

**DMX³ 2500 800 V~ circuit breakers
 (PU MP2.10 and MP4.10)**

**Cat.Nos: 0 285 09 - 0 285 19 - 0 285 29 - 0 285 39
 0 285 49 - 0 285 59 - 0 285 69 - 0 285 70 to 0 285 79
 0 285 89 - 0 285 90 to 0 285 99**



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1. USE

DMX³ 2500 800V~ 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 2500 A. Their electric and mechanical robustness, in addition to breaking capacity and chances of accessorising, are perfectly suited for these requirements. Suitable for protection of wind facility plants, photovoltaic or railways application, up to 2500 A and breaking capacities of 36 kA at 800 V. High performances, reliability and robustness are the main advantages of these range, 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 2500 800V~ fixed version with PU MP2.10/MP4.10

In (A)	36 kA	
	3P	4P
630	0 285 09	0 285 70
800	0 285 19	0 285 71
1000	0 285 29	0 285 72
1250	0 285 39	0 285 73
1600	0 285 49	0 285 74
2000	0 285 59	0 285 75
2500	0 285 69	0 285 76

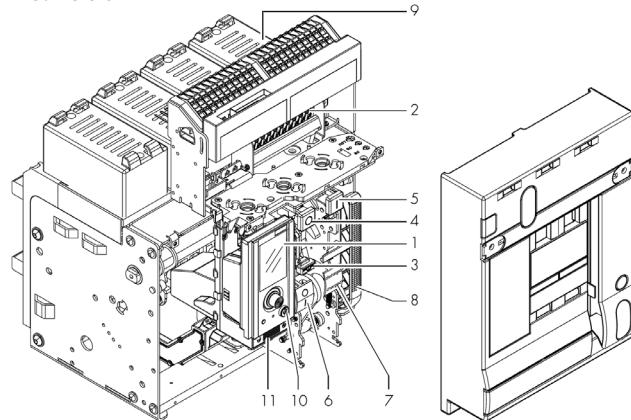
■ 2.2 DMX³ 2500 800V~ draw-out version with PU MP2.10/MP4.10

In (A)	36 kA	
	3P	4P
630	0 285 77	0 285 93
800	0 285 78	0 285 94
1000	0 285 79	0 285 95
1250	0 285 89	0 285 96
1600	0 285 90	0 285 97
2000	0 285 91	0 285 98
2500	0 285 92	0 285 99

■ 2.3 Composition

Main parts constituting the circuit breaker

Fixed version

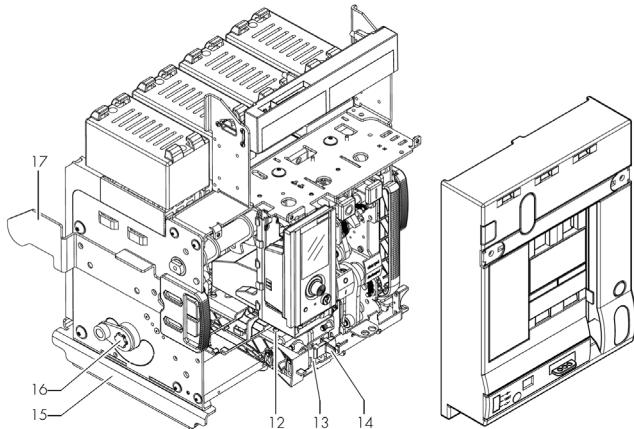


1. Protection Unit
2. Auxiliary contacts
3. Reset button
4. OFF button
5. ON button
6. ON-OFF Indication
7. Spring status indication
8. Charging handle
9. Dejon cell
10. Mini USB cover
11. Battery cover

2. RANGE (continued)

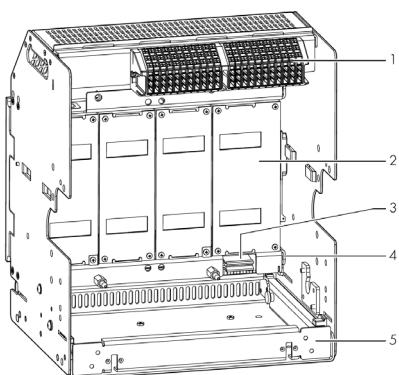
■ 2.4 Composition (continued)

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

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 2500 800 V~		
Frame current	2500 A	
Rated current In	630 A/800 A/1000 A/1250 A 1600 A/2000 A/2500 A	
Poles	3P - 4P	
Rated insulation voltage Ui	1250 V	
Rated impulse withstand voltage Uimp	12 kV	
Rated operational voltage (50/60Hz) Ue	800 V	
Rated ultimate short-circuit breaking capacity Icu (kA)	800 V~	36 kA
Rated service short-circuit breaking capacity Ics (% Icu)		100%
Rated short-circuit making capacity Icm (kA)	800 V~	76
Rated short time withstand current Icw (kA) for t = 1s	800 V~	36
Rated short time withstand current Icw (kA) for t = 3s	800 V~	36
Individual pole short-circuit current I _{IT} (kA) ⁽¹⁾		-
Suitable for insulation		Yes
Neutral protection (% Ith)	0 - 50 - 100 - 150 - 200	
Pole pitch (mm)		85
Operation temperature		-25 °C to +70 °C
Storage temperature		-25 °C to +85 °C

⁽¹⁾For more details, please consult Legrand

■ 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
630	126	630	378	6300
800	160	800	480	8000
1000	200	1000	600	10000
1250	250	1250	750	12500
1600	320	1600	960	16000
2000	400	2000	1200	20000
2500	500	2500	1500	25000

Note: for neutral adjustment, please consider the values ratios 0%, 50%, 100%, 150% and 200% on set currents.

3. TECHNICAL CHARACTERISTICS (continued)

■ 3.3 Mechanical characteristics

- Endurances:

		DMX³ 2500 800 V~
Endurance (cycles)	Mechanical	10000 (w/o maintenance); 20000 (with maintenance)
	Electrical	10000 (w/o maintenance)
Category of use	B	

Note:

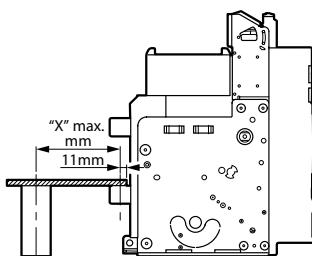
- With auxiliary contacts: same as breaker (10000 cycles w/o maintenance);
- With motor operator: 10000 cycles;
- With releases: 10000 cycles.

- Electrodynami 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 electrodynami 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	36
"X" max. (mm)	350



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/le

		Fixed	Draw-out
Rated Icu (kA)		36 kA	
Rated current In (A)	630	5.7	9.9
	800	9.2	16.0
	1000	14.4	25.0
	1250	22.4	39.1
	1600	36.7	64.0
	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 60947-2 (Annex G) for circuit-breakers. Values in the table are referred to a single phase.

■ 3.5 Electronic protection unit

All DMX³ 2500 800 V~ 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 logs (MP4.10);
- Adjustment via rotating encoder;
- Adjustment of Ir, tr, Isd, tsd, li, 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 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 1 A

Protection: ON/OFF

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%-150%-200%

Configuration

Protection units MP2.10 and MP4.10 are fully configurable by customer, through Legrand software PCS.

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.

3. TECHNICAL CHARACTERISTICS (continued)

■ 3.5 Electronic protection unit (continued)

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_{DC} 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 stabilized power supply module for CX³ energy management system – 1 DIN module. For correct use, choose protection units with measure function (Cat.Nos. 0 283 05 or 0 283 07)

Communication interface

Cat.No. 4 149 40

RS485/CX³ energy management system conversion

Consumption: 0.344 W - 28.7 mA (12 V_{DC}) – 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 2500 800 V~ fixed version-horizontal terminals:

Temperature	Fixed version									
	up to 40 °C		50 °C		60 °C		65 °C		70 °C	
Temperature	lmax (A)	Ir/In	lmax (A)	Ir/In	lmax (A)	Ir/In	lmax (A)	Ir/In	lmax (A)	Ir/In
DMX ³ 2500 800 V~ Icu up to 36 kA	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1880	0.94
	2500	1	2450	0.98	2350	0.94	2250	0.9	2150	0.86

Temperature deratings for DMX³ 2500 800 V~ draw-out version-horizontal terminals:

Temperature	Draw-out version									
	up to 40 °C		50 °C		60 °C		65 °C		70 °C	
Temperature	lmax (A)	Ir/In	lmax (A)	Ir/In	lmax (A)	Ir/In	lmax (A)	Ir/In	lmax (A)	Ir/In
DMX ³ 2500 800 V~ Icu up to 36 kA	630	1	630	1	630	1	630	1	630	1
	800	1	800	1	800	1	800	1	800	1
	1000	1	1000	1	1000	1	1000	1	1000	1
	1250	1	1250	1	1250	1	1250	1	1250	1
	1600	1	1600	1	1600	1	1600	1	1600	1
	2000	1	2000	1	1960	0.98	1920	0.96	1880	0.94
	2500	1	2400	0.96	2250	0.9	2100	0.84	1950	0.78

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

DMX³ 2500 800 V~ circuit breakers (PU MP2.10 and MP4.10)

Cat.Nos: 0 285 09 - 0 285 19 - 0 285 29 - 0 285 39
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0 285 89 - 0 285 90 to 0 285 99

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 2500 800 V~ circuit breakers, degree 3, according to IEC/EN 60947-2.

Electromagnetic disturbances (EMC): for DMX³ 2500 800 V~, according to IEC/EN 60947-2 - Annex F.

Altitude derating for DMX³

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)	800	700	600	550
Rated insulation voltage Ui (V)	1000	900	750	600
Dielectric withstand (V)	3500	3200	2500	2000

5. DIMENSIONS AND WEIGHTS

■ 5.1 Dimensions

DMX ³ 2500 800 V~	
36 kA	
Height (mm)	3P-Fixed
	419
	3P-Draw-out
	465
Depth (mm)	4P-Fixed
	419
	4P-Draw-out
	465
Width (mm)	3P-Fixed
	354
	3P-Draw-out
	433
Width (mm)	4P-Fixed
	354
	4P-Draw-out
	433
Width (mm)	3P-Fixed
	273
	3P-Draw-out
	327
Width (mm)	4P-Fixed
	358
	4P-Draw-out
	412

■ 5.2 Weights

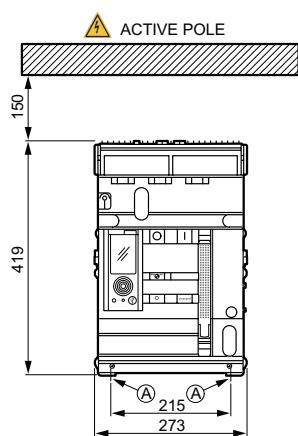
DMX ³ 2500 800 V~	
36 kA	
Weight (kg)	3P-fixed
	36
	3P-Draw-out ⁽¹⁾
	81
Weight (kg)	4P-Fixed
	43
Weight (kg)	4P-Draw-out ⁽¹⁾
	86

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

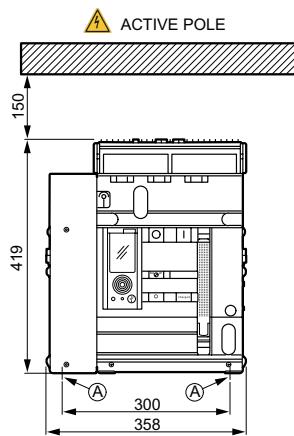
■ 5.3 Fixed version

Frontal view

3P



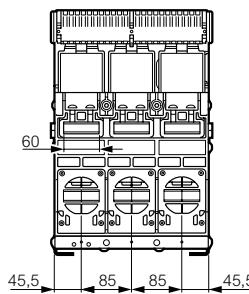
4P



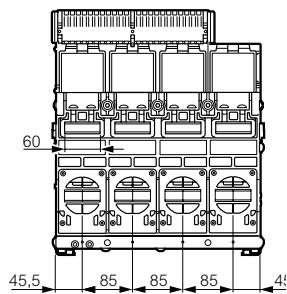
A = fixing point on plate of enclosure

Rear view

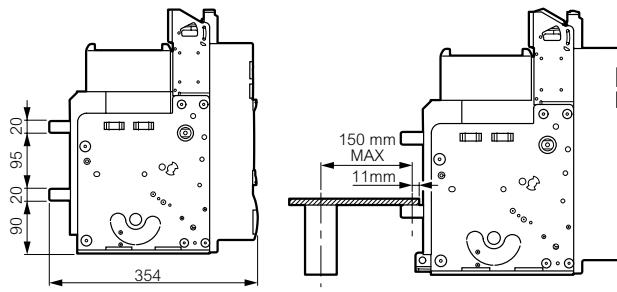
3P



4P



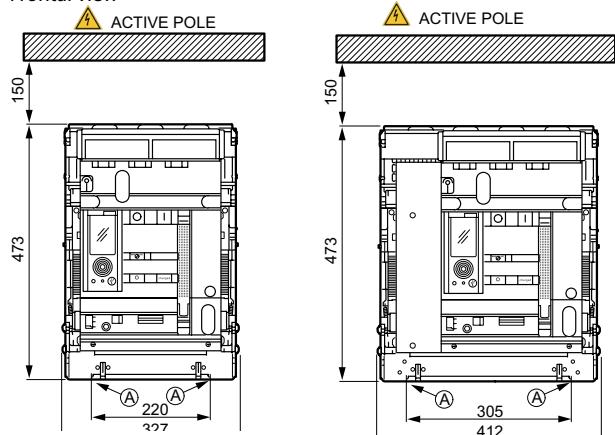
Lateral view (3P - 4P)



5. DIMENSIONS AND WEIGHTS (continued)

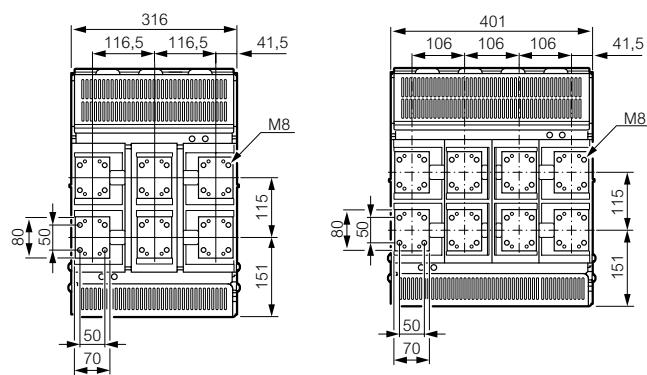
5.4 Draw-out version

Frontal view

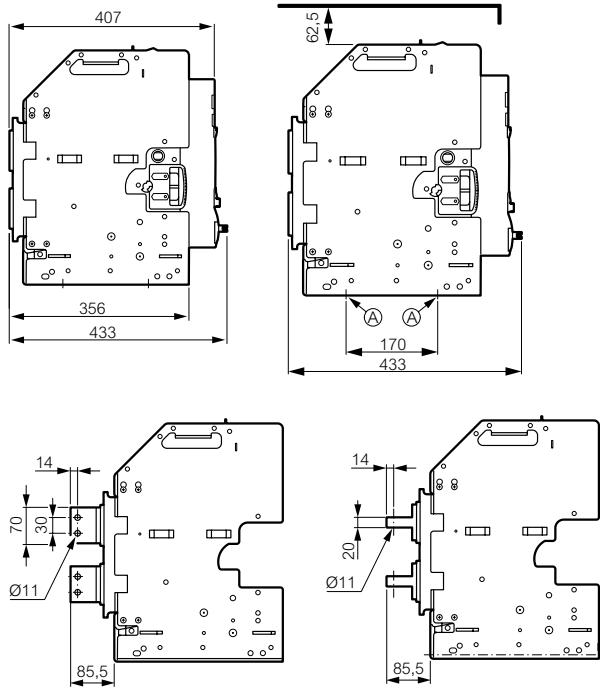


A = fixing point on plate of enclosure

Rear view



Lateral view



A = fixing point on plate of enclosure

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 Copper busbars per pole:

- Fixed version

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

DMX³ 2500 800 V~ circuit breakers (PU MP2.10 and MP4.10)

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0 285 89 - 0 285 90 to 0 285 99

6. ELECTRICAL CONNECTIONS (continued)

Minimum cross section of Copper busbars per pole (continued):

- Draw-out version

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

Minimum cross section of Aluminium busbars per pole:

- Fixed version

Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 50 x 8	2 bars 50 x 10
800	2 bars 50 x 10	2 bars 50 x 10
1000	2 bars 60 x 10	2 bars 60 x 10
1250	2 bars 60 x 10	4 bars 50 x 10
1600	4 bars 50 x 10	4 bars 60 x 10
2000	4 bars 60 x 10	4 bars 80 x 10
2500	4 bars 100 x 10	5 bars 100 x 10

- Draw-out version

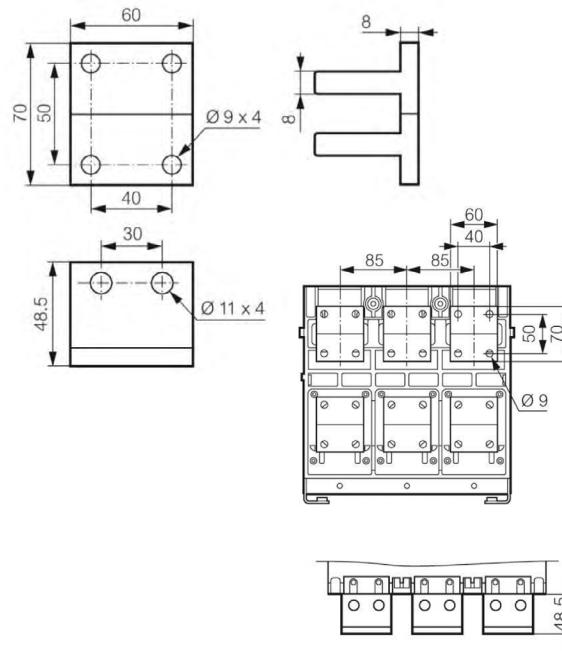
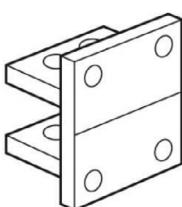
Rated current (A)	Vertical bars (mm)	Horizontal bars (mm)
630	2 bars 50 x 8	2 bars 50 x 10
800	2 bars 50 x 10	2 bars 50 x 10
1000	2 bars 60 x 10	2 bars 60 x 10
1250	2 bars 60 x 10	4 bars 50 x 10
1600	4 bars 50 x 10	4 bars 60 x 10
2000	4 bars 60 x 10	4 bars 80 x 10
2500	4 bars 100 x 10	5 bars 100 x 10

7. EQUIPMENTS AND ACCESSORIES

■ 7.1 Terminals and spreaders

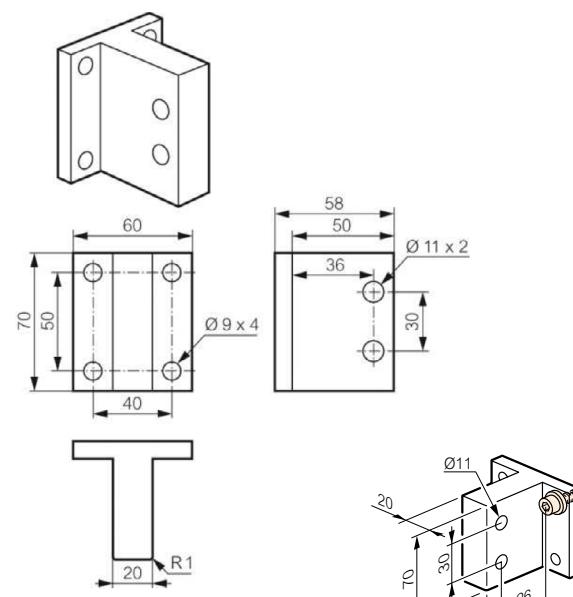
- Rear terminals for fixed version – Flat connection pitch 85 mm
They must be fixed onto horizontal rear terminals of the circuit breaker.

Cat.Nos	
3P	4P
0 288 84	0 288 85



Rear terminals for fixed version – Vertical connection pitch 85 mm
They are used to transform a flat connection into a vertical one. To be fixed onto Cat.Nos 0 288 84/85 according to the number of poles.

Cat.Nos	
3P	4P
0 288 82	0 288 83



DMX³ 2500 800 V~ circuit breakers (PU MP2.10 and MP4.10)

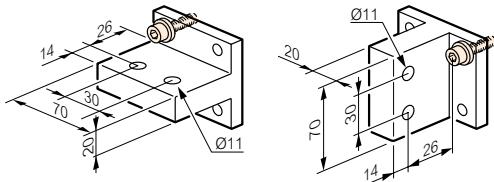
Cat.Nos: 0 285 09 - 0 285 19 - 0 285 29 - 0 285 39
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0 285 89 - 0 285 90 to 0 285 99

7. EQUIPMENTS AND ACCESSORIES (continued)

■ 7.1 Terminals and spreaders (continued)

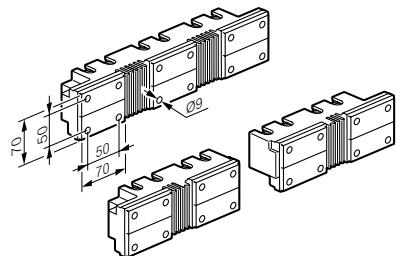
- Rear terminals for draw-out version – Flat/vertical connection
pitch 85 mm

Cat.Nos	
3P	4P
0 288 96	0 288 97



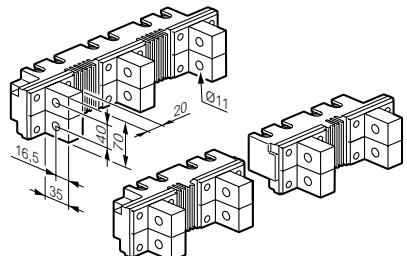
- Spreaders for fixed version – Flat connection

Cat.Nos	
3P	4P
0 288 86	0 288 87



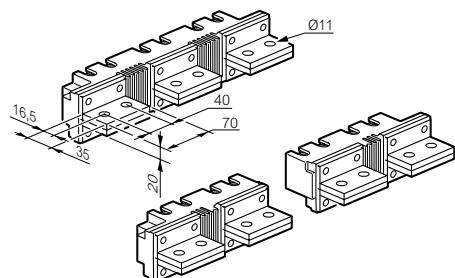
- Spreaders for fixed version – Vertical connection

Cat.Nos	
3P	4P
0 288 88	0 288 89



- Spreaders for fixed version – Horizontal connection

Cat.Nos	
3P	4P
0 288 90	0 288 91



- Aluminium rear terminals

Cat.Nos	
3P	4P
6 696 18	6 696 19

The maximum rating is 1600 A.

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

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

■ 7.2 Control auxiliaries

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

24 V $\sim/_$	Cat.No 0 288 48
48 V $\sim/_$	Cat.No 0 288 49
110 \div 130 V $\sim/_$	Cat.No 0 288 50
220 \div 250 V $\sim/_$	Cat.No 0 288 51
415 \div 480 V \sim	Cat.No 0 288 52

Rated operating voltage (Uc) (V)	$\sim: 24 - 48 - 110 \div 130 - 220 \div 250 - 415 \div 480$ $\therefore: 24 - 48 - 110 \div 130 - 220 \div 250$
Voltage range (% Uc) ⁽¹⁾	70 \div 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

⁽¹⁾ the minimum voltage range % is referred to the rated voltage minimum value
the maximum voltage range % is referred to the rated voltage maximum value

- Undervoltage releases: device trips when coil is de-energised.

24 V $\sim/_$	Cat.No 0 288 55
48 V $\sim/_$	Cat.No 0 288 56
110 \div 130 V $\sim/_$	Cat.No 0 288 57
220 \div 250 V $\sim/_$	Cat.No 0 288 58
415 \div 440 V \sim	Cat.No 0 288 59

Rated operating voltage (Uc) (V)	$\sim: 24 - 48 - 110 \div 130 - 220 \div 250 - 415 \div 480$ $\therefore: 24 - 48 - 110 \div 130 - 220 \div 250$
Voltage range (% Uc) ⁽¹⁾	85 \div 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

⁽¹⁾ the minimum voltage range % is referred to the rated voltage minimum value
the maximum voltage range % is referred to the rated voltage maximum value

- Modules for delayed tripping, to be used with undervoltage releases.

110 V $\sim/_$	Cat.No 0 288 62
230 V $\sim/_$	Cat.No 0 288 63

Rated operating voltage (Uc) (V)	$\sim: 110 \text{ or } 230$ $\therefore: 110 \text{ or } 230$
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 \times Un
Closing threshold	0.85 \times Un
Operating temperature (°C)	-10 to +55

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

7. EQUIPMENTS AND ACCESSORIES (continued)

■ 7.2 Control auxiliaries (continued)

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

24 V $\sim/=\!$	Cat.No 0 288 41
48 V $\sim/=\!$	Cat.No 0 288 42
110 \div 130 V $\sim/=\!$	Cat.No 0 288 43
220 \div 250 V $\sim/=\!$	Cat.No 0 288 44
415 \div 480 V \sim	Cat.No 0 288 45

Rated operating voltage (Uc) (V)	$\sim: 24 - 48 - 110 \div 130 - 220 \div 250 - 415 \div 480$ $\therefore: 24 - 48 - 110 \div 130 - 220 \div 250$
Voltage range (% Uc)⁽¹⁾	85 \div 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

(1) the minimum voltage range % is referred to the rated voltage minimum value
the maximum voltage range % is referred to the rated voltage maximum value

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

24 V $\sim/=\!$	Cat.No 0 288 34
48 V $\sim/=\!$	Cat.No 0 288 35
110 \div 130 V $\sim/=\!$	Cat.No 0 288 36
220 \div 250 V $\sim/=\!$	Cat.No 0 288 37
415 \div 440 V \sim	Cat.No 0 288 38
480 V $\sim/=\!$	Cat.No 0 288 40

Rated operating voltage (Uc) (V)	$\sim: 24 - 48 - 110 \div 130 - 220 \div 250 - 415 \div 480$ $\therefore: 24 - 48 - 110 \div 130 - 220 \div 250$
Voltage range (% Uc)⁽¹⁾	85 \div 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 \times In
Charging time (s)	5 (up to 65 kA); 7 (100 kA)
Operating frequency (n°/min.)	2 (up to 65 kA); 1 (100 kA)

(1) the minimum voltage range % is referred to the rated voltage minimum value
the maximum voltage range % is referred to the rated voltage maximum value

■ 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
	\sim	250 V - 16 A
	\sim	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
	\sim	250 V - 16 A
	\sim	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
	\sim	250 V - 16 A
	\sim	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
	\sim	250 V - 16 A
	\sim	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 Cat.No 4 238 81
EL43525

Key barrel and flat key with fixed mapping Cat.No 4 238 82
EL 43363

Key barrel and star key with random mapping Cat.No 4 238 83

- **Keylocks supports:**
Key locking support in "open" position (to be equipped with universal keylocks Cat.Nos 4 238 80/81/82/83)
Key locking support in "draw-out" position (to be equipped with universal keylocks Cat.Nos 4 238 80/81/82/83)

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

Left-hand and right-hand side mounting 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 2500 800 V~

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

7. EQUIPMENTS AND ACCESSORIES (continued)

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

- Bases for draw-out device

For DMX³ 2500 800 V~ 3P Cat.No 0 289 02
For DMX³ 2500 800 V~ 4P Cat.No 0 289 03

- Transformation kit for draw-out version

For DMX³ 2500 800 V~ 3P Cat.No 0 289 09
For DMX³ 2500 800 V~ 4P Cat.No 0 289 10

■ 7.10 Equipment for interlocking

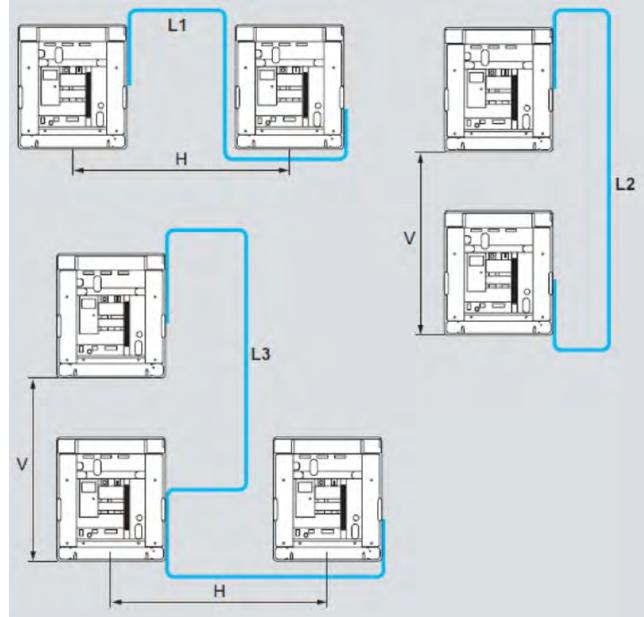
The mechanical interlock is set up using cables and can interlock 2 or 3 devices, which may be different type in a vertical or horizontal configuration. The interlock unit is mounted on the right-hand side of the device. Interlock cables to be ordered separately.

Interlock for DMX³ 2500 800 V~ Cat.No 0 288 64

■ 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

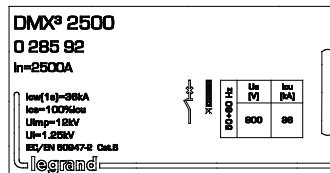
Fixed version 3P	Cat.No 0 288 98
Fixed version 4P	Cat.No 0 288 99
Draw-out version 3P	Cat.No 0 288 18
Draw-out version 4P	Cat.No 0 288 19

8. MARKING

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

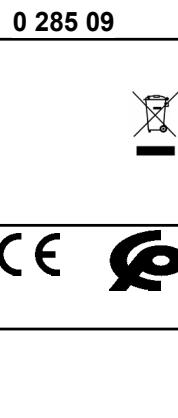
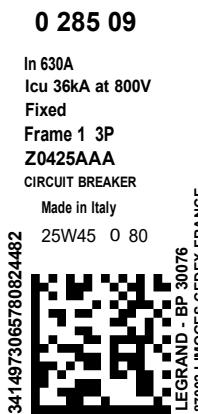
Product laser label on front:

- Manufacturer responsible;
- Denomination, type product, code;
- Standard conformity;
- Standard characteristics declared;
- Coloured identification of Icu at 800 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).

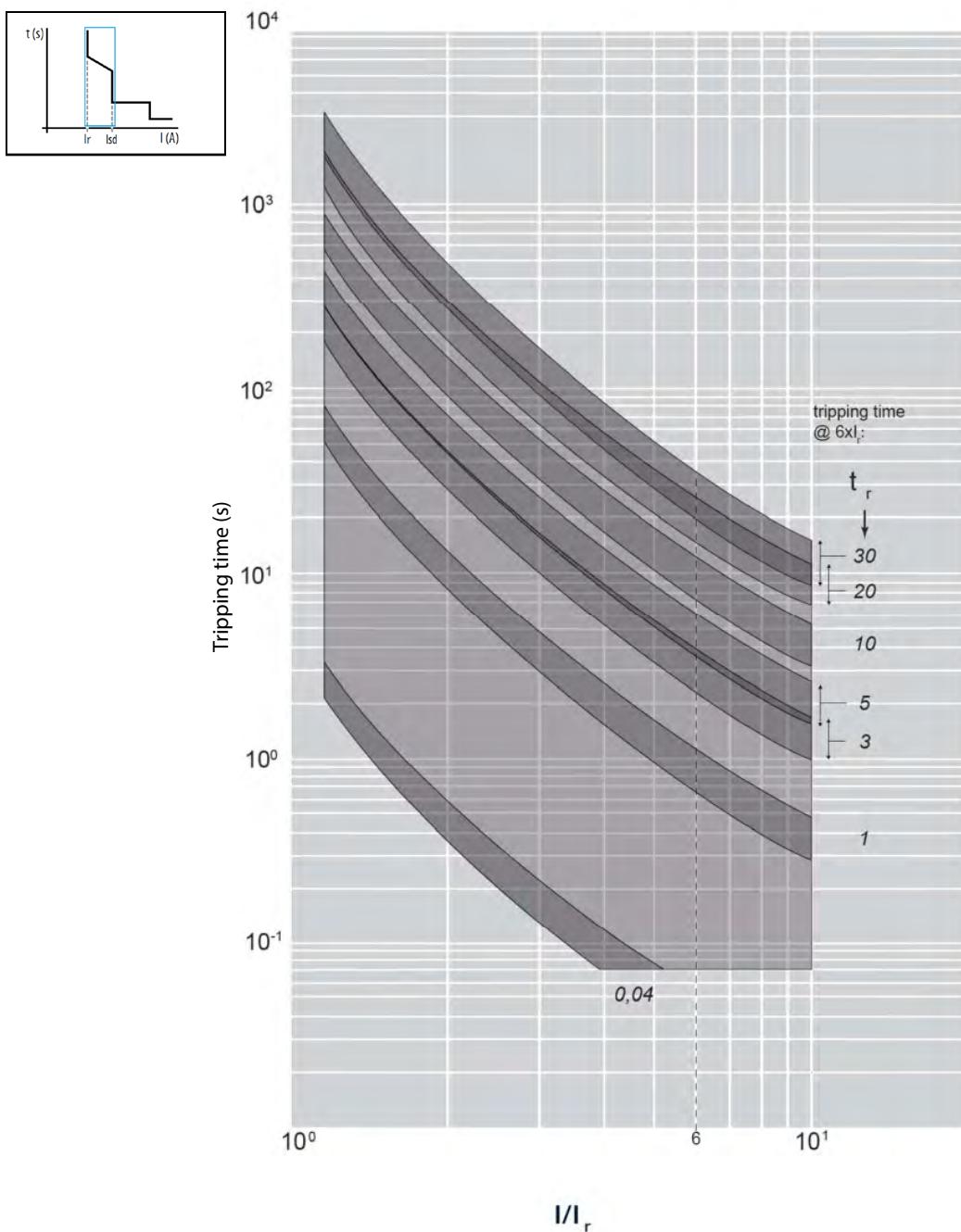
Packaging sticker label:

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



9. CURVES

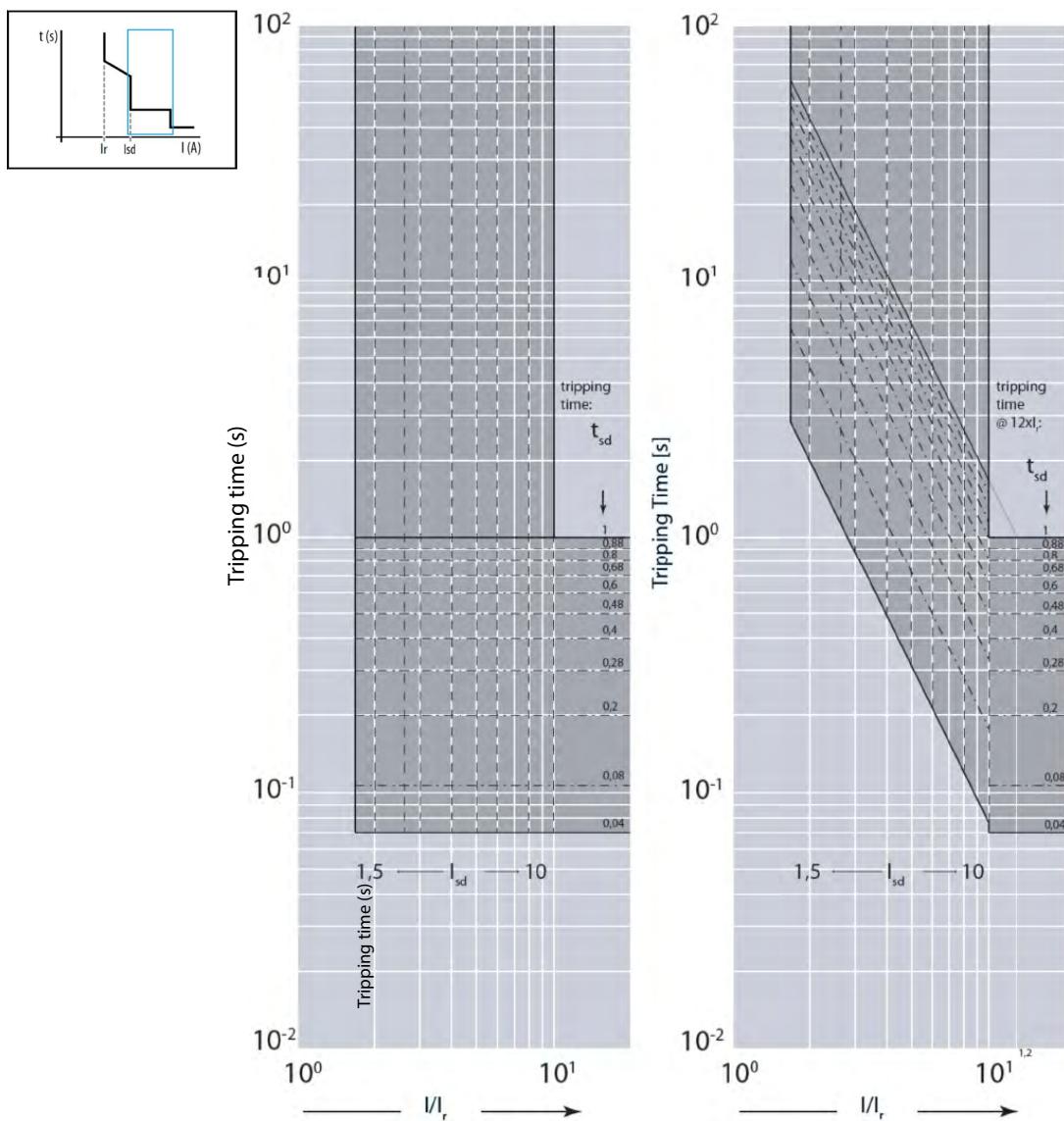
■ 9.1 Tripping curve for DMX³ 2500 800 V~ MPx.10 protection units: L – T protection detail.



Value	Description
I	Current
I_r	Long time setting current
t_r	Long time delay

9. CURVES (continued)

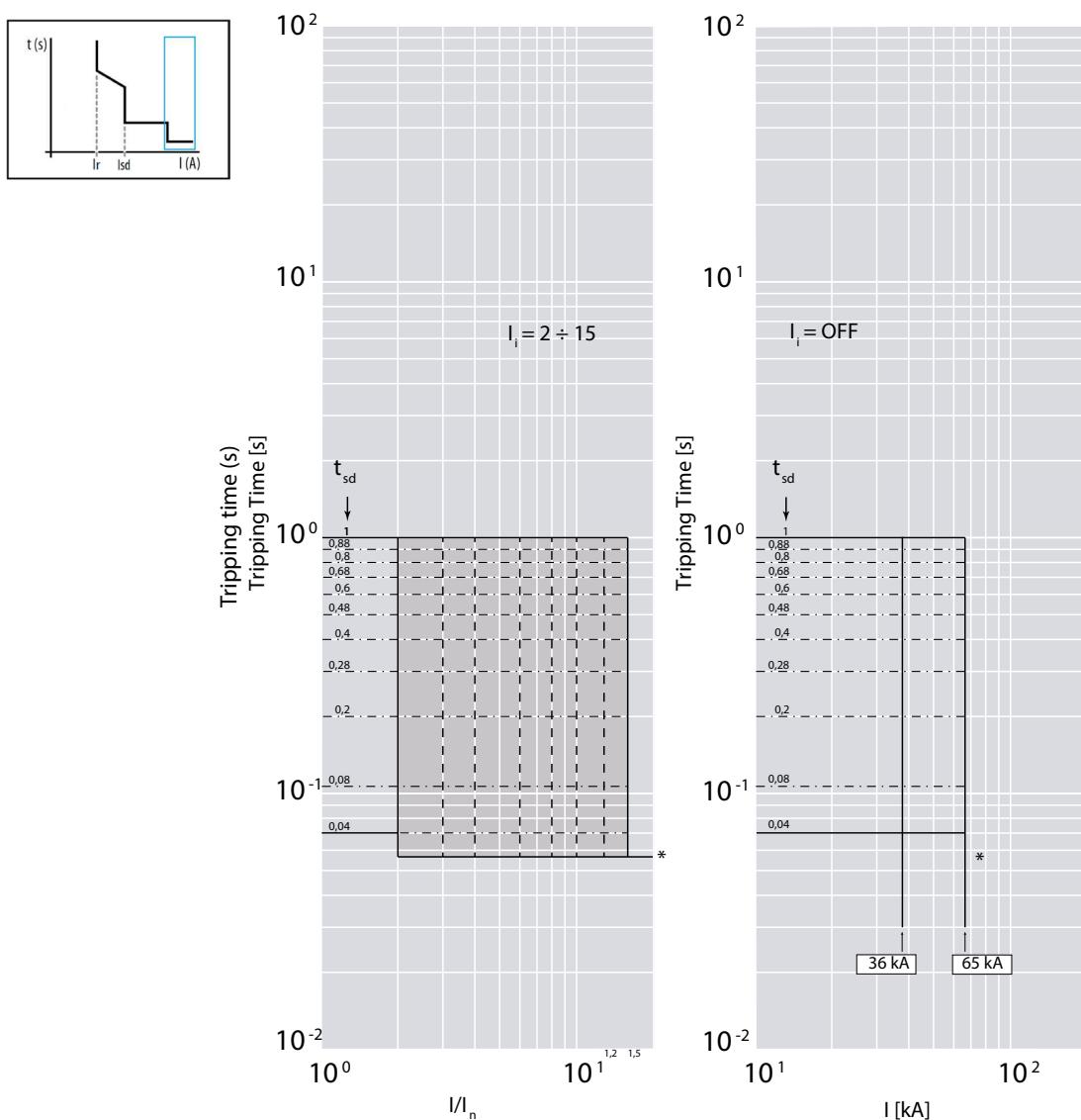
■ 9.2 Tripping curve for DMX³ 2500 800 V~ MPx.10 protection units: short time trip protection detail.



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

9. CURVES (continued)

■ 9.3 Tripping curve for DMX³ 2500 800 V~ MPx.10 protection units: instantaneous trip protection detail.



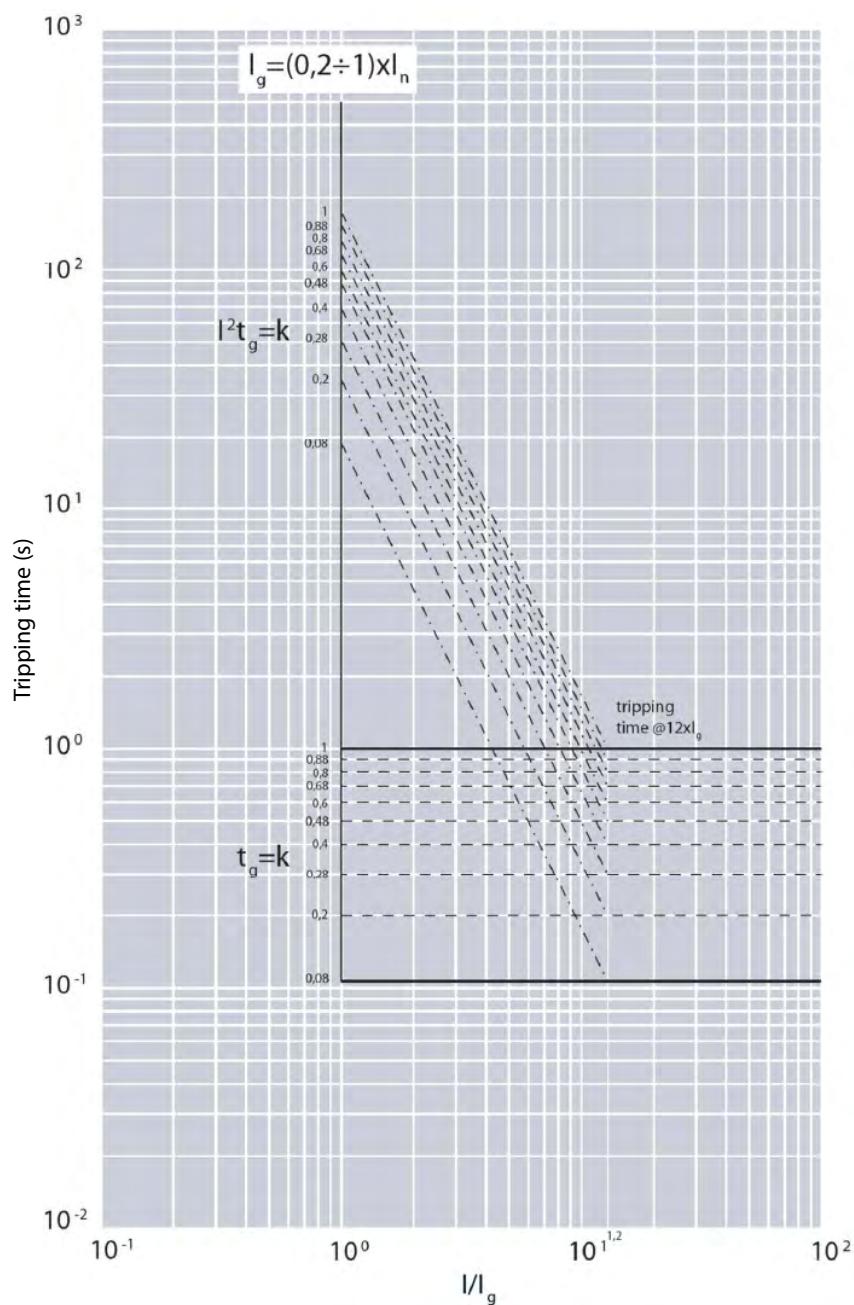
* Fixed instantaneous override - I_{sf}

I _{cu}	Values for I _{sf}
36 kA	36 kA

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

9. CURVES (continued)

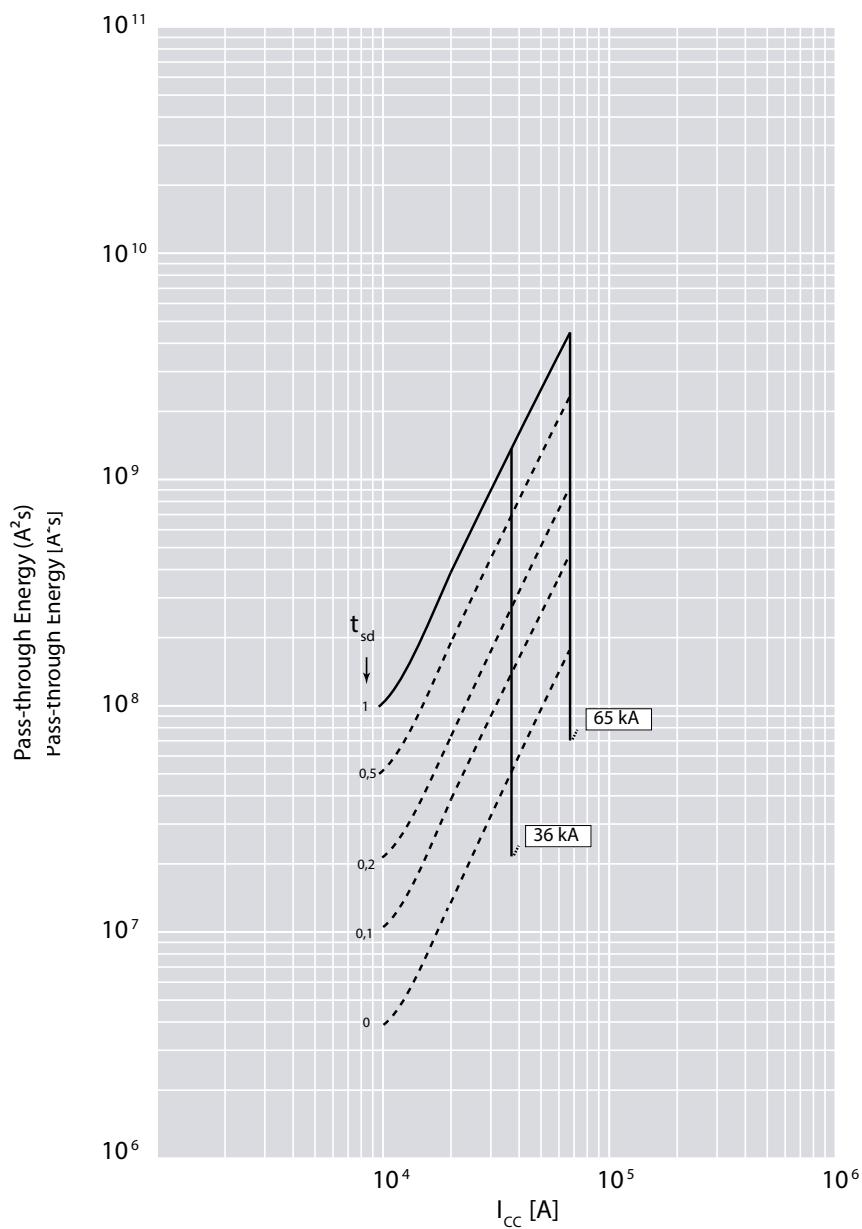
■ 9.4 Ground fault curve for DMX³ 2500 800 V~ MPx.10 protection units.



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

9. CURVES (continued)

■ 9.5 Pass-through specific energy curve (at 800 V).



Value	Description
I	Current
I_n	Rated current
I_g	Ground fault current
tsd	Short time delay
$tsd = k$	Constant tripping time setting
$I^2tsd = k$	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 IEC6266 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.

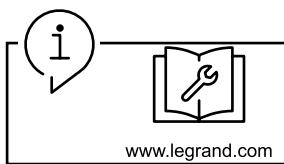
Definition of the electrical characteristics of a low voltage installation in compliance with the applicable standards.

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.



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

PEP: available on e-catalog.

Workshop book: mounting informations, equipments, accessories and spare parts 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.