



MPCBs MPX³

technical characteristics

																						
MPCB		MPX³ 32S				MPX³ 32H																
	Size	1				2																
	Type	Thermal magnetic				Thermal magnetic																
	Breaking capacity	Standard				High																
	Handle type	Toggle				Rotary																
	Number of poles	3				3																
Characteristics of use																						
	Rated operational voltage (Ue)	Up to 690 V				Up to 690 V																
	Rated frequency	50/60 Hz				50/60 Hz																
	Rated insulation voltage (Ui)	690 V				690 V																
	Rated impulse voltage (Uimp)	6 kV				6 kV																
Utilisation category	IEC 60947-2 (breaker)	Cat. A				Cat. A																
	IEC 60947-4 (Motor starter)	AC3				AC3																
	Mechanical endurance (Operating)	100000				100000																
	Electric endurance (Cycles)	100000				100000																
	Max operating frequency per hour (Ope./h)	25				25																
	Temperature compensation	-20 to +60 °C				-20 to +60 °C																
	Instantaneous short circuit release	13 x Ie max.				13 x Ie max.																
	Trip class	10				10																
	Overload protection	•				•																
	Phase failure protection	•				•																
	Trip indicating function	with alarm contact 4 174 06/07				with alarm contact 4 174 06/07																
	Test function	•				•																
	Weight (g)	320				360																
Rated breaking capacity (kA)	Rated operational current Ie (A)	Thermal release adjustment range (A)	240 V		415 V		460 V		525 V		690 V		240 V		415 V		460 V		525 V		690 V	
			230 V	220 V	400 V	440 V	500 V	600 V	230 V	220 V	400 V	440 V	500 V	600 V	400 V	440 V	500 V	600 V	400 V	440 V	500 V	600 V
			Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics
	0.16	0.1 to 0.16	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	0.25	0.16 to 0.25	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	0.4	0.25 to 0.4	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	0.63	0.4 to 0.63	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	1	0.63 to 1	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100	100
	1.6	1 to 1.6	100	100	100	100	100	100	100	100	3	3	100	100	100	100	100	100	100	100	100	100
	2.5	1.6 to 2.5	100	100	100	100	100	100	50	38	3	3	100	100	100	100	100	100	100	100	8	8
	4	2.5 to 4	100	100	100	100	50	38	15	11	3	3	100	100	100	100	100	100	100	100	8	8
	6	4 to 6	100	100	100	100	15	11	10	8	3	3	100	100	100	100	100	100	100	100	6	6
	8	5 to 8	100	100	100	100	15	11	10	8	3	3	100	100	100	100	50	38	50	38	6	6
	10	6 to 10	100	100	50	38	15	11	6	5	3	3	100	100	100	100	50	38	50	38	6	6
	13	9 to 13	100	100	50	38	10	8	6	5	3	3	100	100	100	100	50	38	42	32	6	6
	17	11 to 17	50	38	20	15	10	8	6	5	3	3	100	100	50	38	20	15	10	8	4	4
	22	14 to 22	40	30	15	11	8	6	6	5	3	3	100	100	50	38	20	15	10	8	4	4
	26	18 to 26	40	30	15	11	8	6	5	4	3	3	100	100	50	38	20	15	10	8	4	4
	32	22 to 32	30	22	15	11	6	4	5	4	3	3	100	100	50	38	20	15	10	8	4	4
	40	28 to 40	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	50	34 to 50	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	63	45 to 63	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	75	55 to 75	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	90	70 to 90	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	100	80 to 100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

MPCBs MPX³

motor protection circuit breakers from 0.16 A to 100 A



4 173 08

4 173 68

4 173 79

4 173 48

Technical characteristics and tripping curves **p. 20-23**
 Dimensions and wiring capacity chart **p. 24-27**

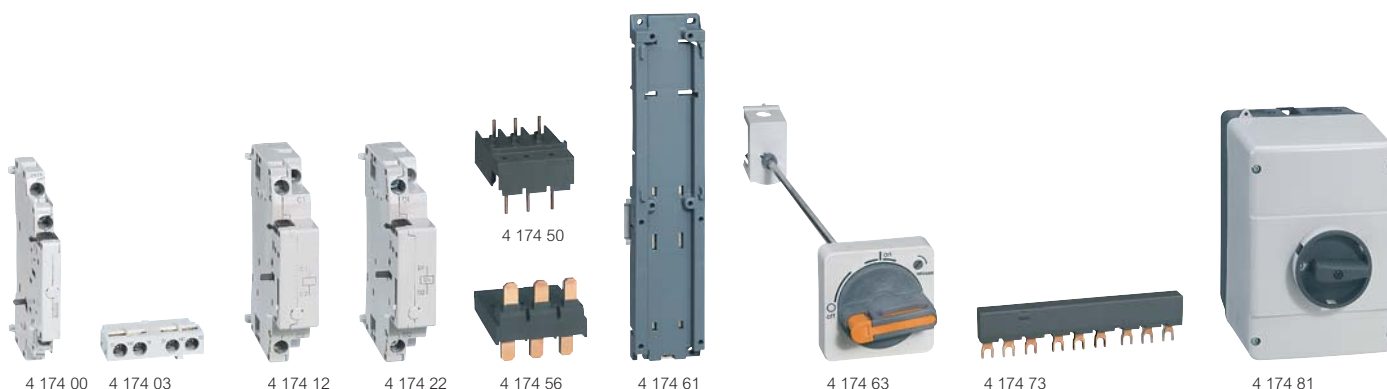
Conform to IEC 60947-1, IEC 60947-2, IEC 60947-4

Pack	Cat. Nos	Thermal magnetic MPCBs			
		Adjustable thermal release Magnetic release 13 le max. MPX³ 32S Standard breaking capacity With toggle handle Fixing on rail			
		Rated operational current I _e (A)	Thermal release adjustment range (A)	Magnetic release operating current (A)	415 V breaking capacity I _{cu} (kA)
	3P				
1	4 173 00	0.16	0.1 to 0.16	2.1	100
1	4 173 01	0.25	0.16 to 0.25	3.3	100
1	4 173 02	0.4	0.25 to 0.4	5.2	100
1	4 173 03	0.63	0.4 to 0.63	8.2	100
1	4 173 04	1	0.63 to 1	13	100
1	4 173 05	1.6	1 to 1.6	20.8	100
1	4 173 06	2.5	1.6 to 2.5	32.5	100
1	4 173 07	4	2.5 to 4	52	100
1	4 173 08	6	4 to 6	78	100
1	4 173 09	8	5 to 8	104	100
1	4 173 10	10	6 to 10	130	50
1	4 173 11	13	9 to 13	169	50
1	4 173 12	17	11 to 17	221	20
1	4 173 13	22	14 to 22	286	15
1	4 173 14	26	18 to 26	338	15
1	4 173 15	32	22 to 32	416	15
		MPX³ 32H High breaking capacity With rotary handle Fixing on rail			
1	4 173 20	0.16	0.1 to 0.16	2.1	100
1	4 173 21	0.25	0.16 to 0.25	3.3	100
1	4 173 22	0.4	0.25 to 0.4	5.2	100
1	4 173 23	0.63	0.4 to 0.63	8.2	100
1	4 173 24	1	0.63 to 1	13	100
1	4 173 25	1.6	1 to 1.6	20.8	100
1	4 173 26	2.5	1.6 to 2.5	32.5	100
1	4 173 27	4	2.5 to 4	52	100
1	4 173 28	6	4 to 6	78	100
1	4 173 29	8	5 to 8	104	100
1	4 173 30	10	6 to 10	130	100
1	4 173 31	13	9 to 13	169	100
1	4 173 32	17	11 to 17	221	50
1	4 173 33	22	14 to 22	286	50
1	4 173 34	26	18 to 26	338	50
1	4 173 35	32	22 to 32	416	50
		MPX³ 63H High breaking capacity With rotary handle Fixing on rail or by screw			
1	4 173 60	10	6 to 10	130	100
1	4 173 61	13	9 to 13	169	100
1	4 173 62	17	11 to 17	221	50
1	4 173 63	22	14 to 22	286	50
1	4 173 64	26	18 to 26	338	50
1	4 173 65	32	22 to 32	416	50
1	4 173 66	40	28 to 40	520	50
1	4 173 67	50	34 to 50	650	50
1	4 173 68	63	45 to 63	819	50

Pack	Cat. Nos	Thermal magnetic MPCBs (continued)			
		MPX³ 100H High breaking capacity With rotary handle Fixing on rail or by screw			
		Rated operational current I _e (A)	Thermal release adjustment range (A)	Magnetic release operating current (A)	415 V breaking capacity I _{cu} (kA)
	3P				
1	4 173 70	17	11 to 17	221	100
1	4 173 71	22	14 to 22	286	100
1	4 173 72	26	18 to 26	338	100
1	4 173 73	32	22 to 32	416	100
1	4 173 74	40	28 to 40	520	100
1	4 173 75	50	34 to 50	650	100
1	4 173 76	63	45 to 63	819	100
1	4 173 77	75	55 to 75	975	75
1	4 173 78	90	70 to 90	1170	75
1	4 173 79	100	80 to 100	1300	75
		Magnetic only MPCBs Without thermal release Magnetic release 13 x I _e max. MPX³ 32MA High breaking capacity With rotary handle Fixing on rail			
		Rated operational current I _e (A)	Magnetic release operating current (A)	415 V breaking capacity I _{cu} (kA)	
	3P				
1	4 173 40	0.16	2.1	100	
1	4 173 41	0.25	3.3	100	
1	4 173 42	0.4	5.2	100	
1	4 173 43	0.63	8.2	100	
1	4 173 44	1	13	100	
1	4 173 45	1.6	20.8	100	
1	4 173 46	2.5	32.5	100	
1	4 173 47	4	52	100	
1	4 173 48	6	78	100	
1	4 173 49	8	104	100	
1	4 173 50	10	130	100	
1	4 173 51	13	169	100	
1	4 173 52	17	221	50	
1	4 173 53	22	286	50	
1	4 173 54	26	338	50	
1	4 173 55	32	416	50	

MPCBs MPX³

accessories



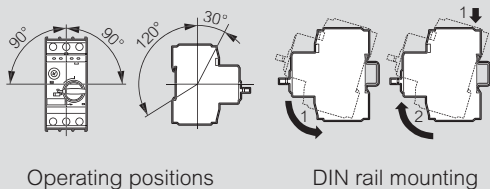
Pack	Cat. Nos	Auxiliary contacts	Pack	Cat. Nos	Direct adaptor and mounting unit
		2-pole Side mounting Mounting on the left side of MPCBs Two auxiliary contacts per MPCB 2 4 174 00 1 NO + 1 NC 2 4 174 01 2 NO 2 4 174 02 2 NC Front mounting One auxiliary contact per MPCB 10 4 174 03 1 NO + 1 NC 10 4 174 04 2 NO 10 4 174 05 2 NC			Direct adaptors Used to connect MPX ³ directly with the contactor For mounting CTX ³ contactors under MPX ³ MPCBs 2 4 174 40 For MPX ³ 32S with CTX ³ mini AC (p. 30) 2 4 174 41 For MPX ³ 32S with CTX ³ mini DC (p. 30) 2 4 174 42 For MPX ³ 32H/32MA with CTX ³ mini AC (p. 30) 2 4 174 43 For MPX ³ 32H/32MA with CTX ³ mini DC (p. 30) 2 4 174 48 For MPX ³ 32S with CTX ³ 22 AC (p. 32) 2 4 174 49 For MPX ³ 32S with CTX ³ 22 DC (p. 32) 2 4 174 50 For MPX ³ 32H/32MA with CTX ³ 22 AC (p. 32) 2 4 174 51 For MPX ³ 32H/32MA with CTX ³ 22 DC (p. 32) 2 4 174 52 For MPX ³ 32S with CTX ³ 40 AC (p. 32) 2 4 174 53 For MPX ³ 32S with CTX ³ 40 DC (p. 32) 2 4 174 54 For MPX ³ 32H/32MA with CTX ³ 40 AC (p. 32) 2 4 174 55 For MPX ³ 32H/32MA with CTX ³ 40 DC (p. 32) 2 4 174 56 For MPX ³ 63H with CTX ³ 65 AC with lug type terminals (p. 32) 2 4 174 57 For MPX ³ 63H with CTX ³ 65 DC with lug type terminals (p. 32) 1 4 174 58 For MPX ³ 100H with CTX ³ 100 AC with lug type terminals (p. 33) 1 4 174 59 For MPX ³ 100H with CTX ³ 100 DC with lug type terminals (p. 33)
		Alarm contacts 1 NO + 1 NC Any trip alarm contact Operate in case of trip Mounting on the left side of MPCBs Set alarm contact first in case of using auxiliary contact and alarm contact together (MPX ³ 63H can not accept auxiliary contact and alarm contact together) 1 4 174 06 For MPX ³ 32 1 4 174 08 For MPX ³ 63 and 100 Magnetic trip alarm contact Operate in case of instantaneous trip Mounting on the left side of MPCBs Set alarm contact first in case of using auxiliary contact together 2 4 174 07 1 NO + 1 NC			Mounting unit This device is used for joining together MPX ³ MCPBs and CTX ³ contactors Screws not supplied 1 4 174 60 For MPX ³ 32S/32H/32MA 1 4 174 61 For MPX ³ 63H 1 4 174 62 For MPX ³ 100H
		Shunt release Mounting on the right side of MPCBs One release per MPCB 1 4 174 10 24 V - 50 Hz / 28 V - 60 Hz 1 4 174 11 110 V - 50 Hz / 120 V - 60 Hz 1 4 174 12 220-230 V - 50 Hz / 240-260 V - 60 Hz 1 4 174 13 380-400 V - 50 Hz / 440-460 V - 60 Hz			Rotary handle Mounting on panel's door to control the MPX ³ 1 4 174 63 For MPX ³ 32H and 32 MA 1 4 174 64 For MPX ³ 63H 1 4 174 65 For MPX ³ 100H
		Undervoltage release Mounting on the right side of MPCBs One release per MPCB Without auxiliary contact 1 4 174 20 24 V - 50 Hz / 28 V - 60 Hz 1 4 174 21 110 V - 50 Hz / 120 V - 60 Hz 1 4 174 22 220-230 V - 50 Hz / 240-260 V - 60 Hz 1 4 174 23 380-400 V - 50 Hz / 440-460 V - 60 Hz With 2 NO auxiliary contacts Can not attach to MPX ³ 32S 1 4 174 30 24 V - 50 Hz / 28 V - 60 Hz 1 4 174 31 110 V - 50 Hz / 120 V - 60 Hz 1 4 174 32 220-230 V - 50 Hz / 240-260 V - 60 Hz 1 4 174 33 380-400 V - 50 Hz / 440-460 V - 60 Hz			Phase busbar For parallel connection of MPX ³ For MPX³ 32S, 32H and 32MA Rated current 63 A 10 4 174 71 2 devices 10 4 174 73 3 devices 10 4 174 75 4 devices 10 4 174 76 5 devices 10 4 174 77 Feeder for phase busbar For MPX³ 63H Rated current 108 A 4 4 174 72 2 devices 4 4 174 74 3 devices
		Dial Cover Sealable cover to protect the set value from the operation that is not intended For all types of MPX ³ 100 4 174 79			Enclosures for MPX³ 32H and 32MA IP 65 enclosure to use in dusty areas as well as in presence of corrosive gas or liquid Yellow/red with rotary handle 1 4 174 80 With black rotary handle 1 4 174 81

MPCBs MPX³

wiring capacity and accessories

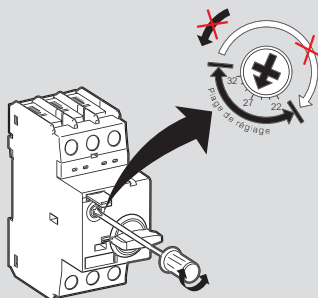
Mounting

MPX³ 32: 35 mm rail (depth 15 mm)
 MPX³ 63: 35 mm rail (depth 15 mm) or screws
 MPX³ 100: 35 mm (depth 15 mm) or 75 mm rail or screws



Caution for thermal adjustments

1. Keep the setting range as shown below
2. Moving counterclockwise out of the setting range may cause the damage of the device



Dial setting method

3. Calibration by ambient air temperature

A: set to one point lower	Calibrated automatically	B: set to one point higher
-20 °C	-5 °C	+40 °C
+60 °C		

In case of using out of the standard air temperature range (-5 °C to +40 °C) it needs to be calibrated by one point

Environment

Ambient air temperature:
 - storage: -50...+80 °C
 - operation: -20...+60 °C
 Ambient temperature compensation: -20...+60 °C
 Maximum operating altitude: 2000 m
 Protection degree: IP20
 Shock resistance: 25 g
 Vibration resistance: 5~150 Hz

Power consumption

	MPX ³ 32S	MPX ³ 32H/MA	MPX ³ 63H	MPX ³ 100H
Total power loss Pv	In = 0.16 to 1.6 A: 4.4	In = 0.16 to 1.6 A: 4.4	In = 10 to 22 A: 10.2	In = 17 to 32 A : 15
Circuit breaker at rated load operating temperature (W)	In = 2.5 to 26 A : 7.4 In = 32 A : 4.0	In = 2.5 to 26 A : 7.4 In = 32 A : 4.0	In = 26 to 63 A: 9.7	In = 40 to 63 A : 21.8 In = 75 to 100 A: 17.8

MPX³ 32S

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																
230/240V (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
400/415V (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
500V (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
690V (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
Back-up fuses gG, gL, only if I_{cc} > I_{cu} (* = no back up fuse required)																
230/240V (A)	*	*	*	*	*	*	*	*	*	*	*	*	*	125	125	125
400/415V (A)	*	*	*	*	*	*	*	*	*	*	80	80	100	100	100	100
440/460V (A)	*	*	*	*	*	*	*	50	50	63	63	80	80	100	100	100
500V (A)	*	*	*	*	*	*	50	40	50	63	63	80	80	80	80	80
690V (A)	*	*	*	*	*	20	35	40	50	63	63	63	63	63	63	63

MPX³ 32H

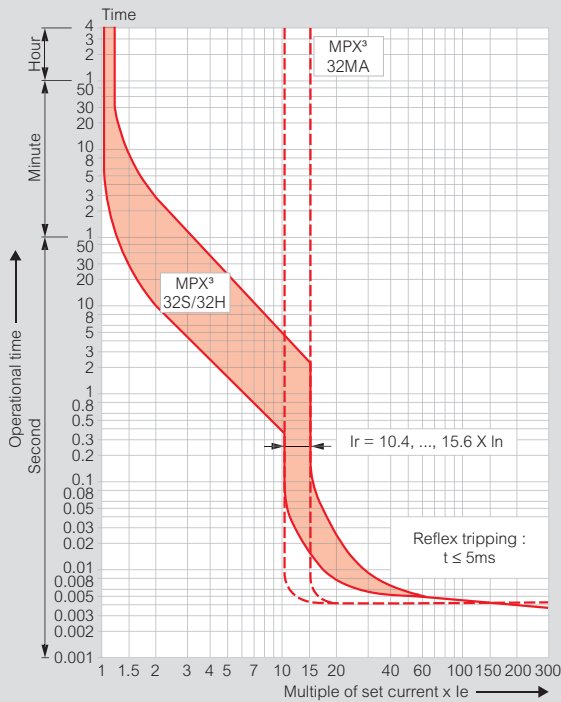
Rated operational current I _e (A)	0.16	0.25	0.4	0.63	1	1.6	2.5	4	6	8	10	13	17	22	26	32
Switching of standard three-phase motors AC-2, AC-3																
230/240V (kW)	-	0.03	0.06	0.09	0.12	0.18/0.25	0.37	0.55/0.75	1.1/1.5	1.5	2.2/3	3	3.7/4	4	5.5	7.5
400/415V (kW)	0.02	0.06	0.09	0.12	0.18/0.25	0.37/0.55	0.75	1.1/1.5	2.2	3	3.7/4	5.5	7.5	7.5	11	15
500V (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
690V (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
Back-up fuses gG, gL, only if I_{cc} > I_{cu} (* = no back up fuse required)																
230/240V (A)	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*	*
400/415V (A)	*	*	*	*	*	*	*	*	*	*	*	*	100	125	125	125
440/460V (A)	*	*	*	*	*	*	*	*	*	80	80	80	80	100	100	100
500V (A)	*	*	*	*	*	*	*	*	*	63	80	80	80	80	80	80
690V (A)	*	*	*	*	*	*	35	40	50	63	63	63	63	63	63	63

MPCBs MPX³

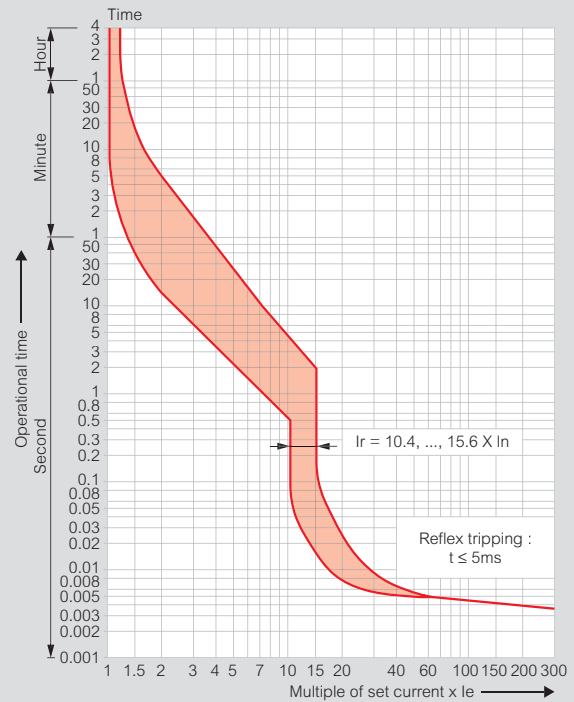
curves

Tripping curves

MPX³ 32S / 32H / 32MA



MPX³ 63H / 100H



1) Thermal release trip current :

The adjustable inverse bimetal trip reliability protects motors against overloads.
The curve shows the mean operating current at an ambient temperature of 20 °C starting from cold.
Careful testing and setting ensures effective motor protection even in the case of single-phasing.

2) Magnetic release trip current :

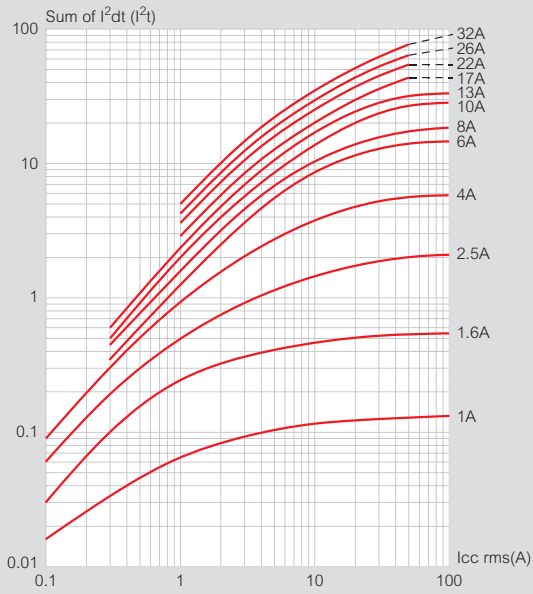
The instantaneous magnetic trip has a fixed operating current setting.
This corresponds to 13 times the maximum value of setting range, at a lower setting it is correspondingly higher.

3) Current setting I_e :

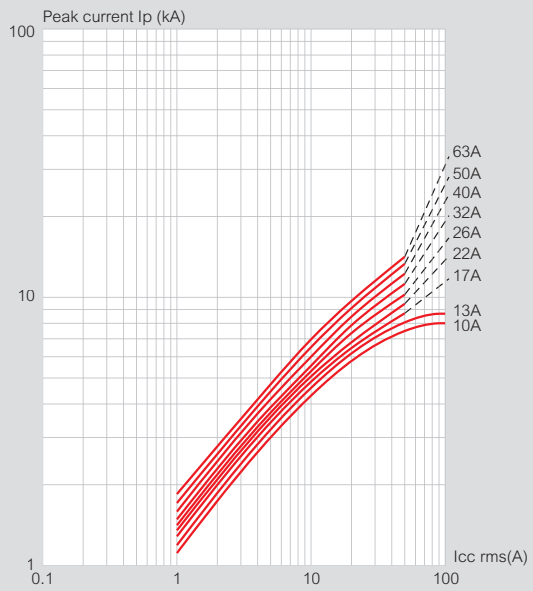
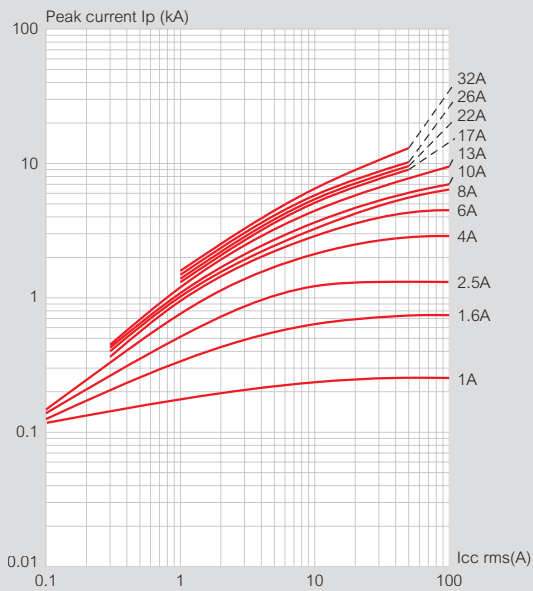
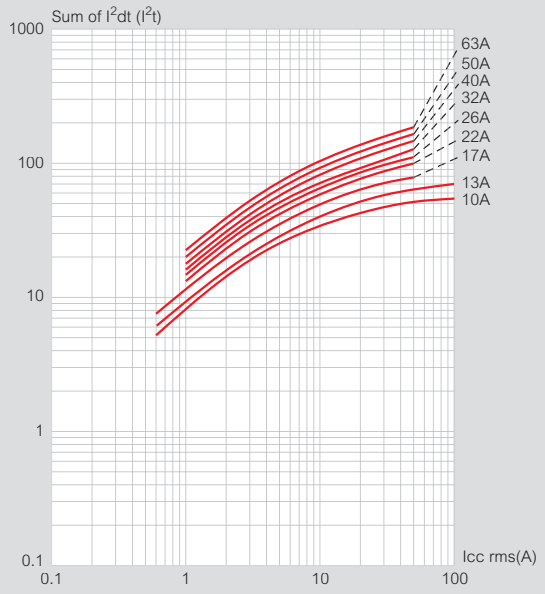
The overload trip corresponds to a thermal overload relay in a motor starter conforming to IEC 947-4-1.
If a different value is prescribed (e.g. reduced I_e for cooling medium having a temperature higher than 40 °C or a place of installation higher than 2000m above sea level), the setting current is equal to the reduced rated current I_e of the motor.

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

MPX³ 32S / 32H / 32MA



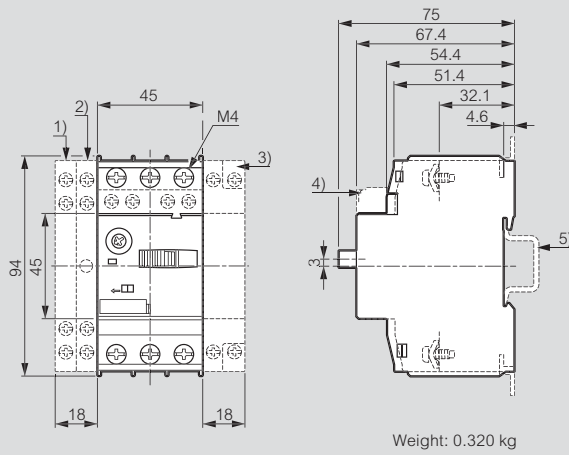
MPX³ 63H / 100H



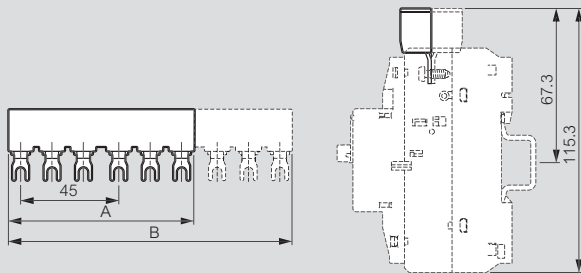
MPCBs MPX³

dimensions

MPX³ 32S



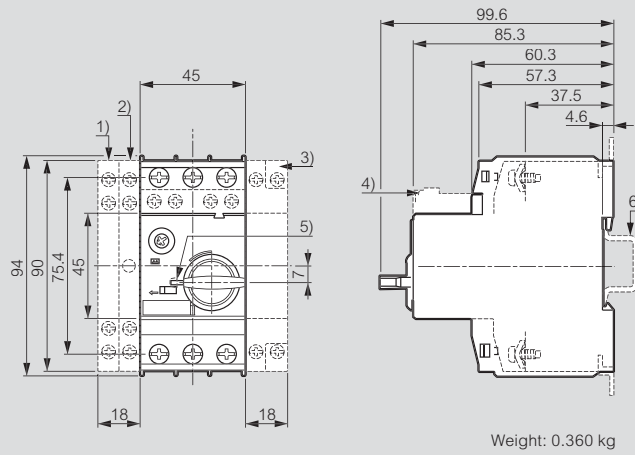
- 1) Side auxiliary contact
- 2) Side magnetic trip alarm contact
- 3) Side shunt release or Side undervoltage release
- 4) Front auxiliary contact
- 5) 35 mm standard mounting rail acc. to EN 50 022



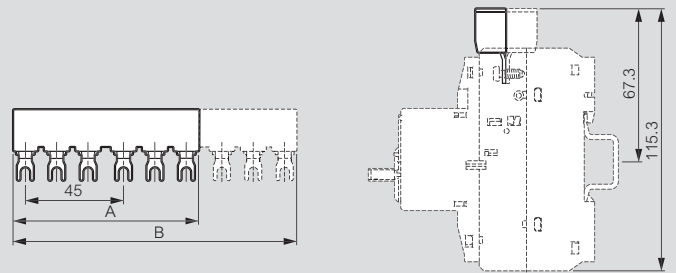
Cat.No	Numbers of MPX ³	A ⁽¹⁾ (mm)	B (mm)
4 174 71	2	85	-
4 174 73	3	-	130
4 174 75	4	-	175
4 174 76	5	-	220

(1) Only for Cat.No 4 174 71

MPX³ 32H / 32MA



- 1) Side auxiliary contact
- 2) Side magnetic trip alarm contact
- 3) Side shunt release or Side undervoltage release
- 4) Front auxiliary contact
- 5) Handle lock in OFF position (Ø 5 mm)
- 6) 35 mm standard mounting rail acc. to EN 50 022







Cat.No	Numbers of MPX ³	A ⁽¹⁾ (mm)	B (mm)
4 174 71	2	85	-
4 174 73	3	-	130
4 174 75	4	-	175
4 174 76	5	-	220

(1) Only for Cat.No 4 174 71


MPCBs MPX³


technical characteristics

Terminals

			MPX ³ 32S	MPX ³ 32H / 32 MA	MPX ³ 63H	MPX ³ 100H
Conformity to standards			IEC60947 UL508, UL508 Type E			
Approvals			CE, UL			
Terminal type						
Single-core	1 conductor	(mm ²) / (AWG)	1...10 / 18...8	1...10 / 18...8	0.75...35 / 18...2	2.5...70 / 12...2/0
	2 conductor	(mm ²) / (AWG)	1...6 / 18...10	1...6 / 18...10	0.75...25 / 18...4	2.5...50 / 12...1/0
Stranded	1 conductor	(mm ²) / (AWG)	1...6 / 18...10	1...6 / 18...10	0.75...35 / 18...2	2.5...70 / 12...2/0
	2 conductor	(mm ²) / (AWG)	1...6 / 18...10	1...6 / 18...10	0.75...25 / 18...4	2.5...50 / 12...1/0
Flexible	1 conductor	(mm ²) / (AWG)	1...6 / 18...10	1...6 / 18...10	0.75...25 / 18...4	2.5...50 / 12...1/0
	2 conductor	(mm ²) / (AWG)	0.75...4 / 18...10	0.75...4 / 18...10	0.75...16 / 18...6	2.5...35 / 10...2
Tightening torque		(Nm) / (lb-in)	0.8...2.5 / 7...22	0.8...2.5 / 7...22	3...4.5 / 26...39	4...6 / 35...53

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	
	(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								
AC-15	(V)		-	240	24	240	24	240
	(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 type								
Screwdriver			Pozi driv size 2					
Single-core	1 conductor	(mm ²) / (AWG)	0.5...2.5 / 20...14		0.5...2.5 / 20...14			
	2 conductor	(mm ²) / (AWG)	-		0.5...2.5 / 20...14			
Stranded	1 conductor	(mm ²) / (AWG)	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			
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 x Us	0.85...1.1 x Us	0.85...1.1 x Us
	Drop-out			0.7...0.35 x Us	0.7...0.35 x Us
Rated control voltage	min:		24 V 50 Hz / 28 V 60 Hz	24 V 50 Hz / 28 V 60 Hz	24 V 50 Hz / 28 V 60 Hz
	max:		415-440 V 50 Hz / 460-480 V 60 Hz	415-440 V 50 Hz / 460-480 V 60 Hz	415-440 V 50 Hz / 460-480 V 60 Hz
Coil rating	Pull-in		8.5 VA, 6 W	8.5 VA, 6 W	8.5 VA, 6 W
	Hold		3 VA, 12 W	3 VA, 12 W	3 VA, 12 W
Opening time (ms)			-	20	20
Weight (g)			18	30	40
Terminal type					
Screwdriver			Pozi driv size 2		
Single-core	1 conductor	(mm ²) / (AWG)	0.5...2.5 / 20...14		
	2 conductor	(mm ²) / (AWG)	0.5...2.5 / 20...14		
Standard	1 conductor	(mm ²) / (AWG)	0.5...4 / 20...10		
	2 conductor	(mm ²) / (AWG)	0.75...2.5 / 18...14		
Tightening torque		(Nm) / (lb-in)	0.8...1.2 / 7...10		