128, av. du Maréchal-de-Lattre-de-Tassigny - 87045 LIMOGES Cedex
Tél. : 33(0)5 55 06 87 87
www.legrand.com

DMX³ 4000 circuit-breakers (PU MP2.10 and MP4.10) DMX³-I 4000 trip free switches

Cat.Nos:
0 283 67/68 - 0 283 77/78 - 0 283 87/88 - 0 283 97/98
0 284 07/08 - 0 284 17/18 - 0 284 27/28 - 0 284 37/38
0 284 47/48 - 0 284 57/58 - 0 284 67/68 - 0 284 77/78
0 282 44/45 - 0 282 54/55 - 0 282 84/85 - 0 282 94/95

CONTENT **Page**

1. USE

DMX³ air circuit breakers offer optimal solutions to answer protection requirements on the origin of the low voltage electrical installation (IEC/EN 60364-1) up to 6300 A. Their electric and mechanical robustness, in addition to breaking capacity and chances of accessorising, are perfectly suited for these requirements.
DMX³ offers a series of trip-free switches (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 part 10. Conformity).

2. RANGE

2.1 DMX³ 4000 fixed version with PU MP2.10/MP4.10

	50 kA		65 kA		100 kA	
In (A)	3P	4P	3P	4P	3P	4P
3200	0 283 67	0 283 77	0 283 87	0 283 97	0 284 07	0 284 17
4000	0 283 68	0 283 78	0 283 88	0 283 98	0 284 08	0 284 18

2.2 DMX³ 4000 draw-out version with PU MP2.10/MP4.10

	50 kA		65 kA		100 kA	
In (A)	3P	4P	3P	4P	3P	4P
3200	0 284 27	0 284 37	0 284 47	0 284 57	0 284 67	0 284 77
4000	0 284 28	0 284 38	0 284 48	0 284 58	0 284 68	0 284 78

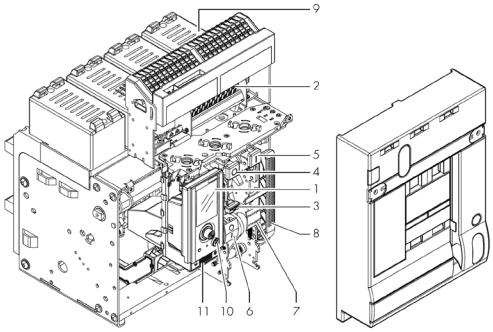
2.3 DMX³-I 4000 trip-free switches fixed/draw-out version

	Fixed version		Draw-out version	
In (A)	3P	4P	3P	4P
3200	0 282 44	0 282 54	0 282 84	0 282 94
4000	0 282 45	0 282 55	0 282 85	0 282 95

2.4 Composition

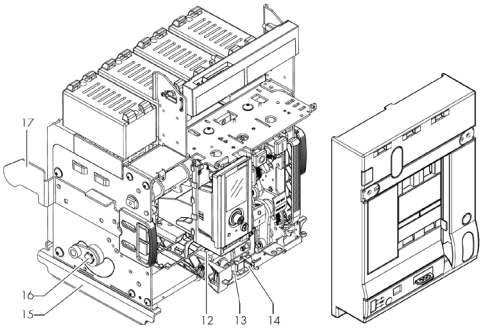
Main parts constituting the circuit breaker

Fixed 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

Draw-out version

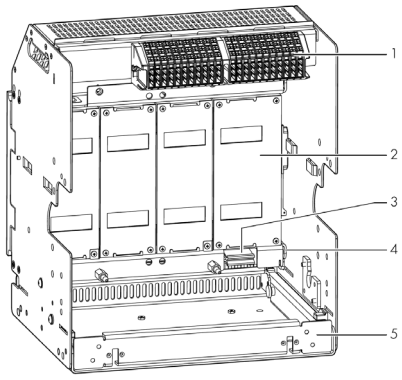


12. Draw-out mechanism
13. Draw-out bar insertion
14. Racking shutter
15. Support to place the breaker in draw-out cassette
16. Draw-out main shaft
17. Insertion guide

2. RANGE *(continued)*

■ 2.4 Composition *(continued)*

Draw-out base



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

DMX³ are equipped with auxiliary contacts (2 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.

3. TECHNICAL CHARACTERISTICS

■ 3.1 Electrical characteristics

- Circuit breaker

		DMX³ 4000		
		50 kA	**65 kA**	**100 kA**
Frame current		4000 A		
Rated current In		3200 A/4000 A		
Poles		3P - 4P		
Rated insulation voltage Ui		1000 V		
Rated impulse withstand voltage Uimp		12 kV		
Rated operational voltage (50/60Hz) Ue		690 V		
Rated ultimate short-circuit breaking capacity Icu (kA)	220/240 V~	50	65	100
	380/415 V~	50	65	100
	440/460 V~	50	65	100
	480/500 V~	50	65	100
	600 V~	50	65	75
	690 V~	50	55	65
Rated service short-circuit breaking capacity Ics (% Icu)		100%		

		DMX³ 4000		
		50 kA	**65 kA**	**100 kA**
Rated short-circuit making capacity Icm (kA)	220/240 V~	105	143	220
	380/415 V~	105	143	220
	440/460 V~	105	143	220
	480/500 V~	105	143	220
	600 V~	105	132	165
	690 V~	105	121	143
Rated short time withstand current Icw (kA) for t = 1s	220/240 V~	50	65	85
	380/415 V~	50	65	85
	440/460 V~	50	65	85
	480/500 V~	50	65	85
	600 V~	50	60	75
	690 V~	50	55	65
Rated short time withstand current Icw (kA) for t = 3s	220/240 V~	50	65	65
	380/415 V~	50	65	65
	440/460 V~	50	65	65
	480/500 V~	50	65	65
	600 V~	50	65	65
	690 V~	50	55	65
Individual pole short-circuit current I_{IT} (kA)	220/240 V~	1.2 times the maximum setting of the defined time delay release tripping current (Isd) [1]		
	380/415 V~			
	440/460 V~			
	480/500 V~			
	600 V~			
	690 V~			
Suitable for insulation		Yes		
Neutral protection (% Ith)		0 - 50 - 100		
Operation temperature		-25 °C to +70 °C		
Storage temperature		-25 °C to +85 °C		

[1] For more details, please consult Legrand

- Trip-free switches

		DMX³-I 4000
Rated current In (A)		3200 A/4000 A
Poles		3P - 4P
Rated insulation voltage Ui		1000 V
Rated impulse withstand voltage Uimp		12 kV
Rated operational voltage (50/60Hz) Ue		690 V
Category of use		AC23A
Rated short circuit making capacity Icm (kA)	220/240 V~	187
	380/415 V~	187
	440/460 V~	187
	480/500 V~	187
	600 V~	165
	690 V~	143

3. TECHNICAL CHARACTERISTICS *(continued)*

■ 3.1 Electrical characteristics *(continued)*

- Trip-free switches *(continued)*

		DMX³-I 4000
Rated short time withstand current Icm (kA) for t = 1s	220/240 V~	85
	380/415 V~	85
	480/500 V~	85
	600 V~	75
	690 V~	65
Rated short time withstand current Icw (kA) for t = 3s	220/240 V~	65
	380/415 V~	65
	480/500 V~	65
	600 V~	65
	690 V~	65
Suitable for insulation		Yes
Operation temperature		-25 °C to +70 °C
Storage temperature		-25 °C to +85 °C

The maximum temperature allowed on power terminals is 135 °C (absolute). For details, see IEC 60947-1 and 60947-2.

■ 3.2 Phases limit trip current

	Thermal		Magnetic	
	Ir		Isd	
In (A)	0.2 x In	1 x In	1.5 x Ir min	10 x Ir max
3200	640	3200	1920	32000
4000	800	4000	2400	40000

Note: for neutral adjustment, please consider the values ratios 0%, 50% and 100% on set currents.

■ 3.3 Mechanical characteristics

- Endurances:

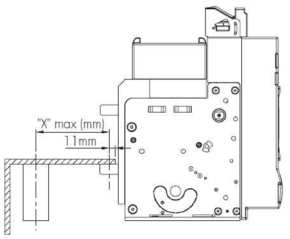
		DMX³ 4000/DMX³-I 4000
Endurance (cycles)	Mechanical	10000 (w/o maintenance); 20000 (with maintenance)
	Electrical	10000 (w/o maintenance)
Category of use		B

Note:
- With auxiliary contacts: same as breaker (10000 cycles w/o maintenance);
- With motor operator: 10000 cycles;
- With releases: 10000 cycles.

- Electrodynamic forces:

The table below shows an indication of suggested distances to keep between the breaker and the first fixing point of the conductor and bars in order to reduce the effects of the electrodynamic stresses that may be created during a short circuit.
In the realization of anchorage system it is recommend the use of isolators suitable for the type of conductor used and the operating voltage.

Icc (kA) max	**50**	**65**	**100**
"X" max. (mm)	300	250	150



According to conductor type and bar system (except Legrand bar kits), the choice of the distance to keep is to be calibrated by the installer.
Also, the installer must take into account the weight of the conductors so that it does not affect the electrical junction between the conductor itself and the connection point.

■ 3.4 Power losses per pole at In/Ie

		Circuit breaker and trip-free switche	
		Fixed	Draw-out
Rated current In (A)	3200	83.3	163.8
	4000	130.1	256.0

Note: power loss in the table above are referred and measured as described in the standard IEC 60947-2 (Annex G) for circuit-breakers and IEC 60947-1 for switches. Values in the table are referred to a single phase.

■ 3.5 Electronic protection unit

All DMX³ 4000 can be equipped by an MP2.10 or MP4.10 electronic protection unit whose 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 Ir, tr, Isd, tsd, Ii, Ig and tg;
- 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 type "B" USB socket for maintenance purposes or PCS software connection to PC.

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

	Features		Power consumption	Cat.Nos
	Display	With measure		
MP2.10	LED matrix	NO	55 mA	0 283 04
		YES	69 mA	0 283 05*
MP4.10	LCD screen	NO	62.5 mA	0 283 06
		YES	80 mA	0 283 07*

* For the correct working of metering function, it is necessary to connect a CX³ EMS power supply module Cat.No 4 149 45.

Protective functions
Ir: Long time delay protection against overloads
From 0.2 to 1 x In with steps of 1A
Protection: ON/OFF

3. TECHNICAL CHARACTERISTICS *(continued)*

■ **3.5 Electronic protection unit *(continued)***
- Protective functions *(continued)*

tr: Long delay protection operation time
From 40 ms to 30 s (@6Ir) with steps of 40 ms
Thermal memory: ON/OFF

Isd: Short time delay protection against short-circuits
From 1.5 to 10 x Ir with steps of 1 A
Protection: ON/OFF

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

Ii: Instantaneous protection against very high short-circuits
From 2 to 15 x In or Icw with steps of 1 A
Protection: ON/OFF

Ig: Earth fault current
From 0.2 to 1 x In with steps of 1A
Protection: ON/OFF

tg: Time delay on earth fault tripping
From 80 ms to 1s with steps of 40 ms
(both t = k, independent time delay, and I^2t=k, inverse short time delay)

N: Neutral protection OFF-50%-100%-200%

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.

General remarks on protection unit
The protection units MP2.10/MP4.10 are normally supplied by the internal current transformers (CTs).
When the current flowing through the circuit breaker is greater than 50 A (single for phase load), the internal current supply ensures all operation of the protection unit (included LED status).

Display backlight is guaranteed starting from 220 A (for single phase load) and integrated measure (if available) are instead guaranteed starting from 300 A (for single phase load) in absence of any other supply.
In any case the external power supply is strongly recommended for the correct working of measurement, as well as RS485 communication.
To ensure the same performance when the load is less than 50 A (for single phase load) to grant complete functions, one of the following optional power supplies can be used:
- EMS power supply module (Cat.No 4 149 45)
- Power supply temporarily connected to frontal USB socket, connected to a 5 V⎓ power bank, Dongle BLE or PC.

Common accessories for protection units
Bluetooth communication key Cat.No 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 the front of protection unit.
Power supply module Cat.No 4 149 45
500 mA 12 V stablized power supply module for CX³ energy management system – 1 DIN module. For correct use, choose protection units with measure function (Cat.Nos. 0 283 01 or 0 283 03)
Communication interface Cat.No. 4 149 40
RS485/CX³ energy management system conversion
Consumption: 0.344 W - 28.7 mA (12 V⎓) – 1 DIN module
External neutral Cat.No. 0 281 98
Optional accessories, to be ordered when ordering electronic protection unit and DMX³ air circuit breakers for factory assembly.

4. INSTALLATION RULES

Temperature derating

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/DMX³-I 4000 fixed version-horizontal terminals:

	Fixed version									
Temperature	**up to 40 °C**		**50 °C**		**60 °C**		**65 °C**		**70 °C**	
	Imax (A)	Ir/In	Imax (A)	Ir/In	Imax (A)	Ir/In	Imax (A)	Ir/In	Imax (A)	Ir/In
DMX³ 4000	3200	1	3200	1	3200	1	3136	0.98	3008	0.94
DMX³-I 4000	4000	1	3920	0.98	3680	0.92	3440	0.86	3120	0.78

Temperature deratings for DMX³/DMX³-I 4000 draw-out version-horizontal terminals:

	Draw-out version									
Temperature	**up to 40 °C**		**50 °C**		**60 °C**		**65 °C**		**70 °C**	
	Imax (A)	Ir/In	Imax (A)	Ir/In	Imax (A)	Ir/In	Imax (A)	Ir/In	Imax (A)	Ir/In
DMX³ 4000	3200	1	3200	1	3200	1	3072	0.96	2880	0.90
DMX³-I 4000	4000	1	3760	0.94	3440	0.86	3200	0.80	2960	0.74

NOTE: For further technical information, please contact Legrand technical support.

4. INSTALLATION RULES *(continued)*

Temperature derating *(continued)*

Climatic conditions: according to IEC/EN 60947-1 Annex Q, Cat. F subject to temperature, humidity, vibration, shock and salt mist.
Pollution degree: for DMX³ 4000 circuit breakers, degree 3, according to IEC/EN 60947-2.
Electromagnetic disturbances (EMC): for DMX³ 4000, according to IEC/EN 60947-2 - Annex F.

Altitude derating for DMX³ and DMX³-I

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

5. DIMENSIONS AND WEIGHTS

5.1 Dimensions

		DMX³ 4000/DMX³-I 4000
Height (mm)	3P-fixed	419
	3P-Draw-out	473
	4P-Fixed	419
	4P-Draw-out	473
Depth (mm)	3P-fixed	354
	3P-Draw-out	433
	4P-Fixed	354
	4P-Draw-out	433
Width (mm)	3P-fixed	408
	3P-Draw-out	425
	4P-Fixed	538
	4P-Draw-out	555

5.2 Weights

		DMX³ 4000
Weight (kg)	3P-fixed	55
	3P-Draw-out(1)	106
	4P-Fixed	68
	4P-Draw-out(1)	134

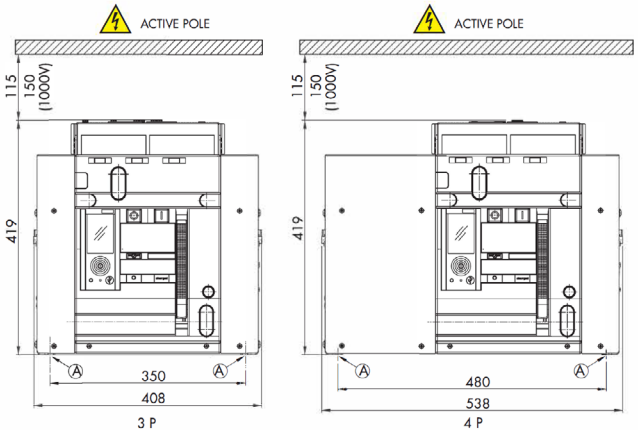
(1) Weights for draw-out releases are to be intended with base.

		DMX³-I 4000
Weight (kg)	3P-fixed	54
	3P-Draw-out(1)	105
	4P-Fixed	67
	4P-Draw-out(1)	133

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

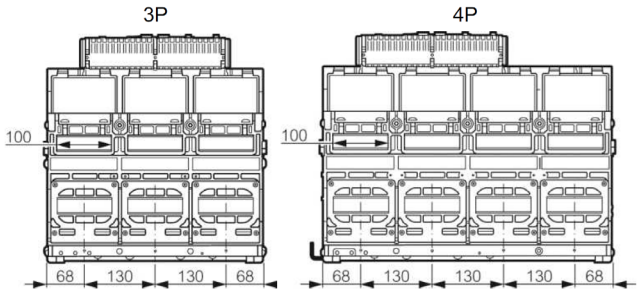
5.3 Fixed version

Frontal view

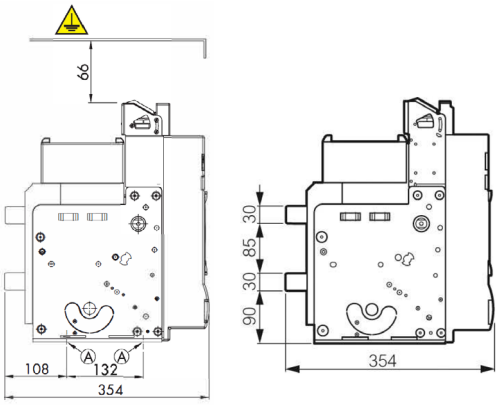


A = fixing point on plate of enclosure

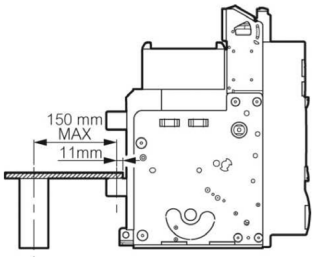
Rear view



Lateral view



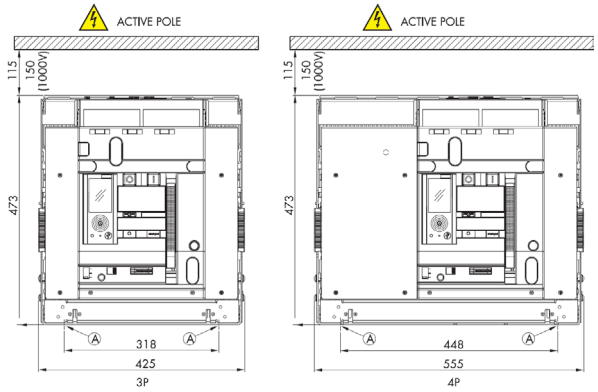
A = fixing point on plate of enclosure



5. DIMENSIONS AND WEIGHTS *(continued)*

5.4 Draw-out version

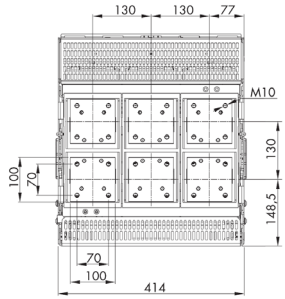
Frontal view



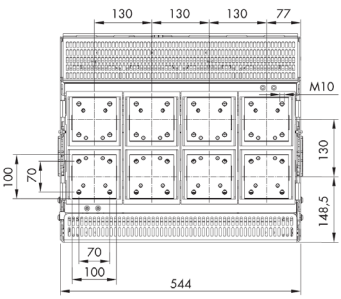
A = fixing point on plate of enclosure

Rear view
- Flat terminals

3P

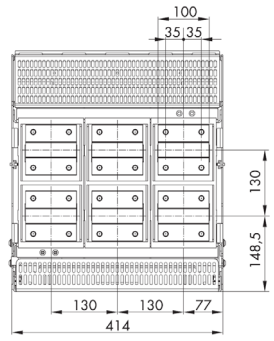


4P

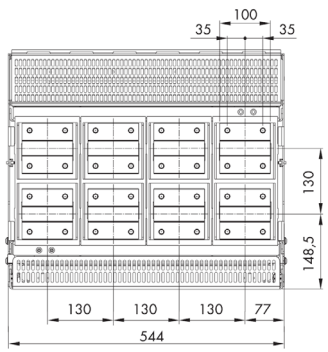


- Horizontal terminals

3P

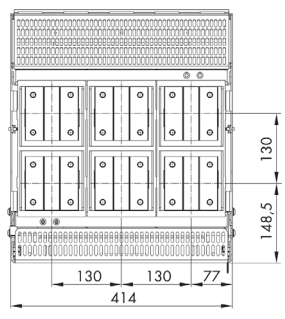


4P

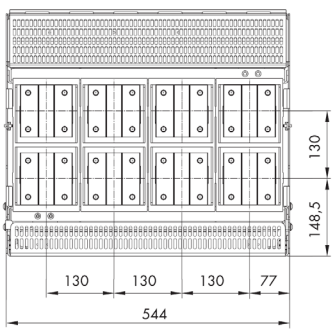


- Vertical terminals

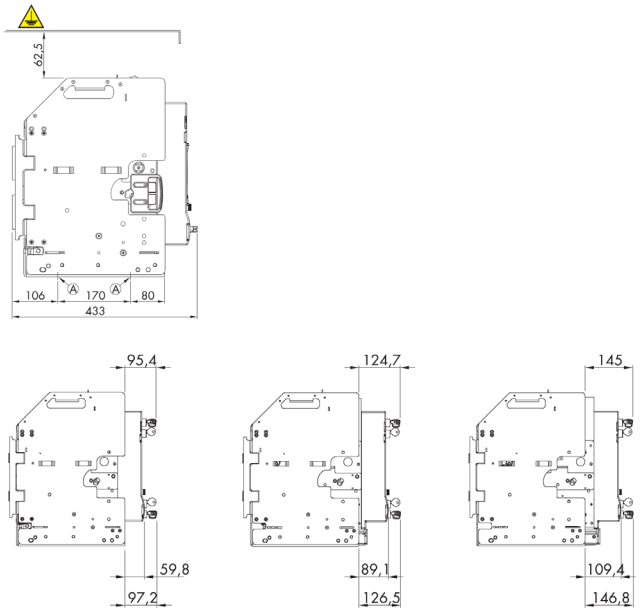
3P



4P



Lateral view



6. 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 20 mm, it is recommended to use of phase insulators or insulated bars.

Minimum cross section of <u>Copper</u> busbars per pole:

- DMX³ and DMX³-I fixed and draw-out versions

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	1 bar 40 x 10 or 2 bars 40 x 5	2 bars 40 x 5
800	1 bar 50 x 10 or 2 bars 50 x 5	2 bars 50 x 5
1000	1 bar 50 x 10 or 2 bars 50 x 5	2 bars 60 x 5
1250	2 bars 60 x 5	2 bars 80 x 5
1600	2 bars 80 x 5	2 bars 50 x 10
2000	2 bars 50 x 10	2 bars 60 x 10
2500	3 bars 50 x 10	3 bars 60 x 10
3200	3 bars 100 x 10	4 bars 80 x 10
4000	4 bars 100 x 10	5 bars 100 x 10

6. ELECTRICAL CONNECTIONS *(continued)*

Minimum cross section of Aluminium busbars per pole:

- DMX³ and DMX³-I fixed and draw-out versions

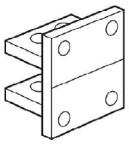
Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 40 x 8	2 bars 40 x 8
800	2 bars 50 x 8	2 bars 50 x 8
1000	2 bars 50 x 8	2 bars 50 x 10
1250	2 bars 50 x 10	2 bars 60 x 10
1600	2 bars 60 x 10	4 bars 50 x 8
2000	4 bars 50 x 8	4 bars 50 x 10
2500	4 bars 60 x 10	4 bars 80 x 10
3200	4 bars 150 x 10	5 bars 150 x 10
4000	5 bars 150 x 10	6 bars 150 x 10

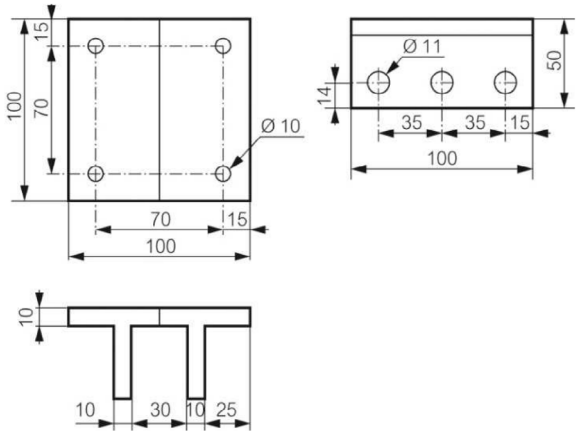
7. EQUIPMENTS AND ACCESSORIES

7.1 Terminals

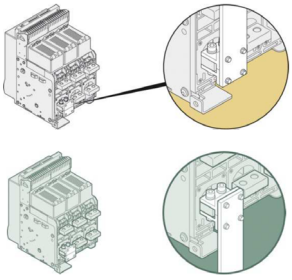
- Rear terminals for fixed version – Flat connection pitch 130 mm
They must be fixed onto horizontal rear terminals of the circuit breaker.

Cat.Nos	
3P	**4P**
0 288 92	0 288 93





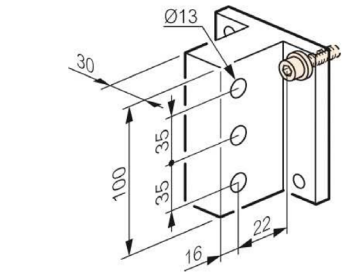
Mounting examples:

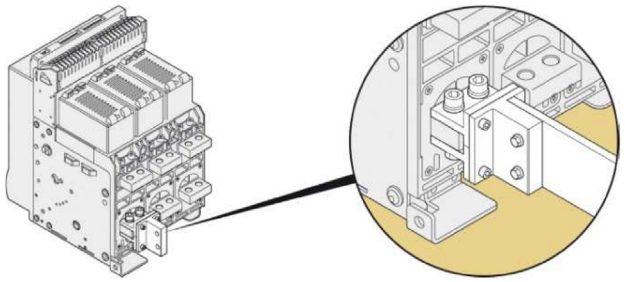


- Rear terminals for fixed version – Vertical connection pitch 130 mm
They are used to transform a flat connection into a vertical one.
They must be fixed onto Cat.Nos 0 288 92/93 according to the number of poles.

Cat.Nos	
3P	**4P**
0 288 94	0 288 95

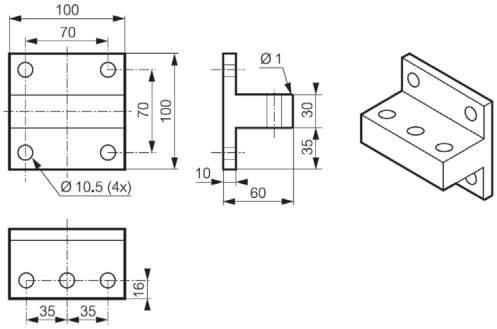
Mounting example:



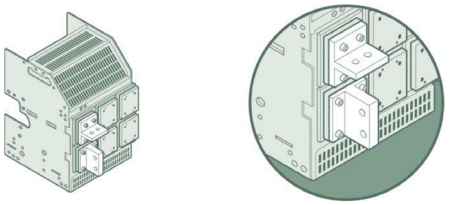


- Rear terminals for draw-out version – Flat/vertical connection
They must be fixed directly onto plate rear terminals of the circuit breaker.

Cat.Nos	
3P	**4P**
0 288 94	0 288 95



Mounting example:



7. EQUIPMENTS AND ACCESSORIES *(continued)*

7.2 Control auxiliaries

- Shunt trip: when energised the circuit breaker will be tripped.

24 V ∿/⎓ Cat.No 0 288 48
48 V ∿/⎓ Cat.No 0 288 49
110 to 130 V ∿/⎓ Cat.No 0 288 50
220 to 250 V ∿/⎓ Cat.No 0 288 51
415 to 480 V∿ Cat.No 0 288 52

Rated operating voltage (Uc) (V)	∿: 24 - 48 - 110 to 130 - 220 to 250 - 415 - 440 - 480 ⎓: 24 - 48 - 110 to 130 - 220 to 250
Voltage range (% Uc)	70 to 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 ∿/⎓ Cat.No 0 288 55
48 V ∿/⎓ Cat.No 0 288 56
110 to 130 V ∿/⎓ Cat.No 0 288 57
220 to 250 V ∿/⎓ Cat.No 0 288 58
415 to 440 V∿ Cat.No 0 288 59

Rated operating voltage (Uc) (V)	∿: 24 - 48 - 110 to 130 - 220 to 250 - 415 - 440 - 480 ⎓: 24 - 48 - 110 to 130 - 220 to 250
Voltage range (% Uc)	85 to 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 ∿/⎓ Cat.No 0 288 62
230 V ∿/⎓ Cat.No 0 288 63

Rated operating voltage (Uc) (V)	∿: 110 or 230 ⎓: 110 or 230
Voltage range (% Uc)	85 to 110
Pick-up consumption (W/VA)	16.5 (@110 V)/34.5 (@230 V)
Time delay (s)	1[(1)]
Hold consumption (W/VA)	5 (@110 V)/10 (@230 V)
Opening threshold	0.3 to 0.75 x Un
Closing threshold	0.85 x Un
Operating temperature (°C)	-10 to +55

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

- Closing coils: to enable remote closing of the circuit breaker if the closing spring is charged.

24 V ∿/⎓ Cat.No 0 288 41
48 V ∿/⎓ Cat.No 0 288 42
110 to 130 V ∿/⎓ Cat.No 0 288 43
220 to 250 V ∿/⎓ Cat.No 0 288 44
415 to 480 V ∿ Cat.No 0 288 45

Rated operating voltage (Uc) (V)	∿: 24 - 48 - 110 to 130 - 220 to 250 - 415 - 440 - 480 ⎓: 24 - 48 - 110 to 130 - 220 to 250
Voltage range (% Uc)	85 to 110
Pick-up consumption (W/VA)	500/500
Pick-up time (ms)	180
Hold consumption (W/VA)	5/5
Maximum closing time (ms)	30
Insulation voltage (kV)	2.5

- Motor operators connect to a release coil (UVR or trip on energising) and a closing coil.

24 V ∿/⎓ Cat.No 0 288 34
48 V ∿/⎓ Cat.No 0 288 35
110 to 130 V ∿/⎓ Cat.No 0 288 36
220 to 250 V ∿/⎓ Cat.No 0 288 37
415 to 440 V ∿ Cat.No 0 288 38
480 V ∿/⎓ Cat.No 0 288 40

7. EQUIPMENTS AND ACCESSORIES *(continued)*

■ 7.2 Control auxiliaries *(continued)*

- Motor operators connect to a release coil (UVR or trip on energising) and a closing coil *(continued)*.

Rated operating voltage (Uc) (V)	∿: 24 - 48 - 110 to 130 - 220 to 250 - 415 to 440 - 480 ⎓: 24 - 48 - 110 to 130 - 220 to 250
Voltage range (% Uc)	85 to 110
Maximum power consumption (W/VA)	180/180 (up to 65 kA); 240/240 (100 kA)
Maximum peak current for 80 ms	2 to 3 x In
Charging time (s)	5 (up to 65 kA); 7 (100 kA)
Operating frequency (n°/min.)	2 (up to 65 kA); 1 (100 kA)

■ 7.3 Signalling auxiliaries

- Signalling contact for draw-out version inserted/test/drawn-out signalling contact 3 changeover contacts per position.

Cat.No 0 288 13		
Rated operating voltage (Uc)	⎓	250 V - 0.3 A
		125 V - 0.6 A
	∿	250 V - 16 A
		125 V - 16 A

- Contact "ready to close" with charged springs.

Cat.No 0 288 14		
Rated operating voltage (Uc)	⎓	250 V - 0.3 A
		125 V - 0.6 A
	∿	250 V - 16 A
		125 V - 16 A

- Additional signalling contact.

Cat.No 0 288 15		
Rated operating voltage (Uc)	⎓	250 V - 0.3 A
		125 V - 0.6 A
	∿	250 V - 16 A
		125 V - 16 A

- Signalling contact for auxiliaries (ST, CC and UVR).

Cat.No 0 288 16		
Rated operating voltage (Uc)	⎓	250 V - 0.3 A
		125 V - 0.6 A
	∿	250 V - 16 A
		125 V - 16 A

■ 7.4 Locking

- Universal key locks: to be used in combination with key locking support Cat.No 0 288 28 or 0 281 94.

Key barrel and flat key with random mapping	Cat.No 4 238 80
Key barrel and flat key with fixed mapping EL43525	Cat.No 4 238 81
Key barrel and flat keywith fixed mapping EL 43363	Cat.No 4 238 82
Key barrel and star key with random mapping	Cat.No 4 238 83

- Keylocks supports:

Key locking support in "open" position (to be equiped with universal keylocks Cat.Nos 4 238 80/81/82/83)	Cat.No 0 288 28
Key locking support in "draw-out" position (to be equiped with universal keylocks Cat.Nos 4 238 80/81/82/83)	Cat.No 0 281 94

- Door locking: prevents opening of the door with the circuit breaker closed.

Left-hand and right-hand side mounting	Cat.No 0 288 20

- Padlocks in "open" position:

Padlocking system for ACB (padlock not supplied)	Cat.No 0 288 21
Padlock for buttons	Cat.No 0 288 24
Padlocking system for shutters (padlock not supplied)	Cat.No 0 288 26

■ 7.5 Mechanical operations counter

to count total number of operation cycles of device	Cat.No 0 288 23

■ 7.6 Rating mis-insertion device

to prevent the insertion of a draw-out circuit breaker into an incompatible base	Cat.No 0 288 25

■ 7.7 Lifting plate — Cat.No 0 288 79

■ 7.8 Fixing devices for DMX³ and DMX³-I 4000

Specific instruction sheets are provide to integrate DMX³ / DMX³-I 4000 into XL³ enclosures ranges (fixing plates, metal faceplates for circuit breakers and cable sleeves, etc.).

■ 7.9 Equipment for conversion of a fixed device into draw-out device

- Bases for draw-out device

For DMX³/DMX³-I 4000 3P	Cat.No 0 289 04
For DMX³/DMX³-I 4000 4P	Cat.No 0 289 05

- Transformation kit for draw-out version

For DMX³/DMX³-I 4000 3P	Cat.No 0 289 11
For DMX³/DMX³-I 4000 4P	Cat.No 0 289 12

■ 7.10 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.

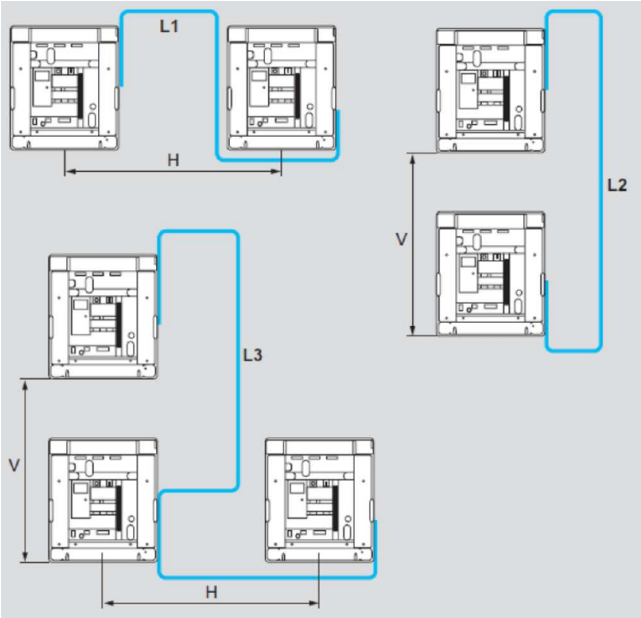
Interlock for DMX³ 4000	Cat.No 0 288 65

7. EQUIPMENTS AND ACCESSORIES *(continued)*

7.11 Interlock cables

Length: 1000 mm	Cat.No 0 289 17
Length: 1500 mm	Cat.No 0 289 18
Length: 2600 mm	Cat.No 0 289 20
Length: 3000 mm	Cat.No 0 289 21
Length: 3600 mm	Cat.No 0 289 22
Length: 4000 mm	Cat.No 0 289 23
Length: 4600 mm	Cat.No 0 289 24
Length: 5600 mm	Cat.No 0 289 25

Choice of interlock cable:



Calculation of cable length:
L1 = 1430 + H
L2 = 1570 + V
L3 = 1430 + V + H

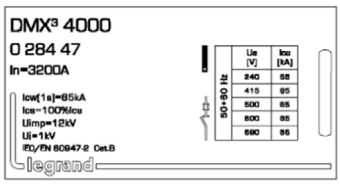
7.12 Insulating shields

Fixed version 3P	Cat.No 0 288 98
Fixed version 4P	Cat.No 0 288 99
Draw-out version 3P	Cat.No 0 288 18
Draw-out version 4P	Cat.No 0 288 19

8. MARKING

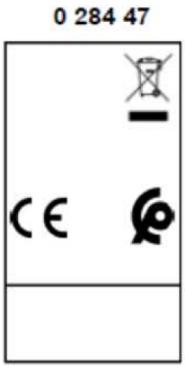
Product is provided with labelling in full conformity to the referred standard and directives requirements by laser or sticker labels as:

Product laser label on front:
- Manufacturer responsible;
- Denomination, type product, code;
- Standard conformity;
- Standard characteristics declared;
- Coloured identification of Icu at 415 V.



Product laser label on side:
- Manufacturer responsible;
- Denomination and type product;
- Standard conformity;
- Mark/Licence (if any);
- Directive requirements;
- Bar code identification product;
- Manufacturing country.

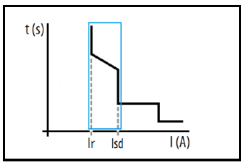
Mark sticker label on side:
- Product code;
- Mark/Licence (if any);
- Country deviation (if any).

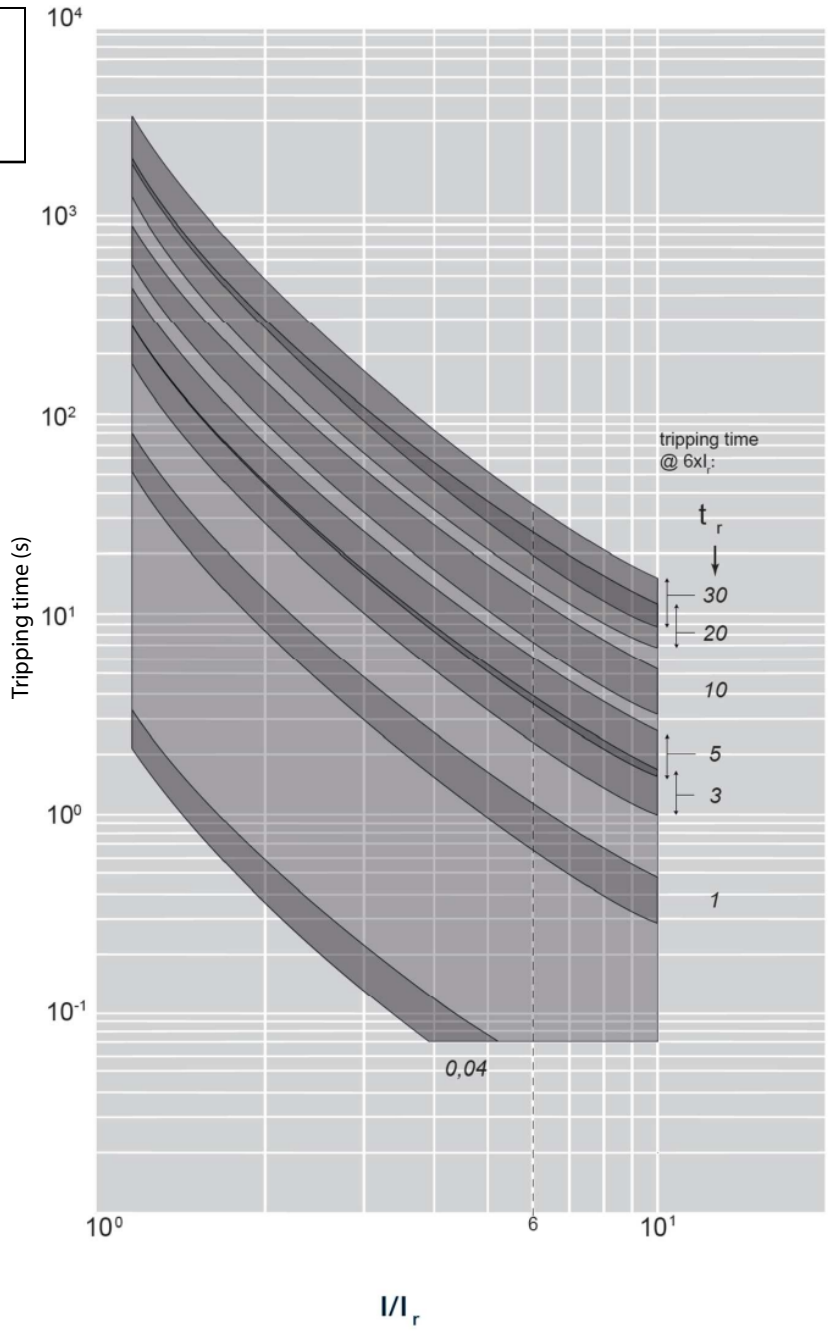


Packaging sticker label:
- Manufacturer responsible;
- Denomination and type product;
- Standard conformity;
- Mark/Licence (if any);
- Directive requirements.

9. CURVES

9.1 Tripping curve for DMX³ 4000 MPx.10 protection units: L – T protection detail.



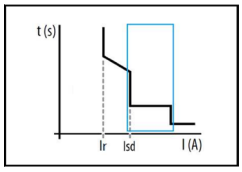


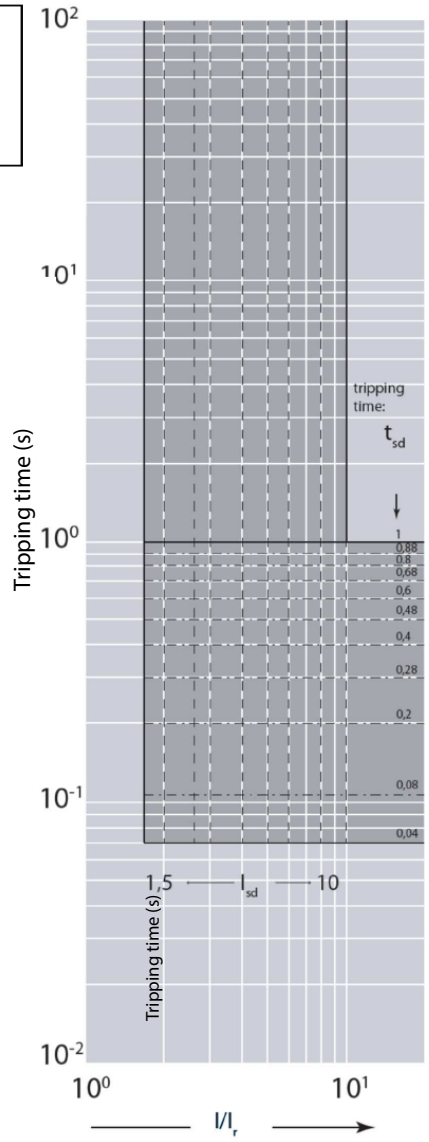
Update: 14/10/2022

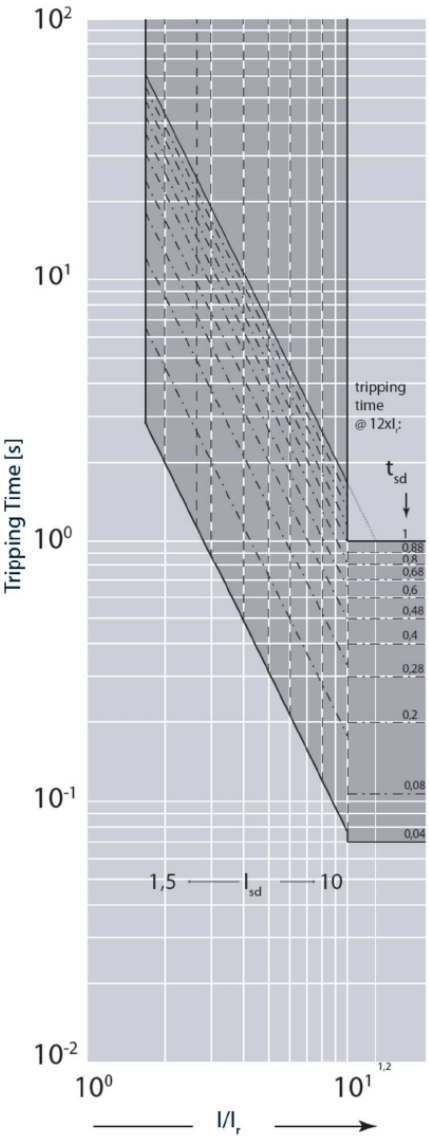
Value	Description
I	Current
Ir	Long time setting current
tr	Long time delay

9. CURVES *(continued)*

■ **9.2 Tripping curve for DMX³ 4000 MPx.10 protection units: short time trip protection detail.**





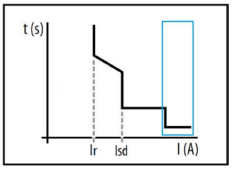


Update: 17/11/2022

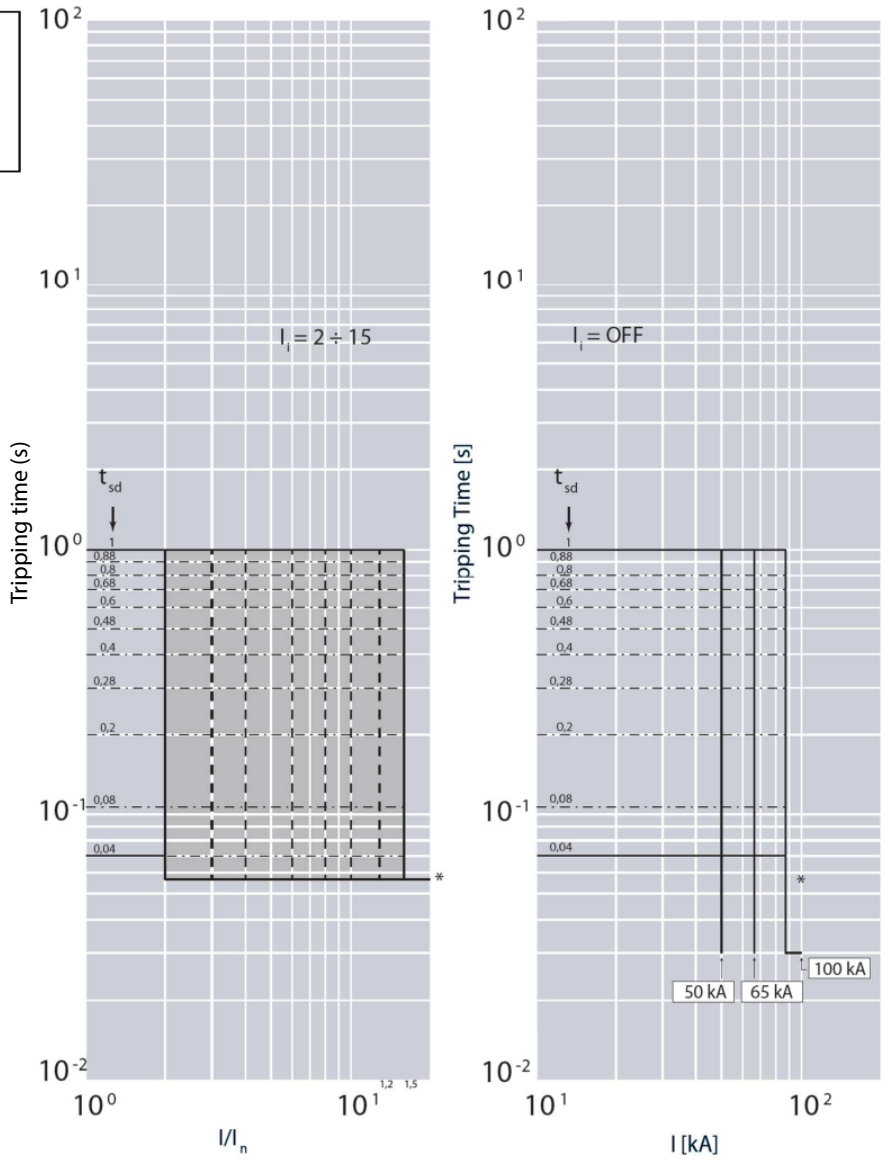
Value	Description
I	Current
Isd	Short time setting current
tsd	Short time delay

9. CURVES *(continued)*

■ **9.3 Tripping curve for DMX³ 4000 MPx.10 protection units: instantaneous trip protection detail.**



Update: 17/11/2022



* Fixed instantaneous override - Isf

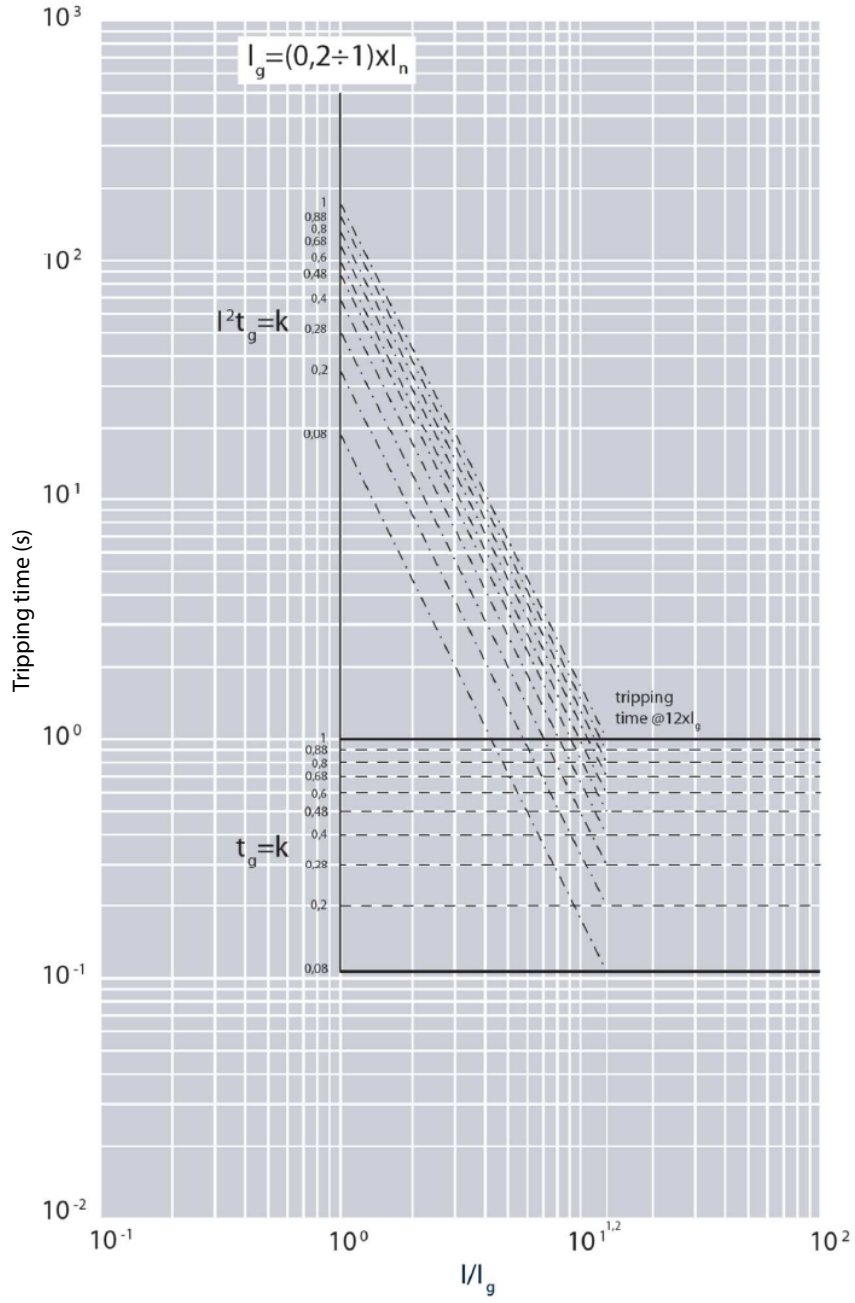
Icu	Values for Isf
50 kA	50 kA
65 kA	65 kA
100 kA	85 kA

Value	Description
I	Current
In	Rated current
tsd	Short time delay
Ii	Instantaneous release
Icw	Rated short time withstand current

9. CURVES *(continued)*

■ **9.4 Ground fault curve for DMX³ 4000 MPx.10 protection units.**

Update: 17/11/2022

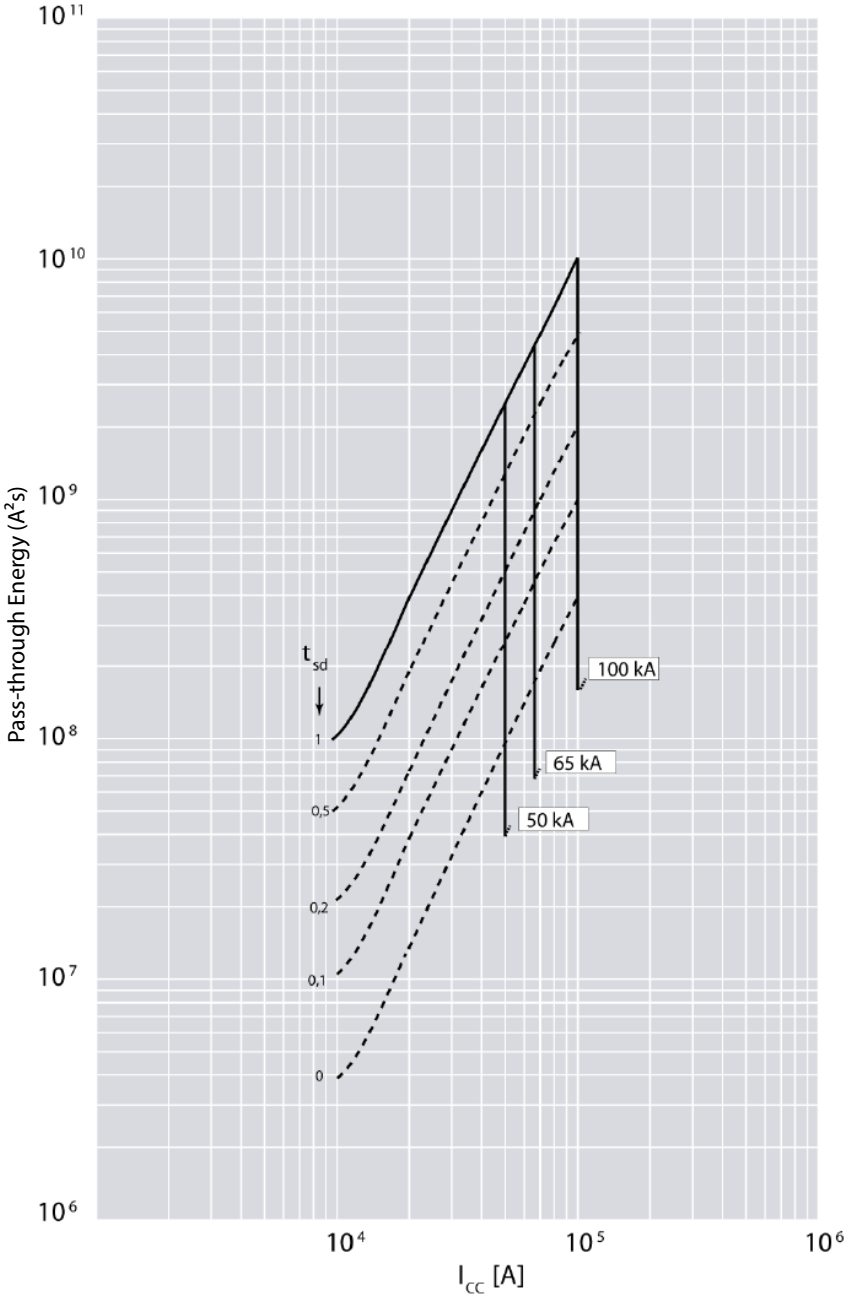


Value	Description
I	Current
In	Rated current
Ig	Ground fault current
tsd	Short time delay
tsd = k	Constant tripping time setting
I^2tsd = k	Constant pass-through energy setting

9. CURVES *(continued)*

■ **9.5 Pass-through specific energy curve (at 415 V).**

Update: 14/07/2021



Value	Description
I	Current
In	Rated current
Ig	Ground fault current
tsd	Short time delay
tsd = k	Constant tripping time setting
I²tsd = k	Constant pass-through energy setting

10. 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.

RoHS: Compliance with the 2011/65/EU Directive (RoHS), as modified by the 2015/863/EU Delegated Directive, on the restriction of the use of certain hazardous substances in electrical and electronic equipment.

REACH: The substances identified as SVHC (Substances of Very High Concern) according to the REACH Regulation (1907/2006), if present in the products at a concentration above 0.1% weight by weight, are declared inside the European SCIP database. At the date of publication of this document none of the substance listed in the annex XIV is found in this product.

WEEE: WEEE Directive (2012/19/EU): the sale of this product includes a contribution to the appointed environmental bodies of each European country in charge of handling, at the end of their life, the products falling within the scope of the EU Directive on Electrical and Electronic Equipment Waste.

PACKAGING: Design and manufacture of packaging compliant with European Directive 94/62/CE.

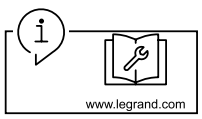
BATTERIES (for product containing batteries and/or accumulators):
The batteries and/or accumulators included in this product comply with the requirements set out in European Regulation 2023/1542, according to the application timing indicated therein.

11. OTHER INFORMATION

XLPro Calcul: Calculation notes creation software, addressed to installers, design office and maintenance operators.
Definition of the electrical characteristics of a low voltage installation in compliance with the applicable standards.

XLPro³ Tool Selectivity and backup/Legrand Selectivity and Backup:
Software dedicated to installers, panelbuilders and design offices. Definition of the selectivity and backup values of an association of electrical devices and obtention of the tripping curves of the selected products.

XLPro Panels: Distribution panel design software, addressed to panelbuilders and electrical panel designers.
Design of the electrical distribution of the panel, production of electrical diagrams, establishment of products and overall costing of the project.



Workshop book: mounting informations, equipments, accessories and spare parts available on e-catalog.

Instruction sheet: all mounting information, available on e-catalog.

PEP: available on e-catalog.

For further technical information, please contact Legrand technical support.

Unless otherwise indicated, data reported in this document refers exclusively to test conditions according to product standards.

For different conditions of use of the product, inside electrical equipment or in any different installation context, refer to the regulatory requirements of the equipment, local regulations and design specifications of the system.