

Table of Specifications

Midi-Contactors



Frame size				
Type		Terminal type		
Number of poles				
Rated operational voltage, Ue				
Rated insulation voltage, Ui				
Rated frequency				
Rated impulse withstand voltage, Uimp				
Maximum operating rate in operating cycles per hour(AC3)				
Durability		Mechanical		
		Electrical		
Current and power	AC-1, Thermal current	A		
	AC-3	200/240V	kW	
			A	
		380/440V	kW	
			A	
		500/550V	kW	
	A			
	690V	kW		
		A		
UL rating (50/60Hz)	Continuous current		A	
	Single phase	110~120V	HP	
		220~240V	HP	
		200~208V	HP	
	Three phase	220~240V	HP	
		440~480V	HP	
550~600V		HP		
	NEMA size			
Size and weight		AC control	Weight	kg
			Size(W × H × D)	mm
		DC control	Weight	kg
			Size(W × H × D)	mm
Auxiliary(standard)				
Auxiliary		Side mount		
		Front mount		

22AF			
CC9	CC12	CC18	CC22
Screw Only			
3pole			
690V			
690V			
50/60Hz			
6kV			
1800 operations per hour			
15 mil. operations			
2.5 mil. operations			
25	25	32	40
2.5	3.5	4.5	5.5
11	13	18	22
4	5.5	7.5	11
9	12	18	22
4	7.5	7.5	15
7	12	13	20
4	7.5	7.5	15
6	9	9	18
25	25	40	40
0.5	0.75	1	2
1.5	2	3	3
2	3	5	7.5
3	5	7.5	10
5	7.5	10	15
7.5	10	15	20
00	00	0	1
0.34			
45 × 73.5 × 86			
0.51			
45 × 73.5 × 117.7			
GUA1, GUA2, GUA4			
GUA-1			
GUA-2, GUA-4			

40AF	
CC32	CC40
Screw Only	
3pole	
690V	
1000V	
50/60Hz	
8kV	
1800 operations per hour	
12 mil. operations	
2 mil. operations	
50	60
7.5	11
32	40
15	18.5
32	40
18.5	22
28	32
18.5	22
20	23
50	60
2	3
5	7.5
7.5	15
10	15
20	30
25	30
1	1
0.55	
69 × 83 × 93	
0.77	
69 × 83 × 120	
GUA-1	
GUA-2, GUA-4	

Note) Minimum conduct current of Auxiliary contactor is DC 17V 5mA.

GT Type Thermal Overload Relays

Type	Screws clamp terminals		
Rated operational voltage, Ue	690V		
Rated insulation voltage, Ui	690V		
Rated impulse withstand voltage, Uimp	6kV		
Trip class	10A, 20		
Setting range	0.1~40A		
Size and weight	Weight		
	Size(W × H × D) mm		



GT32	
●	
690V	
690V	
6kV	
10A, 20	
0.1~40A	
0.17	
45 × 75 × 90	

GT32	
●	
690V	
690V	
6kV	
10A, 20	
0.1~40A	
0.17	
45 × 75 × 90	

Table of Specifications



65AF	
CC50	CC65
Screw or Lug	
3pole	
690V	
1000V	
50/60Hz	
8kV	
1800 operations per hour	
12 mil. operations	
2 mil. operations	
70	100
15	18.5
55	65
22	30
50	65
30	33
43	60
30	33
28	35
70	100
3	5
10	15
20	25
25	30
40	50
50	60
2	2
1.05	
79 × 106 × 122	
1.3	
79 × 106 × 149	

GUA-1
GUA-2, GUA-4



GT63
•
690V
690V
6kV
10A, 20
4~65A
0.31/0.33
55 × 81 × 100



100AF		
CC75	CC85	CC100
Screw or Lug		
3pole		
690V		
1000V		
50/60Hz		
8kV		
1800 operations per hour		
12 mil. operations		
2 mil. operations		
110	135	160
22	25	30
75	85	105
37	45	55
75	85	105
37	45	55
64	75	85
37	45	45
42	45	65
110	135	160
5	7.5	10
15	15	20
25	30	30
30	40	40
50	60	75
60	75	75
2	3	3
1.93		
94 × 140 × 137		
2.8		
94 × 140 × 174		

GUA-1
GUA-2, GUA-4



GT95
•
690V
690V
6kV
10A, 20
7~100A
0.48/0.5
70 × 97 × 110

Table of Specifications



400AF		
CC265*	CC330*	CC400*
Screw Only		
3pole		
690V		
1000V		
50/60Hz		
8kV		
1200 operations per hour		
5 mil. operations	2.5 mil. operations	
1 mil. operations	0.5 mil. operations	
300	350	450
80	90	125
265	330	400
147	160	200
265	330	400
147	160	225
225	280	350
160	200	250
185	225	300
300	350	450
-	-	-
-	-	-
75	100	125
100	125	150
200	250	300
200	250	300
5	5	5

9.2
163 × 243 × 198

2a2b
-
-



GT400
●
690V
690V
6kV
10A, 20
85~400A
2.6
151 × 171 × 198



800AF		
CC500*	CC630*	CC800*
Screw Only		
3pole		
690V		
1000V		
50/60Hz		
8kV		
1200 operations per hour		
2.5 mil. operations		
0.5 mil. operations		
580	660	900
147	190	220
500	630	800
265	330	440
500	630	800
265	330	500
400	500	720
300	400	500
380	420	630
580	660	900
-	-	-
-	-	-
150	200	200
200	250	300
400	500	600
400	500	600
6	6	7

22.4
285 × 312 × 242

2a2b
-
-



GT800
●
690V
690V
6kV
10A, 20
200~800A
11.5
360 × 530 × 212

Type Numbering System

Midi-Contactor

CC	9		S	A	120		
Magnetic 3-pole Midi-Contactor	Amperage Size	Type	Terminal Type	Coil Type	Coil Voltage	AC Coil Frequency	Auxiliary Contact s
	9 - 9A 12 - 12A 18 - 18A 22 - 22A 32 - 32A 40 - 40A 50 - 50A 65 - 65A 75 - 75A 85 - 85A 100 - 100A	BLANK - 3-pole /4 - 4-pole	S - Screw L - Lug (>50A)	A - AC type D - DC type	24 - 24V 120 - 120V & 600 - 600V	BLANK - 50/60 Hz 50Hz - 50Hz only 60Hz - 60Hz only	BLANK - standard arrangement NOAUX - no aux. contact (>=32A)

Overload

GT	32		S	0.16A
Bimetallic Midi-Overload	Frame Size	Class	Terminal Type (Must match contactor number)	Setting Ranges (Use upper limit in part)
	32 - 9, 12, 18A 22, 32, 40A 65 - 50, 65A 75 - 75, 85, 100A	BLANK class 10 L - class 20	S - Screw L - Lug (>35A)	0.1 ~ 0.16A 0.16 ~ 0.25A 0.25 ~ 0.4A 0.4 ~ 0.63A 0.63 ~ 1A 1 ~ 1.6A 1.6 ~ 2.5A 2.5 ~ 4A 4 ~ 6A 5 ~ 8A 6 ~ 9A 7 ~ 10A 9 ~ 13A 12 ~ 18A 16 ~ 22A 18 ~ 25A 22 ~ 32A 24 ~ 36A 28 ~ 40A 34 ~ 50A 45 ~ 65A 54 ~ 75A 63 ~ 85A 70 ~ 95A 80 ~ 100A (Setting Range Guide)

CGE	22	3P	22A
Electronic Midi Overload	Frame Size	Protection	Setting Range (Use upper limit in part)
	22 - 9, 12, 18, 22A 40 - 32, 40A 80 - 50, 65, 75, 85A	Direct Mount 22 and 40AF 2P - 2-Pole 3P - 3-Pole 3PR - 3-pole Separate Mount All CGE sizes 2S - 2-Pole 3S - 3-Pole 3SR - 3-Pole	CGE22 0.3 ~ 1.5A 1 ~ 5A 4.4 ~ 22A CGE40 4 ~ 20A 8 ~ 40A CGE80 16 ~ 80A

Tunel Type 22 and 40AF 2T - 2-Pole 3T - 3-Pole 3TR - 3-Pole	GT32 GT65 GT95
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Optional Accessories

Auxiliary contact unit

GUA1

11

Version	Contact composition
GUA1 Side mount	11 1NO+1NC
GUA2 Front mount(2P)	20 2NO
GUA4 Front mount(4P)	02 2NC
	40 4NO
	31 3NO+1NC
	22 2NO+2NC
	13 1NO+3NC
	04 4NC

Surge absorber

GUS11

Composition and voltage
1 Varistor+RC AC/DC 24~48V
2 Varistor+RC AC/DC 100~125V
3 Varistor+RC AC/DC 200~240V
4 Varistor+RC AC 380~440V
5 Varistor+RC AC 24~48V
6 Varistor+RC AC 100~125V
11 Varistor AC 200~240V
12 Varistor DC 24~48V
13 Varistor DC 100~125V
14 Varistor DC 200~220V
22 RC AC 100~125V

(Note) See page 52 for details.

Interlock unit

GUR02

Contact composition

02	2NC
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Wire kit for Interlocking

GUW32

Frame size

22	22AF
32	32AF
63	63AF
95	95AF

Separate mounting unit (For relay)

GUZ32

Frame size

32	32AF
63	63AF
95	95AF
150	150AF

Remote reset unit (For relay)

GTTR-16

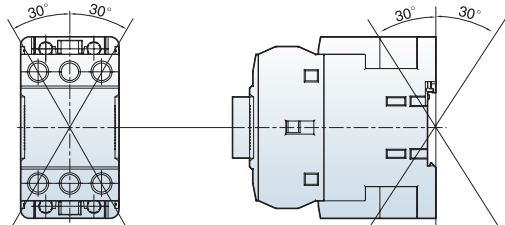
Cable length

16	400
20	500
24	600

Environment / Connections



Environment

Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL508, K60947
Certifications	CE, UL
Rated insulation voltage (Ui)	1000V
Rated impulse withstand voltage (Uimp)	8kV
Degree of protection	IP20 (Conforming to IEC60529)
Ambient air temperature	Storage: -50° C ~ +80° C Operation: -5° C ~ +60° C
Operating altitude	3000m (8900ft)
Operating positions	
Shock resistance (1/2 sine wave =11ms)	Opened: 8G Closed: 10G
Vibration resistance (Conforming to IEC68-2-6) (5...300 Hz)	Opened: 2G Closed: 4G
Flame resistance	Conforming to UL 94: Vo Conforming to IEC 695-2-1: 960° C

Connections

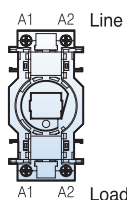
Wire type		Main Terminal Size							Torque	
										
Frame			(AWG / mm²)						mm(max)	[lb-in] [Nm]
CC9		M4	18~10 / 1~6	18~10 / 1~6	18~10 / 1~6				9.6	20 2.25
CC12			18~10 / 1~6	16~10 / 1~6	16~10 / 1~6					
CC18			18~10 / 1~6	16~8 / 1.5~10	16~8 / 1.5~10					
CC22			18~10 / 1~6	14~8 / 2.5~10	14~8 / 2.5~10					
CC32		M5	18~10 / 1~6	12~8 / 2.5~10	12~8 / 2.5~10				12.8	20 2.25
CC40			18~10 / 1~6	8~6 / 10~16	8~6 / 10~16					
CC50		M6	-	10~4 / 6~25	10~4 / 6~25				14	35 4
CC65			-	8~3 / 10~35	8~3 / 10~35					
CC75		M8	-	8~2 / 10~35	8~2 / 10~35				17	45 5.1
CC85			-	8~1/0 / 10~50	8~1/0 / 10~50					
CC100		M8	-	8~2/0 / 10~70	8~2/0 / 10~70				24.5	80 9.1
CC130			-	3~2/0 / 35~70	3~2/0 / 35~70					
CC150		M8	-	3~4/0 / 35~95	3~4/0 / 35~95				24.5	80 9.1
CC9~150		M4	20~14 / 0.5~2.5	18~12 / 0.75~2.5	18~12 / 0.75~2.5				7.6	15 1.75
CC185		M10	-	1~4/0 / 50~95	1~4/0 / 50~95				25	130 14.7
CC225			-	1/0~300 / 50~150	1/0~300 / 50~150					
CC265		M12	-	3/0~500 / 95~240	3/0~500 / 95~240				30	200 22.6
CC330			-	4/0~500 / 95~240	4/0~500 / 95~240					
CC400		M16	-	350~700 / 185~185x2	350~700 / 185~185x2				40	500 26.5
CC500			-	350~800 / 185~240x2	350~800 / 185~240x2					
CC630		M16	-	600~2000	-				40	500 26.5
CC800			-	1700~Busbar	-					
CC185~800		M5	16~10 / 1.25~5.5	16~10 / 1.25~5.5	16~10 / 1.25~5.5				7.6	15 1.75

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Control Coil Characteristics



Frame size			22AF	40AF	65AF	100AF	150AF		
Type			CC9 CC12 CC12 CC22	CC32 CC40	CC50 CC65	CC75 CC85 CC100	CC130 CC150		
	24, 32, 36, 42, 48, 80, 100, 110, 220, 230, 240, 380, 400, 415, 440, 500, 550V						24, 48, 110,		
	24, 48, 100, 110, 120, 200, 208, 220, 230, 240, 277, 380, 440, 480, 600V						220, 300,		
			24, 48, 100, 110, 120, 200, 220, 230, 240, 380, 415, 440, 500, 550V						400, 500
AC coil									
Control voltage	[Uc]								
	50Hz	[V]							
	60Hz	[V]							
	50/60Hz	[V]							
Voltage limit	[Uc]								
	Pick-up		85 ~110% (50Hz)						
			85 ~110% (60Hz)						
			30 ~ 60%						
Coil consumption at 20°C									
AC 220V	Inrush	[VA]	58/56	53/50	110/104	229/216	108/104		
50/60Hz	Holding	[VA]	9.0/6.0	12.0/9.0	13.0/10.0	17.0/13.0	18.0/21.0		
Heat dissipation		[W]	2.1/1.5	2.7/2.2	2.8/2.4	5.4/4.7	2.7/3.6		
Operating time									
	Closing	[ms]	12 ... 22	12 ... 22	12 ... 22	15 ... 30	20 ... 40		
	Opening	[ms]	4 ... 19	4 ... 19	4 ... 19	10 ... 30	60 ... 70		
DC coil									
Control voltage		[Uc]	12, 20, 24, 48, 60, 80, 100, 110, 125, 200, 220, 250					24, 48, 110, 220	
Voltage limit			[Uc]						
			70 ~ 110%						
			10 ~ 30%						
Coil consumption at 20°C									
DC 110V	Inrush	[W]	9	7	9	18	213		
	Holding	[W]	9	7	9	18	7.5		
Time constant (L/R)		[ms]	28	28	65	75			
Operating time									
	Closing	[ms]	35 ... 50	50 ... 65	50 ... 65	100 ... 120	70 ... 80		
	Opening	[ms]	4 ... 19	4 ... 19	4 ... 19	10 ... 25	60 ... 70		



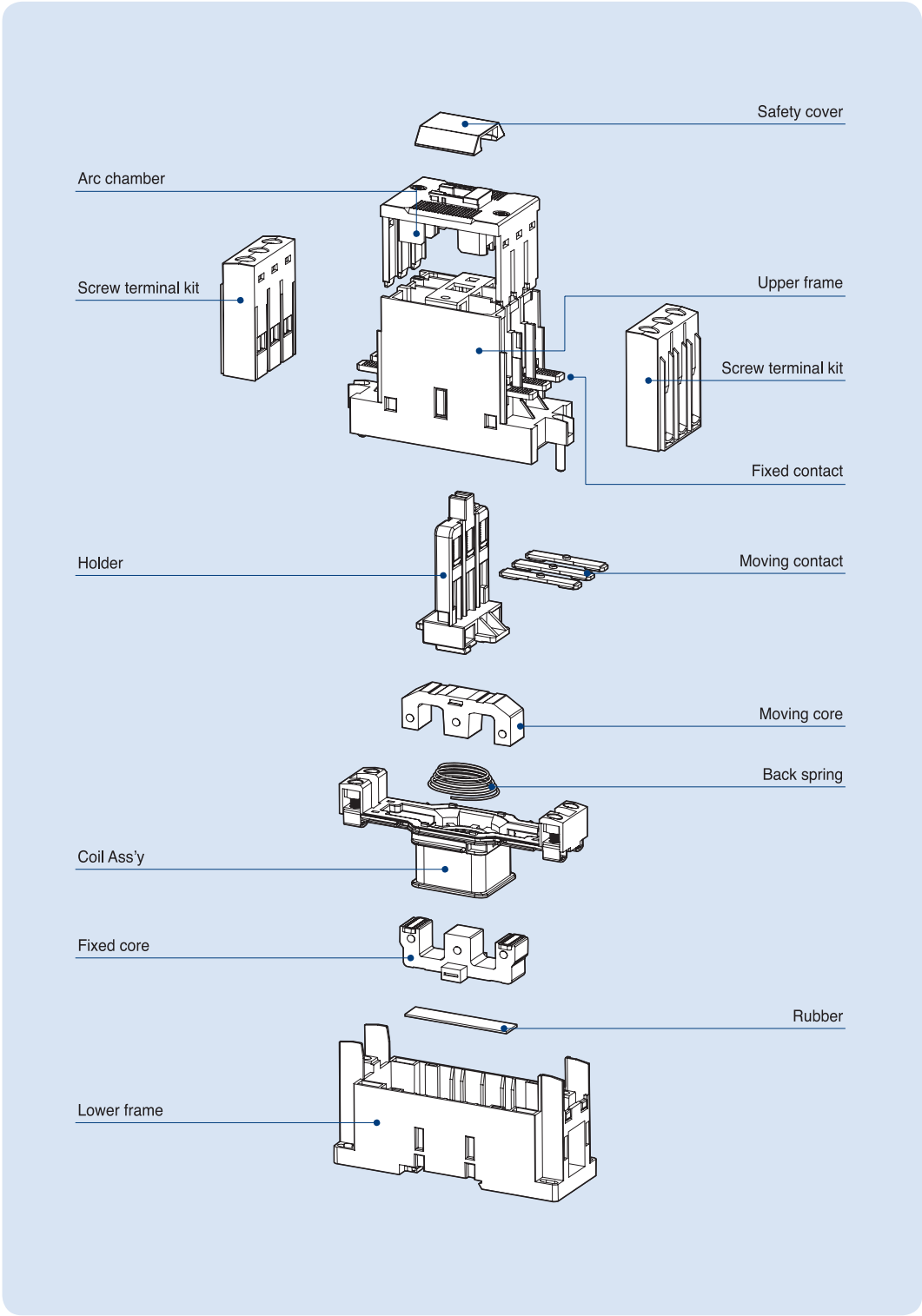
Note) A1(A2) in line side is internally connected to A1(A2) in load side.

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Control Coil Characteristics



Frame size			225AF	400AF	800AF
Type	CC185 CC225			CC265 CC330 CC400	CC500 CC630 CC800
	AC/DC common coil				
	Control voltage [Uc]				
	AC/DC		24/24	-	-
	AC/DC		48/48	-	100/100
	AC/DC		100~240/100~220	100~240/100~220	200/200
	AC		300	300	300
	AC		400	400	400
	AC		500	500	500
Voltage limit [Uc]	Pick-up			86~110%	
	Drop-out			30~60%	
	Coil consumption at 20°C				
AC 220V	Inrush	[VA]	380	571	1000
50/60Hz	Holding	[VA]	11.6	14	29
Heat dissipation		[W]	4.7	5	7.8
Operating time	Closing [ms]		70	55	75
	Opening [ms]		70	55	75



Description

- 3-pole main contact
- AC/DC common use coil built
- Wide coil operation voltage
- Screw mountable
- 2NO+2NC Auxiliary contacts built-in as standard
- Top/side mountable accessories available
- Overload relays available



Rating

Contactor type			CC500		CC630		CC800	
			kW	A	kW	A	kW	A
AC duty	AC3	200/240V	147	500	190	630	220	800
		380/440V	265	500	330	630	440	800
		500/550V	265	400	330	500	500	720
		690V	300	380	400	420	500	630
	AC4	200/240V	90	350	110	400	160	630
		380/440V	176	350	200	400	300	630
	AC1		-	580	-	660	-	900
DC1 duty (L/R=1ms)	2-pole	24V	-	400	-	630	-	800
	in series	48V	-	240	-	630	-	800
		110V	-	200	-	630	-	630
	3-pole	24V	-	400	-	630	-	800
	in series	48V	-	400	-	630	-	800
		110V	-	400	-	630	-	800
DC2, 4 duty (L/R=15ms)	2-pole	24V	-	400	-	630	-	800
	in series	48V	-	200	-	630	-	630
		110V	-	150	-	630	-	630
	3-pole	24V	-	400	-	630	-	800
	in series	48V	-	280	-	630	-	630
		110V	-	200	-	630	-	630
Directly mountable Overload relay			GT800					
Conductor size (solid, stranded)		AWG	350~800		600~2000		1700~Busbar	
(the max. number of conducts: 2)		mm ²	185~480		-		-	
Conductor type			75℃ Cu stranded wire					



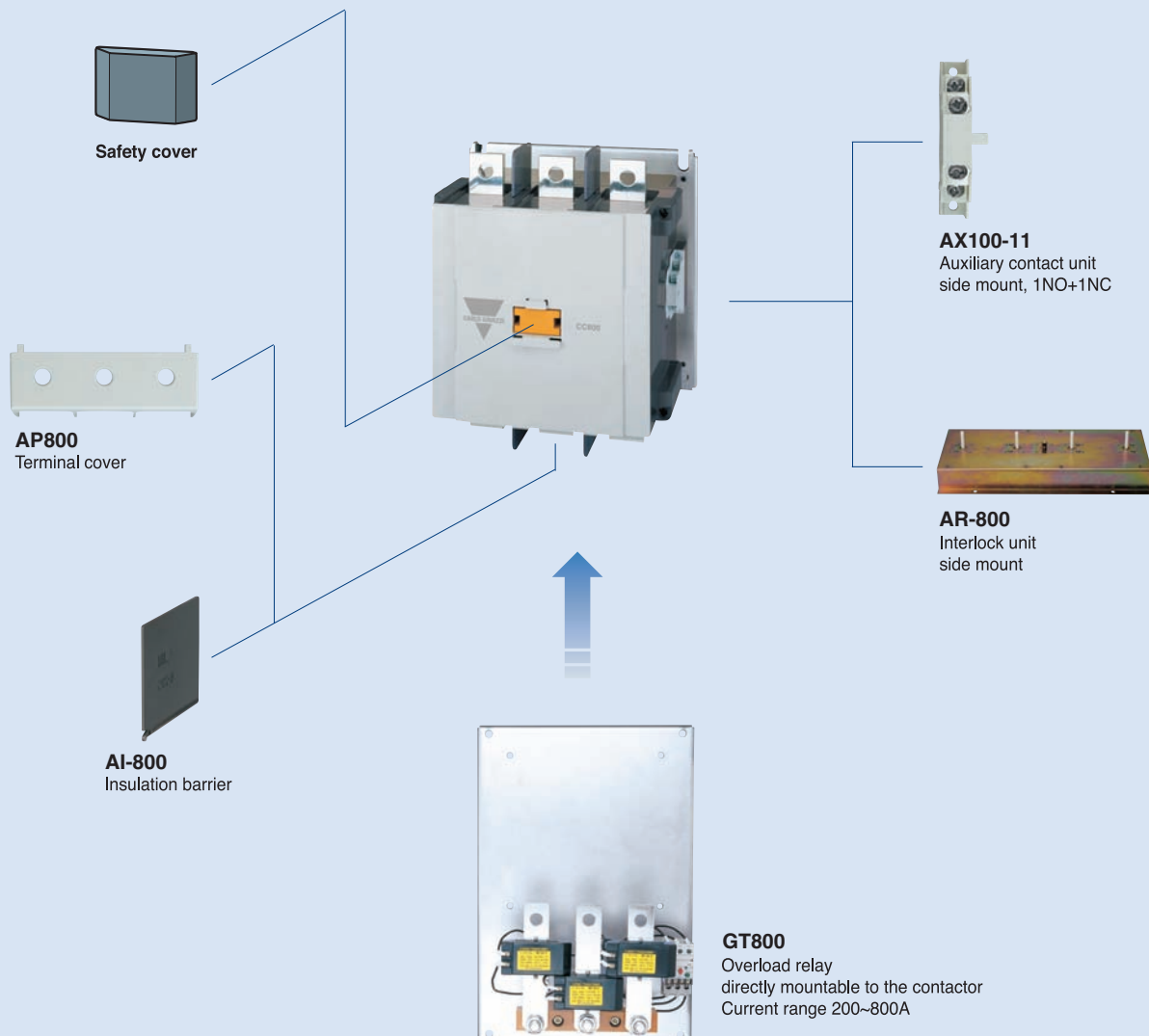
Coil voltage, AC/DC common

Nominal(ordering) voltage	AC 50/60Hz	DC
100V	100 - 127V	100 - 110V
200V	200 - 240V	200 - 220V
300V	265 - 347V	-
400V	380 - 450V	-
500V	440 - 575V	-

Certification

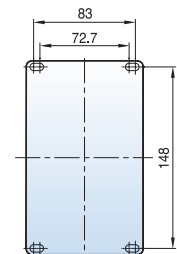
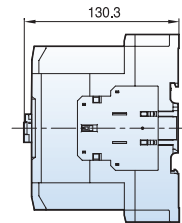
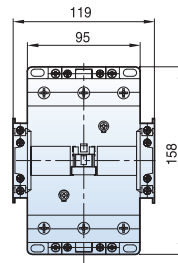
- CE(IEC)
- UL508

Accessories



Contactors (150AF ~ 800AF)

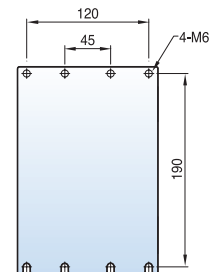
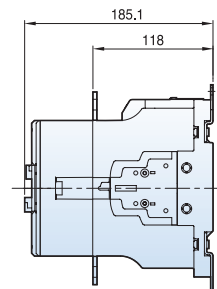
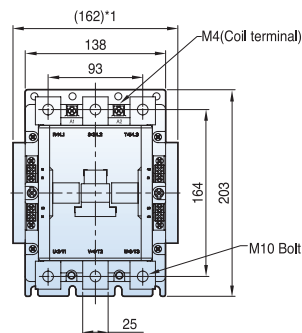
CC130 ~ CC150
2NO2NC aux



[mm]

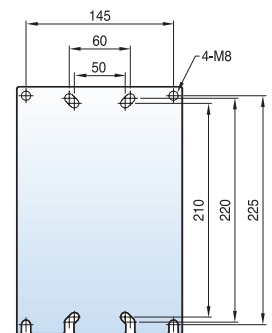
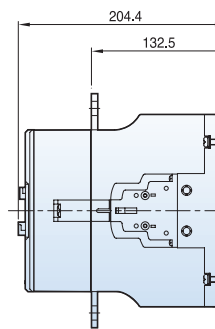
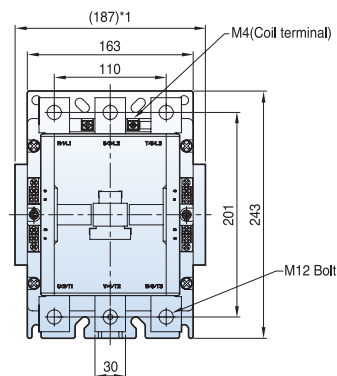
2.4kg

CC185 ~ CC225
2NO2NC aux



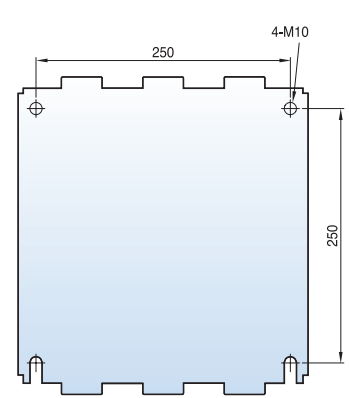
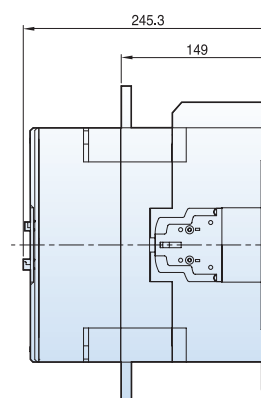
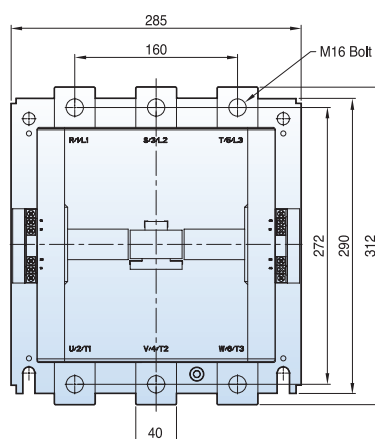
5.4kg

CC265 ~ CC400
2NO2NC aux



9.2kg

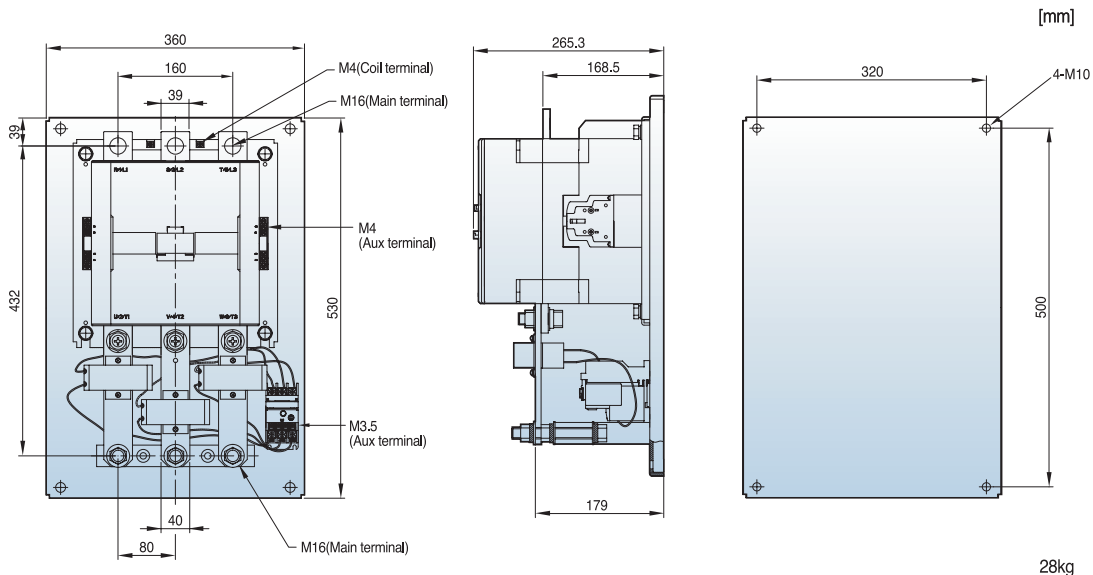
CC500 ~ CC800
2NO2NC aux



22.4kg

Motor Starters (185AF ~ 800AF)

CC500 ~ CC800
with GT800
2NO2NC
aux contact



Mouser Electronics

Authorized Distributor

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[CC500SAD100](#) [CC500SAD200](#) [CC630SAD100](#) [CC630SAD200](#) [CC800SA500](#) [CC500SA500](#) [CC630SA500](#)
[CC800SAD100](#) [CC800SAD200](#)