

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

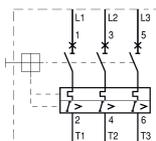


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1. DESCRIPTION - USE

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:

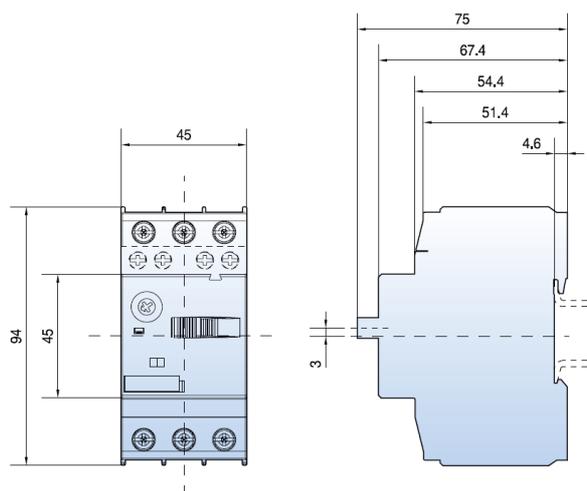
. Category A in accordance with IEC 60947-2.
. Category A C-3 in accordance with IEC 60947-4-1.

Suitability for isolation:

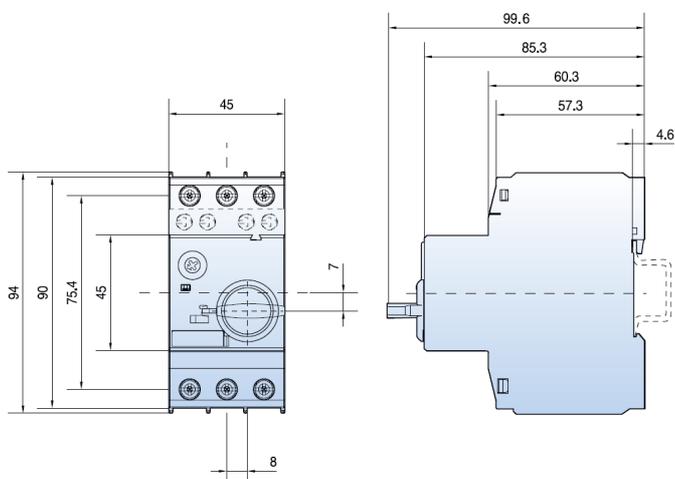
. In accordance with IEC 60947-1.

3. OVERALL DIMENSIONS

MPX³ 32S:

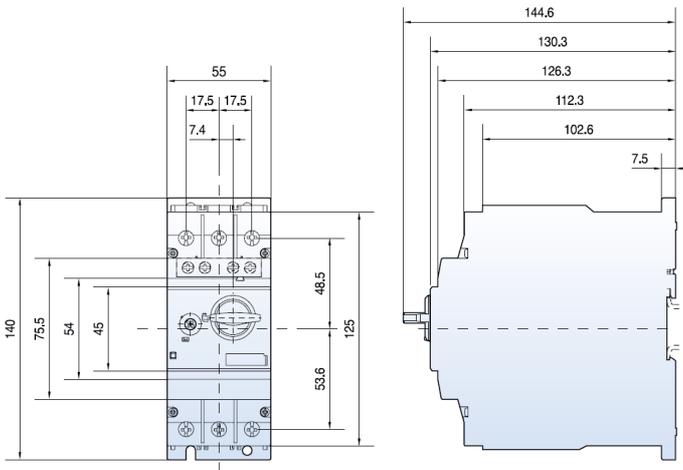


MPX³ 32H / MPX³ 32MA:

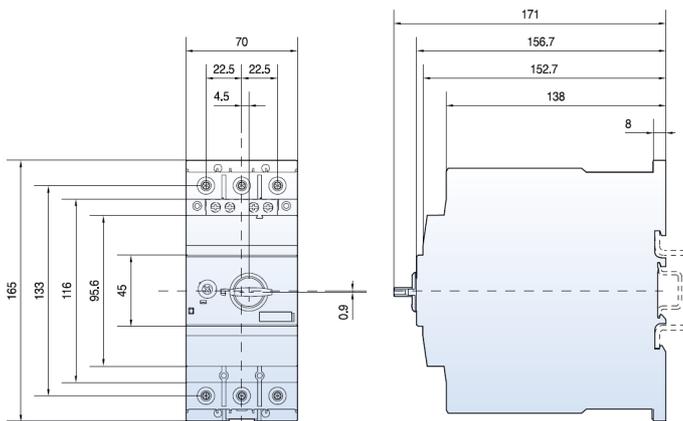


3. OVERALL DIMENSIONS (continued)

MPX³ 63H:



MPX³ 100H:

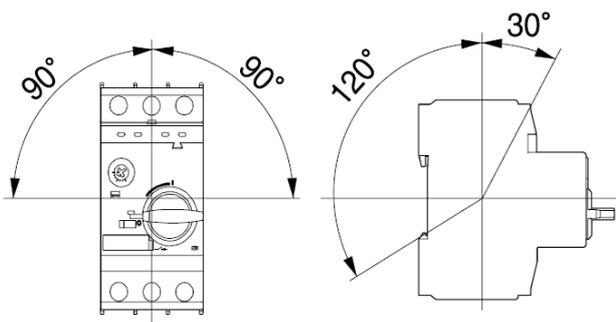


4. INSTALLATION - CONNECTION

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

	MPX ³ 32S	MPX ³ 32H MPX ³ 32MA
Terminal parts		
Single-core	1.conductor [mm ²] / [AWG] 1...10 / 18...8 2.conductor [mm ²] / [AWG] 1...6 / 18...10	1...10 / 18...8 1...6 / 18...10
Standard	1.conductor [mm ²] / [AWG] 1...6 / 18...10 2.conductor [mm ²] / [AWG] 1...6 / 18...10	1...6 / 18...10 1...6 / 18...10
Flexible	1.conductor [mm ²] / [AWG] 1...6 / 18...10 2.conductor [mm ²] / [AWG] 0.75...4 / 18...10	1...6 / 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

	MPX ³ 63H	MPX ³ 100H
Terminal parts		
Single-core	1.conductor [mm ²] / [AWG] 0.75...35 / 18...2 2.conductor [mm ²] / [AWG] 0.75...25 / 18...4	2.5...70 / 12...2/0 2.5...50 / 12...1/0
Standard	1.conductor [mm ²] / [AWG] 0.75...35 / 18...2 2.conductor [mm ²] / [AWG] 0.75...25 / 18...4	2.5...70 / 12...2/0 2.5...50 / 12...1/0
Flexible	1.conductor [mm ²] / [AWG] 0.75...25 / 18...4 2.conductor [mm ²] / [AWG] 0.75...16 / 18...6	2.5...50 / 12...1/0 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)
O : Device open.
I : Device closed.
- . Ergonomic 2 positions rotary handle: (for MPX³ 32H / MPX³ 32MA and MPX³ 63H)
O : Device open.
TRIP : 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.

Labelling:

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

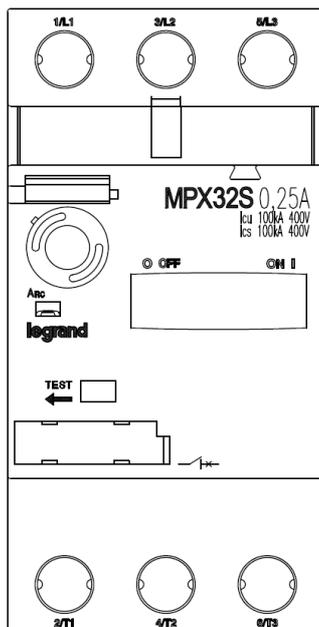
5. GENERAL CHARACTERISTICS

Front side:

. By permanent laser marking:

- Brand: Legrand
- Range: MPX
- Rated current (in A)
- O Off / ON I
- TEST
- Electric diagram
- Thermal adjustment ring
- Icu / Ics
- Marking power terminals

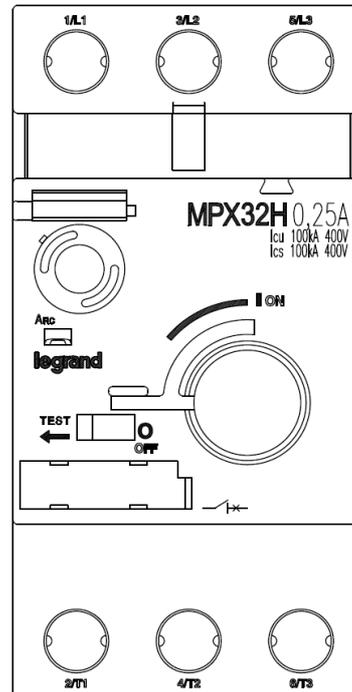
MPX³ 32S: (Example of marking)



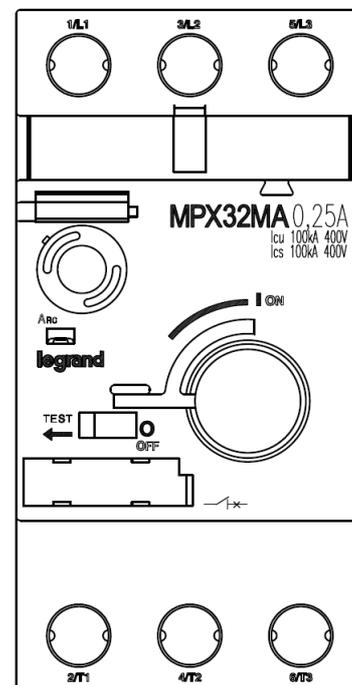
5. GENERAL CHARACTERISTICS *(continued)*

Front side: *(continued)*

MPX³ 32H: (Example of marking)



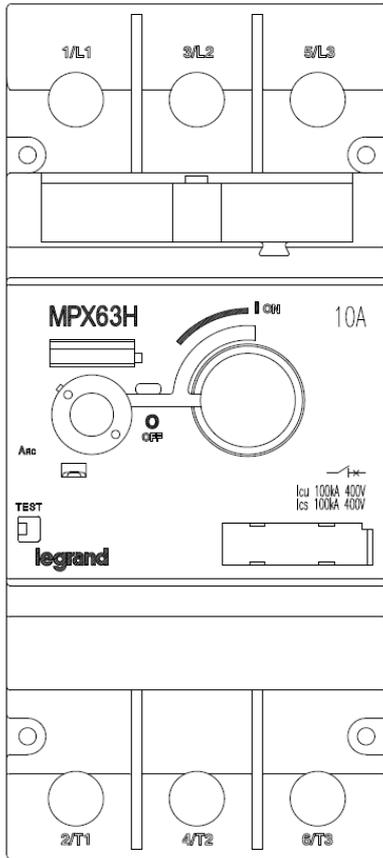
MPX³ 32MA: (Example of marking)



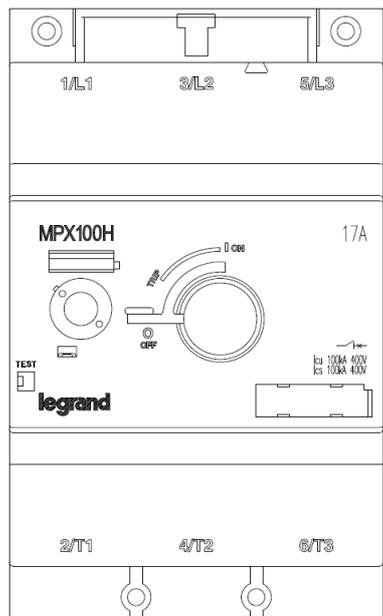
5. GENERAL CHARACTERISTICS (continued)

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)

legrand MPX³ 4 173 00

Cat.A / AC-3 $U_i = 690V$ 50/60Hz $U_{imp} = 6kV$
 $I_e = 0.1-0.16A$ $I_n >> 2.1A$ Trip Class 10

U_e (V)	I_{cu} (kA)	I_{cs} (kA)	$I_{cc} > I_{cu}$ gL / gG
230 / 240	100	100	-
400 / 415	100	100	-
440 / 460	100	100	-
500 / 525	100	100	-
600 / 690	100	100	-

10 10

1 x 1 ... 10mm² 1 x 1 ... 6mm²
 2 x 1 ... 6mm² 2 x 1 ... 6mm²

PZ2/Ø 5...6mm
 2.0Nm

IEC/EN 60947 VDE 0660

CE

140626 YS

MADE IN KOREA

Right side:

. By identification label (referring to UL standard)

MANUAL MOTOR CONTROLLER **UL** US LISTED 644W

MAX. FUSE OR CB 500A
 SHORT CIRCUIT CURRENT RATING,
 RMS, SYM: 50kA 480Y/277V, 10kA 600Y/347V

SUITABLE FOR USE WITH LOAD SIDE CONTROLLERS MARKED FOR USE WITH THIS PRODUCT.
 FOR USE WITH DESIGN E MOTORS.
 USE ALL 3 POLES
 1.0 FLA MAX. DIAL IS FLA. TRIP AMPS 125%
 USE 75°C CU WIRE ONLY; BREAK ALL LINES

V AC	115	200	230	460	575
3PH,HP	-	-	-	-	1/2
1PH,HP	-	-	-	-	-

TORQUE	WIRE RANGE
18LB IN	1x18 TO 8 AWG 2x18 TO 10 AWG

7961 1912 035

WARNING:
 IF AN OVERLOAD OR A FAULT CURRENT INTERRUPTION OCCURS, CIRCUITS MUST BE CHECKED TO DETERMINE THE CAUSE OF THE INTERRUPTION. IF A FAULT CONDITION EXISTS, THE CURRENT-CARRYING COMPONENTS SHOULD BE EXAMINED AND REPLACED IF DAMAGED, AND THE INTEGRAL CURRENT SENSORS MUST BE REPLACED TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK. TO MAINTAIN OVERCURRENT, SHORT-CIRCUIT, AND GROUND-FAULT PROTECTION, THE MANUFACTURER'S INSTRUCTIONS FOR SELECTION OF OVERLOAD AND SHORT CIRCUIT PROTECTION MUST BE FOLLOWED TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK.

5. GENERAL CHARACTERISTICS (continued)

Setting ranges:

Rated operational current (I _e)	Thermal release adjustment range (I _r)
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:

- . U_e = 690 [V] for all products conforming to IEC60947-2.
- . U_e = 600 [V] for all products conforming to UL508

Rated impulse voltage:

- . U_{imp} = 6 kV for MPX³ 32S / MPX³ 32H / MPX³ 32MA.
- . U_{imp} = 8 kV for MPX³ 63H / MPX³ 100H.

Rated insulation voltage:

- . U_i = 690 V for MPX³ 32S / MPX³ 32H / MPX³ 32MA.
- . U_i = 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:

MPX ³	Weight
MPX ³ 32S	0.32 [kg]
MPX ³ 32H	0.36 [kg]
MPX ³ 32MA	0.36 [kg]
MPX ³ 63H	1 [kg]
MPX ³ 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:

	MPX ³ 32S	MPX ³ 32H / MA
Total power loss P _v Circuit breaker at rated load operating temperature	I _n = 0.16~1.6 [A] 4.4 [W]	I _n = 0.16~1.6 [A] 4.4 [W]
	I _n = 2.5~26 [A] 7.4 [W]	I _n = 2.5~26 [A] 7.4 [W]
	I _n = 32 [A] 4 [W]	I _n = 32 [A] 4 [W]

	MPX ³ 63H	MPX ³ 100H
Total power loss P _v Circuit breaker at rated load operating temperature	I _n = 10~22 [A] 10.2 [W]	I _n = 17~32 [A] 15 [W]
	I _n = 26~63 [A] 9.7 [W]	I _n = 40~63 [A] 21.8 [W]
	-	I _n = 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	10	10	6	6	6	5	5
	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
4Rated 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

. 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	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 - I _e [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 (I _{cu})	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	100	50	50	50
	440 / 460[V]	[kA]	100	100	100	100	100	100	100	100	100	100	50	50	50	20	20	20
	500 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	50	50	42	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 (I _{cs})	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	100	38	38	38
	440 / 460[V]	[kA]	100	100	100	100	100	100	100	100	100	100	38	38	38	15	15	15
	500 [V]	[kA]	100	100	100	100	100	100	100	100	100	100	38	38	32	8	8	8
	690 [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 - I _e [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 - I _e [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 (I _{cu})	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 (I _{cs})	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

. In accordance with UL 508 certification

Rated operational current - I _e [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	1½	2	2	3	3	5
	230 [V]	[HP]	1½	2	3	3	3	5	7½	10	10
3 Phase	200 [V]	[HP]	2	3	3	5	7½	7½	10	15	20
	230 [V]	[HP]	3	3	5	7½	7½	10	10	15	20
	460 [V]	[HP]	5	7½	10	15	15	20	30	30	40
	575 [V]	[HP]	7½	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
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
Rated service short-circuit breaking capacity (Ics)	690 [V]	[kA]	9	9	9	9	9	8	6	6	6	6

. In accordance with UL 508 certification

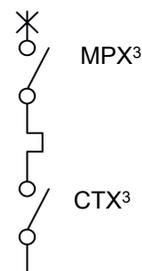
Rated operational current - Ie [A]			17	22	26	32	40	50	63	75	90	100
Max. short-circuit current												
	240 [V]	[kA]	100	100	100	100	100	100	100	100	100	100
	480 [V]	[kA]	50	50	50	50	50	50	50	50	50	50
	600 [V]	[kA]	10	10	10	10	10	10	10	10	10	10
Motor load												
1 Phase	115 [V]	[HP]	1	1½	2	2	3	3	5	5	7½	10
	230 [V]	[HP]	3	3	3	5	7½	10	10	15	20	20
3 Phase	200 [V]	[HP]	3	5	7½	7½	10	15	20	20	25	30
	230 [V]	[HP]	5	7½	7½	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 : I_q = 50 [kA]
- Voltage : 230/240 [V~]
- Frequency : 50/60 [Hz]



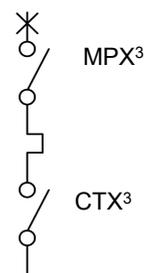
Motor		MPX ³		CTX ³
[kW]	[A]	Type	Rating I _n [A]	Type
0.37	1.8	MPX ³ 32H	2.5	CTX ³ 22 - 9 [A]
0.55	2.75	MPX ³ 32H	4	CTX ³ 40 - 32 [A]
0.75	3.5	MPX ³ 32H	4	
1.1	4.4	MPX ³ 63H	10	CTX ³ 40 - 40 [A]
1.5	6.1	MPX ³ 63H	10	
2.2	8.7	MPX ³ 63H	13	
3	11.5	MPX ³ 63H	13	
3.7	13.5	MPX ³ 63H	18	
4	14.5	MPX ³ 63H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

5. GENERAL CHARACTERISTICS *(continued)*

Coordination: Type 2 *(continued)*

. According to IEC 60947-4-1

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



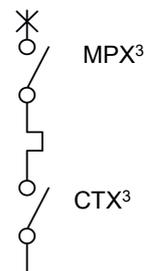
Motor		MPX ³		CTX ³
[kW]	[A]	Type	Rating In [A]	Type
0.37	1.1	MPX ³ 32S	1.6	CTX ³ 22 - 9 [A]
0.55	1.5	MPX ³ 32S	1.6	
0.75	1.9	MPX ³ 32S	2.5	CTX ³ 22 - 12 [A]
1.1	2.7	MPX ³ 32S	4	CTX ³ 22 - 18 [A]
1.5	3.6	MPX ³ 32S	4	
2.2	5.2	MPX ³ 32S	6	
3	6.8	MPX ³ 32S	8	
4	9	MPX ³ 32S	10	
5.5	11.5	MPX ³ 32H	13	CTX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

5. GENERAL CHARACTERISTICS *(continued)*

Coordination: Type 2 *(continued)*

. According to IEC 60947-4-1

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



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

6. CONFORMITIES AND APPROVALS

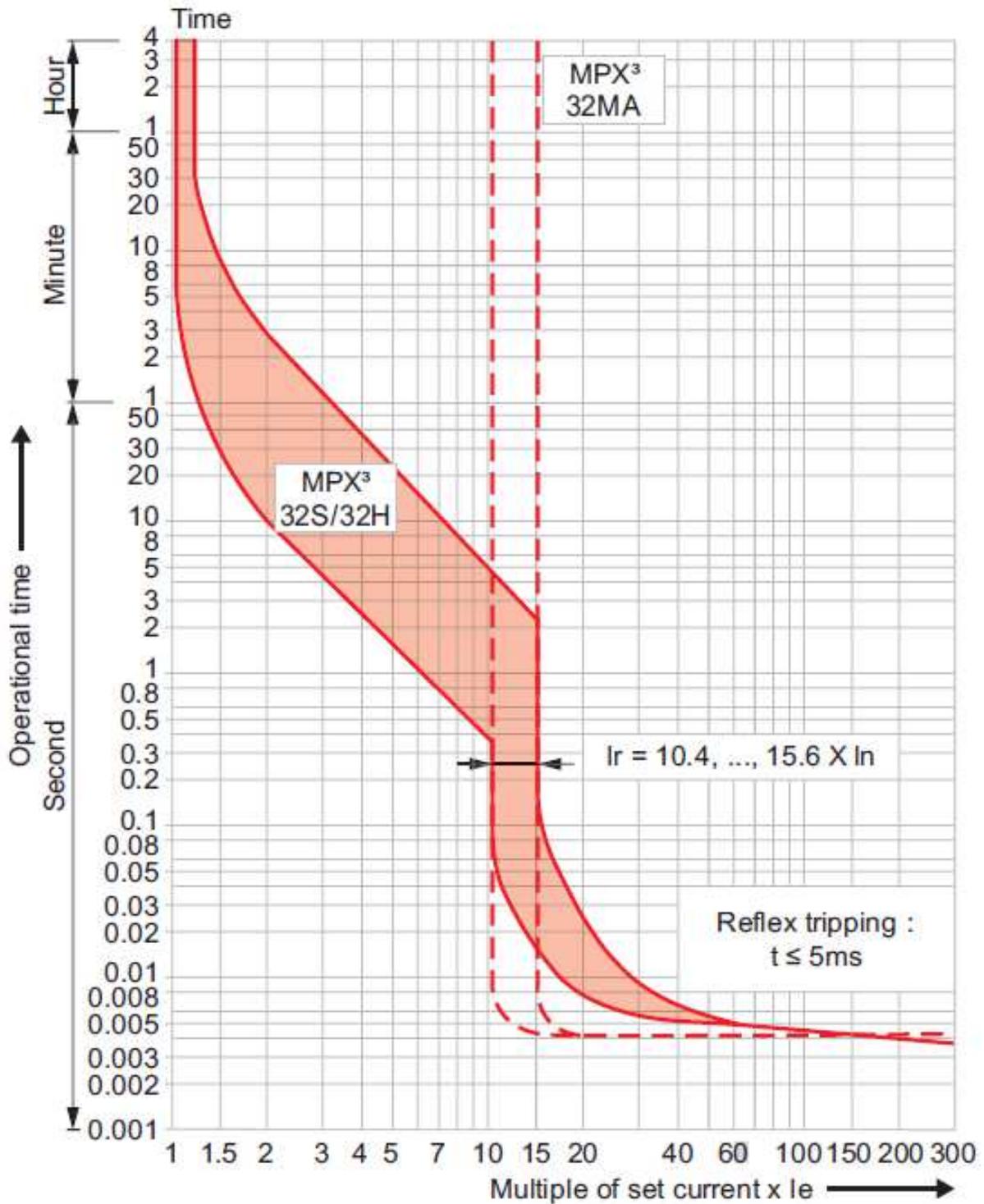
Compliance to standards:

- . 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

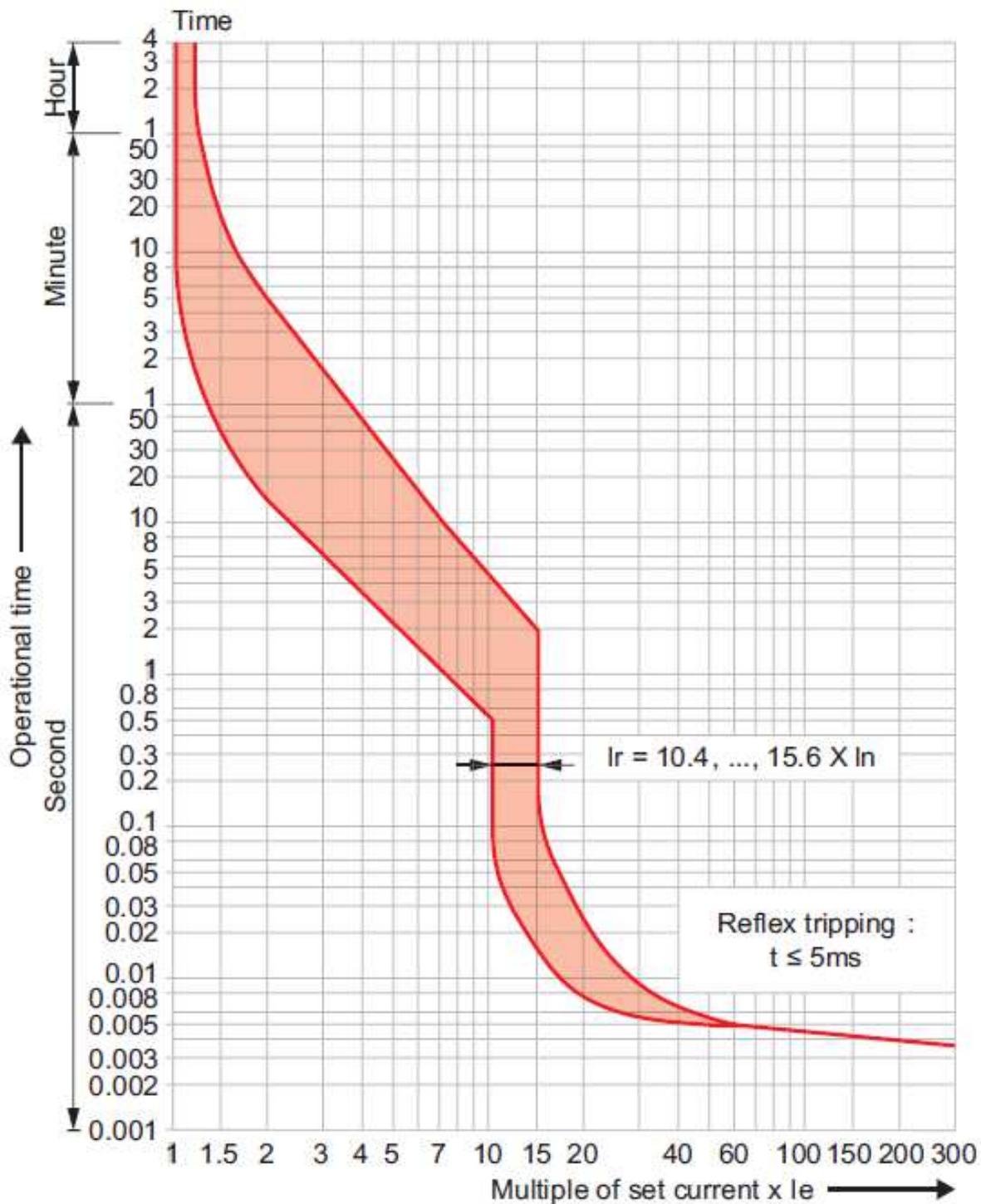
Time / Current tripping curve:

. For MPX³ 32S / MPX³ 32H / MPX³ 32MA



7. CURVES (continued)

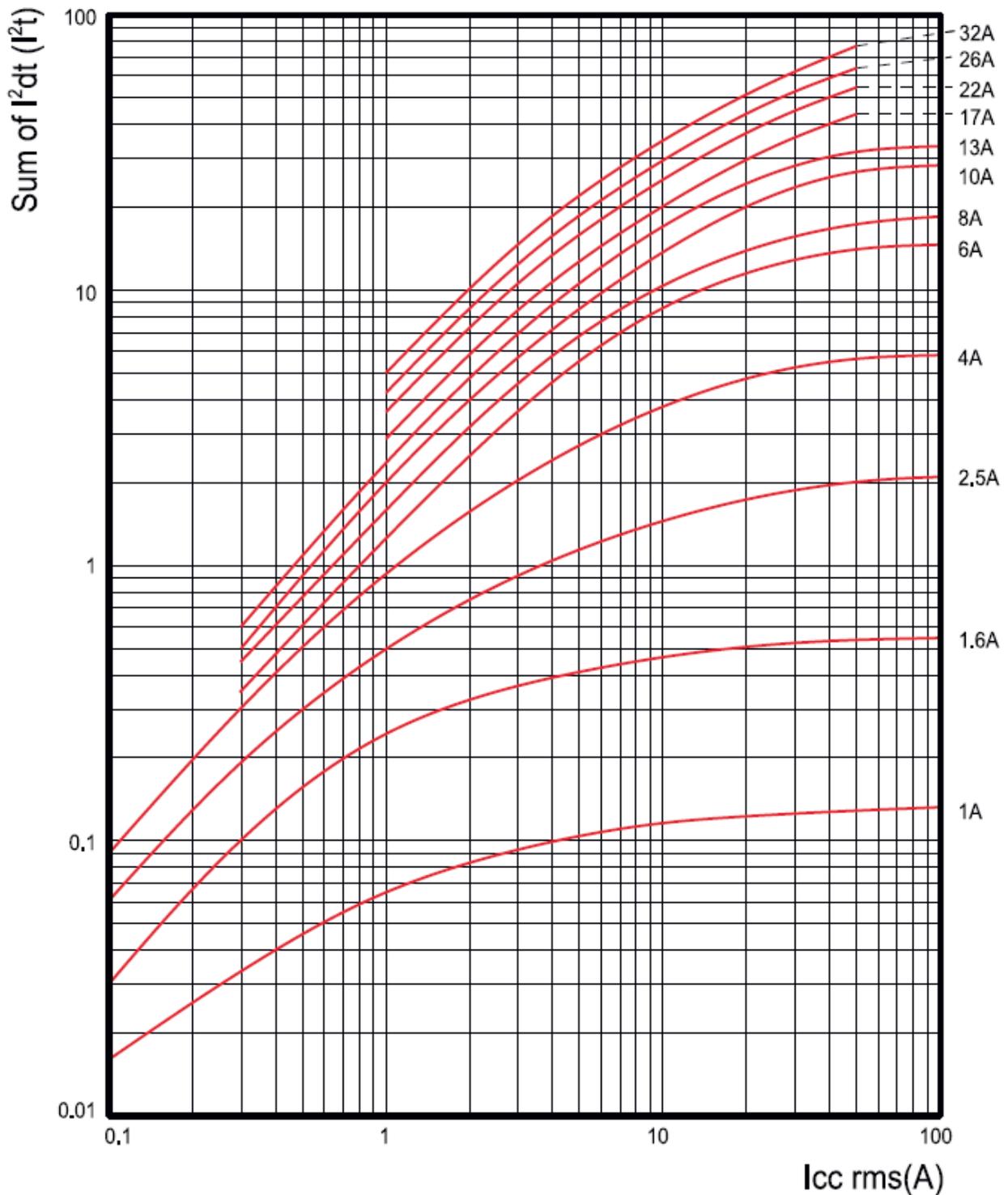
Time / Current tripping curve:
. For MPX³ 63H / MPX³ 100H



7. CURVES (continued)

Thermal limit on short circuit :

. For MPX³ 32S / MPX³ 32H / MPX³ 32MA



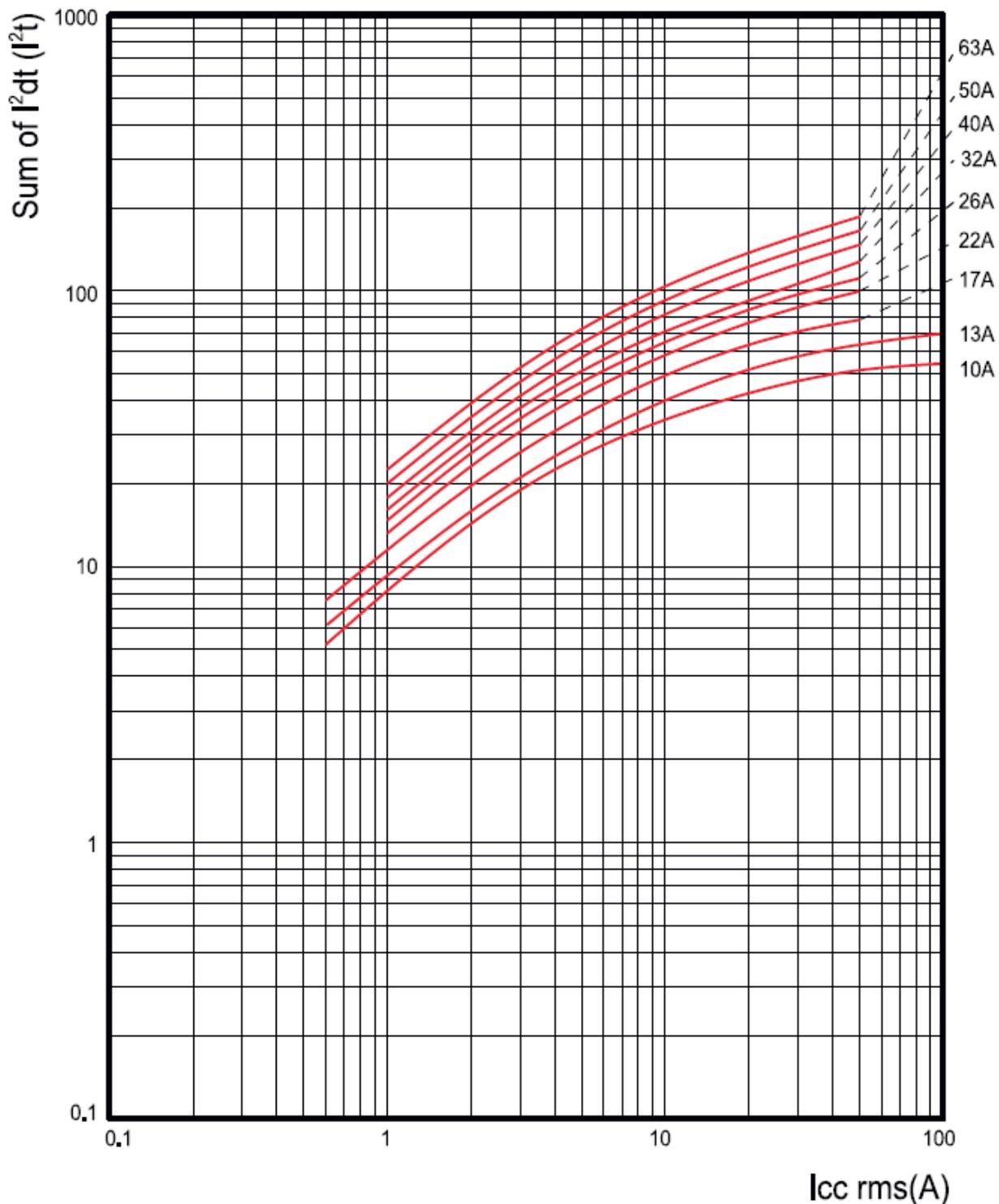
. Icc = Square value of symmetric component of the short circuit current (A).

. I²t = Thermal energy limited (A²s).

7. CURVES (continued)

Thermal limit on short circuit :

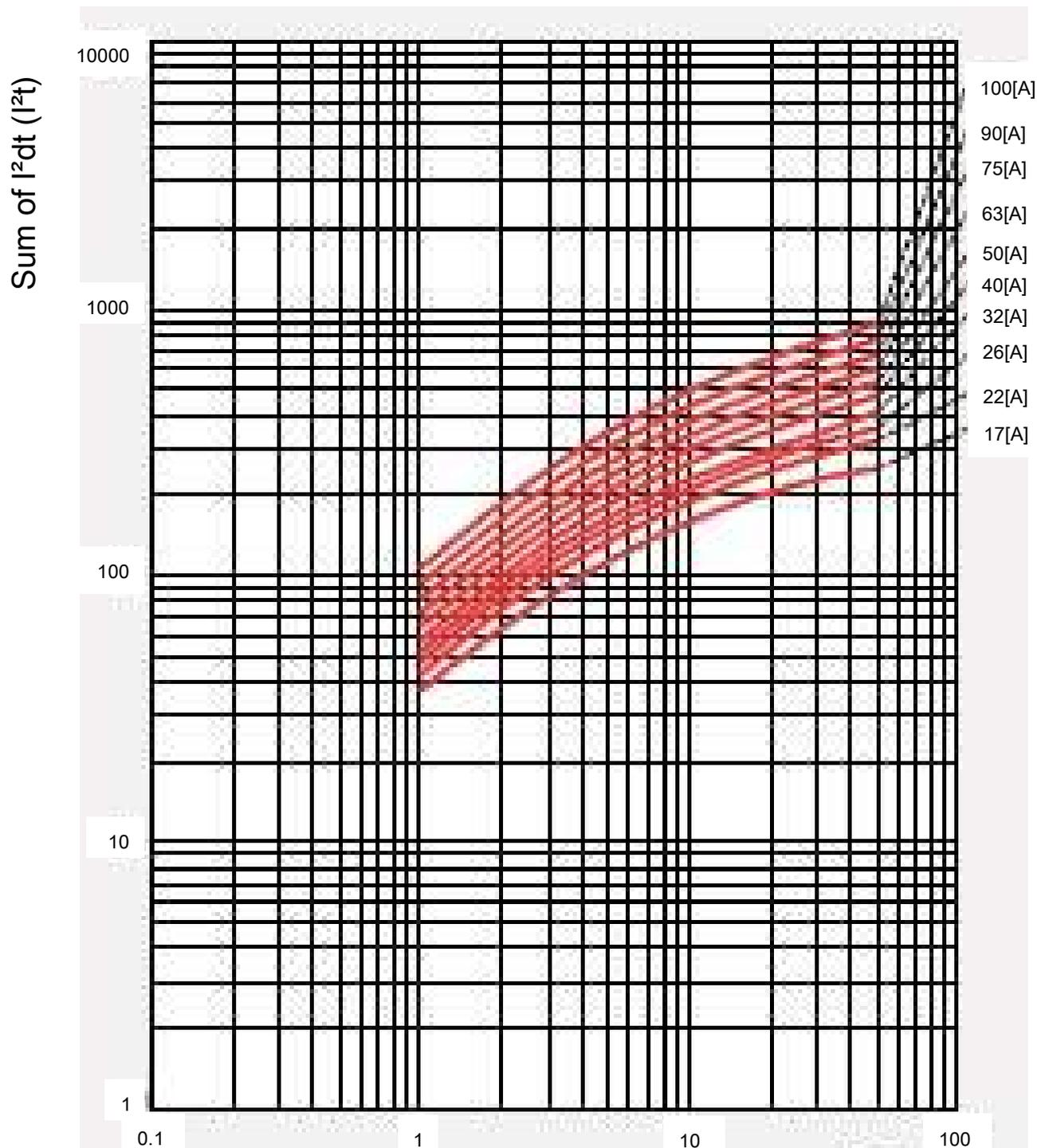
. For MPX³ 63H



. Icc = Square value of symmetric component of the short circuit current (A).
. I²t = Thermal energy limited (A²s).

7. CURVES (continued)

Thermal limit on short circuit :
. For MPX³ 100H

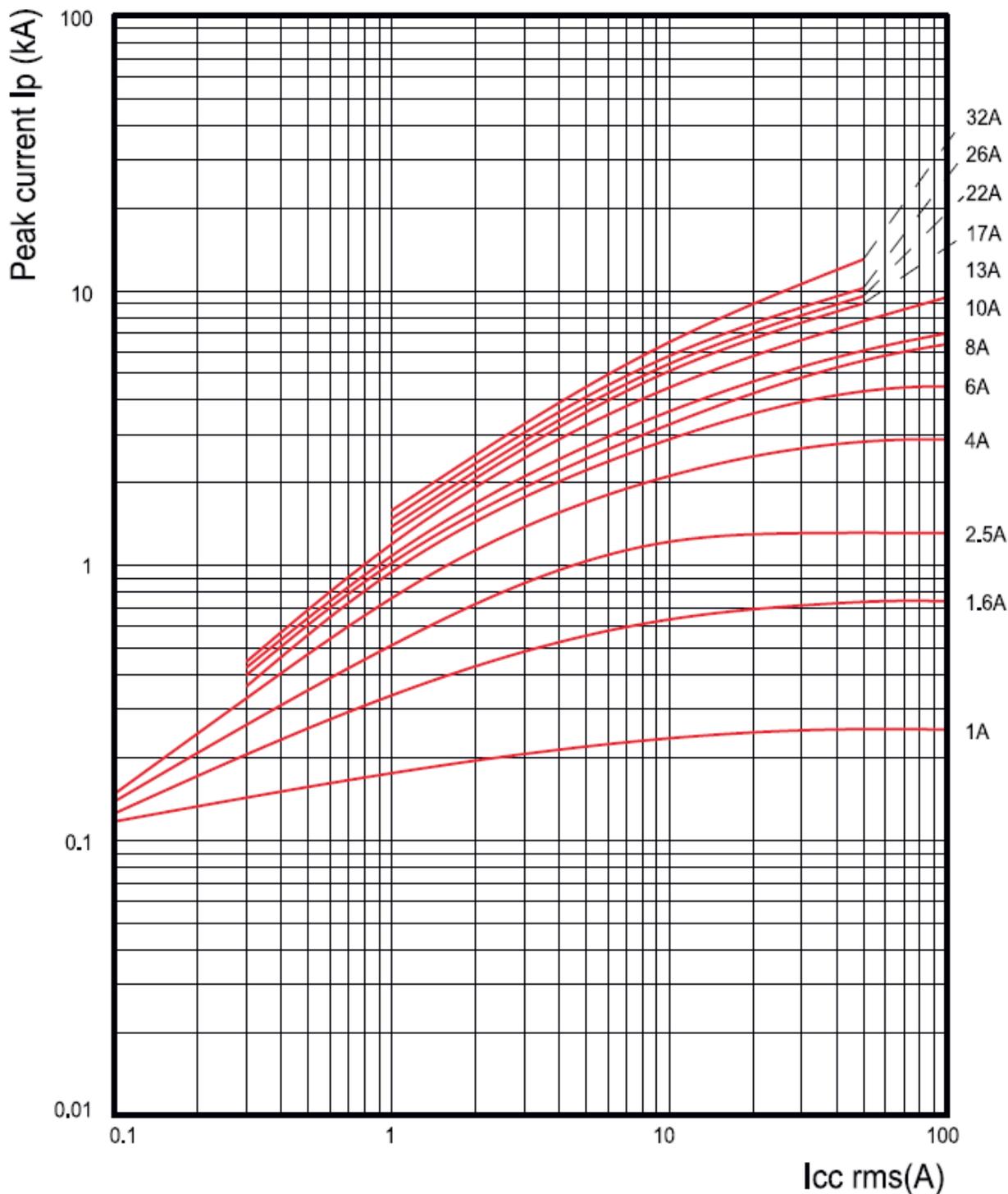


. I_{cc} = Square value of symmetric component of the short circuit current (A).
. I²t = Thermal energy limited (A²s).

7. CURVES (continued)

Thermal limit in kA²s in the magnetic operating zone (U_e = 415V) :

. For MPX³ 32S / MPX³ 32H / MPX³ 32MA

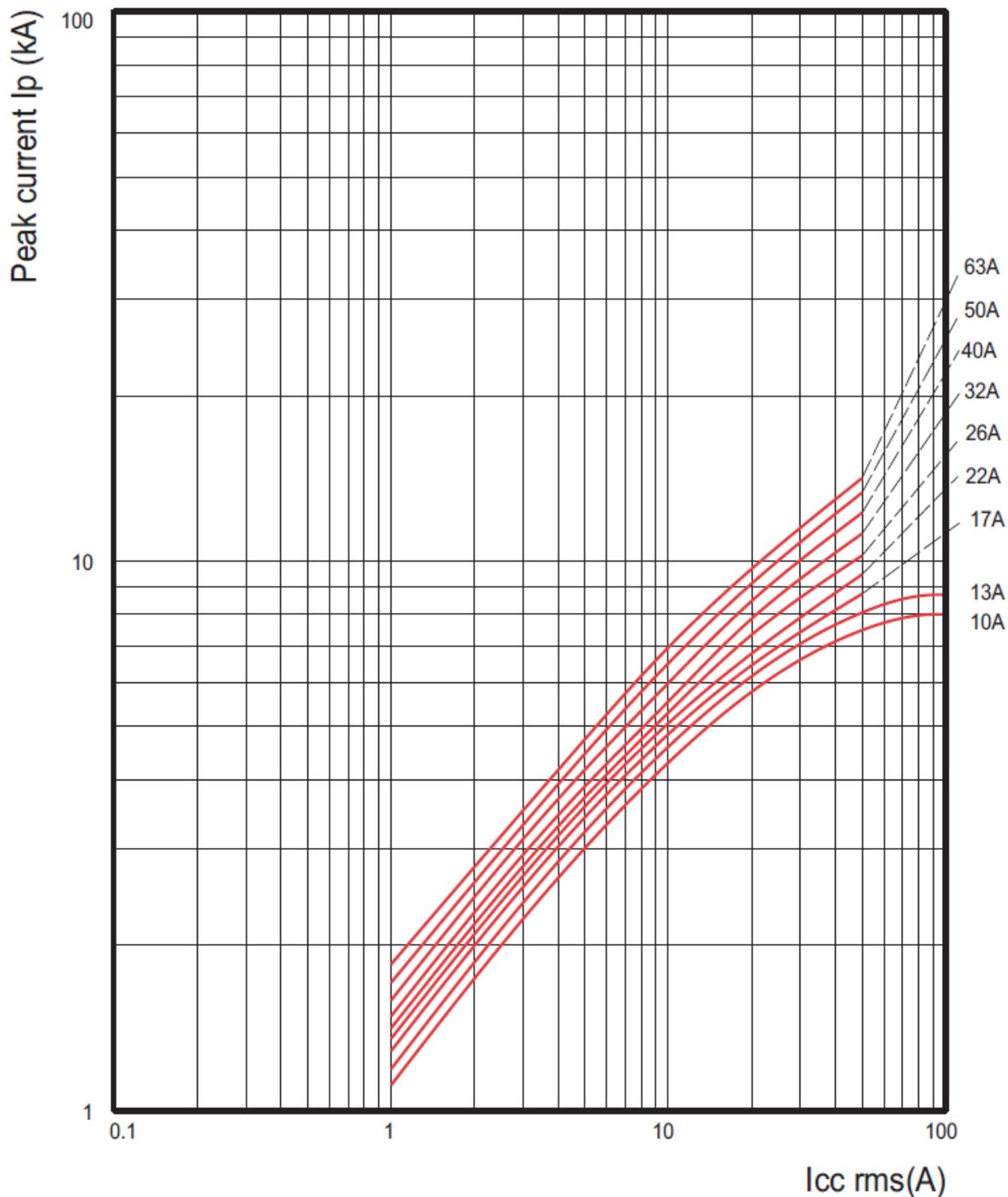


. I_{cc} = Square value of symmetric component of the short circuit current (A).
. I_p = Peak current (kA).

7. CURVES (continued)

Thermal limit in kA²s in the magnetic operating zone (U_e = 415V) :

. For MPX³ 63H

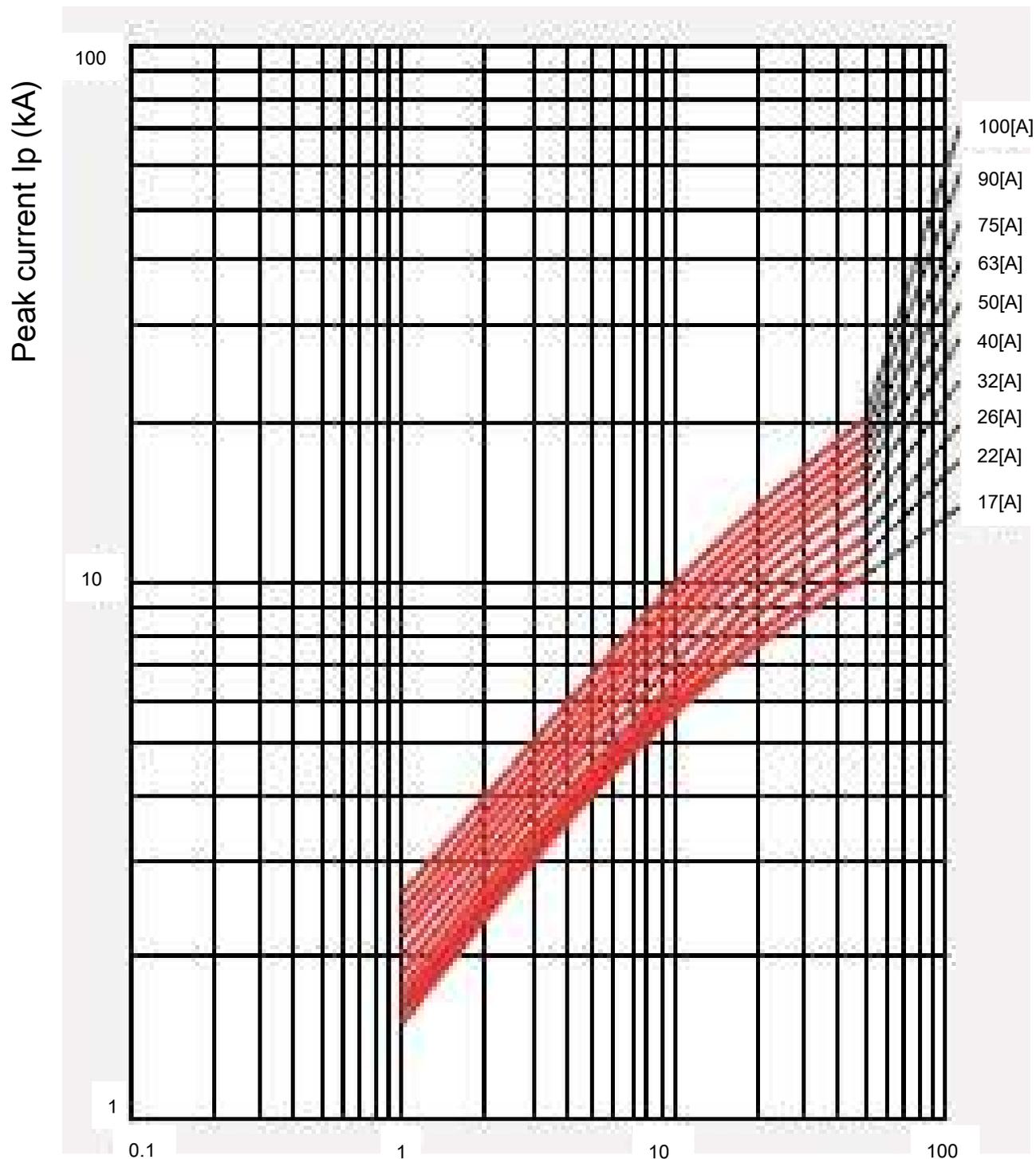


. I_{cc} = Square value of symmetric component of the short circuit current (A).
. I_p = Peak current (kA).

7. CURVES (continued)

Thermal limit in kA²s in the magnetic operating zone (Ue = 415V) :

. For MPX³ 100H



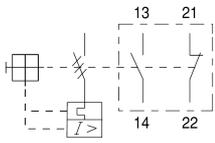
. I_{cc} = Square value of symmetric component of the short circuit current (A).
. I_p = Peak current (kA).

8. AUXILIARIES AND ACCESSORIES

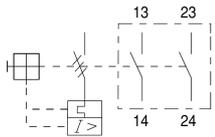
Auxiliaries: (maximum 2 auxiliary switches per MPX³)

. Auxiliary switch: (front mounting)

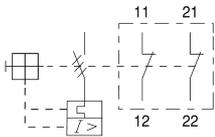
- Auxiliary switch NO + NC (cat n° 4 174 03).



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

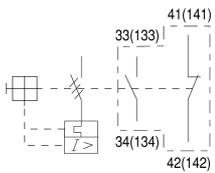


- Auxiliary switch 2NC (cat n° 4 174 05).

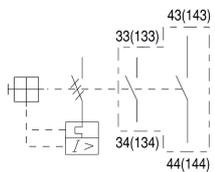


. Auxiliary switch: (side mounting on the left)

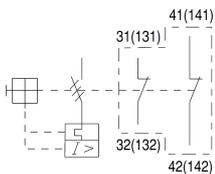
- Auxiliary switch NO + NC (cat n° 4 174 00).



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

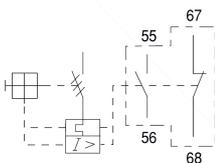


- Auxiliary switch 2NC (cat n° 4 174 02).



. 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).

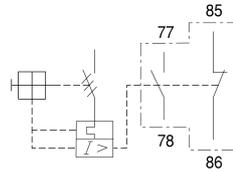


8. AUXILIARIES AND ACCESSORIES (continued)

Auxiliaries: (continued)

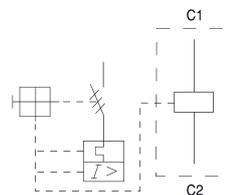
. Magnetic trip alarm switch: (side mounting on the left)

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



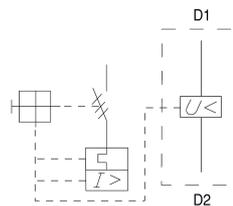
. Shunt release: (side mounting on the right)

- 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).



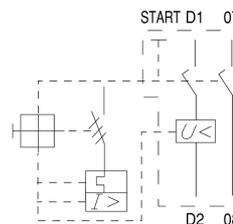
. Undervoltage release: (side mounting on the right)

- 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			MPX ³ 32S		MPX ³ 32H / MA		MPX ³ 63H			MPX ³ 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 / I _n at 40°C ambient temperature	[A]		5		10		10	
	[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	[mm ²] / [AWG]	0.5...2.5 / 20...14		0.5...2.5 / 20...14		0.5...2.5 / 20...14	
	2 conductor	[mm ²] / [AWG]	-		-		-	
Stranded	1 conductor	[mm ²] / [AWG]	0.5...4 / 20...10		0.5...4 / 20...10		0.5...4 / 20...10	
	2 conductor	[mm ²] / [AWG]	0.75...2.5 / 18...14		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		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× U _s		0.85...1.1× U _s		0.85...1.1× U _s	
	Drop-out				0.7...0.35× U _s		0.7...0.35× U _s	
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	[mm ²] / [AWG]	0.5...2.5 / 20...14		0.5...2.5 / 20...14		0.5...2.5 / 20...14	
	2 conductor	[mm ²] / [AWG]	-		-		-	
Stranded	1 conductor	[mm ²] / [AWG]	0.5...4 / 20...10		0.5...4 / 20...10		0.5...4 / 20...10	
	2 conductor	[mm ²] / [AWG]	0.75...2.5 / 18...14		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		0.8...1.2 / 7...10		

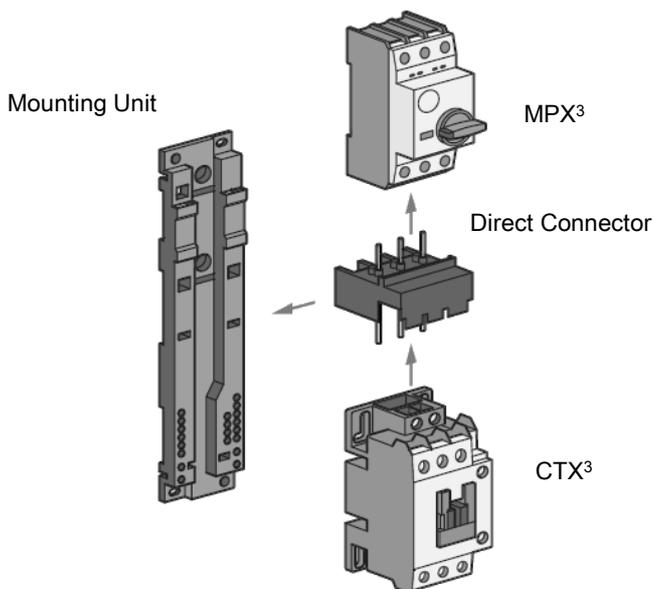
8. AUXILIARIES AND ACCESSORIES (continued)

Auxiliaries: (continued)

. Direct connector and Mounting unit

Type		Combined devices		
Direct connector	Mounting Unit	MPX ³	CTX ³	
4 174 40	Mounting Unit MPX ³ 32S / 32H / 32MA 4 174 60	MPX ³ 32S	CTX ³ mini AC	
4 174 41			CTX ³ mini DC	
4 174 48			CTX ³ 22 AC	
4 174 49			CTX ³ 22 DC	
4 174 52			CTX ³ 40 AC	
4 174 53			CTX ³ 40 DC	
4 174 42			MPX ³ 32H / 32MA	CTX ³ mini AC
4 174 43				CTX ³ mini DC
4 174 50				CTX ³ 22 AC
4 174 51				CTX ³ 22 DC
4 174 54	CTX ³ 40 AC			
4 174 55	CTX ³ 40 DC			
4 174 56	Mounting Unit MPX ³ 63H 4 174 61	MPX ³ 63H	CTX ³ 65 AC	
4 174 57			CTX ³ 65 DC	
4 174 58	Mounting Unit MPX ³ 100H 4 174 62	MPX ³ 100H	CTX ³ 100 AC	
4 174 59			CTX ³ 100 DC	

. Installation principle:



8. AUXILIARIES AND ACCESSORIES (continued)

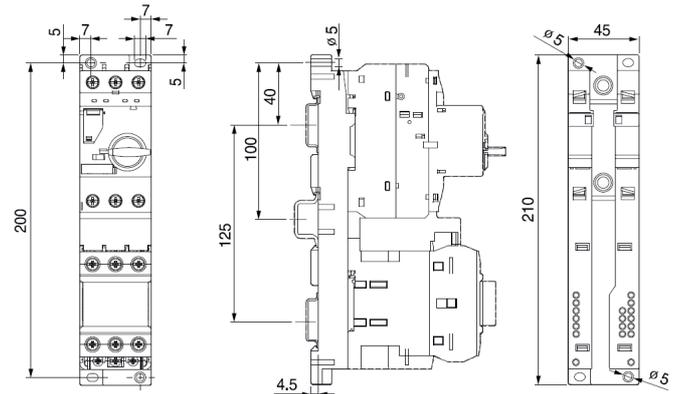
Auxiliaries: (continued)

. Direct connector:

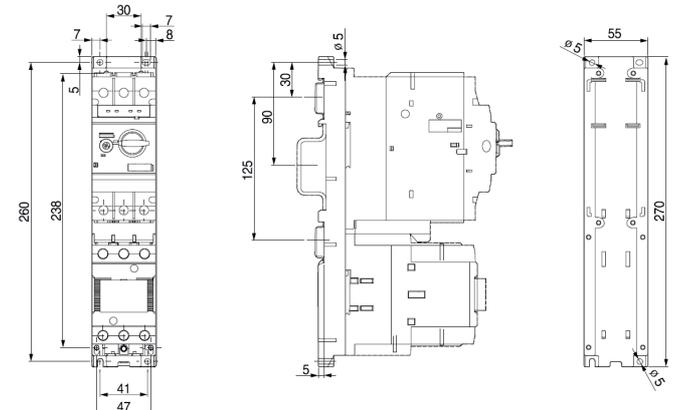


Overall dimensions Mounting unit:

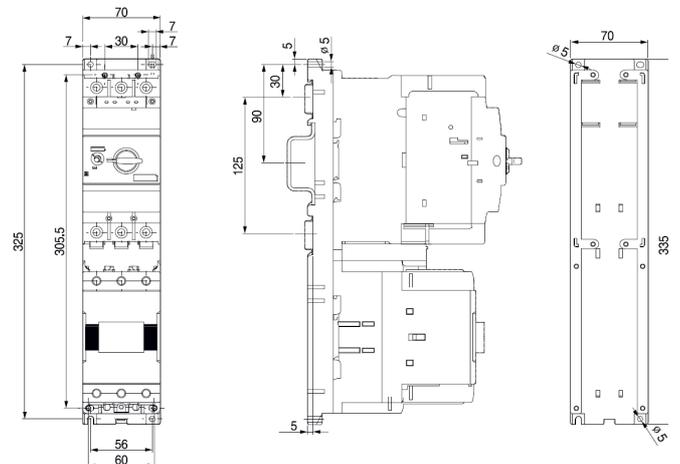
. Mounting Unit MPX³ 32S / 32H / 32MA (cat n° 4 174 60)



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



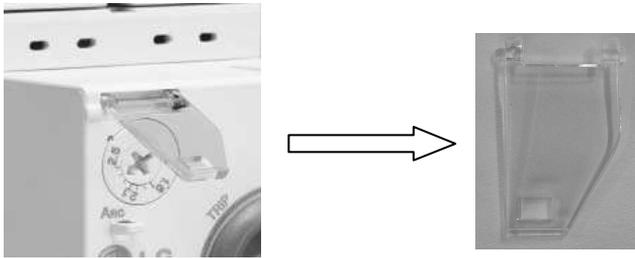
. Mounting Unit MPX³ 100H (cat n° 4 174 62)



8. AUXILIARIES AND ACCESSORIES (continued)

Accessories: (continued)

. Dial Cover MPX³ (cat n° 4 174 79).



. Phase Busbar MPX³:

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

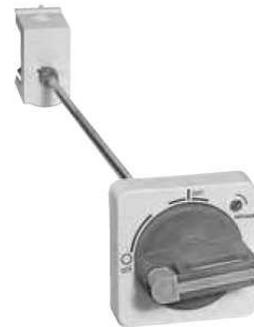
. Enclosure IP 65:

- 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 MPX ³	Shaft / Length
4 174 63	MPX ³ 32H / 32MA	315 [mm]
4 174 64	MPX ³ 63H	
4 174 65	MPX ³ 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).