












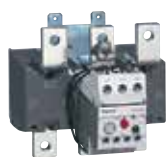
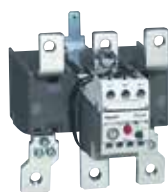

3-pole contactors CTX³ and thermal overload relays RTX³

technical characteristics

												
Contactor		CTX ³ mini				CTX ³ 22				CTX ³ 40		
Size		-				2				3		
Terminals type		screw				screw				screw		
Rated operational voltage, U _e		690 V				690 V				690 V		
Rated insulation voltage, U _i		690 V				690 V				1000 V		
Rated frequency		50/60 Hz				50/60 Hz				50/60 Hz		
Rated impulse withstand voltage, U _{imp}		6 kV				6 kV				8 kV		
Max. operating rate in operation cycle per hour (AC-3)		1800				1200				1800		
Durability in millions of operations	Mechanical	12				15				12		
	Electrical	1				2.5				2		
Type		6 A	9 A	12 A	16 A	9 A	12 A	18 A	22 A	32 A	40 A	
Current and power	AC-1	Thermal current (A)	20	20	20	20	25	25	40	40	50	60
		200/240 V (kW)	1.5	2.2	3	4	2.5	3.5	4.5	5.5	7.5	11
	(A)	7	9	12	15	11	13	18	22	32	40	
	380/440 V (kW)	2.2	4	5.5	7.5	4	5.5	7.5	11	15	18.5	
		(A)	6	9	12	16	9	12	18	22	32	40
	500/550 V (kW)	3	3.7	4	5.5	4	7.5	7.5	15	18.5	22	
		(A)	5	6	7	9	7	12	13	20	28	32
	690 V (kW)	3	4	4	4	4	7.5	7.5	15	18.5	22	
(A)		4	5	5	5	5	9	9	18	20	23	
UL rating 50/60 Hz	Continuous current (A)	20	20	20	20	25	25	40	40	50	60	
		Single phase	110/220 V (HP)	1/2	1/2	1	-	0.5	0.75	1	2	2
		220/240 V (HP)	1	1.5	2	-	1.5	2	3	3	5	7.5
	Three phase	200/208 V (HP)	-	-	-	-	2	3	5	7.5	7.5	15
		220/240 V (HP)	1.5	3	3	-	3	5	7.5	10	10	15
		440/480 V (HP)	3	5	7.5	-	5	7.5	10	15	20	30
		550/600 V (HP)	3	5	7.5	-	7.5	10	15	20	25	30
	NEMA size		00	00	00	0	00	00	0	1	1	1
Weight and size	AC control	Weight (kg)	0.17				0.34				0.4	
		Size (W x H x D) (mm)	45 x 58 x 57				45 x 73.5 x 87.4				45 x 83 x 90	
	DC control	Weight (kg)	0.23				0.41				0.6	
		Size (W x H x D) (mm)	45 x 58 x 69				45 x 73.5 x 103.6				45 x 83 x 117.1	
Integrated auxiliary contacts		1 NO or 1 NC				1 NO + 1 NC				2 NO + 2 NC		
Add on auxiliary block	Side mounting	Yes				Yes				Yes		
	Front mounting	Yes				Yes				Yes		



Thermal overload relay											
		RTX ³ mini				RTX ³ 40				RTX ³ 40	
Terminals type	Standard RTX ³	screw				screw				screw	
	Differential RTX ³	screw				screw				screw	
Rated operational voltage, U _e		690 V				690 V				690 V	
Rated insulation voltage, U _i		690 V				690 V				690 V	
Rated impulse withstand voltage, U _{imp}		6 kV				6 kV				6 kV	
Trip class		10 A				10 A				10 A	
Setting		0.1 to 16 A				0.1 to 40 A				0.1 to 40 A	
Weight and size	Weight (kg)	0.1				0.17				0.17	
	Size (W x H x D) (mm)	45 x 73 x 63				45 x 75 x 90				45 x 75 x 90	

														
CTX³ 65		CTX³ 100			CTX³ 150		CTX³ 225		CTX³ 400			CTX³ 800		
4		5			6		7		8			9		
screw or cage		screw or cage			screw or cage		screw		screw			screw		
690 V		690 V			690 V		690 V		690 V			690 V		
1000 V		1000 V			1000 V		1000 V		1000 V			1000 V		
50/60 Hz		50/60 Hz			50/60 Hz		50/60 Hz		50/60 Hz			50/60 Hz		
8 kV		8 kV			8 kV		8 kV		8 kV			8 kV		
1800		1800			1200		1200		1200			1200		
12		12			5		5		5			2.5		
2		2			1		1		1			0.5		
50 A	65 A	75 A	85 A	100 A	130 A	150 A	185 A	225 A	265 A	330 A	400 A	500 A	630 A	800 A
70	100	110	135	160	160	210	230	275	300	350	450	580	660	900
15	18.5	22	25	30	37	45	55	75	80	90	125	147	190	220
55	65	75	85	105	130	150	185	225	265	330	400	500	630	800
22	30	37	45	55	60	75	90	132	147	160	200	265	330	440
50	65	75	85	105	130	150	185	225	265	330	400	500	630	800
30	33	37	45	55	60	70	110	132	147	160	225	265	330	500
43	60	64	75	85	90	100	180	200	225	280	350	400	500	720
30	33	37	45	55	55	55	110	140	160	200	250	300	400	500
28	35	42	45	65	60	60	120	150	185	225	300	380	420	630
70	100	110	135	160	160	210	230	275	300	350	450	580	660	900
3	5	5	7.5	10	10	15	15	15	-	-	-	-	-	-
10	15	15	15	20	20	25	30	40	-	-	-	-	-	-
20	25	25	30	30	40	40	60	60	75	100	125	150	200	200
25	30	30	40	40	40	50	60	75	100	125	150	200	250	300
40	50	50	60	75	75	100	125	150	200	250	300	400	500	600
50	60	60	75	75	75	75	125	150	200	250	300	400	500	600
2	2	2	3	3	3	4	4	4	5	5	5	6	6	7
0.9		1.6			2.4		5.4		9.2			22.4		
55 × 106 × 119		70 × 140 × 135.8			95 × 158 × 130.3		138 × 203 × 185.1		163 × 243 × 204.4			285 × 312 × 245.3		
1.2		2.6			2.4		5.4		9.2			22.4		
55 × 106 × 146.4		70 × 140 × 172.3			95 × 158 × 130.3		138 × 203 × 185.1		163 × 243 × 204.4			285 × 312 × 245.3		
2 NO + 2 NC		2 NO + 2 NC			2 NO + 2 NC		2 NO + 2 NC		2 NO + 2 NC			2 NO + 2 NC		
Yes		Yes			Yes		Yes		Yes			Yes		
Yes		Yes			Yes		No		No			No		

														
RTX³ 65		RTX³ 100			RTX³ 150		RTX³ 225		RTX³ 400			RTX³ 800		
screw		screw			screw		screw		screw			screw		
cage		cage			cage		screw		screw			screw		
690 V		690 V			690 V		690 V		690 V			690 V		
690 V		690 V			690 V		690 V		690 V			690 V		
6 kV		6 kV			6 kV		6 kV		6 kV			6 kV		
10 A		10 A			10 A		10 A		10 A			10 A		
9 to 65 A		18 to 100 A			45 to 150 A		65 to 240 A		85 to 400 A			200 to 800 A		
0.31/0.33		0.48/0.5			0.67		2.5		2.6			11.5		
55 × 81 × 100		70 × 97 × 110			95 × 109 × 113		147 × 141 × 184		151 × 171 × 198			360 × 530 × 212		

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																
	Overload protection	•				•																
	Phase failure protection	•				•																
	Trip indicating function	with alarm contact 4174 06/07				with alarm contact 4174 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	Icu	Ics	Icu	Ics
			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	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-



MPX³ 32MA

2
Magnetic only
High
Rotary
3



MPX³ 63H

3
Thermal magnetic
High
Rotary
3



MPX³ 100H

4
Thermal magnetic
High
Rotary
3

Up to 690 V

50/60 Hz

690 V

6 kV

Cat. A

AC3

100000

100000

25

-20 to +60 °C

13 x le max.

0

-

-

with alarm contact 4174 06/07

•

360

Up to 690 V

50/60 Hz

1000 V

8 kV

Cat. A

AC3

50000

25000

25

-20 to +60 °C

13 x le max.

10

•

•

with alarm contact 4174 07/08

•

1000

Up to 690 V

50/60 Hz

1000 V

8 kV

Cat. A

AC3

50000

25000

25

-20 to +60 °C

13 x le max.

10

•

•

with alarm contact 4174 07/08

•

2200

240 V 230 V 220 V		415 V 400 V		460 V 440 V		525 V 500 V		690 V 600 V		240 V 230 V 220 V		415 V 400 V		460 V 440 V		525 V 500 V		690 V 600 V		240 V 230 V 220 V		415 V 400 V		460 V 440 V		525 V 500 V		690 V 600 V	
Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics	Icu	Ics
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	100	8	8	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	100	100	100	100	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	50	38	50	38	6	6	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
100	100	100	100	50	38	50	38	6	6	100	100	100	100	50	38	50	38	6	5	-	-	-	-	-	-	-	-	-	-
100	100	100	100	50	38	42	32	6	6	100	100	100	100	50	38	42	32	6	5	-	-	-	-	-	-	-	-	-	-
100	100	50	38	20	15	10	8	4	4	100	100	50	50	50	38	12	9	5	5	100	100	100	100	50	38	35	27	12	9
100	100	50	38	20	15	10	8	4	4	100	100	50	50	50	38	12	9	5	5	100	100	100	50	50	38	35	27	12	9
100	100	50	38	20	15	10	8	4	4	100	100	50	50	35	27	12	9	5	5	100	100	100	50	50	38	35	27	12	9
100	100	50	38	20	15	10	8	4	4	100	100	50	50	35	27	10	8	5	5	100	100	100	50	50	38	25	19	12	9
-	-	-	-	-	-	-	-	-	-	100	100	50	50	35	27	10	8	5	5	100	100	100	50	50	38	20	15	12	9
-	-	-	-	-	-	-	-	-	-	100	100	50	50	35	27	10	8	5	5	100	100	100	50	50	38	15	11	10	8
-	-	-	-	-	-	-	-	-	-	100	100	50	50	35	27	10	8	5	5	100	100	100	50	50	38	15	11	8	6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	75	50	50	38	12	9	6	6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	75	50	50	38	12	9	6	6
-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	100	100	75	50	50	38	12	9	6	6

Contactors CTX³

technical characteristics

Environmental conditions

- Storage temperature: -50 °C to + 80 °C
- Operating temperature: -5 °C to + 50 °C
- Operating altitude: 3000 m
- Protection degree: IP 20
- Shock resistance: open 8 G / closed 10 G
- Vibration resistance (5-300 Hz): open 2 G / closed 4 G

Type 2 coordination with MPCBs MPX³

According to IEC 60 947-4-1
Short circuit current I_q = 50 kA Voltage 400/415 V A 50/60 Hz

Standard motors AC-3 at 400/415 V 1500 rpm		Manual motor starter			Magnetic release response current (A)	Contactor	
Rated Power (kW)	Current (A)	MPCB type	Thermal overload release setting range (A)	Type		Rating (A)	
-	-	MPX ³ 32S	0.16	0.1 - 0.16	2.08	CTX ³ 22	9
0.06	0.20	MPX ³ 32S	0.25	0.16 - 0.25	3.25	CTX ³ 22	9
0.09	0.30	MPX ³ 32S	0.40	0.25 - 0.4	5.2	CTX ³ 22	9
0.12	0.40	MPX ³ 32S	0.63	0.4 - 0.63	8.19	CTX ³ 22	9
0.18	0.60	MPX ³ 32S	0.63	0.4 - 0.63	8.19	CTX ³ 22	9
0.25	0.80	MPX ³ 32S	1	0.63 - 1	13	CTX ³ 22	9
0.37	1.1	MPX ³ 32S	1.6	1 - 1.6	20.8	CTX ³ 22	9
0.55	1.5	MPX ³ 32S	1.6	1 - 1.6	20.8	CTX ³ 22	9
0.75	1.9	MPX ³ 32S	2.5	1.6 - 2.5	32.5	CTX ³ 22	12
1.1	2.7	MPX ³ 32S	4	2.5 - 4	52	CTX ³ 22	18
1.5	3.6	MPX ³ 32S	4	2.5 - 4	52	CTX ³ 22	18
2.2	5.2	MPX ³ 32S	6	4 - 6	78	CTX ³ 22	18
3	6.8	MPX ³ 32S	8	5 - 8	104	CTX ³ 22	18
4	9	MPX ³ 32S	10	6 - 10	130	CTX ³ 22	18
5.5	11.5	MPX ³ 32H	13	9 - 13	169	CTX ³ 22	22
7.5	15.5	MPX ³ 32H	17	11 - 17	221	CTX ³ 22	22
10	20	MPX ³ 32H	22	14 - 22	286	CTX ³ 40	32
11	22	MPX ³ 32H	25	18 - 26	338	CTX ³ 40	32
15	29	MPX ³ 32H	32	22 - 32	416	CTX ³ 40	32
18.5	35	MPX ³ 63H	40	28 - 40	520	CTX ³ 65	50
22	41	MPX ³ 63H	50	34 - 50	650	CTX ³ 65	50
30	55	MPX ³ 63H	63	45 - 63	819	CTX ³ 65	65
37	67	MPX ³ 100H	75	55 - 75	975	CTX ³ 100	75
-	-	MPX ³ 100H	90	70 - 90	1170	CTX ³ 100	85
45	80	MPX ³ 100H	100	80 - 100	1300	CTX ³ 100	85

Definition type 2 coordination according to IEC 947-4-1:

- The contactor or the starter must not endanger persons or systems in the event of a short-circuit.
- The contactor or the starter must be suitable for further use.
- No damage to the overload relay or other parts may occur with the exception of welding of the contactor or starter contacts provided that these can be easily separated without significant deformation (such as with a screwdriver).

Accessory

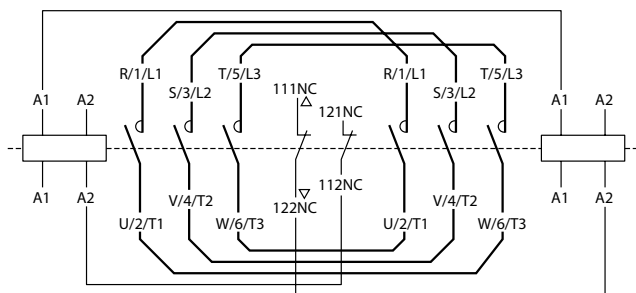
Interlock unit, Cat.No 4168 80

The mechanical interlock unit provides 2NC contacts for use in electrical interlocking of two contactors

Wire kits

Used for making reversing circuit between two contactors

Contactor	Wire kit		Interlock unit	
	Cat.Nos	Weight	Cat.No	Weight
CTX ³ 22	4168 82	0.04 kg	4168 80	0.06 kg
CTX ³ 40	4168 83	0.05 kg		
CTX ³ 65	4168 84	0.12 kg		
CTX ³ 100	4168 85	0.33 kg		
CTX ³ 150	-	-		



CTX³ 9 A - 150 A typical circuit diagram for reversing contactor

Rating of the contacts in the interlocks

Rated operation voltage (V)	600
Rated insulation voltage (V)	600
Rated frequency (Hz)	50/60
Rated thermal current (A)	10
Rated operation current (A) 240 V AC-15	3

Time delay blocks Cat.Nos 4168 70/71/72/73

Applying contactors	Cat.Nos	Rated voltage	Performance
CTX ³ 22 to CTX ³ 150	4168 70	AC/DC 24 to 48 V	<ul style="list-style-type: none"> • Mounting: Head on • Contact: 1 NC • Time delay: 1s to 30s On delay, Off delay
	4168 71	AC 110 to 230 V	
	4168 72	AC/DC 24 to 48 V	<ul style="list-style-type: none"> • Frequency: AC 50/60 Hz • Operation: Min. voltage 85% Max. voltage 110% • Accuracy of setting time: ± 20 %
	4168 73	AC 110 to 230 V	

Features of capacitor unit (Pre-loading resistor)

- Damping resistor that can limit the inrush current up to $60 \times I_n$ by closing earlier than the main contacts of the contactor
- No heat loss by the serial resistor
- Eliminates the switching surge
- Improves the performance of the capacitor system

Operation sequence

Capacitor unit: OFF
Contactor: OFF

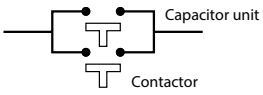


Fig.1

Capacitor unit: ON
Contactor: OFF

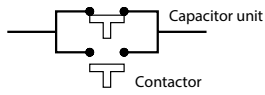


Fig.2

Capacitor unit: OFF
Contactor: ON

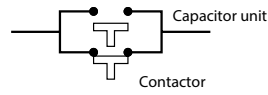


Fig.3

Note - Closing sequence: Fig.1 => Fig.2 => Fig.3
Opening sequence: Fig.3 => Fig.2 => Fig.1

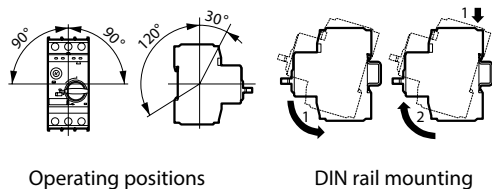


MPCBs MPX³

wiring capacity and accessories

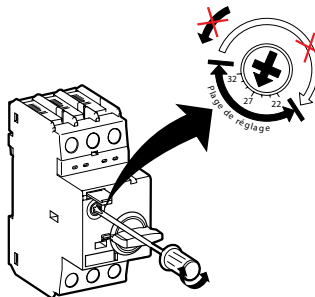
Mounting

MPX³ 32: 35 mm 4 rail (depth 15 mm)
 MPX³ 63: 35 mm 4 rail (depth 15 mm) or screws
 MPX³ 100: 35 mm (depth 15 mm) or 75 mm 4 rail or screws



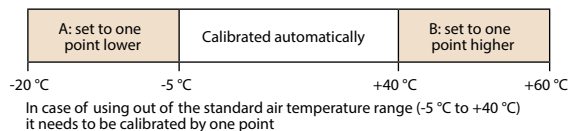
Caution for thermal adjustments

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



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																
230/240 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

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																
230/240 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

Industrial contactors CTX³

technical characteristics

Selection chart

- The Full Load Current (FLC) indicated for 3-phase motors are of 'squirrel-cage Induction motors' at full load.
- Contactors are of the minimum ratings. Higher rating of contactors can be used.
- Selection chart is for standard 3-phase, squirrel cage motor with average power factor and efficiency.
- Selection is valid only for complete Legrand products.
- Compliance to Type '2' co-ordination is not assured in case these groupings are changed to use another product.
- Normal motor starting time (<=5 Sec) is assumed.

Compact motor starter (MPCB + Contactors)

Coordination: Compact motor starters (MPCB + Contactors) Type 2
According to IEC 60947-4-1

Performance: U _e = 415 [V]		
MPX ³	S	H
MPX ³ 32	50 [kA]	50 [kA]
MPX ³ 63	-	50 [kA]
MPX ³ 100	-	50 [kA]



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	CTX ³ 22 - 22 [A]
5.5	11.5	MPX ³ 32H	13	
7.5	15.5	MPX ³ 32H	17	CTX ³ 40 - 32 [A]
10	20	MPX ³ 32H	22	
11	22	MPX ³ 32H	26	CTX ³ 40 - 40 [A]
15	29	MPX ³ 32H	32	
18.5	35	MPX ³ 63H	40	CTX ³ 65 - 50 [A]
22	41	MPX ³ 63H	50	CTX ³ 65 - 65 [A]
30	55	MPX ³ 63H	63	CTX ³ 100 - 75 [A]
37	67	MPX ³ 100H	75	CTX ³ 100 - 85 [A]
45	80	MPX ³ 100H	100	

Industrial contactors CTX³

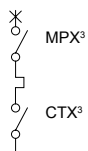
technical characteristics

3P 9 A - 100 A with MPCB

Coordination: Type 2 (continued)

According to IEC 60947-4-1

Performance: U _e = 440 [V]		
MPX ³	S	H
MPX ³ 32	38 [kA]	50 [kA]
MPX ³ 63	-	35 [kA]
MPX ³ 100	-	50 [kA]



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	

Industrial contactors CTX³

technical characteristics

Motor starters

Magnetic protection + Contactor + Thermal overload relay

Table-1: DX³ MCB Ue = 400 [V]

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Rated conditional short-circuit current Iq (kA)
0.37	1.10	DX ³ MA	1.6	20	4098 76	CTX ³ 22 9 A	RTX ³ 40	1 - 1.6	4166 45/65	15
0.55	1.5	DX ³ MA	1.6	20	4098 76	CTX ³ 22 9 A	RTX ³ 40	1 - 1.6	4166 45/65	15
0.75	1.9	DX ³ MA	2.5	32	4098 77	CTX ³ 22 9 A	RTX ³ 40	1.6 - 2.5	4166 46/66	15
1.1	2.7	DX ³ MA	4	50	4098 78	CTX ³ 22 9 A	RTX ³ 40	2.5 - 4	4166 47/67	15
1.5	3.5	DX ³ MA	4	50	4098 78	CTX ³ 22 9 A	RTX ³ 40	2.5 - 4	4166 47/67	15
2.2	5	DX ³ MA	6.3	80	4098 79	CTX ³ 22 9 A	RTX ³ 40	4 - 6	4166 48/68	15
2.5	5.7	DX ³ MA	6.3	80	4098 79	CTX ³ 22 9 A	RTX ³ 40	4 - 6	4166 48/68	15
3	6.7	DX ³ MA	10	125	4098 80	CTX ³ 22 12 A	RTX ³ 40	5 - 8	4166 49/69	15
3.7	8	DX ³ MA	10	125	4098 80	CTX ³ 22 12 A	RTX ³ 40	6 - 9	4166 50/70	15
4	8.5	DX ³ MA	10	125	4098 80	CTX ³ 22 12 A	RTX ³ 40	7 - 10	4166 51/71	15
5.5	11	DX ³ MA	12.5	160	4098 81	CTX ³ 22 22 A	RTX ³ 40	9 - 13	4166 52/72	15
6.3	13	DX ³ MA	16	200	4098 82	CTX ³ 22 22 A	RTX ³ 40	12 - 18	4166 53/73	15
7.5	15	DX ³ MA	16	200	4098 82	CTX ³ 22 22 A	RTX ³ 40	12 - 18	4166 53/73	15
10	20	DX ³ MA	25	320	4098 83	CTX ³ 22 22 A	RTX ³ 40	16 - 22	4166 54/74	15
11	22	DX ³ MA	25	320	4098 83	CTX ³ 22 22 A	RTX ³ 40	18 - 25	4166 55/75	15
12.5	25	DX ³ MA	25	320	4098 83	CTX ³ 40 32 A	RTX ³ 40	22 - 32	4166 56/76	15
15	29	DX ³ MA	40	500	4098 84	CTX ³ 40 32 A	RTX ³ 40	22 - 32	4166 56/76	10
16	31	DX ³ MA	40	500	4098 84	CTX ³ 40 32 A	RTX ³ 40	22 - 32	4166 56/76	10
18.5	35	DX ³ MA	40	500	4098 84	CTX ³ 40 40 A	RTX ³ 40	28 - 40	4166 57/77	10
20	38	DX ³ MA	40	500	4098 84	CTX ³ 40 40 A	RTX ³ 40	28 - 40	4166 57/77	10
22	41	DX ³ MA	63	880	4098 85	CTX ³ 65 50 A	RTX ³ 65	34 - 50	4166 89 4167 09	10
25	47	DX ³ MA	63	880	4098 85	CTX ³ 65 50 A	RTX ³ 65	34 - 50	4166 89 4167 09	10
30	57	DX ³ MA	63	880	4098 85	CTX ³ 65 65 A	RTX ³ 65	45 - 65	4166 90 4167 10	10
31.5	59	DX ³ MA	63	880	4098 85	CTX ³ 65 65 A	RTX ³ 65	45 - 65	4166 90 4167 10	10

Table-2: DPX³ MCCB : Ue = 400 [V]

Coordination: Type 2 (continued)

According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Conditional short-circuit current Iq (kA)
15	29	DPX ³ 160	40	140 - 400	4201 22	CTX ³ 65 50 A	RTX ³ 65	24 - 36	4166 87 4167 07	50
16	31	DPX ³ 160	40	140 - 400	4201 22	CTX ³ 65 50 A	RTX ³ 65	24 - 36	4166 87 4167 07	50
18.5	35	DPX ³ 160	40	140 - 400	4201 22	CTX ³ 65 50 A	RTX ³ 65	28 - 40	4166 88 4167 08	50
20	38	DPX ³ 160	40	140 - 400	4201 22	CTX ³ 65 50 A	RTX ³ 65	34 - 50	4166 89 4167 09	50
22	41	DPX ³ 160	63	220 - 630	4201 23	CTX ³ 65 65 A	RTX ³ 65	34 - 50	4166 89 4167 09	50
25	47	DPX ³ 160	63	220 - 630	4201 23	CTX ³ 100 85 A	RTX ³ 100	34 - 50	4167 26/46	50
30	57	DPX ³ 160	63	220 - 630	4201 23	CTX ³ 100 100 A	RTX ³ 100	45 - 65	4167 27/47	50
31.5	59	DPX ³ 160	63	220 - 630	4201 23	CTX ³ 100 100 A	RTX ³ 100	54 - 75	4167 28/48	50
37	68	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 100 100 A	RTX ³ 100	63 - 85	4167 29/49	50
40	74	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 150 130 A	RTX ³ 150	63 - 85	4167 62/72	50
45	82	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 150 130 A	RTX ³ 150	63 - 85	4167 62/72	50
50	92	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 150 130 A	RTX ³ 150	80 - 105	4167 63/73	50
55	102	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 150 150 A	RTX ³ 150	95 - 130	4167 64/74	50
63	115	DPX ³ 250	160	560 - 1000	4206 07	CTX ³ 150 150 A	RTX ³ 150	95 - 130	4167 64/74	50

Industrial contactors CTX³

technical characteristics

Table-3: DPX³ MCCB : Ue = 440 [V]

Coordination: Type 2 (continued)

According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Conditional short-circuit current I _q (kA)
15	27	DPX ³ 160	40	140 - 400	4201 22	CTX ³ 65 50 A	RTX ³ 65	24 - 36	4166 87 4167 07	30
16	29	DPX ³ 160	40	140 - 400	4201 22	CTX ³ 65 50 A	RTX ³ 65	24 - 36	4166 87 4167 07	30
18.5	34	DPX ³ 160	40	140 - 400	4201 22	CTX ³ 65 65 A	RTX ³ 65	28 - 40	4166 88 4167 08	30
20	37	DPX ³ 160	40	140 - 400	4201 22	CTX ³ 65 65 A	RTX ³ 65	28 - 40	4166 88 4167 08	30
22	40	DPX ³ 160	40	140 - 400	4201 23	CTX ³ 100 75 A	RTX ³ 100	34 - 50	4167 26/46	30
25	45	DPX ³ 160	63	220 - 630	4201 23	CTX ³ 100 85 A	RTX ³ 100	34 - 50	4167 26/46	30
30	53	DPX ³ 160	63	220 - 630	4201 23	CTX ³ 100 100 A	RTX ³ 100	45 - 65	4167 27/47	30
31.5	56	DPX ³ 160	63	220 - 630	4201 23	CTX ³ 100 100 A	RTX ³ 100	45 - 65	4167 27/47	30
37	65	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 100 100 A	RTX ³ 100	54 - 75	4167 28/48	50
40	71	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 150 130 A	RTX ³ 150	63 - 85	4167 62/72	50
45	78	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 150 130 A	RTX ³ 150	63 - 85	4167 62/72	50
50	88	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 150 130 A	RTX ³ 150	80 - 105	4167 63/73	50
55	98	DPX ³ 250	100	350 - 1000	4206 05	CTX ³ 150 150 A	RTX ³ 150	80 - 105	4167 63/73	50
63	110	DPX ³ 250	160	560 - 1000	4206 07	CTX ³ 150 150 A	RTX ³ 150	95 - 130	4167 64/74	50

Table-4: DPX³ MCCBs : Ue = 400 [V]

Coordination: Type 2 (continued)

According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Conditional short-circuit current I _q (kA)
75	137	DPX ³ 250	160	560 - 1600	4206 07	CTX ³ 225 185 A	RTX ³ 225	100 - 160	4167 82	50
90	164	DPX ³ 250	250	900 - 2500	4206 09	CTX ³ 225 185 A	RTX ³ 225	120 - 185	4167 83	50
110	204	DPX ³ 250	250	900 - 2500	4206 09	CTX ³ 225 225 A	RTX ³ 225	160 - 240	4167 84	50
132	238	DPX ³ 250	250	900 - 2500	4206 09	CTX ³ 400 265 A	RTX ³ 400	200 - 330	4167 90	50
150	262	DPX ³ 630	320	1600 - 3200	4220 29	CTX ³ 400 330 A	RTX ³ 400	200 - 330	4167 90	50
160	282	DPX ³ 630	320	1600 - 3200	4220 29	CTX ³ 400 330 A	RTX ³ 400	260 - 400	4167 91	50
200	350	DPX ³ 630	400	2000 - 3200	4220 30	CTX ³ 400 400 A	RTX ³ 400	260 - 400	4167 91	50
220	387	DPX ³ 630	400	1600 - 3200	4220 30	CTX ³ 400 400 A	RTX ³ 400	260 - 400	4167 91	50
250	440	DPX ³ 630	500	1600 - 3200	4220 31	CTX ³ 800 630 A	RTX ³ 800	400 - 630	4167 94	50

Table-5: DPX³ MCCB : Ue = 440 [V]

Motor		Circuit-breaker				Contactor	Thermal relay			Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Type	Setting range (A)	Reference	Conditional short-circuit current I _q (kA)
75	129	DPX ³ 250	160	560 - 1600	4206 07	CTX ³ 225 185 A	RTX ³ 225	100 - 160	4167 82	50
90	157	DPX ³ 250	160	560 - 1600	4206 07	CTX ³ 225 225 A	RTX ³ 225	120 - 185	4167 83	50
110	188	DPX ³ 250	250	900 - 2500	4206 09	CTX ³ 400 265 A	RTX ³ 400	160 - 240	4167 89	50
132	218	DPX ³ 250	250	900 - 2500	4206 09	CTX ³ 400 265 A	RTX ³ 400	160 - 240	4167 89	50
150	244	DPX ³ 630	320	1600 - 3200	4220 29	CTX ³ 400 400 A	RTX ³ 400	200 - 330	4167 90	50
160	260	DPX ³ 630	320	1600 - 3200	4220 29	CTX ³ 400 400 A	RTX ³ 400	200 - 330	4167 90	50
200	330	DPX ³ 630	400	1600 - 3200	4220 30	CTX ³ 800 630 A	RTX ³ 800	260 - 400	4167 93	50
220	355	DPX ³ 630	400	1600 - 3200	4220 30	CTX ³ 800 630 A	RTX ³ 800	260 - 400	4167 93	50
250	405	DPX ³ 630	500	1600 - 3200	4220 31	CTX ³ 800 800 A	RTX ³ 800	400 - 600	4167 94	50

Industrial contactors CTX³

technical characteristics

Table-6: DX³ MCB : U_e = 400 [V]

Coordination: Type 2 (continued)

According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Rated conditional short-circuit current I _q (kA)
5.5	11	DX ³ MA	12.5	160	4098 91	4164 26	15
6.3	13	DX ³ MA	16	200	4098 92	4164 26	15
7.5	15	DX ³ MA	16	200	4098 92	4164 26	15
10	20	DX ³ MA	25	320	4098 93	4164 26	15
11	22	DX ³ MA	25	320	4098 93	4164 26	15
18.5	35	DX ³ MA	40	500	4098 94	4164 36	10
20	38	DX ³ MA	40	500	4098 94	4164 36	10
30	57	DX ³ MA	63	880	4098 95	4164 46	10
31.5	59	DX ³ MA	63	880	4098 95	4164 46	10

Table-7: DPX³ MCCB : U_e = 400 [V]

Motor		Circuit-breaker				Contactor	Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	conditional short-circuit current I _q (kA)
5.5	11.5	DPX ³ 160	16	160	4200 90	4164 36	36
7.5	15.5	DPX ³ 160	16	160	4200 90	4164 36	36
15	29	DPX ³ 160	40	400	4200 92	4164 56	36
16	31	DPX ³ 160	40	400	4200 92	4164 56	36
18.5	35	DPX ³ 160	40	400	4200 92	4164 56	36
20	38	DPX ³ 160	40	400	4200 92	4164 56	36
37	68	DPX ³ 160	100	1000	4200 95	4164 66	36
40	74	DPX ³ 160	100	1000	4200 95	4164 66	36
45	82	DPX ³ 160	100	1000	4200 95	4164 66	36
50	92	DPX ³ 160	100	1000	4200 95	4164 66	36
55	102	DPX ³ 160	125	1250	4200 96	4164 76	36
63	115	DPX ³ 160	125	1250	4200 96	4164 76	36

Table-8: DPX³ MCCB : U_e = 400 [V]

Coordination: Type 2 (continued)

According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Conditional short-circuit current I _q (kA)
22	41	DPX ³ 160	63	220 - 630	4201 33	4164 46	50
25	47	DPX ³ 160	63	220 - 630	4201 33	4164 56	50
40	74	DPX ³ 250	100	350 - 1000	4206 15	4164 66	50
45	82	DPX ³ 250	100	350 - 1000	4206 15	4164 66	50
50	92	DPX ³ 250	100	350 - 1000	4206 15	4164 66	50
55	102	DPX ³ 250	100	350 - 1000	4206 15	4164 76	50
63	115	DPX ³ 250	160	560 - 1600	4206 17	4164 76	50
110	204	DPX ³ 250	250	900 - 2500	4206 19	4164 86	50
150	262	DPX ³ 630	320	1600 - 3200	4220 34	4164 96	50
160	282	DPX ³ 630	320	1600 - 3200	4220 34	4164 96	50
200	350	DPX ³ 630	400	2000 - 3200	4220 35	4165 06	50
220	387	DPX ³ 630	400	1600 - 3200	4220 35	4165 06	50
250	440	DPX ³ 630	500	1600 - 3200	4220 36	4165 16	50

Industrial contactors CTX³

technical characteristics

Table-9: DPX³ MCCB : U_e = 440 [V]

Coordination: Type 2 (continued)

According to IEC 60947-4-1

Motor		Circuit-breaker				Contactor	Test
Rated power (kW)	Rated current (A)	Type	Rated current (A)	Magnetic threshold (A)	Reference	Type	Conditional short-circuit current I _q (kA)
18.5	34	DPX ³ 160	40	140 - 400	4201 32	4164 46	30
20	37	DPX ³ 160	40	140 - 400	4201 32	4164 46	30
25	45	DPX ³ 160	63	220 - 630	4201 33	4164 56	30
40	71	DPX ³ 250	100	350 - 1000	4206 15	4164 66	50
45	78	DPX ³ 250	100	350 - 1000	4206 15	4164 66	50
50	88	DPX ³ 250	100	350 - 1000	4206 15	4164 66	50
55	98	DPX ³ 250	100	350 - 1000	4206 15	4164 76	50
63	110	DPX ³ 250	160	560 - 1600	4206 17	4164 76	50
90	157	DPX ³ 250	160	560 - 1600	4206 17	4164 86	50
150	244	DPX ³ 630	320	1600 - 3200	4220 34	4165 06	50
160	260	DPX ³ 630	320	1600 - 3200	4220 34	4165 06	50
200	330	DPX ³ 630	400	1600 - 3200	4220 35	4165 16	50
220	355	DPX ³ 630	400	1600 - 3200	4220 35	4165 16	50
250	405	DPX ³ 630	500	1600 - 3200	4220 36	4165 26	50

Selection table for CTX³ contactors for capacitor banks

Step power at 400 V up to	Terminals	Steps without detuned reactors				Steps with detuned reactors	
		With 3 terminals capacitors Alpivar ² & Alpican		With 6 terminals Alpivar ³ (wiring inside)		With 3 terminals capacitors Alpivar ² & Alpican	With 6 terminals Alpivar ³ (wiring inside)
		Contactors	+ capacitor switching units CTX-C	Contactors	+ capacitor switching units CTX-C	Contactors	Contactors
7.5 kVAr	Screw terminals	4160 8X	4168 74	4160 8X	4168 74	4160 9X	4160 8X
12.5 kVAr	Screw terminals	4160 9X	4168 74	4160 9X	4168 74	4161 0X	4160 9X
20 kVAr	Screw terminals	4161 2X	4168 74	4161 1X	4168 74	4161 2X	4161 0X
25 kVAr	Screw terminals	4161 2X	4168 74	4161 1X	4168 74	4161 3X	4161 0X
30 kVAr	Screw terminals	4161 3X	4168 74	4161 2X	4168 74	4161 4X	4161 1X
40 kVAr	Screw terminals	4161 4X	4168 75	4161 3X	4168 74	4161 6X	4161 3X
	Cage terminals	4161 5X	4168 76	4161 5X	4168 76	4161 7X	4161 5X
50 kVAr	Screw terminals	4161 8X	4168 77	4161 4X	4168 75	4161 8X	4161 3X
	Cage terminals	4161 9X	4168 76	4161 5X	4168 76	4161 9X	4161 5X
60 kVAr	Screw terminals	4162 2X	4168 77	4161 8X	4168 77	4162 0X	4161 6X
	Cage terminals	4162 3X	4168 76	4161 9X	4168 76	4162 1X	4161 7X
75 kVAr	Screw terminals	NA		4161 8X	4168 77	4162 4Y	4161 6X
	Cage terminals	NA		4161 9X	4168 76	4162 5Y	4161 7X
80 kVAr	Screw terminals	NA		4162 2X	4168 77	4162 6Y	4162 4Y
	Cage terminals	NA		4162 3X	4168 76	4162 7Y	4162 5Y

Coil voltage	X	Coil voltage	Y
24 V AC	0	24 V AC	0
24 V DC	1	24 V DC	1
48 V AC	2	48 V AC	2
48 V DC	3	48 V DC	3
110 V AC	4	100-240 V AC / 100-220 V DC	6
230 V AC	6		
380 V AC	8	400-440 V AC	9
415 V AC	9		

Industrial contactors CTX³

technical characteristics

Size of wire and tightening torque:

3P 9 A - 150 A

Frame	Wire type	Main Terminal Size								Torque			
			(AWG / mm ²)							mm(max)	{lb-in}	{Nm}	{kgf. Cm}
CTX ³ 22 - 9 A		M4	18-10 / 1-6		18-10 / 1-6		18-10 / 1-6		9.6	20	2.25	23	
CTX ³ 22 - 12 A			18-10 / 1-6		16-10 / 1-6		16-10 / 1-6						
CTX ³ 22 - 18 A			18-10 / 1-6		16-8 / 1.5-10		16-8 / 1.5-10						
CTX ³ 22 - 22 A			18-10 / 1-6		14-8 / 2.5-10		14-8 / 2.5-10						
CTX ³ 40 - 32 A		M5	18-10 / 1-6		12-8 / 2.5-10		12-8 / 2.5-10		12.8	35	4	41	
CTX ³ 40 - 40 A			18-10 / 1-6		8-6 / 10-16		8-6 / 10-16						
CTX ³ 65 - 50 A		M6	-		10-4 / 6-25		10-4 / 6-25		14	35	4	41	
CTX ³ 65 - 65 A			-		8-3 / 10-35		8-3 / 10-35						
CTX ³ 100 - 75 A		M8	-		8-2 / 10-35		8-2 / 10-35		17	45	5.1	52	
CTX ³ 100 - 85 A			-		8-1/0 / 10-50		8-1/0 / 10-50						
CTX ³ 100 - 100 A			-		8-2/0 / 10-70		8-2/0 / 10-70						
CTX ³ 150 - 130 A		M8	-		3-2/0 / 35-70		3-2/0 / 35-70		24.5	80	9.1	93	
CTX ³ 150 - 150 A			-		3-4/0 / 35-95		3-4/0 / 35-95						
CTX ³ 22 - 150 Aux/Coil		M4	20-14 / 0.5-2.5		18-12 / 0.75-2.5		18-12 / 0.75-2.5		7.6	15	1.75	18	

Frame	Wire type								Torque		
		(AWG / mm ²)							mm(max)	{lb-in}	{Nm}
CTX ³ 65		0.75-35 / 18-2	0.75-25 / 18-4	0.75-35 / 18-2	0.75-25 / 18-4	0.75-25 / 18-4	0.75-16 / 18-6	---	35	4	
CTX ³ 100		2.5-70 / 12-2	2.5-50 / 12-1	2.5-70 / 12-2	2.5-50 / 12-1	2.5-50 / 12-2	2.5-35 / 10-2	---	45	5.1	
CTX ³ 150		2.5-70 / 12-2	2.5-50 / 12-1	35-95 / 3-4	35-95 / 3-4	35-95 / 3-4	35-95 / 3-4	---	80	9.1	

3P 185 A - 800 A

Frame	Wire type	Main Terminal Size								Torque			
			(AWG / mm ²)							mm(max)	{lb-in}	{Nm}	{kgf. Cm}
CTX ³ 225 - 185 A		M10	-		1-4/0 / 50-95		1-4/0 / 50-95		25	130	14.7	150	
CTX ³ 225 - 225 A			-		1/0-300 / 50-150		1/0-300 / 50-150						
CTX ³ 400 - 265 A		M12	-		3/0-500 / 95-240		3/0-500 / 95-240		30	200	22.6	230	
CTX ³ 400 - 330 A			-		4/0-500 / 95-240		4/0-500 / 95-240						
CTX ³ 400 - 400 A			-		350-700 / 185-185 x 2		350-700 / 185-185 x 2						
CTX ³ 800 - 500 A		M16	-		350-800 / 185-240 x 2		350-800 / 185-240 x 2		40	500	26.5	270	
CTX ³ 800 - 630 A			-		600-2000		-						
CTX ³ 800 - 800 A			-		1700-Busbar		-						
CTX ³ 225 - 800 Aux/Coil		M4	16-10 / 1.25-5.5		16-10 / 1.25-5.5		16-10 / 1.25-5.5		7.6	15	1.75	18	

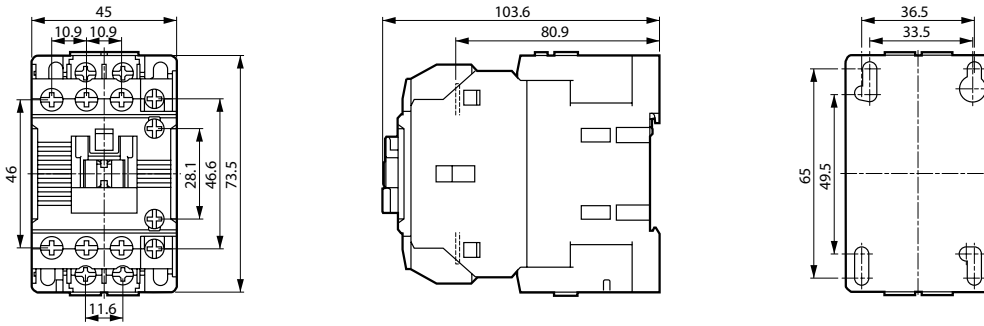
4P 40 A to 900 A

Frame size	Terminal screw		Size of wire [mm ²]	Connecting torque [kgf cm]
	Contactor			Contactor
4164 26	M4	9.6	2.5~10	15~22.5
4164 36	M5	12.8	10~16	26~39
4164 46	M6	14	16~35	45~67.5
4164 56	M8	17	25~50	100~150
4164 66	M8	17	35~70	100~150
4164 76	M8	17	35~95	100~150
4164 86	M10	25	50~150	150~225
4164 96, 4165 06	M12	30	95~240	250~375
4165 16, 4165 26	M16	40	185~480	600~1200

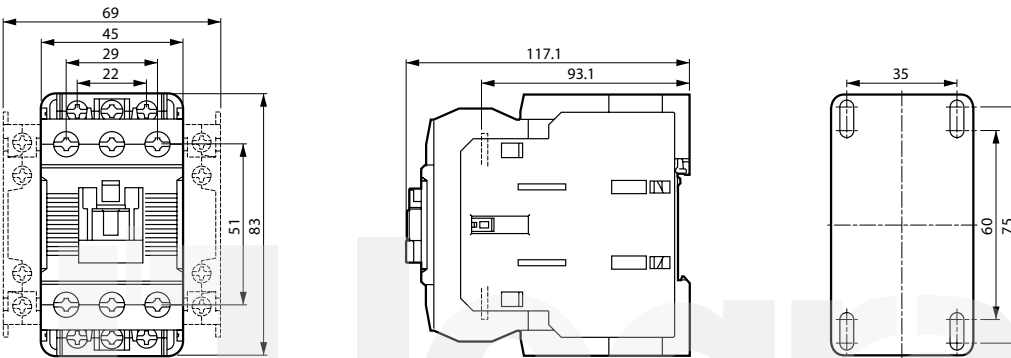
3-pole contactors CTX³

dimensions

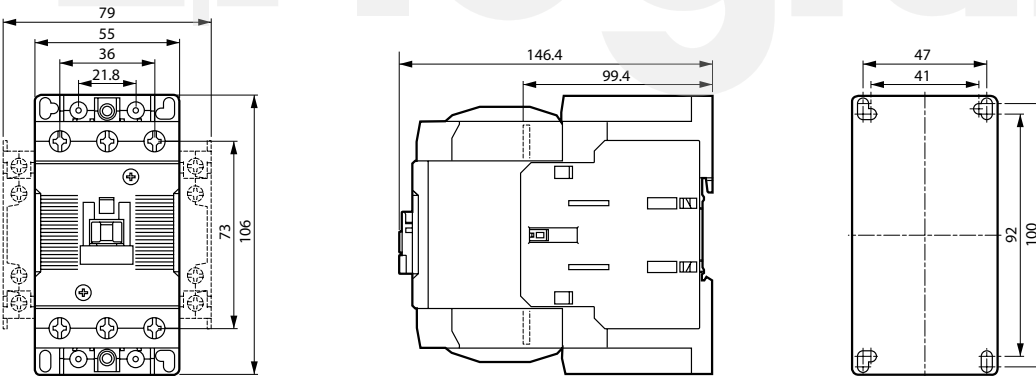
CTX³ 22



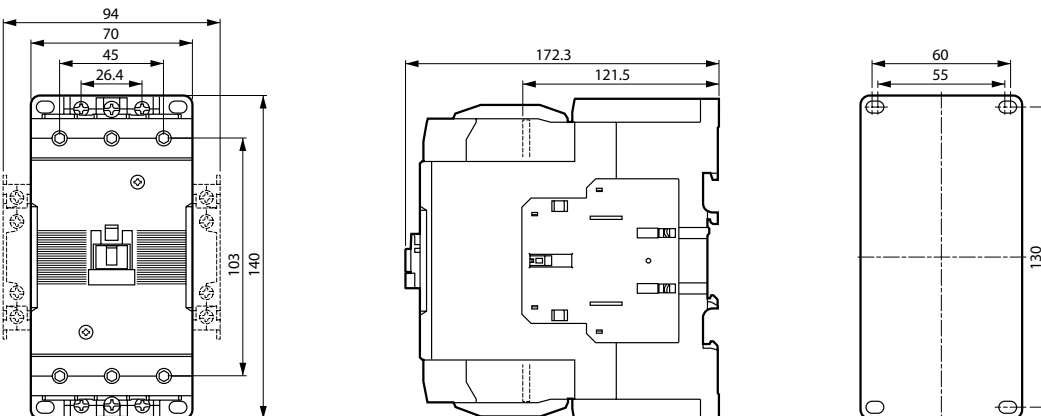
CTX³ 40



CTX³ 65



CTX³ 100

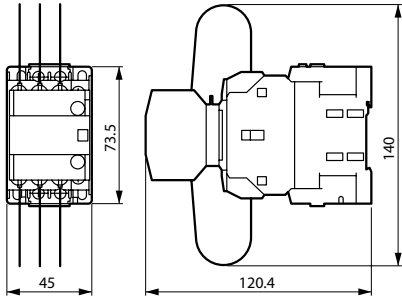


Contactors CTX³

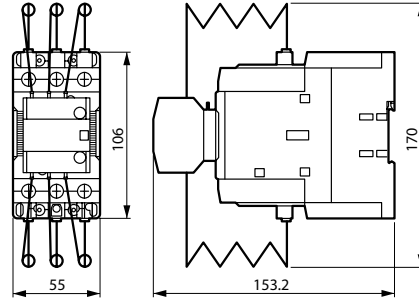
dimensions

■ Overall dimensions of contactors equipped with CTX³ switching units

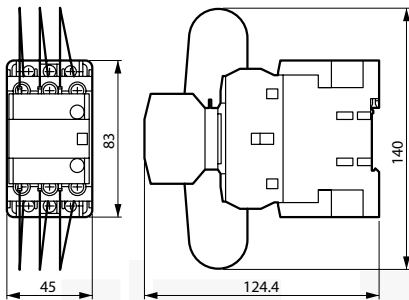
Cat.No 4168 74 on CTX³ 22



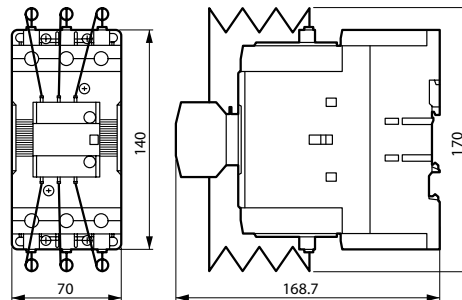
Cat.No 4168 75 on CTX³ 65



Cat.No 4168 74 on CTX³ 40



Cat.No 4168 77 on CTX³ 100

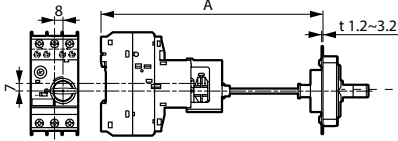


MPCBs MPX³

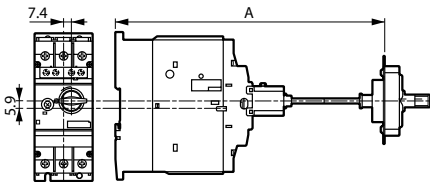
dimensions (continued)

External Handle

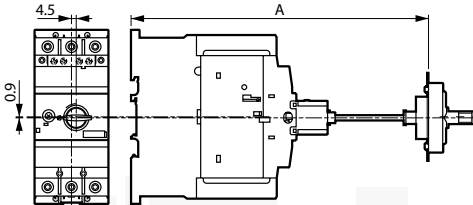
MPX³ 32H / 32MA - Cat.No 4174 63



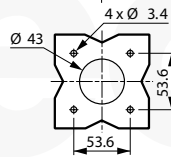
MPX³ 63H - Cat.No 4174 64



MPX³ 100H - Cat.No 4174 65

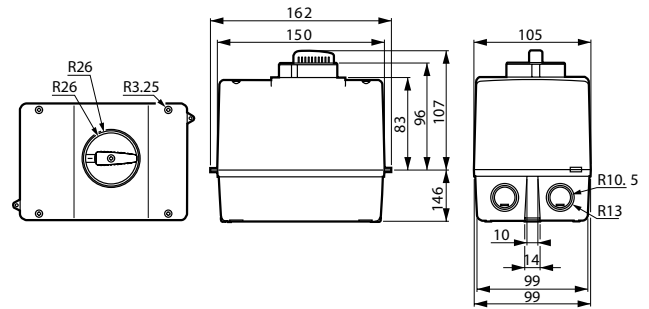


Cat.Nos	A (mm)	MMS Type
4174 63	min: 148.6	MPX ³ 32H / 32MA
	max: 410.6 (Shaft 315mm)	
4174 64	min: 193.6	MPX ³ 63H
	max: 455.6 (Shaft 315mm)	
4174 65	min: 220	MPX ³ 100H
	max: 482 (Shaft 315mm)	



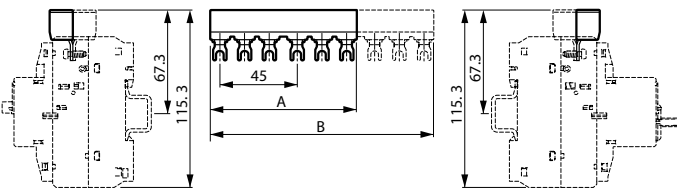
Enclosure

Cat.Nos 4174 80/81

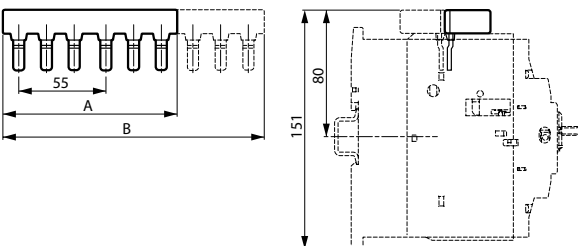


Phase Bus

Cat.Nos 4174 71/73/75/76



Cat.Nos 4174 72/74



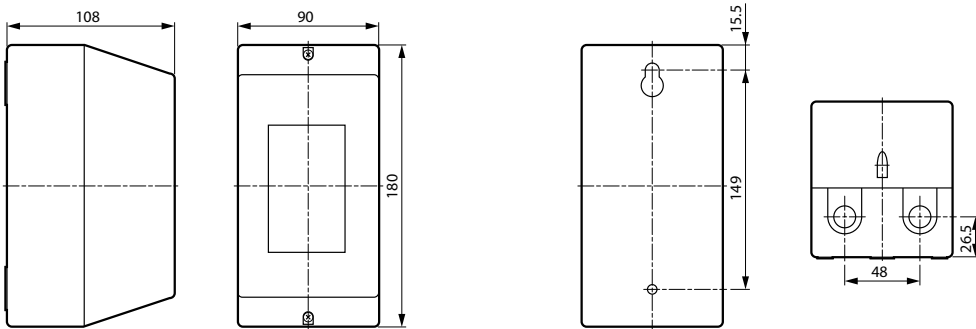
Cat.Nos	Number of MPX ³	A (mm)	B (mm)
4174 71	2	85	-
4174 72	3	-	130
4174 73	2	110	-
4174 74	3	-	165
4174 75	4	-	175
4174 76	5	-	220

CTX³ accessories

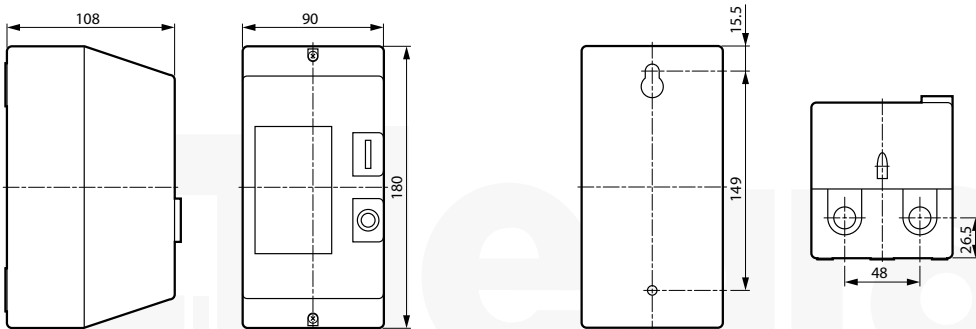
dimensions and wiring diagrams (continued)

Boxes for motor starters

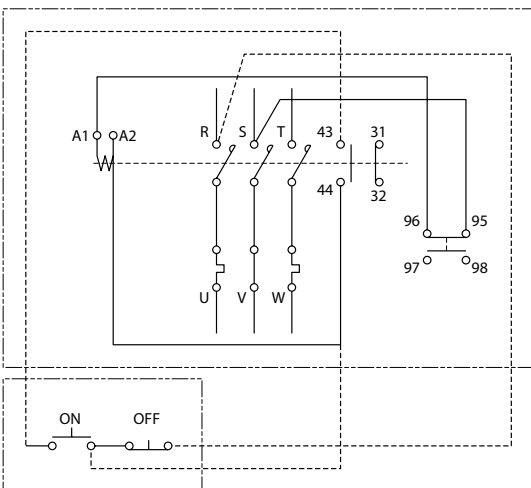
Without pushbuttons - Cat.No 4168 90



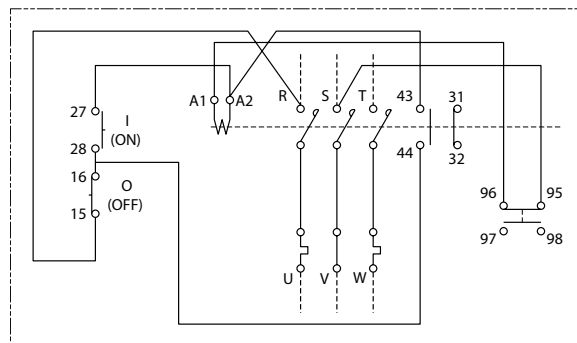
With pushbuttons - Cat.No 4168 91



Wiring diagram - Cat.No 4168 90



Wiring diagram - Cat.No 4168 91

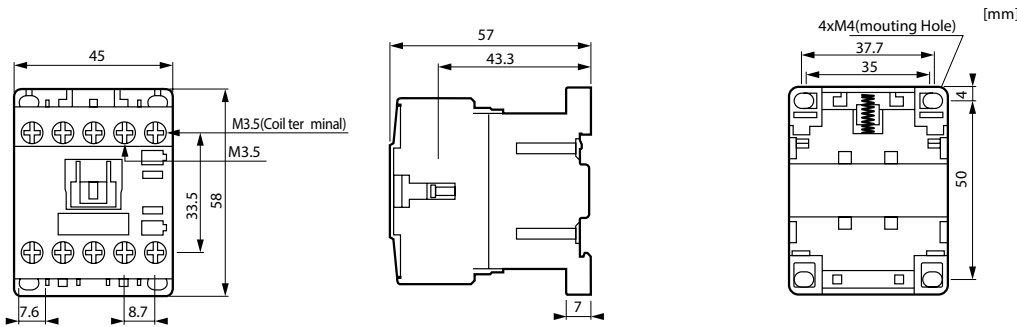


Mini contactors CTX³

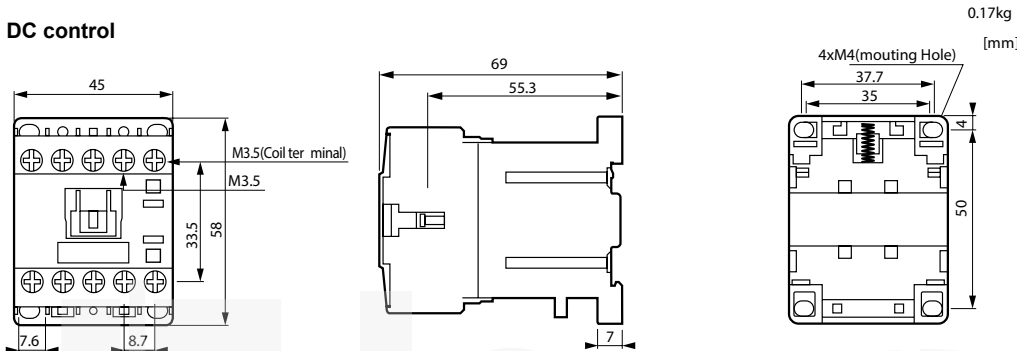
technical characteristics and dimensions

Mini contactors 3P and 4P and control relays

AC control



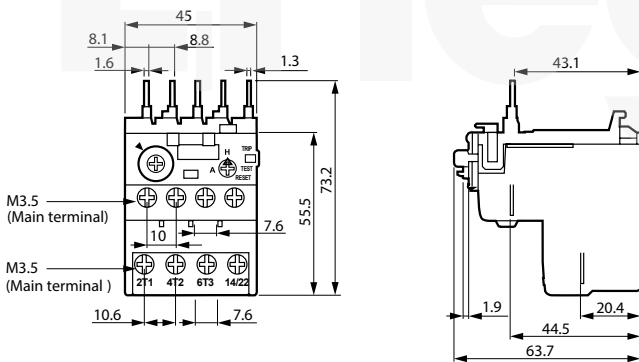
DC control



0.17kg

[mm]

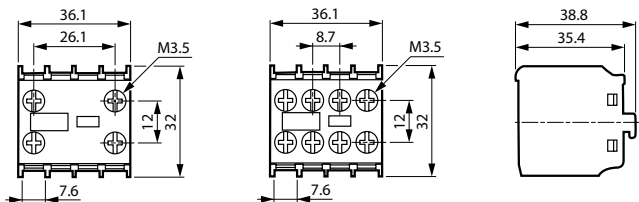
Thermal overload relays for mini contactors



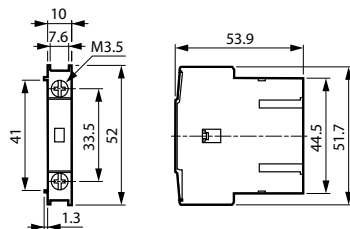
0.23kg

Auxiliary contacts

Front mounting



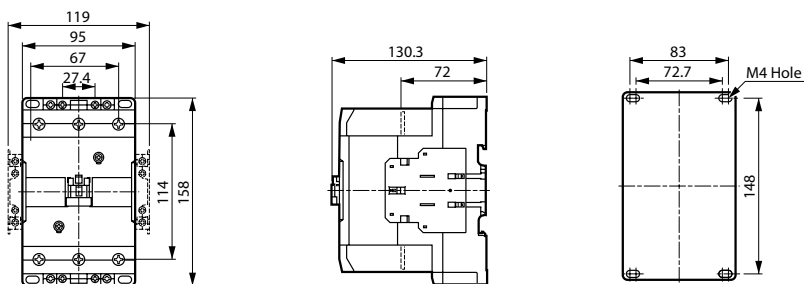
Side mounting



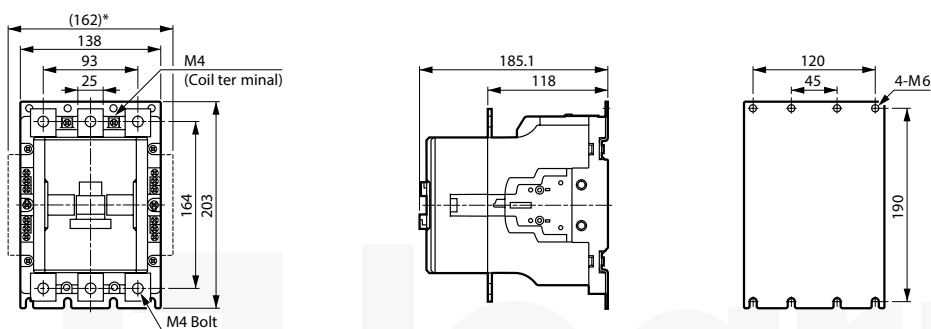
3-pole contactors CTX³

dimensions (continued)

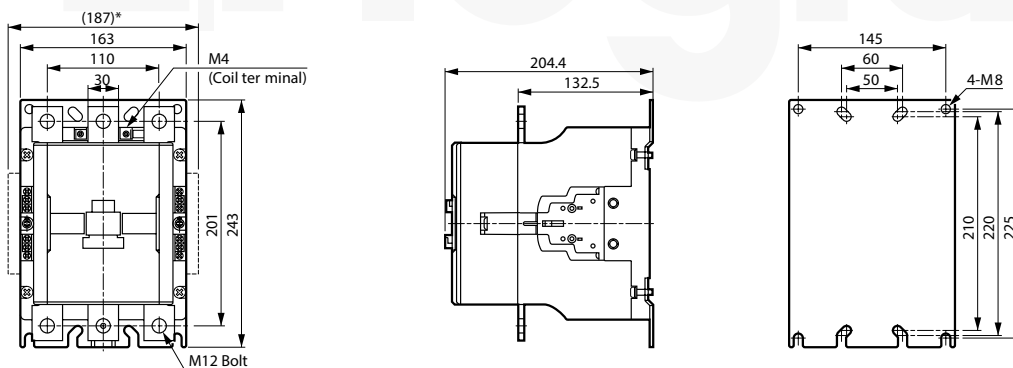
CTX³ 150



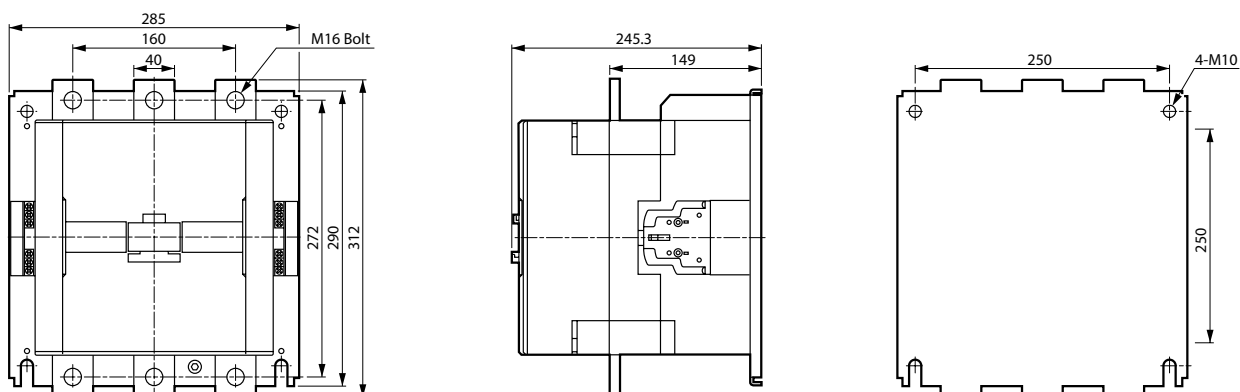
CTX³ 225



CTX³ 400



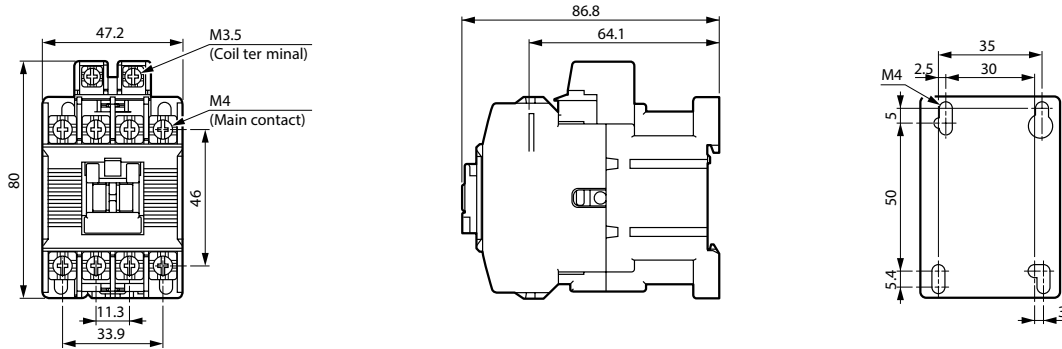
CTX³ 800



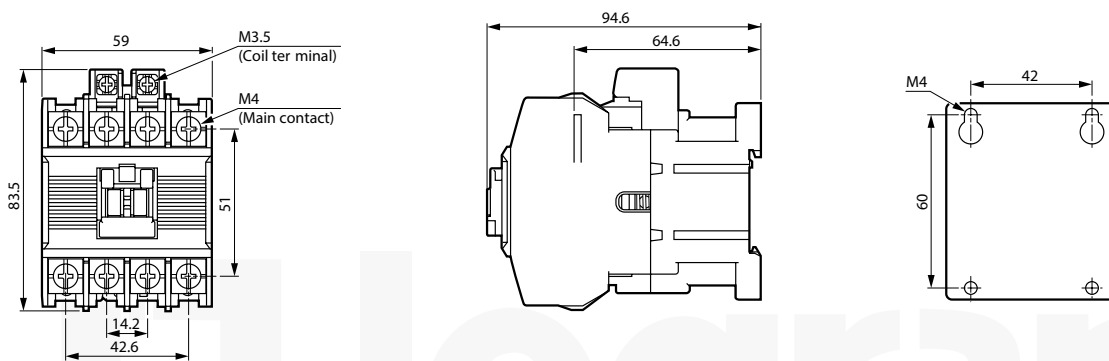
4-pole contactors CTX³

dimensions

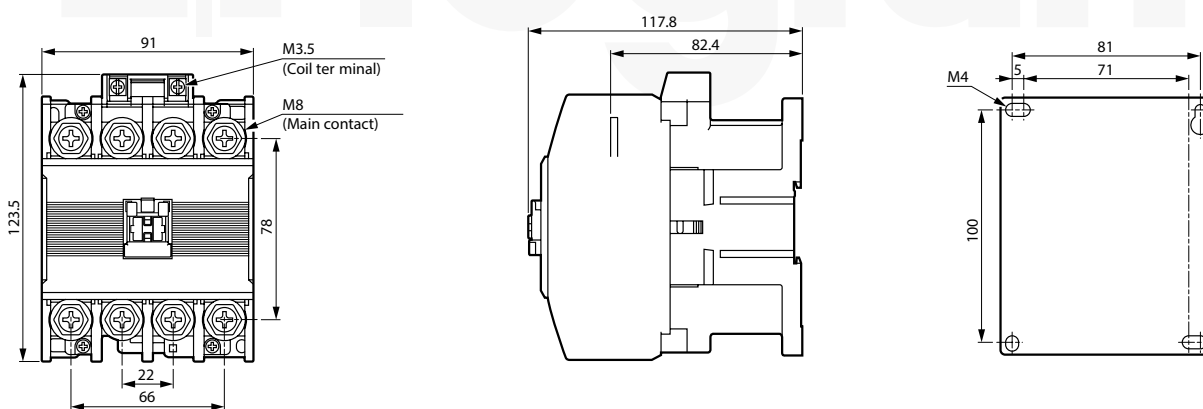
CTX³ 4P 40 A



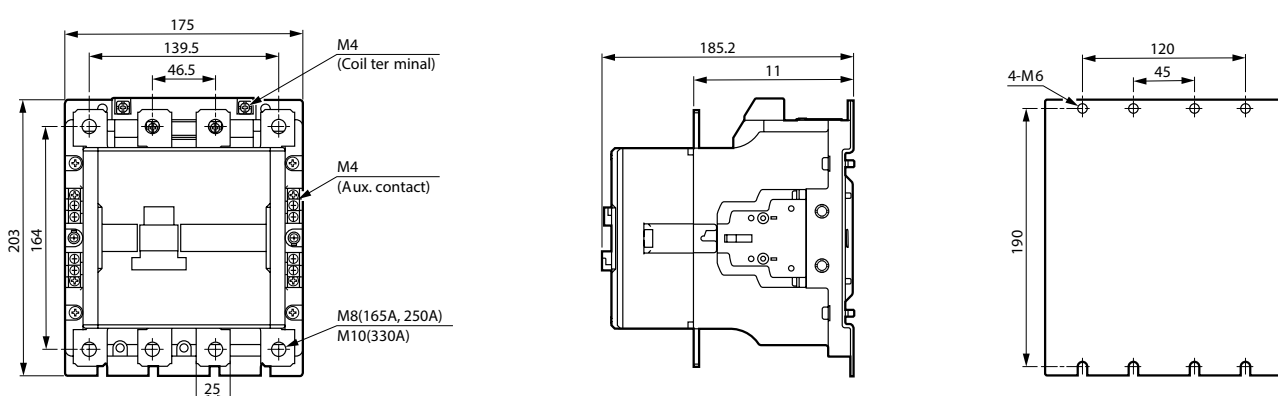
CTX³ 4P 60 A



CTX³ 4P 100 A and 135 A



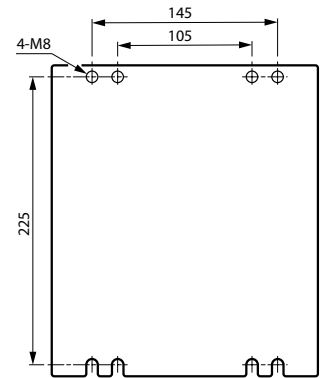
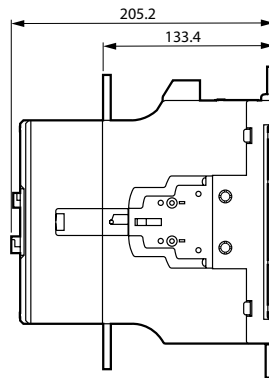
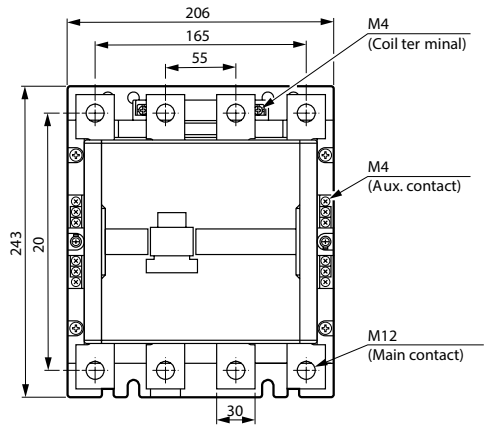
CTX³ 4P 165 A, 250 A and 330 A



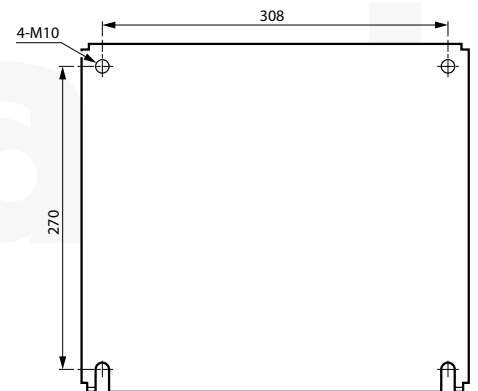
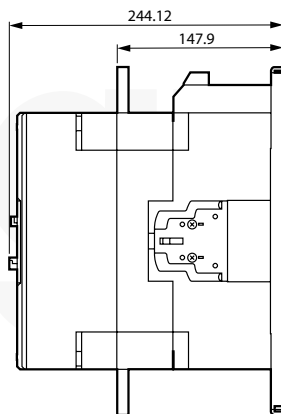
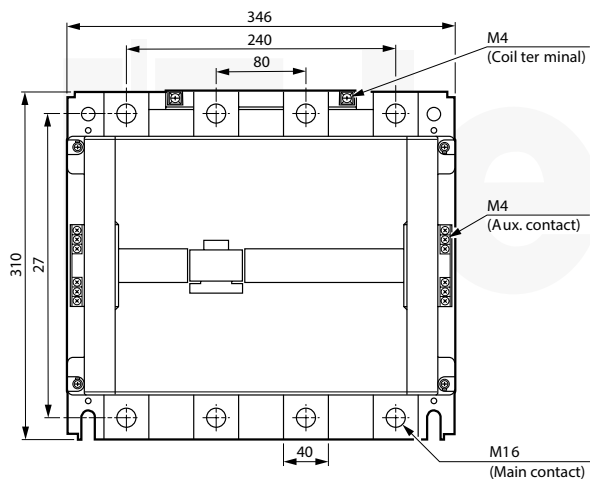
4-pole contactors CTX³

dimensions (continued)

CTX³ 4P 420 A and 500 A



CTX³ 4P 750 A and 900 A

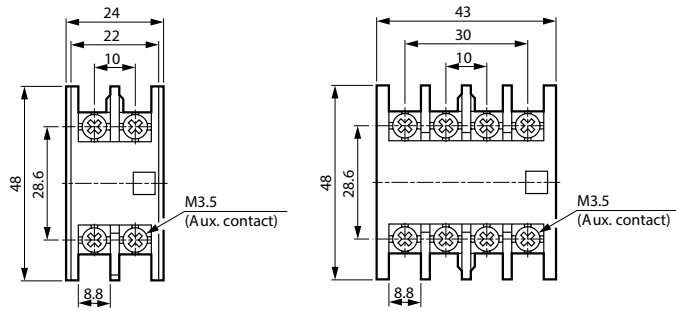


CTX³ accessories

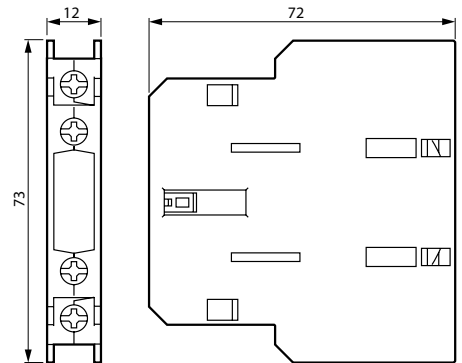
dimensions and wiring diagrams

Auxiliary contacts for CTX³

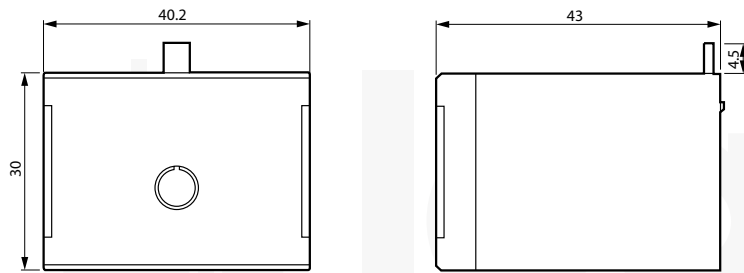
Front mounting



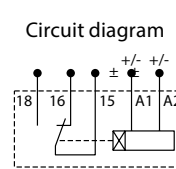
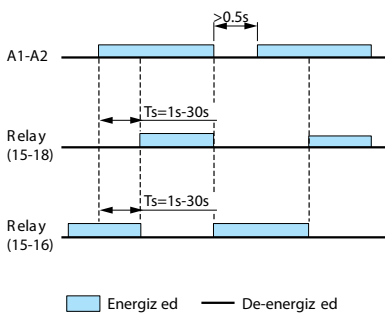
Side mounting



CTX³ time-delay blocks



ON delay - Cat.Nos 4168 70/71



OFF delay - Cat.Nos 4168 72/73

