

DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to 64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42



CONTENTS	PAGES
1. Description - Use.....	1
2. Range	1
3. Overall dimensions	1
4. Preparation - Connection.....	1
5. General characteristics.....	2
6. Conformities and approvals.....	7
7. Characteristic curves.....	7
8. Auxiliaries and accessories.....	16

1. DESCRIPTION - USE

Thermal-magnetic circuit breaker (MCB) with positive contact indication for control, protection against short-circuits and overloads, and isolation of electrical circuits.

Symbol:



Technology:

- . Current limiting device.
- . 1.5 module (26.7 mm) per pole.
- . Trip free mechanism.

2. RANGE

Polarities:

- . 1P / 2P / 3P / 4P.

Rated current In:

- . 80 / 100 A in B curve.
- . 80 / 100 / 125 A in C and D curves.

Magnetic tripping curves:

- . B curve (between 3 and 5 In).
- . C curve (between 5 and 10 In).
- . D curve (between 10 and 14 In).

Thermal threshold:

- . Non operating current (In_f): 1.05 In.
- . Operating current (If): 1.3 In.

Rated Voltage / Frequency:

- . 230 / 400 V ~, 50 / 60 Hz with standard tolerances.
- . 240 / 415 V ~, 50 / 60 Hz with standard tolerances.
- . 125 V per pole in direct current.

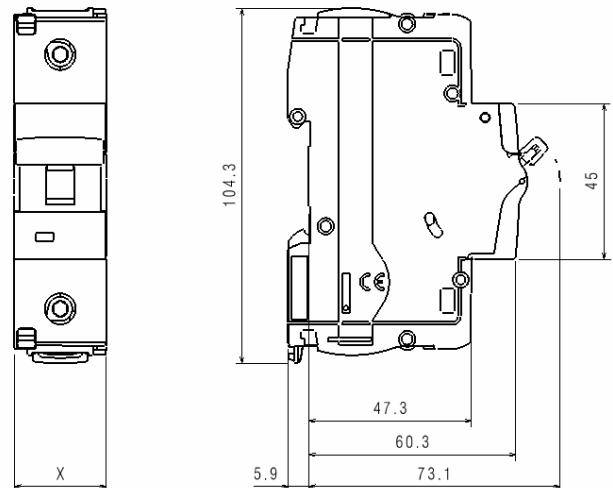
Maximum operating voltage:

- . 500 V ~, 50 / 60 Hz with derating of breaking capacity.

Breaking capacity:

- . 16 kA according to IEC/EN/NF 60947-2 standard

3. OVERALL DIMENSIONS



N° of poles	"X" (mm)
1P	26.7 mm
2P	53.4 mm
3P	80.1 mm
4P	106.8 mm

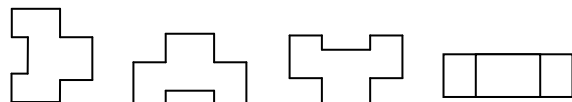
4. PREPARATION - CONNECTION

Fixing:

- . On symmetric rail EN/IEC 60715 or DIN 35.

Operating position:

- . Vertical, Horizontal, upside down and on the side



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4. PREPARATION – CONNECTION *(continued)*

Supply:

- . Either from the top or the bottom

Terminal depth:

- . 19 mm.
- . It is possible to separate the terminals by retractable insulation shields.

Stripping length recommended:

- . 17 mm for main terminals.
- . 10 mm for extra automatic terminals.

Screw head:

- . Allen screw.

Tightening torque:

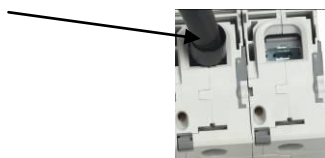
- . Recommended: 5.5 Nm.
- . Mini 4.5 Nm
- . Maxi 6 Nm.

Tools required:

- . For the terminals: Allen wrench 4 mm.
- . For fixing: flat screwdriver 5.5 mm (6 mm maximum).

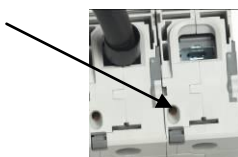
Conductor type:

- . For main terminals :



	Copper cable	
	Without ferrule	With ferrule
Rigid cable	6 mm ² to 70 mm ²	-
Flexible cable	6 mm ² to 50 mm ²	6 mm ² to 50 mm ²

- . For extra terminals :



	Copper cable	
	Without ferrule	With ferrule
Rigid cable	0.75 mm ² à 2.5 mm ²	-
Flexible cable	0.75 mm ² à 2.5 mm ²	0.75 mm ² à 1.5 mm ²

Manual actuation of the MCB:

- . By the 2-position ergonomic handle:
 - “I – ON”: Closed circuit.
 - “0 – OFF”: Opened circuit.

4. PREPARATION – CONNECTION *(continued)*

Display of contact state:

- . By marking of the MCBs handle:
 - “O-Off” in white on a green background = contacts opened.
 - “I-On” in white on a red background = contacts closed.
- . By mechanical indicator on front face:
 - Green = contacts opened.
 - Red = contacts closed.

Sealing:

- . Possible in “Open” position (OFF) or “Closed” position (ON).

Locking:

- . By 5 mm padlock (cat. N° 4 063 13) or 6 mm padlock (cat. N° 0 227 97) with padlock support (cat. N° 0 044 42).

Consignment:

- . On site padlocking system, possible only in open circuit – “0 – OFF” handle position - with 1.5mm² stripped wire for example or 2.4mm wide “colring”.

Labelling:

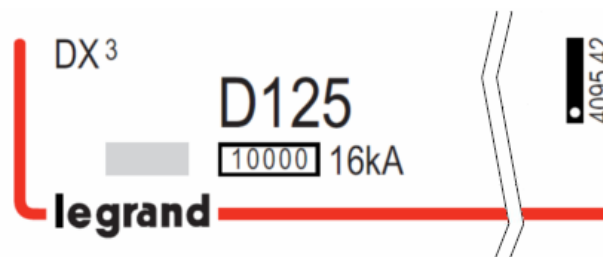
- . Circuit identification by way of a label inserted in the label holder situated on the front of the product.



5. GENERAL CHARACTERISTICS

Front side marking:

- . By permanent ink pad printing:
 - Name of range : DX³
 - Tripping curve and rated current (en A)
 - Icu in Amps, Breaking capacity according to IEC/EN 60898-1 standard (10000 A)
 - Icu in kA, Breaking capacity according to IEC/ EN 60947-2 standard (16 kA)
 - Catalogue number and logo
 - Brand: Legrand



DX³ MCB 10000 A / 16 kA

80 A to 125 A (1,5 module per pole)

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5. GENERAL CHARACTERISTICS (continued)

Short-circuit breaking capacity:

. Single-phase or three-phase network (50/60 Hz AC)

According to IEC 60947-2.

Un		1P	2P	3P / 4P
110 V~	Icu	25 kA	50 kA	-
230 V~		16 kA	32 kA	32 kA
400 V~		-	16 kA	16 kA
440 V~		-	10 kA	10 kA
500 V~		-	8 kA	8 kA

Un	Ics	100% of Icu	100% of Icu	100% of Icu
110 V~	Ics	100% of Icu	100% of Icu	100% of Icu
230 V~				
400 V~				

Breaking capacity of a single pole:

. In three-phase network 220 / 380 V~ to 240 / 415 V~

- for TN neutral system, Icn1 = 16 kA (under 220 to 240 V~)
- for IT neutral system, Iit = 4 kA (under 380 to 415 V~)

. In three-phase network 110 / 220 V~ to 120 / 240 V~

- for TN neutral system, Icn1 = 32 kA (under 110 to 127 V~)
- for IT neutral system, Iit = 8 kA (under 220 to 240 V~)

Breaking capacity with DC (direct current):

According to IEC 60947-1

Un		1P	2P	3P	4P
24 à 48 V d.c.	Icu	16 kA	16 kA	-	-
110 V d.c.		-	16 kA	16 kA	-
230 V d.c.		-	-	-	16 kA

Un	Ics	16 kA	16 kA	-	-
24 à 48 V d.c.	Ics	16 kA	16 kA	-	-
110 V d.c.		-	16 kA	16 kA	-
230 V d.c.		-	-	-	16 kA

Minimum operating voltage:

. 12 V a.c. / d.c. per pole.

Pulse rated voltage:

. Uimp = 6 kV (wave 1.5 / 50 μs).

Insulation rated voltage:

. Ui = 500 V.

Pollution degree:

. 3.

Dielectric strength:

. 2500 V.

Operation at 400Hz:

. The magnetic thresholds increase by 45%.

5. GENERAL CHARACTERISTICS (continued)

Closing and opening force via the handle:

- . 0.17 Nm per pole to close.
- . 0.09 Nm per pole to open.

Mechanical endurance according to IEC 60947-2 :

- . 20 000 operations without load
- . 10 000 operations with load (under In x Cos φ=0.9)
- . 2 000 operations with load (under In in DC current)

Enclosure material:

- . Polyester.
- . Characteristics of this material: self extinguishing, heat and fire resistant according to EN 60898-1, glow-wire test at 960°C for external parts made of insulating material necessary to retain in position current-carrying parts and parts of protective circuit (650°C for all other external parts made of insulating material).

Average weight per pole:

- . 0,220 kg.

Packaged volume:

	Volume (dm ³)
Single pole	0,36
Double pole	0,63
Triple and Four pole	1,14

Ambient operating temperature:

- . Min. = -25°C. Max. = +70°C

Ambient storage temperature:

- . Min. = -40°C. Max. = +70°C

Protection class:

- . Protection index of terminals against solid and liquid bodies: IP 20 (according to IEC 529, EN 60529 et NF C 20-010).
- . Protection index of the box against solid and liquid bodies: IP 40 (according to IEC 529, EN 60529 et NF C 20-010).
- . Protection index against mechanical shocks: IK 02 (according to EN 50102 et NF C 20-015).

Resistance to sinusoidal vibrations:

- . According to IEC 60068-2-35.
- . Axis : x, y, z.
- . Frequency range: 5÷100 Hz ; duration 90 minutes
- . Displacement (5÷13,2 Hz) : 1mm.
- . Acceleration (13,2÷100 Hz) : 0,7g (g=9,81 m/s²)

Power dissipated and impedance per device at In (in W):

. mcbs B, C and D curves

In	80 A	100 A	125 A
1P to 4P	8.8 W	10 W	15.6 W

- . Impedance per pole (Ω) = $\frac{\text{Power dissipated}}{I_n^2}$

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5. GENERAL CHARACTERISTICS *(continued)*

Derating of circuit-breakers according to ambient temperature:

. The nominal characteristics of a circuit breaker are modified according to the ambient temperature inside the cabinet or the enclosure where the circuit breaker is located.

. Reference temperature: 40 °C according IEC/EN 60947-2.

In (A)	Ambient temperature / In									
	-25°C	-10°C	0°C	10°C	20°C	30°C	40°C	50°C	60°C	70°C
80	102	97	94	91	88	84	80	76	72	69
100	128	122	118	114	110	105	100	95	90	86
125	160	152	147	142	137	131	125	119	113	108

Influence of the altitude:

	≤2000 m	3000 m	4000 m	5000 m
Dielectric holding	3000 V	2500 V	2000 V	1500 V
Max operational Voltage	400 V	400 V	400 V	400 V
Derating at 40°C	none	none	none	none

Derating of MCBs function of the number of devices side by side:

When several MCBs are juxtaposed and operate simultaneously, the thermal evacuation of the poles is limited. This results in an increase in operating temperature of the circuit breakers which can cause unwanted tripping. It is recommended to apply the following coefficients to the rated currents.

Number of circuit breakers side by side	Coefficient
2 - 3	0.9
4 - 5	0.8
6 - 9	0.7
≥ 10	0.6

These values are given by the recommendation of IEC 60439-1, NF C 63421 and EN 60439-1 standards.

To avoid to have to use these coefficients, it is necessary to allow a good ventilation and to separate the devices with 0.5 module spacing elements (cat. N° 4 063 07).

Association and coordination of a circuit breaker with a protective device located upstream:

Association allows a device's breaking capacity to be increased by combining it with another protective device placed upstream.

This combination makes it possible to use a downstream device with a breaking capacity which is lower than the maximum prospective short-circuit current at its installation point.

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5. GENERAL CHARACTERISTICS *(continued)*

MCB's back-up protection in three-phase network (+N) 400/415V according to IEC 60 947-2:

For TT or TN neutral system in 230/400 V network, to know the breaking capacity of the combination of a double pole breaker (connected between phase and neutral under 230V) downstream of a four-pole circuit-breaker, take the values shown in tables 230/400V.

		m.c.b. upstream											
		DPX 125		DPX 125		DPX ³ 160 / DPX ³ 160 + add on			DPX 160		DPX 250ER		
		16kA		25 - 36kA		25 - 50kA			25 - 36 - 50kA		25 - 36 - 50kA		
m.c.b. downstream		100A	125A	100A	125A	100A	125A	160A	100A	160A	100A	160A	250A
DX ³ 10000A/16kA B and C curves	80A	16kA	16kA	20kA	20kA	25kA	25kA	25kA	20kA	20kA	20kA	20kA	20kA
	100A	-	16kA	-	20kA	-	25kA	25kA	-	20kA	-	20kA	20kA
	125A	-	-	-	-	-	-	25kA	-	20kA	-	20kA	20kA
DX ³ 10000A/16kA D curve	80A	16kA	16kA	20kA	20kA	25kA	25kA	25kA	20kA	20kA	20kA	20kA	20kA
	100A	-	16kA	-	20kA	-	25kA	25kA	-	20kA	-	20kA	20kA
	125A	-	-	-	-	-	-	25kA	-	20kA	-	20kA	20kA

		m.c.b. upstream											
		DPX 250ER AB			DPX ³ 250 / DPX ³ 250+add on				DPX - H / L 250			DPX 400AB	
		36kA			25 - 36 - 70kA				36 - 70 - 100kA			36kA	
m.c.b. downstream		130A	170A	240A	100A	160A	200A	250A	100A	160A	250A	320A	400A
DX ³ 10000A/16kA B and C curves	80A	20kA	20kA	20kA	25kA	25kA	25kA	25kA	20kA	20kA	20kA	20kA	20kA
	100A	-	20kA	20kA	-	25kA	25kA	25kA	-	20kA	20kA	20kA	20kA
	125A	-	20kA	20kA	-	25kA	25kA	25kA	-	16kA	16kA	16kA	16kA
DX ³ 10000A/16kA D curve	80A	20kA	20kA	20kA	25kA	25kA	25kA	25kA	20kA	20kA	20kA	20kA	20kA
	100A	-	20kA	20kA	-	25kA	25kA	25kA	-	20kA	20kA	20kA	20kA
	125A	-	20kA	20kA	-	25kA	25kA	25kA	-	16kA	16kA	16kA	16kA

MCB's back-up protection in three-phase network (+ N) 230 / 240 V~ according to IEC/EN 60947-2:

		m.c.b. upstream												
		DPX 125		DPX ³ 160 DPX ³ 160 + add on			DPX ³ 160 DPX ³ 160 + add on			DPX ³ 160 DPX ³ 160 + add on			DPX 160	
		25 - 36kA		16kA			25kA			50kA			25 - 36 - 50kA	
m.c.b. downstream		100A	125A	100A	125A	160A	100A	125A	160A	100A	125A	160A	100A	160A
DX ³ 10000A/16kA B and C curves	80A	35kA	35kA	35kA	35kA	35kA	40kA	40kA	40kA	50kA	50kA	50kA	36kA	36kA
	100A	-	35kA	-	35kA	35kA	-	40kA	40kA	-	50kA	50kA	-	36kA
	125A	-	-	-	-	35kA	-	-	40kA	-	50kA	50kA	-	36kA
DX ³ 10000A/16kA D curve	80A	35kA	35kA	35kA	35kA	35kA	40kA	40kA	40kA	50kA	50kA	50kA	36kA	36kA
	100A	-	35kA	-	35kA	35kA	-	40kA	40kA	-	50kA	50kA	-	36kA
	125A	-	-	-	-	35kA	-	-	40kA	-	50kA	50kA	-	36kA

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5. GENERAL CHARACTERISTICS (continued)

		m.c.b. upstream													
		DPX 250ER			DPX 250ER AB			DPX ³ 250 DPX ³ 250 + add on				DPX ³ 250 DPX ³ 250 + add on			
		25 - 36 - 50kA			36kA			25kA				36 - 70kA			
m.c.b. downstream		100A	160A	125A	130A	170A	240A	100A	160A	200A	250A	100A	160A	200A	250A
DX ³ 10000A/16kA B and C curves	80A	36kA	36kA	36kA	36kA	36kA	36kA	40kA	40kA	40kA	40kA	50kA	50kA	50kA	50kA
	100A	-	36kA	36kA	-	36kA	36kA	-	40kA	40kA	40kA	-	50kA	50kA	50kA
	125A	-	36kA	36kA	-	36kA	36kA	-	40kA	40kA	40kA	-	50kA	50kA	50kA
DX ³ 10000A/16kA D curve	80A	36kA	36kA	36kA	36kA	36kA	36kA	40kA	40kA	40kA	40kA	50kA	50kA	50kA	50kA
	100A	-	36kA	36kA	-	36kA	36kA	-	40kA	40kA	40kA	-	50kA	50kA	50kA
	125A	-	36kA	36kA	-	36kA	36kA	-	40kA	40kA	40kA	-	50kA	50kA	50kA

Selectivity between two levels of protection

- . The downstream MCB must always have a magnetic threshold and a rated current lower than those of the upstream protection.
- . Selectivity or Discrimination is said to be total (T) if there is discrimination up to the value of breaking capacity (in accordance with standard EN/IEC 60947-2) of the downstream MCB.

Selectivity between MCBs:

- . Selectivity limit at 400V~: values in Ampere.

		m.c.b. upstream						
		DX ³ 16kA / DX ³ 25kA D curve		DPX ³ 160E / B / N DPX ³ 160E / B / N + add on.		DPX 160	DPX 250ER	
		16 - 25kA		16 - 25 - 50kA		25 - 36 - 50kA	25 - 36 - 50kA	
m.c.b. downstream		100A	125A	125A	160A	160A	160A	250A
DX ³ 10000A/16kA B and C curves	80A	1200	1500	5000	6000	5000	5000	5000
	100A	-	1500	-	5000	4000	4000	4000
	125A	-	-	-	3000	2000	2000	3000
DX ³ 10000A/16kA D curve	80A	1200	1500	5000	6000	4000	4000	5000
	100A	-	1500	-	5000	3000	3000	4000
	125A	-	-	-	3000	1500	1500	2000

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5. GENERAL CHARACTERISTICS *(continued)*

		m.c.b. upstream						
		DPX 250 / H / L		DPX 250ER AB	DPX ³ 250 DPX ³ 250 + add on			
		25 - 70 - 100kA		36kA	25 - 36 - 70kA			
m.c.b. downstream		160A	250A	240A	100A	160A	200A	250A
DX ³ 10000A/16kA B and C curves	80A	8000	T	T	-	T	T	T
	100A	6000	T	T	-	T	T	T
	125A	3000	8000	T	-	T	T	T
DX ³ 10000A/16kA D curve	80A	8000	T	T	-	T	T	T
	100A	6000	T	T	-	T	T	T
	125A	3000	7000	T	-	-	T	T

		Fuse upstream					
		aM type			gG type		
m.c.b. downstream		100A	125A	160A	100A	125A	160A
DX ³ 10000A/16kA B and C curves	80A	3000	6000	8000	3000	3000	4000
	100A	-	4000	5000	-	3000	3500
	125°	-	-	4000	-	-	3500
DX ³ 10000A/16kA D curve	80A	-	4000	5000	-	2000	3000
	100A	-	-	4000	-	-	2000
	125A	-	-	-	-	-	-

6. COMPLIANCE AND APPROVALS

Compliance to standards:

- . Standard: IEC/EN 60947-2.
- . CEE guidelines: 73/23/CEE + 93/68/CEE.
- . Legrand circuit-breakers can be used under the conditions of use as defined by IEC / EN 60947.
- . The performance of circuit breakers can be influenced by particular climates: hot dry, cold dry, hot humid, salt fog atmosphere.

Classification according to Annex Q (standard IEC/EN 60947-1) :

- . Category C with a range test temperature -25 °C / +70 °C
- . salt fog atmosphere according IEC 60068-2-52

Respect of the environment – Compliance with CEE directives:

- . Compliance with Directive 2002/95/EC of 27/01/03 called "RoHS" which provides for the banning of hazardous substances such as lead, mercury, cadmium, hexavalent chromium, brominated flame retardants polybrominated biphenyls (PBBs) and polybrominated diphenyl ethers (PBDEs) from 1st July 2006
- . Compliance with Directive 91/338/CEE of 18/06/91 and Decree 94-647 of 27/07/04
- . Compliance with Directives 83/336/CEE, 92/31/EEC and 93/68/EEC (EMC).

Plastic materials :

- . Halogen-free plastic materials.
- . Marking of parts according to ISO 11469 and ISO 1043.

Packaging:

- . Design and manufacture of packaging in accordance with Decree 98-638 of 07.20.98 and Directive 94/62/EC

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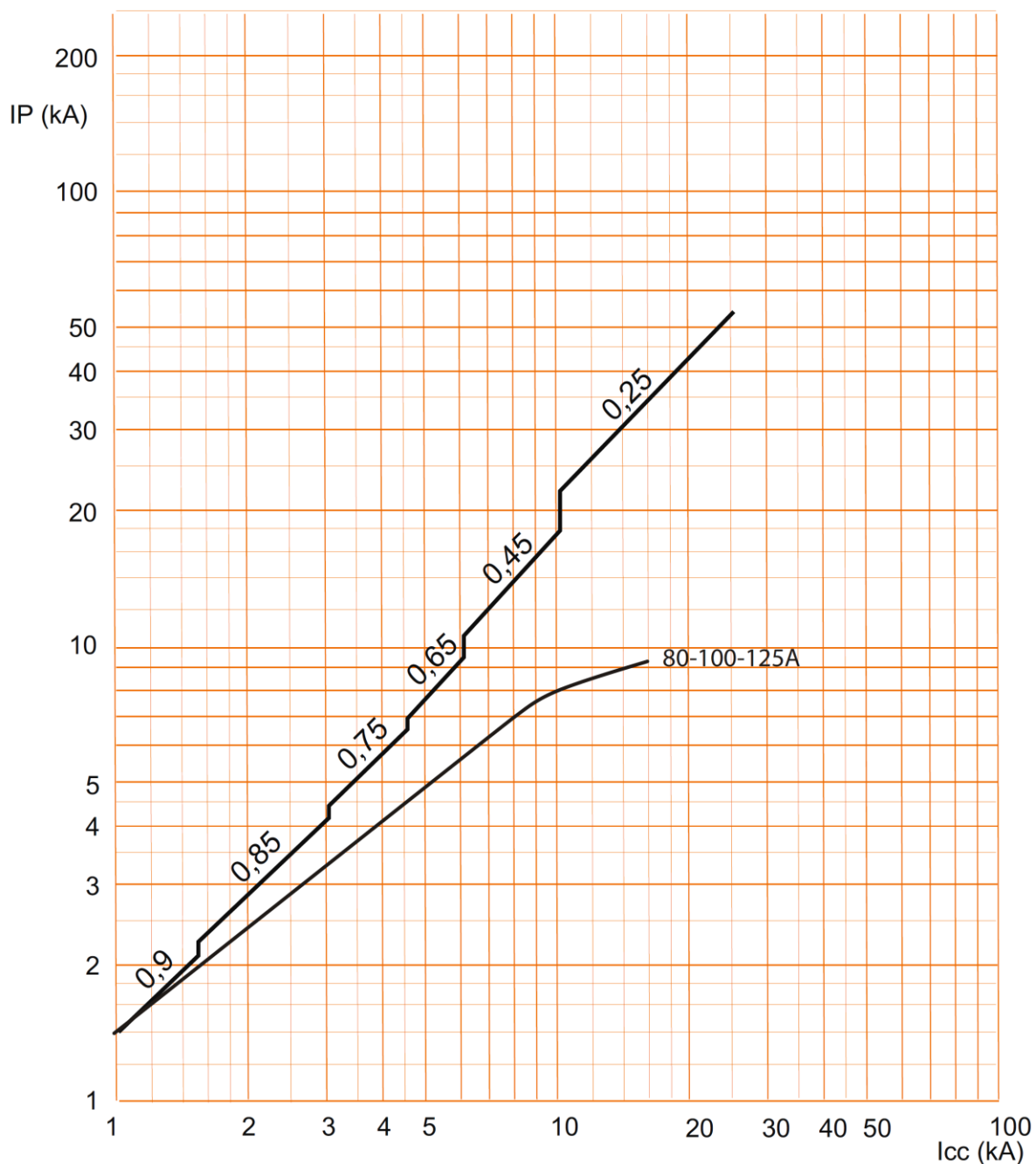
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7. CURVES

Current limiting curve:

. B, C and D curves.



. I_{cc} = Square value of symmetric component of the short circuit current (kA).

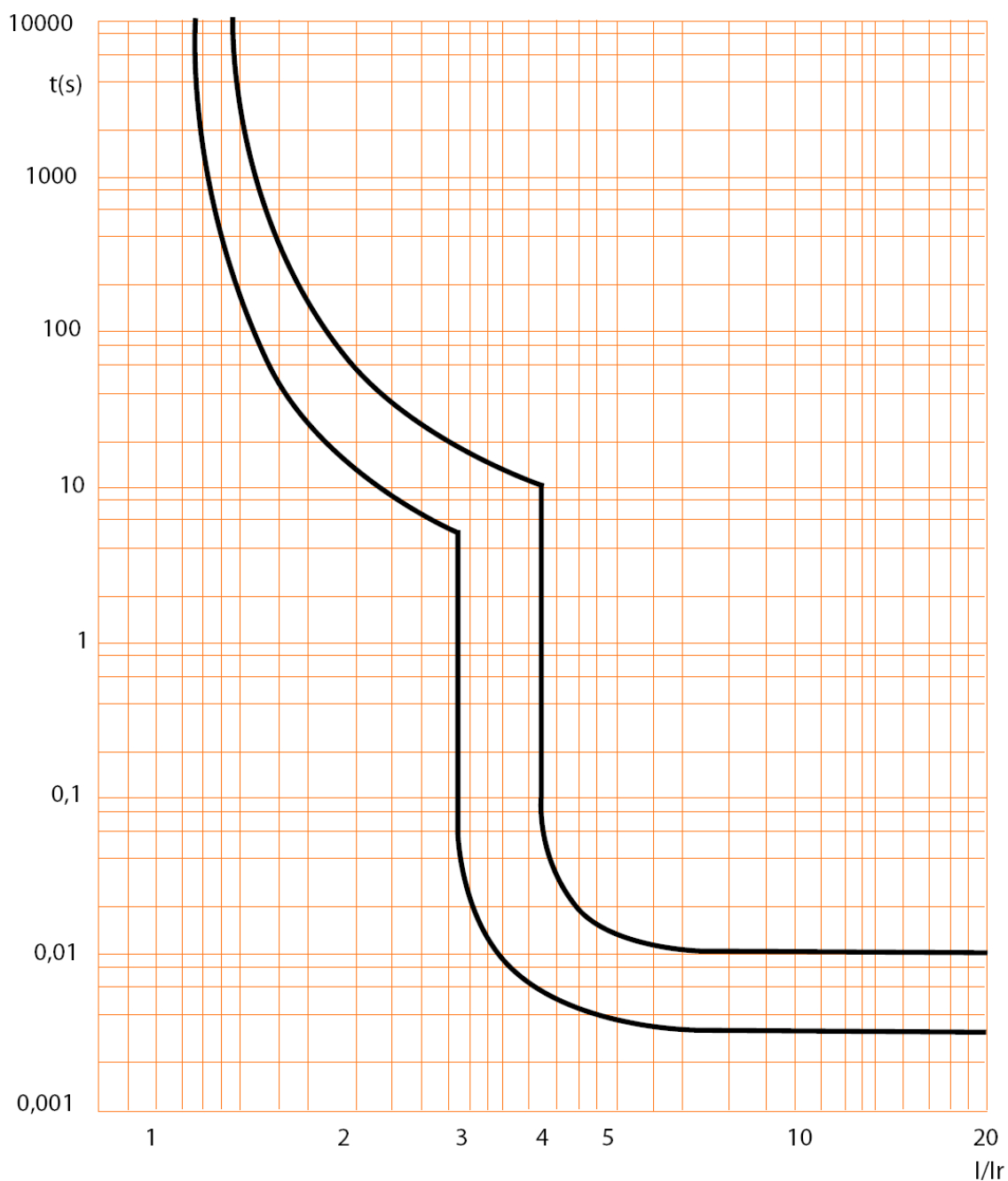
. IP = Max peak value (kA).

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7. CURVES (continued)

Operating characteristic of circuit breakers curve B:

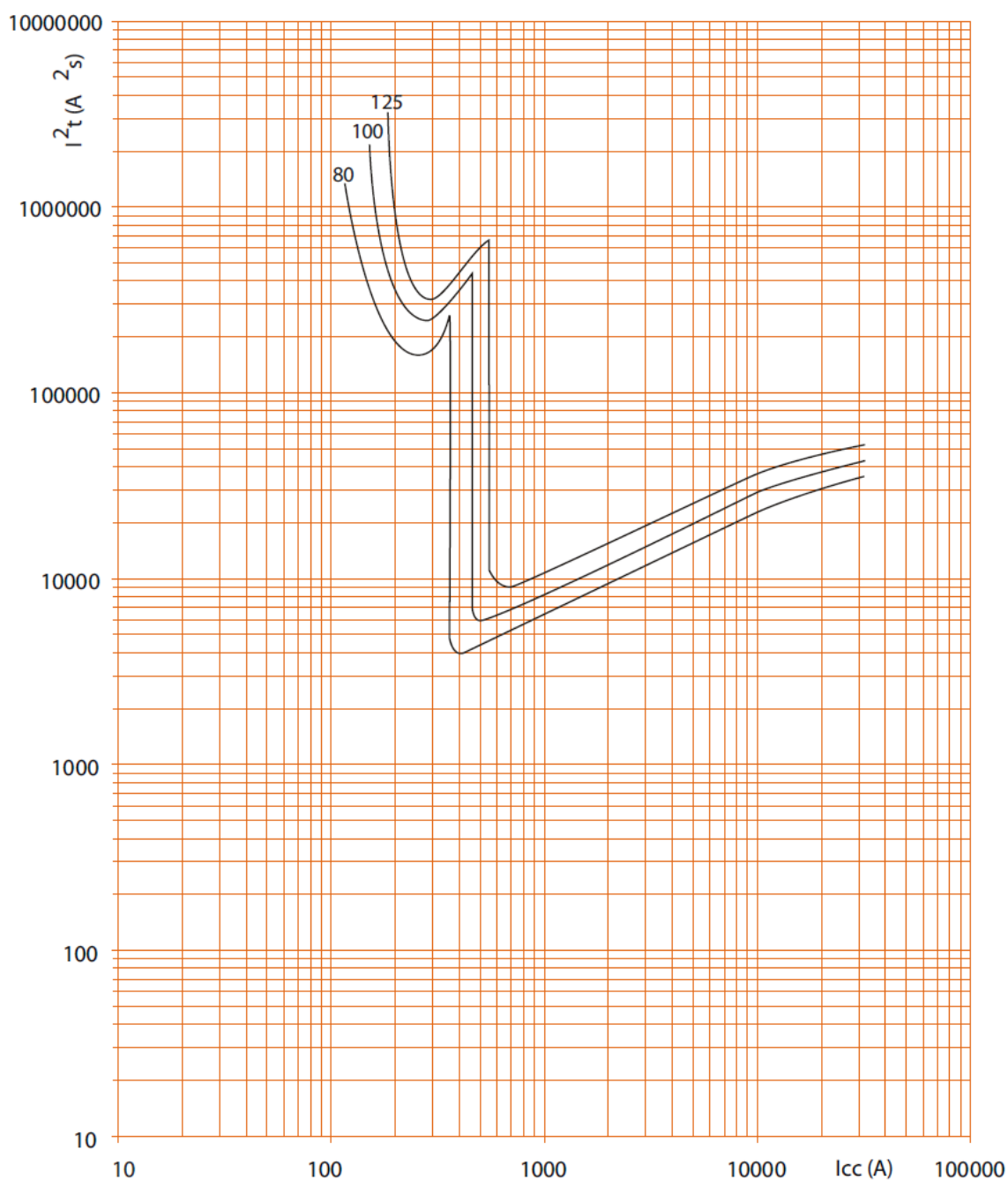


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7. CURVES (continued)

Thermal energy limiting curves of circuit breakers curve B, 2P (230V~ / 50Hz):



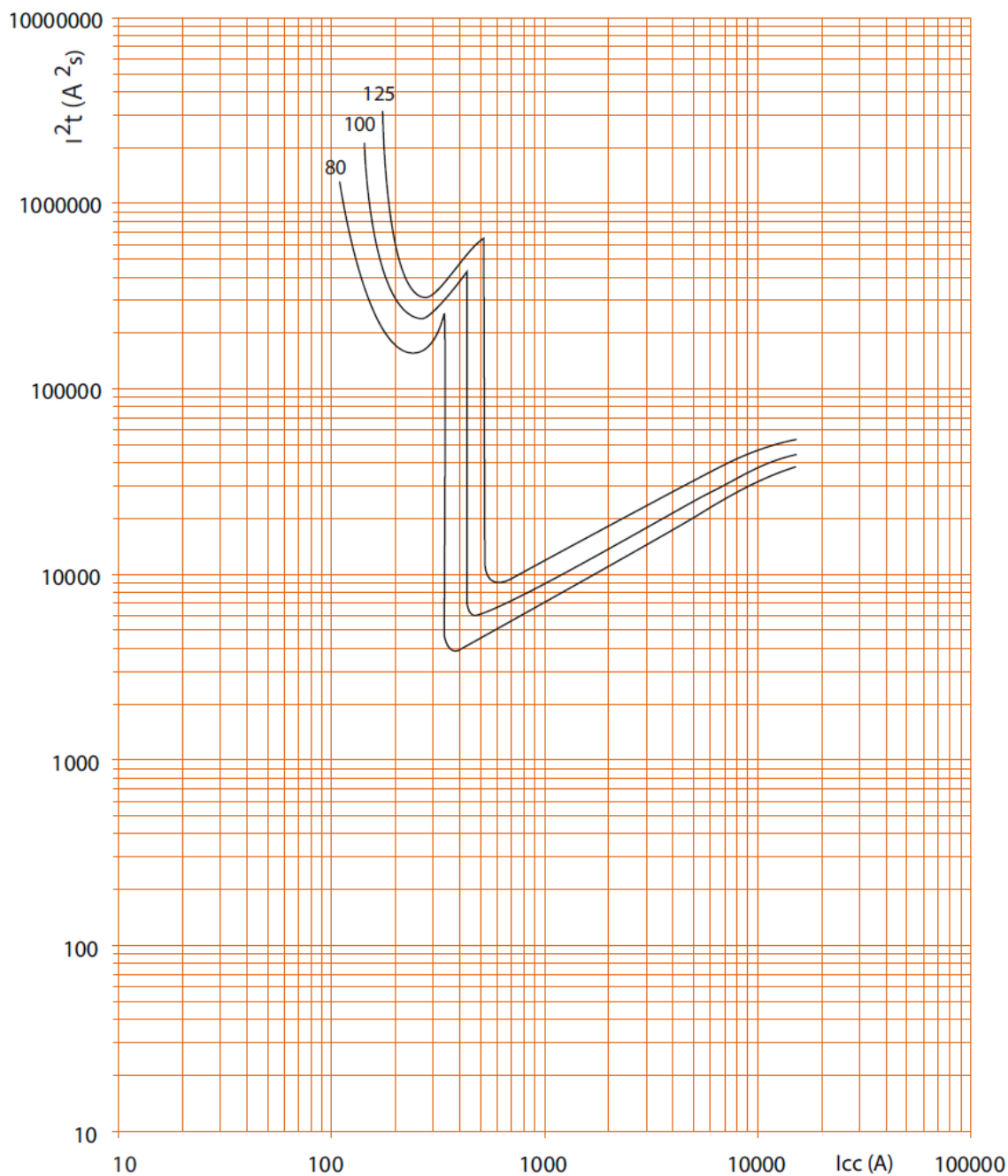
- . I_{cc} = Square value of symmetric component of the short circuit current (kA).
- . I^2t = Thermal energy limited (A^2s).

DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to
64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Thermal energy limiting curves of circuit breakers curve B, 3P et 4P (400V~ / 50Hz):



. I_{cc} = Square value of symmetric component of the short circuit current (kA).

. I^2t = Thermal energy limited (A^2s).

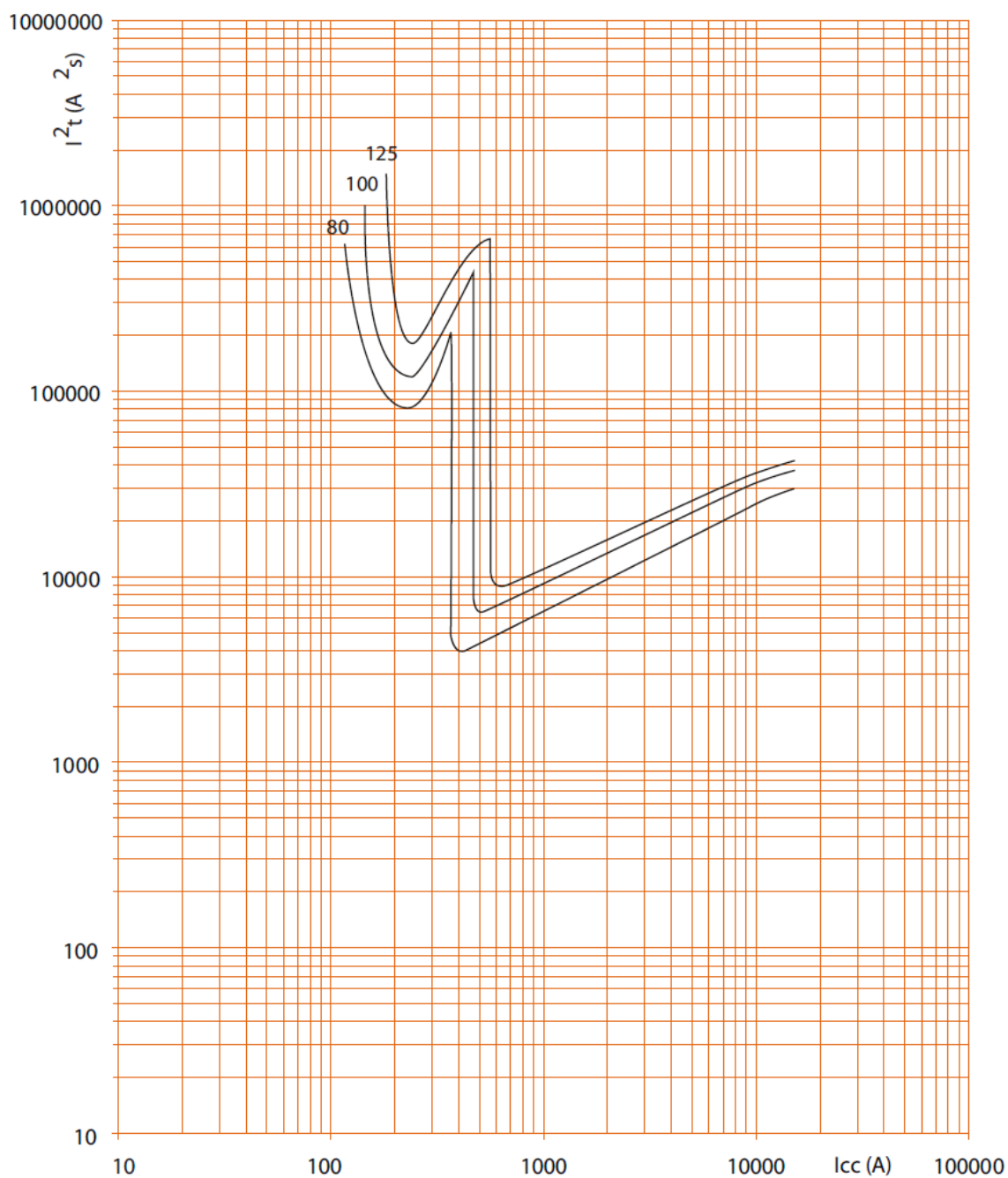
DX³ MCB 10000 A / 16 kA

80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
 4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to
 64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Thermal energy limiting curves of circuit breakers curve B, 2P (400V~ / 50Hz):



I_{cc} = Square value of symmetric component of the short circuit current (kA).

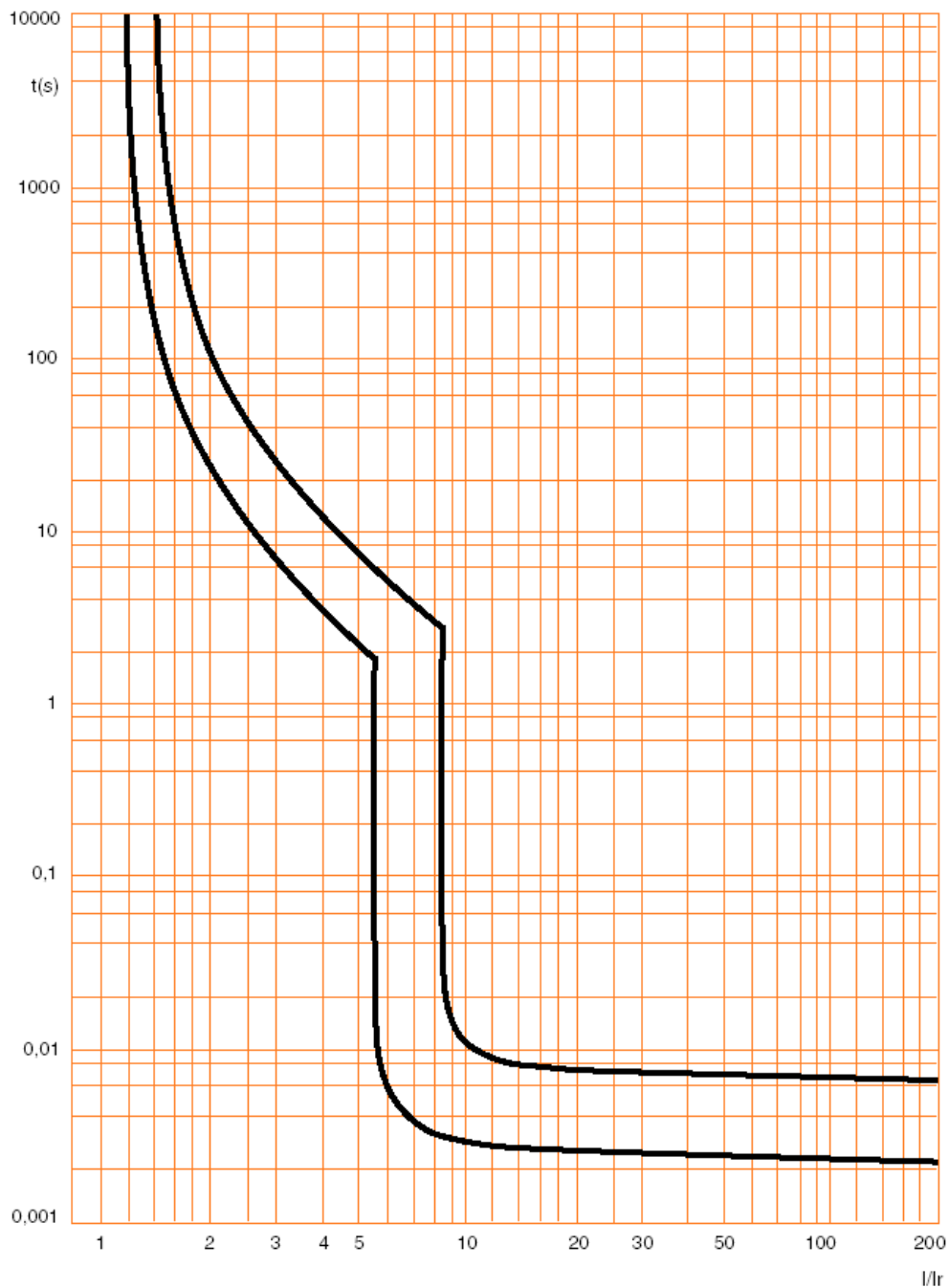
I²t = Thermal energy limited (A²s).

D DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to
64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Operating characteristic of circuit breakers curve C:

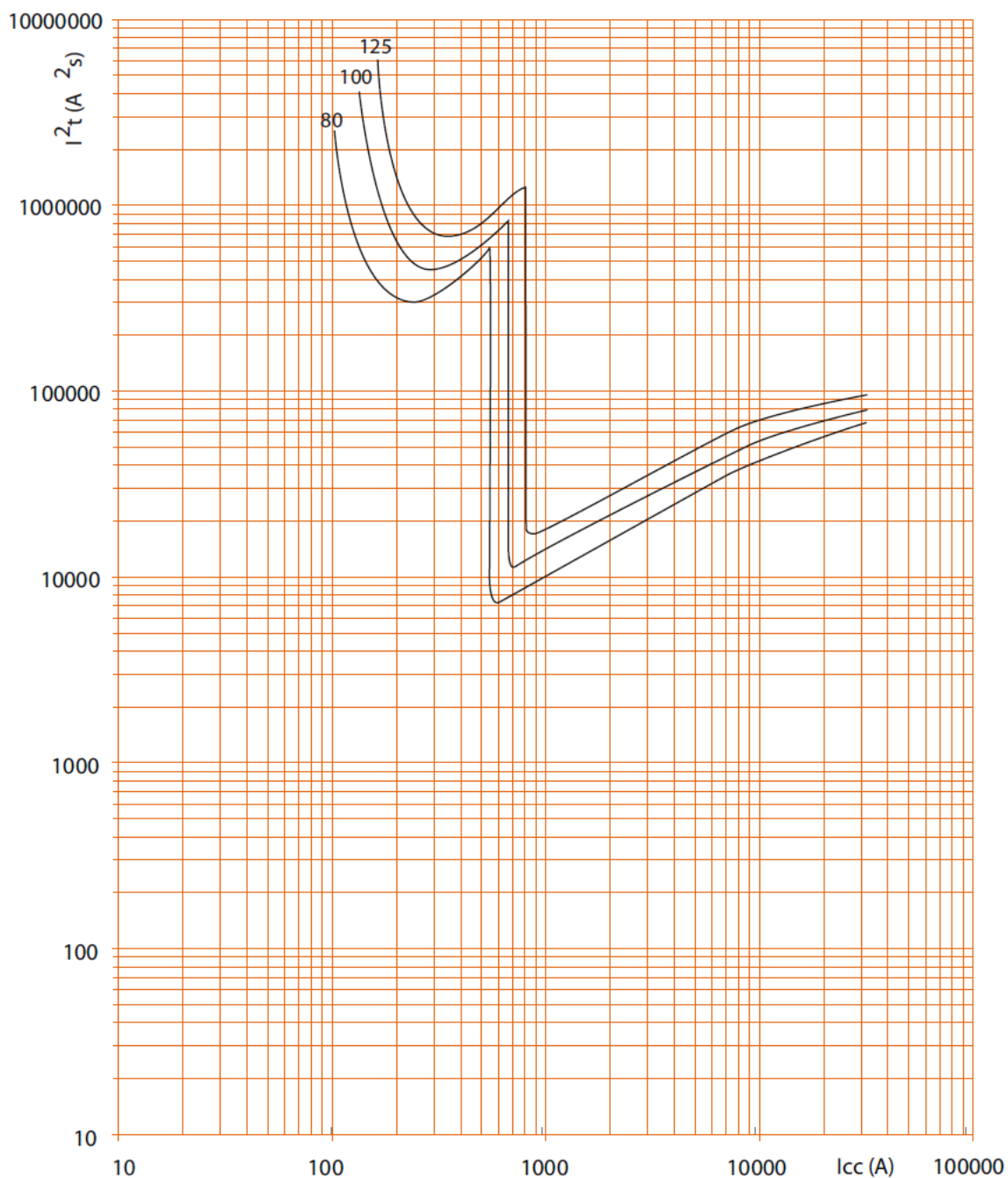


DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to 64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Thermal energy limiting curves of circuit breakers curve C, 2P (230V~ / 50Hz) :



. I_{cc} = Square value of symmetric component of the short circuit current (kA).

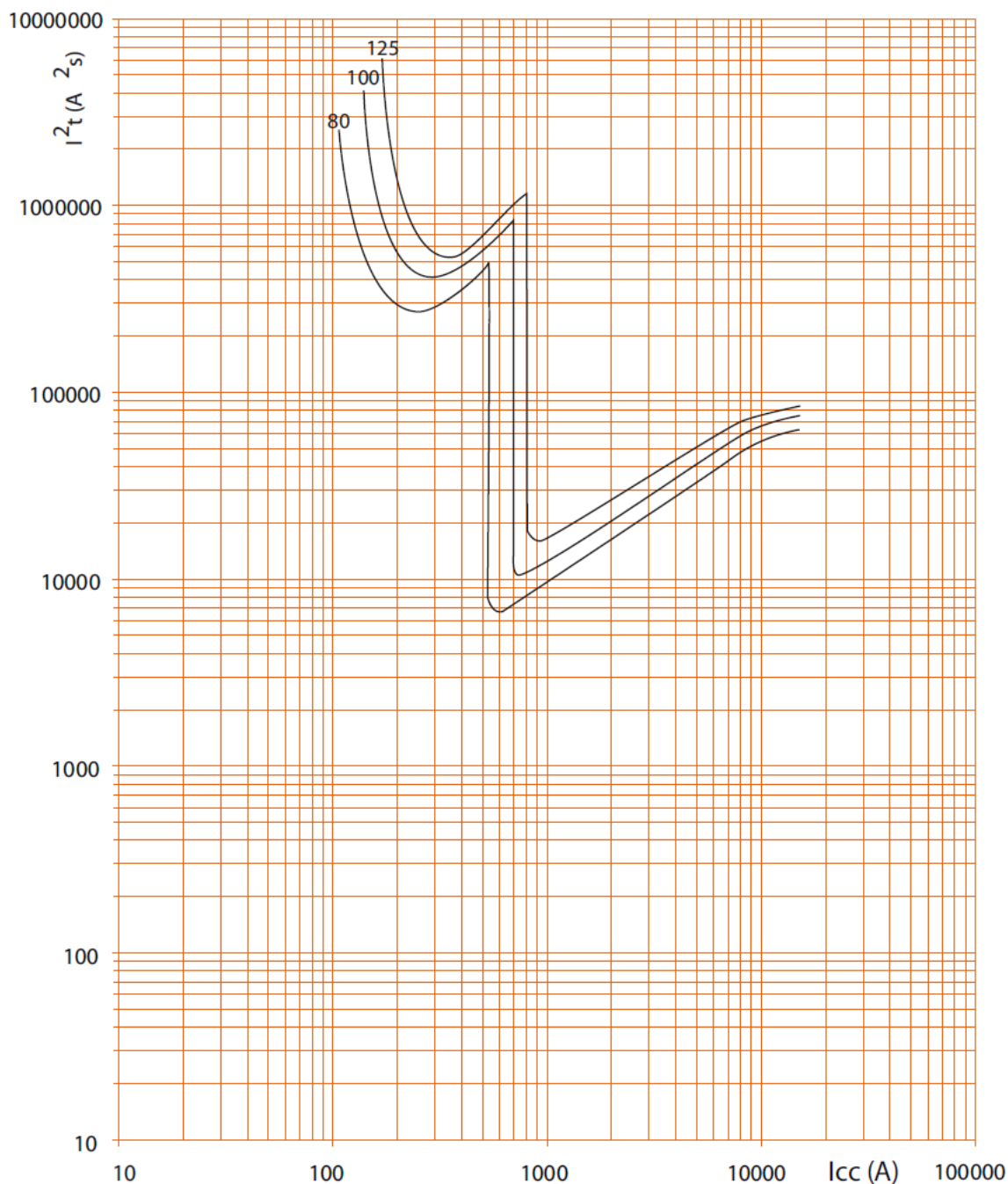
. I²t = Thermal energy limited (A²s).

DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to
64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Thermal energy limiting curves of circuit breakers curve C, 1P, 3P, 4P (400V~ / 50Hz):



I_{cc} = Square value of symmetric component of the short circuit current (kA).

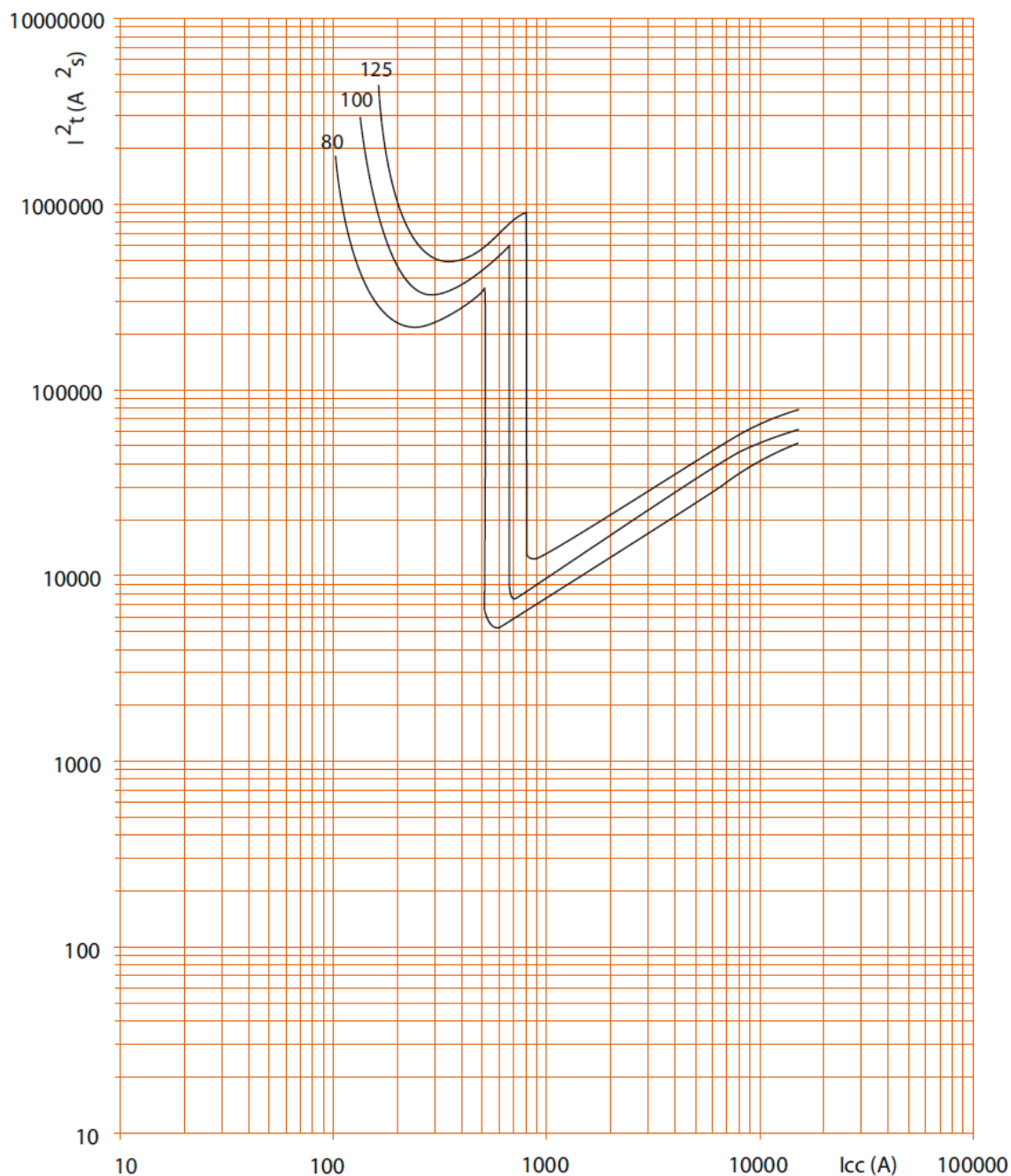
I^2t = Thermal energy limited (A^2s).

DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to
64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Thermal energy limiting curves of circuit breakers curve C, 2P (400V~ / 50Hz) :



. Icc = Square value of symmetric component of the short circuit current (kA).

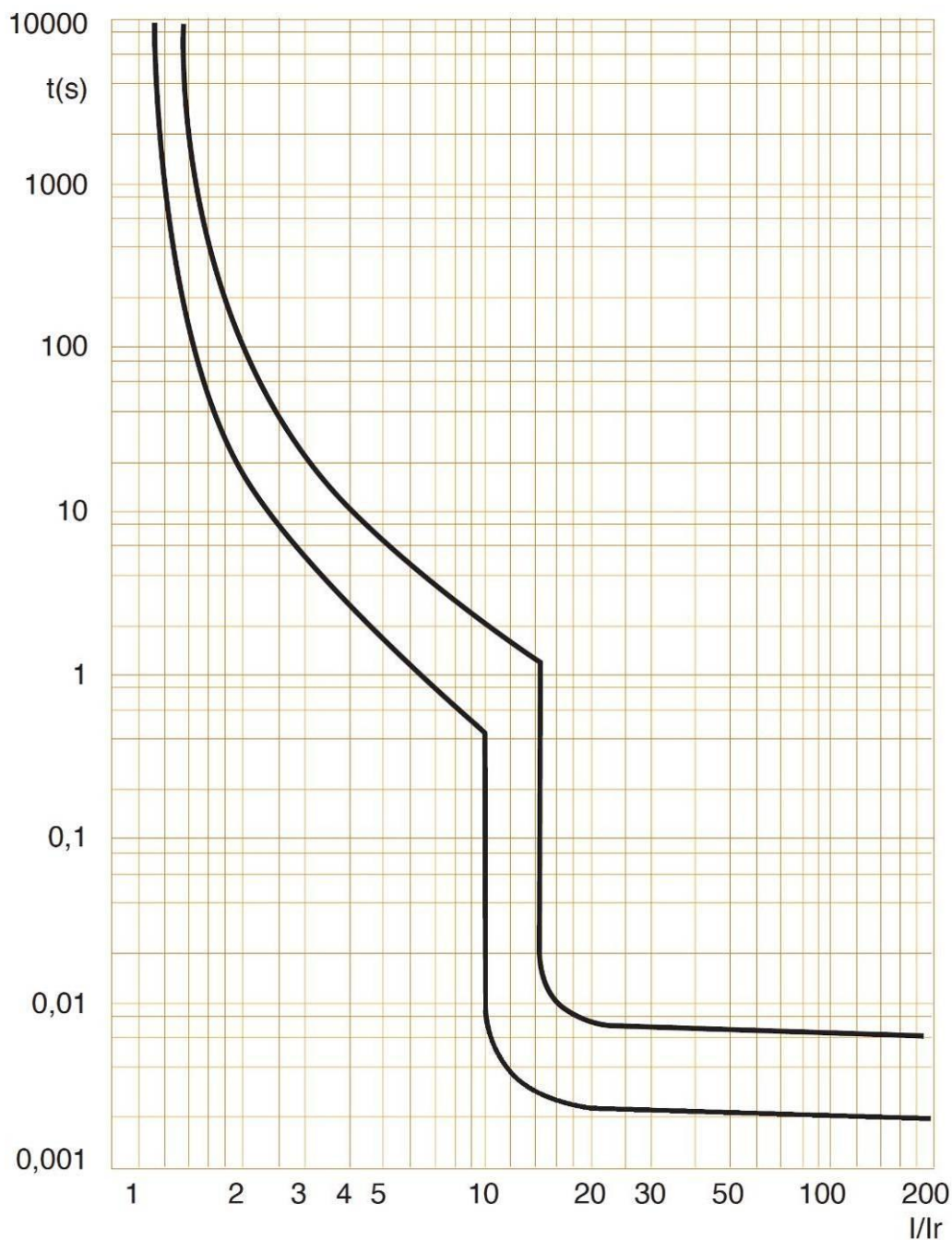
. I²t = Thermal energy limited (A²s).

DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to
64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Operating characteristic of circuit breakers curve D:

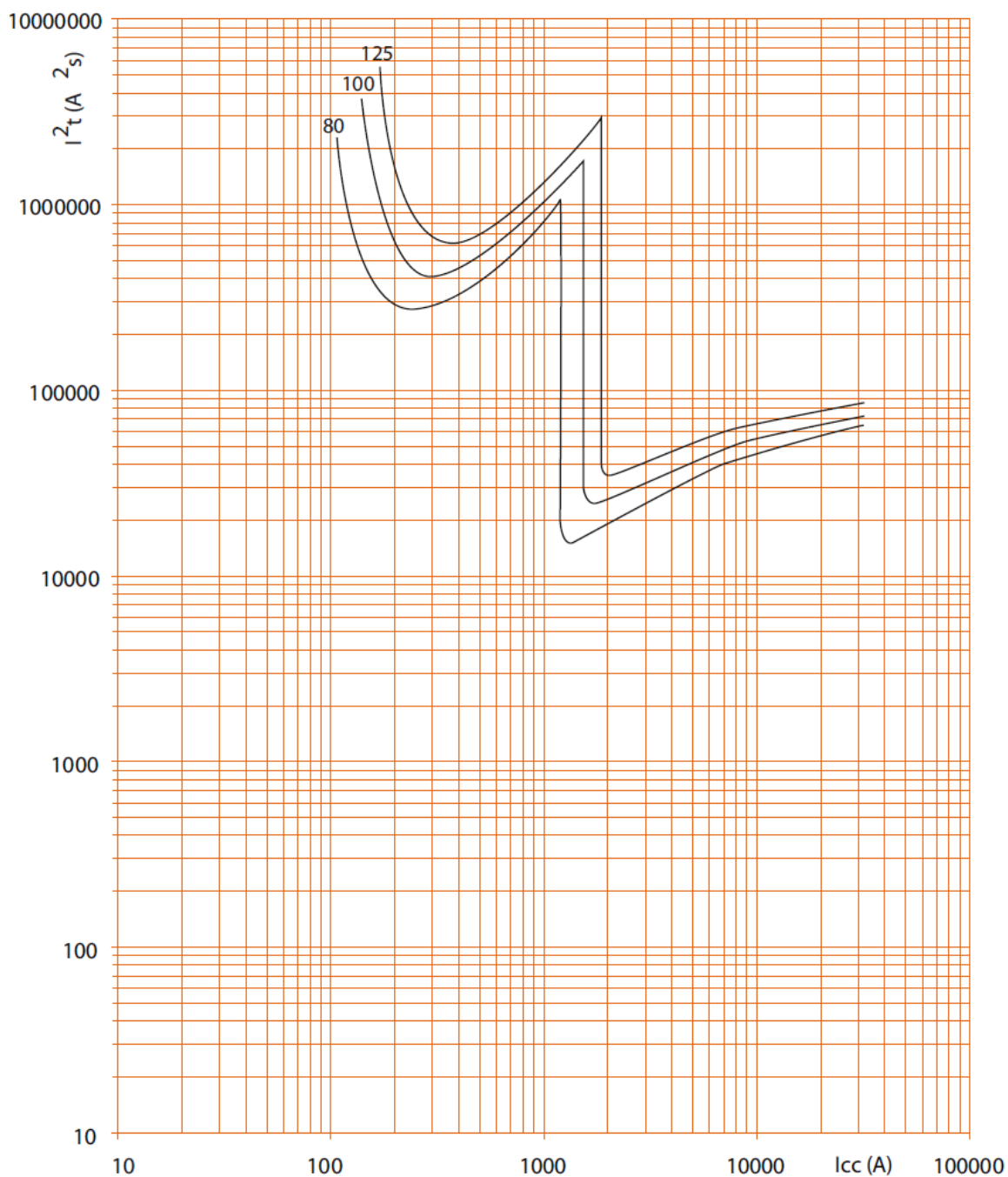


DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to 64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Thermal energy limiting curves of circuit breakers curve D, 2P (230V~ / 50Hz):



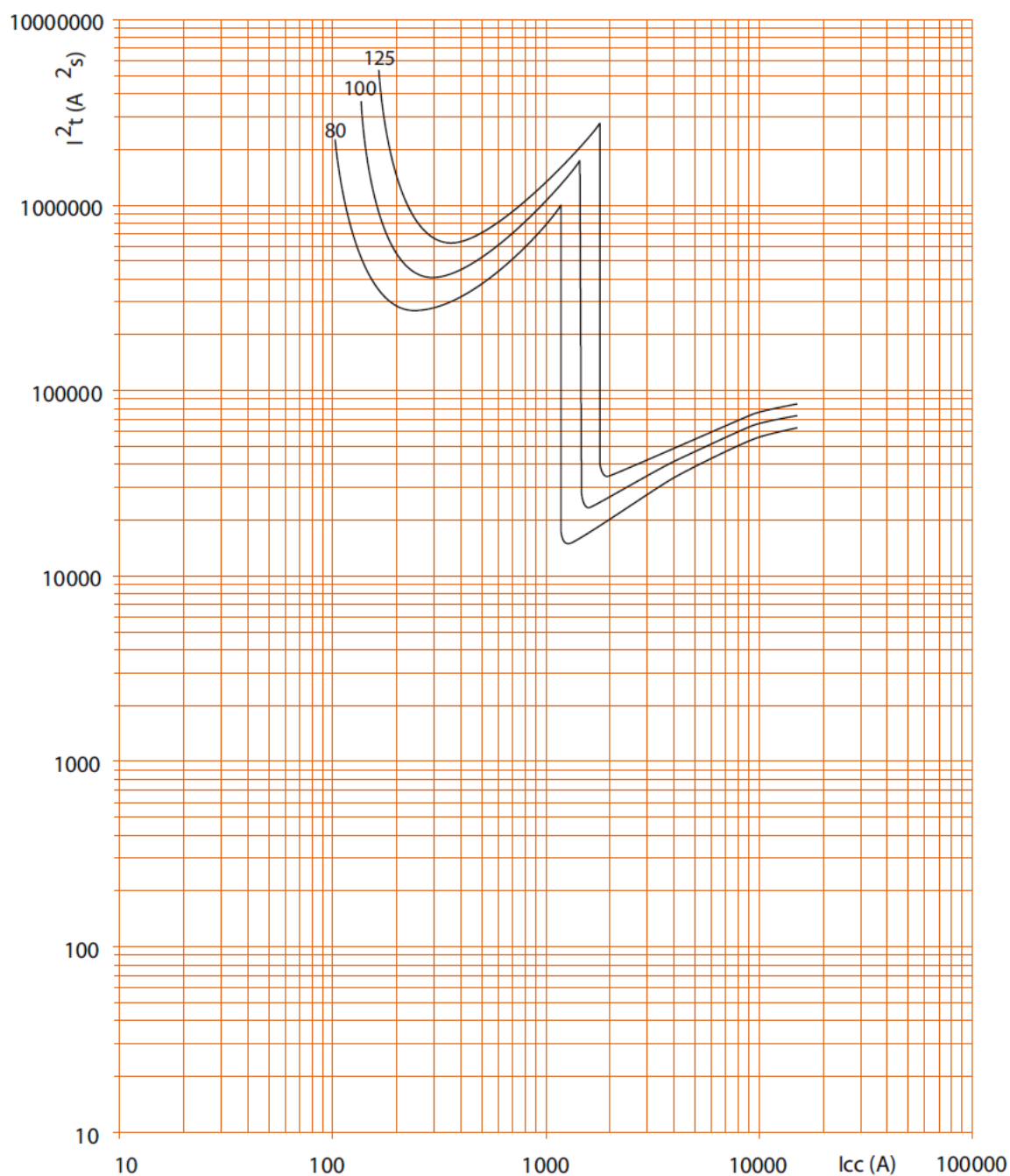
- . I_{cc} = Square value of symmetric component of the short circuit current (kA).
- . I^2t = Thermal energy limited (A²s).

DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to
64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Thermal energy limiting curves of circuit breakers curve D, 3P and 4P (400V~ / 50Hz):



. I_{cc} = Square value of symmetric component of the short circuit current (kA).

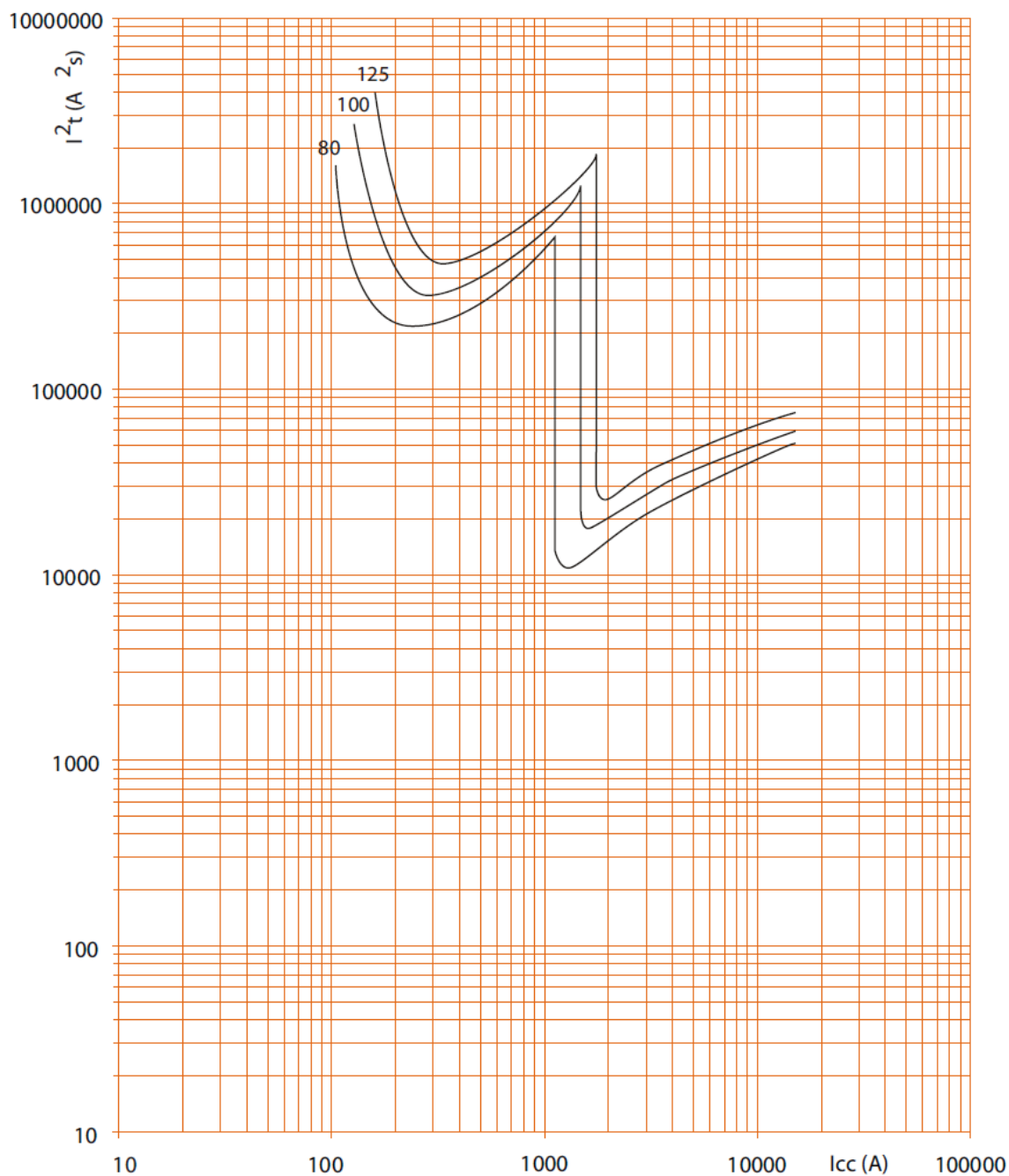
. I^2t = Thermal energy limited (A^2s).

DX³ MCB 10000 A / 16 kA 80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to
64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

7. CURVES (continued)

Thermal energy limiting curves of circuit breakers curve D, 2P (400V~ / 50Hz):



. I_{cc} = Square value of symmetric component of the short circuit current (kA).

. I^2t = Thermal energy limited (A^2s).

DX³ MCB 10000 A / 16 kA

80 A to 125 A (1,5 module per pole)

Cat N°(s): 4 089 66 / 67, 4 090 15 / 16, 4 090 89 / 90
4 091 40 to 42, 4 092 28 to 30, 4 092 80 to 82, 4 093 62 to
64, 4 094 58 to 60, 4 095 06 to 08, 4 095 40 to 42

8. AUXILIARIES AND ACCESSORIES

Add-on modules 125 A:

mcb	Add on module		
	2P	3P	4P
2P	X	-	-
3P	-	X	-
4P	-	-	X

Wiring accessories:

- . Sealable screw cover (cat n° 4 063 06).
- . Insulating shields (cat n° 4 063 12)
- . Aluminium terminal 95 mm² max (cat. n° 4 063 11)

Signal auxiliaries:

- . Auxiliary contact (½ module – cat n° 4 062 58).
- . Fault signalling changeover switch (½ module – cat n° 4 062 60).
- . Auxiliary contact modifiable in default signal (½ module – cat n° 4 062 62).
- . Auxiliary contact + fault signalling switch - can be modified to 2 auxiliary contacts (1 module - cat n° 4 062 66).

Control auxiliaries:

- . Shunt releases (1 module - cat n° . 4 062 76 / 78).
- . Under voltage release (1 module - cat n° 4 062 80 / 82).
- . Autonomous shunt trip for NC push-button (1 module - cat n° . 4 062 87).

Possible combinations of auxiliaries and MCBs:

- . The auxiliaries are installed to the left of the MCBs
- . Maximum number of auxiliaries = 3
- . Maximum number of 1 module signalling auxiliaries = 2
- . Maximum number of control auxiliaries (Cat. Nos. 4 062 76 to 4 062 87) = 1
- . The control auxiliary (Cat. Nos. 4 062 76 to 4 062 87) must mandatorily be placed to the left of the signalling auxiliaries (Cat. Nos. 4 062 58 to 4 062 66) where the auxiliaries from these 2 families are connected to the same MCB.

Sealing:

- . Possible in "Open" mode (OFF) or "Close" mode (ON).

Locking options:

- . By padlock (cat. n° 4 063 13 or 0 227 97), whit padlock support (cat. n° 4 063 03)

Installation software:

- . XL PRO³