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MPCB's MPX³

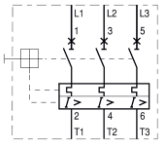
Cat. N°(s) : 4 173 00...4 173 15, 4 173 20...4 173 35, 4 173 40...4 173 55, 4 173 60...4 173 68, 4 173 70...4 173 79

CONTENTS PAGES

1. DESCRIPTION - USE

Thermal-magnetic circuit breaker with positive contact indication for control, protection and isolation of electrical circuits supplying electrical motors.

Symbol:



2. RANGE

Number of Poles:
. Triple pole (3P).

Rated current In:
. 0.16A, 0.25A, 0.4A, 0.63A, 1A, 1.6A, 2.5A, 4A, 6A, 8A, 10A, 13A, 17A, 22A, 26A, 32A, 40A, 50A, 63A, 75A, 90A, 100A.

Magnetic threshold:
. 13 Ie Max

Rated Voltage / Frequency:
. 400 / 415 V ~, 50 / 60 Hz with standard tolerances.

Operating voltage:
. 230 / 240 V ~.
. 400 / 415 V ~.
. 440 / 460 V ~.
. 500 / 525 V ~.
. 600 / 690 V ~.

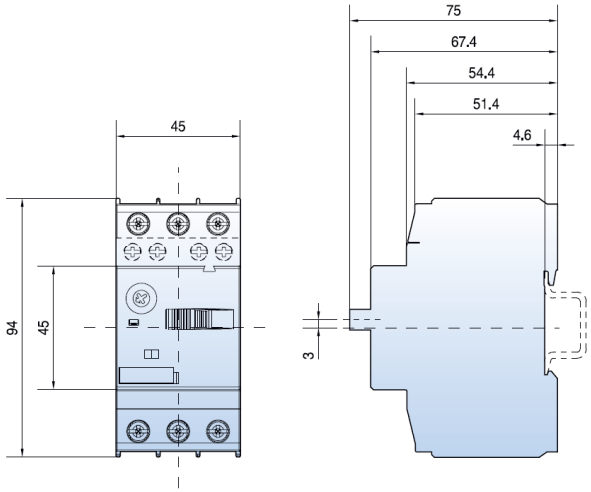
Thermal tripping class:
. Class 10A in accordance with IEC 60 947.

Utilisation category:
. Category A in accordance with IEC 60947-2.
. Category A C-3 in accordance with IEC 60947-4-1.

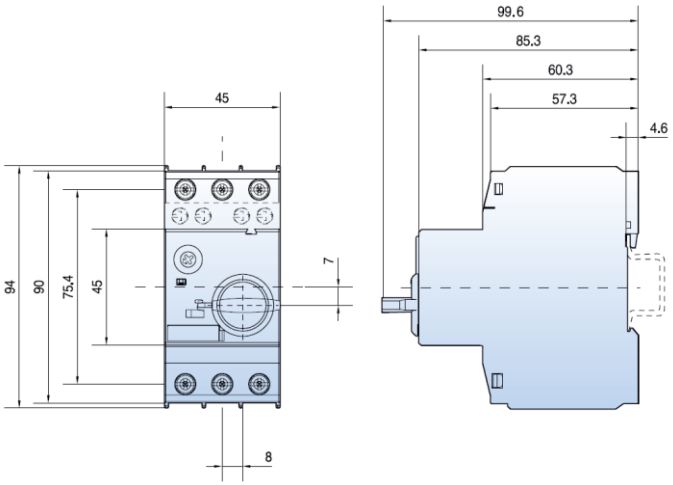
Suitability for isolation:
. In accordance with IEC 60947-1.

3. OVERALL DIMENSIONS

MPX³ 32S:

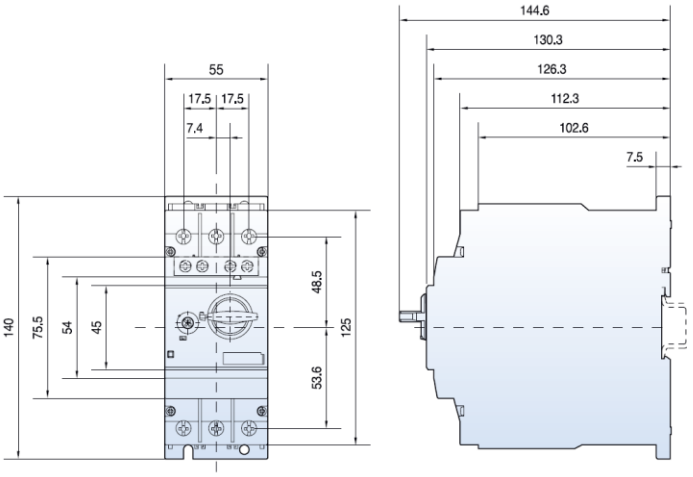


MPX³ 32H / MPX³ 32MA:

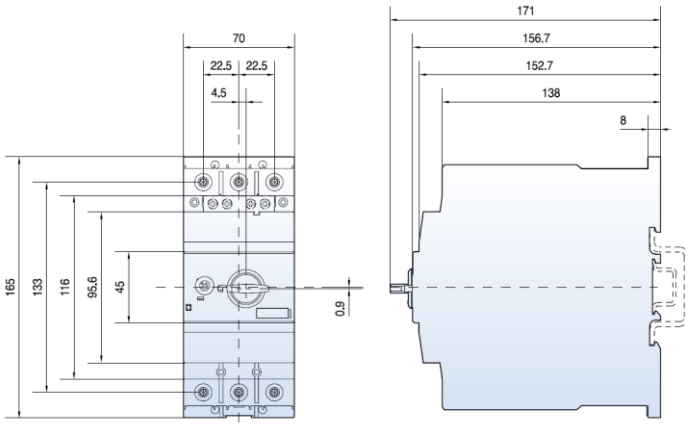


3. OVERALL DIMENSIONS *(continued)*

MPX³ 63H:



MPX³ 100H:

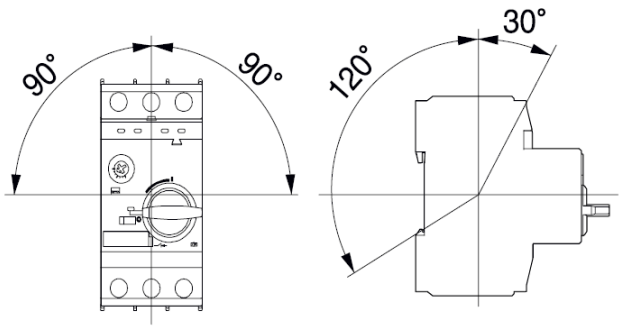


4. INSTALLATION - CONNECTION

Fixing:

. 35mm DIN rail for MPX³ 32S / MPX³ 32H / MPX³ 32MA.
. 35mm DIN rail for MPX³ 63H, or with screws.
. 35mm or 75 mm DIN rail for MPX³ 100H, or with screws.
- use 15 mm depth for 35 mm DIN rail

Operating position:



4. INSTALLATION - CONNECTION *(continued)*

Supply:

. Either from the top or the bottom.

Type of wire:

. For MPX³ 32S / MPX³ 32H / MPX³ 32MA

			MPX³ 32S	MPX³ 32H MPX³ 32MA
Terminal parts				
Single-core	1.conductor	[mm²] / [AWG]	1...10 / 18...8	1...10 / 18...8
	2.conductor	[mm²] / [AWG]	1...6 / 18...10	1...6 / 18...10
Standard	1.conductor	[mm²] / [AWG]	1...6 / 18...10	1...6 / 18...10
	2.conductor	[mm²] / [AWG]	1...6 / 18...10	1...6 / 18...10
Flexible	1.conductor	[mm²] / [AWG]	1...6 / 18...10	1...6 / 18...10
	2.conductor	[mm²] / [AWG]	0.75...4 / 18...10	0.75...4 / 18...10
Tightening torque		[Nm] / [lb-in]	0.8...2.5 / 7...22	0.8...2.5 / 7...22

. For MPX³ 63H / MPX³ 100H

			MPX³ 63H	MPX³ 100H
Terminal parts				
Single-core	1.conductor	[mm²] / [AWG]	0.75...35 / 18...2	2.5...70 / 12...2/0
	2.conductor	[mm²] / [AWG]	0.75...25 / 18...4	2.5...50 / 12...1/0
Standard	1.conductor	[mm²] / [AWG]	0.75...35 / 18...2	2.5...70 / 12...2/0
	2.conductor	[mm²] / [AWG]	0.75...25 / 18...4	2.5...50 / 12...1/0
Flexible	1.conductor	[mm²] / [AWG]	0.75...25 / 18...4	2.5...50 / 12...1/0
	2.conductor	[mm²] / [AWG]	0.75...16 / 18...6	2.5...35 / 10...2
Tightening torque		[Nm] / [lb-in]	3...4.5 / 26...39	4...6 / 35...53

Connection :

. Terminals protected against direct contact (IP20).
. Terminals with release and captive screws.
. Screw head : slotted and pozidriv n°2.
(for MPX³ 32S, 32H, 32MA and MPX³ 63H)
. Allen key 4 [mm] (for MPX³ 100H).

Tools required:

. Posidriv N°2 screwdriver recommended.
. Flat screwdriver Ø5 to Ø6 [mm] Maximum.

Manual actuation:

. Ergonomic 2 positions rocker: (for MPX³ 32S)
. Ergonomic 2 positions rotary handle: (for MPX³ 32H / MPX³ 32MA and MPX³ 63H)
O : Device open.
I : Device closed.
. Ergonomic 3 positions rotary handle: (for MPX³ 100H)
O : Device open.
TRIP : Device open.
I : Device closed.

4. INSTALLATION - CONNECTION *(continued)*

Contact status display:

. For MPX³ 32S / MPX³ 32H / MPX³ 32MA and MPX³ 63H

- By permanent laser marking:
  - . “O-OFF“ = contacts open.
  - . “I-ON” = contacts closed.

. For MPX 100H:

. By permanent laser marking:

- . "O-OFF" = contacts open.
- . "TRIP" = contacts open (indication on current fault).
- . "I-ON" = contacts closed.

Sealing:

. With dial Cover MPX³ (cat n° 4 174 79).

Locking possibility:

. By 4.5 [mm] padlock, in the open position - "OFF".

Labelling:

. Identification labelling area situated on the front of the product.

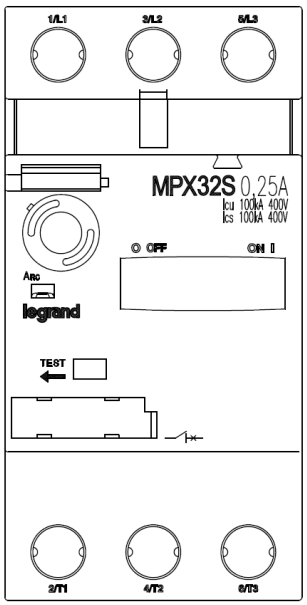
5. GENERAL CHARACTERISTICS

Front side:

. By permanent laser marking:

- -Brand: Legrand
- - Range: MPX³
- - Rated current (in A)
- - O Off / ON I
- - TEST
- - Electric diagram
- - Thermal adjustment ring
- - Ultimate short-circuit breaking capacity (Icu)
- - Rated service short-circuit breaking capacity (Ics)
- - Marking power terminals

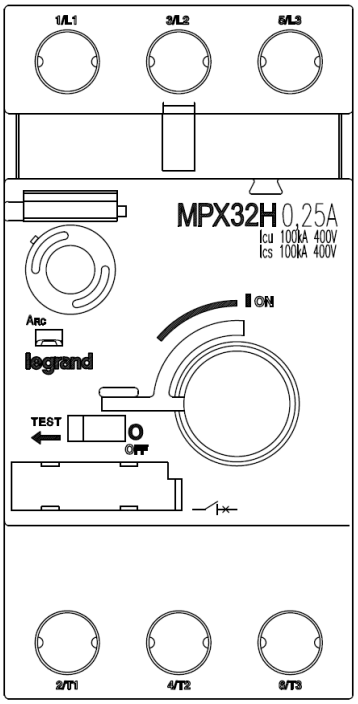
MPX³ 32S: (Example of marking)



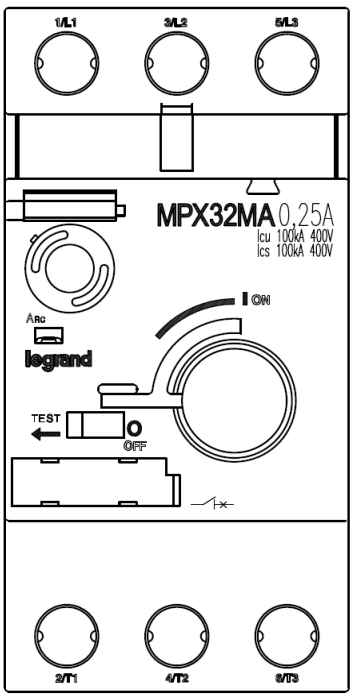
5. GENERAL CHARACTERISTICS *(continued)*

Front side: *(continued)*

MPX³ 32H: (Example of marking)



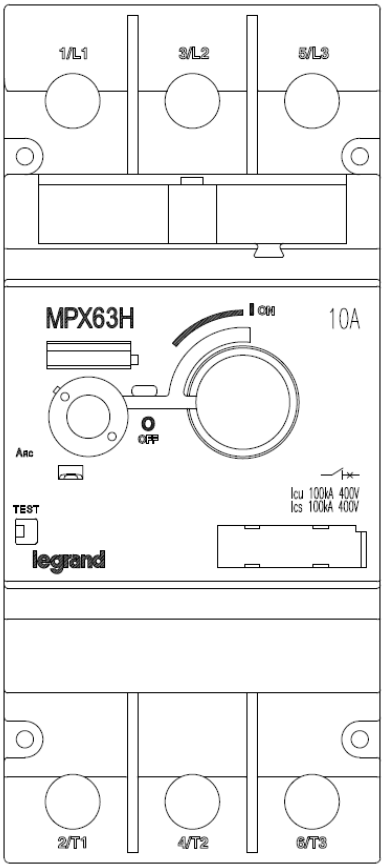
MPX³ 32MA: (Example of marking)



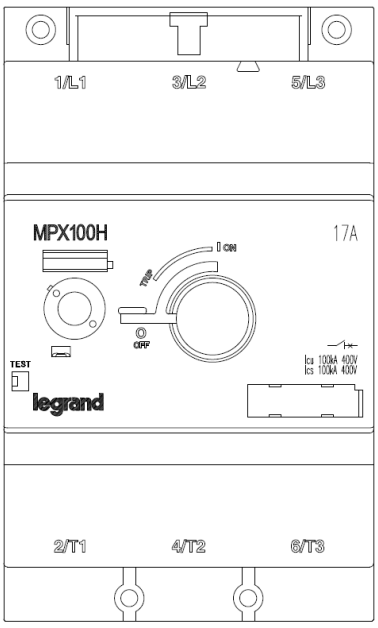
5. GENERAL CHARACTERISTICS *(continued)*

Front side: *(continued)*

MPX³ 63H: (Example of marking)



MPX³ 100H: (Example of marking)

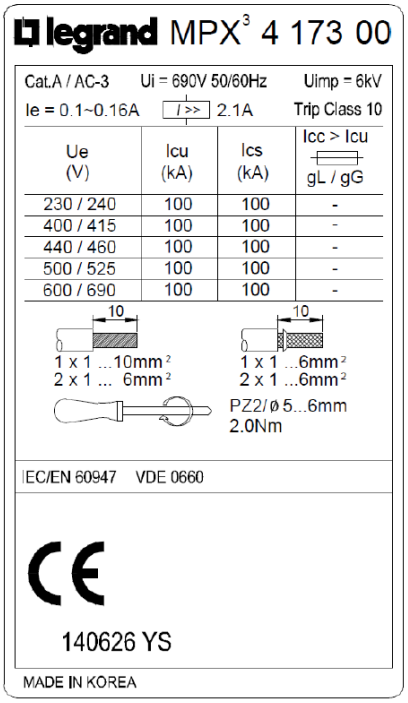


5. GENERAL CHARACTERISTICS *(continued)*

Front side: *(continued)*

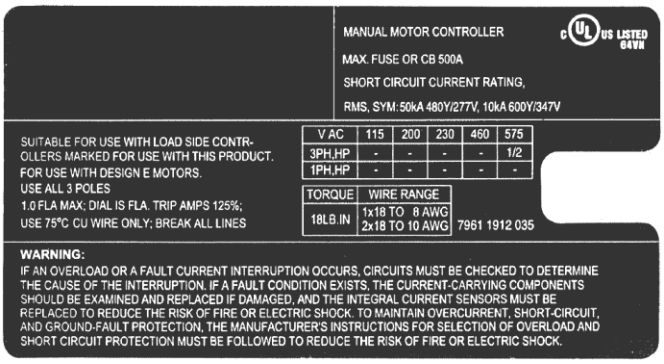
Left side:

. By identification label (referring to IEC standard)



Right side:

. By identification label (referring to UL standard)



5. GENERAL CHARACTERISTICS *(continued)*

Setting ranges:

Rated operational current (Ie)	Thermal release adjustment range (Ir)
0.16 [A]	0.1~0.16 [A]
0.25 [A]	0.16~0.25 [A]
0.4 [A]	0.25~0.4 [A]
0.63 [A]	0.4~0.63 [A]
1 [A]	0.63~1 [A]
1.6 [A]	1~1.6 [A]
2.5 [A]	1.6~2.5 [A]
4 [A]	2.5~4 [A]
6 [A]	4~6 [A]
8 [A]	5~8 [A]
10 [A]	6~10 [A]
13 [A]	9~13 [A]
17 [A]	11~17 [A]
22 [A]	14~22 [A]
26 [A]	18~26 [A]
32 [A]	22~32 [A]
40 [A]	28~40 [A]
50 [A]	34~50 [A]
63 [A]	45~63 [A]
75 [A]	55~75 [A]
90 [A]	70~90 [A]
100 [A]	80~100 [A]

Rated operational voltage:
. Ue = 690 [V] for all products conforming to IEC60947-2.
. Ue = 600 [V] for all products conforming to UL508

Rated impulse voltage:
. Uimp = 6 kV for MPX³ 32S / MPX³ 32H / MPX³ 32MA.
. Uimp = 8 kV for MPX³ 63H / MPX³ 100H.

Rated insulation voltage:
. Ui = 690 V for MPX³ 32S / MPX³ 32H / MPX³ 32MA.
. Ui = 1000 V for MPX³ 63H / MPX³ 100H.

Mechanical endurance:
. 100 000 operations for MPX³ 32S / MPX³ 32H / MPX³ 32MA.
. 50 000 operations for MPX³ 63H / MPX³ 100H.

Electrical endurance:
. 100 000 cycles for MPX³ 32S / MPX³ 32H / MPX³ 32MA.
. 25 000 cycles for MPX³ 63H / MPX³ 100H.

Max operating frequency per hour:
. 25 operations per hour.

5. GENERAL CHARACTERISTICS *(continued)*

Ambient operating temperature:
. Min. = -20°C. Max. = +60°C.

Ambient storage temperature:
. Min. = -50°C. Max. = +80°C.

Overload protection:
. No overload protection for MPX³ 32MA.

Phase failure protection:
. All products.

Test function:
. All products.

Weight:

MPX³	Weight
MPX³ 32S	0.32 [kg]
MPX³ 32H	0.36 [kg]
MPX³ 32MA	0.36 [kg]
MPX³ 63H	1 [kg]
MPX³ 100H	2.2 [kg]

Maximum operating altitude:
. 2000 [m].

Protection degree:
. IP20.

Flame resistance:
. Conforming to UL = V0.
. Conforming to IEC 695-2-1 = 960 [°C].

Shock resistance:
. 25 [g].

Vibration resistance:
. 5~150 [Hz].

Power consumption:

	MPX³ 32S	MPX³ 32H / MA
Total power loss circuit breaker at rated load operating temperature	In = 0.16~1.6 [A] 4.4 [W]	In = 0.16~1.6 [A] 4.4 [W]
	In = 2.5~26 [A] 7.4 [W]	In = 2.5~26 [A] 7.4 [W]
	In = 32 [A] 4 [W]	In = 32 [A] 4 [W]

	MPX³ 63H	MPX³ 100H
Total power loss circuit breaker at rated load operating temperature	In = 10~22 [A] 10.2 [W]	In = 17~32 [A] 15 [W]
	In = 26~63 [A] 9.7 [W]	In = 40~63 [A] 21.8 [W]
	-	In = 75~100 [A] 17.8 [W]

5. GENERAL CHARACTERISTICS *(continued)*

Breaking capacity: In accordance with IEC 60 947-2 standard

. For MPX³ 32S

Rated operational current - Ie [A]			0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
Switching of standard three-phase motors AC-2, AC-3	230 / 240 [V]	[kW]	-	0.03	0.06	0.09	0.12	0.18/ 0.25	0.37	0.55/ 0.75	1.1/ 1.5	1.5	2.2/3	3	3.7/4	4	5.5	7.5
	400 / 415 [V]	[kW]	0.02	0.06	0.09	0.12	0.18/ 0.25	0.37/ 0.55	0.75	1.1/ 1.5	2.2	3	3.7/4	5.5	7.5	7.5	11	15
	500 [V]	[kW]	-	-	-	0.25	0.37	0.55/ 0.75	1.1	1.5/ 2.2	3	3.7	4/5.5	7.5	11	11	15	18.5
	690 [V]	[kW]	-	-	-	0.25	0.37/ 0.55	0.75/ 1.1	1.5	2.2/3	3.7/4	5.5	7.5	11	11	15	18.5	22
Ultimate short-circuit breaking capacity (Icu)	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	50	40	40	30
	400 / 415 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	50	50	20	15	15	15
	440 / 460[V]	[kA]	100	100	100	100	100	100	100	50	15	15	15	10	10	8	8	6
	500 [V]	[kA]	100	100	100	100	100	100	50	15	10	10	6	6	6	6	5	5
	690 [V]	[kA]	100	100	100	100	100	3	3	3	3	3	3	3	3	3	3	3
Rated service short-circuit breaking capacity (Ics)	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	38	30	30	22
	400 / 415 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	38	38	15	11	11	11
	440 / 460[V]	[kA]	100	100	100	100	100	100	100	38	11	11	11	8	8	6	6	4
	500 [V]	[kA]	100	100	100	100	100	100	38	11	8	8	5	5	5	5	4	4
	690 [V]	[kA]	100	100	100	100	100	3	3	3	3	3	3	3	3	3	3	3
Rated service short-circuit breaking capacity of one single pole	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	38	38	15	11	11	11
	400 / 415 [V]	[kA]	100	100	100	100	100	3	3	3	3	3	3	3	3	3	3	3

. In accordance with UL 508 certification

Rated operational current - Ie [A]			0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
Max. short-circuit current																		
	240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	50	50	40	30	30	20
	480 [V]	[kA]	50	50	50	50	50	50	50	50	25	25	10	10	10	10	7.5	7.5
	600 [V]	[kA]	10	10	10	10	10	10	10	5	5	5	5	5	5	5	5	5
Motor load																		
1 Phase	115 [V]	[HP]	-	-	-	-	-	-	-	1/8	1/4	1/3	1/2	1/2	1	1 1/2	2	2
	230 [V]	[HP]	-	-	-	-	-	1/10	1/6	1/3	1/2	1	1 1/2	2	3	3	3	5
3 Phase	200 [V]	[HP]	-	-	-	-	-	-	1/2	3/4	1	2	2	3	3	5	7 1/2	7 1/2
	230 [V]	[HP]	-	-	-	-	-	-	1/2	3/4	1 1/2	2	3	3	5	7 1/2	7 1/2	10
	460 [V]	[HP]	-	-	-	-	-	3/4	1	2	3	5	5	7 1/2	10	15	15	20
	575 [V]	[HP]	-	-	-	-	1/2	3/4	1 1/2	3	5	5	7 1/2	10	15	20	20	30
Max. Fuse size		[A]	1	1	1	1	3	6	10	15	20	30	40	50	60	80	100	125
Max. Breaker size		[A]	15	15	15	15	15	15	15	15	20	30	40	50	60	80	100	125

5. GENERAL CHARACTERISTICS *(continued)*

Breaking capacity: In accordance with IEC 60 947-2 standard

. For MPX³ 32H and 32MA

Rated operational current - Ie [A]			0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
Switching of standard three-phase motors AC-2, AC-3	230 / 240 [V]	[kW]	-	0.03	0.06	0.09	0.12	0.18/ 0.25	0.37	0.55/ 0.75	1.1/ 1.5	1.5	2.2/3	3	3.7/4	4	5.5	7.5
	400 / 415 [V]	[kW]	0.02	0.06	0.09	0.12	0.18/ 0.25	0.37/ 0.55	0.75	1.1/ 1.5	2.2	3	3.7/4	5.5	7.5	7.5	11	15
	500 [V]	[kW]	-	-	-	0.25	0.37	0.55/ 0.75	1.1	1.5/ 2.2	3	3.7	4/5.5	7.5	11	11	15	18.5
	690 [V]	[kW]	-	-	-	0.25	0.37/ 0.55	0.75/ 1.1	1.5	2.2/3	3.7/4	5.5	7.5	11	11	15	18.5	22
Ultimate short-circuit breaking capacity (Icu)	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	400 / 415 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	50	50	50	50
	440 / 460[V]	[kA]	100	100	100	100	100	100	100	100	100	50	50	50	20	20	20	20
	500 [V]	[kA]	100	100	100	100	100	100	100	100	100	50	50	42	10	10	10	10
	690 [V]	[kA]	100	100	100	100	100	100	8	8	6	6	6	6	4	4	4	4
Rated service short-circuit breaking capacity (Ics)	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	400 / 415 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	38	38	38	38
	440 / 460[V]	[kA]	100	100	100	100	100	100	100	100	100	38	38	38	15	15	15	15
	500 [V]	[kA]	100	100	100	100	100	100	100	100	100	38	38	32	8	8	8	8
	690 [V]	[kA]	100	100	100	100	100	100	8	8	6	6	6	6	4	4	4	4
Rated service short-circuit breaking capacity of one single pole	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	38	38	38	38
	400 / 415 [V]	[kA]	100	100	100	100	100	100	8	8	6	6	6	6	4	4	4	4

. In accordance with UL 508 certification

Rated operational current - Ie [A]			0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
Max. short-circuit current																		
	240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	480 [V]	[kA]	50	50	50	50	50	50	50	50	50	50	50	50	30	30	30	30
	600 [V]	[kA]	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
Motor load																		
1 Phase	115 [V]	[HP]	-	-	-	-	-	-	-	1/8	1/4	1/3	1/2	1/2	1	1 1/2	2	2
	230 [V]	[HP]	-	-	-	-	-	1/10	1/6	1/3	1/2	1	1 1/2	2	3	3	3	5
3 Phase	200 [V]	[HP]	-	-	-	-	-	-	1/2	3/4	1	2	2	3	3	5	7 1/2	7 1/2
	230 [V]	[HP]	-	-	-	-	-	-	1/2	3/4	1 1/2	2	3	3	5	7 1/2	7 1/2	10
	460 [V]	[HP]	-	-	-	-	-	3/4	1	2	3	5	5	7 1/2	10	15	15	20
	575 [V]	[HP]	-	-	-	-	1/2	3/4	1 1/2	3	5	5	7 1/2	10	15	20	20	30
Max. Fuse size		[A]	1	1	1	1	3	6	10	15	20	30	40	50	60	80	100	125
Max. Breaker size		[A]	15	15	15	15	15	15	15	15	20	30	40	50	60	80	100	125

5. GENERAL CHARACTERISTICS *(continued)*

Breaking capacity: *(continued)*

. For MPX³ 63H

Rated operational current - Ie [A]			10	13	17	22	26	32	40	50	63
Switching of standard three-phase motors AC-2, AC-3	230 / 240 [V]	[kW]	2.2/3	3	3.7/4	4	5.5	7.5	7.5	11	15
	400 / 415 [V]	[kW]	3.7/4	5.5	7.5	7.5	11	15	18.5	22	30
	500 [V]	[kW]	4/5.5	7.5	11	11	15	18.5	22	30	37
	690 [V]	[kW]	7.5	11	11	15	18.5	22	30	45	55
Ultimate short-circuit breaking capacity (Icu)	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100
	400 / 415 [V]	[kA]	100	100	50	50	50	50	50	50	50
	440 / 460[V]	[kA]	50	50	50	50	35	35	35	35	35
	500 [V]	[kA]	50	42	12	12	12	10	10	10	10
	690 [V]	[kA]	6	6	5	5	5	5	5	5	5
Rated service short-circuit breaking capacity (Ics)	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100
	400 / 415 [V]	[kA]	100	100	50	50	50	50	50	50	50
	440 / 460[V]	[kA]	38	38	38	38	27	27	27	27	27
	500 [V]	[kA]	38	32	9	9	9	8	8	8	8
	690 [V]	[kA]	5	5	5	5	5	5	5	5	5
Rated service short-circuit breaking capacity of one single pole	230 / 240 [V]	[kA]	100	100	50	50	50	50	50	50	50
	400 / 415 [V]	[kA]	5	5	5	5	5	5	5	5	5

. In accordance with UL 508 certification

Rated operational current - Ie [A]			10	13	17	22	26	32	40	50	63
Max. short-circuit current											
	240 [V]	[kA]	100	100	100	100	100	100	100	100	100
	480 [V]	[kA]	50	50	50	50	50	50	50	50	50
	600 [V]	[kA]	10	10	10	10	10	10	10	10	10
Motor load											
1 Phase	115 [V]	[HP]	1/2	1/2	1	1 1/2	2	2	3	3	5
	230 [V]	[HP]	1 1/2	2	3	3	3	5	7 1/2	10	10
3 Phase	200 [V]	[HP]	2	3	3	5	7 1/2	7 1/2	10	15	20
	230 [V]	[HP]	3	3	5	7 1/2	7 1/2	10	10	15	20
	460 [V]	[HP]	5	7 1/2	10	15	15	20	30	30	40
	575 [V]	[HP]	7 1/2	10	15	20	20	30	30	40	60
Max. Fuse size		[A]	40	50	60	80	100	125	150	200	250
Max. Breaker size		[A]	40	50	60	80	100	125	150	200	250

5. GENERAL CHARACTERISTICS *(continued)*

Breaking capacity: *(continued)*

. For MPX³ 100H

Rated operational current - Ie [A]			17	22	26	32	40	50	63	75	90	100
Switching of standard three-phase motors AC-2, AC-3	230 / 240 [V]	[kW]	3.7/4	4	5.5	7.5	7.5	11	15	22	30	30
	400 / 415 [V]	[kW]	7.5	7.5	11	15	18.5	22	30	37	45	45
	500 [V]	[kW]	11	11	15	18.5	22	30	37	45	55	63
	690 [V]	[kW]	11	15	18.5	22	30	45	55	63	75	90
Ultimate short-circuit breaking capacity (Icu)	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100
	400 / 415 [V]	[kA]	100	100	100	100	100	100	100	75	75	75
	440 / 460[V]	[kA]	50	50	50	50	50	50	50	50	50	50
	500 [V]	[kA]	35	35	35	25	20	15	15	12	12	12
	690 [V]	[kA]	12	12	12	12	12	10	8	6	6	6
Rated service short-circuit breaking capacity (Ics)	230 / 240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100
	400 / 415 [V]	[kA]	100	50	50	50	50	50	50	50	50	50
	440 / 460[V]	[kA]	38	38	38	38	38	38	38	38	38	38
	500 [V]	[kA]	27	27	27	19	15	11	11	9	9	9
	690 [V]	[kA]	9	9	9	9	9	8	6	6	6	6
Rated service short-circuit breaking capacity of one single pole	230 / 240 [V]	[kA]	100	50	50	50	50	50	50	50	50	50
	400 / 415 [V]	[kA]	9	9	9	9	9	8	6	6	6	6

. In accordance with UL 508 certification

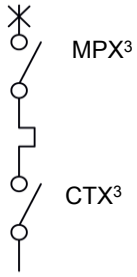
Rated operational current - Ie [A]			17	22	26	32	40	50	63	75	90	100
Max. short-circuit current												
	240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100
	480 [V]	[kA]	50	50	50	50	50	50	50	50	50	50
	600 [V]	[kA]	10	10	10	10	10	10	10	10	10	10
Motor load												
1 Phase	115 [V]	[HP]	1	1 1/2	2	2	3	3	5	5	7 1/2	10
	230 [V]	[HP]	3	3	3	5	7 1/2	10	10	15	20	20
3 Phase	200 [V]	[HP]	3	5	7 1/2	7 1/2	10	15	20	20	25	30
	230 [V]	[HP]	5	7 1/2	7 1/2	10	10	15	20	25	30	30
	460 [V]	[HP]	10	15	15	20	30	30	40	50	60	75
	575 [V]	[HP]	15	20	20	30	30	40	60	60	75	100
Max. Fuse size		[A]	60	80	100	125	150	200	250	300	350	400
Max. Breaker size		[A]	60	80	100	125	150	200	250	300	350	400

5. GENERAL CHARACTERISTICS *(continued)*

Coordination: Type 2

. According to IEC 60947-4-1

- Short circuit current : Iq = 50 [kA]
- Voltage : 230/240 [V~]
- Frequency : 50/60 [Hz]



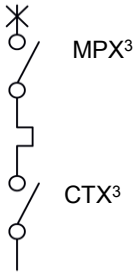
Motor		MPX³		CTX³
[kW]	[A]	Type	Rating In [A]	Type
0.37	1.8	MPX³ 32H	2.5	CTX³ 22 - 9 [A]
0.55	2.75	MPX³ 32H	4	CTX³ 40 - 32 [A]
0.75	3.5	MPX³ 32H	4	
1.1	4.4	MPX³ 63H	10	CTX³ 40 - 40 [A]
1.5	6.1	MPX³ 63H	10	
2.2	8.7	MPX³ 63H	13	
3	11.5	MPX³ 63H	13	
3.7	13.5	MPX³ 63H	18	
4	14.5	MPX³ 63H	18	
5.5	20	MPX³ 63H	22	
7.5	27	MPX³ 63H	32	
9	32	MPX³ 100H	32	CTX³ 100 - 85 [A]
10	35	MPX³ 100H	40	
11	39	MPX³ 100H	40	
15	52	MPX³ 100H	63	
18.5	64	MPX³ 100H	75	
22	75	MPX³ 100H	75	
25	85	MPX³ 100H	90	

5. GENERAL CHARACTERISTICS *(continued)*

Coordination: Type 2 *(continued)*

. According to IEC 60947-4-1

- Short circuit current : Iq = 50 [kA]
- Voltage : 400/415 [V~]
- Frequency : 50/60 [Hz]



Motor		MPX³		CTX³
[kW]	[A]	Type	Rating In [A]	Type
0.37	1.1	MPX³ 32S	1.6	CTX³ 22 - 9 [A]
0.55	1.5	MPX³ 32S	1.6	
0.75	1.9	MPX³ 32S	2.5	CTX³ 22 - 12 [A]
1.1	2.7	MPX³ 32S	4	CTX³ 22 - 18 [A]
1.5	3.6	MPX³ 32S	4	
2.2	5.2	MPX³ 32S	6	
3	6.8	MPX³ 32S	8	
4	9	MPX³ 32S	10	
5.5	11.5	MPX³ 32H	13	CTX³ 22 - 22 [A]
7.5	15.5	MPX³ 32H	17	
10	20	MPX³ 32H	22	CTX³ 40 - 32 [A]
11	22	MPX³ 32H	26	
15	29	MPX³ 32H	32	
18.5	35	MPX³ 63H	40	CTX³ 40 - 40 [A]
22	41	MPX³ 63H	50	CTX³ 65 - 50 [A]
30	55	MPX³ 63H	63	CTX³ 65 - 65 [A]
37	67	MPX³ 100H	75	CTX³ 100 - 75 [A]
45	80	MPX³ 100H	100	CTX³ 100 - 85 [A]

5. GENERAL CHARACTERISTICS *(continued)*

Coordination: Type 2 *(continued)*

. According to IEC 60947-4-1

- Short circuit current : Iq = 50 [kA]
- Voltage : 440 [V~]
- Frequency : 50/60 [Hz]

Motor		MPX³		CTX³
[kW]	[A]	Type	Rating In [A]	Type
0.37	0.99	MPX³ 32S	1	CTX³ 22 - 9 [A]
0.55	1.36	MPX³ 32S	1.6	
0.75	1.68	MPX³ 32S	2.5	
1.1	2.37	MPX³ 32S	2.5	
1.5	3.06	MPX³ 32S	4	CTX³ 22 - 18 [A]
2.2	4.42	MPX³ 32H	6	CTX³ 22 - 22 [A]
3	5.57	MPX³ 32H	6	
3.7	7.1	MPX³ 32H	8	CTX³ 40 - 32 [A]
4	7.9	MPX³ 32H	8	
5.5	10.4	MPX³ 32H	13	
9	16.9	MPX³ 63H	17	CTX³ 40 - 40 [A]
11	20.1	MPX³ 63H	22	
15	26.5	MPX³ 63H	32	
18.5	32.8	MPX³ 63H	40	CTX³ 65 - 50 [A]
22	39	MPX³ 63H	40	
25	45.3	MPX³ 63H	50	
30	51.5	MPX³ 100H	63	CTX³ 65 - 65 [A]
33	58	MPX³ 100H	63	
37	64	MPX³ 100H	63	
40	67	MPX³ 100H	75	CTX³ 100 - 85 [A]
45	76	MPX³ 100H	75	

6. CONFORMITIES AND APPROVALS

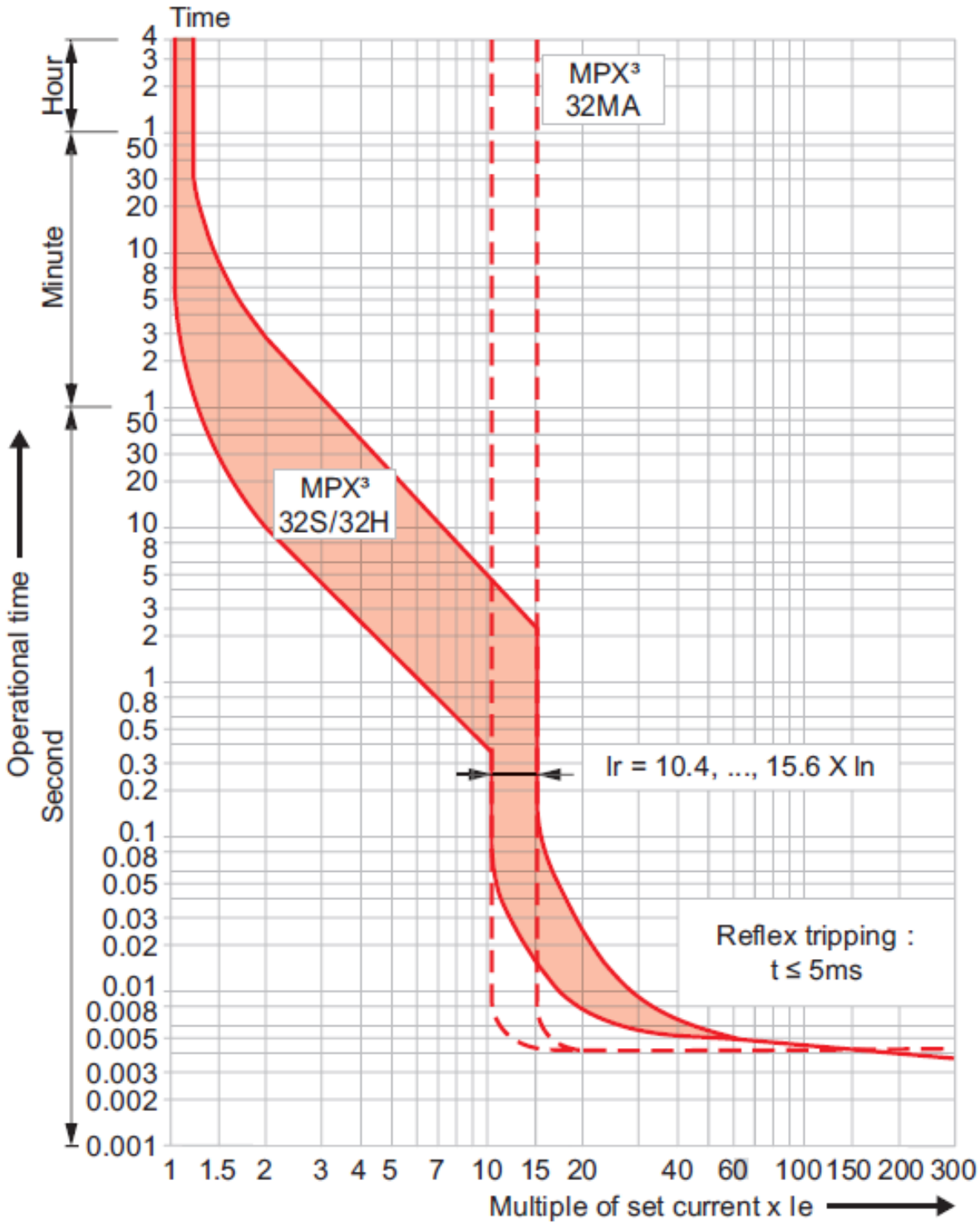
Compliance to standards:

. Standard reference: IEC/EN 60 947-2 (Breaker).
. Standard reference: IEC/EN 60 947-4 (Motor starter).
. Certificate of compliance with UL 508 standard.

7. CURVES

Time / Current tripping curve:

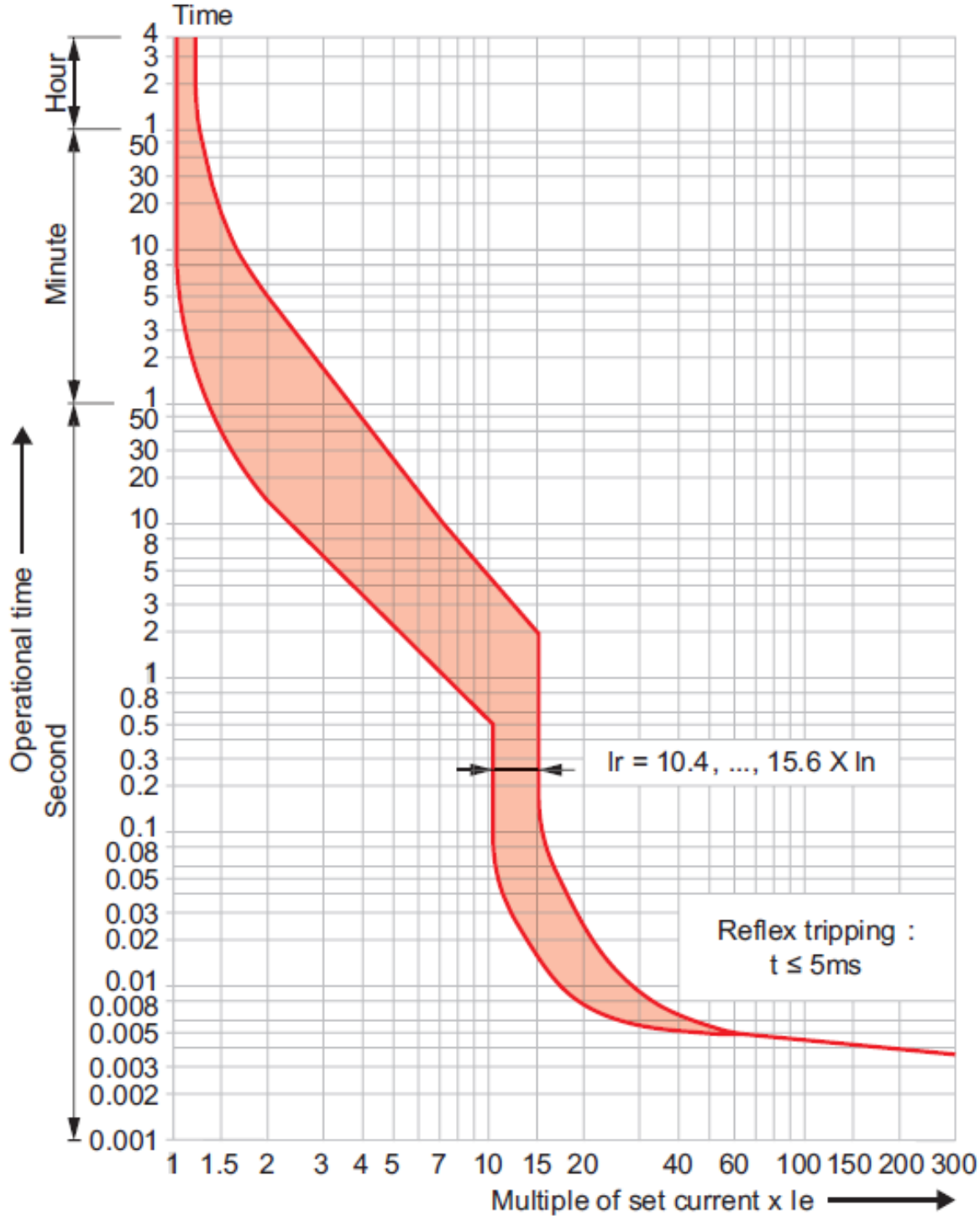
. For MPX³ 32S / MPX³ 32H / MPX³ 32MA



7. CURVES *(continued)*

Time / Current tripping curve:

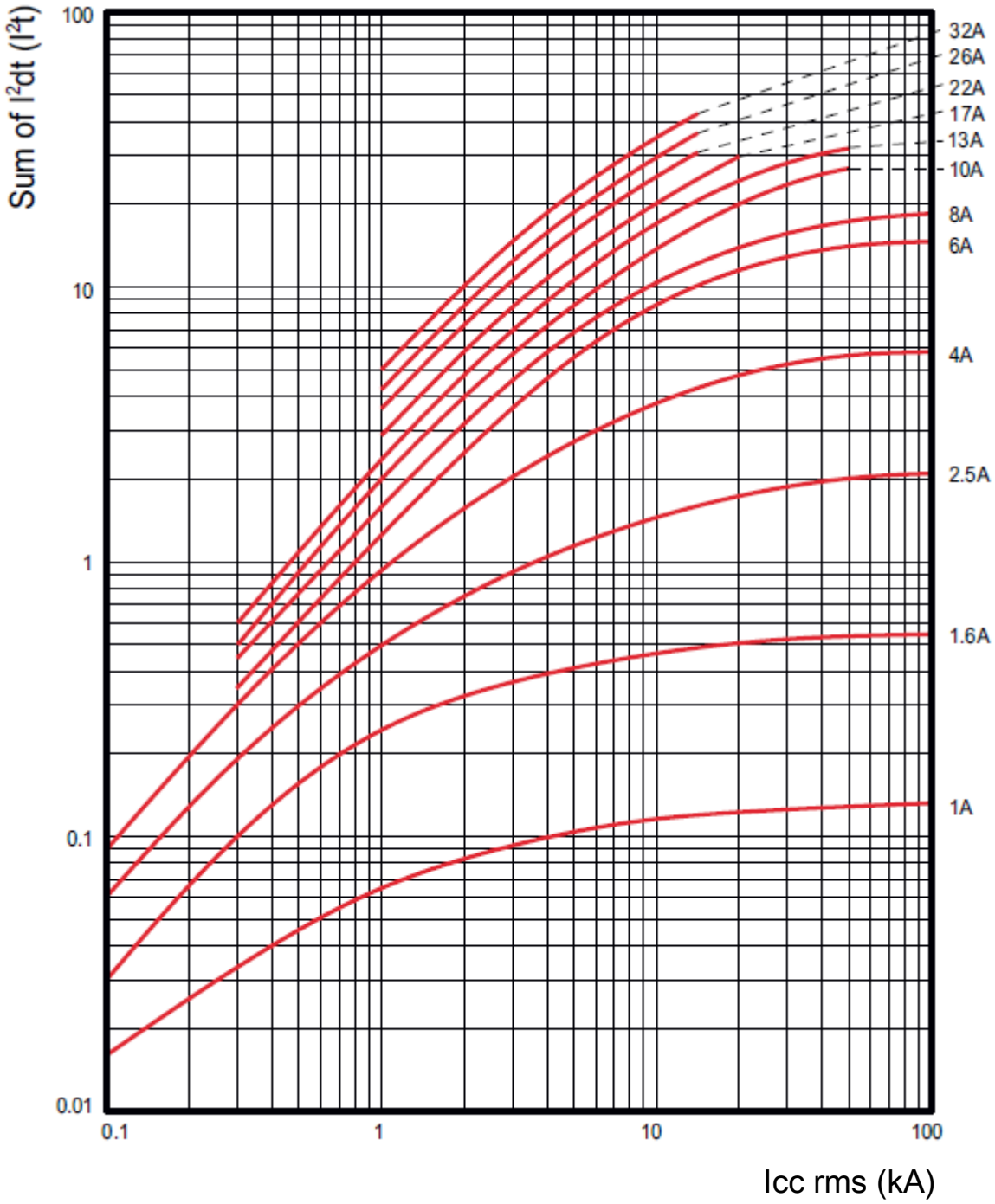
. For MPX³ 63H / MPX³ 100H



7. CURVES *(continued)*

Thermal limit on short circuit (Ue = 415V) :

. For MPX³ 32S



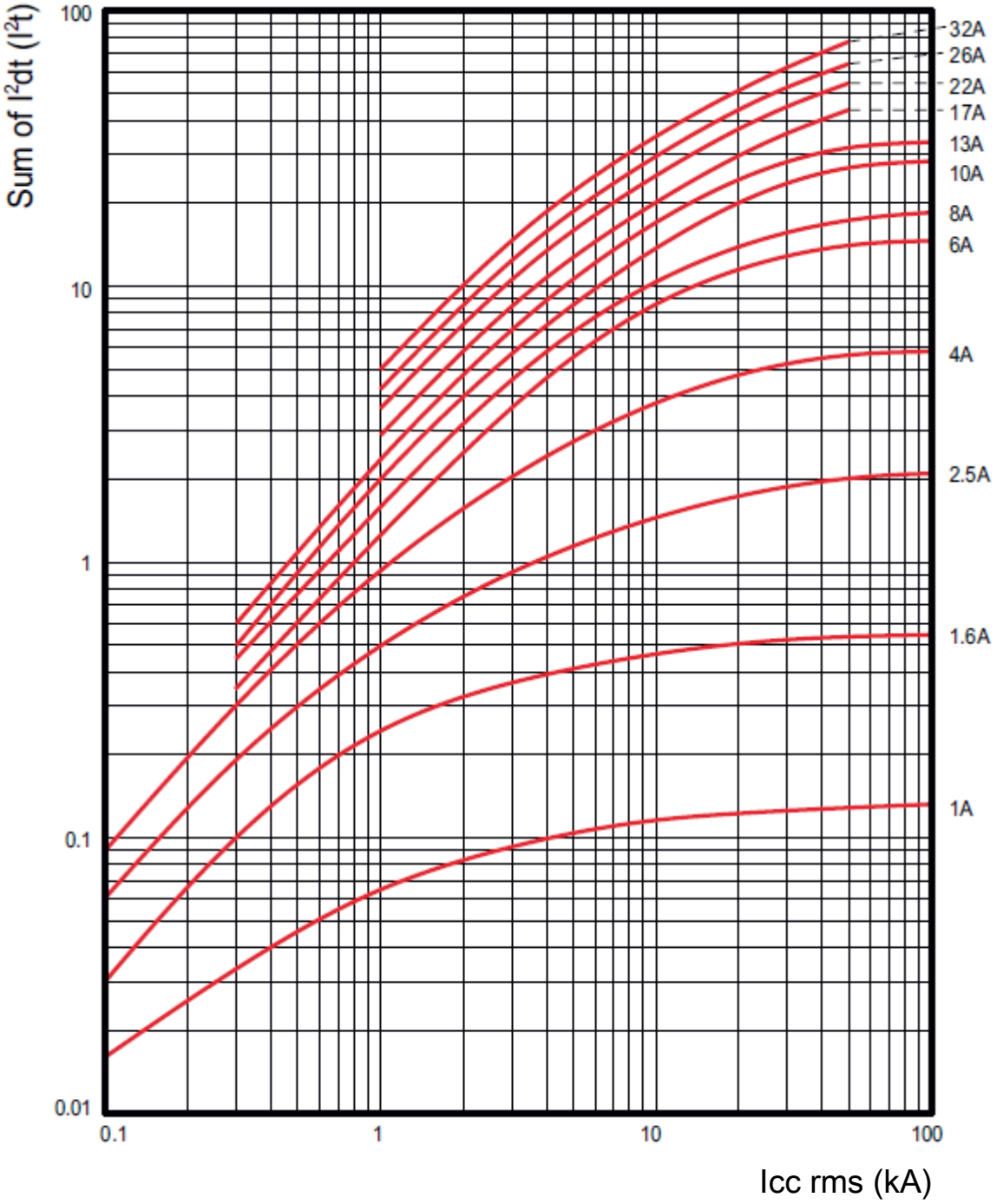
. Icc = Square value of symmetric component of the short circuit current (kA).

. I²t = Thermal energy limited (kA²s).

7. CURVES *(continued)*

Thermal limit on short circuit (Ue = 415V) :

. For MPX³ 32H / MPX³ 32MA



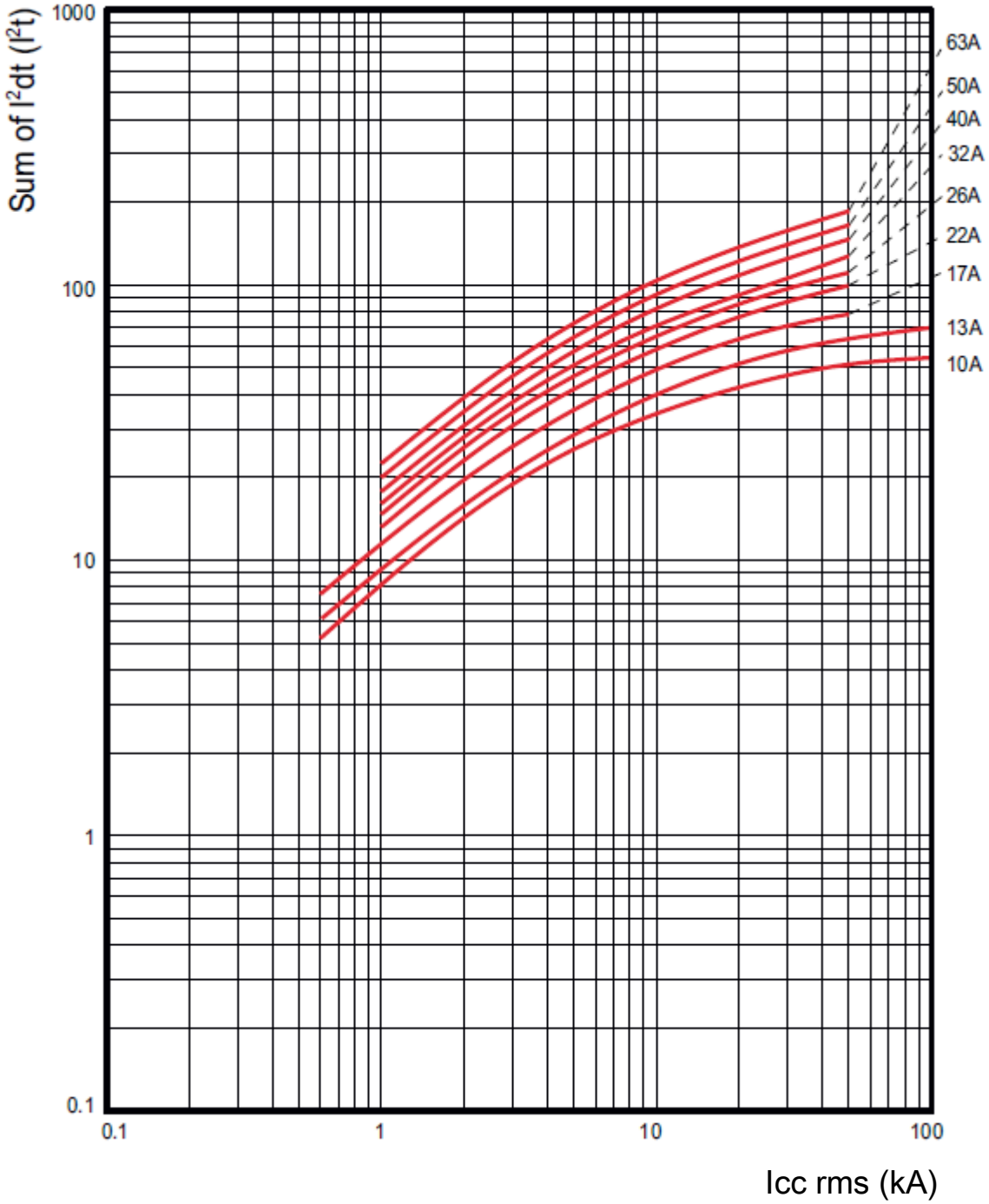
. Icc = Square value of symmetric component of the short circuit current (kA).

. I²t = Thermal energy limited (kA²s).

7. CURVES *(continued)*

Thermal limit on short circuit (Ue = 415V) :

. For MPX³ 63H



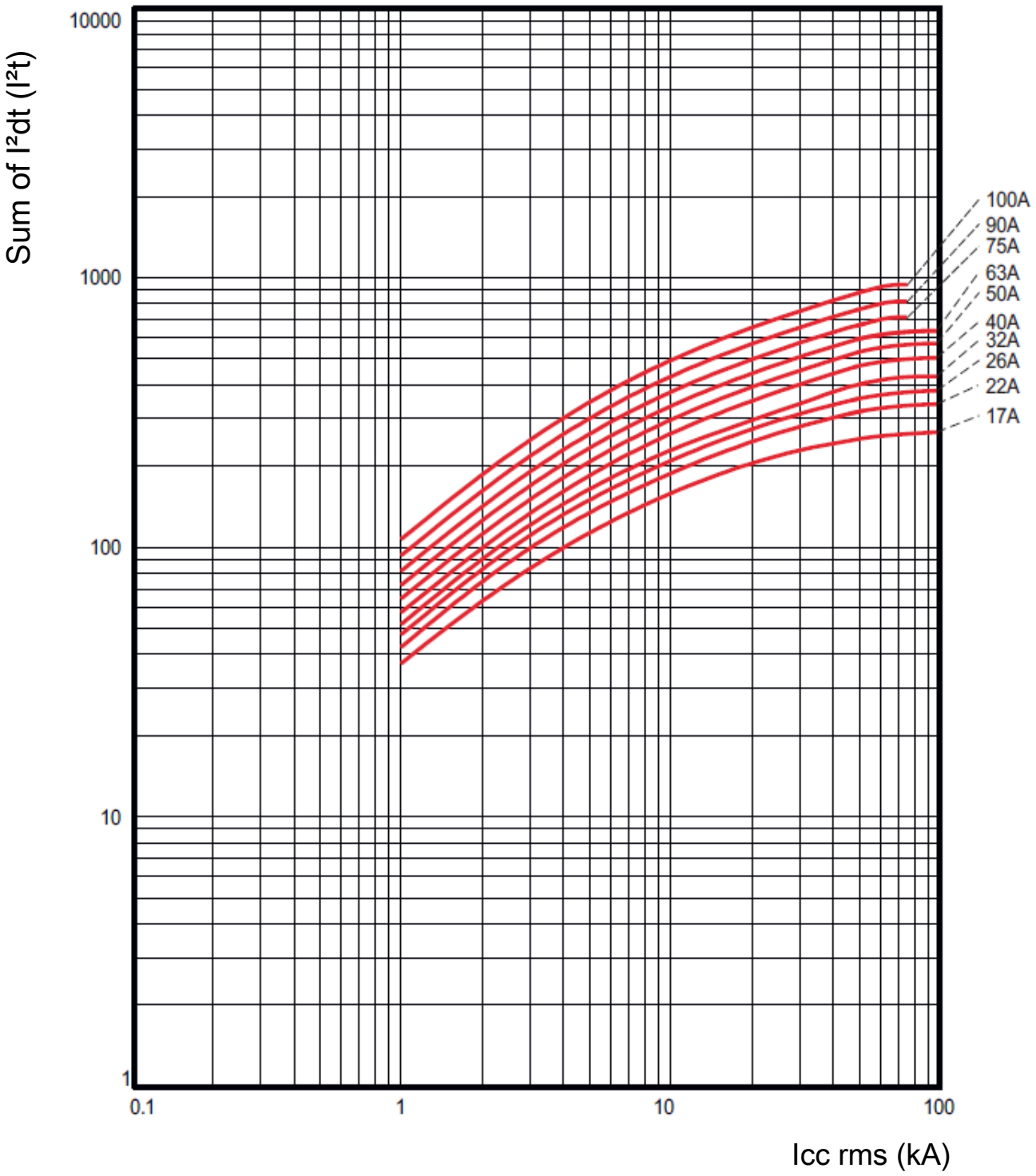
. Icc = Square value of symmetric component of the short circuit current (kA).

. I²t = Thermal energy limited (kA²s).

7. CURVES *(continued)*

Thermal limit on short circuit (Ue = 415V) :

. For MPX³ 100H



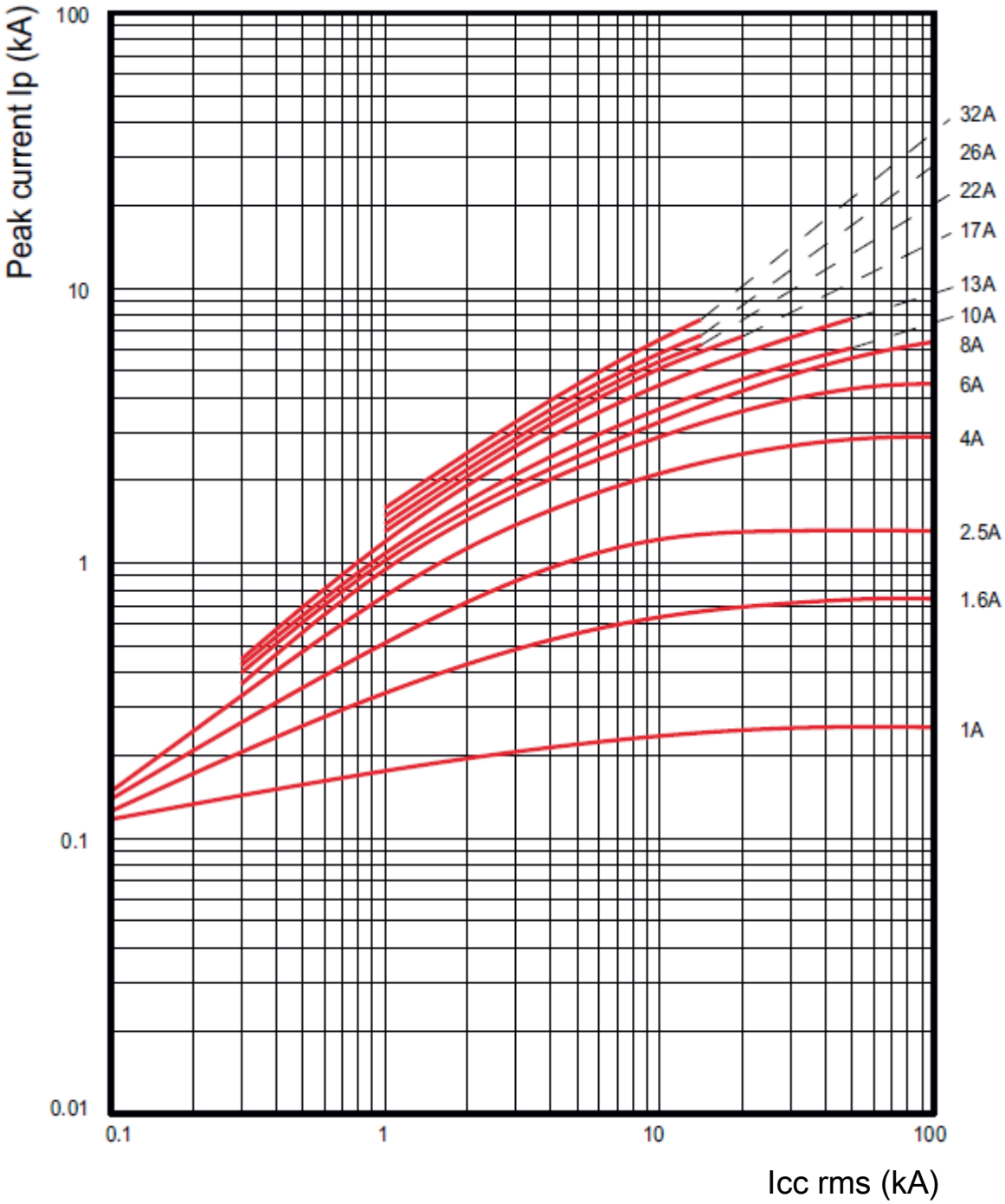
. Icc = Square value of symmetric component of the short circuit current (kA).

. I²t = Thermal energy limited (kA²s).

7. CURVES *(continued)*

Peak current in kA (Ue = 415V) :

. For MPX³ 32S



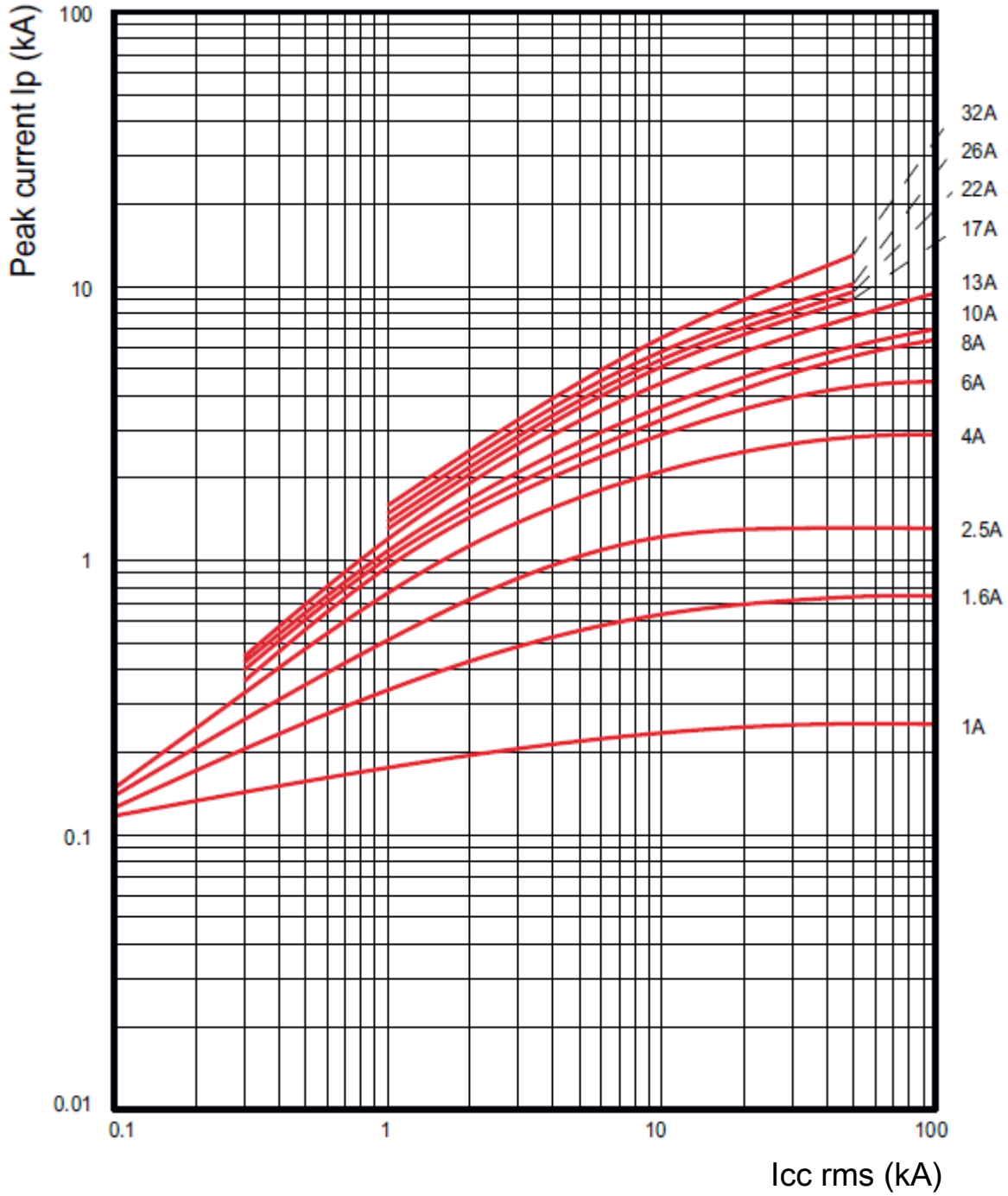
. Icc = Square value of symmetric component of the short circuit current (kA).

. Ip = Peak current (kA).

7. CURVES *(continued)*

Peak current in kA (Ue = 415V) :

. For MPX³ 32H / MPX³ 32MA



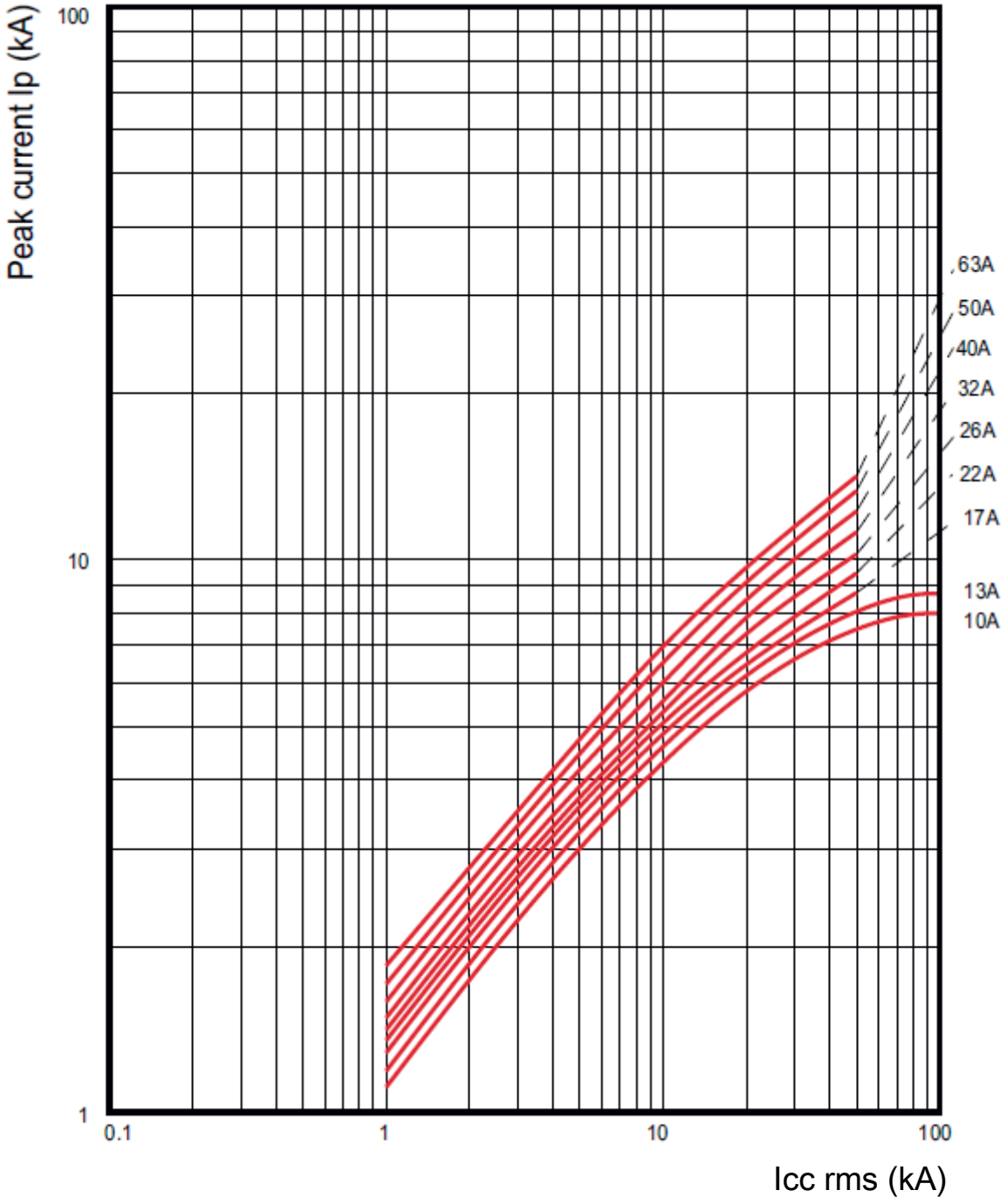
. Icc = Square value of symmetric component of the short circuit current (kA).

. Ip = Peak current (kA).

7. CURVES *(continued)*

Peak current in kA (Ue = 415V) :

. For MPX³ 63H



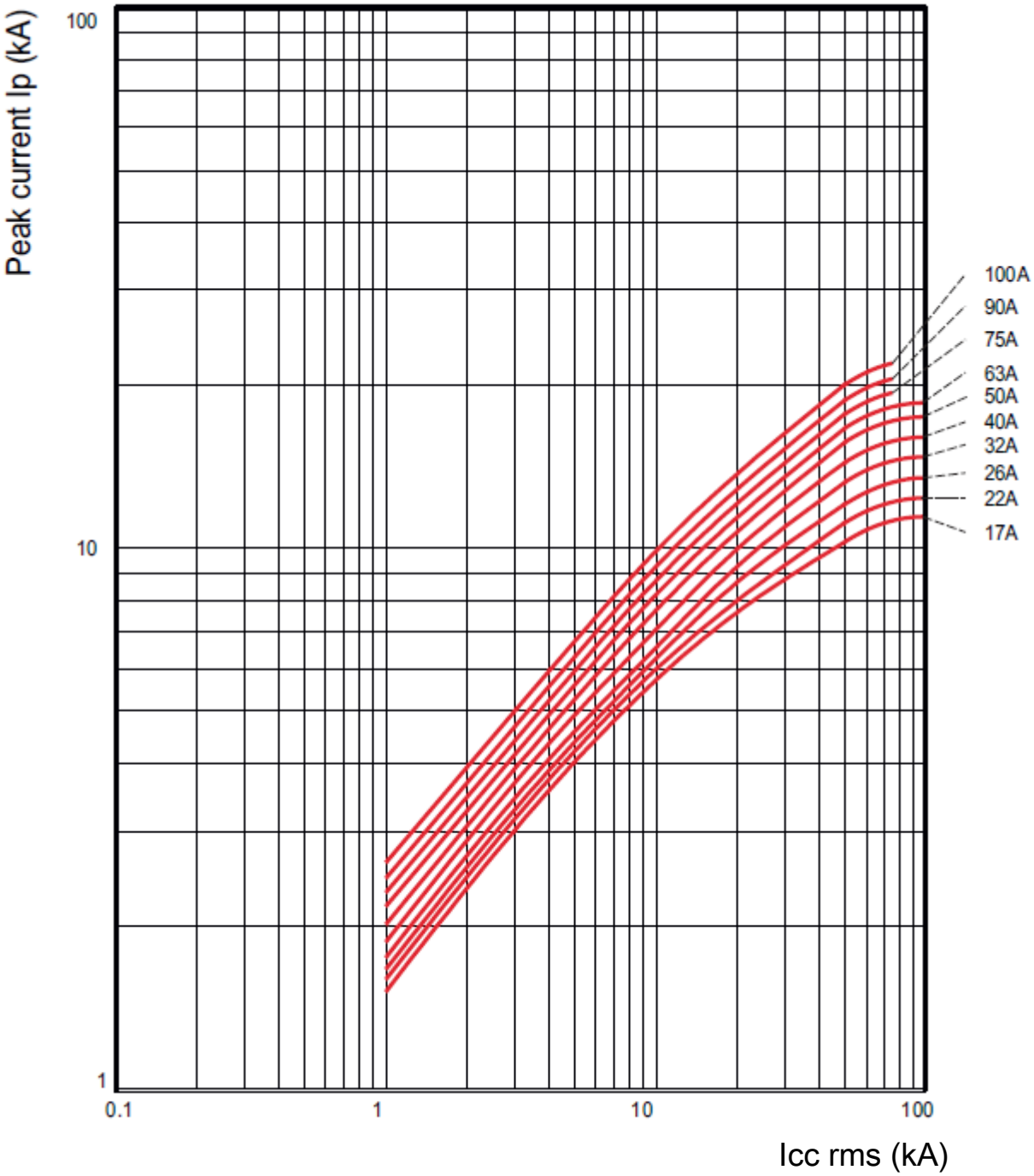
. Icc = Square value of symmetric component of the short circuit current (kA).

. Ip = Peak current (kA).

7. CURVES *(continued)*

Peak current in kA (Ue = 415V) :

. For MPX³ 100H



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

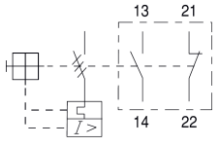
. Ip = Peak current (kA).

8. AUXILIARIES AND ACCESSORIES

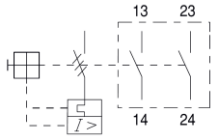
Auxiliaries: (maximum 2 auxiliary switches per MPX³)

. Auxiliary switch: (front mounting)

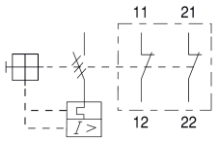
- Auxiliary switch NO + NC (cat n° 4 174 03).



- Auxiliary switch 2NO (cat n° 4 174 04).

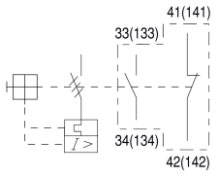


- Auxiliary switch 2NC (cat n° 4 174 05).

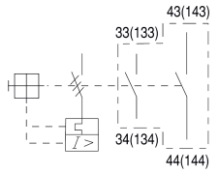


. Auxiliary switch: (side mounting on the left)

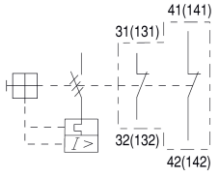
- Auxiliary switch NO + NC (cat n° 4 174 00).



- Auxiliary switch 2NO (cat n° 4 174 01).

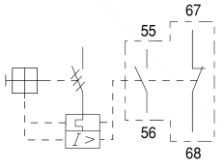


- Auxiliary switch 2NC (cat n° 4 174 02).



. Any trip alarm switch: (side mounting on the left)

- Any trip alarm switch NO + NC (cat n° 4 174 06).
- Any trip alarm switch NO + NC 63/100A (cat n° 4 174 08).

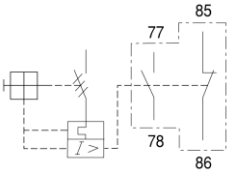


8. AUXILIARIES AND ACCESSORIES *(continued)*

Auxiliaries: *(continued)*

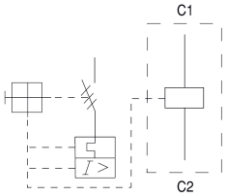
. Magnetic trip alarm switch: (side mounting on the left)

- Magnetic trip alarm switch NO + NC (cat n° 4 174 07).



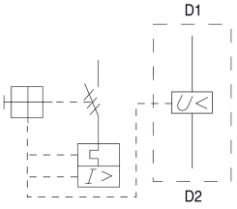
. Shunt release: (side mounting on the right)

- Shunt release 24V AC (cat n° 4 174 10).
- Shunt release 110V AC (cat n° 4 174 11).
- Shunt release 230V AC (cat n° 4 174 12).
- Shunt release 400V AC (cat n° 4 174 13).



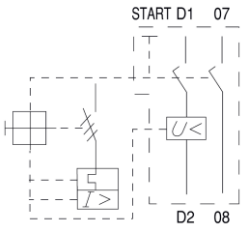
. Undervoltage release: (side mounting on the right)

- Undervoltage release 24V AC (cat n° 4 174 20).
- Undervoltage release 110V AC (cat n° 4 174 21).
- Undervoltage release 230V AC (cat n° 4 174 22).
- Undervoltage release 400V AC (cat n° 4 174 23).



. Undervoltage release with switch: (side mounting on the right)

- Undervoltage release with switch 2NO 24V AC.
(cat n° 4 174 30)
- Undervoltage release with switch 2NO 110V AC.
(cat n° 4 174 31)
- Undervoltage release with switch 2NO 230V AC.
(cat n° 4 174 32)
- Undervoltage release with switch 2NO 400V AC.
(cat n° 4 174 33)



8. AUXILIARIES AND ACCESSORIES *(continued)*

Auxiliaries: *(continued)*

. Possible combinations of auxiliaries:

Auxiliaries			MPX³ 32S		MPX³ 32H / MA		MPX³ 63H			MPX³ 100H	
Auxiliary contacts	Front mounting	Max. No.	0	1 or	0	1 or	0	1 or	1	0	1 or
	Side mounting	Max. No.	2	1	2	1	2	1	0	2	1
Fault signal contact		Max. No.	0	1	0	1	0	1(1)	1(2)	0	1(2)
Shunt trip or undervoltage release		Max. No.	1	1	1	1	1	1	1	1	1

(1) : cat n° 4 174 07
(2) : cat n° 4 174 08

General characteristics auxiliaries:

			Auxiliary contacts for front mounting		Auxiliary contacts for left side mounting		Alarm switch for left side mounting	
Rated thermal current / th								
at 40°C ambient temperature		[A]	5		10		10	
at 60°C ambient temperature		[A]	3		6		6	
Contact class coordination according to NEMA (UL/CSA-Standards)		AC	A600		A600		A600	
		DC	Q300		Q300		Q300	
Back-up fuses gG, gL		[A]	16		16		16	
Rated supply current		[V]	-	240	24	240	24	240
	AC-15:	[A]	-	3	6	4	6	4
	DC-13:	[V]	24	220	24	220	24	220
		[A]	1	0.1	2	0.25	2	0.25
Weight (g)			18		30		40	
Terminal parts								
Wire					Pozidriv size 2			
Single-core	1 conductor	[mm²] / [AWG]	0.5...2.5 / 20...14		0.5...2.5 / 20...14			
	2 conductor	[mm²] / [AWG]	-		0.5...2.5 / 20...14			
Stranded	1 conductor	[mm²] / [AWG]	0.5...4 / 20...10		0.5...4 / 20...10			
	2 conductor	[mm²] / [AWG]	0.75...2.5 / 18...14		0.75...2.5 / 18...14			
Tightening torque		[Nm] / [lb-in]	0.8...1.2 / 7...10		0.8...1.2 / 7...10			

			Undervoltage release for right side mounting	Undervoltage release with 2 auxiliary contacts for right side mounting	Shunt release for right side mounting
Actuating voltage					
Pull-in			0.7...1.1× Us	0.85...1.1× Us	0.85...1.1× Us
Drop-out				0.7...0.35× Us	0.7...0.35× Us
Rated control voltage					
min.:			24V 50Hz / 28V 60Hz	24V 50Hz / 28V 60Hz	24V 50Hz / 28V 60Hz
max.:			415~440V 50Hz / 460~480V 60Hz	415~440V 50Hz / 460~480V 60Hz	415~440V 50Hz / 460~480V 60Hz
Coil rating					
Pull-in			8.5VA, 6W	8.5VA, 6W	8.5VA, 6W
Hold			3VA, 1.2W	3VA, 1.2W	3VA, 1.2W
Opening time (ms)			-	20	20
Weight (g)			18	30	40
Terminal parts					
Wire			Pozidriv size 2		
Single-core	1 conductor	[mm²] / [AWG]	0.5...2.5 / 20...14		
	2 conductor	[mm²] / [AWG]	0.5...2.5 / 20...14		
Stranded	1 conductor	[mm²] / [AWG]	0.5...4 / 20...10		
	2 conductor	[mm²] / [AWG]	0.75...2.5 / 18...14		
Tightening torque		[Nm] / [lb-in]	0.8...1.2 / 7...10		

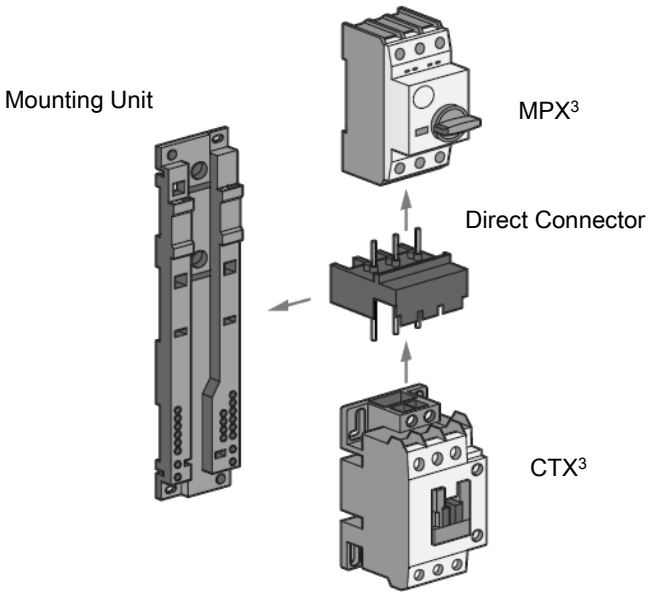
8. AUXILIARIES AND ACCESSORIES *(continued)*

Auxiliaries: *(continued)*

. Direct connector and Mounting unit

Type		Combined devices	
Direct connector	Mounting Unit	MPX³	CTX³
4 174 40	Mounting Unit MPX³ 32S / 32H / 32MA 4 174 60	MPX³ 32S	CTX³ mini AC
4 174 41			CTX³ mini DC
4 174 48			CTX³ 22 AC
4 174 49			CTX³ 22 DC
4 174 52			CTX³ 40 AC
4 174 53			CTX³ 40 DC
4 174 42		MPX³ 32H / 32MA	CTX³ mini AC
4 174 43			CTX³ mini DC
4 174 50			CTX³ 22 AC
4 174 51			CTX³ 22 DC
4 174 54			CTX³ 40 AC
4 174 55			CTX³ 40 DC
4 174 56	Mounting Unit MPX³ 63H 4 174 61	MPX³ 63H	CTX³ 65 AC
4 174 57			CTX³ 65 DC
4 174 58	Mounting Unit MPX³ 100H 4 174 62	MPX³ 100H	CTX³ 100 AC
4 174 59			CTX³ 100 DC

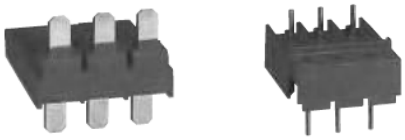
. Installation principle:



8. AUXILIARIES AND ACCESSORIES *(continued)*

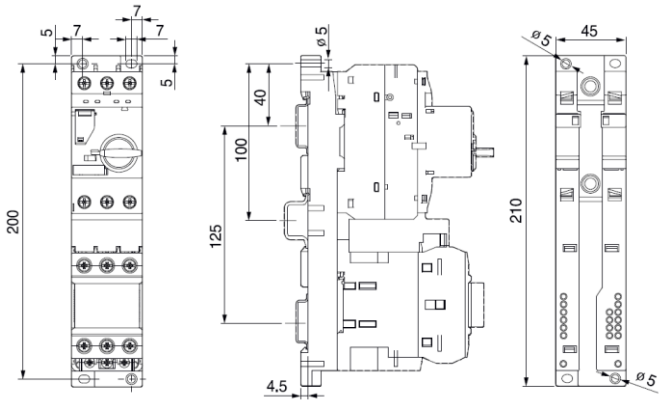
Auxiliaries: *(continued)*

. Direct connector:

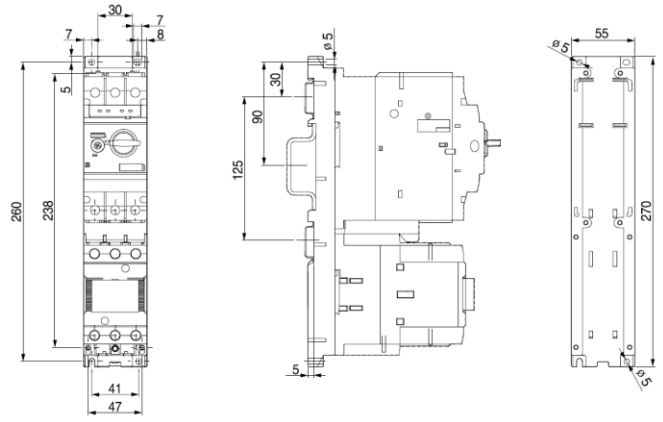


Overall dimensions Mounting unit:

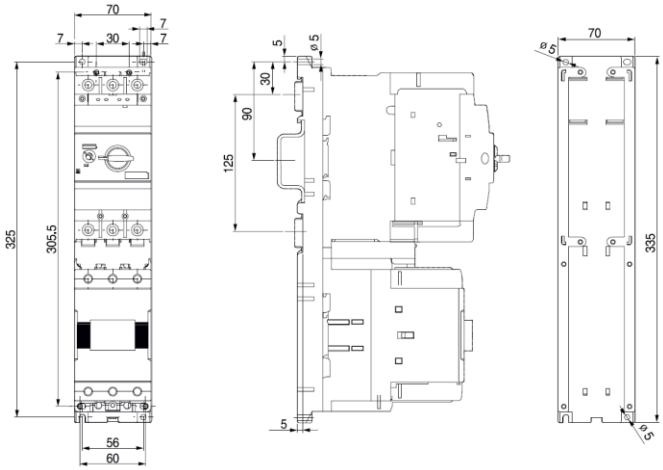
. Mounting Unit MPX³ 32S / 32H / 32MA (cat n° 4 174 60)



. Mounting Unit MPX³ 63H (cat n° 4 174 61)



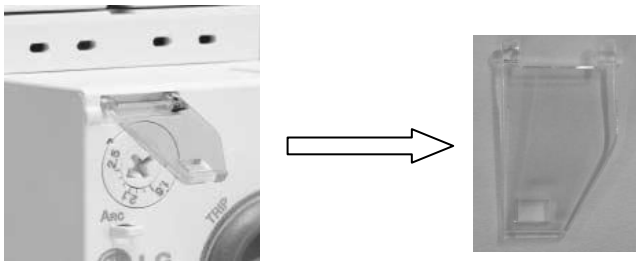
. Mounting Unit MPX³ 100H (cat n° 4 174 62)



8. AUXILIARIES AND ACCESSORIES *(continued)*

Accessories: *(continued)*

. Dial Cover MPX³ (cat n° 4 174 79).



. Phase Busbar MPX³:

References	Application MPX³	Number of breakers	Rated current
4 174 71	MPX³ 32S / 32H / 32MA	2	63 [A]
4 174 73		3	
4 174 75		4	
4 174 76		5	
4 174 72	MPX³ 63H	2	108 [A]
4 174 74		3	

. Feeder 32A phase busbar for MPX³ 32S / 32H / 32 MA (cat n° 4 174 77).

Pole	3P
Mounting location	Upstream
IP degree of protection	IP20 according to IEC 60 529
Rated insulation voltage (Ui)	690 [V] according to IEC 60 947-1
Rated operational current (Ie)	63 [A]
Terminal torque	1.7 [Nm] on screw clamp terminals

Installation software:

. XL PRO³.

8. AUXILIARIES AND ACCESSORIES *(continued)*

Accessories: *(continued)*

. Enclosure IP 65:

- Enclosure yellow red rotary handle MPX³ 32H / 32MA. (cat n° 4 174 80)
- Enclosure rotary handle MPX³ 32H / 32MA. (cat n° 4 174 81)

. Rotary handle:

- Rotary handle MPX³ 32H / 32MA (cat n° 4 174 63).
- Rotary handle MPX³ 63H (cat n° 4 174 64).
- Rotary handle MPX³ 100H (cat n° 4 174 65).

References	Application MPX³	Shaft / Length
4 174 63	MPX³ 32H / 32MA	315 [mm]
4 174 64	MPX³ 63H	
4 174 65	MPX³ 100H	

. Operation temperature : Min. = -20°C. Max. = +60°C.

. Degree of protection : IP65 or UL50 Type 3R (separately).

. Locking device : Lockable in ON / OFF position.

. Material of insulation : Plastic (PA66).