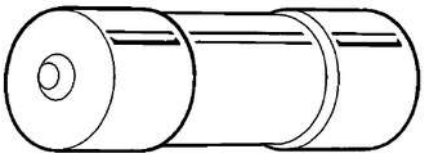
87045 LIMOGES Cedex
Phone : 05 55 06 87 87 – Fax : 05 55 06 88 88

Industrial cartridge fuses Type aM

Reference (s): 0 120 01 à 10 - 0 130 01 à 95 - 0 140 02 à 50 0 141 02 à 50 - 0 150 16 à 97 - 0 151 16 à 97



SUMMARY Page

1. Description and usage.....1
2. Range and characteristics 1
3. Neutral links.....2
4. Compliance…… 2
5. Choise of equipment.…..…..... 3
6. Limitation curve 4
7. Fusion curve.....6
8. Thermal stresses.....10

1. DESCRIPTION AND USAGE

For the protection of motors, transformers and other loads with inrush currents.

Body in ceramic and contacts in silver plated copper.

2. RANGE AND CHARACTERISTICS

2.1 Rated currents :

Nominal Current (A)	8 x 32	10 x 38 HPC	14 x 51 HPC		22 x 58 HPC	
	Without striker	With striker	Without striker	With striker	Without striker	With striker
0,25		0 130 92				
0,5		0 130 95				
1	0 120 01	0 130 01				
2	0 120 02	0 130 02	0 140 02	0 141 02		
4	0 120 04	0 130 04	0 140 04	0 141 04		
6	0 120 06	0 130 06	0 140 06	0 141 06		
8	0 120 08	0 130 08	0 140 08	0 141 08		
10	0 120 10	0 130 10	0 140 10	0 141 10		
12		0 130 12	0 140 12	0 141 12		
16		0 130 16	0 140 16	0 141 16	0 150 16	0 151 16
20		0 130 20	0 140 20	0 141 20	0 150 20	0 151 20
25		0 130 25	0 140 25	0 141 25	0 150 25	0 151 25
32			0 140 32	0 141 32	0 150 32	0 151 32
40			0 140 40	0 141 40	0 150 40	0 151 40
45			0 140 45	0 141 45		
50			0 140 50 (1)	0 141 50 (1)	0 150 50	0 151 50
63					0 150 63	0 151 63
80					0 150 80	0 151 80
100					0 150 96	0 151 95
125					0 150 97 (1)	0 151 97 (1)

(1) Non-standard ratings

2.2 Rated voltage and breaking capacity:

Size	Rated voltage (V)	Breaking capacity (kA)
8 x 32	400	20
10 x 38	500 (except 20A et 25 A : 400 V)	100
14 x 51	500 (except 45A et 50A: 400 V)	100
22 x 58	500 (except 125A: 400 V)	100

Can be used to protect DC circuits: 48VDC max

2.3 Frequency

Frequency :45Hz to 62Hz

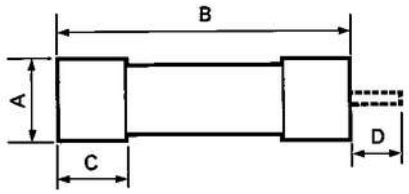
2.4 Thermal dissipation of the cartridge fuses

Dissipation in watts of heat at rated current

Size	Nominal current (A)																			
	0,25	0,5	1	2	4	6	8	10	12	16	20	25	32	40	45	50	63	80	100	125
8 x 32			0,09	0,15	0,26	0,35	0,47	0,55												
10 x 38	0,08	0,07	0,1	0,14	0,28	0 ,38	0 ,55	0,62	0,82	0,87	1,05	1,2								
14 x 51				0,18	0,28	0,42	0,55	0,65	0,75	1,05	1,3	1,55	2,05	2,65	2,85	2,95				
22 x 58										1,15	1,35	1,7	2,2	2,7		3,6	4,8	6,2	6,65	9,9 (1)

(1) : in intermittent. Respect for the IEC 60269-2, permanent care advocated <110A

2.5 Dimensions



Size	A	B	C	D
8 x 32 (mm)	8,5	31,5	6,7	-
10 x 38 (mm)	10,3	38	10,5	-
14 x 51 (mm)	14,3	51	13,8	7,5
22 x 58 (mm)	22,2	58	16,2	7,5

2.6 Conditions of storage and usage

Storage temperature: -40°C à 70°C
Ambient operating temperature: -25°C à 40°C
Maximum operating altitude: 2000m

Orientation:



Vertical Inclined Horizontal

Provided using a fuse carrier Legrand

3. NEUTRAL LINKS

References	For dimensions	In (A) max
0 123 00	8 x 32	20 A
0 133 00	10 x 38	25 A
0 143 00	14 x 51	50 A
0 153 00	22 x 58	125 A

Material : brass CuZn tinned

4. COMPLIANCE

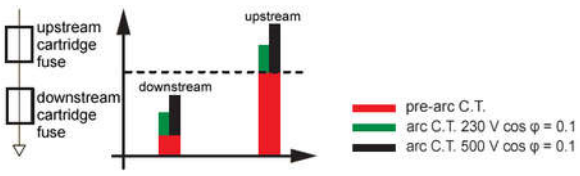
NF C 60-200, 63-210, 63-211
EN 60269-1 et 2
IEC 60269-1 et 2
NFC 63-213 (juillet 1995)

5. CHOICE OF EQUIPMENT

5.1 How to choose a protection system

- Overload: use the performance data for the various protection devices. The curves must not cross one another in a same circuit.
- Short-circuit: use the integral (∫I²dt) of the thermal stresses. The total integral for the downstream protection device must be lower than the pre-arc integral for the upstream device.

■ Example of good protection

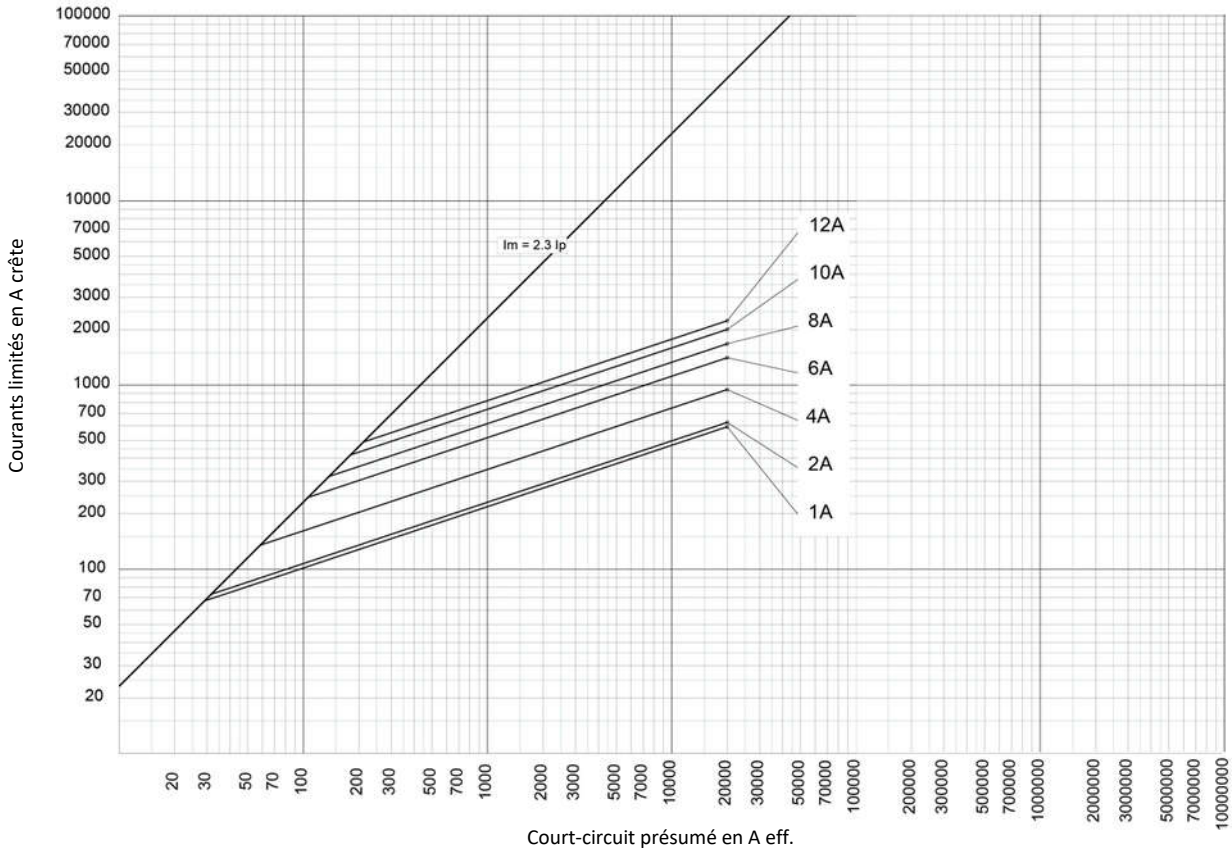


5.2 Derating

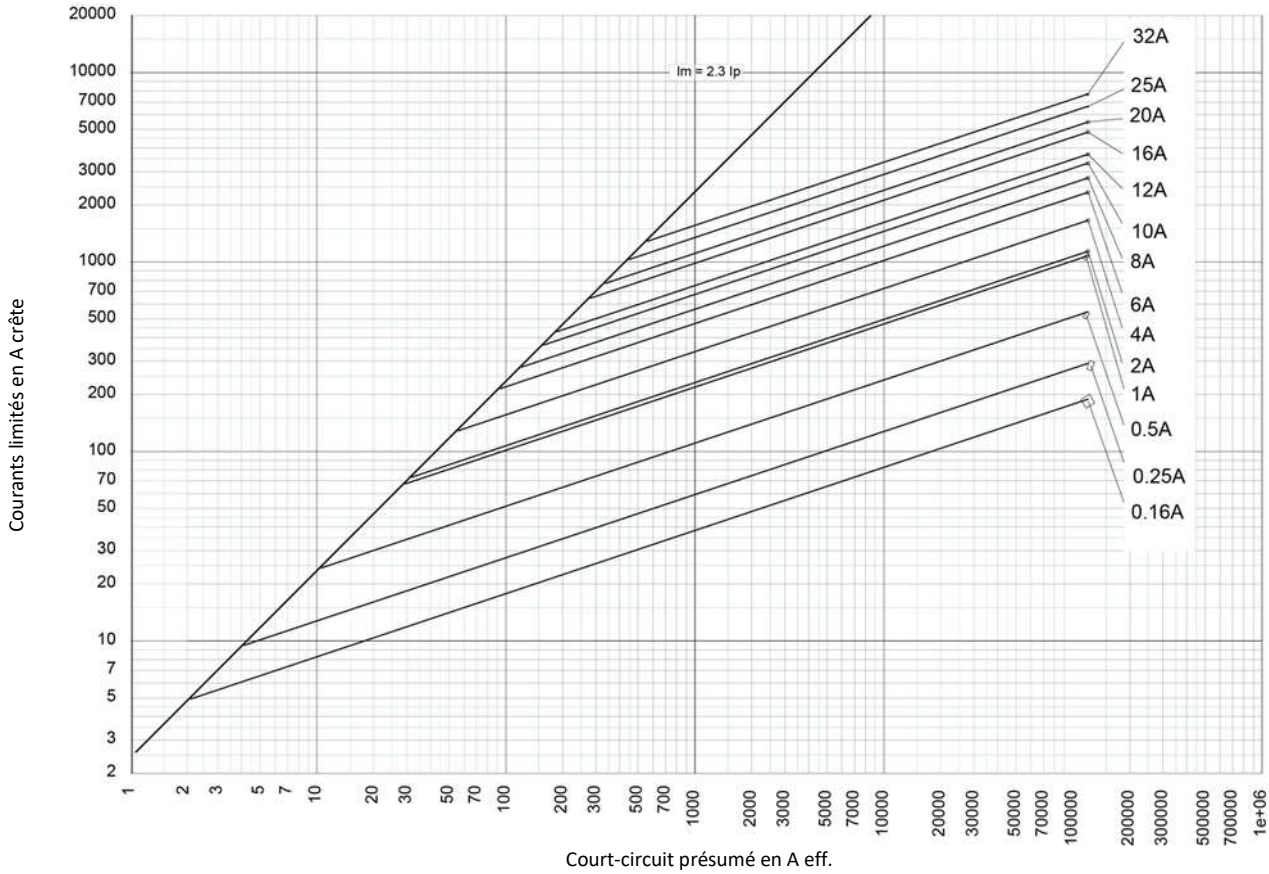
Refer to fuse carriers datasheet

6. LIMITATION CURVES

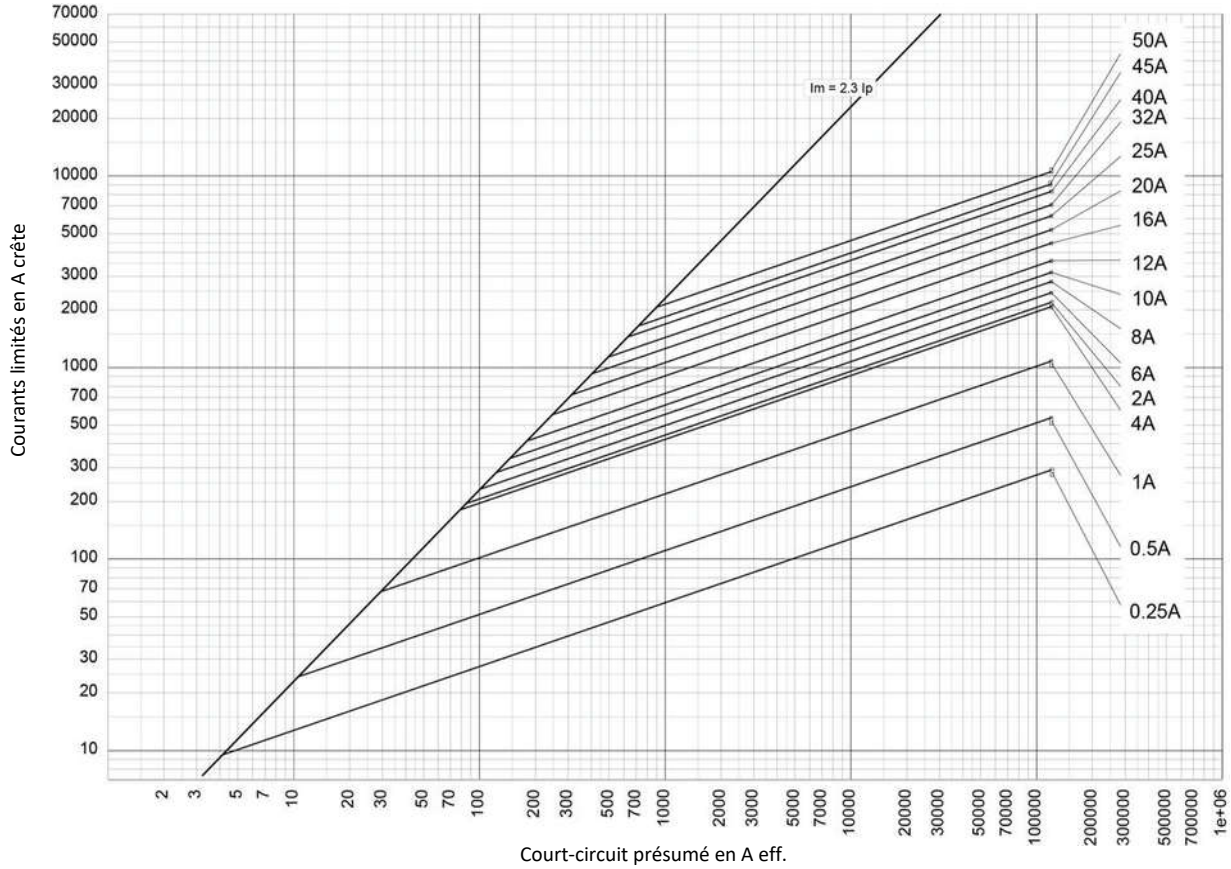
6 .1 Cartridge 8 x 32 :



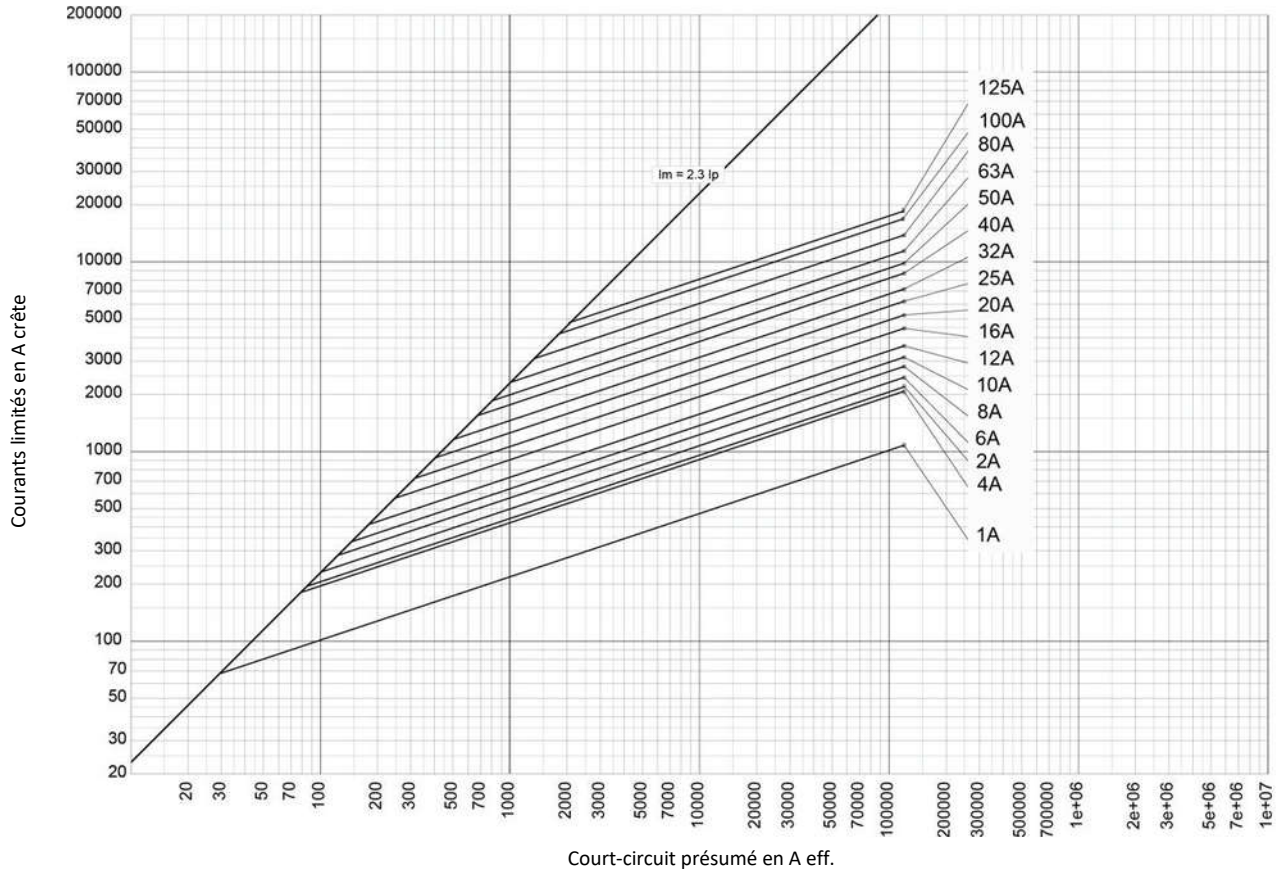
6 .2 Cartridge 10 x 38 :



6 .3 Cartridge 14 x 51 :

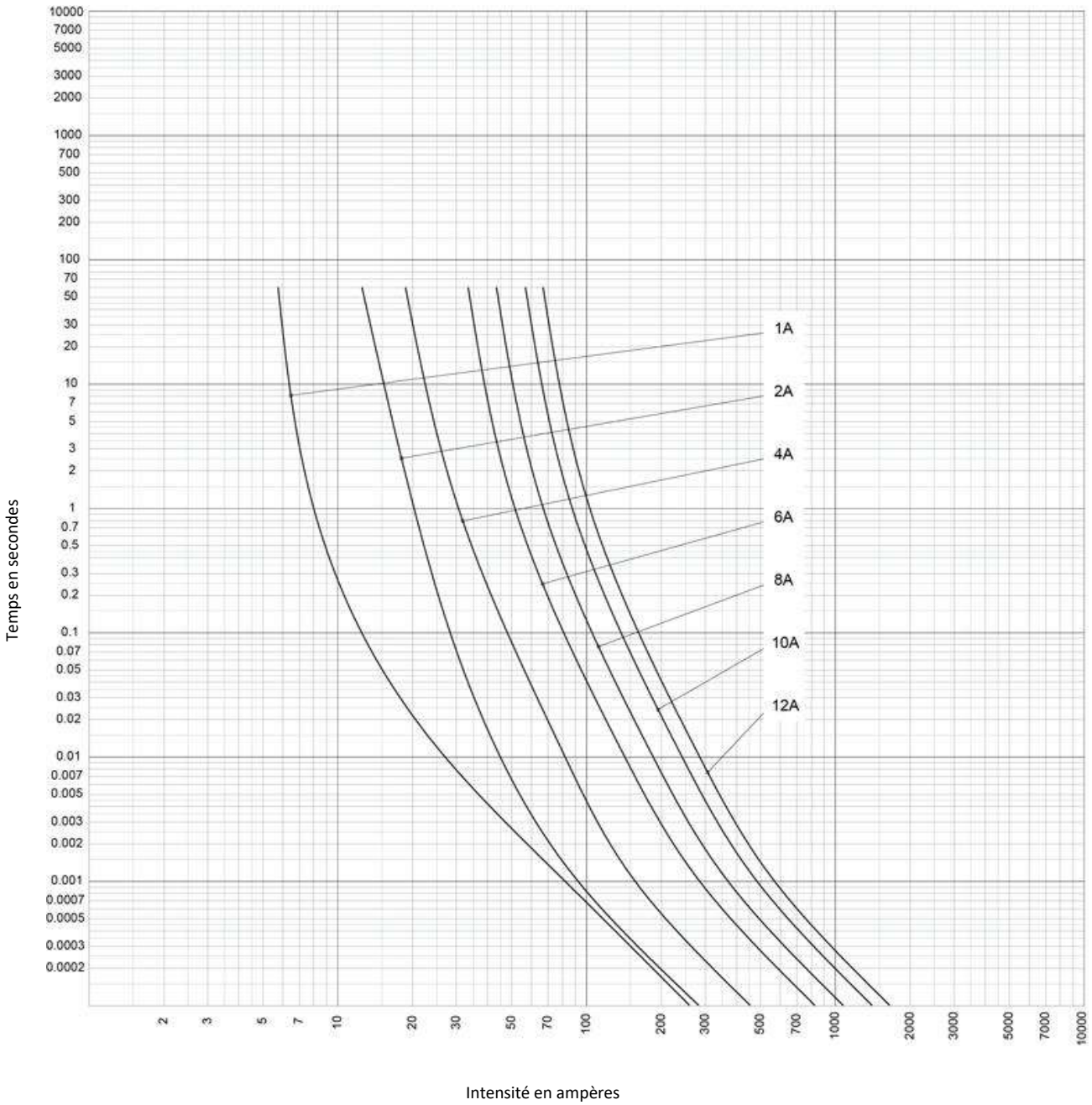


6 .4 Cartridge 22 x 58 :

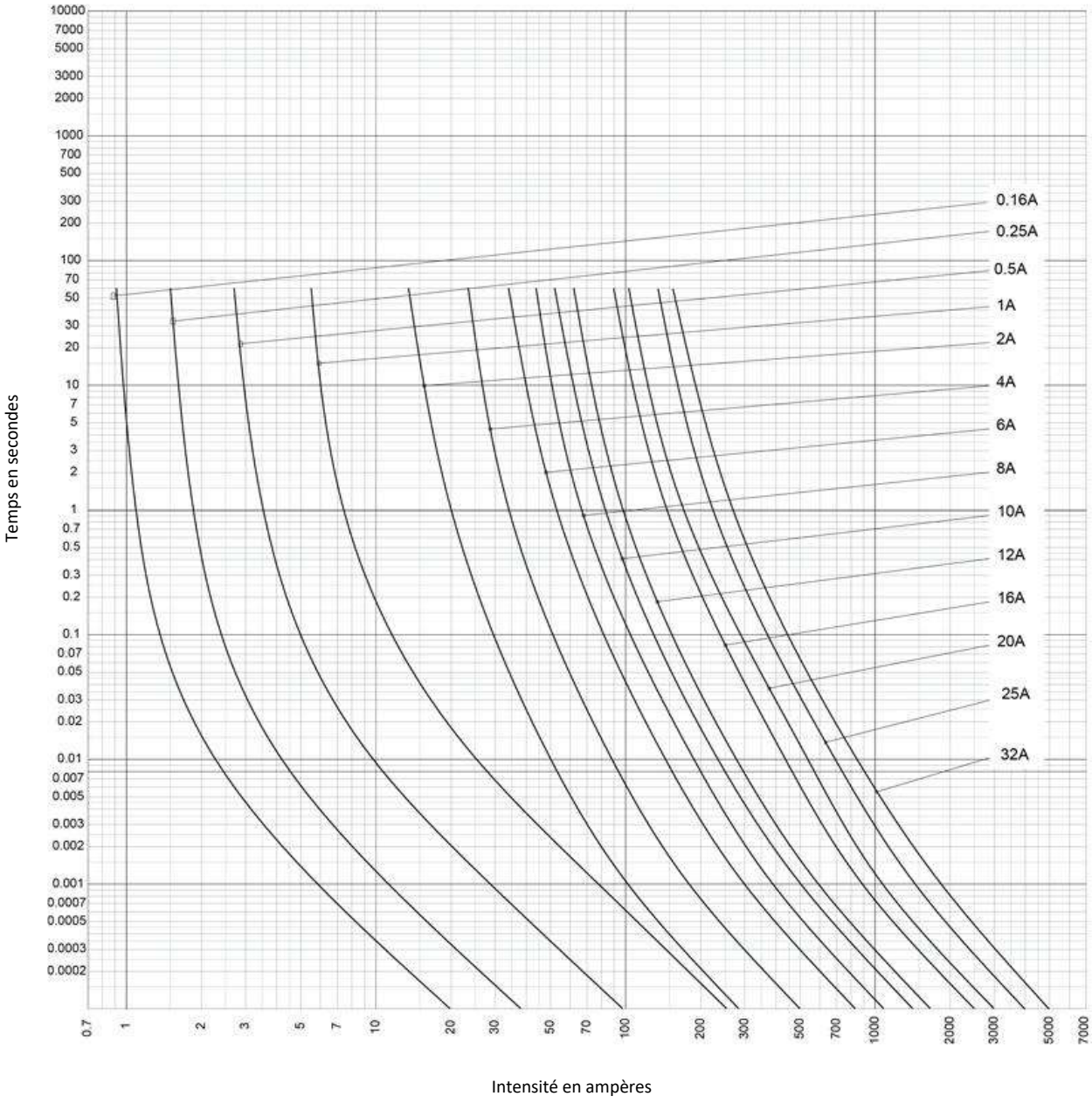


7. FUSION CURVE

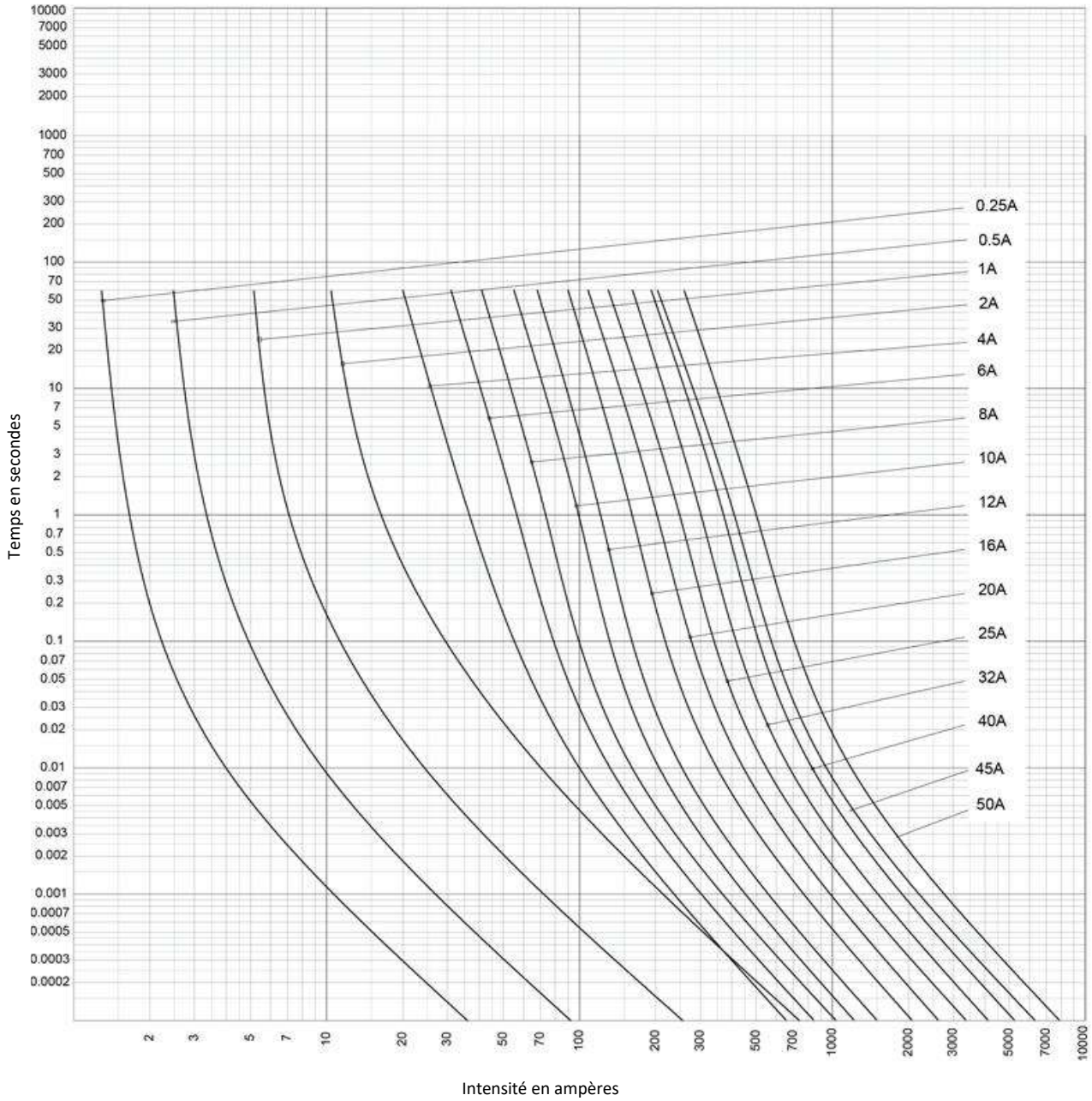
7 .1 Cartridge 8 x 32 :



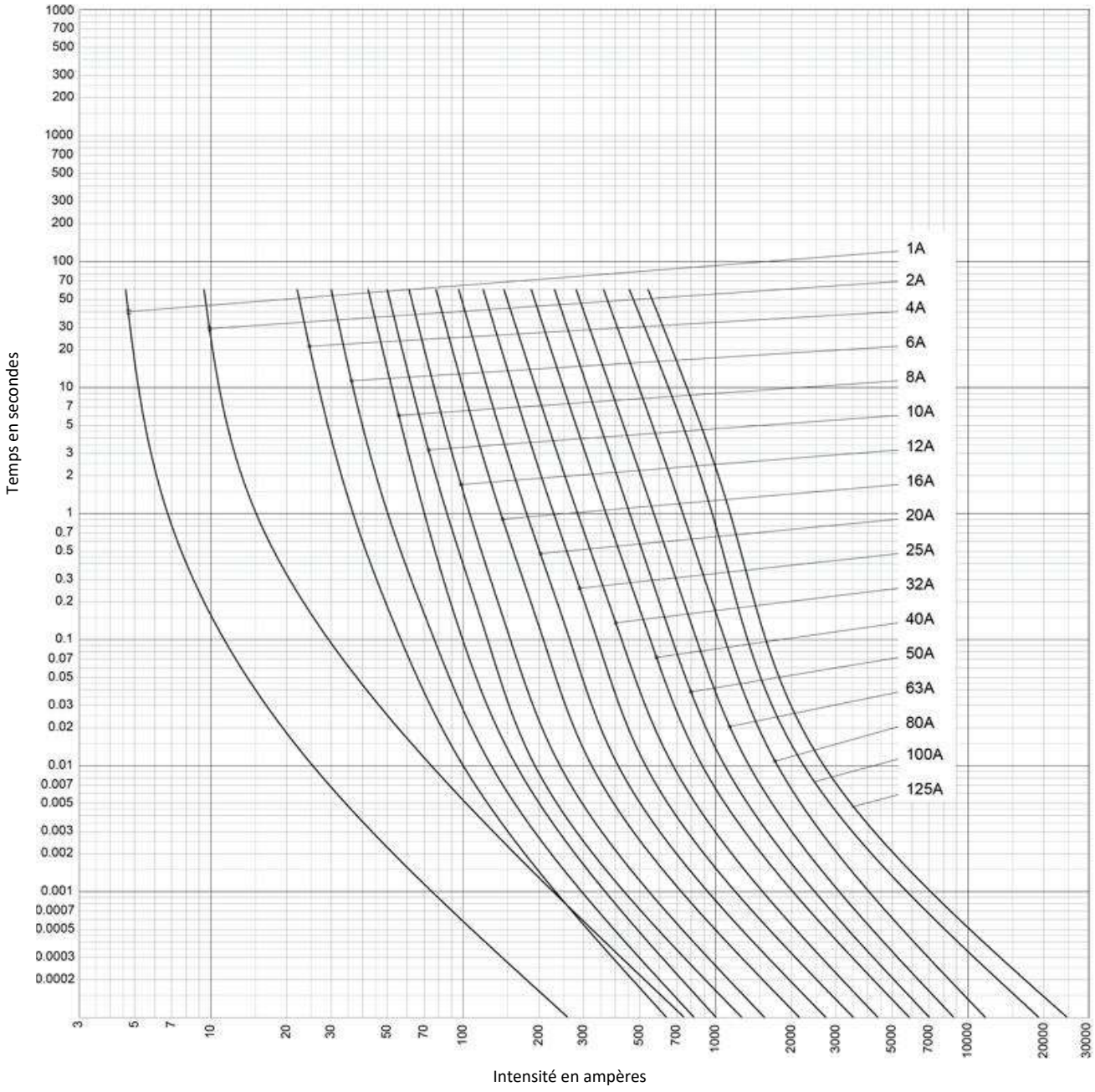
7 .2 Cartridge 10 x 38 :



7 .3 Cartridge 14 x 51 :

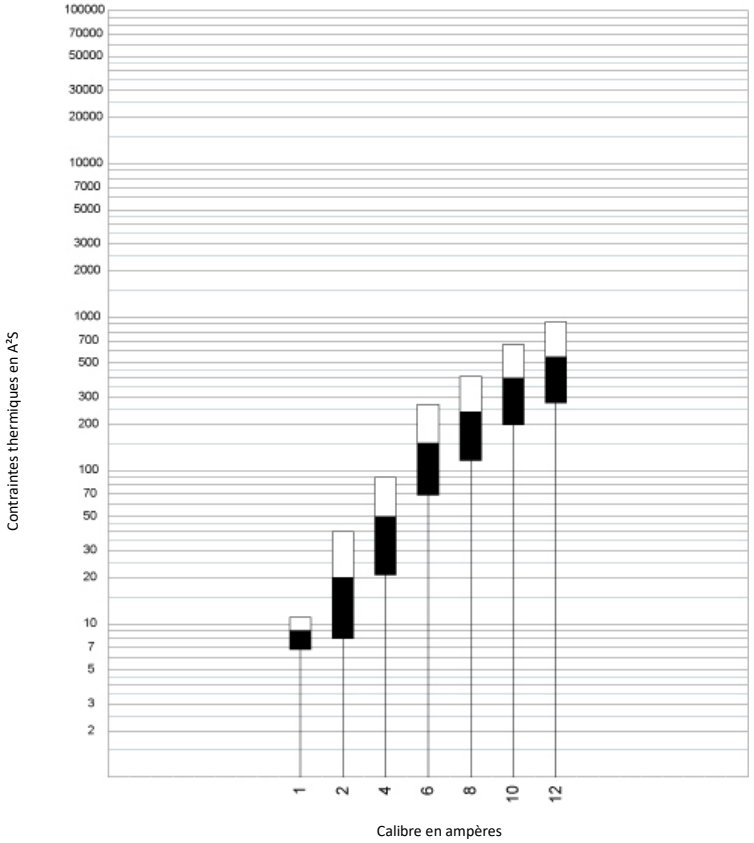


7 .4 Cartridge 22 x 58 :

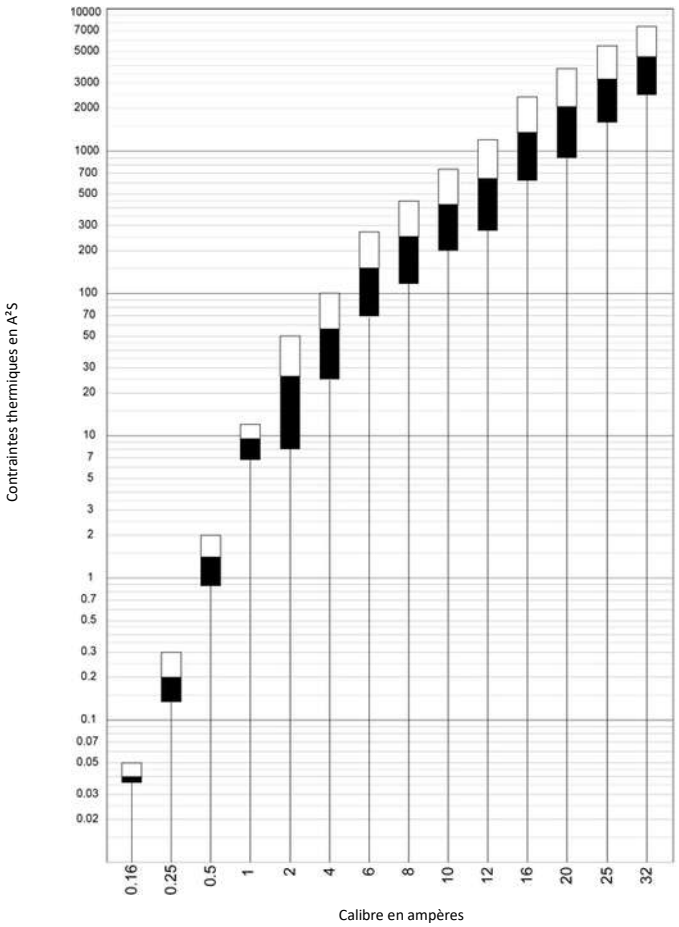


8. THERMAL STRESSES

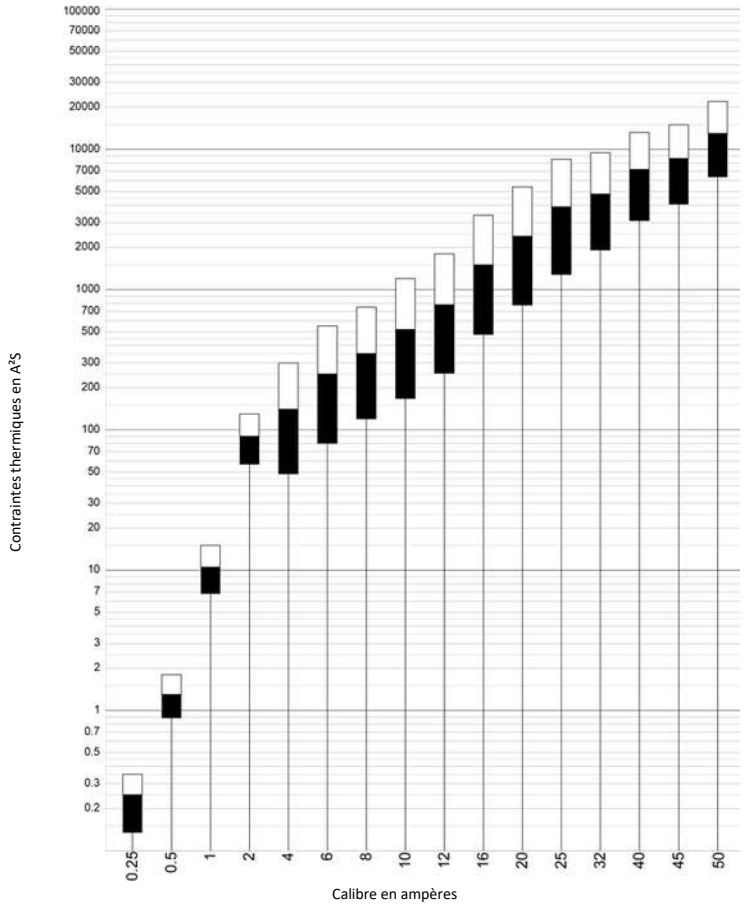
8 .1 Cartridge 8 x 32 :



8 .2 Cartridge 10 x 38 :



8 .3 Cartridge 14 x 51 :



8 .4 Cartridge 22 x 58 :

