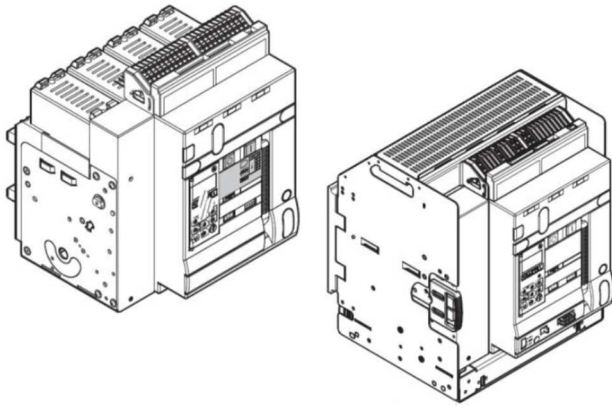


DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96



CONTENTS

PAGES

1. USE	1
2. RANGE	1
3. DIMENSIONS	1
4. OVERVIEW	8
5. ELECTRICAL CONNECTIONS	8
6. ELECTRICAL AND MECHANICAL CHARACTERISTICS	10
7. CONFORMITY	14
8. EQUIPMENTS AND ACCESSORIES	14
9. CURVES	17

Full technical sheet Y2958H

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 2500A. 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

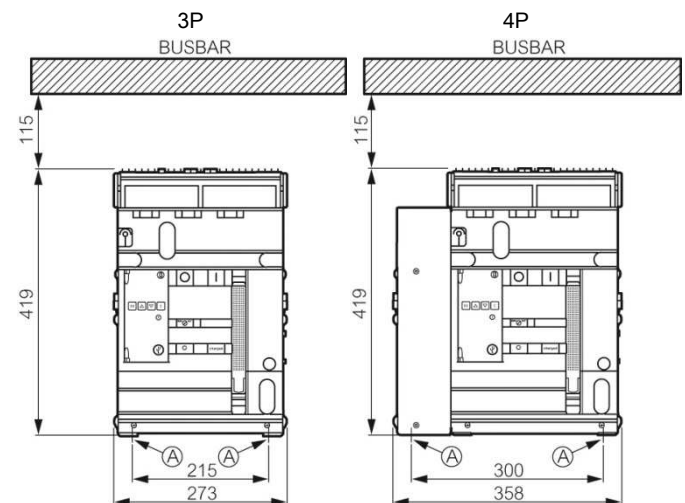
DMX ³ 2500 circuit breakers						
Fixed version						
I _n (A)	50kA		65kA		100kA	
	3P	4P	3P	4P	3P	4P
630	0 286 20	0 286 30	0 286 40	0 286 50	0 286 60	0 286 70
800	0 286 21	0 286 31	0 286 41	0 286 51	0 286 61	0 286 71
1000	0 286 22	0 286 32	0 286 42	0 286 52	0 286 62	0 286 72
1250	0 286 23	0 286 33	0 286 43	0 286 53	0 286 63	0 286 73
1600	0 286 24	0 286 34	0 286 44	0 286 54	0 286 64	0 286 74
2000	0 286 25	0 286 35	0 286 45	0 286 55	0 286 65	0 286 75
2500	0 286 26	0 286 36	0 286 46	0 286 56	0 286 66	0 286 76
Draw-out version						
I _n (A)	50kA		65kA		100kA	
	3P	4P	3P	4P	3P	4P
630	0 287 20	0 287 30	0 287 40	0 287 50	0 287 60	0 287 70
800	0 287 21	0 287 31	0 287 41	0 287 51	0 287 61	0 287 71
1000	0 287 22	0 287 32	0 287 42	0 287 52	0 287 62	0 287 72
1250	0 287 23	0 287 33	0 287 43	0 287 53	0 287 63	0 287 73
1600	0 287 24	0 287 34	0 287 44	0 287 54	0 287 64	0 287 74
2000	0 287 25	0 287 35	0 287 45	0 287 55	0 287 65	0 287 75
2500	0 287 26	0 287 36	0 287 46	0 287 56	0 287 66	0 287 76

I _n (A)	DMX ³ -I 2500 switch disconnectors			
	Fixed version		Draw-out version	
	3P	4P	3P	4P
1250	0 286 83	0 286 93	0 287 83	0 287 93
1600	0 286 84	0 286 94	0 287 84	0 287 94
2000	0 286 85	0 286 95	0 287 85	0 287 95
2500	0 286 86	0 286 96	0 287 86	0 287 96

3. DIMENSIONS

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

Frontal view



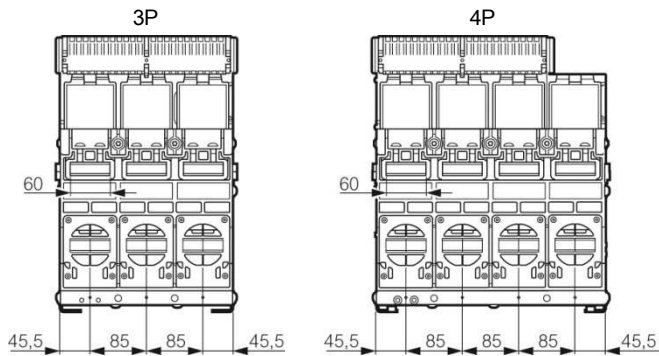
A = fixing point on plate of enclosure

DMX³ 2500 circuit breakers

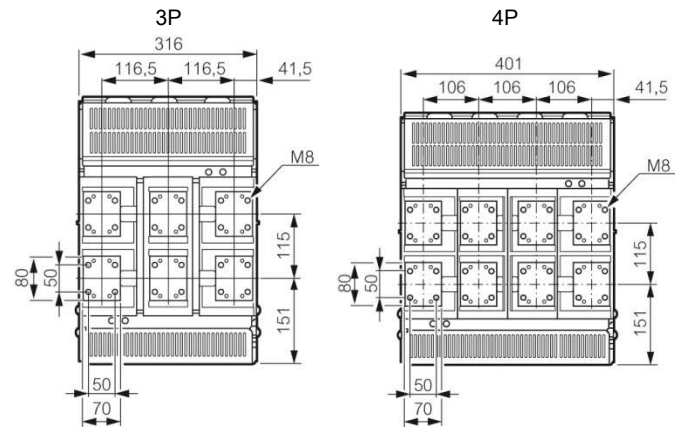
DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

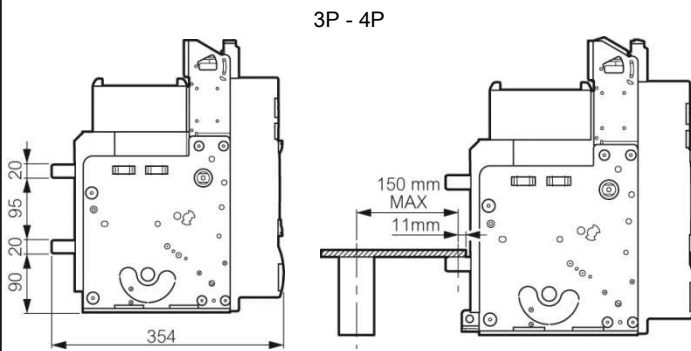
Rear view



Rear view

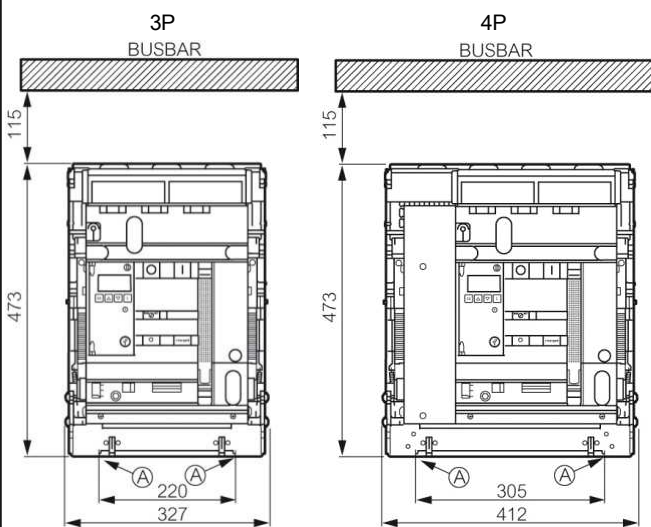


Lateral view

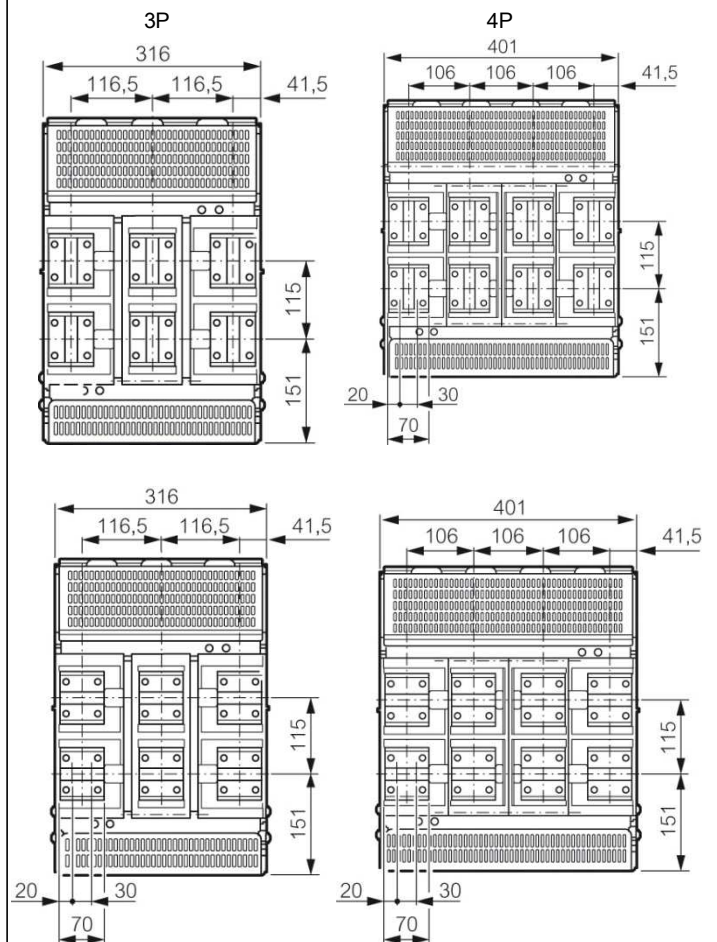


3.2 Draw-out version (DMX³ with $I_{cu}=50kA$, $I_{cu}=65kA$ and DMX³-I)

Frontal view



A = fixing point on plate of enclosure

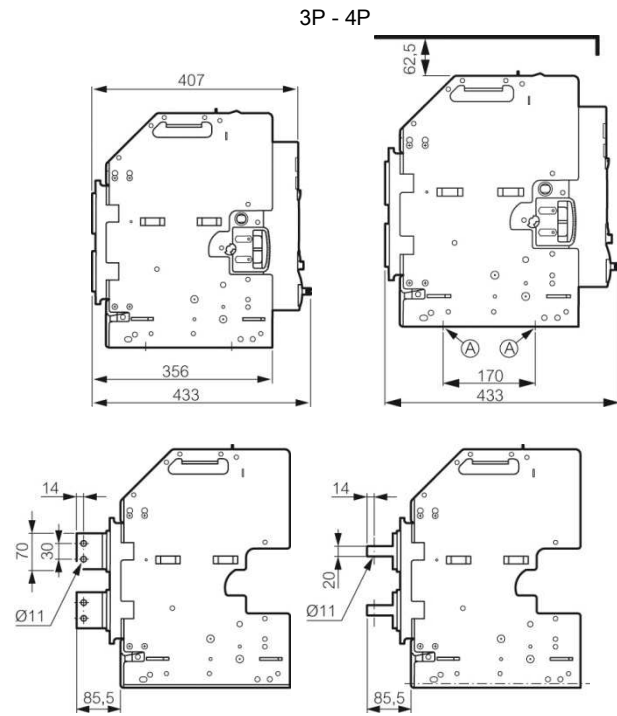


DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

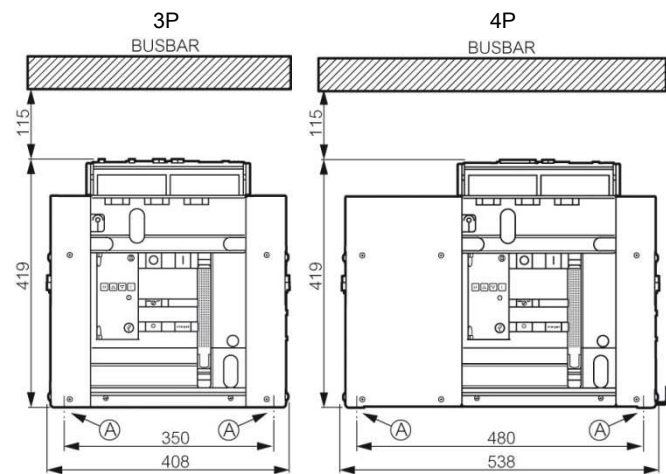
Lateral view



A = fixing point on plate of enclosure

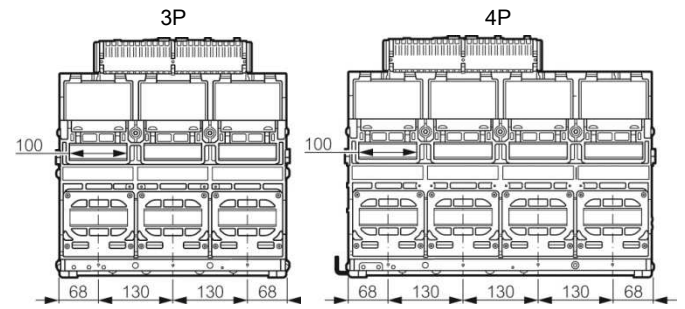
3.3 Fixed version (DMX³ with I_{cu}=100kA)

Frontal view

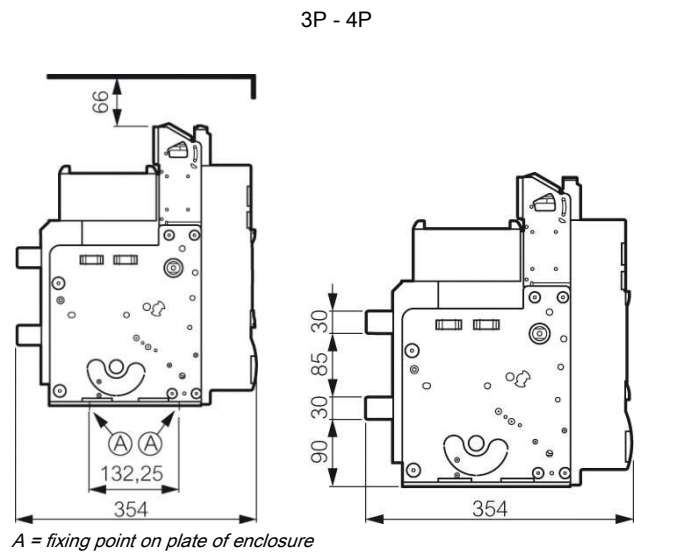


A = fixing point on plate of enclosure

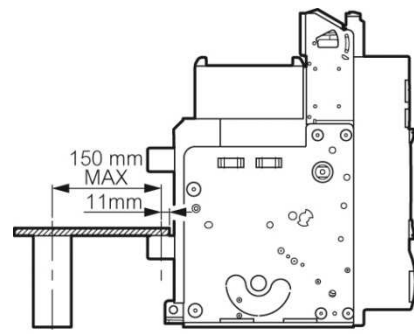
Rear view



Lateral view



A = fixing point on plate of enclosure



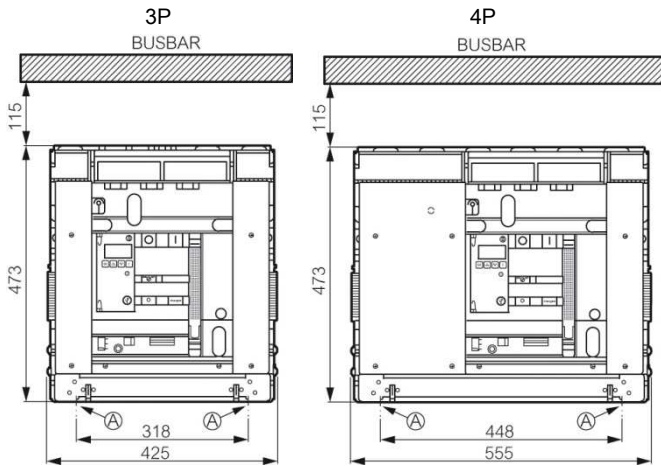
DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

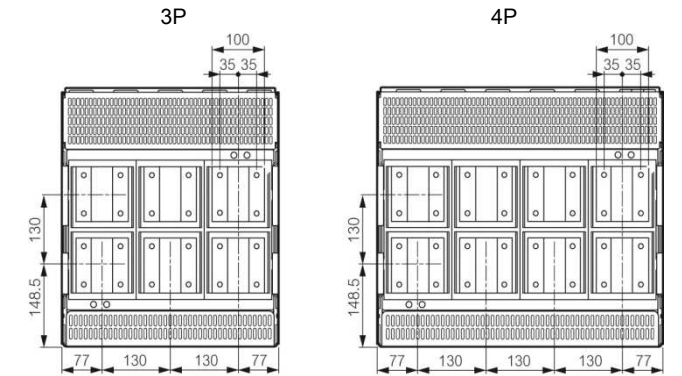
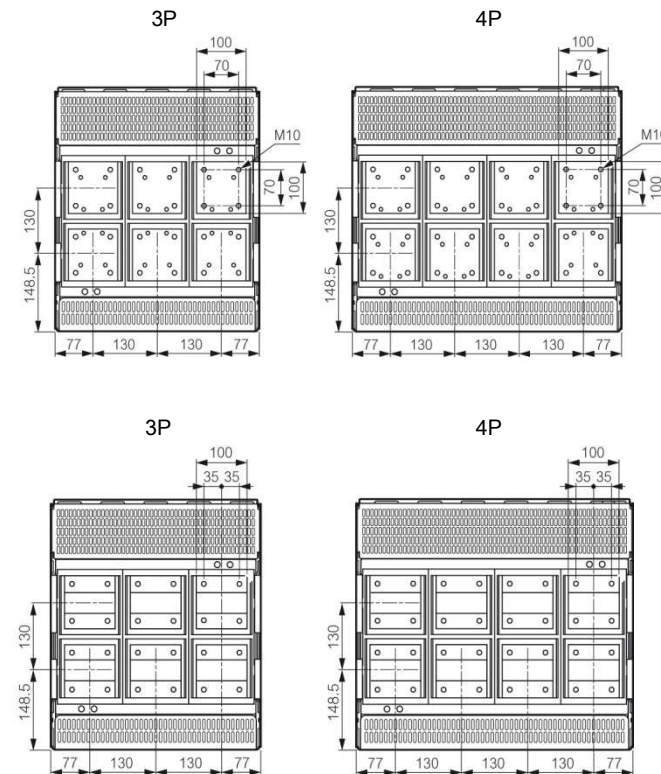
3.4 Draw-out version (DMX³ with $I_{cu}=100kA$)

Frontal view

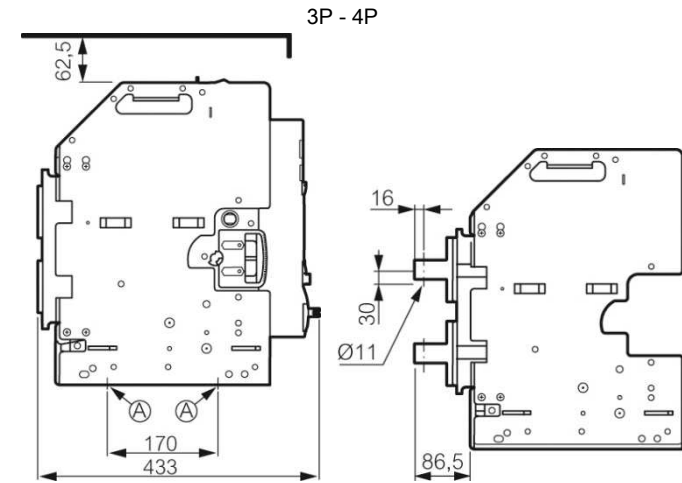


A = fixing point on plate of enclosure

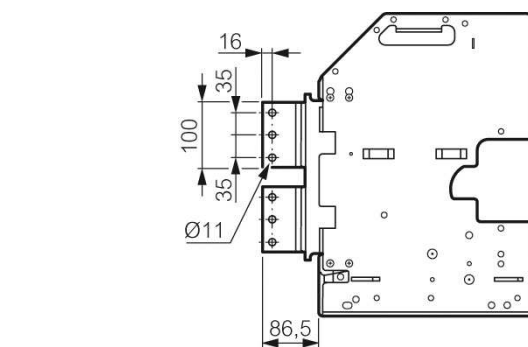
Rear view



Lateral view



A = fixing point on plate of enclosure



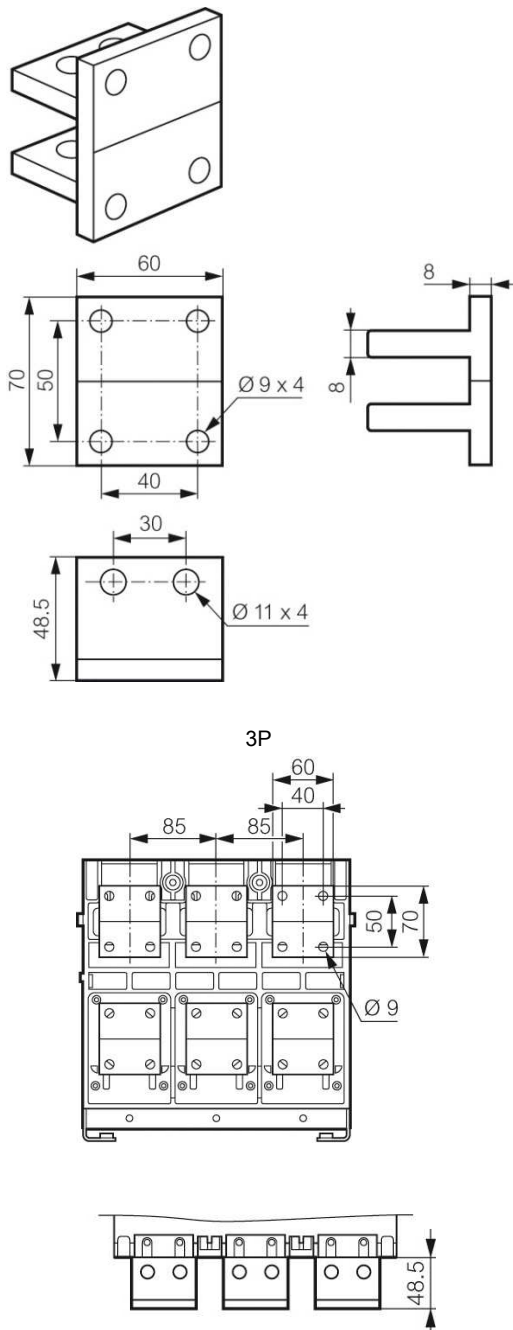
DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

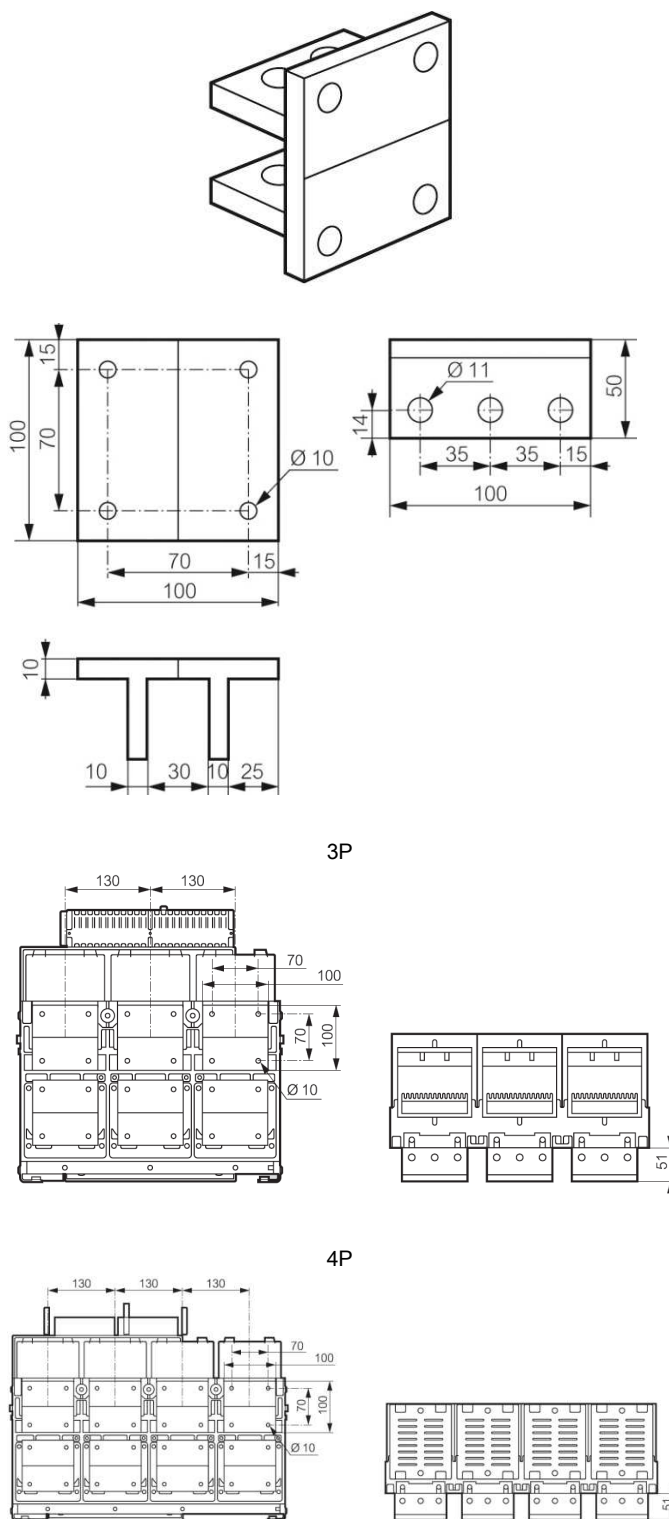
3.5 Rear terminals for fixed version – Flat connection pitch 85mm

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

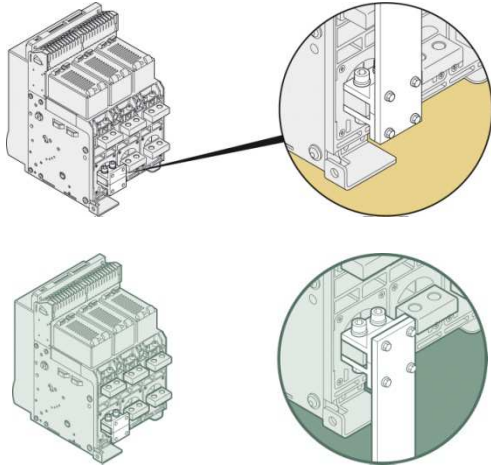


DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

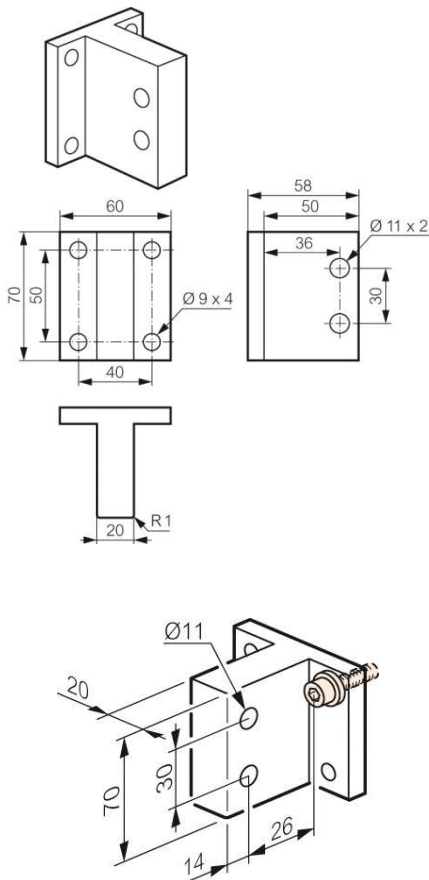
References: 0 286 20 / 21 / 22 / 23 / 24 / 25 / 26 / 30 / 31 / 32 / 33 / 34 / 35 / 36 / 40 / 41 / 42 / 43 / 44 / 45 / 46 / 50 / 51 / 52 / 53 / 54 / 55 / 56 / 60 / 61 / 62 / 63 / 64 / 65 / 66 / 70 / 71 / 72 / 73 / 74 / 75 / 76 / 83 / 84 / 85 / 86 / 0 287 20 / 21 / 22 / 23 / 24 / 25 / 26 / 30 / 31 / 32 / 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 / 93 / 94 / 95 / 96

Mounting examples:



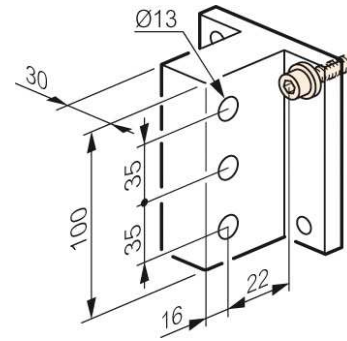
3.7 Rear terminals for fixed version – Vertical connection pitch 85mm

References	
3P	4P
0 288 82	0 288 83

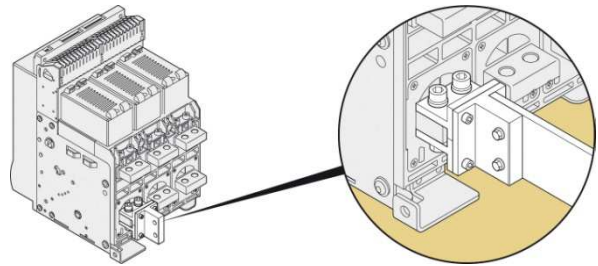


3.8 Rear terminals for fixed version – Vertical connection pitch 130mm

References	
3P	4P
0 288 94	0 288 95

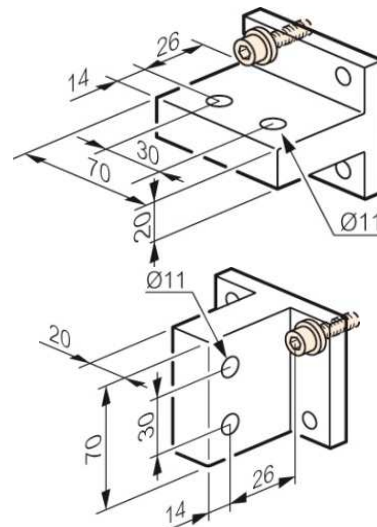


Mounting example:



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

References	
3P	4P
0 288 96	0 288 97



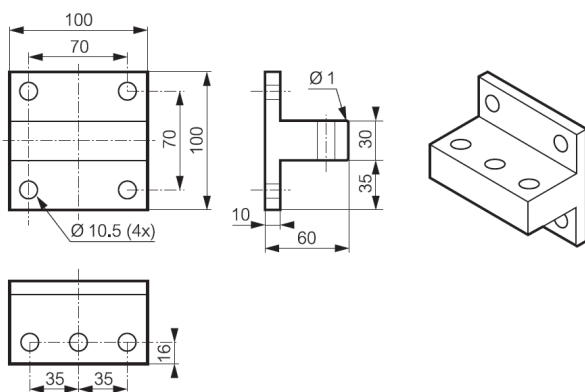
DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

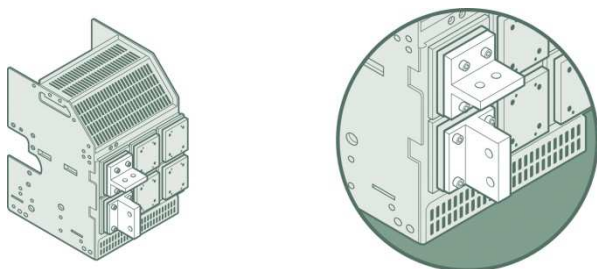
References: 0 286 20 / 21 / 22 / 23 / 24 / 25 / 26 / 30 / 31 / 32 / 33 / 34 / 35 / 36 / 40 / 41 / 42 / 43 / 44 / 45 / 46 / 50 / 51 / 52 / 53 / 54 / 55 / 56 / 60 / 61 / 62 / 63 / 64 / 65 / 66 / 70 / 71 / 72 / 73 / 74 / 75 / 76 / 83 / 84 / 85 / 86 / 0 287 20 / 21 / 22 / 23 / 24 / 25 / 26 / 30 / 31 / 32 / 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 / 93 / 94 / 95 / 96

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

References	
3P	4P
0 288 94	0 288 95

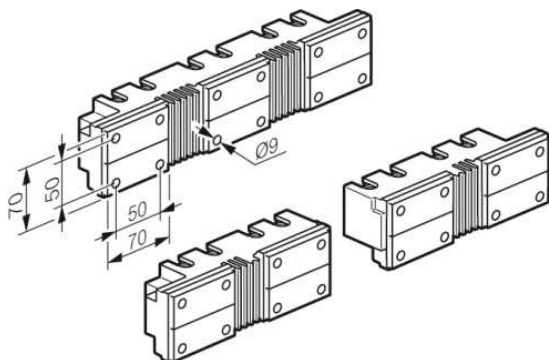


Mounting example:



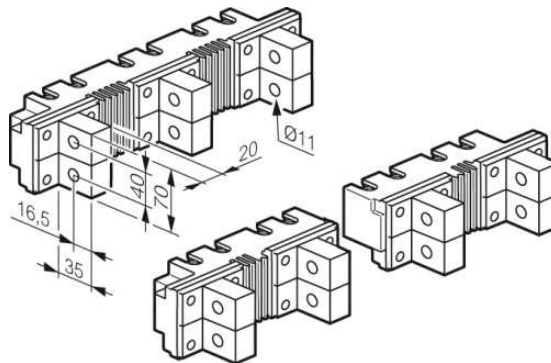
3.11 Spreaders for fixed version – Flat connection

References	
3P	4P
0 288 86	0 288 87



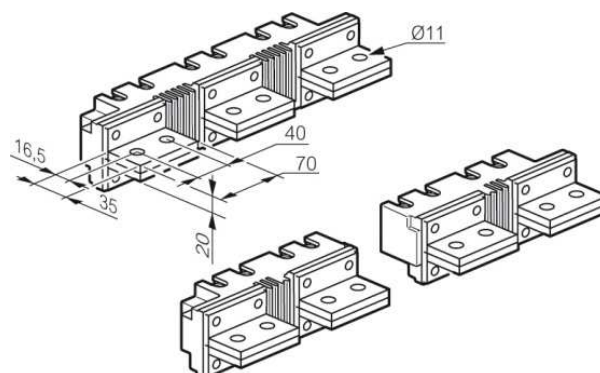
3.12 Spreaders for fixed version – Vertical connection

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



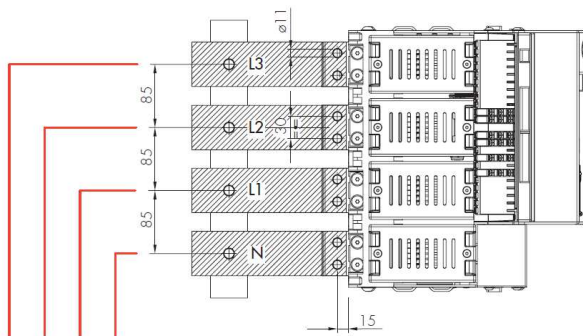
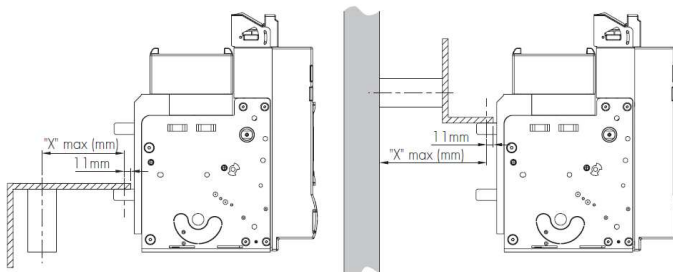
DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

3.14 Terminations support distances – Fixed version

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

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

. 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

DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

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 _{cu} (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 _{cu})		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 _{sw} (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
	690 V AC	50	55	65
Rated short time withstand current I _{sw} (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
	690 V AC	45	45	65
Individual pole short-circuit current I _{pr} (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
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		408
	3P - Drawout	327		425
	4P - Fixed	358		538
	4P - Drawout	412		555
Temperature	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 _e (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 _{sw} (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 _{sw} (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	
Weight (Kg)	3P - Fixed	419	
	3P - Drawout	465	
	4P - Fixed	419	
	4P - Drawout	465	
Height (mm)	3P - Fixed	354	
	3P - Drawout	433	
	4P - Fixed	354	
	4P - Drawout	433	
Depth (mm)	3P - Fixed	273	
	3P - Drawout	327	
	4P - Fixed	358	
	4P - Drawout	412	
Width (mm)	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

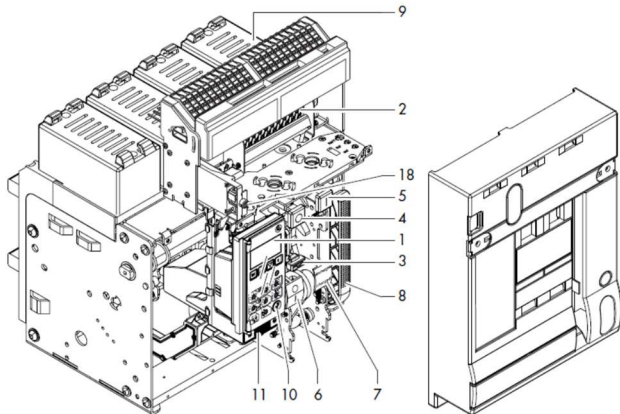
DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

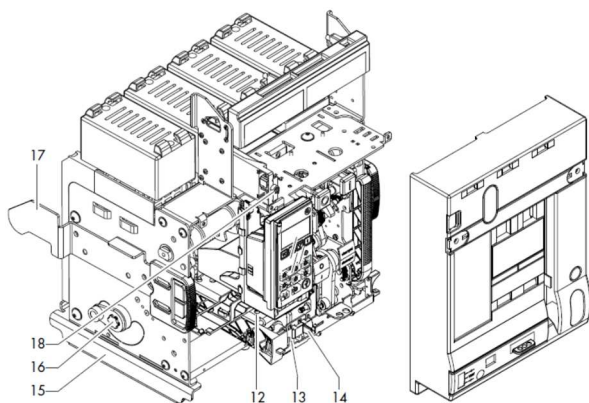
References: 0 286 20 / 21 / 22 / 23 / 24 / 25 / 26 / 30 / 31 / 32 / 33 / 34 / 35 / 36 / 40 / 41 / 42 / 43 / 44 / 45 / 46 / 50 / 51 / 52 / 53 / 54 / 55 / 56 / 60 / 61 / 62 / 63 / 64 / 65 / 66 / 70 / 71 / 72 / 73 / 74 / 75 / 76 / 83 / 84 / 85 / 86 / 0 287 20 / 21 / 22 / 23 / 24 / 25 / 26 / 30 / 31 / 32 / 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 / 93 / 94 / 95 / 96

6.1 Main parts constituting the circuit breaker

Fixed version

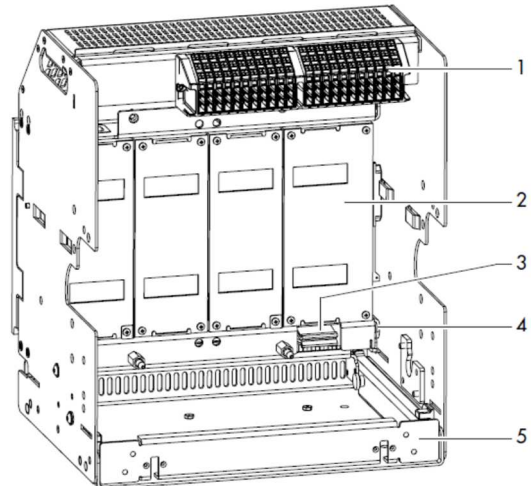


Draw-out version



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 Regulated ranges

I_n (A)	Phases			
	I_r		I_{sd}	
	$0.4 \times I_n$	$1 \times I_n$	$1.5 \times I_{r \min}$	$10 \times I_{r \max}$
630	252	630	378	6300
800	320	800	480	8000
1000	400	1000	600	10000
1250	500	1250	750	12500
1600	640	1600	960	16000
2000	800	2000	1200	20000
2500	1000	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

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

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
DMX ³ 2500 I _{cu} = 100kA	2500	1	2500	1	2350	0.94	2250	0.9	2150	0.86
	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
DMX ³ 2500 I _{cu} = 100kA	2500	1	2500	1	2250	0.9	2100	0.84	1950	0.78
	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

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

6.5 Electronic protection unit

All DMX³ 2500 can be equipped by an MP4 or MP6 electronic protection unit which main characteristics are:

-Adjustments accomplished by selector switches (MP4) or touchscreen (MP6)

-Long delay (I_r) threshold based on true RMS value of the current

-Integrated LCD screen display electrical values, settings and logs (only for MP4 release)

-Integrated 3.5" colour touchscreen to display electrical values, settings, logs and measures (only for MP4 release)

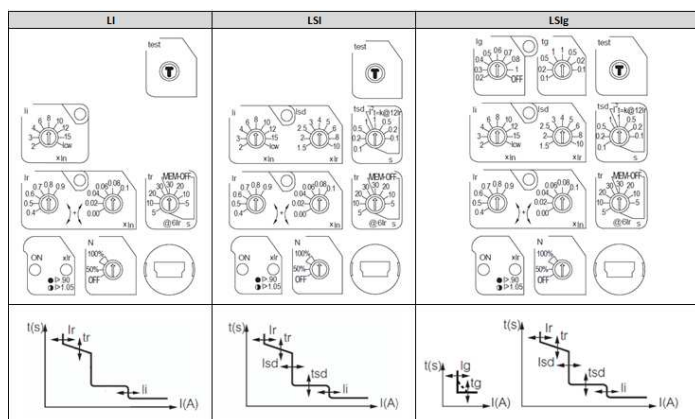
All protection units have onboard a mini USB type "B" socket for maintenance purposes.

6.5.1 Protection unit types

Protection unit are available in MP4 and MP6 type as following

Type	Function	Data		Reference
		visualization	adjustment	
MP4	LI	on LCD screen	knob	0 288 00
	LSI	on LCD screen	knob	0 288 01
	LSIg	on LCD screen	knob	0 288 02
MP6	LSI	on screen	touch	0 288 03
	LSIg	on screen	touch	0 288 04

MP4 detail



Protective functions

I_r : against overloads with long inverse time delay trip

t_r : long inverse time delay trip

I_{sd} : against short-circuits

t_{sd} : independent time delay ($t=k$)

: inverse short time delay ($I^2t=k$)

I_l : against short-circuits with adjustable threshold

I_{ov} : against short-circuit with fixed threshold (factory imposed)

I_g : against earth fault

t_g : independent time delay ($t=k$) or inverse short time delay ($I^2t=k$)

6.5.2 Trip threshold (and maximum setting range)

MP4 protection unit

	LI	LSI	LSIg	Maximum possible range of setting	Tolerance
I_r	$0.4 \pm 1 \times I_n$	$0.4 \pm 1 \times I_n$	$0.4 \pm 1 \times I_n$	1 st selector $0.4 \pm 0.9 \times I_n$ (step 0.1) 2 nd selector $0.00 \pm 0.1 \times I_n$ (step 0.02)	$\pm 20\%$
t_r	$5 \pm 30s$	$5 \pm 30s$	$5 \pm 30s$	at $6 \times I_r$, MEM ON (5-10-20-30s)	-
	$5 \pm 30s$	$5 \pm 30s$	$5 \pm 30s$	at $6 \times I_r$, MEM OFF (5-10-20-30s)	
I_{sd}	$10 \times I_r$	$1.5 \pm 10 \times I_r$	$1.5 \pm 10 \times I_r$	$1.5-2-2.5-3-4-5-6-8-10 \times I_r$	$\pm 20\%$
t_{sd}	$1s$	$0.1 \pm 1s$	$0.1 \pm 1s$	$t = k$ ($0.1-0.2-0.5-1s$) $I^2t = k$ ($0.3-0.2-0.1-0.01s$)	-
I_l	$2 \pm 15 \times I_n$	$2 \pm 15 \times I_n$	$2 \pm 15 \times I_n$	$2-3-4-6-8-10-12-15 \times I_n$	$\pm 10\%$
I_{ov}	I_{cw}/U_e	I_{cw}/U_e	I_{cw}/U_e	override instantaneous fixed threshold	$\pm 10\%$
I_g	N/A	N/A	$0.2 \pm 1 \times I_n$	$0.2-0.3-0.4-0.5-0.6-0.7-0.8-1$	$\pm 20\%$
t_g	N/A	N/A	$0.1 \pm 1s$	$t = k$ ($0.1-0.2-0.5-1s$) $I^2t = k$ ($0.1-0.2-0.5-1s$)	-

MP6 protection unit

	LSI	LSIg	Maximum possible range of setting	Tolerance
I_r	$0.4 \pm 1 \times I_n$	$0.4 \pm 1 \times I_n$	$0.4 \pm 1 \times I_n$ (step 0.1)	$\pm 20\%$
t_r	$5 \pm 30s$	$5 \pm 30s$	at $6 \times I_r$, MEM ON (5-10-20-30s)	-
	$5 \pm 30s$	$5 \pm 30s$	at $6 \times I_r$, MEM OFF (5-10-20-30s)	
I_{sd}	$1.5 \pm 10 \times I_r$	$1.5 \pm 10 \times I_r$	$1.5-2-2.5-3-4-5-6-8-10 \times I_r$	$\pm 20\%$
t_{sd}	$0.1 \pm 1s$	$0.1 \pm 1s$	$t = k$ (0 ± 1 step 0.1) $I^2t = k$ (0 ± 1 step 0.1)	-
I_l	$2 \pm 15 \times I_n$	$2 \pm 15 \times I_n$	$2-3-4-6-8-10-12-15 \times I_n$	$\pm 10\%$
I_{ov}	I_{cw}/U_e	I_{cw}/U_e	override instantaneous fixed threshold	$\pm 10\%$
I_g	N/A	$0.2 \pm 1 \times I_n$	$0.2-0.3-0.4-0.5-0.6-0.7-0.8-1$	$\pm 20\%$
t_g	N/A	$0.1 \pm 1s$	$t = k$ ($0.1-0.2-0.5-1s$) $I^2t = k$ ($0.1-0.2-0.5-1s$)	-

6.5.3 Batteries for protection units

All protection units are equipped with batteries for powering in case of mains fault or when the breaker is open or not connected. All settings, stored parameters and logs are kept saved on protection unit's memory also if batteries are removed to be replaced.

The protection unit has to be equipped with four CR2 Lithium batteries (voltage 3V).

6.6 Common accessories for protection units

• External auxiliary power supply ref. 0 288 06

Input supply	24 V DC or AC @50-60Hz
Output current	250 mA
Operating temperature (°C)	-10 ÷ +55
Input power supply (W / VA)	≥ 5
Dimension	35mm Din rail: 2 modules

• Communication option ref. 0 288 05

• External neutral for DMX³ 2500 ref. 0 288 11

• Programmable output module ref. 0 288 12

Input supply	24 V DC or AC @50-60Hz
Contact rated current (A)	AC: 250V 8A DC: 30V 8A; 110V 0.3A; 230V 0.12A
Operating temperature (°C)	-10 ÷ +55
Dimension	35mm Din rail: 6 modules

DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

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.

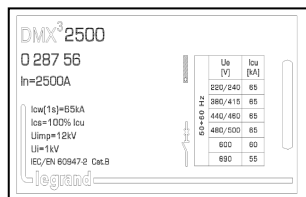
DMX³ respect the European Directives REACH, RoHS, RAEE and Product Environment Product (PEP Ecopassport) are available.

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

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

• 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

• 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
- Inserted/test/drawout lock button ref. 0 288 17

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

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

- Key locking in "open" position
 - 1 lock + 1 Profalux star type flat key ref. 0 288 30
 - 1 lock + 1 Ronis type flat key ref. 0 288 31
 - 2 holes support frame for locks ref. 0 288 28
 - Set of 5 key barrels with Ronis type flat key ref. 0 288 29

- Key locking in "draw-out" position
 - Mounting of the lock on the base
 - Lock and key Profalux type star key ref. 0 288 32
 - Lock and key Ronis type flat key ref. 0 281 33

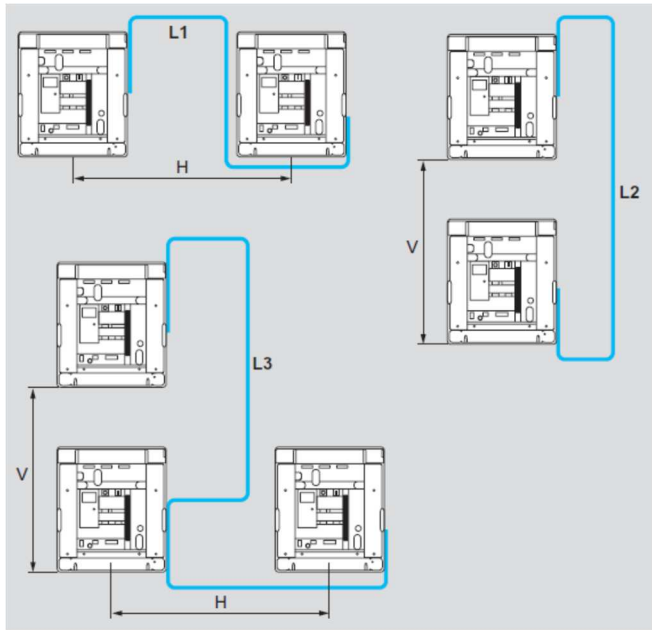
- Door locking
 - Prevents opening of the door with the circuit breaker closed
 - Left-hand and right-hand side mounting ref. 0 288 20

DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

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

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

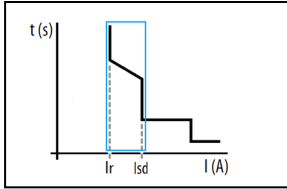
DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

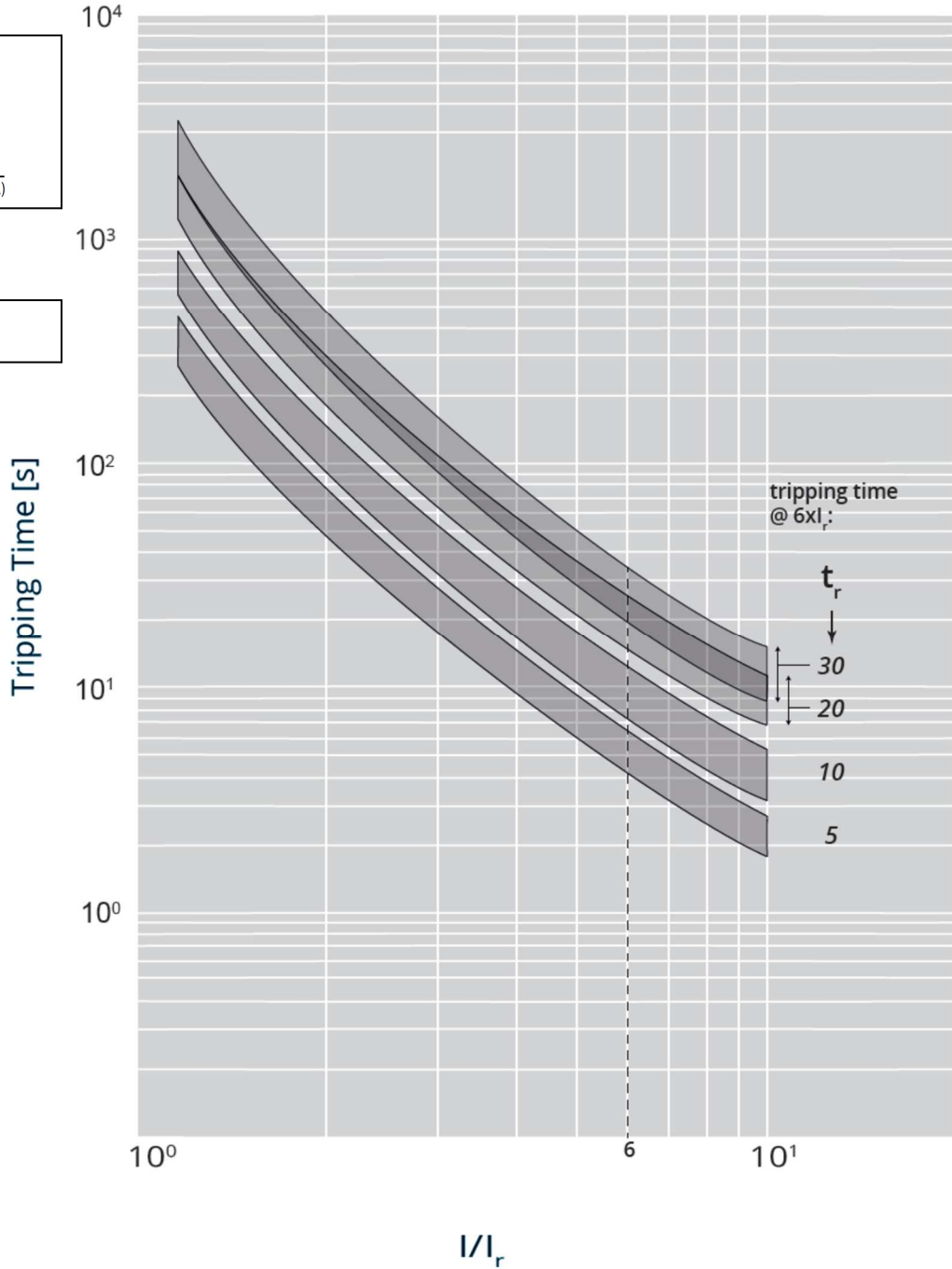
References: 0 286 20 / 21 / 22 / 23 / 24 / 25 / 26 / 30 / 31 / 32 / 33 / 34 / 35 / 36 / 40 / 41 / 42 / 43 / 44 / 45 / 46 / 50 / 51 / 52 / 53 / 54 / 55 / 56 / 60 / 61 / 62 / 63 / 64 / 65 / 66 / 70 / 71 / 72 / 73 / 74 / 75 / 76 / 83 / 84 / 85 / 86 / 0 287 20 / 21 / 22 / 23 / 24 / 25 / 26 / 30 / 31 / 32 / 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 / 93 / 94 / 95 / 96

9. CURVES

9.1.1 TRIPPING CURVE FOR DMX³ 2500 protection units: long time protection detail



Update: 27/03/2018



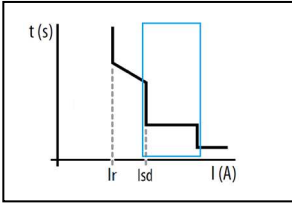
Value	Description
I	current
I_r	long time setting current
t_r	long time delay

DMX³ 2500 circuit breakers

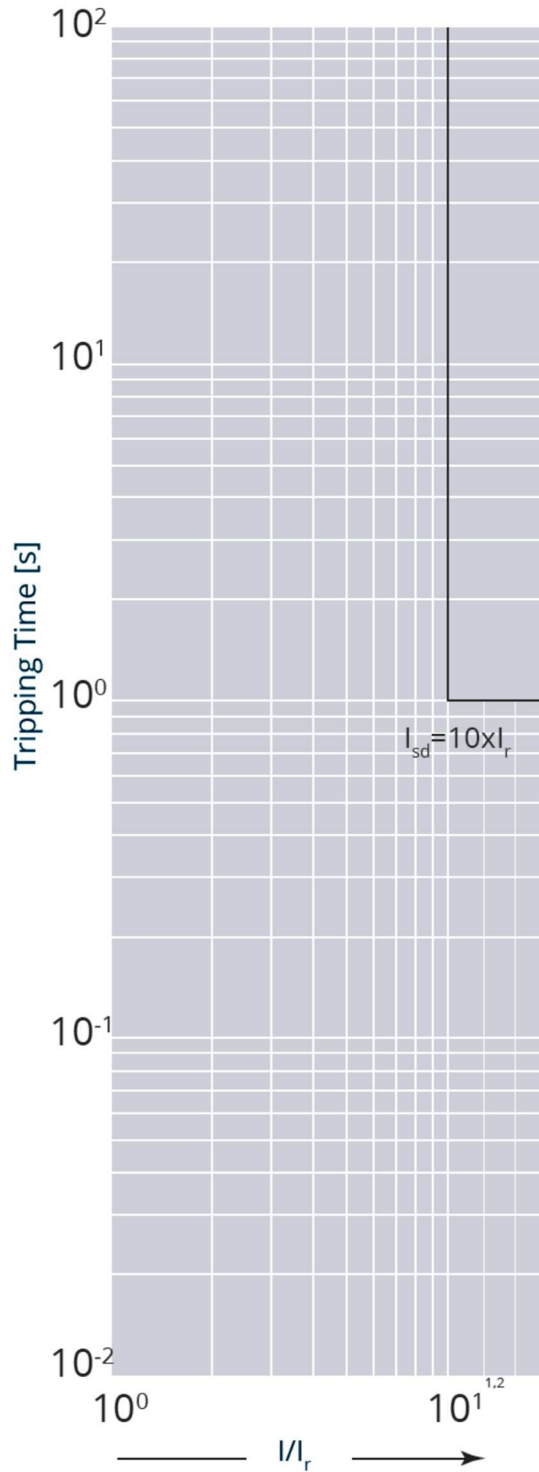
DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

9.1.2 TRIPPING CURVE FOR DMX³ 2500 (MP4 protection units): short time trip protection detail (only LI)



Update: 27/04/2018



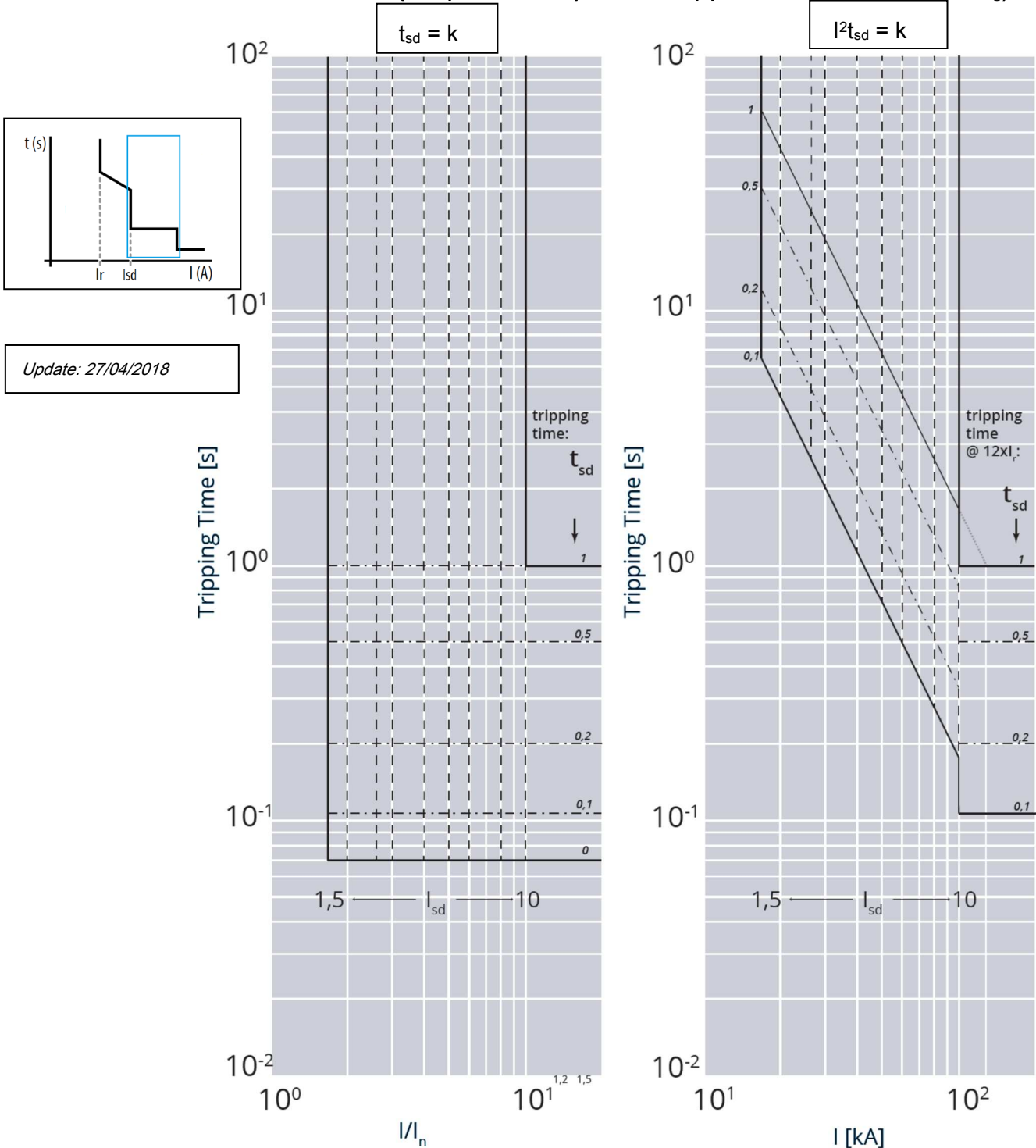
Value	Description
I	current
I _{sd}	short time setting current
t _{sd}	short time delay

DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

9.1.3 TRIPPING CURVE FOR DMX³ 2500 (MP4 protection units): short time trip protection detail (only LSI and LSIg)



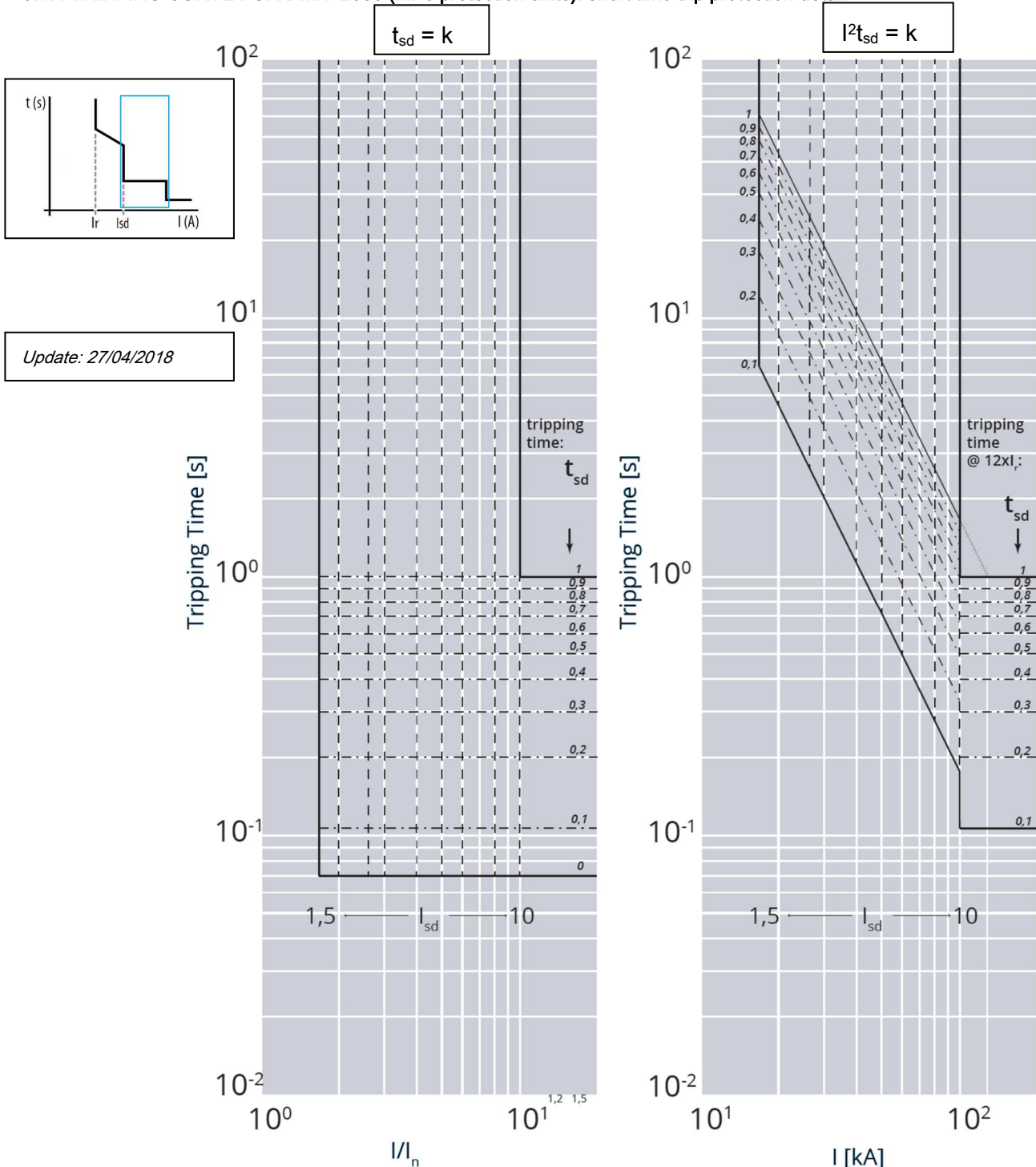
Value	Description
I	current
I _{sd}	short time setting current
t _{sd}	short time delay

DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 /
 0 287 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 / 93 / 94 / 95 / 96

9.1.4 TRIPPING CURVE FOR DMX³ 2500 (MP6 protection units): short time trip protection detail



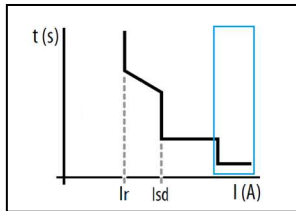
Value	Description
I	current
I_{sd}	short time setting current
t_{sd}	short time delay

DMX³ 2500 circuit breakers

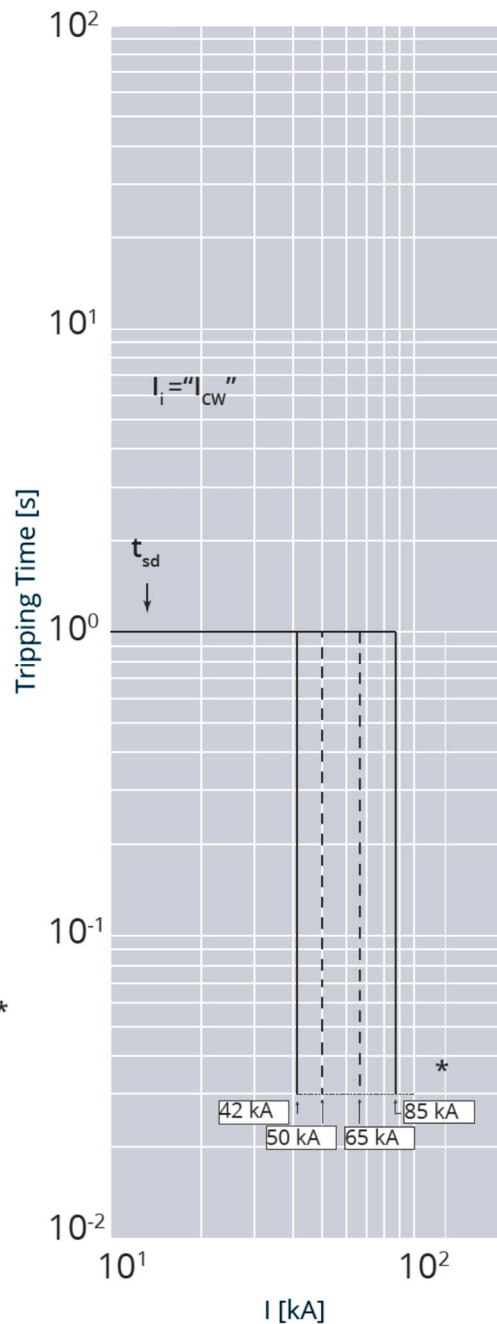
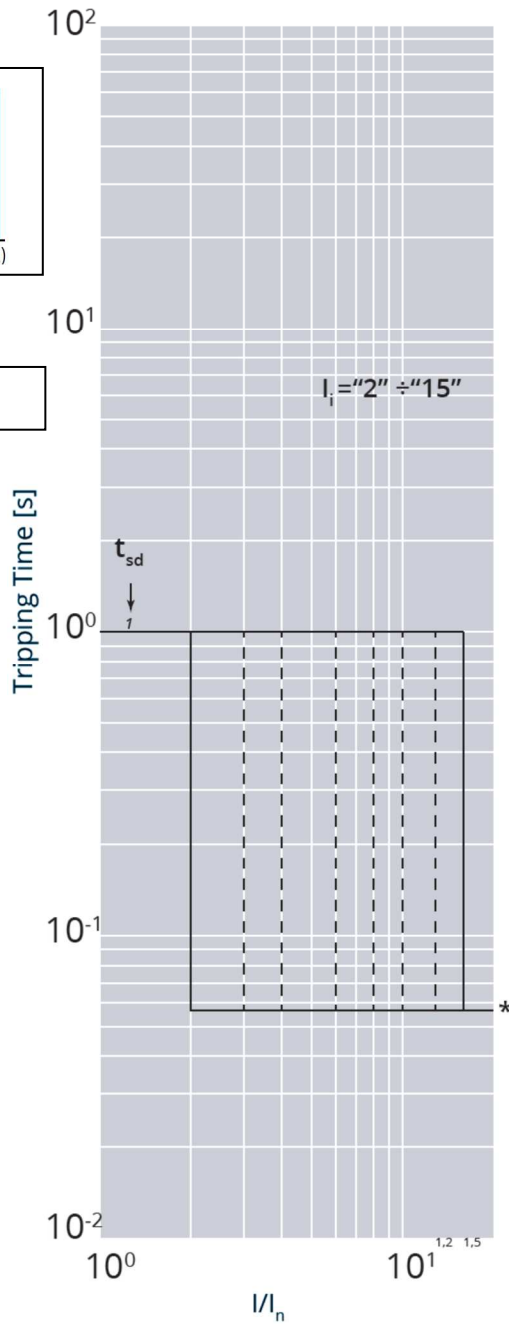
DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

9.1.5 TRIPPING CURVE FOR DMX³ 2500 (MP4 protection units): instantaneous trip protection detail (only LI)



Update: 25/06/2018



* 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

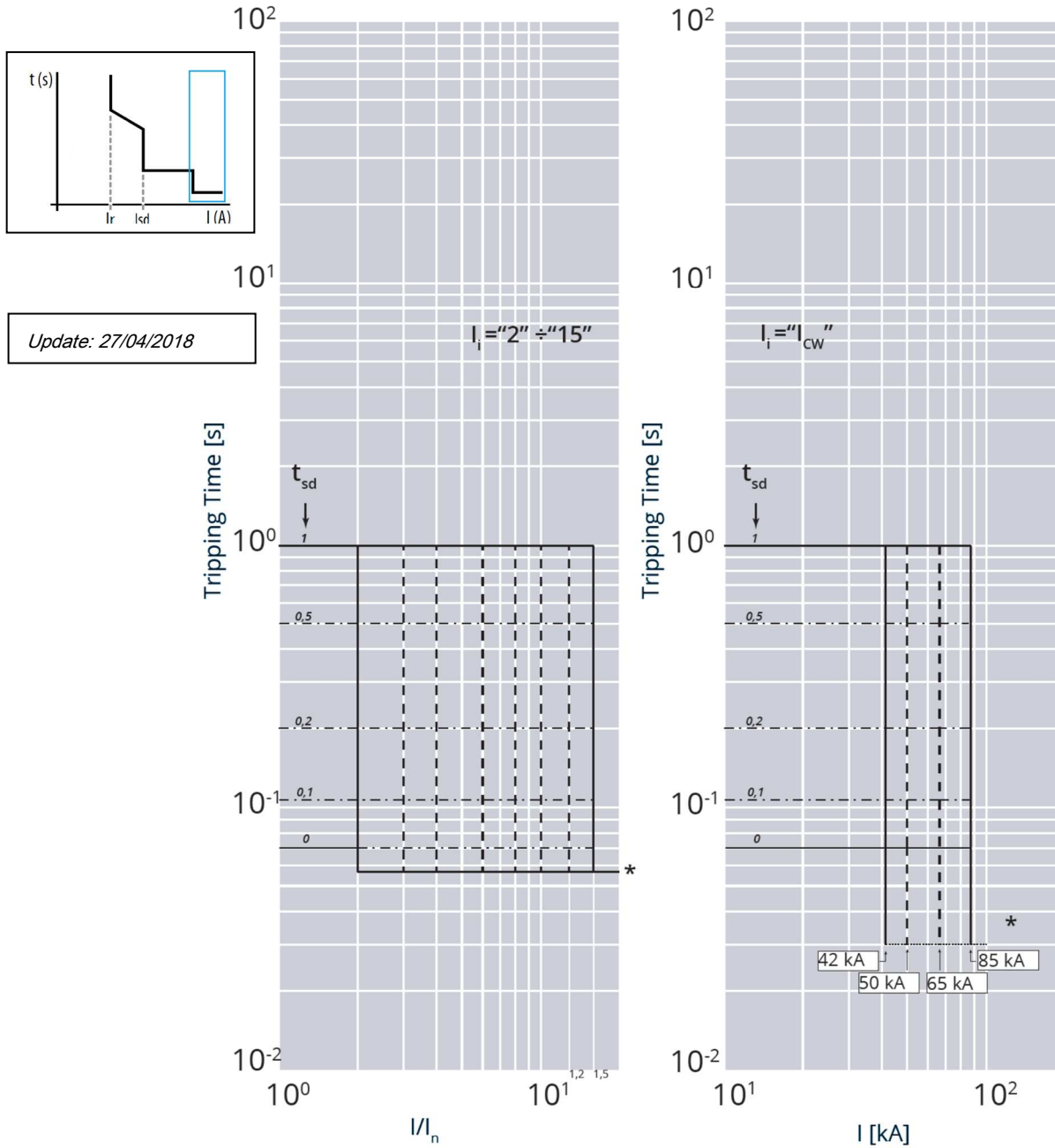
I _{cu}	Values for I _{sf}
50kA	50kA
65kA	65kA
100kA	85kA

DMX³ 2500 circuit breakers

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

9.1.6 TRIPPING CURVE FOR DMX³ 2500 (MP4 protection units): instantaneous trip protection detail (only LSI and LSIg)



* 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

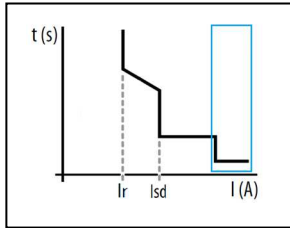
I_{cu}	Values for I_{sf}
50kA	50kA
65kA	65kA
100kA	85kA

DMX³ 2500 circuit breakers

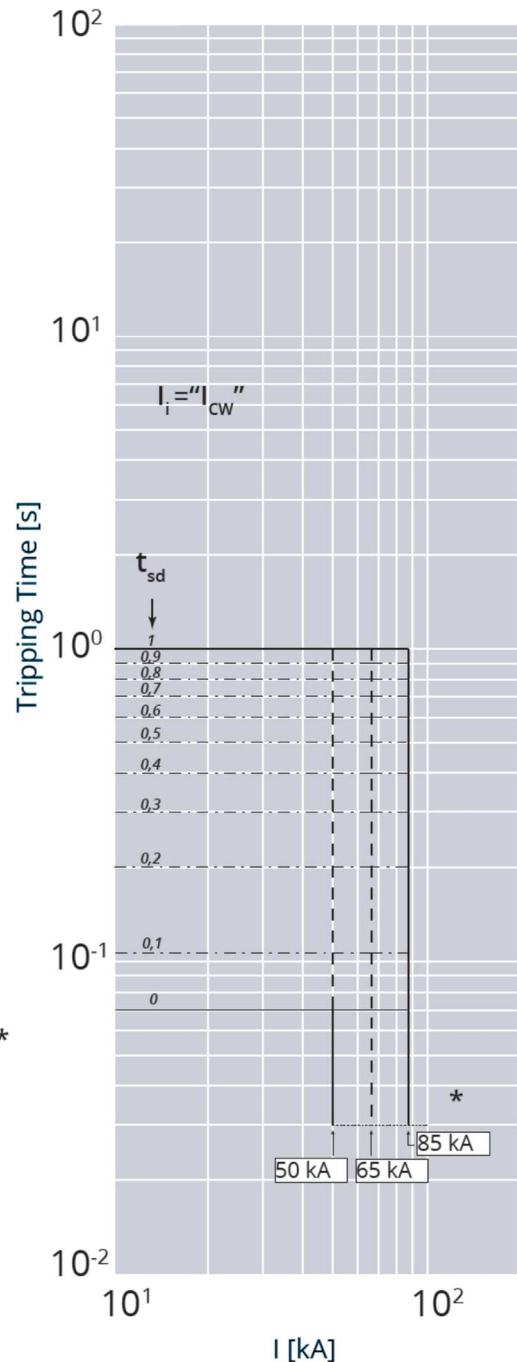
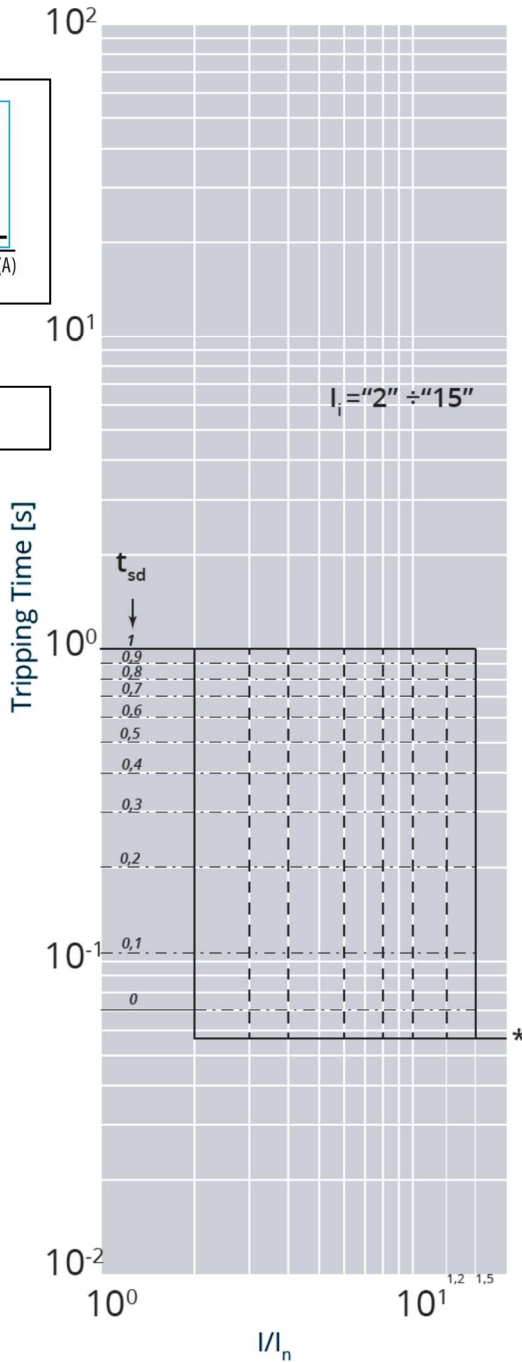
DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

9.1.7 TRIPPING CURVE FOR DMX³ 2500 protection units (MP6 protection units): instantaneous trip protection detail



Update: 27/04/2018



* 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

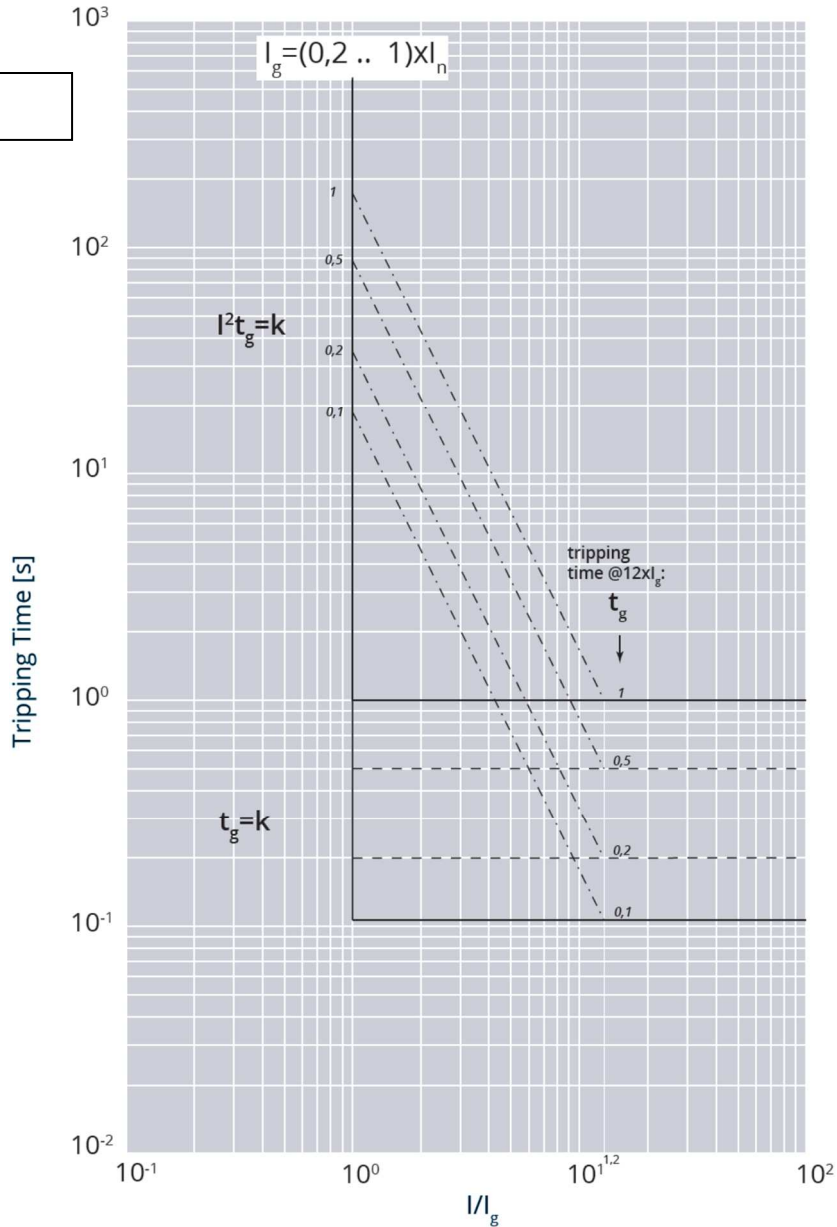
DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

9.1.8 Ground fault curve (MP4 protection units)

Only LSIg releases

Update: 27/04/2018



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

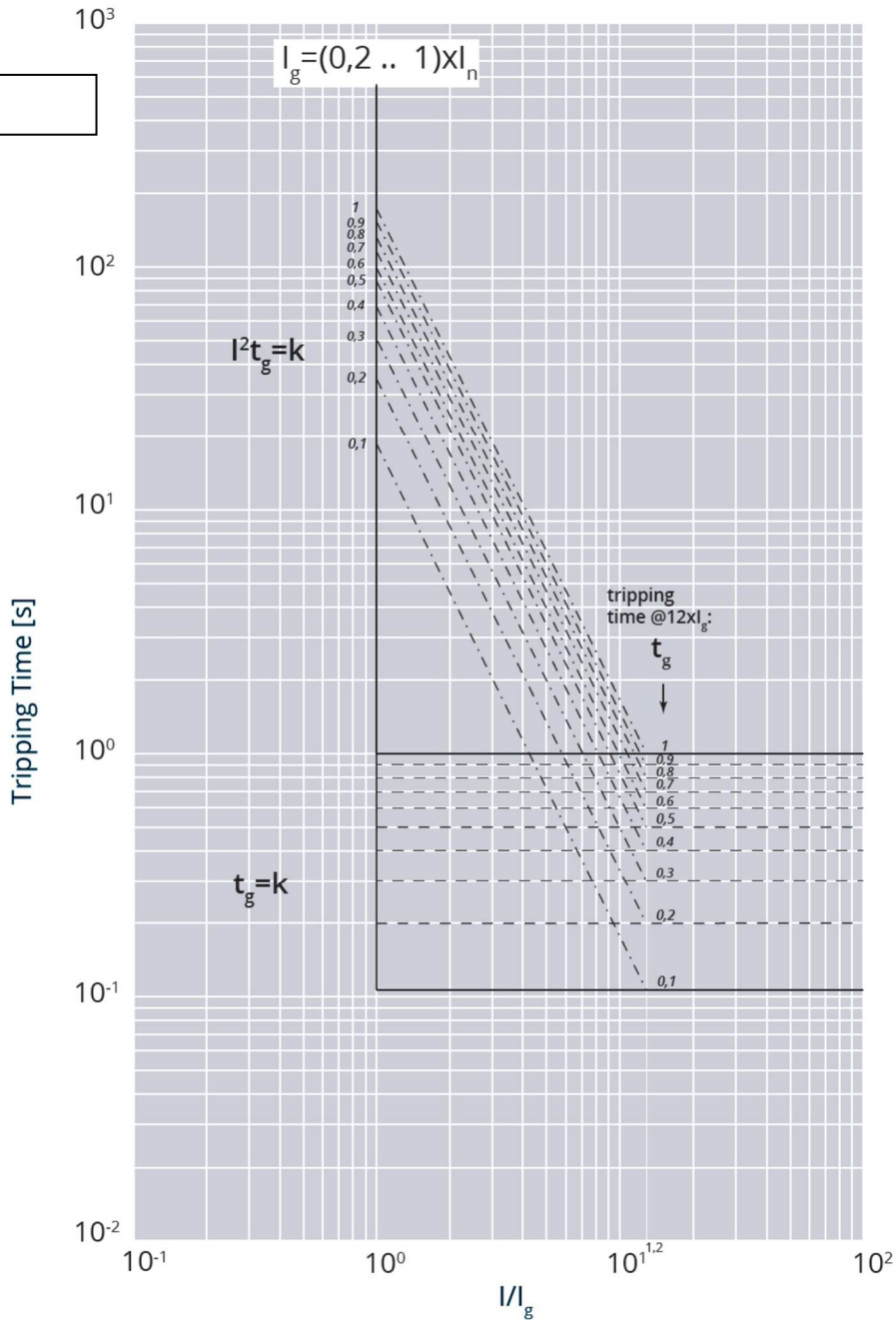
DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 /
 0 287 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 / 93 / 94 / 95 / 96

9.1.9 Ground fault curve (MP6 protection units)

Only LSig releases

Update: 27/04/2018



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

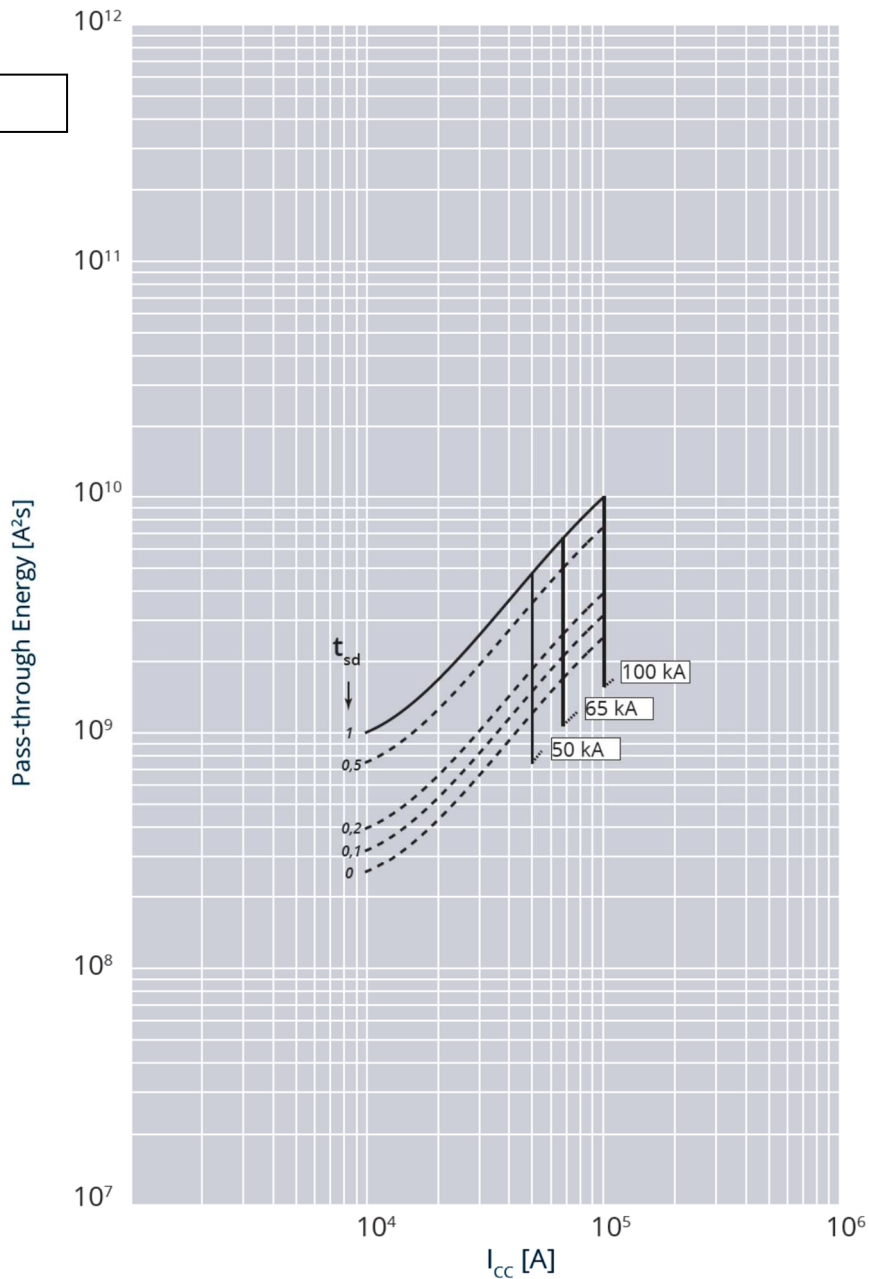
DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 /
 0 287 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 / 93 / 94 / 95 / 96

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

Only LSIg releases

Update: 19/02/2018



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

DMX³-I 2500 switch disconnectors

References: 0 286 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 / 83 / 84 / 85 / 86 / 0 287 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 / 93 / 94 / 95 / 96

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