	-	—
	Measured temperature-rise ....:	-	N/A
8.3.3.2	Test of dielectric properties, impulse withstand voltage (Uimp indicated)		P
	Rated impulse withstand voltage (kV) ....:	8	—
	- test Uimp main circuits (kV) ....:	9,8	P
	- test Uimp auxiliary circuits (kV) ....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) ....:	12,3	P
	Power-frequency withstand voltage (V) ....:	1000	—
	- main circuits, test voltage for 5 sec. (V) ....:	2200	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) ....:	-	N/A

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.1	Temperature-rise		P
	MULTIVERT 400, single-pole operated: 630A with solid-links		
	ambient temperature 10-40 °C ....:	24,5	—
	test enclosure W x H x D (mm x mm x mm) ....:	-	—
	material of enclosure ....:	-	—
	Main circuits, test conditions:		—
	- conventional thermal current Ith (A) ....:	630	—
	- conventional enclosed thermal current Ithe (A) ...:	-	—
	- cable/busbar cross-section (mm²)/(mm x mm)....:	Incoming: 30mmx10mm Outgoing: 240mm²	—
	- cable/busbar length (mm)/(mm).........................:	Incoming: 600mm Outgoing: 2000mm	—
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ....:		—
	- manufacturer's model or type reference ....:		—
	- rated voltage (V) ....:		—
	- rated current (A) ....:		—
	- power loss (W) ....:		—
	- rated breaking capacity (kA) ....:		—
	Measured temperature-rise ....:	See appended table 8.3.3.1-d	P
	Auxiliary circuits, test conditions:		N/A
	- rated operation current (A) ....:	-	—
	- cable cross-section (mm²) ....:	-	—
	Measured temperature-rise ....:	-	N/A
8.3.3.2	Test of dielectric properties, impulse withstand voltage (Uimp indicated)		P
	Rated impulse withstand voltage (kV) ....:	8	—
	- test Uimp main circuits (kV) ....:	9,8	P
	- test Uimp auxiliary circuits (kV) ....:	-	N/A
	- test Uimp on open main contacts (equipment suitable for isolation) (kV) ....:	12,3	P
	Power-frequency withstand voltage (V) ....:	1000	—
	- main circuits, test voltage for 5 sec. (V) ....:	2200	P
	- control and auxiliary circuits, test voltage for 5 sec. (V) ....:	-	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.3	Making and breaking capacity		P
	MULTIVERT 400, three-pole operated: AC-23B at 400V/400A		
	- utilization category ....:	AC-23B	—
	- rated operational voltage Ue (V) ....:	400	—
	- rated operational current Ie (A) ....:	400	—
	Conditions for make operation, AC-23A and AC-23B only:		P
	- test voltage, U = 1,05 Ue.................................(V):	L1: 429 L2: 427 L3: 428	—
	- test current, I = ... 10 x Ie (A):	L1: 4032 L2: 4045 L3: 4027	—
	- power factor ....:	L1: 0,36 L2: 0,35 L3: 0,35	—
	Conditions for break operation, AC-23A and AC-23B only:		P
	- test voltage, U = 1,05 Ue.................................(V):	L1: 428 L2: 428 L3: 428	—
	- test current, I = ... 8 x Ie (A):	L1: 3216 L2: 3227 L3: 3220	—
	- power factor ....:	L1: 0,34 L2: 0,33 L3: 0,33	—
	Conditions for make/break operations, other than AC-23A and AC-23B:		N/A
	- test voltage, U = 1,05 Ue.................................(V):	L1: - L2: - L3: -	—
	- test current, I = ... _ x Ie (A):	L1: - L2: - L3: -	—
	- power factor / time constant ....:	L1: - L2: - L3: -	—
	Number of make/break or make and break operations ....:	3 and 3	P
	- recovery voltage duration ≥ 50 ms (ms)................:	240	P
	- current duration (ms) ....:	320 and 350	—
	- time interval between operations (s) ....:	30	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only:		P
	- oscillatory frequency (kHz) ....:	83,26	—
	- measured oscillatory frequency (kHz) ....:	L1: 83,3 L2: 83,3 L3: 83,3	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- factor γ ......:	L1: 1,1 L2: 1,1 L3: 1,1	P
8.3.3.3.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.3.4	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage 1,1 Ue (V) ......:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ......:	< 1	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ......:	Eurofuse	—
	- manufacturer's model or type reference ......:	362 240	—
	- rated voltage (V) ......:	500	—
	- rated current (A) ......:	400	—
	- power loss (W) ......:	34 max.	—
	- rated breaking capacity (kA) ......:	120	—
	Conductor cross-section (mm^2) / mmxmm) ......:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ......:	400	—
	Measured temperature-rise ......:	See appended table 8.3.3.6-a	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.3	Making and breaking capacity		P
	MULTIVERT 400, three-pole operated: AC-22B at 500V/400A		
	- utilization category ...:	AC-22B	—
	- rated operational voltage Ue (V) ...:	500	—
	- rated operational current Ie (A) ...:	400	—
	Conditions for make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue ...(V):	L1: - L2: - L3: -	—
	- test current, I = ... _ x Ie (A):	L1: - L2: - L3: -	—
	- power factor ...:	L1: - L2: - L3: -	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue ...(V):	L1: - L2: - L3: -	—
	- test current, I = ... _ x Ie (A):	L1: - L2: - L3: -	—
	- power factor ...:	L1: - L2: - L3: -	—
	Conditions for make/break operations, other than AC-23A and AC-23B:		P
	- test voltage, U = 1,05 Ue ...(V):	L1: 528 L2: 529 L3: 529	—
	- test current, I = ... 3 x Ie (A):	L1: 1224 L2: 1237 L3: 1220	—
	- power factor / ~~time constant~~ ...:	L1: 0,65 L2: 0,64 L3: 0,64	—
	Number of make/break or make and break operations ...:	5	P
	- recovery voltage duration ≥ 50 ms (ms)...:	Permanent	P
	- current duration (ms) ...:	300	—
	- time interval between operations (s) ...:	30	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only:		P
	- oscillatory frequency (kHz) ...:	57,24	—
	- measured oscillatory frequency (kHz) ...:	L1: 57,1 L2: 57,1 L3: 57,1	P

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Clause	Requirement + Test	Result - Remark	Verdict
	- factor γ ...:	L1: 1,1 L2: 1,1 L3: 1,1	P
8.3.3.3.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.3.4	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ...:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm²) / mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.3.6-b	P

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.3	Making and breaking capacity		P
	MULTIVERT 400, three-pole operated: AC-21B at 690V/400A		
	- utilization category ....:	AC-21B	—
	- rated operational voltage Ue (V) ....:	690	—
	- rated operational current Ie (A) ....:	400	—
	Conditions for make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue ....(V):	L1: - L2: - L3: -	—
	- test current, I = ... _ x Ie (A):	L1: - L2: - L3: -	—
	- power factor ....:	L1: - L2: - L3: -	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue ....(V):	L1: - L2: - L3: -	—
	- test current, I = ... _ x Ie (A):	L1: - L2: - L3: -	—
	- power factor ....:	L1: - L2: - L3: -	—
	Conditions for make/break operations, other than AC-23A and AC-23B:		P
	- test voltage, U = 1,05 Ue ....(V):	L1: 730 L2: 730 L3: 728	—
	- test current, I = ... 1,5 x Ie (A):	L1: 612 L2: 619 L3: 610	—
	- power factor / ~~time constant~~ ....:	L1: 0,94 L2: 0,93 L3: 0,94	—
	Number of make/break or make and break operations ....:	5	P
	- recovery voltage duration ≥ 50 ms (ms)................:	Permanent	P
	- current duration (ms) ....:	300	—
	- time interval between operations (s) ....:	30	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only:		N/A
	- oscillatory frequency (kHz) ....:	-	—
	- measured oscillatory frequency (kHz) ....:	L1: - L2: - L3: -	N/A

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- factor γ ...:	L1: - L2: - L3: -	N/A
8.3.3.3.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.3.4	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ...:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm^2) / mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.3.6-c	P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.7	Strength of actuator mechanism		P
8.2.5	Verification of the strength of actuator mechanism and position indicating device		P
	- actuator type (fig.) ...:	1e	—
8.2.5.2.1	Dependent and independent manual operation		P
	- actuating force for opening (N) ...:	235	—
	- test force with blocked main contacts (N) ...:	400	—
	- used method to keep the contact closed ...:	Brazing	—
	During and after the test, open position not indicated ...:	No open position	P
	Equipment with locking mean, no locking in the open position while test force is applied...:	No locking mechanism in open position	N/A
8.2.5.2.2	Dependent power operation		N/A
	- main contacts fixed together in the closed position ...:	-	N/A
	- used method to keep the contact closed ...:	-	N/A
	- 110% of the rated supply voltage applied to the equipment (3 times) ...:	-	N/A
	During and after the test, open position not indicated ...:	-	N/A
	Equipment show no damage impairing its normal operation...:	-	N/A
	Equipment with locking mean, no locking in the open position while test force is applied...:	-	N/A
8.2.5.2.3	Independent power operation		N/A
	- main contacts fixed together in the closed position ...:	-	N/A
	- used method to keep the contact closed ...:	-	N/A
	- stored energy of the power operator released (3 times)...:	-	N/A
	During and after the test, open position not indicated ...:	-	N/A
	Equipment show no damage impairing its normal operation...:	-	N/A
	Equipment with locking mean, no locking in the open position while test force is applied...:	-	N/A

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.3	Making and breaking capacity		P
	MULTIVERT 400, single-pole operated: AC-23B at 400V/400A (Test 1: L1 and L2 closed, L3 operated; Test 2: L1 operated, L2 closed, L3 open)		
	- utilization category ....:	AC-23B	—
	- rated operational voltage Ue (V) ....:	400	—
	- rated operational current Ie (A) ....:	400A	—
	Conditions for make operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue..................................(V):	L1: 428 L2: 428 L3: 427	—
	- test current, I = ... 10 x Ie (A):	L1: 4030 L2: 4046 L3: 4028	—
	- power factor ....:	L1: 0,35 L2: 0,35 L3: 0,35	—
	Conditions for break operation, AC-23A and AC-23B only:		N/A
	- test voltage, U = 1,05 Ue..................................(V):	L1: 428 L2: 430 L3: 429	—
	- test current, I = ...8 x Ie (A):	L1: 3218 L2: 3225 L3: 3223	—
	- power factor ....:	L1: 0,33 L2: 0,34 L3: 0,33	—
	Conditions for make/break operations, other than AC-23A and AC-23B:		P
	- test voltage, U = 1,05 Ue..................................(V):	L1: - L2: - L3: -	—
	- test current, I = ... _ x Ie (A):	L1: - L2: - L3: -	—
	- power factor / ~~time constant~~ ....:	L1: - L2: - L3: -	—
	Number of make/break or make and break operations ....:	3 and 3	P
	- recovery voltage duration ≥ 50 ms (ms)................:	250 and 240	P
	- current duration (ms) ....:	320 and 330	—
	- time interval between operations (s) ....:	30	P
	Characteristic of transient recovery voltage for AC-22 and AC-23 only:		P
	- oscillatory frequency (kHz) ....:	83,26	—
	- measured oscillatory frequency (kHz) ....:	L1: 83,3 L2: 83,3 L3: 83,4	P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	- factor γ .....:	L1: 1,1 L2: 1,1 L3: 1,1	P
8.3.3.3.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.3.3.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.3.4	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ....:	1380	—
	No flashover or breakdown		P
8.3.3.5	Leakage current		P
	test voltage 1,1 Ue (V) .....:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) .....:	< 1	P
8.3.3.6	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark .....:	Eurofuse	—
	- manufacturer's model or type reference .....:	362 240	—
	- rated voltage (V) .....:	500	—
	- rated current (A) .....:	400	—
	- power loss (W) .....:	34 max.	—
	- rated breaking capacity (kA) .....:	120	—
	Conductor cross-section (mm²) / mmxmm) .....:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) .....:	400	—
	Measured temperature-rise .....:	See appended table 8.3.3.6-d	P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.7	Strength of actuator mechanism		P
8.2.5	Verification of the strength of actuator mechanism and position indicating device		P
	- actuator type (fig.) ....:	1e	—
8.2.5.2.1	Dependent and independent manual operation		P
	- actuating force for opening (N) ....:	235	—
	- test force with blocked main contacts (N) ....:	400	—
	- used method to keep the contact closed ....:	Brazing	—
	During and after the test, open position not indicated ....:	Not indicated	P
	Equipment with locking mean, no locking in the open position while test force is applied..................:	No locking mechanism in open position	N/A
8.2.5.2.2	Dependent power operation		N/A
	- main contacts fixed together in the closed position ....:	-	N/A
	- used method to keep the contact closed ....:	-	N/A
	- 110% of the rated supply voltage applied to the equipment (3 times) ....:	-	N/A
	During and after the test, open position not indicated ....:	-	N/A
	Equipment show no damage impairing its normal operation...:	-	N/A
	Equipment with locking mean, no locking in the open position while test force is applied..................:	-	N/A
8.2.5.2.3	Independent power operation		N/A
	- main contacts fixed together in the closed position ....:	-	N/A
	- used method to keep the contact closed ....:	-	N/A
	- stored energy of the power operator released (3 times)...:	-	N/A
	During and after the test, open position not indicated ....:	-	N/A
	Equipment show no damage impairing its normal operation...:	-	N/A
	Equipment with locking mean, no locking in the open position while test force is applied..................:	-	N/A

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4	TEST SEQUENCE II: OPERATIONAL PERFORMANCE CAPABILITY		—
8.3.4.1	Operational performance test		P
	MULTIVERT 400, three-pole operated: AC-23B at 400V/400A		
	- utilization category ......:	AC-23B	—
	- rated operational voltage (V) ......:	400	—
	- rated operational current (A) ......:	400	—
	Test conditions for electrical operation cycles:		P
	- test voltage (V) ......:	L1: 407 L2: 409 L3: 405	—
	- test current (A) ......:	L1: 412 L2: 417 L3: 410	—
	- power factor / ~~time constant~~ ......:	L1: 0,66 L2: 0,65 L3: 0,65	—
	Number of cycles with current ......:	200	P
	Number of cycles without current ......:	800	P
	First test sequence (with/without current) ......:	With	—
	Second test sequence (with/without current) ......:	Without	—
	- time interval between first and second test sequence ......:	10 minutes	—
	- recovery voltage duration at operations with current ≥ 50 ms (ms)......:	Permanent	P
	- current duration (ms) ......:	320	—
	- time interval between operations (s) ......:	60	P
8.3.4.1.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.4.1.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.2	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm²) / (mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.4.4-a	P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.1	Operational performance test		P
	MULTIVERT 400, three-pole operated: AC-22B at 500V/400A		
	- utilization category ....:	AC-22B	—
	- rated operational voltage (V) ....:	500	—
	- rated operational current (A) ....:	400	—
	Test conditions for electrical operation cycles:		P
	- test voltage (V) ....:	L1: 506 L2: 506 L3: 505	—
	- test current (A) ....:	L1: 406 L2: 411 L3: 402	—
	- power factor / ~~time constant~~ ....:	L1: 0,78 L2: 0,77 L3: 0,78	—
	Number of cycles with current ....:	200	P
	Number of cycles without current ....:	800	P
	First test sequence (with/without current) ....:	With	—
	Second test sequence (with/without current) ....:	Without	—
	- time interval between first and second test sequence ....:	10 minutes	—
	- recovery voltage duration at operations with current ≥ 50 ms (ms)..........:	Permanent	P
	- current duration (ms) ....:	320	—
	- time interval between operations (s) ....:	60	P
8.3.4.1.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.4.1.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.2	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm²) / (mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.4.4-b	P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.1	Operational performance test		P
	MULTIVERT 400, three-pole operated: AC-21B at 690V/400A		
	- utilization category ....:	AC-21B	—
	- rated operational voltage (V) ....:	690	—
	- rated operational current (A) ....:	400	—
	Test conditions for electrical operation cycles:		P
	- test voltage (V) ....:	L1: 697 L2: 699 L3: 697	—
	- test current (A) ....:	L1: 411 L2: 417 L3: 408	—
	- power factor / ~~time constant~~ ....:	L1: 0,96 L2: 0,95 L3: 0,95	—
	Number of cycles with current ....:	200	P
	Number of cycles without current ....:	800	P
	First test sequence (with/without current) ....:	With	—
	Second test sequence (with/without current) ....:	Without	—
	- time interval between first and second test sequence ....:	10 minutes	—
	- recovery voltage duration at operations with current ≥ 50 ms (ms)..........:	Permanent	P
	- current duration (ms) ....:	320	—
	- time interval between operations (s) ....:	60	P
8.3.4.1.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.4.1.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.2	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm^2) / (mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.4.4-c	P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.1	Operational performance test		P
	MULTIVERT 400, single-pole operated: AC-23B at 400V/400A (Test 1: L1 and L2 closed, L3 operated; Test 2: L1 operated, L2 closed, L3 open)		
	- utilization category ....:	AC-23B	—
	- rated operational voltage (V) ....:	400	—
	- rated operational current (A) ....:	400A	—
	Test conditions for electrical operation cycles:		P
	- test voltage (V) ....:	L1: 404 L2: 408 L3: 406	—
	- test current (A) ....:	L1: 410 L2: 414 L3: 412	—
	- power factor / ~~time constant~~ ....:	L1: 0,65 L2: 0,65 L3: 0,65	—
	Number of cycles with current ....:	200	P
	Number of cycles without current ....:	800	P
	First test sequence (with/without current) ....:	With	—
	Second test sequence (with/without current) ....:	Without	—
	- time interval between first and second test sequence ....:	10 minutes	—
	- recovery voltage duration at operations with current ≥ 50 ms (ms)..:	Permanent	P
	- current duration (ms) ....:	320	—
	- time interval between operations (s) ....:	60	P
8.3.4.1.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.4.1.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.4.2	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No breakdown or flashover		P
8.3.4.3	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.4.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm²) / (mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.4.4-d	P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.5	TEST SEQUENCE III: SHORT-CIRCUIT PERFORMANCE CAPABILITY		—
8.3.5.1	Short-time withstand current test		P
	8000A r.m.s / 1s		
	Rated short-time withstand current Icw (A) (≥ 12 Ie max.) ......:	8000 r.m.s. / 1s	P
	- test voltage (V) ......:	L1: 726 L2: 726 L3: 728	—
	- r.m.s. test current (A) ......:	L1: 8180 L2: 8270 L3: 8130	—
	- peak test current (A) ......:	L1: 16010 L2: 13020 L3: 14100	—
	- power factor / ~~time constant~~ ......:	L1: 0,49 L2: 0,49 L3: 0,48	—
	- factor n ......:	1,96	—
	Test duration (ms) ......:	1010	—
8.3.5.1.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.5.1.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.5.2	Short-circuit making capacity		P
	16000A peak		
	Rated short-circuit making capacity Icm (A) ....:	16000 peak	P
	- test voltage (1,05 x Ue) ....(V):	L1: 726 L2: 726 L3: 728	—
	- r.m.s. test current (A) ....(A):	L1: 8180 L2: 8270 L3: 8130	—
	- maximum peak test current (factor n) ....:	1,96	P
	- power factor / time constant ....:	L1: 0,49 L2: 0,49 L3: 0,48	P
	Current duration (s) ....:	0,065	—
	Time interval between the cycles ....:	3	—
8.3.5.2.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.5.2.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.5.3	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No flashover or breakdown		P
8.3.5.4	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.5.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm²) (mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.5.5-a	P

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.6	TEST SEQUENCE IV: CONDITIONAL SHORT-CIRCUIT CURRENT		—
	Conditional short-circuit current test		P
	MULTIVERT 400, three-pole operated: 120kA at 500V with 400A fuse-links		
	Protective device details:		P
	- manufacturer's name, trademark or identification mark ....:	Eurofuse	—
	- manufacturer's model or type reference ....:	362 240	—
	- rated voltage (V) ....:	500	—
	- rated current (A) ....:	400	—
	- rated breaking capacity (kA) ....:	120	—
8.3.6.2	Conditional short-circuit current test values		P
	- test voltage (1,05 Ue) (V) ....:	L1: 530 L2: 531 L3: 531	—
	- test current (A) ....:	L1: 121100 L2: 122600 L3: 121450	—
	- rated frequency (Hz) ....:	50	—
	- power factor ....:	0,15	—
	- time constant (ms) ....:	-	—
	- factor n ....:	2,24	—
	Fuse protected short-circuit withstand (equipment in closed position)		P
	- max. let-through current (A) ....:	L1: 11900 L2: 31870 L3: 39480	—
	- Joule integral I^2dt (A^2s) ....:	L1: 162990 L2: 756860 L3: 1056000	—
	Fuse protected short-circuit making (equipment closing on to short-circuit)		P
	- mean velocity of 15 manually under no-load conditions operations (m/s) ....:	0,80	—
	- point at which the measurement is made ....:	Maximum distance of the actuator	—
	- test speed during the fuse protected short-circuit making (m/s) ....:	0,81	—
	- max. let-through current (A) ....:	L1: 34370 L2: 0 L3: 34370	—
	- Joule integral I^2dt (A^2s) ....:	L1: 726200 L2: 0 L3: 726200	—

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.6.2.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.6.2.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.6.3	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No flashover or breakdown		P
8.3.6.4	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.6.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm²) / (mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.6.5-a	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Conditional short-circuit current test		P
	MULTIVERT 400, three-pole operated: 120kA at 690V with 315A fuse-links		
	Protective device details:		P
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	372 331	—
	- rated voltage (V) ...:	690	—
	- rated current (A) ...:	315	—
	- rated breaking capacity (kA) ...:	120	—
8.3.6.2	Conditional short-circuit current test values		P
	- test voltage (1,05 Ue) (V) ...:	L1: 727 L2: 729 L3: 728	—
	- test current (A) ...:	L1: 120700 L2: 122000 L3: 121100	—
	- rated frequency (Hz) ...:	50	—
	- power factor ...:	0,14	—
	- time constant (ms) ...:	-	—
	- factor n ...:	2,25	—
	Fuse protected short-circuit withstand (equipment in closed position)		P
	- max. let-through current (A) ...:	L1: 35020 L2: 22680 L3: 12760	—
	- Joule integral I^2dt (A^2s) ...:	L1: 1014000 L2: 321610 L3: 215900	—
	Fuse protected short-circuit making (equipment closing on to short-circuit)		P
	- mean velocity of 15 manually under no-load conditions operations (m/s) ...:	0,80	—
	- point at which the measurement is made ...:	Maximum distance of the actuator	—
	- test speed during the fuse protected short-circuit making (m/s) ...:	0,81	—
	- max. let-through current (A) ...:	L1: 36420 L2: 0 L3: 36420	—
	- Joule integral I^2dt (A^2s) ...:	L1: 697890 L2: 0 L3: 697890	—

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.6.2.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.6.2.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.6.3	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No flashover or breakdown		P
8.3.6.4	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.6.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ....:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm²) / (mmxmm) ....:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.6.5-b	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Conditional short-circuit current test		P
	MULTIVERT 400, single-pole operated: 120kA at 500V with 400A fuse-links L1 open, L2 closed, L3 subjected to make operation		
	Protective device details:		P
	- manufacturer's name, trademark or identification mark .....:	Eurofuse	—
	- manufacturer's model or type reference .....:	362 240	—
	- rated voltage (V) .....:	500	—
	- rated current (A) .....:	400	—
	- rated breaking capacity (kA) .....:	120	—
8.3.6.2	Conditional short-circuit current test values		P
	- test voltage (1,05 Ue) (V) .....:	L1: 530 L2: 531 L3: 530	—
	- test current (A) .....:	L1: 121100 L2: 122600 L3: 121450	—
	- rated frequency (Hz) .....:	50	—
	- power factor .....:	0,14	—
	- time constant (ms) .....:	-	—
	- factor n .....:	2,24	—
	Fuse protected short-circuit withstand (equipment in closed position)		P
	- max. let-through current (A) .....:	L1: - L2: - L3: -	—
	- Joule integral I^2dt (A^2s) .....:	L1: - L2: - L3: -	—
	Fuse protected short-circuit making (equipment closing on to short-circuit)		P
	- mean velocity of 15 manually under no-load conditions operations (m/s) .....:	0,80	—
	- point at which the measurement is made .....:	Maximum distance of actuator	—
	- test speed during the fuse protected short-circuit making (m/s) .....:	0,81	—
	- max. let-through current (A) .....:	L1: - L2: 34980 L3: 34980	—
	- Joule integral I^2dt (A^2s) .....:	L1: - L2: 778830 L3: 778830	—

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.6.2.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.6.2.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.6.3	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ....:	1380	—
	No flashover or breakdown		P
8.3.6.4	Leakage current		P
	test voltage 1,1 Ue (V) ....:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ....:	< 1	P
8.3.6.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ....:	Eurofuse	—
	- manufacturer's model or type reference ....:	362 240	—
	- rated voltage (V) ....:	500	—
	- rated current (A) ....:	400	—
	- power loss (W) ....:	34 max.	—
	- rated breaking capacity (kA) ....:	120	—
	Conductor cross-section (mm²) / (mmxmm) ....:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ....:	400	—
	Measured temperature-rise ....:	See appended table 8.3.6.5-c	P

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Clause	Requirement + Test	Result - Remark	Verdict
	Conditional short-circuit current test		P
	MULTIVERT 400, single-pole operated: 120kA at 690V with 315A fuse-links L1 open, L2 closed, L3 subjected to make operation		
	Protective device details:		P
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	372 331	—
	- rated voltage (V) ...:	690	—
	- rated current (A) ...:	315	—
	- rated breaking capacity (kA) ...:	120	—
8.3.6.2	Conditional short-circuit current test values		P
	- test voltage (1,05 Ue) (V) ...:	L1: 727 L2: 729 L3: 728	—
	- test current (A) ...:	L1: 120700 L2: 122000 L3: 121100	—
	- rated frequency (Hz) ...:	50	—
	- power factor ...:	0,14	—
	- time constant (ms) ...:	-	—
	- factor n ...:	2,25	—
	Fuse protected short-circuit withstand (equipment in closed position)		P
	- max. let-through current (A) ...:	L1: - L2: - L3: -	—
	- Joule integral I^2dt (A^2s) ...:	L1: - L2: - L3: -	—
	Fuse protected short-circuit making (equipment closing on to short-circuit)		P
	- mean velocity of 15 manually under no-load conditions operations (m/s) ...:	0,80	—
	- point at which the measurement is made ...:	Maximum distance of actuator	—
	- test speed during the fuse protected short-circuit making (m/s) ...:	0,81	—
	- max. let-through current (A) ...:	L1: - L2: 36750 L3: 36750	—
	- Joule integral I^2dt (A^2s) ...:	L1: - L2: 699140 L3: 699140	—

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.6.2.5	Behaviour of the equipment during test		P
	Test performed without:		—
	- endanger to the operator		P
	- cause damage to adjacent equipment		P
	No permanent arcing		P
	No flash over between poles and poles and frame		P
	No melting of the fuse in the detection circuit		P
8.3.6.2.6	Condition of the equipment after test		P
	Immediately after the test equipment must work satisfactorily		P
	- required opening force not greater than the test force of 8.2.5.2 and table 8		P
	- equipment is able to carry its rated current after normal closing operation		P
8.3.6.3	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No flashover or breakdown		P
8.3.6.4	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P
8.3.6.5	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Conductor cross-section (mm²) / (mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.6.5-d	P

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.7	TEST SEQUENCE V: OVERLOAD PERFORMANCE CAPABILITY		—
8.3.7.1	Overload test		P
	MULTIVERT 400, three-pole operated		
	ambient temperature 10-40 °C ...:	25	—
	test enclosure W x H x D (mm x mm x mm) ...:	-	—
	material of enclosure ...:	-	—
	test current 1,6 x Ithe or 1,6 x Ith (A) ...:	640	—
	cable/busbar cross-section (mm²)/(mm x mm) ...:	Incoming: 40mmx10mm Outgoing: 2 x 40mmx5mm	—
	cable/busbar length (mm)/(mm) ...:	Incoming: 600mm Outgoing: 2000mm	—
	Fuse-link details:		P
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Time duration of the overload test (s) ...:	1470	—
	Within 3 to 5 min after the fuse(s) has(have) operated (or 1 h), the equipment has been operated once, i.e. opened and closed	Opened and closed	P
	Required opening force not greater than the test force of 8.2.5.2 and table 8		P
	The equipment has not undergone any impairment hindering such operation		P
8.3.7.2	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	1380	—
	No flashover or breakdown		P
8.3.7.3	Leakage current		P
	test voltage 1,1 Ue (V) ...:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ...:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	< 1	P

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IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.7.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ....:	Eurofuse	—
	- manufacturer's model or type reference ....:	362 240	—
	- rated voltage (V) ....:	500	—
	- rated current (A) ....:	400	—
	- power loss (W) ....:	34 max.	—
	- rated breaking capacity (kA) ....:	120	—
	Fuse link(s) aged during the overload test are replaced by new fuse-link(s)............:	Yes	P
	Conductor cross-section (mm²) (mmxmm) ....:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ....:	400	—
	Measured temperature-rise ....:	See appended table 8.3.7.4-a	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.7.1	Overload test		P
	MULTIVERT 400, single-pole operated		
	ambient temperature 10-40 °C ....:	24,5	—
	test enclosure W x H x D (mm x mm x mm) ....:	-	—
	material of enclosure ....:	-	—
	test current 1,6 x Ithe or 1,6 x Ith (A) ....:	640	—
	cable/busbar cross-section (mm²)/(mm x mm)......:	Incoming: 40mmx10mm Outgoing: 2 x 40mmx5mm	—
	cable/busbar length (mm)/(mm)............................:	Incoming: 600mm Outgoing: 2000mm	—
	Fuse-link details:		P
	- manufacturer's name, trademark or identification mark ....:	Eurofuse	—
	- manufacturer's model or type reference ....:	362 240	—
	- rated voltage (V) ....:	500	—
	- rated current (A) ....:	400	—
	- power loss (W) ....:	34 max.	—
	- rated breaking capacity (kA) ....:	120	—
	Time duration of the overload test (s) ....:	1608	—
	Within 3 to 5 min after the fuse(s) has(have) operated (or 1 h), the equipment has been operated once, i.e. opened and closed	Opened and closed	P
	Required opening force not greater than the test force of 8.2.5.2 and table 8		P
	The equipment has not undergone any impairment hindering such operation		P
8.3.7.2	Dielectric verification		P
	test voltage 2 Ue with a minimum of 1000V~ (V) ....:	1380	—
	No flashover or breakdown		P
8.3.7.3	Leakage current		P
	test voltage 1,1 Ue (V) ....:	760	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ....:	< 1	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.3.7.4	Temperature-rise verification		P
	Fuse-link details (fuse-combination units only):		—
	- manufacturer's name, trademark or identification mark ...:	Eurofuse	—
	- manufacturer's model or type reference ...:	362 240	—
	- rated voltage (V) ...:	500	—
	- rated current (A) ...:	400	—
	- power loss (W) ...:	34 max.	—
	- rated breaking capacity (kA) ...:	120	—
	Fuse link(s) aged during the overload test are replaced by new fuse-link(s) ...:	Yes	P
	Conductor cross-section (mm^2) (mmxmm) ...:	30x10 (incoming) / 240 (outgoing)	—
	Test current Ie (A) ...:	400	—
	Measured temperature-rise ...:	See appended table 8.3.7.4-b	P

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Clause	Requirement + Test	Result - Remark	Verdict
8.4	ELECTROMAGNETIC COMPATIBILITY TESTS		P
8.4.1	Immunity		P
8.4.1.1	Equipment not incorporating electronic circuits: no tests necessary		P
8.4.1.2	Equipment incorporating electronic circuits:		N/A
	Equipment utilizing circuits in which all components are passive are not required to be tested		N/A
	All other equipment, requirements according to 7.3.3.2 and limits according table 6 apply		N/A
	Performed tests ....:	-	N/A
	No unintentional separation or closing of contacts has occurred during these tests ....:	-	N/A
8.4.2	Emission		P
8.4.2.1	Equipment not incorporating electronic circuits: no tests necessary		P
8.4.2.2	Equipment incorporating electronic circuits:		N/A
	Equipment utilizing circuits in which all components are passive are not required to be tested		N/A
	All other equipment, requirements according to 7.3.3.2 and limits according table 7 apply		N/A
	Performed tests ....:	-	N/A

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Clause	Requirement + Test	Result - Remark	Verdict
	Annex A (normative)		N/A
A	Equipment for direct switching of a single motor		N/A
A.1	Additional rated duties ....:	-	N/A
A.1.1	- intermittent periodic duty		N/A
	- intermittent duty		N/A
A.1.1.1	Classes of intermittent duty ....:	-	N/A
	-class 1: up to 1 operating cycle per hour		N/A
	-class 3: up to 3 operating cycle per hour		N/A
	-class 12: up to 12 operating cycles per hour		N/A
	-class 30: up to 30 operating cycles per hour		N/A
	-class 120: up to 120 operating cycles per hour		N/A
A.1.2	Temporary duty ....:	-	N/A
A.5	Mechanical durability:		N/A
	Equipment mounted according to manufacturer's instruction		N/A
	Preferred number of no-load operating cycles expressed in millions...:	-	N/A
	0,001 – 0,003 – 0,01 – 0,03 – 0,1 – 0,3 - 1		N/A
	If no mechanical endurance is stated by the manufacturer, a minimum mechanical endurance according to the class of intermittent duty shall be tested.		N/A
	Number of no-load operating cycles performed......:	-	N/A
A.6	Electrical durability:		N/A
	- test according to manufacturer's instruction		N/A
A.7	Verification of making and breaking capacities:		N/A
	- utilization category ....:	-	—
	- rated operational voltage Ue (V) ....:	-	—
	- rated operational current Ie (A) ....:	-	—
	Conditions for make/break operations or make operations:		—
	- test voltage, U = 1,05 Ue...............................(V):	L1: - L2: - L3: -	—
	- test current, I = ... _ x Ie (A):	L1: - L2: - L3: -	—
	- power factor ....:	L1: - L2: - L3: -	—

ВЯРНО С ОРИГИНАЛА

IEC 60947-3

Clause	Requirement + Test	Result - Remark	Verdict
	Conditions for make/break operations:		N/A
	- test voltage, U = 1,05 Ue ....(V):	L1: - L2: - L3: -	—
	- test current, I = ... _ x Ie (A):	L1: - L2: - L3: -	—
	- power factor / time constant ....:	L1: - L2: - L3: -	—
	Number of make/break or make and break operations ....:	-	N/A
	- recovery voltage duration ≥ 50 ms (ms)		N/A
	- current duration (ms) ....:	-	—
	- time interval between operations (s) ....:	-	N/A
	Characteristic of transient recovery voltage if necessary:		N/A
	- oscillatory frequency (kHz) ....:	-	—
	- measured oscillatory frequency (kHz) ....:	L1: - L2: - L3: -	N/A
	- factor γ ....:	L1: - L2: - L3: -	N/A
8.3.3.3.5	Behaviour of the equipment during test		N/A
	Test performed without:		—
	- endanger to the operator		N/A
	- cause damage to adjacent equipment		N/A
	No permanent arcing		N/A
	No flash over between poles and poles and frame		N/A
	No melting of the fuse in the detection circuit		N/A
8.3.3.3.6	Condition of the equipment after test		N/A
	Immediately after the test equipment must work satisfactorily		N/A
	- required opening force not greater than the test force of 8.2.5.2 and table 8		N/A
	- equipment is able to carry its rated current after normal closing operation		N/A
8.3.3.4	Dielectric verification		N/A
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	-	—
	No flashover or breakdown		N/A

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
8.3.3.5	Leakage current		N/A
	test voltage 1,1 Ue (V) ......:	-	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B): ≤ 0,5 mA/pole .....:	-	N/A
	Leakage current (other utilization categories): ≤ 2 mA/pole (mA) ......:	-	N/A
8.3.3.6	Temperature-rise verification		N/A
	- conductor cross-section (mm^2) ......:	-	—
	- test current Ie (A) ......:	-	—
	Measured temperature-rise ......:	-	N/A
A.8	Operational performance test:		N/A
	- utilization category ......:	-	—
	- rated operational voltage (V) ......:	-	—
	- rated operational current (A) ......:	-	—
	Test conditions for electrical operation cycles:		N/A
	- test voltage (V) ......:	L1: - L2: - L3: -	—
	- test current (A) ......:	L1: - L2: - L3: -	—
	- power factor / time constant ......:	L1: - L2: - L3: -	—
	Number of cycles with current ......:	-	N/A
	Number of cycles without current ......:	-	N/A
	First test sequence (with/without current) ......:	-	—
	Second test sequence (with/without current) ......:	-	—
	- time interval between first and second test sequence ......:	-	—
	- recovery voltage duration at operatons with current ≥ 50 ms (ms)......:	-	N/A
	- current duration (ms) ......:	-	—
	- time interval between operations (s) ......:	-	N/A
8.3.4.1.5	Behaviour of the equipment during test		N/A
	Test performed without:		—
	- endanger to the operator		N/A
	-cause damage to adjacent equipment		N/A
	No permanent arcing		N/A

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	No flash over between poles and poles and frame		N/A
	No melting of the fuse in the detection circuit		N/A
8.3.4.1.6	Condition of the equipment after test		N/A
	Immediately after the test equipment must work satisfactorily		N/A
	- required opening force not greater than the test force of 8.2.5.2 and table 8		N/A
	- equipment is able to carry its rated current after normal closing operation		N/A
8.3.4.2	Dielectric verification		N/A
	test voltage 2 Ue with a minimum of 1000V~ (V) ...:	-	—
	No breakdown or flashover		N/A
8.3.4.3	Leakage current		N/A
	test voltage 1,1 Ue (V) ...:	-	—
	Leakage current (utilization categories AC-20A, AC-20B, DC-20A and DC-20B) ≤ 0,5 mA/pole ......:	-	N/A
	Leakage current (other utilization categories) ≤ 2 mA/pole (mA) ...:	-	N/A
8.3.4.4	Temperature-rise verification		N/A
	- conductor cross-section (mm²) ...:	-	—
	- test current Ie (A) ...:	-	—
	Measured temperature-rise ...:	-	N/A
A.9	Special tests:	-	N/A

ВЯРНО С ОРИГИНАЛА

IEC 60947-3			
Clause	Requirement + Test	Result - Remark	Verdict
	Annex C (normative)		P
C	Single pole operated three pole switches		P
C.1	Three pole operated switches of fundamentally the same design, already successfully tested are deemed to satisfy the requirements of individually operated three pole devices.		P
C.2	Additional-tests to be performed on single pole operated three pole switches		P
	Test "8.3.3.3 Making and breaking capacities" according to test sequence I with following modifications		P
	L1 and L2 are closed, L3 is subjected to the required make-break operation cycle......................:	see clause 8.3.3.3	P
	L2 closed and L3 opened, L1 is subjected to the required make-break operation cycle......................:	see clause 8.3.3.3	P
	Test performed in a three phase circuit		P
	Test "8.3.4.1 Operational performance" according to test sequence II with following modifications		P
	L1 and L2 are closed, L3 is subjected to the required make-break operation cycle......................:	see clause 8.3.4.1	P
	L2 closed and L3 opened, L1 is subjected to the required make-break operation cycle......................:	see clause 8.3.4.1	P
	Test performed in a three phase circuit		P
	Test "8.3.6.2 Fuse protected short circuit test" according to test sequence IV with following modifications		P
	For the making test L1 shall be open and L2 closed, L3 is subjected to the required make operation cycle ....:	see clause 8.3.6	P
	Test performed in a three phase circuit		P
C.5	Instruction for use		P
	The product literature includes following statement:		P
	These devices are intended for power distribution systems where switching and/or isolating of an individual phase may be necessary and shall not be used for the switching of the primary circuit of three-phase equipment.		P

ВЯРНО С ОРИГИНАЛА

7.1.4	TABLE: Clearance and creepage distance measurements				—
Clearance cl and creepage distance crd between:		cl (mm) required	cl (mm) measured	crd (mm) required	crd (mm) measured
Each pole and the other poles connected together		8	> 10	14	> 15
Line terminals and load terminals		8	> 10	14	> 15
Live parts and enclosure (covered by a metal foil)		8	> 10	14	> 15
Main circuit and other circuits		-	-	-	-
Supplementary information: ---					

8.3.3.1-a	TABLE: Temperature-rise measurements		
Temperature rise dT of part:		dT (K) measured	dT (K) required
Terminals, max: tin-plated copper		51	65
Manual operating means: non-metallic		2	25
Parts intended to be touched but not hand-held: non-metallic		19	40
Parts which need not be touched during normal operation: non-metallic		30	50
Supplementary information: ---			

8.3.3.1-b	TABLE: Temperature-rise measurements		
Temperature rise dT of part:		dT (K) measured	dT (K) required
Terminals, max: tin-plated copper		58	65
Manual operating means: non-metallic		5	25
Parts intended to be touched but not hand-held: non-metallic		27	40
Parts which need not be touched during normal operation: non-metallic		39	50
Supplementary information: ---			

8.3.3.1-c	TABLE: Temperature-rise measurements		
Temperature rise dT of part:		dT (K) measured	dT (K) required
Terminals, max: tin-plated copper		52	65
Manual operating means: non-metallic		2	25
Parts intended to be touched but not hand-held: non-metallic		18	40
Parts which need not be touched during normal operation: non-metallic		29	50
Supplementary information: ---			

ВЯРНО С ОРИГИНАЛА

8.3.3.1-d	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	59	65
Manual operating means: non-metallic	6	25
Parts intended to be touched but not hand-held: non-metallic	24	40
Parts which need not be touched during normal operation: non-metallic	40	50
Supplementary information: ---		

8.3.3.6-a	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	63	80
Manual operating means: non-metallic	3	35
Parts intended to be touched but not hand-held: non-metallic	24	50
Parts which need not be touched during normal operation: non-metallic	40	60
Supplementary information: ---		

8.3.3.6-b	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	59	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	22	50
Parts which need not be touched during normal operation: non-metallic	38	60
Supplementary information: ---		

8.3.3.6-c	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	60	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	21	50
Parts which need not be touched during normal operation: non-metallic	35	60
Supplementary information: ---		

ВЯРНО С ОРИГИНАЛА

8.3.3.6-d	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	59	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	21	50
Parts which need not be touched during normal operation: non-metallic	35	60
Supplementary information: ---		

8.3.4.4-a	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	62	80
Manual operating means: non-metallic	3	35
Parts intended to be touched but not hand-held: non-metallic	25	50
Parts which need not be touched during normal operation: non-metallic	38	60
Supplementary information: ---		

8.3.4.4-b	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	56	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	21	50
Parts which need not be touched during normal operation: non-metallic	35	60
Supplementary information: ---		

8.3.4.4-c	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	55	80
Manual operating means: non-metallic	3	35
Parts intended to be touched but not hand-held: non-metallic	22	50
Parts which need not be touched during normal operation: non-metallic	36	60
Supplementary information: ---		

ВЯРНО С ОРИГИНАЛА

8.3.4.4-d	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	57	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	24	50
Parts which need not be touched during normal operation: non-metallic	35	60
Supplementary information: ---		

8.3.5.5-a	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	53	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	20	50
Parts which need not be touched during normal operation: non-metallic	33	60
Supplementary information: ---		

8.3.6.5-a	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	56	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	24	50
Parts which need not be touched during normal operation: non-metallic	37	60
Supplementary information: ---		

8.3.6.5-b	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	58	80
Manual operating means: non-metallic	3	35
Parts intended to be touched but not hand-held: non-metallic	25	50
Parts which need not be touched during normal operation: non-metallic	36	60
Supplementary information: ---		

ВЯРНО С ОРИГИНАЛА

8.3.6.5-c	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	53	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	22	50
Parts which need not be touched during normal operation: non-metallic	34	60
Supplementary information: ---		

8.3.6.5-d	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	55	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	21	50
Parts which need not be touched during normal operation: non-metallic	33	60
Supplementary information: ---		

8.3.7.4-a	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	50	80
Manual operating means: non-metallic	2	35
Parts intended to be touched but not hand-held: non-metallic	18	50
Parts which need not be touched during normal operation: non-metallic	29	60
Supplementary information: ---		

8.3.7.4-b	TABLE: Temperature-rise measurements	
Temperature rise dT of part:	dT (K) measured	dT (K) required
Terminals, max: tin-plated copper	53	80
Manual operating means: non-metallic	3	35
Parts intended to be touched but not hand-held: non-metallic	21	50
Parts which need not be touched during normal operation: non-metallic	34	60
Supplementary information: ---		

ВЯРНО С ОРИГИНАЛА

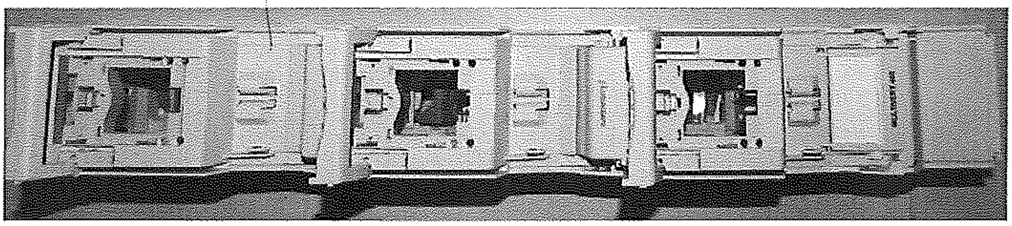
List of test equipment used:

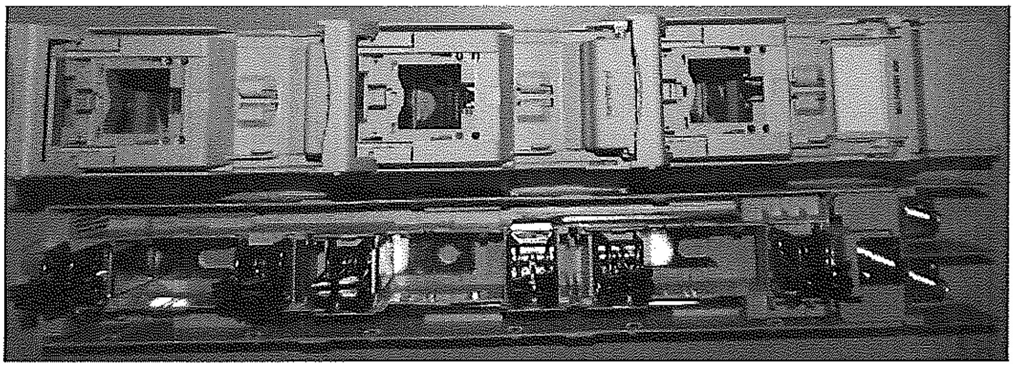
Measured quantity	Device	Manufacturer	Code
Voltage a.c. or d.c. (tests up to 10kA)	Voltage divider 1:2000 Difference amplifier AM 502 Signal memory recorder TRA 800	AIT Tektronix W&W	- AM 502/1…3 TRA800
Current a.c. (tests up to 10kA)	Lin. Current transformer LGSSO Burden 1Ω Signal memory recorder TRA 800	Ritz AIT W&W	WLIN5000/1…3 - TRA800
Current d.c. (tests up to 10kA)	Measuring shunt 250A/150mV Insulating measuring amplifier Arcus Signal memory recorder TRA 800	Goerz Rohrer W&W	SH250A150/1 T303A TRA800
Voltage a.c. or d.c. (tests above 10kA)	Insulating measuring amplifier Arcus Signal memory recorder 2580-P	Rohrer Nicolet	T908D 2580-P
Current a.c. (tests above 10kA)	Lin current transformer LGSSO Burden 0,7mΩ Signal memory recorder 2580-P	Ritz AIT Nicolet	WLIN6000.HVF/1…3 - 2580-P
Current d.c. (tests above 10kA)	Measuring shunt 10000A/100mV Insulating measuring amplifier Arcus Signal memory recorder 2580-P	Goerz Rohrer Nicolet	SH10000A100/1 T303A 2580-P
Current (tests at reduced voltage)	Current clamp Fluke 376 Digital multimeter Fluke 185	Fluke Fluke	376-3 FLUKE185/2
Transient recovery voltage	Adjustment equipment for TRV Oscilloscope TDS1012	AIT Tektronix	- TDS 1012/1
Dielectric properties	High-voltage test equipment 90-1F with measuring equipment Impulse tester 35 Impulse voltmeter SV 642 Oscilloscope HDO 4024	Elabo Haefely Haefely Le Croy	HSG5KV G304 G503 G807
Leakage current	High-voltage test equipment 90-1F Digital multimeter Fluke 185 Digital multimeter Fluke 187	Elabo Fluke Fluke	HSG5KV FLUKE185/2 G922
Time	Signal memory recorders Digital stopwatch	W&W, Nicolet Quantum	TRA800, 2580-P 938-3
Temperature	Data Logger Unit 34970A Temperature meter TESTO 901	Agilent Testoterm	942 TESTO
Abnormal heat and fire	Glow-wire test device with measuring equipment	Friborg	GLOW
Insertability of unprepared conductors	Test gauge	AIT	Gauge 1…16
Strength of actuator mechanism	Test equipment	Sauter GmbH	FH1K
Degree of protection	Test probe, dust chamber Test equipment for ingress of water	PTL, Friborg PTL, Friborg	PTL1…3, DUST X1…X4
Clearances, creepage distances	Digital slide gauge	Spiral	SCHUB-1

ВЯРН
ОРИГИ

Photo documentation:

Multivert 400 1p





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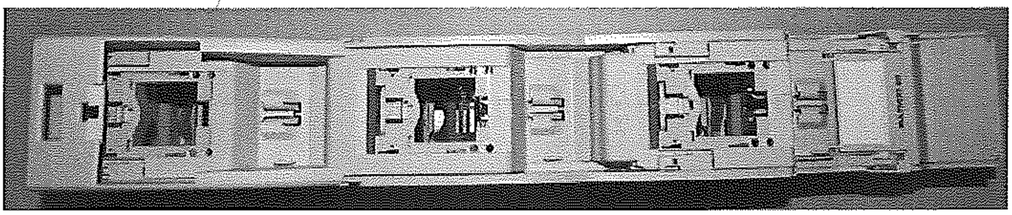
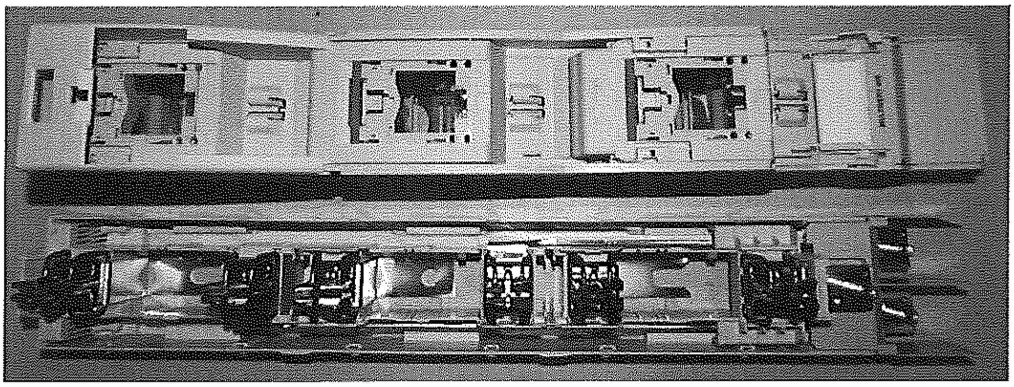
Multivert 400 3p





ВЯРНО С ОРИГИНАЛА

10.4.4

bmwfw

Bundesministerium für Wissenschaft, Forschung und Wirtschaft

Die Nationale Akkreditierungsstelle / *The National Accreditation Body*

AKKREDITIERUNG AUSTRIA

bestätigt die Akkreditierung der Rechtsperson / *confirms the accreditation of*

AIT Austrian Institute of Technology GmbH

Donau-City-Straße 1, A-1220 Wien

Identifikationsnummer / *ID-number*: **0001**

als / as

Prüfstelle / *Testing Laboratory*
gemäß / *according to* EN ISO/IEC 17025:2005

Datum der Erstakkreditierung / *Initial date of accreditation*: **01.12.1993**

Standorte/Organisationseinheiten / *sites/units*:
Standort Tulln, Konrad-Lorenz-Straße 24, A-3430 Tulln
Standort Wien, Giefinggasse 2, A-1210 Wien

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Informationen zum Akkreditierungsumfang und zu Akkreditierung Austria / *Information about the accreditation scope and Akkreditierung Austria* http://www.bmwfw.gv.at/akkreditierung

Die Akkreditierung wurde mittels Bescheid erteilt und damit bestätigt, dass die Konformitätsbewertungsstelle die Anforderungen der **EN ISO/IEC 17025:2005** erfüllt. Diese Bestätigung der Akkreditierung darf nur unverändert weiterverbreitet werden.

*The accreditation was granted by a decree which confirms, that the Conformity Assessment Body fulfills the requirements of **EN ISO/IEC 17025:2005**. This confirmation of accreditation may not be reproduced other than in full.*

На основание чл. 2
от ЗЗЛД

11.02.2016
Datum / *Date*

10.4. 5.

MERSEN

EU DECLARATION OF CONFORMITY / DECLARATION DE CONFORMITE UE

We / Nous **Mersen France SB** sas 15, Rue Jacques Vaucanson 69720 Saint Bonnet de Mure France

Website / Site web **ep-fr.mersen.com** (this declaration is downloadable / cette déclaration est téléchargeable)

Certify that products with the registered trade mark / Certifions que les produits de la marque Mersen ®,

- **NH vertical fuse switch disconnectors type Multivert 690V AC 1-pole and 3-pole switching**
- **Size 00 - Multivert 160A, 100mm, 185mm bus bar distance**
- **Size 1 - Multivert 250A**
- **Size 2 - Multivert 400A, 800A, 1260A with neutral links.**
- **Size 3 - Mutlivert 630A, 1000A with neutral links, 1260A, 1600A with neutral links 630 kVA/910A.**

Provided that they are installed, maintained and used as intended and in accordance with the current installation standards according to manufacturer's recommendations, comply with the following Directives

Sous réserve d'installations, d'entretien et d'utilisation conformes à leur destination, aux normes d'installations applicables et aux instructions du constructeur, satisfont aux exigences des Directives suivantes:

Low Voltage 2014/35/EU	Basse Tension 2014/35/UE
RoHS 2011/65/EU	RoHS 2011/65/UE

And are in compliance with the following standards / et sont conformes aux normes suivantes:

IEC 60947-1 Ed.2007 / AMD1 : 2010 / AMD2 : 2014
IEC 60947-3 Ed.2008 / AMD1 : 2012 / AMD2 : 2015

ВЯРНО С ОРИГИНАЛА

Saint Bonnet de Mure le 12 Octobre 2017

Name / Nom

Position / Fonction

Signature / Signature

На основание чл. 2
от ЗЗЛД

DECLARATION CE N°	0	1	6	7	G

10.11 6

PS ELECTRIC

"ПС електрик" ООД – гр. Шумен

ДЕКЛАРАЦИЯ ЗА СЪОТВЕТСТВИЕ

Долуподписаният, **"ПС ЕЛЕКТРИК" ООД,**
(име на производителя или неговия упълномощен представител, наименование на дружеството /фирмата производител или негов представител)

9700 гр. Шумен, бул. "Мадара" № 12,
(адрес)

декларирам на собствена отговорност, че продуктът

Триполюсен вертикален разединител с предпазители размер NH2 400А тип Multivert 400A
(наименование и търговска марка, тип или модел, предназначение)

произведен от

Mersen Osterreich Wien GMBH
(място на производство на разглеждания продукт)

за който се отнася тази декларация, е произведен в условията на въведена и поддържана от производителя система за производствен контрол и е в съответствие със следния(те) стандарт(и), Българско техническо одобрение (БТО) или друг(и) нормативен(ни) акт(актове):

- **БДС EN 60947-1:2007** – Комутационни апарати за ниско напрежение. Част 1; Общи правила (**IEC 60947-1:2007**)
- **БДС EN 60947-3:2002** – Комутационни апарати за ниско напрежение. Част 3; Товарови прекъсвачи, разединители, товарив прекъсвач-разединители и апарати, комбинирани с предпазители (**IEC 60947-3:1999+** Поправка юли 1999)

(наименование и/или номер и дата на издаване на стандарта(тите), БТО или друг(и) нормативен(ни) акт (актове)

и е оценен положително по реда и условията на Нарадбата за съществените изисквания и оценяване на съответствието на електрически съоръжения, предназначени за използване в определени граници на напражението, приета с ПСМ№182 от 06.07.2001г., обн. ДВ, бр.62 от 13.07.2001г.

Декларирам, че ми е известна отговорността, която нося съгласно чл. 313 от НК.

03.08.2018 год.
гр. Шумен
(място и дата на издаване)

(фа

На основание чл. 2
от ЗЗЛД

5

PS ELECTRIC®

Декларация за съответствие

Ние, Мерсен, Франция

Интернет страница ep-fr.mersen.com

Декларираме, че продуктите с регистрирана търговска марка

Mersen

-NH вертикални разединители с предпазители Multivert 690 V AC-1-полюсно и 3-полюсно изключване

-Размер 00-Multivert 160 A,100 mm, 185 mm разстояние м/у шините

-Размер 1-Multivert 250A

-Размер 2-Multivert 400A, 800A, 1260A с неутрални вложки

-Размер 3-Multivert 630A, 1000A с неутрални вложки, 1260A, 1600A с неутрални вложки, 630 kVA/910A

При условие, че са инсталирани, поддържани и използвани по предназначение и в съответствие с настоящите стандарти за инсталиране съгласно препоръките на производителя, да отговорят на следните директиви:

Low voltage 2014/35/EU

ROHS 2001/65/EU

И са в съответствие със следните стандарти: IEC 60947-1 Ed.2007/AMD1:2010/ AMD2:2014, IEC 60947-3 Ed.2008/ AMD1:2012/ AMD2:2015

Дата:12.10.2017

Подписи, печат

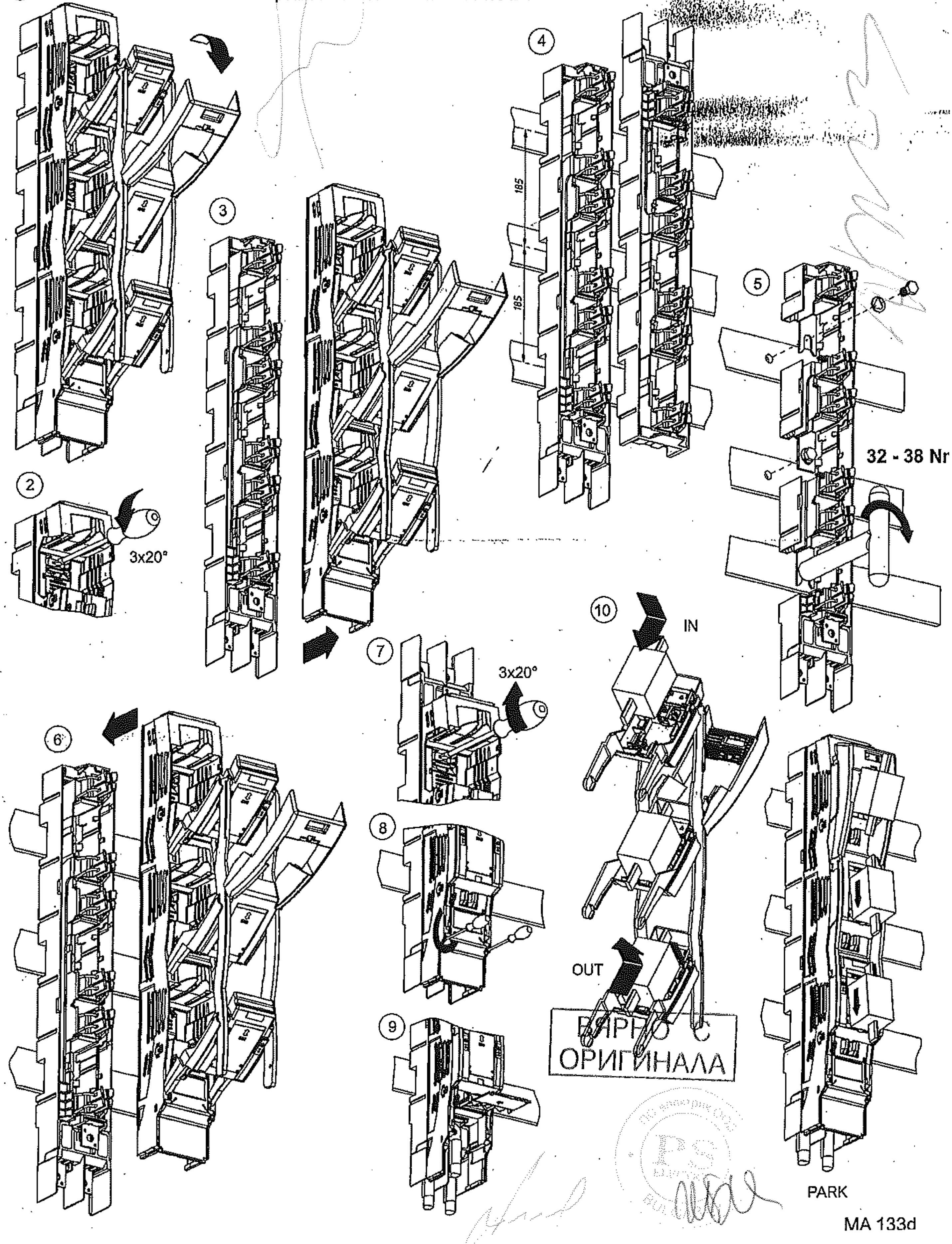
ПС електрик ООД BULGARIA

10.4

MULTIVERT®

250 A, 400 A, 630 A

NH-Sicherungs-Lastschaltleiste Größe 1 250A, Größe 2 400A, Größe 3 630A
für NH-Sicherungs-Einsätze nach IEC/EN 60269-2-1, section 1 und VDE 0636 Teil 201
NH-vertical fuse switch disconnector size 1 250A, size 2 400A, size 3 630A
for NH-fuse links in accordance with IEC/EN 60269-2-1, section 1 and VDE 0636 part 201
Interrupteur-sectionneur-vertical B.T. calibre 1 250 A, calibre 2 400 A, calibre 3 630 A
pour fusibles selon IEC/EN 60269-2-1 section 1 et VDE 0636 partie 201



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pour fusibles selon IEC/EN 60269-2-1 section 1 et VDE 0636 partie 201

IEC/EN 60947

MULTIVERT	**MULTIVERT**
NH-Sicherungs-Lastschaltleiste	**NH-vertical fuse switch disconnector**
Baugröße	size
Anzahl der Pole / Phasen	number of poles / phases
Konventioneller thermischer Strom in freier Luft Ith mit NH-Sicherungs-Einsätzen	conventional free air thermal curent Ith with NH-fuse links
Max. zulässige Bemessungsleistungsabgabe Pn der NH-Sicherungs-Einsätze	max. allowed rated power dissipation Pn of NH-fuse links
Konventioneller thermischer Strom in freier Luft Ith mit Trennmessern[1])	conventional free air thermal current Ith with NH-solid links[1])
Max. zulässige Bemessungsleistungsabgabe Pn der Trennmesser	max. allowed rated power dissipation Pn of NH-solid links
Gebrauchs-kategorie / Bemessungsbetriebs-spannung Ue / Bemessungsbetriebs-strom Ie	utilization category / rated operational voltage Ue / rated operational current Ie
AC 23B / 400 V AC	AC 23B / 400 V AC
AC 22B / 500 V AC	AC 22B / 500 V AC
AC 21B / 690 V AC	AC 21B / 690 V AC
Bemessungsbetriebsspannung Ue	rated operational voltage Ue
Bemessungsisolationsspannung Ui	rated insulation voltage Ui
Bemessungsstoßspannungsfestigkeit Uimp	rated impulse withstand voltage Uimp
Bemessungsfrequenz	rated frequency
Schutzart (mit Zentralabdeckung)	degree of protection (with central cover)
Verschmutzungsgrad	pollution degree
Bemessungsbetriebsart	rated duty
Bemessungs-Kurzschluß-Einschaltvermögen Icm mit Trennmessern[1]) (Spitzenwert)	rated short circuit making capacity Icm with solid links[1]) (peak value)
Bedingter Bemessungskurzschlußstrom bei Schutz durch Sicherungen	rated short circuit making capacity with fuse links
400 V AC	400 V AC
500 V AC	500 V AC
690 V AC	690 V AC
690 V AC	690 V AC
Bemessungskurzzeitstromfestigkeit Icw mit Trennmessern[1])	rated short time withstand current Icw with solid links[1])
Bemessungsleistungsabgabe bei Ith ohne NH-Sicherungs-Einsätze	rated power dissipation by Ith without NH-fuse links
Bemessungsleistungsabgabe bei Ith ohne Trennmesser	rated power dissipation by Ith without NH-solid links
Kabelanschluss:	**cable terminal connections:**
Bolzen / Einpressmutter	bolt / insert nut
für Kupferschienen mit max. Breite	for copper bus bars with max. width
für Kabelschuhe max:	for cable lugs max.
V-Anschlusslaschen für V-Anschlussklemmen[2])	V-shaped terminal for V-clamps[2])
Sammelschienenanschluss:	**bus bar terminals:**
Standardanschluss	standard
Krallenklemme[3]) für SaS-Stärke	hooked clamps[3]) for bus bars with width

ВЯРНО С ОРИГИНАЛА

Achtung!
Inbetriebnahme und Wartung nur durch Fachpersonal und/oder unterwiesene Personen!
Beachten Sie die Betriebs- und Montageanleitung!

Warning!
Only qualified or authorized personnel may commission and maintain these devices!
Follow the operating instructions!

Attention!
Mise en service et maintenance uniquement par des personnes qualifiées ou instructées.
Respectez les instructions de montage!

BULGARIA

MULTIVERT®

250 A, 400 A, 630 A

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pour fusibles selon IEC/EN 60269-2-1 section 1 et VDE 0636 partie 201

IEC/EN 60947

MULTIVERT	**250 A**	**400 A**	**630 A**
Interrupteur-sectionneur-vertical B.T. à fusibles			
calibre	1	2	3
nombres de pôles / phases	3	3	3
courant thermique conventionnel à l'air libre Ith avec cartouches fusibles B.T.	250 A	400 A	630 A
perte de puissance assignée max. admissible Pn de cartouches fusibles B.T.	23 W	34 W	43 W
courrant thermique conventionnel à l'air libre Ith avec couteaux de sectionnement1)	400 A	630 A	800 A
perte de puissance assignée max. admissible Pn de couteaux de sectionnement	2,6 W	9 W	17,5 W
catégorie d'emploi / tension assignée d'emploi Ue / courants assignés d'emploi Ie			
AC 23B / 400 V AC / Ie =	250 A	400 A	630 A
AC 22B / 500 V AC / Ie =	250 A	400 A	630 A
AC 21B / 690 V AC / Ie =	250 A	400 A	630 A
tension assignée d'emploi Ue	690 V AC	690 C AC	690 V AC
tension assignée d'isolement Ui	1000 V	1000 V	1000 V
tension assignée de tenue aux chocs Uimp	8 kV	8 kV	8 kV
fréquence assignée	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
degré de protection /avec plaque de protection)	IP 30	IP 30	IP 30
degré de pollution	3	3	3
service assigné	Dauerbetrieb / uninterrupted duty / service ininter-rompu		
pouvoir assigné de fermeture en court-circuit Icm avec couteaux de sectionnement1) (valeur de crête maximale)	16 kA	16 kA	16 kA
courant assigné de courte-circuit conditionnel avec des cartouches fusibles B.T.			
400 V AC	120 kA / 250 A	120 kA / 400 A	80 kA / 630 A
500 V AC	120 kA / 250 A	120 kA / 400 A	80 kA / 630 A
690 V AC	120 kA / 250 A	120 kA / 315 A	80 kA / 500 A
690 V AC		100 kA / 400 A	
courant assigné de courte durée admissible Icw avec couteaux de sectionnement1)	8 kA/1 s	8 kA/1 s	8 kA/1 s
puissance dissipée assignée à Ith sans cartouches fusibles	24 W	46 W	92 W
puissance dissipée assignée à Ith sans couteaux de sectionnement	65 W	126 W	161 W
raccordement de câble			
boulon / écrout sert	M10	M12	M12
pour jeu de barres de largeur maximum	40 mm	40 mm	40 mm
pour cosse de câble:	300 mm²	300 mm²	300 mm²
V-terminal patte pour V-borne2)		35 - 240 mm²	
raccordement de jeu de barres			
raccordement à vis standard	M12 / 32-38 Nm	M12 / 32-38 Nm	M12 / 32-38 Nm
borne à crampon3) pour jeu de barres de épaisseur	5 - 10 mm	5 - 10 mm	5 - 10 mm

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ВЯРНО С
ОРИГИНАЛА

MULTIVERT®

250 A, 400 A, 630 A

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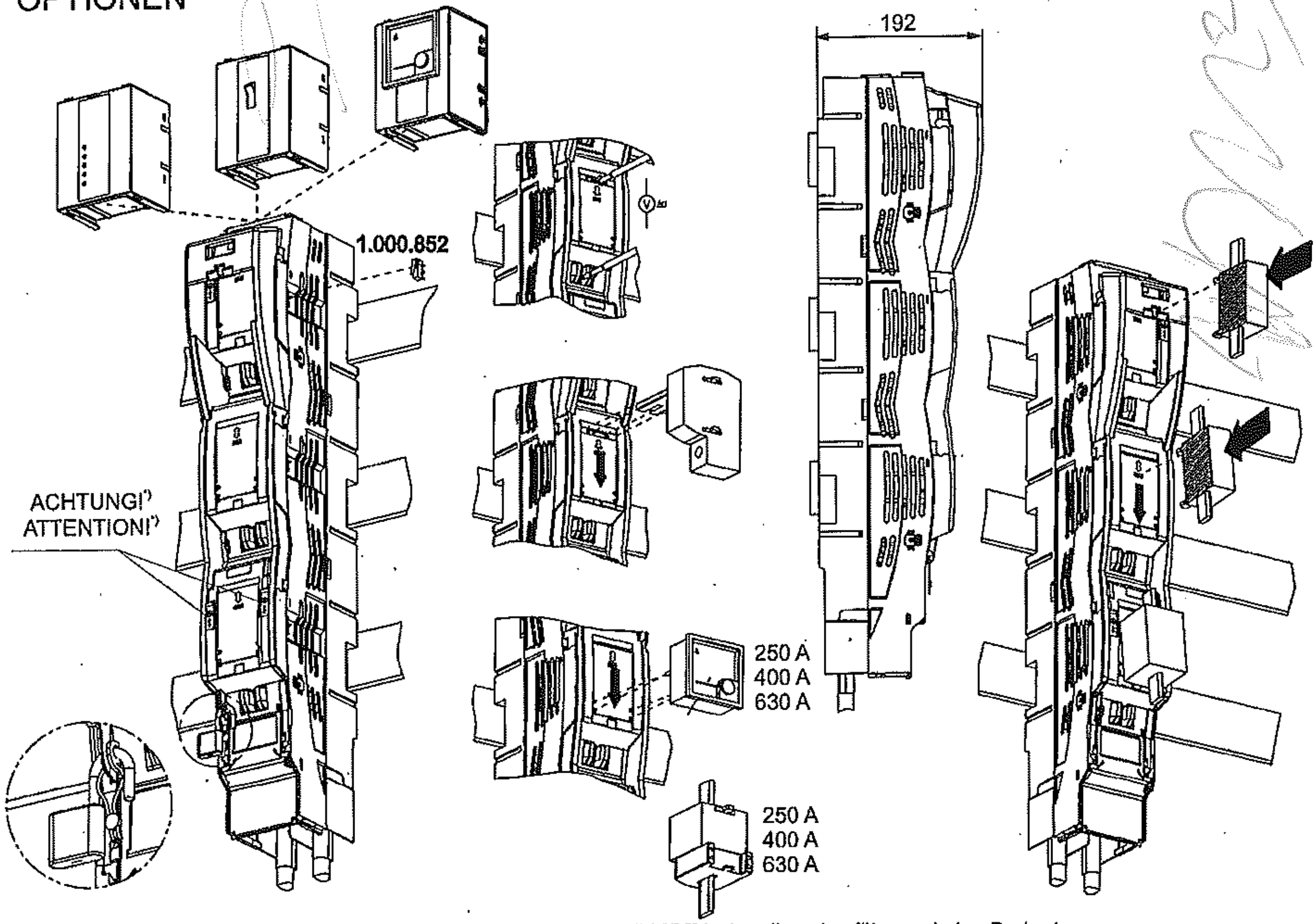
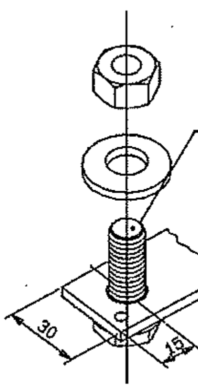
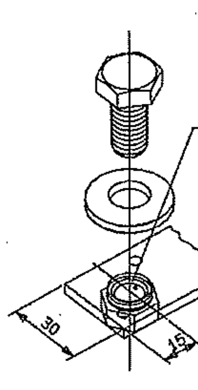
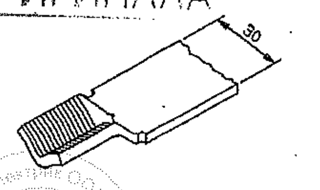
OPTIONEN



*) Diese Beschriftung (PRESS) auf dem Deckel hat für die MULTIVERT in 3-poliger Ausführung keine Bedeutung.
Indicated information on the cover (PRESS) is of no importance for MULTIVERT units for triple pole switching.

Bezeichnung reference	B	E	V
Anschlussart type of terminal	Bolzenanschluss bolt	Einpressmutter insert nut	V-Anschluss V-terminal
Zubehör accessory	Kabelschuh max. 45 mm breit cable lug max width 45 mm	Kabelschuh max. 45 mm breit cable lug max width 45 mm	V-Klemme / V-clamp: 22SZVK4
Klemmbereich cross section [mm²][	max. 300	max. 300	35 re,rm / round solid, round stranded 50 - 185 sm / sectoral solid 50 - 240 se / sectoral stranded
M(an) [Nm]	35 ±3	35 ±3	25 ±2
	 Gr. / size 1: M10x25 Gr. / size 2/3: M12x35	 Gr. / size 1: M10x20 Gr. / size 2/3: M12x30	ВЯРНО С ОРИГИНАЛА 

FERRAZ SHAWMUT IS NOW MERSEN

MERSEN

10.4.8

Saint Bonnet de Mure, 2017 January 23rd

PRODUCT DECLARATION LETTER

MERSEN FRANCE SB
15, Rue de Vaucanson
69720 Saint Bonnet de Mure Cedex
FRANCE

Since the m.Schneider company has been fully acquired by Mersen in 2010, all products manufactured by m.Schneider are now branded Mersen and are strictly identical in characteristics.

Therefore all type tests under m.Schneider brand are fully valid for Mersen branded products.

The name of the apparels remains the same: Multivert, Multibloc and BSL.

For and on behalf of MERSEN FRANCE SB,

Name:
Position:

На основание чл. 2
от ЗЗЛД

ВЯРНО С
ОРИГИНАЛА

BULGARIA

8

PS ELECTRIC®

Писмо- декларация за продукт

Мерсен, Франция

След като компанията М Шнайдер е напълно придобита от Мерсен, Франция през 2010 година, всички продукти произвеждани от М Шнайдер са вече с марка Мерсен и са напълно идентични по характеристики.

Следователно, всички типови изпитания направени за продукти М Шнайдер, са приложими за продуктите на Мерсен.

Името на продуктите си остава непроменено: Multivert, Multibloc, BSL.

За и от името на Мерсен, Франция:

Име: [redacted]

На основание чл. 2
от ЗЗЛД

Пози[redacted]ър

Подп[redacted]

31.07.2018

ПС електрик ООД

Централен офис адрес: 9700 Шумен, бул. Мадара 12; тел: +359 54 87 44 99; факс: +359 54 87 45 00
Офис София адрес: 1000 София, бул. Витоша 129; тел: +359 2 952 24 05; факс: +359 2 952 67 20
e-mail: office@pselectric.bg web: www.pselectric.bg

I. 2; 2.1
II. 1; 4.1

Инструкция за транспортиране, складиране, монтиране, поддържане и експлоатация

MULTIVERT **250 A, 400 A, 630 A**

NH - Вертикален предпазител-разединител размер 1 250A, размер 2 400A, размер 3 630A

за NH - ножови стопяеми предпазители съгласно IEC 60269-2-1, час 1 и VDE 0636 част 201

				IEC 60947
MULTIVERT		250 A	400 A	630 A
NH - Вертикален предпазител-разединител				
Размер		1	2	3
Брой полюси / фази		3	3	3
Номинален ток във въздух при NH-ножови стопяеми предпазители	Ith	250A	400A	630A
Макс. Позволена одтадена мощност при NH-ножови стопяеми предпазители	Pn	23W	34W	43W
Номинален ток във въздух при NH-ножове	Ith^1	400A	630A	800A
Макс. Позволена одтадена мощност при NH-ножове	Pn^1	2.6W	9W	17.5W
Категория на приложение Номинално работно напрежение	Номинален работен ток			
AC 23 B 400 VAC	Ie=	250A	400A	630A
AC 22 B 500 VAC	Ie=	250A	400A	630A
AC 21 B 690 VAC	Ie=	250A	400A	630A
Номинално работно напрежение	Ue=	690 VAC	690 VAC	690 VAC
Изолационно напрежение	Ui=	1000 V	1000 V	1000 V
Издържано импулсно напражение	Uimp=	6 kV	6 kV	6 kV
Честота		50-60 Hz	50-60 Hz	50-60 Hz
Степен на защита (с централен капак)	IP	30	30	30
Степен на замърсяване		3	3	3
Работен режим			Непрекъстан работен режим	
Условен ток на късо съединение при NH-ножове	Icm=	16 kA	16 kA	16 kA
Условен ток на късо съединение при NH-ножови стопяеми предпазители	400 VAC	120 kA / 250A	120 kA / 400A	80 kA / 630A
	500 VAC	120 kA / 250A	120 kA / 400A	80 kA / 630A
	690 VAC	120 kA / 250A	120 kA / 315A	80 kA / 500A
	690 VAC		100 kA / 400A	
Кратковременен издържан ток на к.с при NH-ножове	Icw=	8 kA / 1s	8 kA / 1s	8 kA / 1s
Одтадена мощност при Ith без NH-ножови стопяеми предпазители		24 W	46 W	92 W
Одтадена мощност при Ith без NH-ножове		65 W	126 W	161 W
Присъединяване на кабели				
болт / гайка		M10	M10	M10
за медни шини с макс. ширина		40 mm	40 mm	40 mm
за медни кабелни обувки до		300 mm^2	300 mm^2	300 mm^2
V-присъединителни клеми за кабели			35 -240 mm^2	
Присъединяване към шинна с-ма				
Стандартно		M12 / 32-38 Nm	M12 / 32-38 Nm	M12 / 32-38 Nm
Скоби за присъединяване към шини с дебелина		5 -10 mm	5 -10 mm	5 -10 mm

Бр. 10.4.7

ВНИМАНИЕ

Само квалифициран или оторизиран може да монтира, поддържа и експлоатира тези устройства.

Да се следва инструкцията са есплоатация.

ПС електрик ООД PS ELECTRIC BULGARIA

Инструкция за транспортиране, складиране, монтиране, поддържане и експлоатация

MULTIVERT **250 A, 400 A, 630 A**

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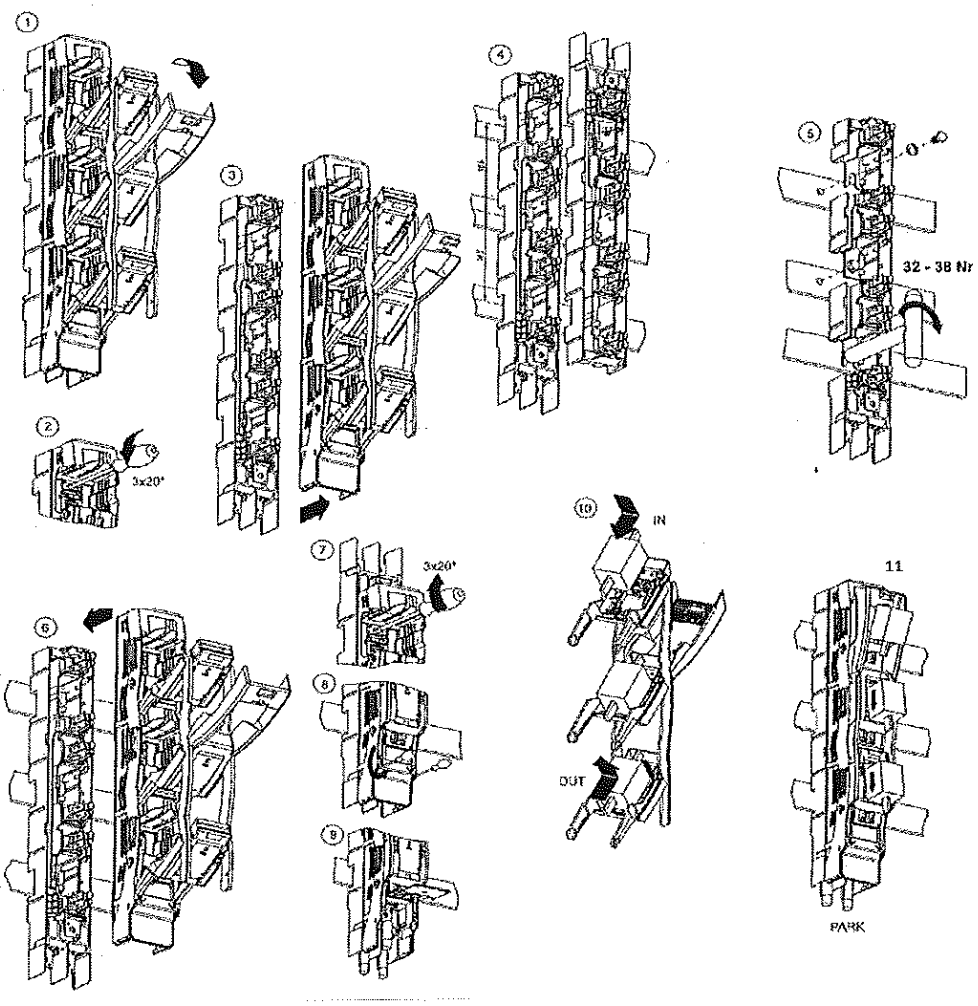
за NH - ножови стопуеми предпазители съгласно IEC 60269-2-1, час 1 и VDE 0636 част 201



ПС електрик ООД PS ELECTRIC BULGARIA

2

Инструкция за транспортиране, складиране, монтиране, поддържане и експлоатация

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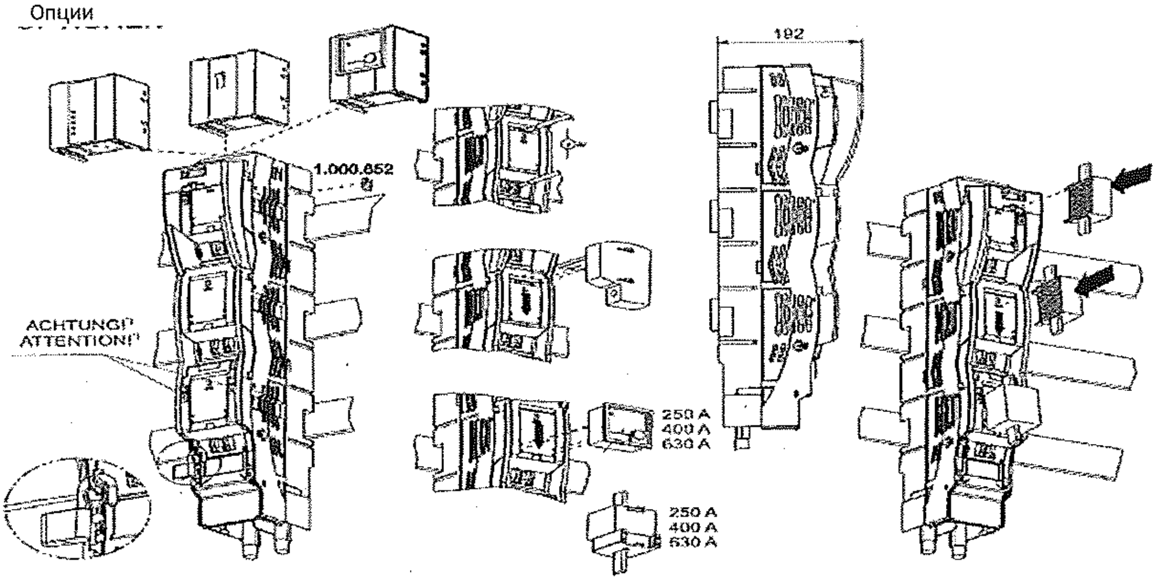
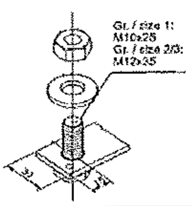
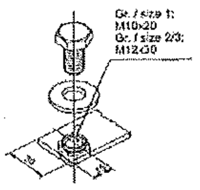
Опции



*) - Индикаторът на капака (PRESS) не е от значение при MULTIVERT разединетели с триполюсно включване.

Позиция	B	E	V
Тип свързване	чрез бот	гайка за запресоване	V-клема
Аксесоари	лни обувка с макс. ширина 4	кабелни обувка с макс. ширина 45мм	22SZVK4
Сечение	max. 300	max. 300	35 re/rm - плънто кръгло/ многожилно кръгло 50-185 se / секторно плътно 50-240 sm / секторно многожилно
Nm	35 ± 3	35 ± 3	35 ± 3
			

ПС електрик ООД PS ELECTRIC BULGARIA

3

MULTIVERT®

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pour fusibles selon IEC/EN 60269-2-1 section 1 et VDE 0636 partie 201

IEC/EN 60947

MULTIVERT	**MULTIVERT**
NH-Sicherungs-Lastschaltleiste	**NH-vertical fuse switch disconnector**
Baugröße	size
Anzahl der Pole / Phasen	number of poles / phases
Konventioneller thermischer Strom in freier Luft Ith mit NH-Sicherungs-Einsätzen	conventional free air thermal curent Ith with NH-fuse links
Max. zulässige Bemessungsleistungsabgabe Pn der NH-Sicherungs-Einsätze	max. allowed rated power dissipation Pn of NH-fuse links
Konventioneller thermischer Strom in freier Luft Ith mit Trennmessern1)	conventional free air thermal current Ith with NH-solid links1)
Max. zulässige Bemessungsleistungsabgabe Pn der Trennmesser	max. allowed rated power dissipation Pn of NH-solid links
Gebrauchs-kategorie / Bemessungsbetriebs-spannung Ue / Bemessungsbetriebs-strom Ie	utilization category / rated operational voltage Ue / rated operational current Ie
AC 23B / 400 V AC	AC 23B / 400 V AC
AC 22B / 500 V AC	AC 22B / 500 V AC
AC 21B / 690 V AC	AC 21B / 690 V AC
Bemessungsbetriebsspannung Ue	rated operational voltage Ue
Bemessungsisolationsspannung Ui	rated insulation voltage Ui
Bemessungsstoßspannungsfestigkeit Uimp	rated impulse withstand voltage Uimp
Bemessungsfrequenz	rated frequency
Schutzart (mit Zentralabdeckung)	degree of protection (with central cover)
Verschmutzungsgrad	pollution degree
Bemessungsbetriebsart	rated duty
Bemessungs-Kurzschluß-Einschaltvermögen Icm mit Trennmessern1) (Spitzenwert)	rated short circuit making capacity Icm with solid links1) (peak value)
Bedingter Bemessungskurzschlußstrom bei Schutz durch Sicherungen	rated short circuit making capacity with fuse links
400 V AC	400 V AC
500 V AC	500 V AC
690 V AC	690 V AC
690 V AC	690 V AC
Bemessungskurzzeitstromfestigkeit Icw mit Trennmessern1)	rated short time withstand current Icw with solid links1)
Bemessungsleistungsabgabe bei Ith ohne NH-Sicherungs-Einsätze	rated power dissipation by Ith without NH-fuse links
Bemessungsleistungsabgabe bei Ith ohne Trennmesser	rated power dissipation by Ith without NH-solid links
Kabelanschluss:	**cable terminal connections:**
Bolzen / Einpressmutter	bolt / insert nut
für Kupferschienen mit max. Breite	for copper bus bars with max. width
für Kabelschuhe max:	for cable lugs max.
V-Anschlusslaschen für V-Anschlussklemmen2)	V-shaped terminal for V-clamps2)
Sammelschienenanschluss:	**bus bar terminals:**
Standardanschluss	standard
Krallenklemme3) für SaS-Stärke	hooked clamps3) for bus bars with width

ВЯРНО С ОРИГИНАЛА

Achtung!
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Warning!
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MULTIVERT®

250 A, 400 A, 630 A

NH-Sicherungs-Lastschaltleiste Größe 1 250A, Größe 2 400A, Größe 3 630A
für NH-Sicherungs-Einsätze nach IEC/EN 60269-2-1, section 1 und VDE 0636 Teil 201
NH-vertical fuse switch disconnector size 1 250A, size 2 400A, size 3 630A
for NH-fuse links in accordance with IEC/EN 60269-2-1, section 1 and VDE 0636 part 201
Interrupteur-sectionneur-vertical B.T. calibre 1 250 A, calibre 2 400 A, calibre 3 630 A
pour fusibles selon IEC/EN 60269-2-1 section 1 et VDE 0636 partie 201

IEC/EN 60947

MULTIVERT	**250 A**	**400 A**	**630 A**
Interrupteur-sectionneur-vertical B.T. à fusibles			
calibre	1	2	3
nombres de pôles / phases	3	3	3
courant thermique conventionnel à l'air libre Ith avec cartouches fusibles B.T.	250 A	400 A	630 A
perte de puissance assignée max. admissible Pn de cartouches fusibles B.T.	23 W	34 W	43 W
courant thermique conventionnel à l'air libre Ith avec couteaux de sectionnement[1)]	400 A	630 A	800 A
perte de puissance assignée max. admissible Pn de couteaux de sectionnement	2,6 W	9 W	17,5 W
catégorie d'emploi / tension assignée d'emploi Ue / courants assignés d'emploi Ie			
AC 23B / 400 V AC / Ie =	250 A	400 A	630 A
AC 22B / 500 V AC / Ie =	250 A	400 A	630 A
AC 21B / 690 V AC / Ie =	250 A	400 A	630 A
tension assignée d'emploi Ue	690 V AC	690 C AC	690 V AC
tension assignée d'isolement Ui	1000 V	1000 V	1000 V
tension assignée de tenue aux chocs Uimp	8 kV	8 kV	8 kV
fréquence assignée	50 - 60 Hz	50 - 60 Hz	50 - 60 Hz
degré de protection /avec plaque de protection)	IP 30	IP 30	IP 30
degré de pollution	3	3	3
service assigné	Dauerbetrieb / uninterrupted duty / service ininter-rompu		
pouvoir assigné de fermeture en court-circuit Icm avec couteaux de sectionnement[1)] (valeur de crête maximale)	16 kA	16 kA	16 kA
courant assigné de courte-circuit conditionnel avec des cartouches fusibles B.T.			
400 V AC	120 kA / 250 A	120 kA / 400 A	80 kA / 630 A
500 V AC	120 kA / 250 A	120 kA / 400 A	80 kA / 630 A
690 V AC	120 kA / 250 A	120 kA / 315 A	80 kA / 500 A
690 V AC		100 kA / 400 A	
courant assigné de courte durée admissible Icw avec couteaux de sectionnement[1)]	8 kA/1 s	8 kA/1 s	8 kA/1 s
puissance dissipée assignée à Ith sans cartouches fusibles	24 W	46 W	92 W
puissance dissipée assignée à Ith sans couteaux de sectionnement	65 W	126 W	161 W
raccordement de câble			
boulon / écrout sert	M10	M12	M12
pour jeu de barres de largeur maximum	40 mm	40 mm	40 mm
pour cosse de câble:	300 mm²	300 mm²	300 mm²
V-terminal patte pour V-borne[2)]		35 - 240 mm²	
raccordement de jeu de barres			
raccordement à vis standard	M12 / 32-38 Nm	M12 / 32-38 Nm	M12 / 32-38 Nm
borne à crampon[3)] pour jeu de barres de épaisseur	5 - 10 mm	5 - 10 mm	5 - 10 mm

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ПС електрик ООД PS ELECTRIC BUL

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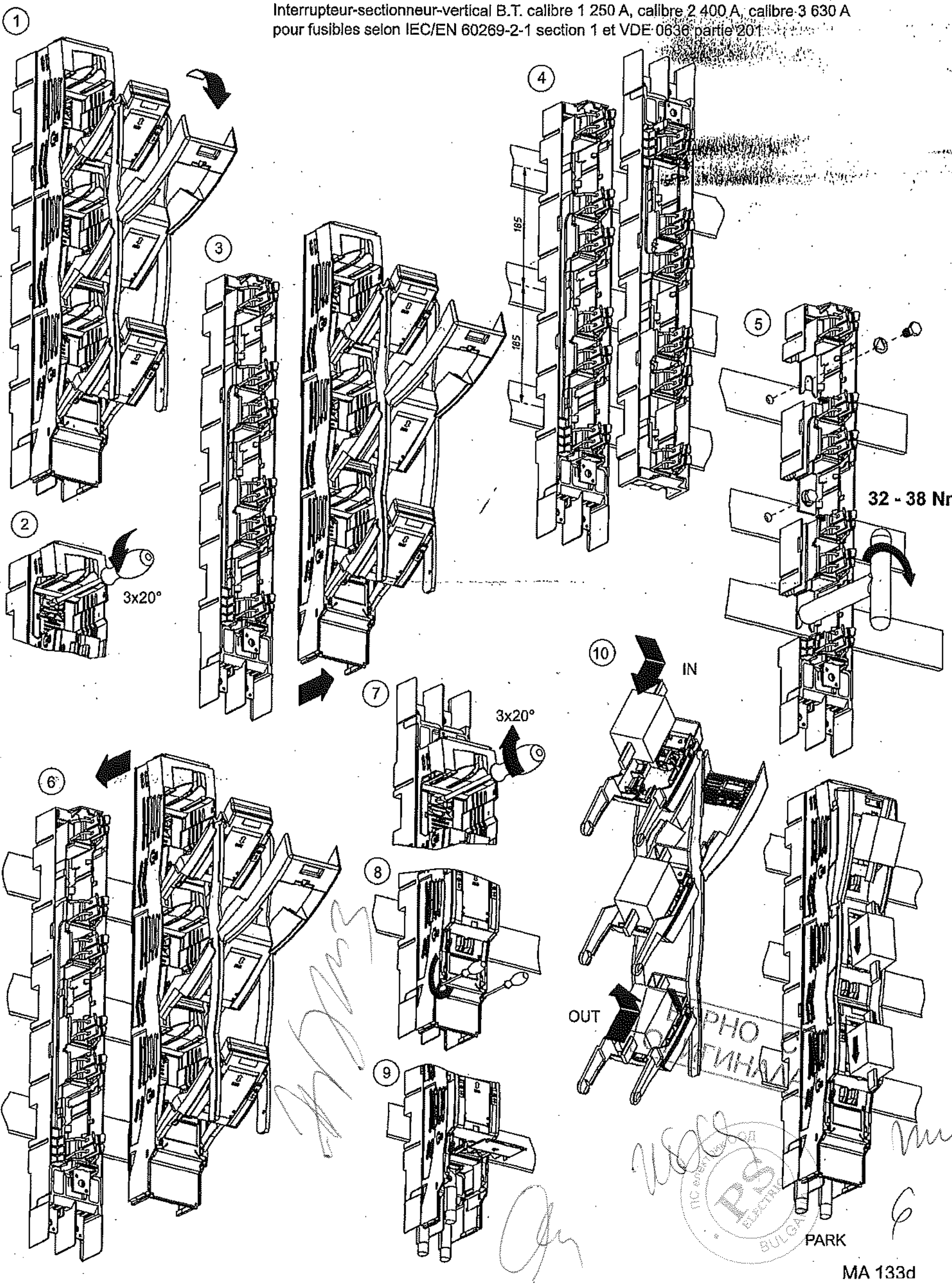

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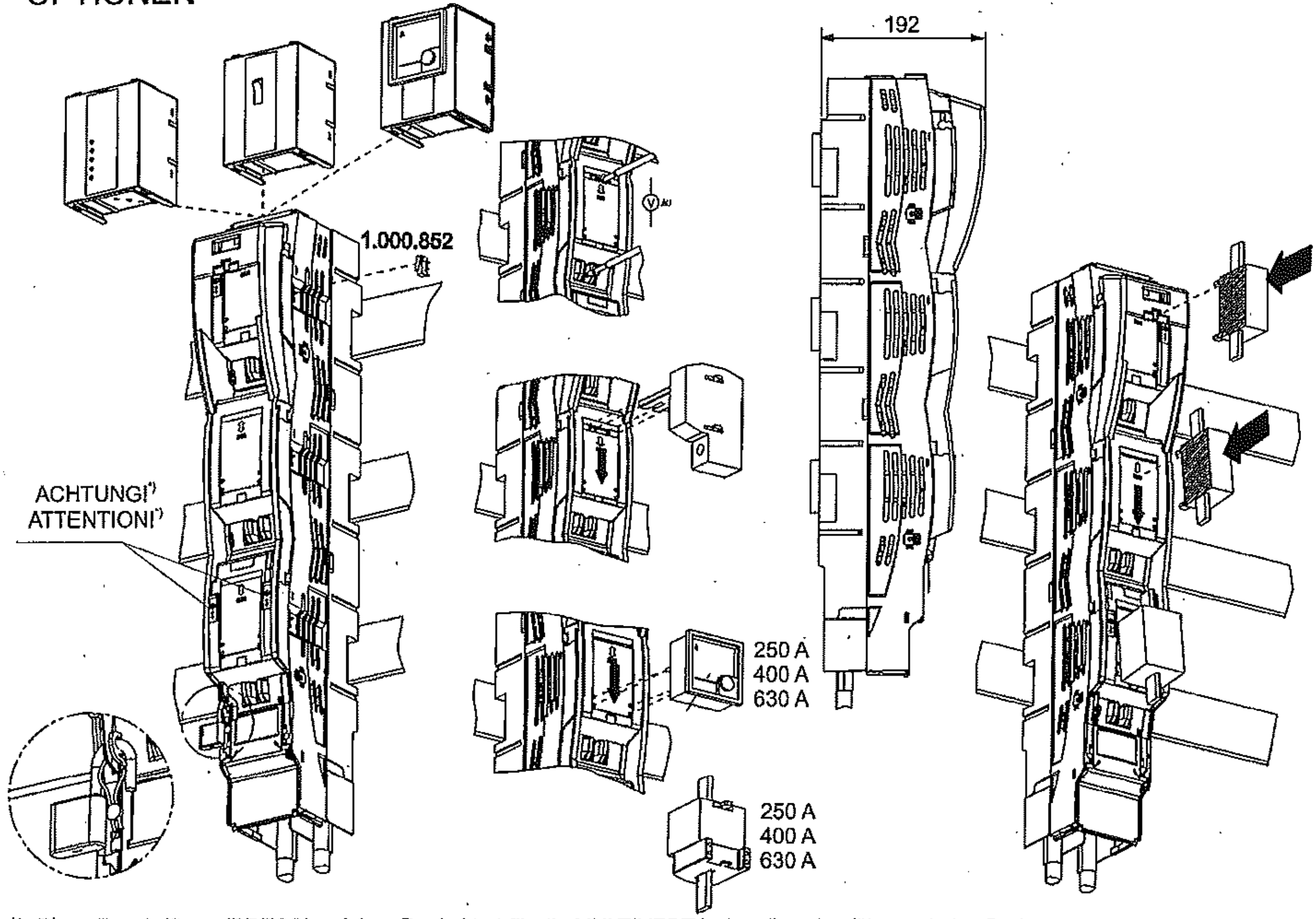
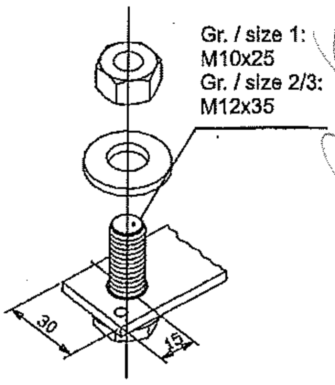
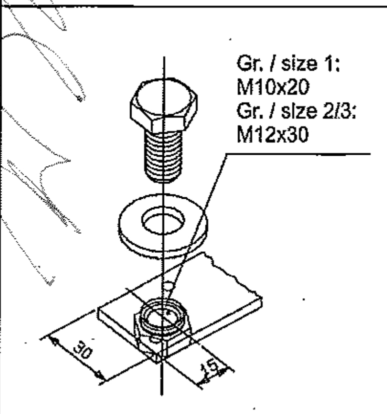
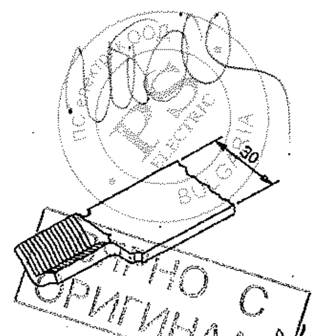
OPTIONEN



*) Diese Beschriftung (PRESS) auf dem Deckel hat für die MULTIVERT in 3-poliger Ausführung keine Bedeutung.
Indicated information on the cover (PRESS) is of no importance for MULTIVERT units for triple pole switching.

Bezeichnung reference	B	E	V
Anschlussart type of terminal	Bolzenanschluss bolt	Einpressmutter insert nut	V-Anschluss V-terminal
Zubehör accessory	Kabelschuh max. 45 mm breit cable lug max width 45 mm	Kabelschuh max. 45 mm breit cable lug max width 45 mm	V-Klemme / V-clamp: 22SZVK4
Klemmbereich cross section [mm²][	max. 300	max. 300	35 re,rm / round solid, round stranded 50 - 185 sm / sectoral solid 50 - 240 se / sectoral stranded
M(an) [Nm]	35 ±3	35 ±3	25 ±2
	 Gr. / size 1: M10x25 Gr. / size 2/3: M12x35 30 15	 Gr. / size 1: M10x20 Gr. / size 2/3: M12x30 30 15	 30

НО С
ОРИГИНАЛА