

DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10)

DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93


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Full technical sheet LE12614AA

1. USE

DMX³ air circuit breakers offer optimal solutions to answer to protection requirements on the origin of the low voltage electrical installation (IEC/EN 60364-1) up to 6300A. Their electric and mechanical robustness, in addition to breaking capacity and chances of accessorizing, are perfectly suited for these requirements.

DMX³ offer a series of air switch-disconnector (I series) also, with high performances of insulation, robustness, closing and withstand capability.

Both series are furthermore developed for increase continuity service looking at the plant energy efficiency and in respect of "green aspects" (see item 7-Conformity).

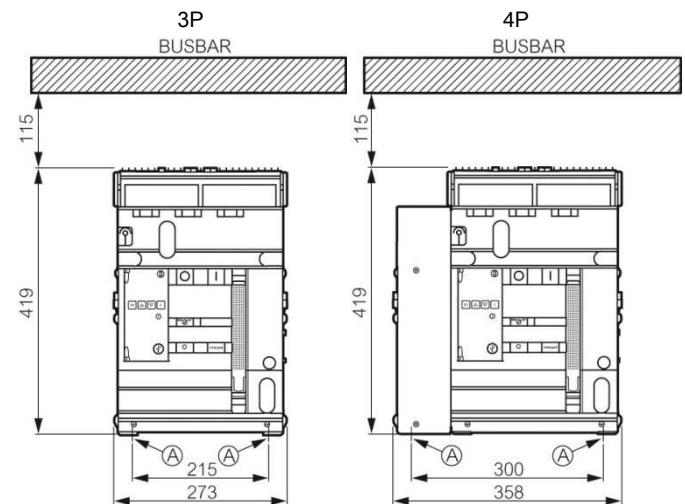
2. RANGE

DMX ³ 2500 circuit breakers (new electronics)						
Fixed version						
I _n (A)	50kA		65kA		100kA	
	3P	4P	3P	4P	3P	4P
630	0 283 60	0 283 70	0 283 80	0 283 90	0 284 00	0 284 10
800	0 283 61	0 283 71	0 283 81	0 283 91	0 284 01	0 284 11
1000	0 283 62	0 283 72	0 283 82	0 283 92	0 284 02	0 284 12
1250	0 283 63	0 283 73	0 283 83	0 283 93	0 284 03	0 284 13
1600	0 283 64	0 283 74	0 283 84	0 283 94	0 284 04	0 284 14
2000	0 283 65	0 283 75	0 283 85	0 283 95	0 284 05	0 284 15
2500	0 283 66	0 283 76	0 283 86	0 283 96	0 284 06	0 284 16
Draw-out version						
I _n (A)	50kA		65kA		100kA	
	3P	4P	3P	4P	3P	4P
630	0 284 20	0 284 30	0 284 40	0 284 50	0 284 60	0 284 70
800	0 284 21	0 284 31	0 284 41	0 284 51	0 284 61	0 284 71
1000	0 284 22	0 284 32	0 284 42	0 284 52	0 284 62	0 284 72
1250	0 284 23	0 284 33	0 284 43	0 284 53	0 284 63	0 284 73
1600	0 284 24	0 284 34	0 284 44	0 284 54	0 284 64	0 284 74
2000	0 284 25	0 284 35	0 284 45	0 284 55	0 284 65	0 284 75
2500	0 284 26	0 284 36	0 284 46	0 284 56	0 284 66	0 284 76

DMX ³ -I 2500 switch disconnectors				
I _n (A)	Fixed version		Draw-out version	
	3P	4P	3P	4P
1250	0 282 40	0 282 50	0 282 80	0 282 90
1600	0 282 41	0 282 51	0 282 81	0 282 91
2000	0 282 42	0 282 52	0 282 82	0 282 92
2500	0 282 43	0 282 53	0 282 83	0 282 93

3. DIMENSIONS

3.1 Fixed version (DMX³ with I_{cu}=50kA, I_{cu}=65kA and DMX³-I)

Frontal view


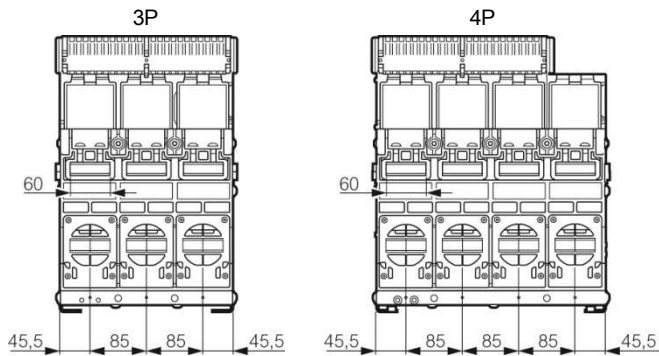
A = fixing point on plate of enclosure

DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

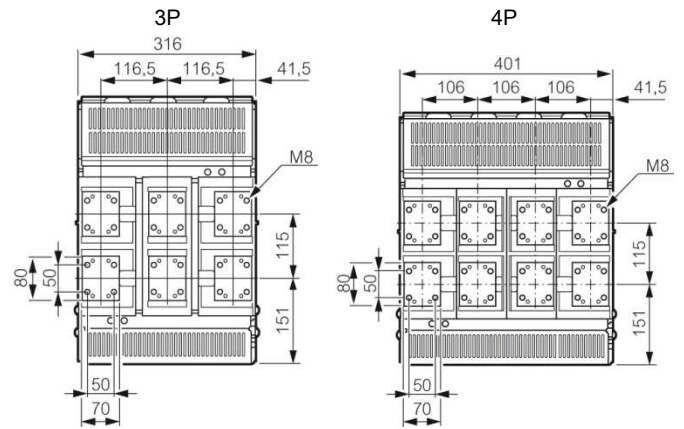
Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
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50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
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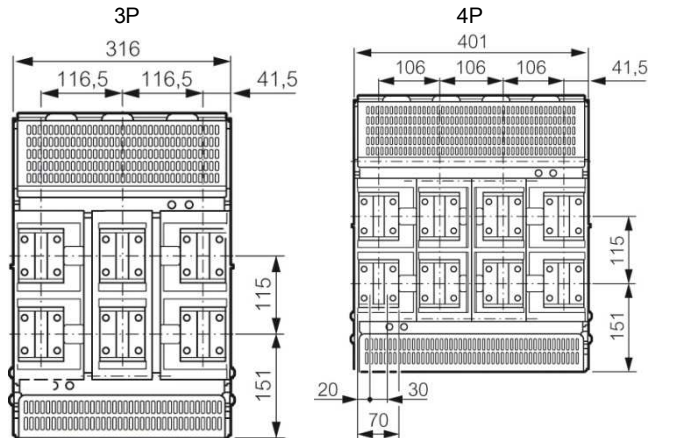
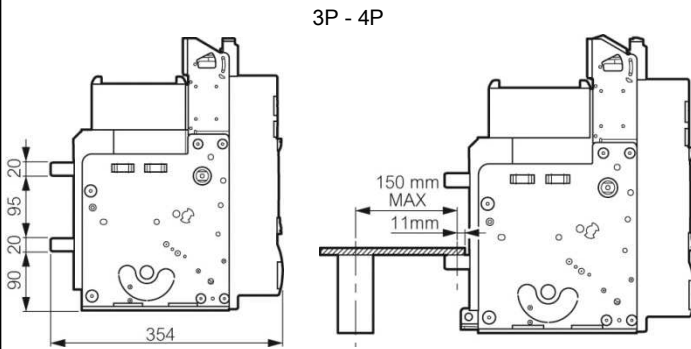
Rear view



Rear view

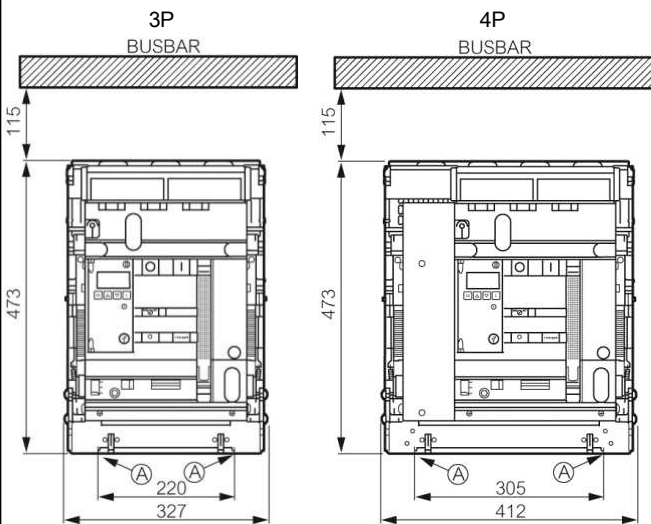


Lateral view

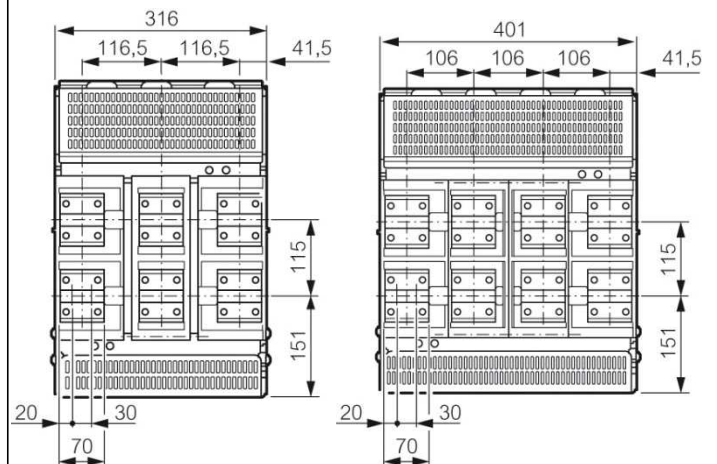


3.2 Draw-out version (DMX³ with $I_{cu}=50kA$, $I_{cu}=65kA$ and DMX³-I)

Frontal view



A = fixing point on plate of enclosure

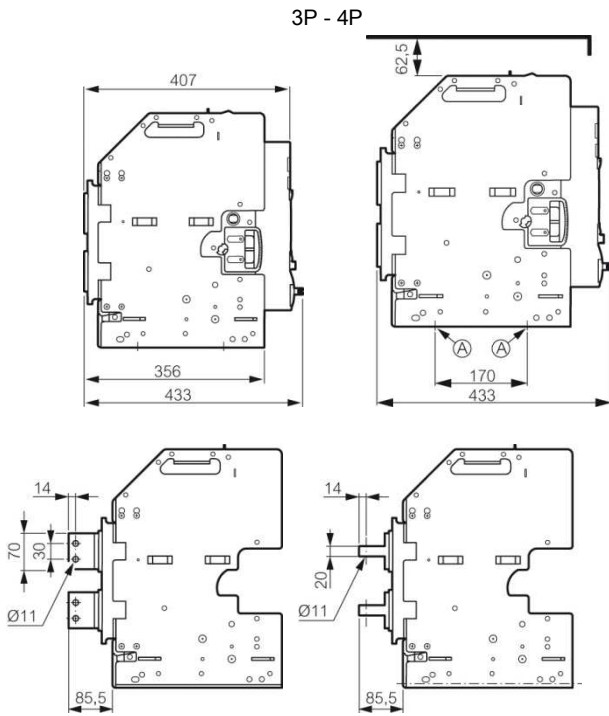


DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
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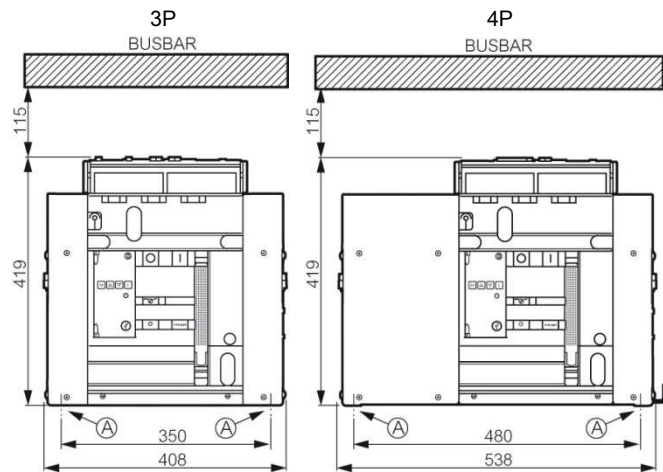
Lateral view



A = fixing point on plate of enclosure

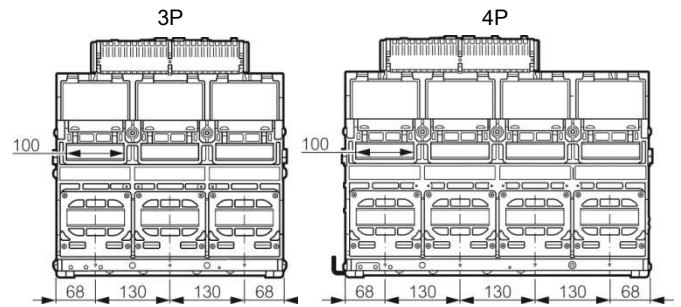
3.3 Fixed version (DMX³ with I_{cu}=100kA)

Frontal view

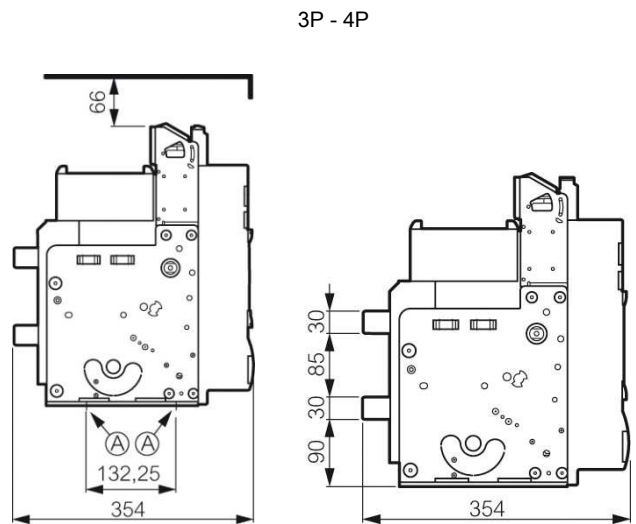


A = fixing point on plate of enclosure

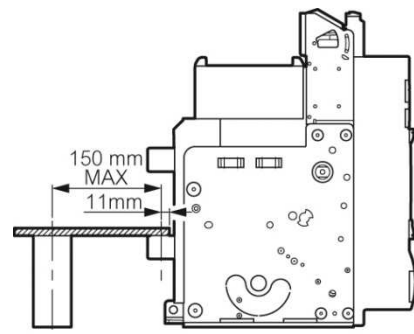
Rear view



Lateral view



A = fixing point on plate of enclosure



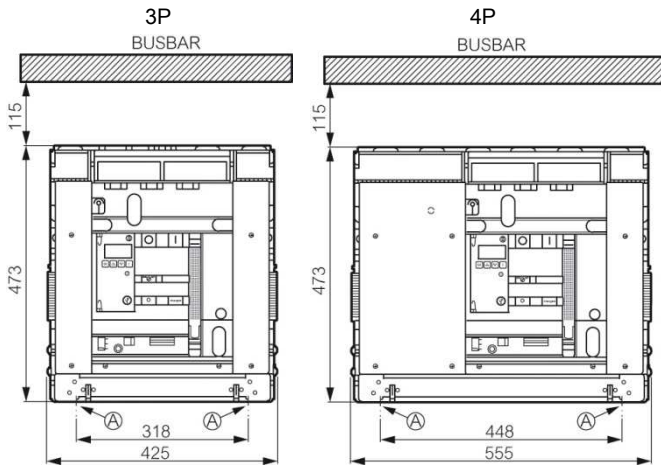
DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
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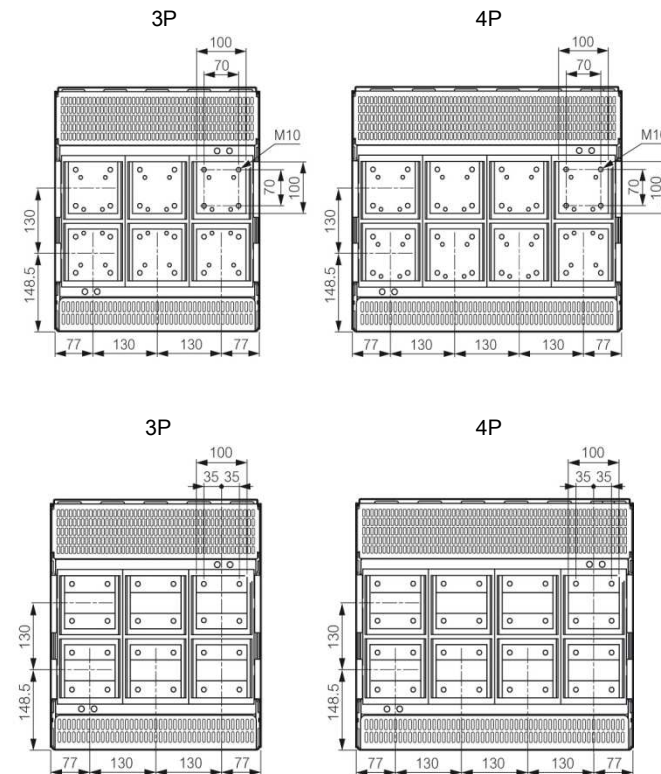
3.4 Draw-out version (DMX³ with I_{cu}=100kA)

Frontal view

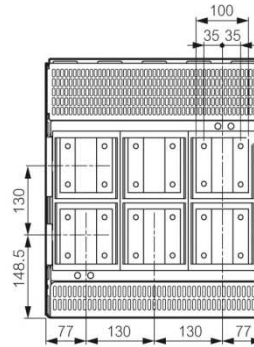


A = fixing point on plate of enclosure

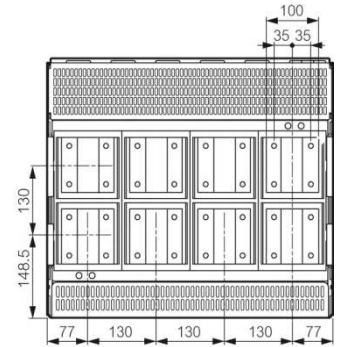
Rear view



3P

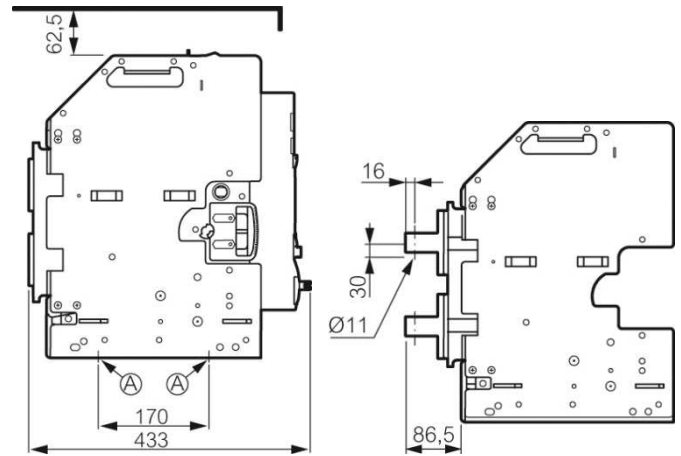


4P

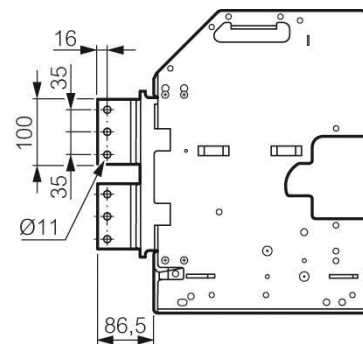


Lateral view

3P - 4P



A = fixing point on plate of enclosure



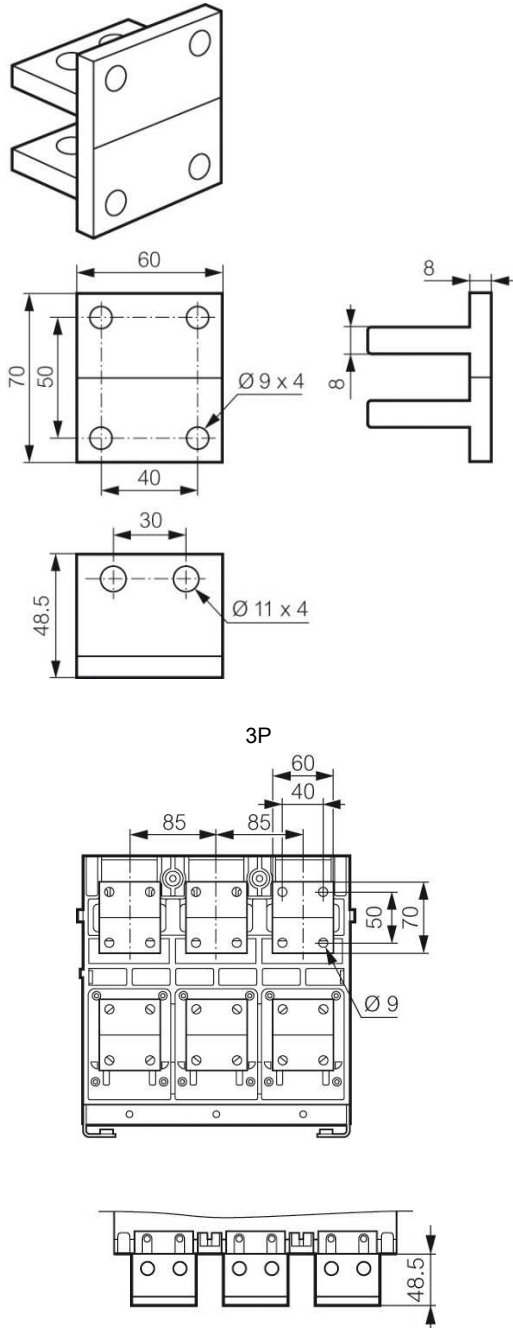
DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
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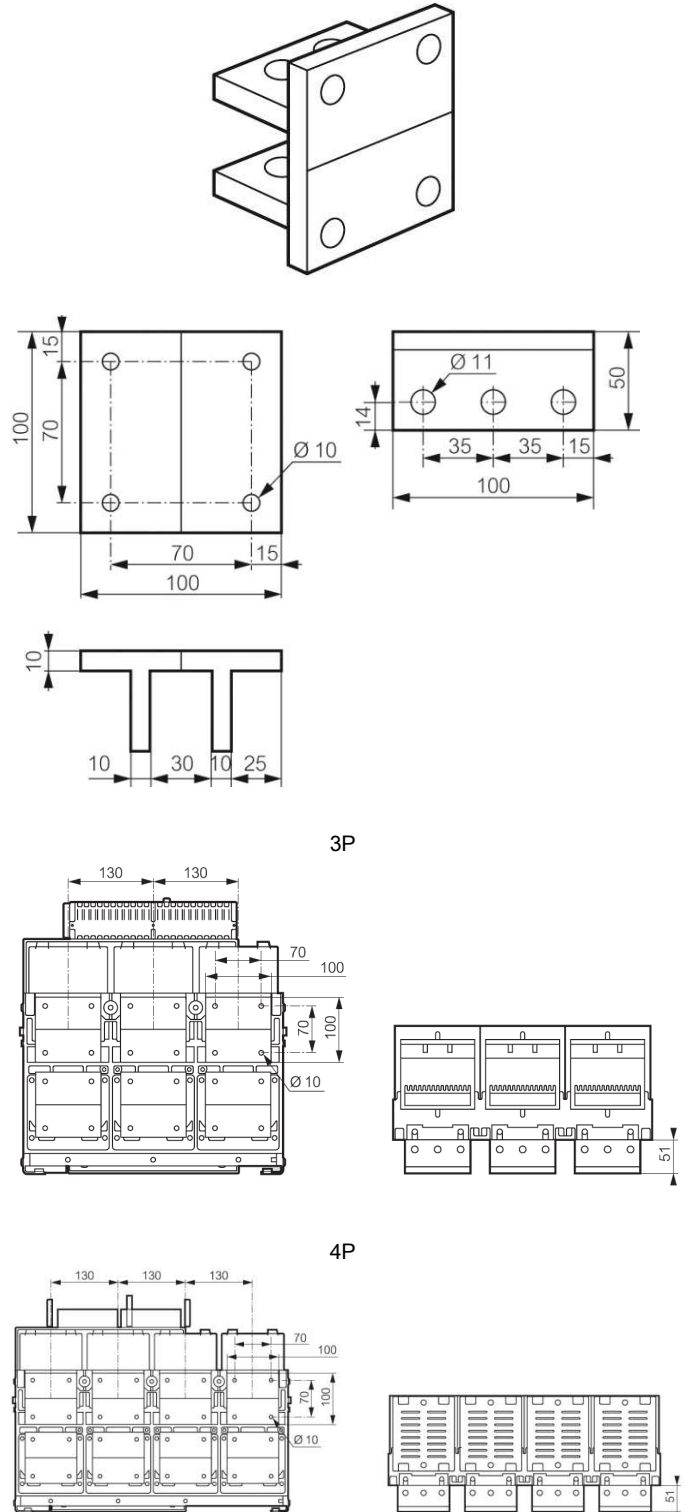
3.5 Rear terminals for fixed version – Flat connection pitch 85mm

References	
3P	4P
0 288 84	0 288 85



3.6 Rear terminals for fixed version – Flat connection pitch 130mm

References	
3P	4P
0 288 92	0 288 93

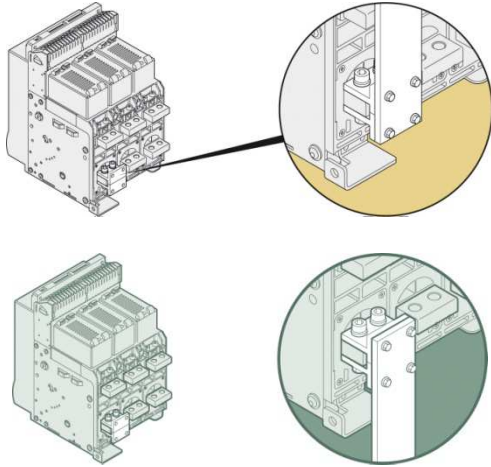


DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

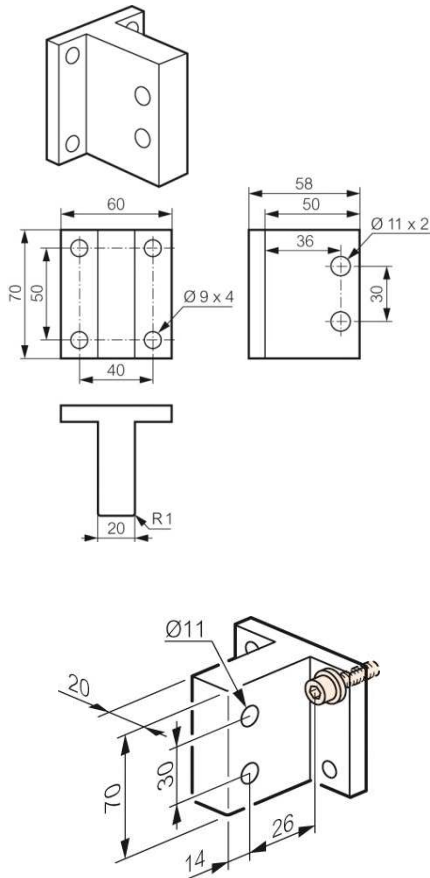
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Mounting examples:



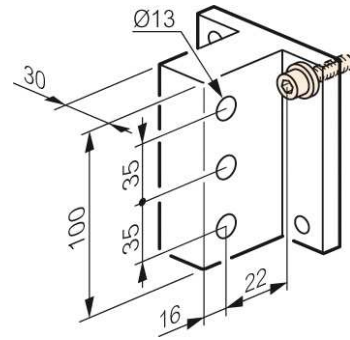
3.7 Rear terminals for fixed version – Vertical connection pitch 85mm

References	
3P	4P
0 288 82	0 288 83

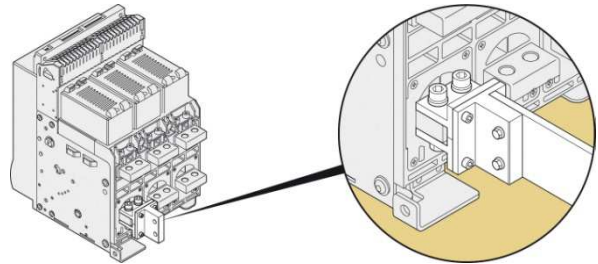


3.8 Rear terminals for fixed version – Vertical connection pitch 130mm

References	
3P	4P
0 288 94	0 288 95

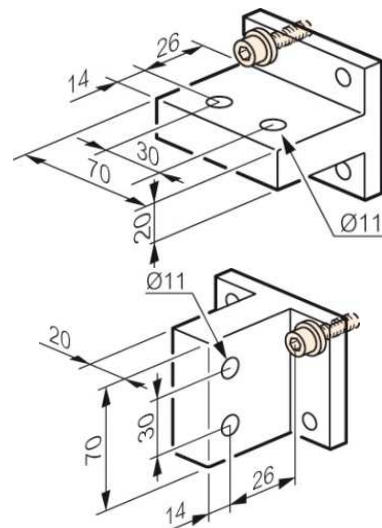


Mounting example:



3.9 Rear terminals for Draw-out version – Flat/vertical connection pitch 85mm

References	
3P	4P
0 288 96	0 288 97



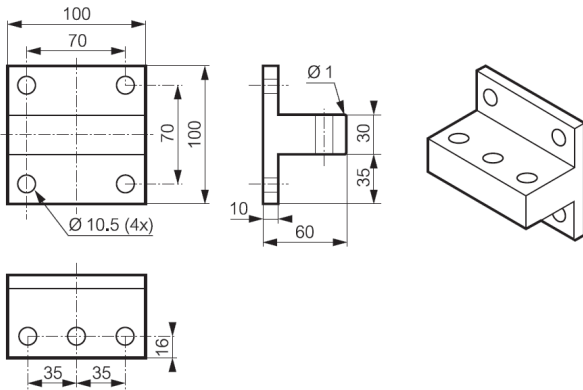
DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

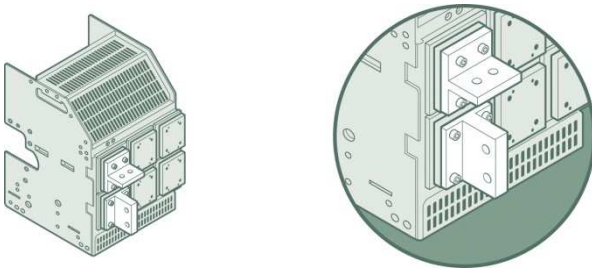
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90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
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0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

3.10 Rear terminals for Draw-out version – Flat/vertical connection pitch 130mm

References	
3P	4P
0 288 94	0 288 95

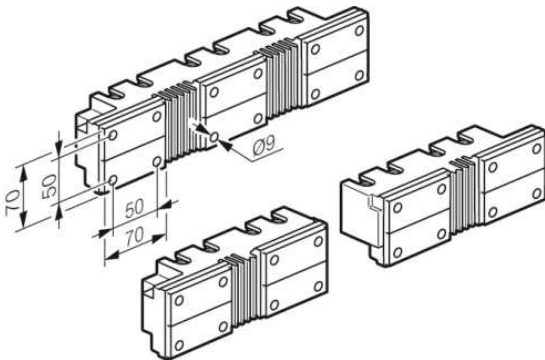


Mounting example:



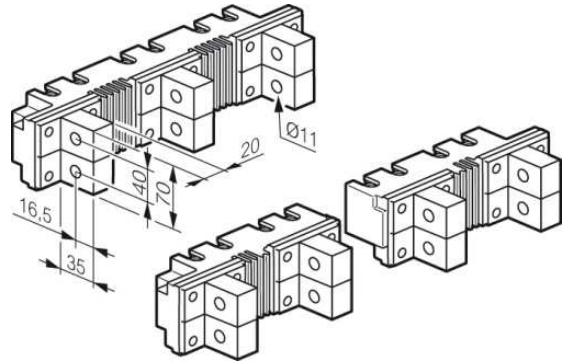
3.11 Spreaders for fixed version – Flat connection

References	
3P	4P
0 288 86	0 288 87



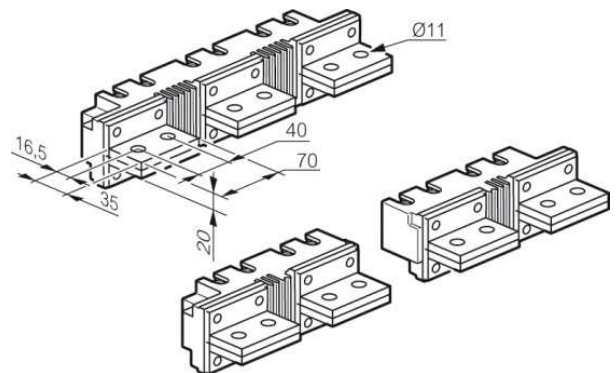
3.12 Spreaders for fixed version – Vertical connection

References	
3P	4P
0 288 88	0 288 89



3.13 Spreaders for fixed version – Horizontal connection

References	
3P	4P
0 288 90	0 288 91



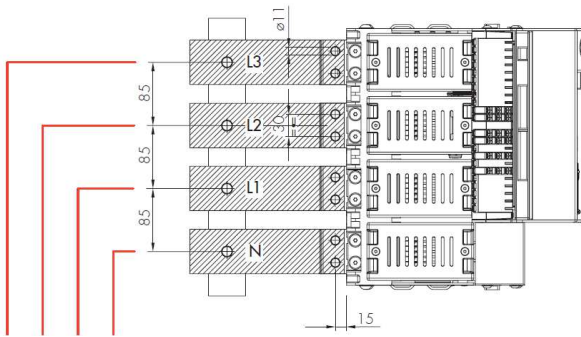
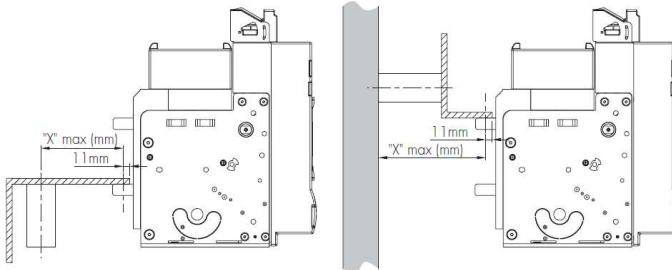
3.14 Terminations support distances – Fixed version

DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
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50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

I_{cc} (kA)	≤ 50	≤ 65	≤ 100
"X" max (mm)	300	250	150



4. OVERVIEW

4.1 Equipped with

ACBs are equipped with auxiliary contacts (4 NO/NC, expandable up to 10) and doorframe; besides:

- Fixed version: equipped with rear terminals for horizontal connections with bars.
- Draw-out version: equipped with flat rear terminals for connections with bars and delivered with base equipped with extraction crank and isolating components.
- Door sealing.

5. ELECTRICAL CONNECTIONS

Use only as a general guideline to select products. Due to extensive variety of switchgear installation shapes and conditions of use, the solution used must always be verified. If inter-poles air distance is less than 20mm, it's recommended use of phase insulators or insulated bars.

Minimum cross section of COPPER busbars per pole

. Fixed version (DMX³ with $I_{cu}=50kA$, $I_{cu}=65kA$ and DMX³-I)

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 40x5	2 bars 40x5
800	2 bars 50x5	2 bars 50x5
1000	1 bar 60x10 / 2 bars 60x5	1 bar 60x10 / 2 bars 60x5
1250	1 bar 80x10 / 2 bars 80x5	1 bar 80x10 / 2 bars 80x5
1600	2 bars 50x10	2 bars 50x10
2000	3 bars 50x10	3 bars 50x10 / 4 bars 50x10
2500	3 bars 80x10	4 bars 80x10 / 5 bars 60x10

. Fixed version (DMX³ with $I_{cu}=100kA$)

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	1 bar 40x10 / 2 bars 40x5	2 bars 40x5
800	1 bar 50x10 / 2 bars 50x5	2 bars 50x5
1000	1 bar 50x10 / 2 bars 50x5	2 bars 60x5
1250	2 bars 60x5	2 bars 80x5
1600	2 bars 80x5	2 bars 50x10
2000	2 bars 50x10	2 bars 60x10
2500	3 bars 50x10	3 bars 60x10

**DMX³ 2500 circuit breakers
(PU MP2.10 and MP4.10)
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50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

. Draw-out version (DMX³ with I_{cu}=50kA, I_{cu}=65kA and DMX³-I)

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 40x5	2 bars 40x5
800	2 bars 50x5	2 bars 50x5
1000	2 bars 60x5	2 bars 60x5
1250	2 bars 80x5	2 bars 80x5
1600	2 bars 50x10	2 bars 50x10
2000	3 bars 50x10	3 bars 50x10
2500	3 bars 80x10	4 bars 80x10

. Draw-out version (DMX³ with I_{cu}=100kA)

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	1 bar 40x10 / 2 bars 40x5	2 bars 40x5
800	1 bar 50x10 / 2 bars 50x5	2 bars 50x5
1000	1 bar 50x10 / 2 bars 50x5	2 bars 60x5
1250	2 bars 60x5	2 bars 80x5
1600	2 bars 80x5	2 bars 50x10
2000	2 bars 50x10	2 bars 60x10
2500	3 bars 50x10	3 bars 60x10

Minimum cross section of ALUMINIUM busbars per pole

. Fixed version (DMX³ with I_{cu}=50kA, I_{cu}=65kA and DMX³-I)

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 50x8	2 bars 50x10
800	2 bars 50x10	2 bars 50x10
1000	2 bars 60x10	2 bars 60x10
1250	2 bars 60x10	4 bars 50x10
1600	4 bars 50x10	4 bars 60x10
2000	4 bars 60x10	4 bars 80x10
2500	4 bars 100x10	5 bars 100x10

. Fixed version (DMX³ with I_{cu}=100kA)

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 40x8	2 bars 40x8
800	2 bars 50x8	2 bars 50x8
1000	2 bars 50x8	2 bars 50x10
1250	2 bars 50x10	2 bars 60x10
1600	2 bars 60x10	4 bars 50x8
2000	4 bars 50x8	4 bars 50x10
2500	4 bars 60x10	4 bars 80x10

. Draw-out version (DMX³ with I_{cu}=50kA, I_{cu}=65kA and DMX³-I)

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 50x8	2 bars 50x10
800	2 bars 50x10	2 bars 50x10
1000	2 bars 60x10	2 bars 60x10
1250	2 bars 60x10	4 bars 50x10
1600	4 bars 50x10	4 bars 60x10
2000	4 bars 60x10	4 bars 80x10
2500	4 bars 100x10	5 bars 100x10

. Draw-out version (DMX³ with I_{cu}=100kA)

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 40x8	2 bars 40x8
800	2 bars 50x8	2 bars 50x8
1000	2 bars 50x8	2 bars 50x10
1250	2 bars 50x10	2 bars 60x10
1600	2 bars 60x10	4 bars 50x8
2000	4 bars 50x8	4 bars 50x10
2500	4 bars 60x10	4 bars 80x10

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90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

6. ELECTRICAL AND MECHANICAL CHARACTERISTICS

Circuit breaker

Electrical data refers to IEC/EN 60947-2 standard

		DMX ³ 2500		
		DMX ³ - N 50 kA	DMX ³ - H 65 kA	DMX ³ - L 100 kA
Frame current (A)		2500		
Number of poles		3P - 4P		
Rated current I _n (A)		630/800/1000/1250/1600/2000/2500		
Release type		electronic		
Rated insulation voltage U _i (V)		1000		
Rated impulse withstand voltage U _{imp} (kV)		12		
Rated operational voltage (50/60Hz) U _e (V)		690		
Category of use		B		
Rated ultimate short-circuit breaking capacity I _{cs} (kA)	220 / 240 V AC	50	65	100
	380 / 415 V AC	50	65	100
	440 / 460 V AC	50	65	100
	480 / 500 V AC	50	65	100
	480 / 550 V AC	50	65	75
	600 V AC	50	65	75
	690 V AC	50	55	65
Rated service short-circuit breaking capacity I _{cs} (% I _{cs})		100%		
Rated short-circuit making capacity I _{cm} (kA)	220 / 240 V AC	105	143	220
	380 / 415 V AC	105	143	220
	440 / 460 V AC	105	143	220
	480 / 500 V AC	105	143	220
	480 / 550 V AC	105	132	165
	600 V AC	105	132	165
	690 V AC	105	121	143
Rated short time withstand current I _{cs} (kA) for t = 1s	220 / 240 V AC	50	65	85
	380 / 415 V AC	50	65	85
	440 / 460 V AC	50	65	85
	480 / 500 V AC	50	65	85
	600 V AC	50	60	75
Rated short time withstand current I _{cs} (kA) for t = 3s	220 / 240 V AC	45	45	65
	380 / 415 V AC	45	45	65
	440 / 460 V AC	45	45	65
	480 / 500 V AC	45	45	65
	600 V AC	45	45	65
Individual pole short-circuit current I _{IT} (kA)	220 / 240 V AC	1.2 times the maximum setting of the definite time delay release tripping current (I _{sd}) ⁽¹⁾		
	380 / 415 V AC			
	440 / 460 V AC			
	480 / 500 V AC			
	600 V AC			
Suitable for insulation		Yes		
Neutral protection (% I _n)		0 - 50 - 100		
Endurance (cycles)	mechanical	10000 (w/o maintenance); 20000 (with maintenance)		
	electrical	10000 (w/o maintenance)		
Weight (Kg)	3P - Fixed	41		59
	3P - Drawout ⁽²⁾	77		108
	4P - Fixed	48		76
	4P - Drawout ⁽²⁾	94		137
	3P - Fixed		419	
Height (mm)	3P - Drawout		465	
	4P - Fixed		419	
	4P - Drawout		465	
	3P - Fixed		354	
Depth (mm)	3P - Drawout		433	
	4P - Fixed		354	
	4P - Drawout		433	
	3P - Fixed		273	408
Width (mm)	3P - Drawout		327	425
	4P - Fixed		358	538
	4P - Drawout		412	555
	operation		-25°C to +70°C	
storage		-25°C to +85°C		
Maintenance		Yes (see specific guide)		

⁽¹⁾ For more details, please consult Legrand

⁽²⁾ Weights for draw-out releases are to be intended with base

For electrical datas @U_e = 1000V, see table A, on the last page.

Switch disconnector

Electrical data refers to IEC/EN 60947-3 standard

		DMX ³ -I 2500
Frame current (A)		2500
Number of poles		3P - 4P
Rated current I _n (A)		1250/1600/2000/2500
Rated insulation voltage U _i (V)		1000
Rated impulse withstand voltage U _{imp} (kV)		12
Rated operational voltage (50/60Hz) U _e (V)		690
Category of use		AC23A
Rated short circuit making capacity I _{cm} (kA)	220 / 240 V AC	143
	380 / 415 V AC	143
	440 / 460 V AC	143
	480 / 500 V AC	143
	600 V AC	132
Rated short time withstand current I _{cs} (kA) for t = 1s	690 V AC	121
	220 / 240 V AC	65
	380 / 415 V AC	65
	440 / 460 V AC	65
	480 / 500 V AC	65
Rated short time withstand current I _{cs} (kA) for t = 3s	600 V AC	60
	690 V AC	55
	220 / 240 V AC	45
	380 / 415 V AC	45
	440 / 460 V AC	45
Suitable for insulation	480 / 550 V AC	45
	600 V AC	45
	690 V AC	45
	mechanical	10000 (w/o maint.); 20000 (with maint.)
	electrical	10000 (w/o maint.)
Endurance (cycles)	3P - Fixed	39
	3P - Drawout ⁽¹⁾	75
	4P - Fixed	45
	4P - Drawout ⁽¹⁾	91
Height (mm)	3P - Fixed	419
	3P - Drawout	465
	4P - Fixed	419
	4P - Drawout	465
Depth (mm)	3P - Fixed	354
	3P - Drawout	433
	4P - Fixed	354
	4P - Drawout	433
Width (mm)	3P - Fixed	273
	3P - Drawout	327
	4P - Fixed	358
	4P - Drawout	412
Temperature	operation	-25°C to +70°C
	storage	-25°C to +85°C
Maintenance		Yes (see specific guide)

⁽¹⁾ Weights for draw-out releases are to be intended with base

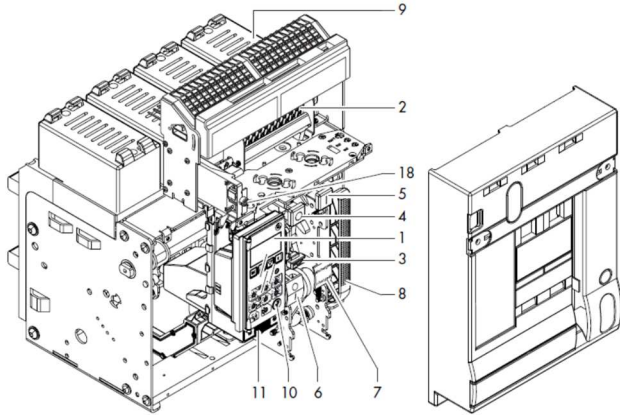
DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

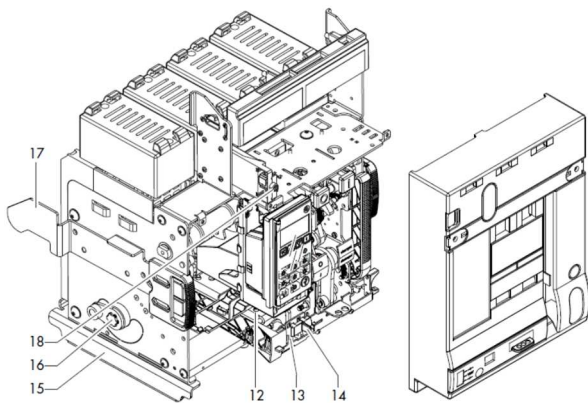
0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

6.1 Main parts constituting the circuit breaker

Fixed version

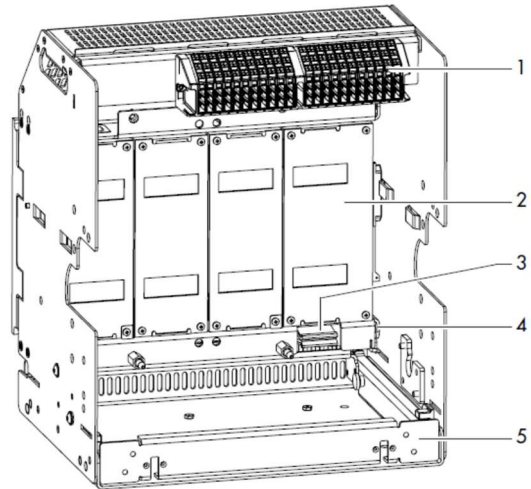


Draw-out version



1. Protection Unit
2. Auxiliary Contacts
3. Reset button
4. OFF button
5. ON button
6. ON-OFF Indication
7. Spring Status Indication
8. Charging handle
9. Dejon cell
10. Mini USB cover
11. Battery cover
12. Draw-out mechanism
13. Draw-out bar insertion
14. Racking shutter
15. Support to place the breaker in draw-out cassette
16. Draw-out main shaft
17. Insertion guide
18. Dielectric test selector (if present)

Draw-out base



1. Aux terminal block
2. Safety shutter
3. Earth connection
4. Earth terminal
5. Removable cassette

6.2 Adjustment ranges

I_n (A)	Phases			
	I_r		I_{sd}	
	$0.2 \times I_n$	$1 \times I_n$	$1.5 \times I_{r \min}$	$10 \times I_{r \max}$
630	126	630	378	6300
800	160	800	480	8000
1000	200	1000	600	10000
1250	250	1250	750	12500
1600	320	1600	960	16000
2000	400	2000	1200	20000
2500	500	2500	1500	25000

* For neutral adjustment, as explained in technical sheet, please consider the values ratios 0%, 50% and 100% on set currents.

DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

6.3 Power losses per pole at I_n / I_e

Power losses for DMX³

Power Losses (W) DMX ³ 2500					
Version	Fixed	Draw-out	Fixed	Draw-out	
Rated I _{cu} (kA)	up to 65kA		100kA		
Rated current I _n (A)	630	5.7	9.9	3.2	6.4
	800	9.2	16.0	5.2	10.2
	1000	14.4	25.0	8.1	16.0
	1250	22.4	39.1	12.7	25.0
	1600	36.7	64.0	20.8	41.0
	2000	57.4	100.0	32.5	64.0
2500	89.7	156.3	50.8	100.0	

Note: power loss in the table above are referred and measured as described in the standard IEC 60947-2 (Annex G) for circuit-breakers. Values in the table are referred to a single phase.

Power losses for DMX³-I

Power Losses (W) DMX ³ -I 2500			
Version	Fixed	Draw-out	
Rated current I _e (A)	1250	32.8	54.7
	1600	53.8	89.6
	2000	57.4	100.0
	2500	89.7	156.3

Note: power loss in the table above are referred and measured as described in the standard IEC 60947-1 for switches. Values in the table are referred to a single phase.

6.4 Deratings

6.4.1 Temperature

Rated current and his adjustment has to be considered relating to a rise or fall of ambient temperature and to a different version or installation conditions. The table below indicates the maximum long-time (LT) protection setting depending on the ambient temperature.

Temperature deratings for DMX³ fixed version - horizontal terminals

Temperature	Fixed version									
	up to 40°C		50°C		60°C		65°C		70°C	
	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n
DMX ³ 2500 I _{cu} up to 65kA	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1880	0.94
2500	1	2500	1	2350	0.94	2250	0.9	2150	0.86	
DMX ³ 2500 I _{cu} = 100kA	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	2000	1	2000	1	2000	1
2500	1	2500	1	2500	1	2500	1	2500	1	

Temperature deratings for DMX³-I fixed version - horizontal terminals

Temperature	Fixed version									
	up to 40°C		50°C		60°C		65°C		70°C	
	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n
DMX ³ -I 2500	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1880	0.94
	2500	1	2500	1	2350	0.94	2250	0.9	2150	0.86

Temperature deratings for DMX³ draw-out version - horizontal terminals

Temperature	Draw-out version									
	up to 40°C		50°C		60°C		65°C		70°C	
	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n
DMX ³ 2500 I _{cu} up to 65kA	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1880	0.94
2500	1	2500	1	2250	0.9	2100	0.84	1950	0.78	
DMX ³ 2500 I _{cu} = 100kA	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	2000	1	2000	1	2000	1
2500	1	2500	1	2500	1	2500	1	2500	1	

Temperature deratings for DMX³-I draw-out version - horizontal terminals

Temperature	Draw-out version									
	up to 40°C		50°C		60°C		65°C		70°C	
	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n	I _{max} (A)	I _r / I _n
DMX ³ -I 2500	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1880	0.94
	2500	1	2500	1	2250	0.9	2100	0.84	1950	0.78

6.4.2 Specific conditions use

Climatic conditions

according to IEC/EN 60947-1 Annex Q, Cat. F subject to temperature, humidity, vibration, shock and salt mist.

Electromagnetic disturbances (EMC)

for DMX³ 2500 according to IEC/EN 60947-2 Annex F.

6.4.3 Altitude

Altitude derating for DMX³ and DMX³-I

Altitude (m)	< 2000	3000	4000	5000
Rated current (at 40°C/50°C) I _n (A)	I _n	0.98 x I _n	0.94 x I _n	0.9 x I _n
Rated voltage U _e (V)	690	600	500	440
Rated insulation voltage U _i (V)	1000	900	750	600
Dielectric withstand (V)	3500	3200	2500	2000

For altitude derating @U_e = 1000V, see table B, on the last page.

DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

6.5 Electronic protection unit

All DMX³ 1600 can be equipped by an MP2.10 or MP4.10 electronic protection unit which main characteristics are:

- Integrated LED matrix screen to show electrical values and settings (MP2.10) or Integrated LCD screen for displaying electrical values, settings and log (MP4.10)
- Adjustment via rotating encoder
- Adjustment of I_r , t_r , I_{sd} , t_{sd} , I_i , I_g and t_g
- Possibility to enable/disable protections
- Measure and display instantaneous, maximum and average values of different electrical values and protection conditions, fault signaling and log (for versions with measure)
- Equipped with batteries for powering in case of mains fault or when the breaker is open or not connected (MP4.10).

All protection units have onboard a mini USB type "B" socket for maintenance purposes or PCS software connection to PC

6.5.1 Protection unit types

Protection unit are available in in MP2.10 and MP4.10 type as following

Type	Features		Reference
	display	with measure	
MP2.10	LED matrix	NO	0 283 04
		YES	0 283 06 (*)
MP4.10	LCD screen	NO	0 283 06
		YES	0 283 07 (*)

(*) For the correct working of metering function, it's necessary to connect a CX³ EMS power supply module ref. 4 149 45

Protective functions

I_r : Long time delay protection against overloads

From 0.2 to 1 x I_n with steps of 1A
Protection: ON/OFF

t_r : Long delay protection operation time

From 40ms to 30 s (@6Ir) with steps of 40ms
Thermal memory: ON/OFF

I_{sd} : Short time delay protection against short-circuits

From 1.5 to 10 x I_r with steps of 1A
Protection: ON/OFF

t_{sd} : Short time delay protection operation time

From 40ms to 1 s with steps of 40ms
(both $t=k$, independent time delay, and $I^2t=k$, inverse short time delay)

I_i : Instantaneous protection against very high short-circuits

From 2 to 15 x I_n or I_{cw} with steps of 1A
Protection: ON/OFF

I_g : Earth fault current

From 0.2 to 1 x I_n with steps of 1A
Protection: ON/OFF

t_g : Time delay on earth fault tripping

From 80ms to 1s with steps of 40ms
(both $t=k$, independent time delay, and $I^2t=k$, inverse short time delay)

I_N : Neutral protection

OFF - 50% - 100% - 200%

6.5.2 Configuration

Protection units MP2.10 and MP4.10 are fully configurable and can be configured in complete freedom.

They can be used to adapt settings as closely as possible to the requirements of the specific installation, either by enabling/disabling the different protection devices (currents and tripping times), or by altering the different trip thresholds.

The tripping curve is thus fully customised to suit the real-life conditions of each project.

Protection units with integrated measurement function can also be used to display voltages, active and reactive powers, frequency, power factor, and also energy, in addition to monitoring currents.

Alarms can be programmed on a number of these parameters: max. voltage, min. voltage, voltage unbalance, max. and min. frequency, etc.

6.6 Common accessories for protection units

- Bluetooth communication key ref. 0 283 10
USB key for Bluetooth communication with DMX³ protection unit, needed to monitor and manage (test and report) the DMX³ protection units through EnerUp + Project App USB connection port on front of protection unit.

- Power supply module ref. 4 149 45
500 mA 12V DC stabilized power supply module for CX³ energy management system – 1 DIN module.
To use for correct use of protection units with measure function (ref. 0 283 01 and 0 283 03)

- Communication interface ref. 4 149 40
RS485 / CX3 energy management system conversion
Consumption: 0.344 W - 28.7 mA (12 V DC) – 1 DIN module

- External neutral for DMX³ 1600 ref. 0 281 98
Optional accessories, to be ordered when ordering electronic protection unit and DMX³ air circuit breakers for factory assembly

DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

7. CONFORMITY

DMX³ range of product concerning circuit-breakers and switch-disconnectors exceed compliance with the IEC/EN standard 60947-2 and 60947-3 respectively. Certification available by IECEE CB-scheme or LOVAG Compliance scheme.

Marks as CCC (China), EAC (Eurasian Federation) or different local certification are available.

DMX³ are in conformity with the Lloyds Shipping Register, RINA and Bureau Veritas Marine.

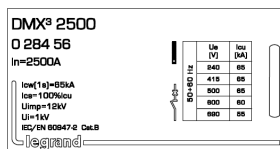
DMX³ respect the European Directives REACH, RoHS, RAEE and Product Environment Product (PEP Ecopassport) are available.

7.1 MARKING

Product is provided with labelling in full conformity to the referred standard and directives requirements by laser or sticker labels as:

Product laser label on front

- Manufacturer responsible
- Denomination, type product, code
- Standard conformity
- Standard characteristics declared
- coloured identification of I_{cu} at 415V



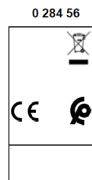
Product sticker label on side

- Manufacturer responsible
- Denomination and type product
- Standard conformity
- Mark/Licence (if any)
- Directive requirements
- bar code identification product
- Manufacturing Country



Mark sticker label on side

- Product code
- Mark/Licence (if any)
- Country deviation, if any



Packaging sticker label

- Manufacturer responsible
- Denomination and type product
- Standard conformity
- Mark/Licence (if any)
- Directive requirements
- bar code identification product



8. EQUIPMENTS AND ACCESSORIES

8.1 Control auxiliaries

- shunt trip: when energised the circuit breaker will be tripped
 - 24 V AC and DC ref. 0 288 48
 - 48 V AC and DC ref. 0 288 49
 - 110 ÷ 130 V AC and DC ref. 0 288 50
 - 220 ÷ 250 V AC and DC ref. 0 288 51
 - 415 ÷ 480 V AC ref. 0 288 52

Rated operating voltage (U _c)	AC: 24V;48V;110V ÷ 130V;220V ÷ 250V;415V/440V/480V DC: 24V; 48V; 110V ÷ 130V; 220V ÷ 250V
Voltage range (%U _c)	70 ÷ 110
Pick-up consumption (W / VA)	500 / 500
Pick-up time (ms)	180
Hold consumption (W / VA)	5 / 5
Minimum opening time (ms)	30
Insulation voltage (kV)	2.5

- undervoltage releases: device trips when coil is de-energised
 - 24 V AC and DC ref. 0 288 55
 - 48 V AC and DC ref. 0 288 56
 - 110 ÷ 130 V AC and DC ref. 0 288 57
 - 220 ÷ 250 V AC and DC ref. 0 288 58
 - 415 ÷ 440 V AC ref. 0 288 59

Rated operating voltage (U _c)	AC: 24V;48V;110V ÷ 130V;220V ÷ 250V;415V/440V/480V DC: 24V; 48V; 110V ÷ 130V; 220V ÷ 250V
Voltage range (%U _c)	85 ÷ 110
Pick-up consumption (W / VA)	500 / 500
Pick-up time (ms)	180
Hold consumption (W / VA)	5 / 5
Minimum opening time (ms)	60
Insulation voltage (kV)	2.5

- Modules for delayed tripping, to be used with undervoltage releases
 - 110 V AC and DC ref. 0 288 62
 - 230 V AC and DC ref. 0 288 63

Rated operating voltage (U _c)	AC: 110V / 230V DC: 110V / 230V
Voltage range (%U _c)	85 ÷ 110
Pick-up consumption (W / VA)	16.5 (@110V) / 34.5 (@230V)
Time delay (s)	1 (1)
Hold consumption (W / VA)	5 (@110V) / 10 (@230V)
Opening threshold	0.3 ÷ 0.75 U _n
Closing threshold	0.85 U _n
Operating temperature (°C)	-10 ÷ +55

(1) It is possible to connect up to 3 modules - 1s of delay for each module installed

- Motor operators
 - connect to a release coil (UVR or trip on energising) and a closing coil
 - 24 V AC and DC ref. 0 288 34
 - 48 V AC and DC ref. 0 288 35
 - 110 ÷ 130 V AC and DC ref. 0 288 36
 - 220 ÷ 250 V AC and DC ref. 0 288 37
 - 415 ÷ 440 V AC ref. 0 288 38
 - 480 V AC and DC ref. 0 288 40

Rated operating voltage (U _c)	AC: 24V;48V;110V ÷ 130V;220V÷250V;415V ÷ 440V;480V DC: 24V; 48V; 110V ÷ 130V; 220V ÷ 250V
Voltage range (%U _c)	85 ÷ 110
Maximum Power consumption (W / VA)	180 / 180 (up to 65kA); 240/240 (100kA)
Maximum peak current for 80ms	(2 ÷ 3) x I _n
Charging time (s)	5 (up to 65kA); 7 (100kA)
Operating frequency (n° / min)	2 (up to 65kA); 1 (100kA)

DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

• Closing coils

To enable remote closing of the circuit breaker if the closing spring is charged

24 V AC and DC	ref. 0 288 41
48 V AC and DC	ref. 0 288 42
110 ÷ 130 V AC and DC	ref. 0 288 43
220 ÷ 250 V AC and DC	ref. 0 288 44
415 ÷ 480 V AC	ref. 0 288 45

Rated operating voltage (U_c)	AC: 24V;48V;110V ÷ 130V;220V ÷ 250V;415V/440V/480V DC: 24V; 48V; 110V ÷ 130V; 220V ÷ 250V
Voltage range (%V_n)	85 ÷ 110
Pick-up consumption (W / VA)	500 / 500
Pick-up time (ms)	180
Hold consumption (W /VA)	5 / 5
Maximum closing time (ms)	50
Insulation voltage (kV)	2.5

8.2 Signalling auxiliaries

- Signalling contact for draw-out version
Inserted / test / draw-out signalling contact

3 changeover contacts per position ref. 0 288 13

Rated operating voltage (U_c)	DC	250V 0.3A 125V 0.6A
	AC	250V 16A 125V 16A

- Contact "ready to close" with charged springs ref. 0 288 14

Rated operating voltage (U_c)	DC	250V 0.3A 125V 0.6A
	AC	250V 16A 125V 16A

- Additional signalling contact ref. 0 288 15

Rated operating voltage (U_c)	DC	250V 0.3A 125V 0.6A
	AC	250V 16A 125V 16A

- Signalling contact for auxiliaries (ST, CC and UVR) ref. 0 288 16

Rated operating voltage (U_c)	DC	250V 0.3A 125V 0.6A
	AC	250V 16A 125V 16A

8.3 Locking

Universal key locks

To be used in combination with key locking support ref. 0 281 91

- Key barrel and flat key with random mapping ref. 4 238 80
- Key barrel and flat key with fixed mapping EL43525 ref. 4 238 81
- Key barrel and flat key with fixed mapping EL 43363 ref. 4 238 82
- Key barrel and star key with random mapping ref. 4 238 83
- Key locking support in "open" position ref. 0 288 28
To be equipped with universal keylocks ref. 4 238 80/81/82/83
- Key locking support in "draw-out" position ref. 0 281 94
To be equipped with universal keylocks ref. 4 238 80/81/82/83

- Door locking

Prevents opening of the door with the circuit breaker closed

Left-hand and right-hand side mounting ref. 0 288 20

- Padlocks in "open" position

Padlocking system for ACB (padlock not supplied) ref. 0 288 21

Padlock for buttons ref. 0 288 24

Padlocking system for shutters (padlock not supplied) ref. 0 288 26

8.4 Accessories

- Mechanical operations counter: to count total number of operation cycles of device ref. 0 288 23

- Rating mis-insertion device: to prevent the insertion of a draw-out circuit breaker into an incompatible base ref. 0 288 25

- Lifting plate ref. 0 288 79

8.5 Fixing devices for DMX³ and DMX³-I 2500

Specific instruction sheets are provide to integrate DMX³ and

DMX³-I 2500 into XL³ enclosures ranges (fixing plates, metal faceplates for circuit breakers and cable sleeves, etc...).

8.6 Equipment for conversion of a fixed device into draw-out device

- Bases for draw-out device

For DMX³ / DMX³-I 2500 (up to 65kA) 3P ref. 0 289 02

For DMX³ / DMX³-I 2500 (up to 65kA) 4P ref. 0 289 03

For DMX³ / DMX³-I 2500 (100kA) 3P ref. 0 289 04

For DMX³ / DMX³-I 2500 (100kA) 4P ref. 0 289 05

- Transformation kit for draw-out version

For DMX³ / DMX³-I 2500 (up to 65kA) 3P ref. 0 289 09

For DMX³ / DMX³-I 2500 (up to 65kA) 4P ref. 0 289 10

For DMX³ / DMX³-I 2500 (100kA) 3P ref. 0 289 11

For DMX³ / DMX³-I 2500 (100kA) 4P ref. 0 289 12

8.7 Equipment for interlocking

The mechanical interlock is set up using cables and can interlock 2 or 3

devices, which may be different type in a vertical or horizontal configuration. The interlock unit is mounted on the right-hand side

of the device. Interlock cables to be ordered separately.

- Interlock for DMX³ 2500 (up to 65kA) ref. 0 288 64

- Interlock for DMX³ 2500 (100kA) ref. 0 288 65

8.8 Interlock cables

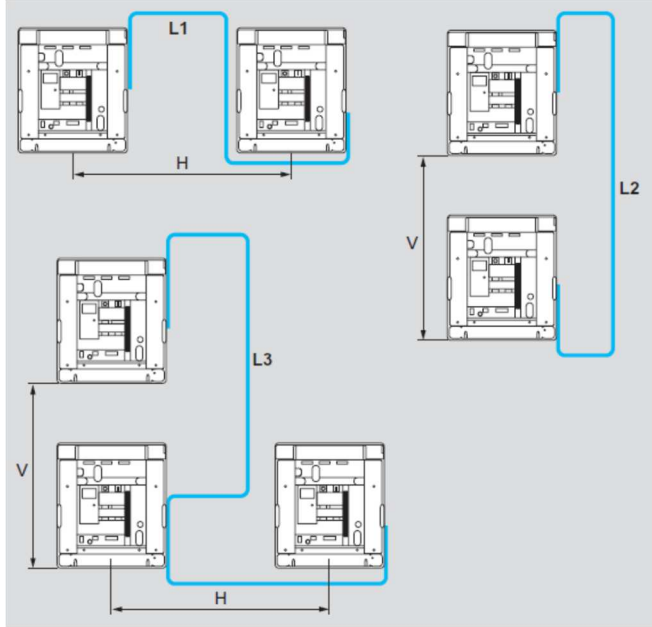
- 1000 mm ref. 0 289 17
- 1500 mm ref. 0 289 18
- 2600 mm ref. 0 289 20
- 3000 mm ref. 0 289 21
- 3600 mm ref. 0 289 22
- 4000 mm ref. 0 289 23
- 4600 mm ref. 0 289 24
- 5600 mm ref. 0 289 25

DMX³ 2500 circuit breakers (PU MP2.10 and MP4.10) DMX³-I 2500 switch disconnectors

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
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50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

Choice of interlock cable



Calculation of cable length:

$$L1 = 1430 + H$$

$$L2 = 1570 + V$$

$$L3 = 1430 + V + H$$

8.9 Spreaders for DMX³ 2500 fixed version

To be fixed onto horizontal rear terminals of the circuit breaker

- For flat connections with bars, 3P ref. 0 288 86
- For flat connections with bars, 4P ref. 0 288 87
- For vertical connections with bars, 3P ref. 0 288 88
- For vertical connections with bars, 4P ref. 0 288 89
- For horizontal connections with bars, 3P ref. 0 288 90
- For horizontal connections with bars, 4P ref. 0 288 91

8.10 Rear terminals

- For fixed version (up to 65kA)
 - For flat connections with bars, 3P ref. 0 288 84
 - For flat connections with bars, 4P ref. 0 288 85
 - For vertical connections with bars, 3P ref. 0 288 82
 - For vertical connections with bars, 4P ref. 0 288 83

Note 1: refs. 0 288 84/85 to be fixed onto horizontal rear terminals of the circuit breaker

Note 2: refs. 0 288 82/83 to be used to transform a flat connection into a vertical one. To be fixed onto refs. 0 288 84/85 according to the number of poles.

- For draw-out version (up to 65kA)
 - For vertical or horizontal connections with bars, 3P ref. 0 288 96
 - For vertical or horizontal connections with bars, 4P ref. 0 288 97

- For fixed version (100kA)
 - For flat connections with bars, 3P ref. 0 288 92
 - For flat connections with bars, 4P ref. 0 288 93
 - For vertical connections with bars, 3P ref. 0 288 94
 - For vertical connections with bars, 4P ref. 0 288 95

Note 1: refs. 0 288 92/93 to be fixed onto horizontal rear terminals of the circuit breaker

Note 2: refs. 0 288 94/95 to be used to transform a flat connection into a vertical one. To be fixed onto refs. 0 288 92/93 according to the number of poles.

- For draw-out version (100kA)
 - For vertical or horizontal connections with bars, 3P ref. 0 288 94
 - For vertical or horizontal connections with bars, 4P ref. 0 288 95

Note: to be fixed directly onto plate rear terminals of the circuit breaker

Aluminium rear terminals:

- for 3P ref. 6 696 18
- for 4P ref. 6 696 19

Maximum rating 1600A

On fixed version, they must be fixed onto refs. 0 288 86 / 87

On draw-out version, they must be fixed directly onto plate rear terminal of the circuit breaker

8.11 Insulating shields

- Fixed version 3P ref. 0 288 98
- Fixed version 4P ref. 0 288 99
- Draw-out version 3P ref. 0 288 18
- Draw-out version 4P ref. 0 288 19

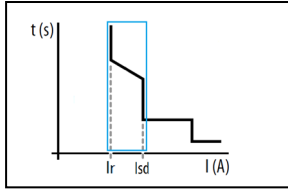
**DMX³ 2500 circuit breakers
(PU MP2.10 and MP4.10)
DMX³-I 2500 switch disconnectors**

Reference(s) :

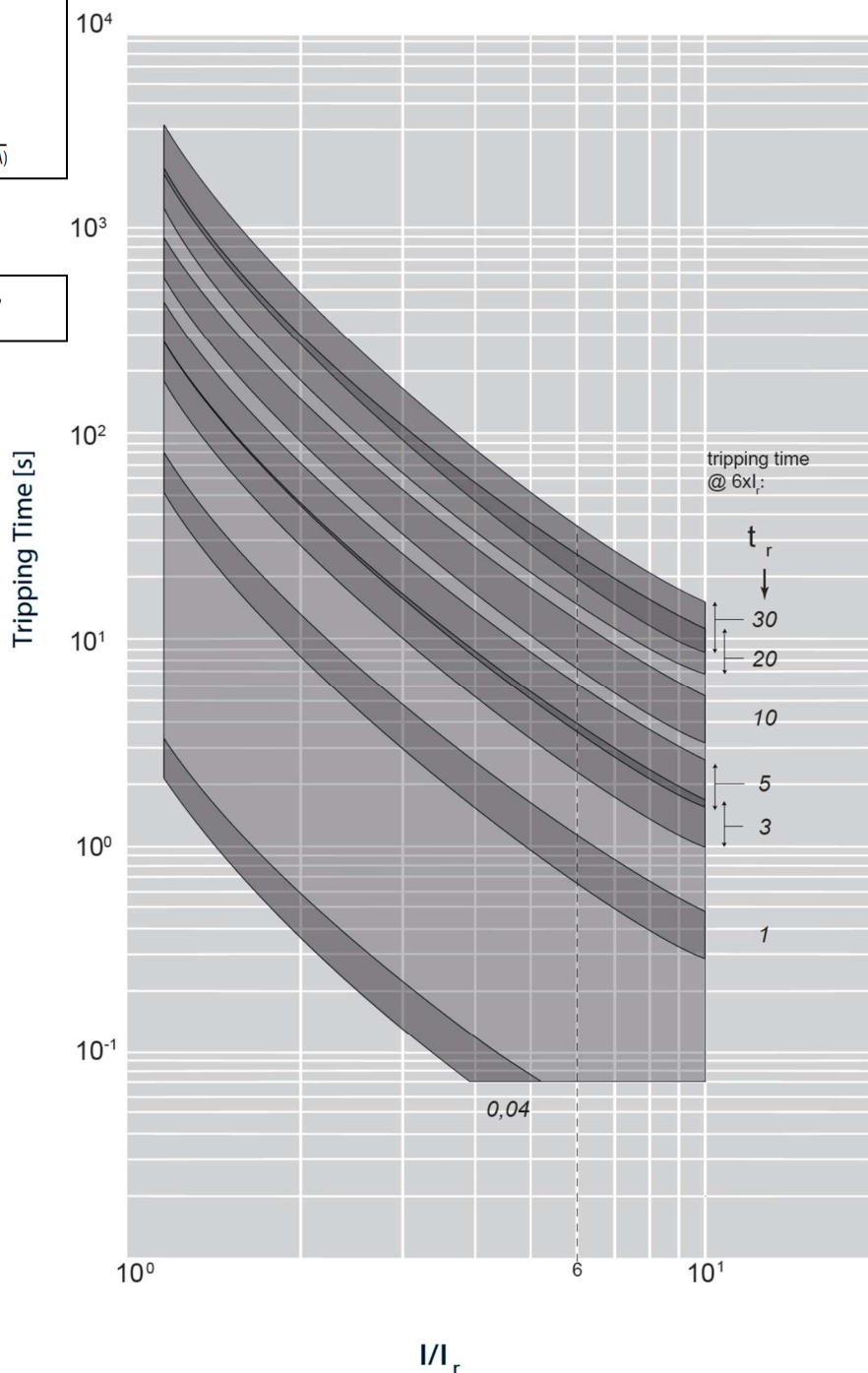
0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

9. CURVES

9.1 TRIPPING CURVE FOR DMX³ 2500 MPx.10 protection units: L – T protection detail



Update: 14/10/2022

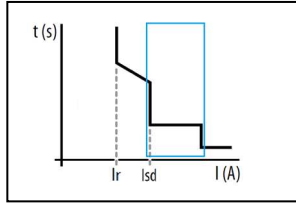


Value	Description
I	current
I_r	long time setting current
t_r	long time delay

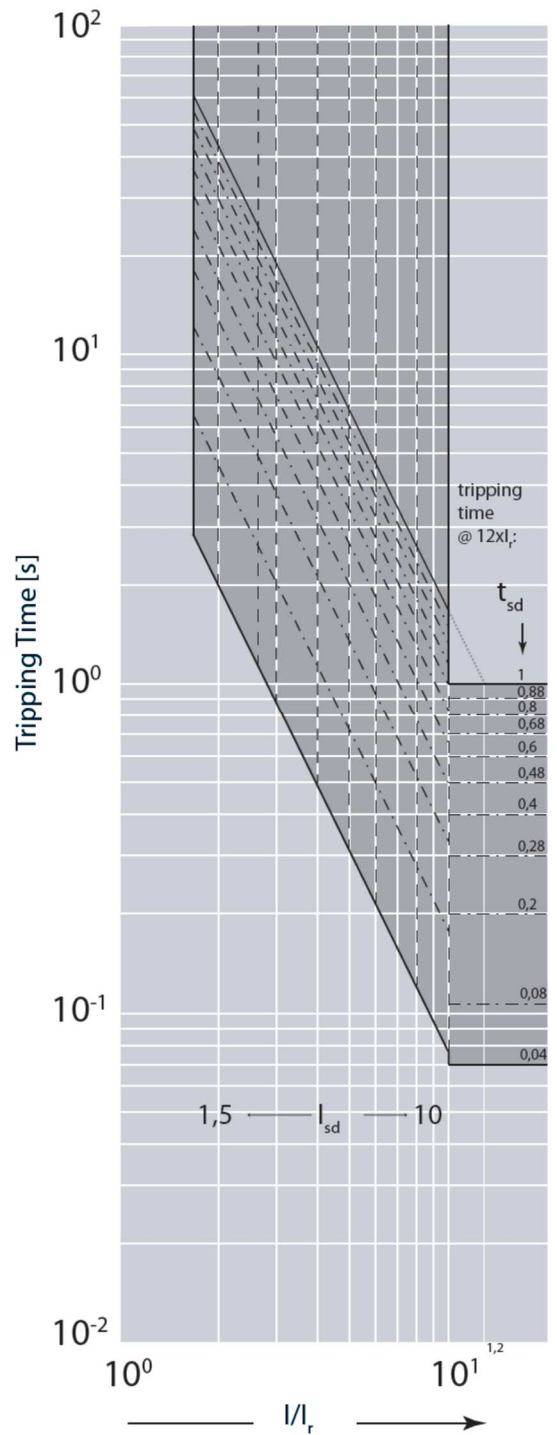
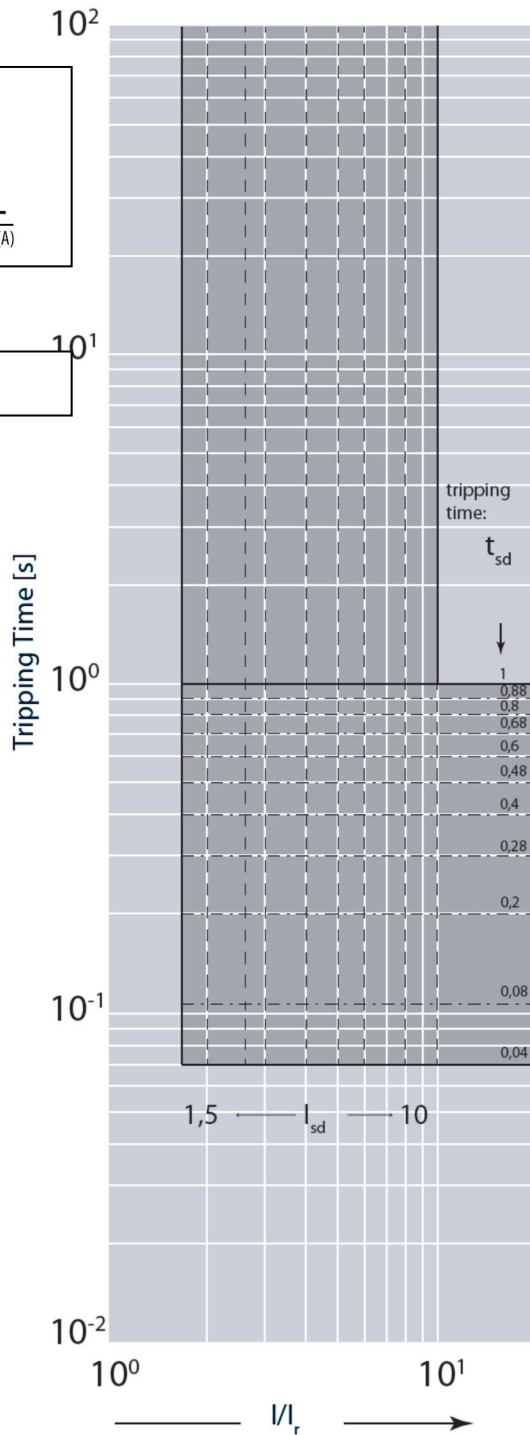
**DMX³ 2500 circuit breakers
(PU MP2.10 and MP4.10)
DMX³-I 2500 switch disconnectors**

Reference(s) :
0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

9.2 TRIPPING CURVE FOR DMX³ 2500 MPx.10 protection units: short time trip protection detail



Update: 17/11/2022



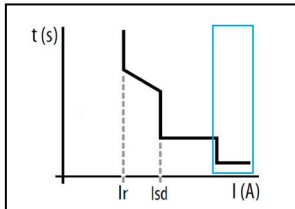
Value	Description
I	current
I_{sd}	short time setting current
t_{sd}	short time delay

**DMX³ 2500 circuit breakers
(PU MP2.10 and MP4.10)
DMX³-I 2500 switch disconnectors**

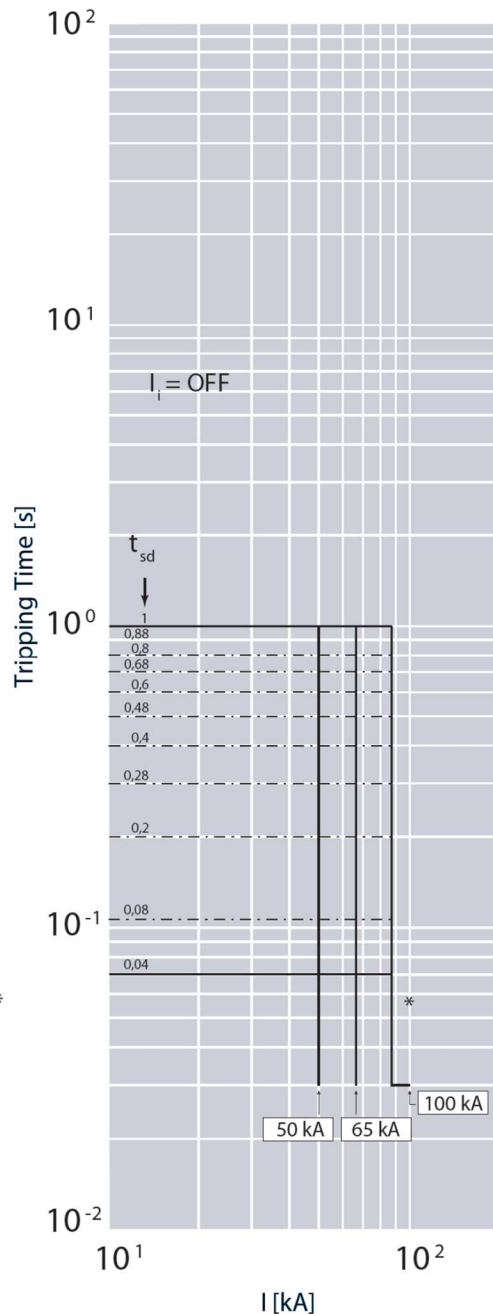
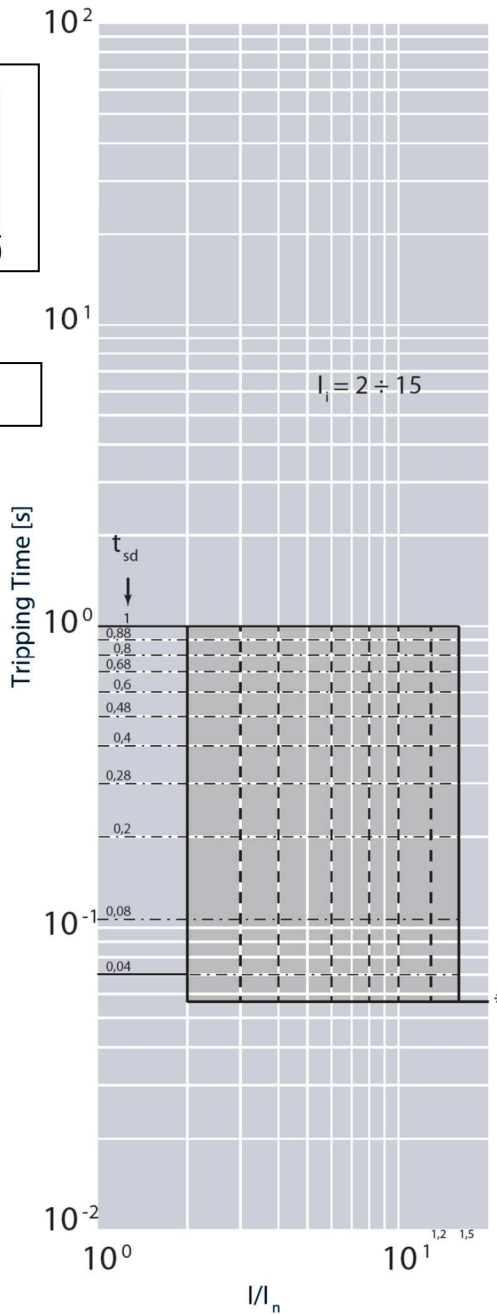
Reference(s) :

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90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

9.3 TRIPPING CURVE FOR DMX³ 2500 MPx.10 protection units: instantaneous trip protection detail



Update: 17/11/2022



*

* Fixed Instantaneous override – I_{sf}



Value	Description
I	current
I _n	rated current
t _{sd}	short time delay
I _i	Instantaneous release
I _{cw}	Rated short time withstand current

I _{cu}	Values for I _{sf}
50kA	50kA
65kA	65kA
100kA	85kA

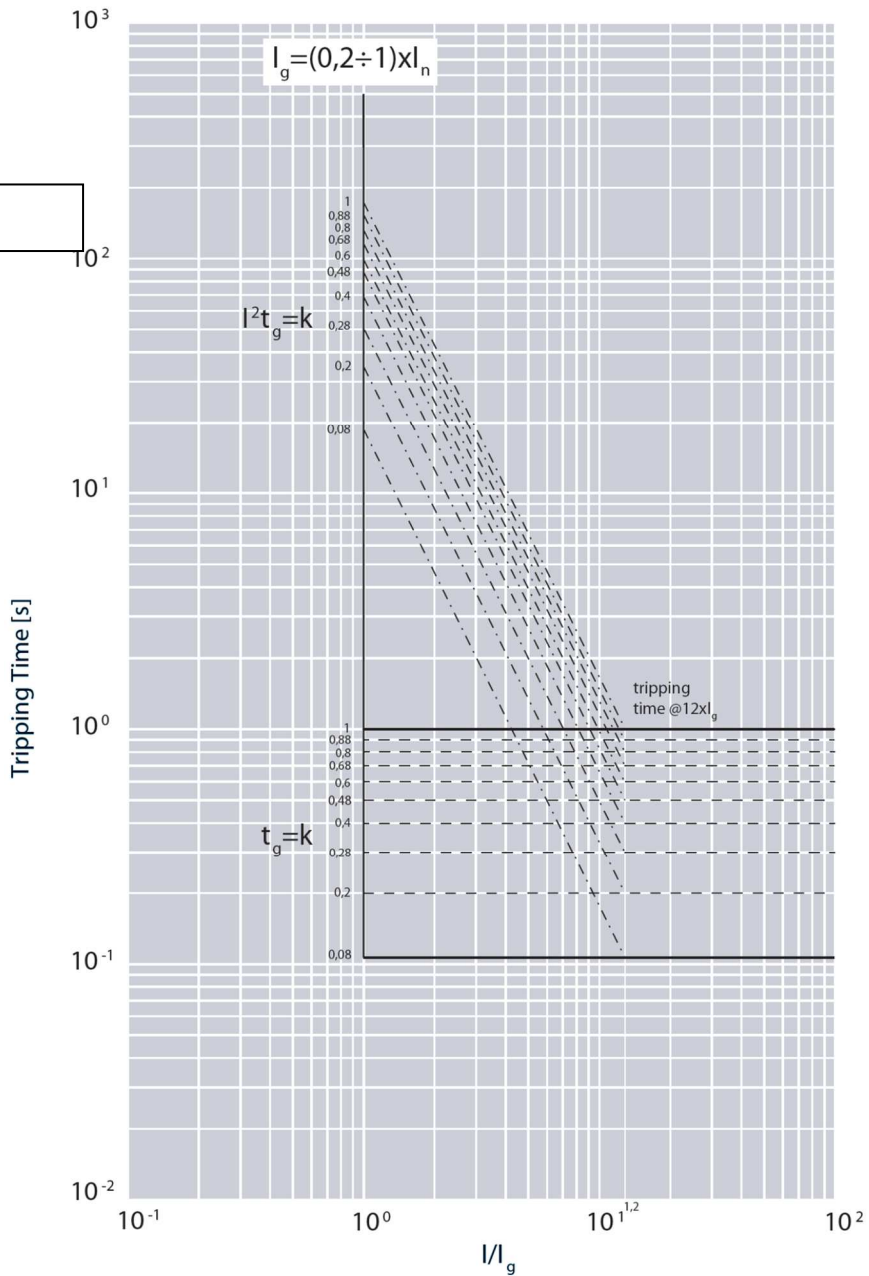
**DMX³ 2500 circuit breakers
(PU MP2.10 and MP4.10)
DMX³-I 2500 switch disconnectors**

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

9.4 Ground fault curve for DMX³ 2500 MPx.10 protection units

Update: 17/11/2022



Value	Description
I	current
I _n	rated current
I _g	Ground fault current
t _{sd}	short time delay
t _{sd} = k	Constant tripping time setting
I ² t _{sd} = k	Constant pass-through energy setting

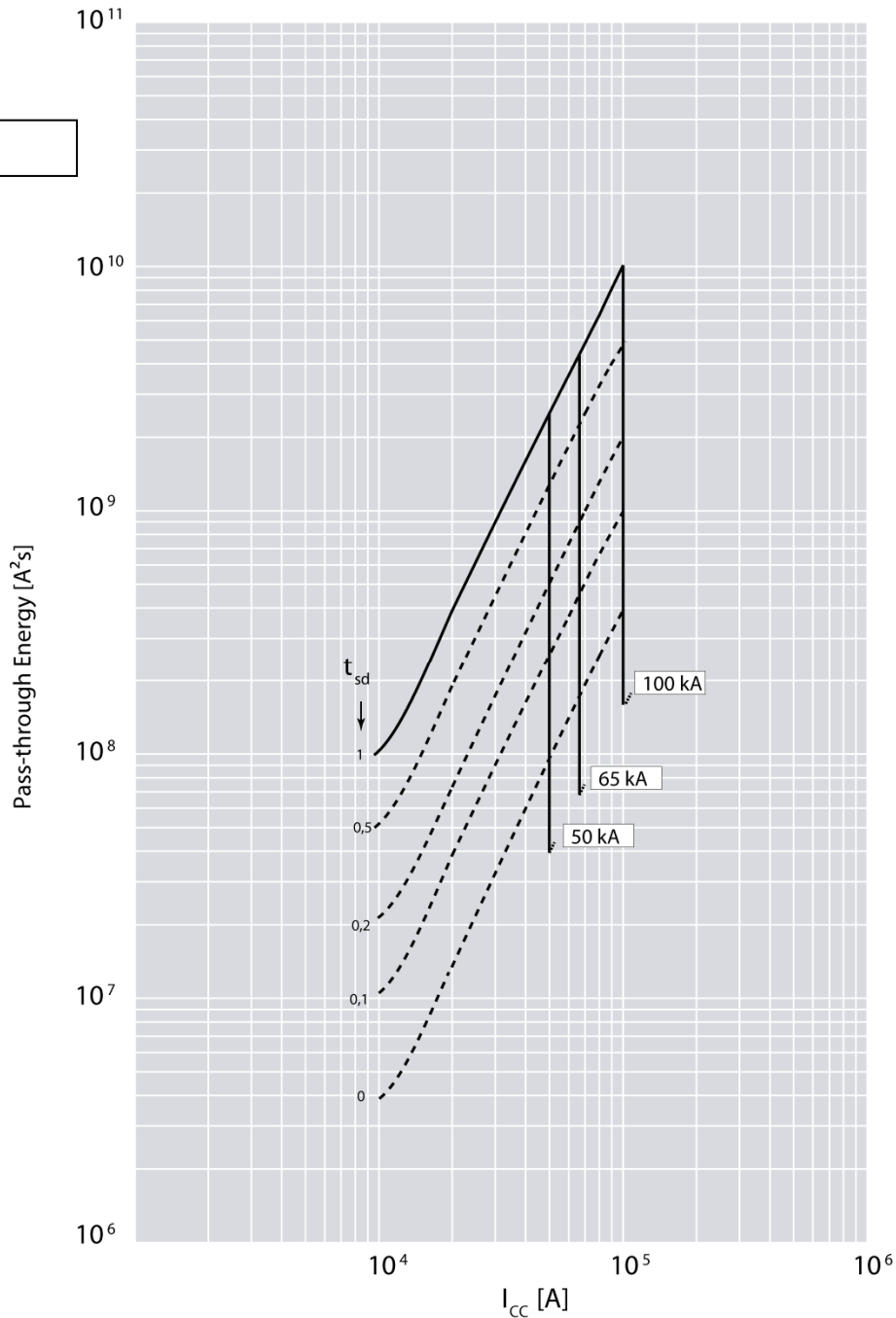
**DMX³ 2500 circuit breakers
(PU MP2.10 and MP4.10)
DMX³-I 2500 switch disconnectors**

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

9.5 PASS-THROUGH SPECIFIC ENERGY CURVE (at 415V)

Update: 14/07/2021



Value	Description
I	current
I _n	rated current
I _g	Ground fault current
t _{sd}	short time delay
t _{sd} = k	Constant tripping time setting
I ² t _{sd} = k	Constant pass-through energy setting

**DMX³ 2500 circuit breakers
(PU MP2.10 and MP4.10)
DMX³-I 2500 switch disconnectors**

Reference(s) :

0 283 60/61/62/63/64/65/66/70/71/72/73/74/75/76/ 80/81/ 82/83/84/85/ 86/
90/91/92/93/94/95/96; 0 284 00/01/02/03/04/05/06/10/11/12/13/14/15/16/
20/21/22/23/24/25/26/30/31/32/33/34/35/36/40/41/42/43/44/45/46/
50/51/52/53/54/55/56/60/61/62/63/64/65/66/70/71/72/73/74/75/76;
0 282 40/41/42/43/50/51/52/53/80/81/82/83/90/91/92/93

A) For electrical datas @U_e = 1000V

		DMX ³ 2500	
Pole pitch (mm)		85	130
Frame current (A)		2500	
Number of poles		3P - 4P	
Rated current I _n (A)		630/800/1000/1250/1600/2000/2500	
Release type		electronic	
Rated insulation voltage U _i (V)		1250	
Rated impulse withstand voltage U _{imp} (kV)		12	
Rated operational voltage (50/60Hz) U _e (V)		1150	
Category of use		B	
Rated ultimate short-circuit breaking capacity I _{cu} (kA)	1000 V AC	30	50
Rated service short-circuit breaking capacity I _{cs} (% I _{cu})		100%	
Rated short-circuit making capacity I _{cm} (kA)	1000 V AC	63	105
Rated short time withstand current I _{cw} (kA) for t = 1s	1000 V AC	30	50
Rated short time withstand current I _{cw} (kA) for t = 3s	1000 V AC	30	50
Suitable for insulation		Yes	

B) Altitude derating @U_e = 1000V

Altitude (m)	2000	3000	4000	5000
Rated current (at 40°C/50°C) I _n (A)	I _n	0.98 x I _n	0.94 x I _n	0.9 x I _n
Rated voltage U _e (V)	1000	880	750	690
Rated insulation voltage U _i (V)	1250	1100	950	850
Dielectric withstand (V)	3500	3200	2500	2000