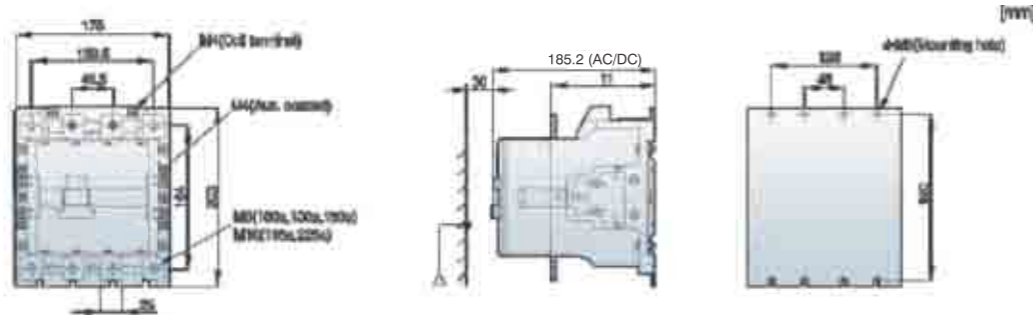


Dimensions (4Pole)

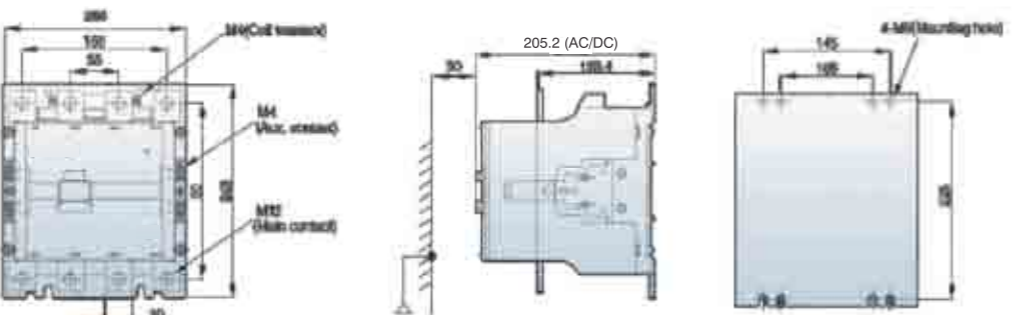
Contactors (IC-100a/4~800a/4)

- IC-100a/4
- IC-130a/4
- IC-150a/4
- IC-185a/4
- IC-225a/4



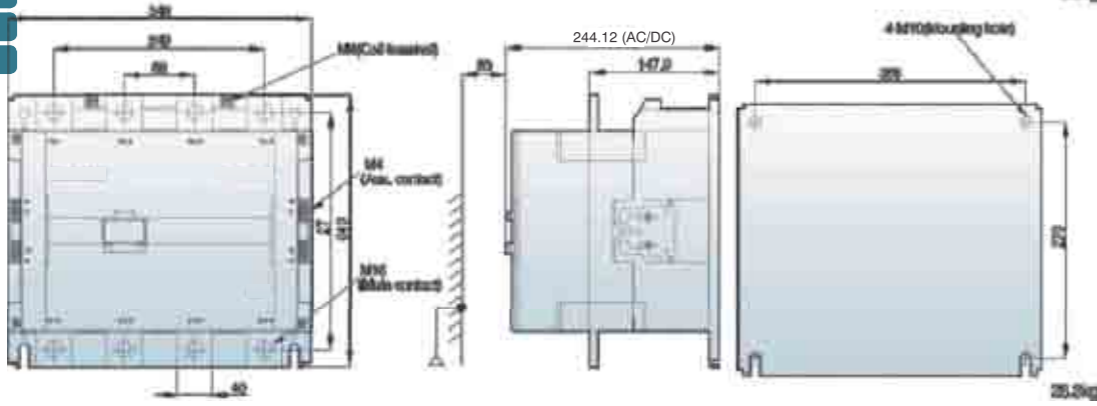
5.6kg

- IC-265a/4
- IC-330a/4
- IC-400a/4



9.8kg

- IC-500a/4
- IC-630a/4
- IC-800a/4



25.2kg



HPL Electric & Power Pvt. Ltd.

1/21, Asaf Ali Road, New Delhi-110002 Ph.: +91-11-23234411
Fax : +91-11-23232639 E-mail : hpl@hplindia.com

www.hplindia.com

Branch Offices :

- | | | | | |
|----------------------------|------------------------|---------------------------|---------------------------|---------------------------|
| • Ahmedabad 079-30021025 | • Indore 0731-4225540 | • Vijayawada 0866-2442275 | • Davangere 0891-2794506 | • Srinagar 086-2442275 |
| • Bangalore 080-22863069 | • Jaipur 0141-5106268 | • Vizag 0891-2794506 | • Goa 0891-2794506 | • Sambalpur 0674-6538229 |
| • Bhubaneswar 0674-6538229 | • Kanpur 0512-2316017 | • Agartala 033-22252716 | • Gorakhpur 0522-4021687 | • Tirupati 0484-2354595 |
| • Chandigarh 0172-5077815 | • Kolkata 0522-4021687 | • Agra 022-28506246 | • Allahabad 0712-2222988 | • Trichy 0422-4393995 |
| • Chennai 044-28551530 | • Lucknow 022-28506246 | • Anantpuram 020-66004041 | • Aurangabad 0651-2206144 | • Trivandrum 0361-2450889 |
| • Cochin 0484-2354595 | • Nagpur 0712-2222988 | • Amravati 0651-2206144 | • Akola 0771-6541590 | • Udaipur 0836-4251463 |
| • Coimbatore 0422-4393995 | • Pune 020-66004041 | • Bilaspur 0651-2206144 | • Angul 0771-6541590 | • Vapi 040-66687878 |
| • Dehradun 0135-2650346 | • Ranchi 0651-2206144 | • Calicut 0771-6541590 | • Bareilly 0265-2341747 | |
| • Guwahati 0361-2450889 | • Raipur 0771-6541590 | • Cuttack 0265-2341747 | | |
| • Hubli 0836-4251463 | • Vadodra 0265-2341747 | | | |
| • Hyderabad 040-66687878 | | | | |

Due to continuous development, specifications and features are subject to change without prior notice.

HPL/COR/04-11



Corporate Information

Founded in 1956, the HPL Group is a major player in Indian Electrical Industry with commitment to state of art technology, manufacturing world class products. HPL Group has been serving Indian Industry since last 55 years with time tested, reliable and well-proven products in the field of Switchgears, Protection Devices, Electronic Energy Meters, Energy Management Systems, CFL Lamps, Luminaries and Wires & Cables.

HPL Group has 69 marketing offices spread throughout the country with 1200 authorised dealers and over 15000 retailers. The Group has manpower of over 5000 people. HPL Group possess nine ultra modern state-of-art manufacturing plants, located in Gurgaon (Haryana), Noida (U.P), Kundli (Haryana), Sonapat (Haryana) and Jabli (Himachal Pradesh), having 80,000 sq. mtr. covered area, to manufacture the products confirming to latest Indian and International standards. HPL has an R&D centre with over 100 Design Engineers, who are consistently working to upgrade the product technology.

Following the philosophy of 3D's i.e. Duty to work, Discipline to quality & Devotion to customers, HPL group has created a niche for itself in the electrical industry. HPL today is popularly known as " The Technology Brand of India ".

HPL range of Controlgear is in technical collaboration with **LSIS** Co.,Ltd, Korea, a US\$ 25 billion group. **LSIS** is a leader in LV, MV & HV Switchgear, Controlgear, Circuit Breakers, Automation, Large scale systems, GIS and Green technologies solutions.



Contactors and Overload Relays *intelli*CONTROL intelligent control

Product Portfolio & Features

- Widest Range of 3P & 4P Contactors upto 800A
- 25 Models in just 9 frames
- Capacitor Duty Contactors upto 62 kvar
- Highest Electrical Life upto 2.5 million operations.
- Differential Bimetallic Overload Relays upto 800A
- Site mounted add on accessories
- Safety cover to avoid dust
- Conformity to latest IEC/IS Standards
- Type II Co-ordination
- CE marked & UL Certified



Specifications

IC type - 3 Pole Contactors



Frame Size		
Type		
Conforms to Standards		
POWER CONTACTS		
No. of poles		
Rated Operational voltage(V), Ue		
Rated Insulation voltage(V), Ui		
Rated Impulse withstand voltage(kV), Uimp		
Rated Making Capacity(A)		
Rated Breaking Capacity(A)		
AC Current (A)	Thermal current Ith	AC-1
	Motor Duty, 3ph, 380/440 v, 50Hz	AC-3
		AC-4
Capacitor Switching delta connected, 415 V, 50 Hz with fitted capacitor unit -(kVAR)		
		AC-6b
DC Current (A)	with 3 poles in series	DC1-24V
		DC1-48V
		DC1-110V
		DC2,4-24V
		DC2,4-48V
		DC2,4-110V
Mechanical Durability(Million op.)		
Electrical Durability(Million op.)		
Max Operating Rate in Op.Cycles/Hour		
		AC-3
Service Temperature		
Main Terminal Capacity	Lug(mm ²) Max. Nos. of conductors 2	
	Solid /Multi strand conductors - AWG	
Wt.(kg)---AC Control		
Size(W*H*D)-(mm)AC Control		
Wt.(kg)---DC Control		
Size(W*H*D)-(mm)DC Control		
AUXILIARY CONTACTS		
No. of Built in Aux Contacts		
Conventional Thermal current(A) Ith (AC-12 duty)		
AC-15 Rating at 380/440 V, 50 hz		
Terminal Capacity	(solid or multi strand (mm ²))	
CONTROL CIRCUIT/COIL		
Voltages available for U _c V, 50 Hz		
Pick Up	VA	
Hold on	VA	
Heat Dissipation	Watts	
Limit of Operations	Pick up(%U _c)	
	Drop out(%U _c)	

18AF			
IC-6a	IC-9a	IC-12a	IC-18a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947			
3	3	3	3
690	690	690	690
690	690	690	690
6	6	6	6
70	90	120	180
56	72	96	144
25	25	25	32
9	9	12	18
5	6	9	11
NA	9.7	12.5	16.7
20	20	20	20
20	20	20	20
15	15	15	15
18	18	18	18
15	15	15	15
12	12	12	12
15	15	15	15
2.5	2.5	2.5	2.5
1800	1800	1800	1800
-5°C to +60°C	-5°C to +60°C	-5°C to +60°C	-5°C to +60°C
1.5~4	1.5~4	1.5~10	2.5~10
18~10AWG	16~10AWG	16~8AWG	14~8AWG
0.3	0.3	0.3	0.3
45*73.5*79	45*73.5*79	45*73.5*79	45*73.5*79
0.5	0.5	0.5	0.5
45*73.5*110.7	45*73.5*110.7	45*73.5*110.7	45*73.5*110.7
1NO or 1NC	1NO or 1NCC	1NO or 1NC	1NO or 1NC
16	16	16	16
1.9	1.9	1.9	1.9
1~2.5	1~2.5	1~2.5	1~2.5
24 to 550V	24 to 550V /	24 to 550V	24 to 550V
58	58	58	58
9	9	9	9
2.1	2.1	2.1	2.1
85-110%	85-110%	85-110%	85-110%
30-60%	30-60%	30-60%	30-60%

22AF			
IC- 9b	IC- 12b	IC- 18b	IC- 22b
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947			
3	3	3	3
690	690	690	690
690	690	690	690
6	6	6	6
90	120	180	220
72	96	144	176
25	25	32	40
9	12	18	22
6	9	11	13
9.7	12.5	16.7	18
20	20	20	32
20	20	20	32
15	15	15	27
18	18	18	30
15	15	15	30
12	12	12	20
15	15	15	15
2.5	2.5	2.5	2.5
1800	1800	1800	1800
-5°C to +60°C	-5°C to +60°C	-5°C to +60°C	-5°C to +60°C
1.5~4	1.5~10	2.5~10	2.5~10
16~10AWG	16~8AWG	14~8AWG	14~8AWG
0.3	0.3	0.3	0.3
45*73.5*86	45*73.5*86	45*73.5*86	45*73.5*86
0.5	0.5	0.5	0.5
45*73.5*117.7	45*73.5*117.7	45*73.5*117.7	45*73.5*117.7
1NO + 1NC	1NO + 1NC	1NO + 1NC	1NO + 1NC
16	16	16	16
1.9	1.9	1.9	1.9
1~2.5	1~2.5	1~2.5	1~2.5
24 to 550V	24 to 550V	24 to 550V	24 to 550V
58	58	58	58
9	9	9	9
2.1	2.1	2.1	2.1
85-110%	85-110%	85-110%	85-110%
30-60%	30-60%	30-60%	30-60%

Specifications

IC type - 3 Pole Contactors



Frame Size		
Type		
Conforms to Standards		
POWER CONTACTS		
No. of poles		
Rated Operational voltage(V), Ue		
Rated Insulation voltage(V), Ui		
Rated Impulse withstand voltage(kV), Uimp		
Rated Making Capacity(A)		
Rated Breaking Capacity(A)		
AC Current (A)	Thermal current Ith	AC-1
	Motor Duty, 3ph, 380/440 v, 50Hz	AC-3
		AC-4
Capacitor Switching delta connected, 415 V, 50 Hz with fitted capacitor unit -(kVAR)		
DC Current (A)	with 3 poles in series	DC1-24V
		DC1-48V
		DC1-110V
		DC2,4-24V
		DC2,4-48V
		DC2,4-110V
Mechanical Durability(Million op.)		
Electrical Durability(Million op.)		
Max Operating Rate in Op.Cycles/Hour		
Service Temperature		
Main Terminal Capacity	Lug(mm ²) Max. Nos. of conductors 2	
	Solid / Multi strand conductors - AWG	
Wt.(kg)---AC Control		
Size(W*H*D)-(mm)AC Control		
Wt.(kg)---DC Control		
Size(W*H*D)-(mm)DC Control		
AUXILIARY CONTACTS		
No. of Built in Aux Contacts		
Conventional Thermal current(A) Ith (AC-12 duty)		
AC-15 Rating at 380/440 V, 50 hz		
Terminal Capacity	(solid or multi strand (mm ²))	
CONTROL CIRCUIT/COIL		
Voltages available for Uc V, 50 Hz		
Pick Up	VA	
Hold on	VA	
Heat Dissipation		
Limit of Operations	Pick up(%Uc)	
	Drop out(%Uc)	

40AF	
IC- 32a	IC- 40a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947	
3	3
690	690
1000	1000
8	8
320	400
256	320
50	60
32	40
17	24
25	33.3
32	55
32	55
27	45
30	45
30	40
20	30
12	12
2	2
1800	1800
-5°C to +60°C	-5°C to +60°C
2.5~10	4~16
12~8AWG	10~6AWG
0.4	0.4
45*83*90	45*83*90
0.6	0.6
45*83*117.1	45*83*117.1
NA	NA
16	16
1.9	1.9
1~2.5	1~2.5
24 to 550V	24 to 550V
53	53
12	12
2.7	2.7
85-110%	85-110%
30-60%	30-60%

65AF	
IC- 50a	IC- 65a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947	
3	3
690	690
1000	1000
8	8
500	650
400	520
70	100
50	65
32	47
40	45.7
70	90
70	90
60	80
55	75
50	65
35	55
12	12
2	2
1800	1800
-5°C to +60°C	-5°C to +60°C
6~25	10~35
10~4AWG	8~3AWG
0.9	0.9
55*106*119	55*106*119
1.2	1.2
55*106*146.4	55*106*146.4
NA	NA
16	16
1.9	1.9
1~2.5	1~2.5
24 to 550V	24 to 550V
110	110
13	13
2.8	2.8
85-110%	85-110%
30-60%	30-60%

100AF		
IC- 75a	IC- 85a	IC- 100a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947		
3	3	3
690	690	690
1000	1000	1000
8	8	8
750	850	1050
600	650	840
110	135	160
75	85	105
52	62	75
54	60	62
90	100	100
90	100	100
80	85	85
75	80	80
65	70	70
55	60	60
12	12	12
2	2	2
1800	1800	1800
-5°C to +60°C	-5°C to +60°C	-5°C to +60°C
10~35	10~50	10~70
8~2AWG	8~00AWG	8~0AWG
1.8	1.8	1.8
70*140*135.8	70*140*135.8	70*140*135.8
2.7	2.7	2.7
79*140*172.3	79*140*172.3	94*140*172.3
NA	NA	NA
16	16	16
1.9	1.9	1.9
1~2.5	1~2.5	1~2.5
24 to 550V	24 to 550V	24 to 550V
229	229	229
17	17	17
5.4	5.4	5.4
85-110%	85-110%	85-110%
30-60%	30-60%	30-60%

150AF	
IC- 130a	IC- 150a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947	
3	3
690	690
1000	1000
8	8
1200	1500
960	1200
160	210
130	150
90	110
NA	NA
120	150
120	150
100	150
120	150
90	130
80	120
5	5
1	1
1200	1200
-5°C to +60°C	-5°C to +60°C
35~70	35~95
3~00AWG	3~00AWG
2.4	2.4
95*158*130.3	95*158*130.3
2.4	2.4
95*158*130.3	95*158*130.3
NA	NA
16	16
1.9	1.9
1~2.5	1~2.5
24 to 500V	24 to 500V
108	108
18	18
2.7	2.7
85-110%	85-110%
30-60%	30-60%

Specifications

IC type - 3 Pole Contactors



Frame Size		
Type		
Conforms to Standards		
POWER CONTACTS		
No. of poles		
Rated Operational voltage(V), Ue		
Rated Insulation voltage(V), Ui		
Rated Impulse withstand voltage(kV), Uimp		
Rated Making Capacity(A)		
Rated Breaking Capacity(A)		
AC Current (A)	Thermal current Ith	AC-1
	Motor Duty, 3ph, 380/440 v, 50Hz	AC-3
		AC-4
Capacitor Switching delta connected, 415 V, 50 Hz with fitted capacitor unit -(kVAR)		
DC Current (A)	with 3 poles in series	DC1-24V
		DC1-48V
		DC1-110V
		DC2,4-24V
		DC2,4-48V
		DC2,4-110V
Mechanical Durability(Million op.)		
Electrical Durability(Million op.)		
Max Operating Rate in Op.Cycles/Hour		
Service Temperature		
Main Terminal Capacity	Lug(mm ²) Max. Nos. of conductors 2	
	Solid /Multi strand conductors - AWG	
Wt.(kg)---AC Control		
Size(W*H*D)-(mm)AC Control		
Wt.(kg)---DC Control		
Size(W*H*D)-(mm)DC Control		
AUXILIARY CONTACTS		
No. of Built in Aux Contacts		
Conventional Thermal current(A) Ith (AC-12 duty)		
AC-15 Rating at 380/440 V, 50 hz		
Terminal Capacity	(solid or multi strand (mm ²))	
CONTROL CIRCUIT/COIL		
Voltages available for Uc V, 50 Hz		
Pick Up	VA	
Hold on	VA	
Heat Dissipation	Watts	
Limit of Operations	Pick up(%Uc)	
	Drop out(%Uc)	

225AF	
IC- 185a	IC- 225a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947	
3	3
690	690
1000	1000
8	8
1850	2250
1480	1800
230	275
185	225
150	180
NA	NA
180	220
180	220
180	220
180	220
180	220
150	150
5	5
1	1
1200	1200
-5°C to +60°C	-5°C to +60°C
50~95	50~150
1~410AWG	110~300AWG
5.4	5.4
138*203*185.1	138*203*181
5.4	5.4
138*203*185.1	138*203*181
2NO+2NC	2NO+2NC
16	16
1.9	1.9
1~2.5	1~2.5
24 to 500V	24 to 500V
380	380
11.6	11.6
4.7	4.7
85-110%	85-110%
30-60%	30-60%

400AF		
IC- 265a	IC- 330a	IC- 400a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947		
3	3	3
690	690	690
1000	1000	1000
8	8	8
2650	3300	4000
2120	2640	3200
300	350	450
265	330	400
200	220	300
NA	NA	NA
220	300	400
220	300	400
220	300	400
220	300	400
220	280	280
150	200	200
5	5	2.5
1	1	0.5
1200	1200	1200
-5°C to +60°C	-5°C to +60°C	-5°C to +60°C
95~240	95~240	185~370
310~500AWG	410~500AWG	350~700AWG
9.2	9.2	9.2
163*243*204.4	163*243*204.4	163*243*204.4
9.2	9.2	9.2
163*243*204.4	163*243*204.4	163*243*204.4
2NO+2NC	2NO+2NC	2NO+2NC
16	16	16
1.9	1.9	1.9
1~2.5	1~2.5	1~2.5
100 to 500V	100 to 500V	100 to 500V
571	571	571
14	14	14
5	5	5
85-110%	85-110%	85-110%
30-60%	30-60%	30-60%

800AF		
IC- 500a	IC- 630a	IC- 800a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947		
3	3	3
690	690	690
1000	1000	1000
8	8	8
5000	6300	8000
4000	5040	6400
580	660	900
500	630	800
350	400	630
NA	NA	NA
400	630	800
400	630	800
400	630	800
400	630	800
280	630	630
200	630	630
2.5	2.5	2.5
0.5	0.5	0.5
1200	1200	1200
-5°C to +60°C	-5°C to +60°C	-5°C to +60°C
185~480	NA	NA
350~800AWG	600~2000AWG	1700 BUSBAR
22.4	22.4	22.4
285*312*245.3	285*312*245.3	285*312*245.3
22.4	22.4	22.4
285*312*245.3	285*312*245.3	285*312*245.3
2NO+2NC	2NO+2NC	2NO+2NC
16	16	16
1.9	1.9	1.9
1~2.5	1~2.5	1~2.5
100 to 500V	100 to 500V	100 to 500V
1000	1000	1000
29	29	29
7.8	7.8	7.8
85-110%	85-110%	85-110%
30-60%	30-60%	30-60%

Specifications

IC type - 4 Pole Contactors



Frame size			
Type	Screw clamp terminal		
Number of poles	4pole		
Rated operational voltage (Ue)	690V		
Rated insulation voltage (Ui)	690V		
Rated frequency	50/60Hz		
Rated impulse withstand voltage, Uimp	6kV		
Maximum operating rate in operating cycles per hour(AC1)	1800 operations per hour		
Durability	Mechanical	15 mil. Operations	
	Electrical	0.5 mil. Operations	0.8 mil. Operations
Current and Power	Thermal current	A	25
		AC-1 200/240V	9
	kW	A	25
		380/400V	17
	kW	A	25
		500/550V	21
kW	A	25	
	690V	27	
UL rating (50/60Hz)	Continuous current	A	25
		Single 110~120V	0.5
	HP	Phase 220~240V	1.5
		200~208V	2
	HP	Three 220~240V	3
		Phase 440~480V	5
	HP	550~600V	7.5
		NEMA Size	00
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	IUA-1	
	Front Mount	IUA-2, IUA-4	

18AF			
IC-6a/4	IC-9a/4	IC-12a/4	IC-18a/4
Screw clamp terminal			
4pole			
690V			
690V			
50/60Hz			
6kV			
1800 operations per hour			
15 mil. Operations			
0.5 mil. Operations		0.8 mil. Operations	
25	25	25	40
9	9	9	15
25	25	25	40
17	17	17	27
25	25	25	40
21	21	21	35
25	25	25	40
27	27	27	44
25	25	25	40
25	25	25	32
0.5	0.5	0.75	1
1.5	1.5	2	3
2	2	3	5
3	3	5	7.5
5	5	7.5	10
7.5	7.5	10	15
00	00	0	0
0.33			
45×73.5×79			
0.5			
45×73.5×110.7			
-			
IUA-1			
IUA-2, UA-4			

22AF	
IC-22a/4	
Screw clamp terminal	
4pole	
690V	
690V	
50/60Hz	
6kV	
1800 operations	
15 mil. Operations	
1 mil. Operations	
40	
15	
40	
27	
40	
35	
40	
44	
40	
32	
2	
3	
7.5	
7.5	
10	
15	
1	
0.4	
47.2×80×86.8	
0.5	
47.2×80×113.2	
-	
IUA-1	
IUA-2, IUA-4	

40AF	
IC-32a/4	IC-40a/4
Screw clamp terminal	
4pole	
690V	
690V	
50/60Hz	
6kV	
1800 operations per hour	
15 mil. Operations	
1 mil. Operations	
50	60
18	22
50	60
35	42
50	60
43	52
50	60
55	66
50	60
45	50
2	3
5	5
7.5	10
10	10
20	25
20	25
1	1
0.59	
59×83.5×94.5	
0.7	
59×83.5×121	
-	
IUA-1	
IUA-2, IUA-4	

85AF			
IC-50a/4	IC-65a/4	IC-75a/4	IC-85a/4
Screw clamp terminal			
4pole			
690V			
1000V			
50/60Hz			
8kV			
1800 operations per hour			
12 mil. Operations			
1 mil. Operations			
80	100	110	135
30	37	41	51
80	100	110	135
56	70	76	95
80	100	110	135
70	88	97	120
80	100	110	135
88	110	120	150
80	100	110	135
70	80	90	100
3	5	5	7.5
7.5	10	15	15
10	15	20	25
15	20	25	30
30	40	50	50
30	40	50	50
2	2	2	3
1.2			
91×123.5×117.8			
1.29			
91×123.5×117.8			
-			
IUA-1			
IUA-2, IUA-4			

Specifications

IC type - 4 Pole Contactors



Frame size			
Type			
Screw clamp terminal			
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(AC1)			
Durability	Mechanical		
	Electrical		
Current and Power	AC-1	Thermal current	A
		200/240V	kW
		380/400V	kW
			A
		500/550V	kW
		A	
		690V	kW
			A
UL rating (50/60Hz)	Continuous current	A	
		Single	110~120V HP
	Phase	220~240V	HP
		200~208V	HP
		Three	220~240V HP
	Phase	440~480V	HP
		550~600V	HP
NEMA Size			
Size and weight	AC	Weight	kg
	Control	Size(W×H×D)	mm
		DC	Weight
	Control	Size(W×H×D)	mm
Auxiliary(standard)			
Auxiliary	Side Mount		
	Front Mount		

225AF				
IC-100a/4	IC-130a/4	IC 150a/4	IC-185a/4	IC-225a/4
●				
4pole				
690V				
1000V				
50/60Hz				
8kV				
1200 operations per hour				
15 mil. Operations				
0.8 mil. Operations				
160	165	250	300	330
57	60	76	87	100
150	155	200	230	260
106	110	142	165	185
150	155	200	230	260
132	137	180	205	230
150	155	200	230	260
165	170	225	255	290
150	155	200	230	260
160	160	210	230	275
7.5	10	15	15	15
15	20	25	30	40
30	40	40	60	60
30	40	50	60	75
60	75	100	125	150
60	75	100	125	150
3	3	4	4	4
5.6				
175 × 203 × 185				
2a2b				
IAU-100				
-				

400AF		
IC-265a/4	IC-330a/4	IC-400a/4
●		
4pole		
690V		
1000V		
50/60Hz		
8kV		
1200 operations per hour		
15 mil. Operations		
0.5 mil. Operations		
360	420	500
115	135	160
300	350	420
215	250	300
300	350	420
265	315	375
300	350	420
335	390	470
300	350	420
300	350	450
-	-	-
-	-	-
75	100	125
100	100	150
200	200	300
200	200	300
5	5	5
9.9		
206 × 243 × 205		
2a2b		
IAU-100		
-		

800AF		
IC-500a/4	IC-630a/4	IC-800a/4
●		
4pole		
690V		
1000V		
50/60Hz		
8kV		
1200 operations per hour		
12 mil. Operations		
0.5 mil. Operations		
630	750	900
245	255	310
630	660	800
450	470	570
630	660	800
560	590	710
630	660	800
710	740	900
630	660	800
580	660	900
-	-	-
-	-	-
150	200	200
200	250	300
400	500	600 *
400	500	600 **
6	6	7
26.3		
346 × 310 × 244		
2a2b		
IAU-100		
-		

* - FLA = 722 A, LRA = 5618 A
** - FLA = 566 A, LRA = 4495 A

Specifications

IT type - 3 Pole Thermal Overload Relays



Type	IT 12	IT 32	IT 63	IT 95	IT 150	IT 225	IT 400	IT 800	
Conforms to Standards				IEC /EN 60947-1, IEC/EN-60947-4-1					
Range (A)	0.1---0.16	0.63---1.0	24---36	34---50	80---105	100---160	160---240	200---300	
	0.16---0.25	1---1.6	28---40	45---65	95---130	120---185	200---330	260---400	
	0.25---0.40	1.6---2.5	34---50	54---75	110---150	160---240	260---400	400---600	
	0.40---0.63	2.5---4.0	45---65	63---85				520---800	
	0.63---1.0	4---6		70---95					
	1---1.6	5---8		80---100					
	1.6---2.5	6---9							
	2.5---4.0	7---10							
	4---6	9---13							
	5---8	12---18							
	6---9	16---22							
	7---10	18---25							
	9---13	22---32							
	12---18	28---40							
Mounting	Direct	Direct/Separate	Direct/Separate	Direct/Separate	Direct/Separate	Direct/Separate	Direct/Separate	Direct/Separate	
Suitable for Contactors	IC 6a,9a,12a,18a	IC-9b,12b,18b 22b,32a,40a	IC-50a,65a	IC-75a,85a,100a	IC-130a,150a	IC-185a,225a	IC-265a,330a, 400a	IC-500a,630a, 800a	
Rated Operational voltage(V),Ue	690	690	690	690	690	690	690	690	
Rated Insulation voltage(V),Ui	690	690	690	690	690	690	690	690	
Rated Impulse withstand voltage(kV), Uimp	6	6	6	6	6	6	6	6	
Service Temp					-5°C to +60°C				
Stop/Test/ Reset (H/A)	Test/Reset	Stop/Test/ Reset	Stop/Test/ Reset	Stop/Test/ Reset	Stop/Test/ Reset	Stop/Test/ Reset	Stop/Test/ Reset	Stop/Test/ Reset	
Built in contacts	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC	
Rated Operational Current(A),Ie Aux Contacts	5	5	5	5	5	5	5	5	
AC-15 Duty	110/120 V	1.5	1.5	1.5	1.5	2.5	2.5	2.5	
	220/240V	0.75	0.75	0.75	0.75	2	2	2	
	380/415V	0.47	0.47	0.47	0.47	0.47	0.47	0.47	
	480V	0.375	0.375	0.375	0.375	0.375	0.375	0.375	
Trip Class	10A	10A	10A	10A	10A	10A	10A	10A	
Main Terminal capacity(Max 2 no conductors)	Lug(mm ²)	1~2.5	1~10	1~10	2.5~35	10~50	35~120	50~240	2*185~240
Aux terminal capacity	Wire(mm ²)	2*2.5	2*2.5	2*2.5	2*2.5	2*2.5	2*2.5	2*2.5	
Separate Mounting Unit		NA	IUZ-32	IUZ-63	IUZ-95	IUZ-150	NA	NA	

Accessories & Spares for Contactors

Contactor Frame	Aux Contact on Block	Cat Ref	Mech Interlock Kit	Safety Cover	Surge Suppressor	Cat Ref	Spare Coil	Capacitor Unit
18AF	Top Mounting-4NO	IAU-40			Varistor+RC(24~48V AC)	IUS-1	IXC18AF***	
	Top Mounting-3NO+1NC	IAU-31			Varistor+RC(100~125V AC)	IUS-2		
22AF	Top Mounting-2NO+2NC	IAU-22			Varistor+RC(200~240V AC)	IUS-3	IXC22AF***	IAC-9
	Top Mounting-1NO+3NC	IAU-13			Varistor+RC(24~48V DC)	IUS-4		
40AF	Top Mounting-4NO	IAU-04	IUR-02	IAP-9	Varistor+RC(100~125V DC)	IUS-5	IXC40AF***	
	Top Mounting-2NO	IAU-20			Varistor+RC(200~240V DC)	IUS-6		
65AF	Top Mounting-1NO+1NC	IAU-11			Varistor(24~48V AC/DC)	IUS-11	IXC65AF***	IAC-50
	Top Mounting-2NO	IAU-02			Varistor(100~125V AC/DC)	IUS-12		
100AF					Varistor(200~240V AC/DC)	IUS-13	IXC100AF***	
	Side Mounting-1NO+1NC	IUA-11			Varistor(380~440V AC/DC)	IUS-14		
150AF					RC(100~125VAC)	IUS-22	IXC150AF***	NA
225 AF							IXC225AF***	NA
400AF	Side Mounting-1NO+1NC	IAU-100	IAR-180	IAP-185			IXC400AF***	NA
800AF	Extended Side Mounting-1NO+1NC	IAU-100E	IAR-600				IXC800AF***	NA

Capacitor Duty Contactors

Description

Capacitor unit(Pre-loading resistor) is connected to the terminals of the contactor to reduce the high inrush current exceeding $20 \times I_n$.

- AC or DC control coil on selection
- 3-pole(NO) main contact
- Finger proof design
- DIN rail or screw mountable

Rating

Type	Maximum operating power (kvar)			Rated current (A)	Capacitor unit type
	220 ~ 240V	400 ~ 440V	500 ~ 550V		
IC-9a/9b	5	9.7	14	14	IAC-9
IC-12a/12b	6.7	12.5	18	18	IAC-9
IC-18a/18b	8.5	16.7	24	24	IAC-9
IC-22b	10	18	26	26	IAC-9
IC-32a	15	25	36	36	IAC-9
IC-40a	20	33.3	48	48	IAC-9
IC-50a	20	40	58	58	IAC-50
IC-65a	25	45.7	66	66	IAC-50
IC-75a	29.7	54	78	78	IAC-50
IC-85a	35	60	92	92	IAC-50
IC-100a	37	62	94	94	IAC-50

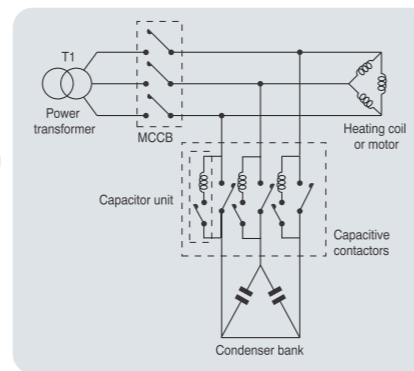
Note) - When the switch is closed condenser must be discharged before recharged. (Maximum residual voltage at terminals $\leq 50V$)
- To prevent short current, gG type fuse must be 1.5-2 times than rated current.

Features of capacitor unit (Pre-loading resistor)

These capacitive contactors are suitable for switching single-step or multiple-step condenser bank. It is standardized by IEC-60947-4941, UL and CSA.

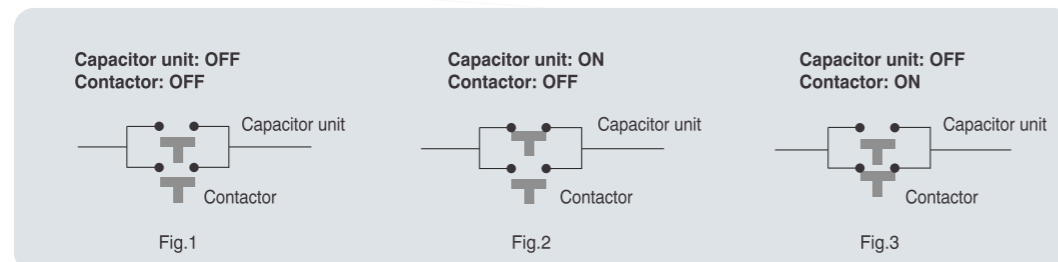
Features of capacitor unit(Pre-loading resistor)

- Damping resistor that can limit the inrush current upto $60 \times I_n$ is connected to the mechanism that closes earlier than the main contact of the contactor
- No heat loss by the serial resistor
- Eliminate the switching surge
- Improving the performance of the capacitor system



Example

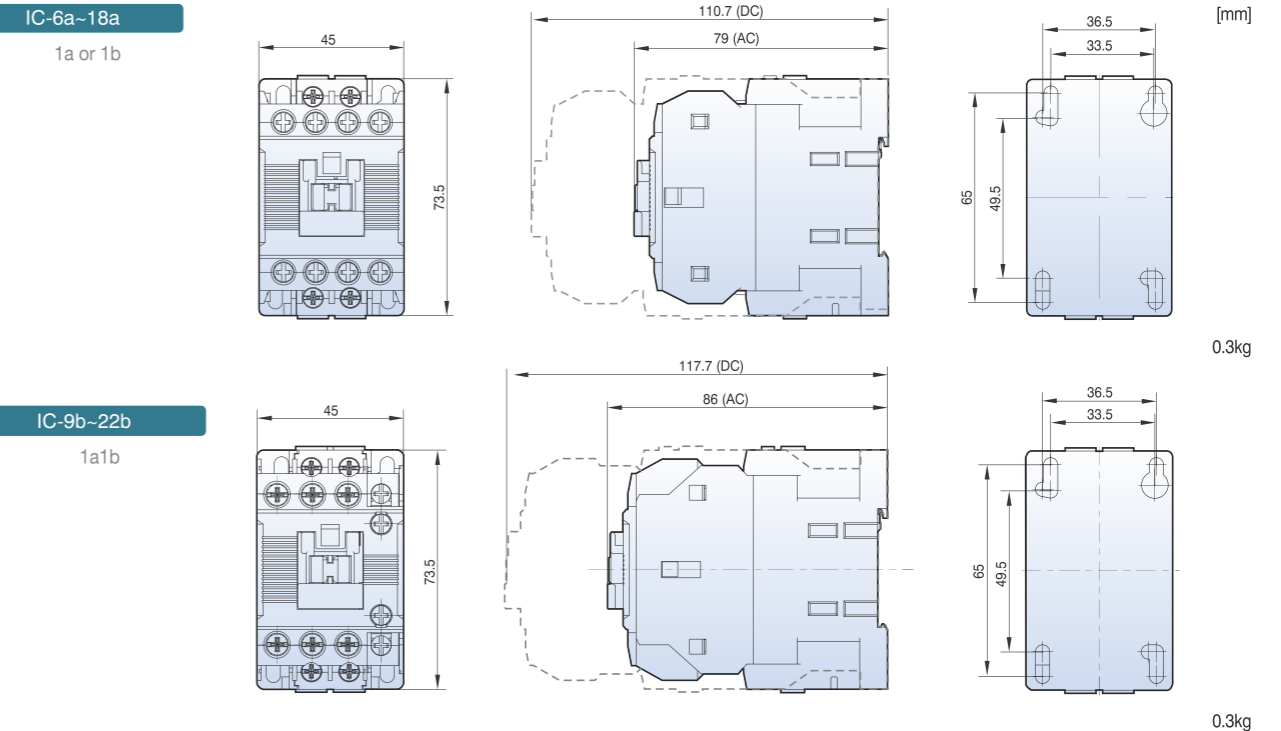
Operation sequence



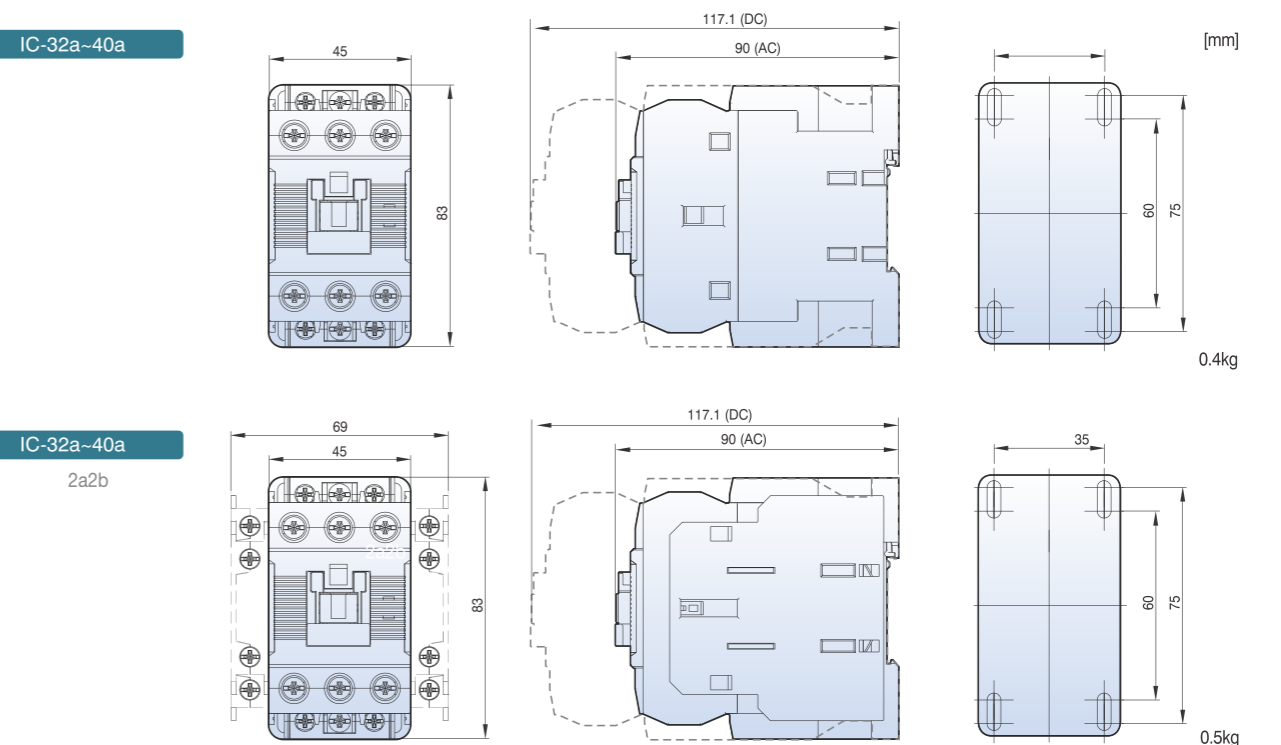
Note) Closing sequence: Fig.1 => Fig.2 => Fig.3
Opening sequence: Fig.3 => Fig.1

Dimensions (3Pole)

Contactors (18AF/22AF)



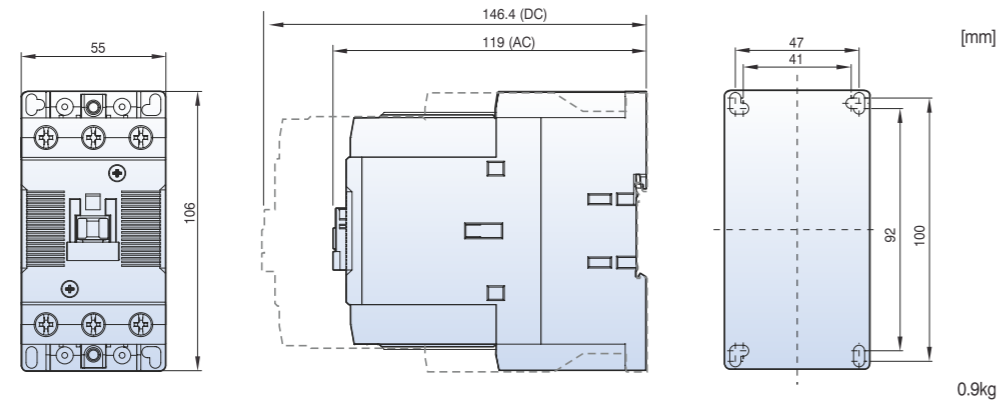
Contactors (40AF)



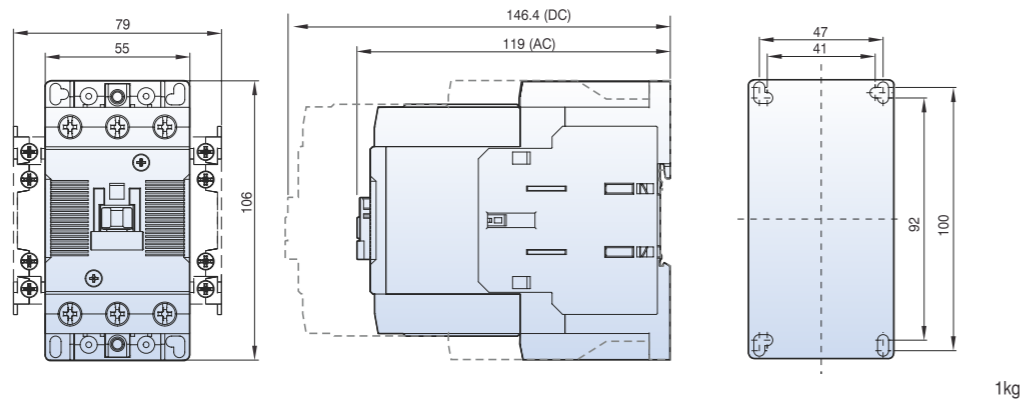
Dimensions (3Pole)

Contactors (65AF)

IC-50a~65a

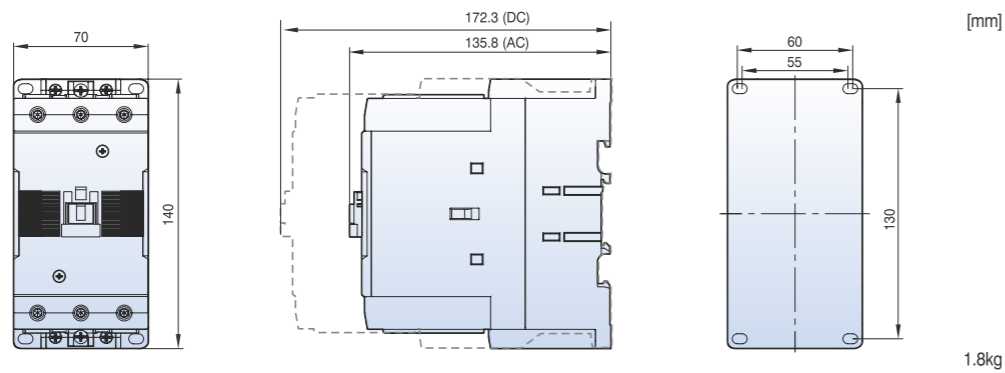


IC-50a~65a
2a2b

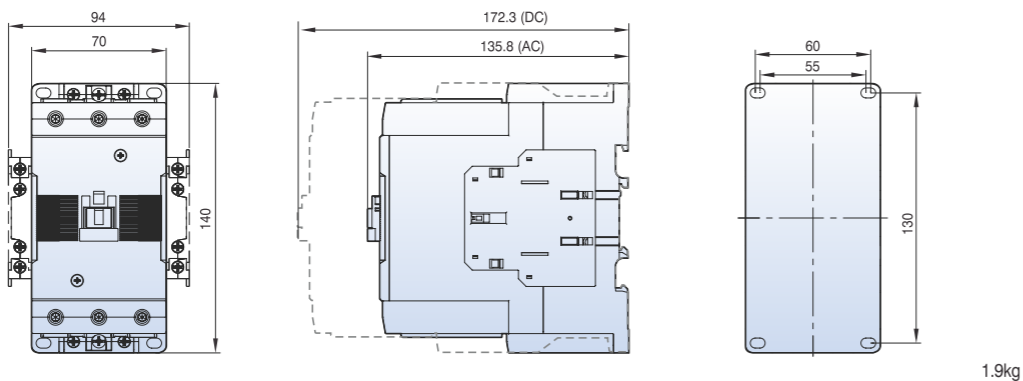


Contactors (100AF)

IC-75a~100a



IC-75a~100a
2a2b

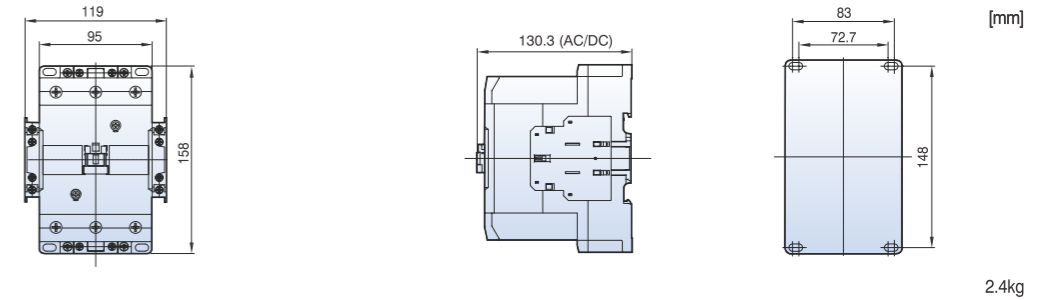


Dimensions (3Pole)

Contactors (150AF~800AF)

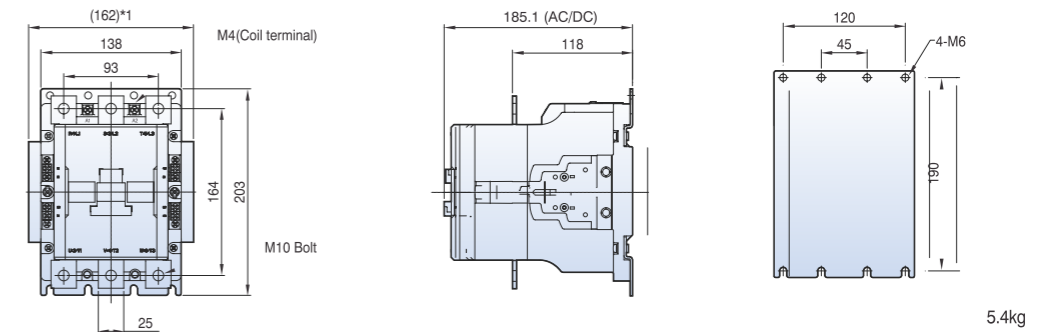
IC-130a

IC-150a



IC-185a

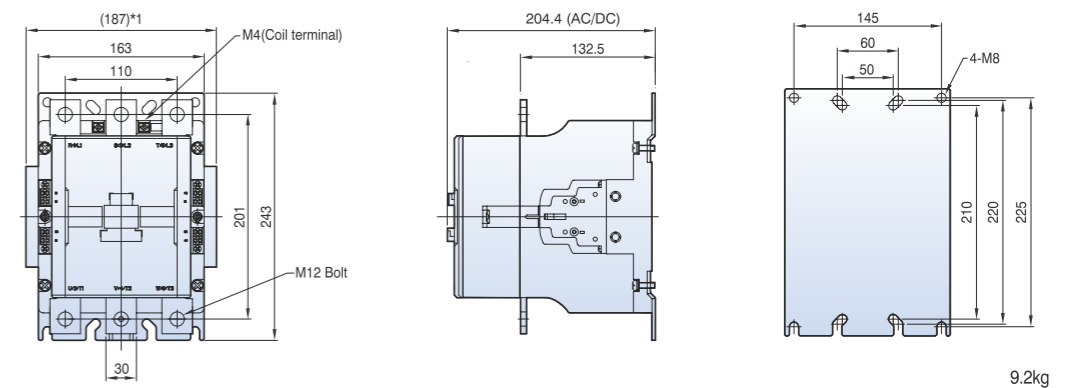
IC-225a



IC-265a

IC-330a

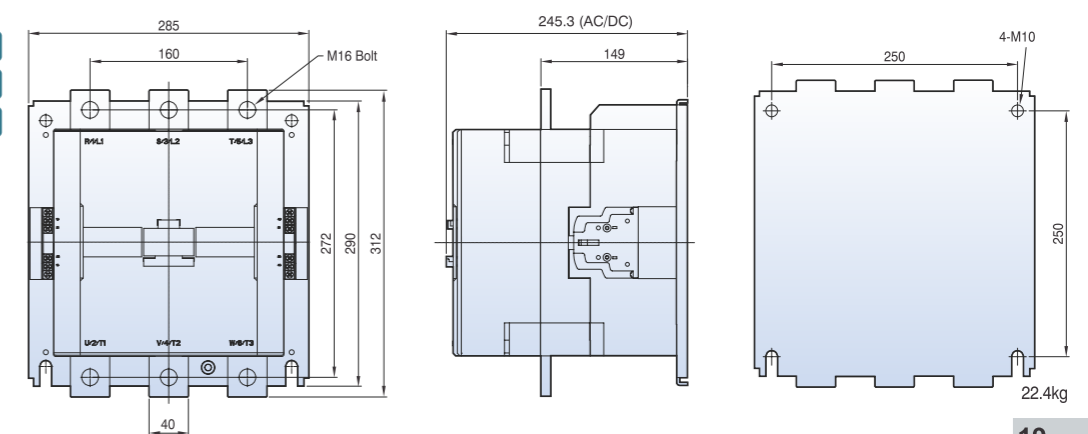
IC-400a



IC-500a

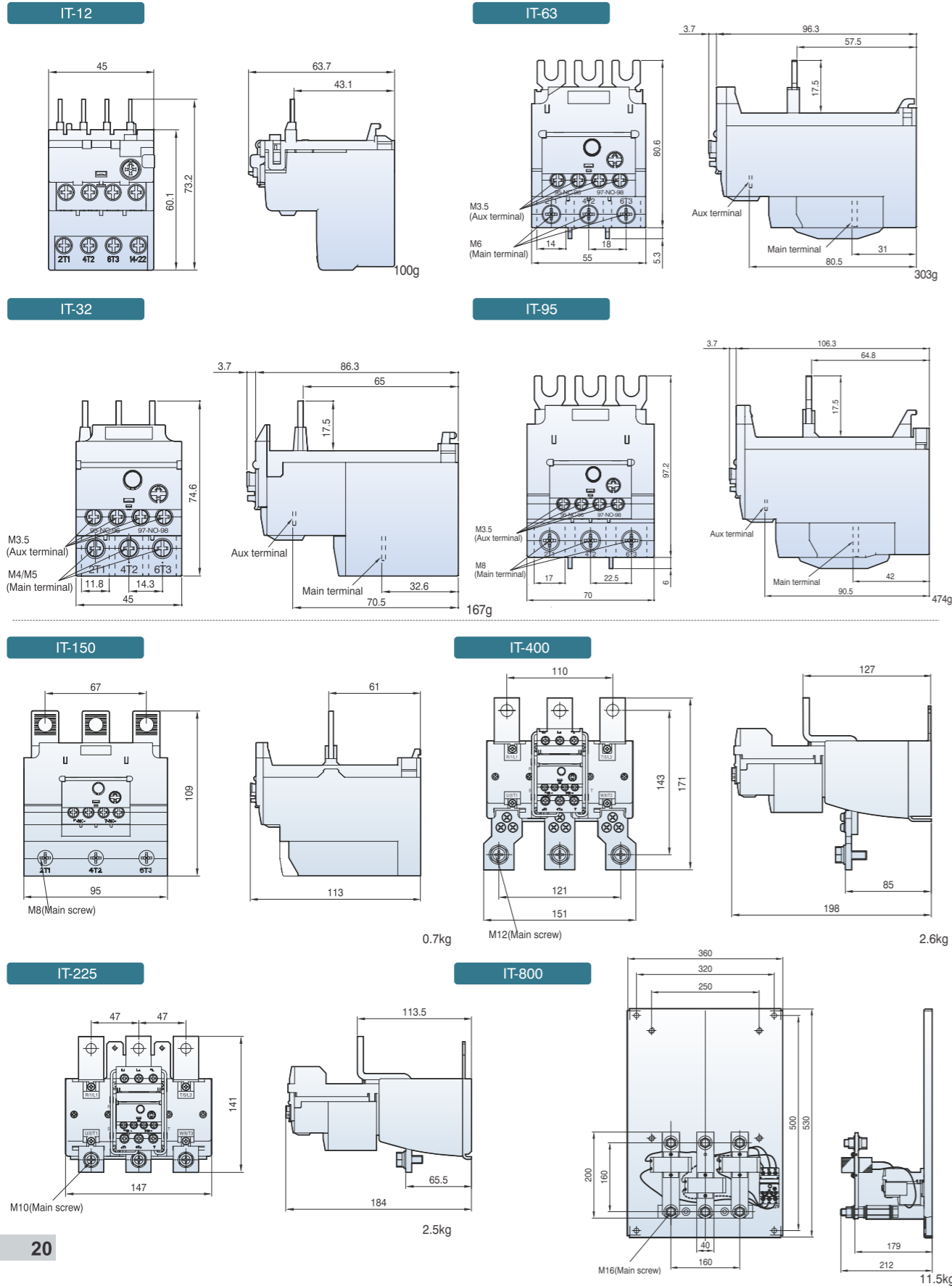
IC-630a

IC-800a

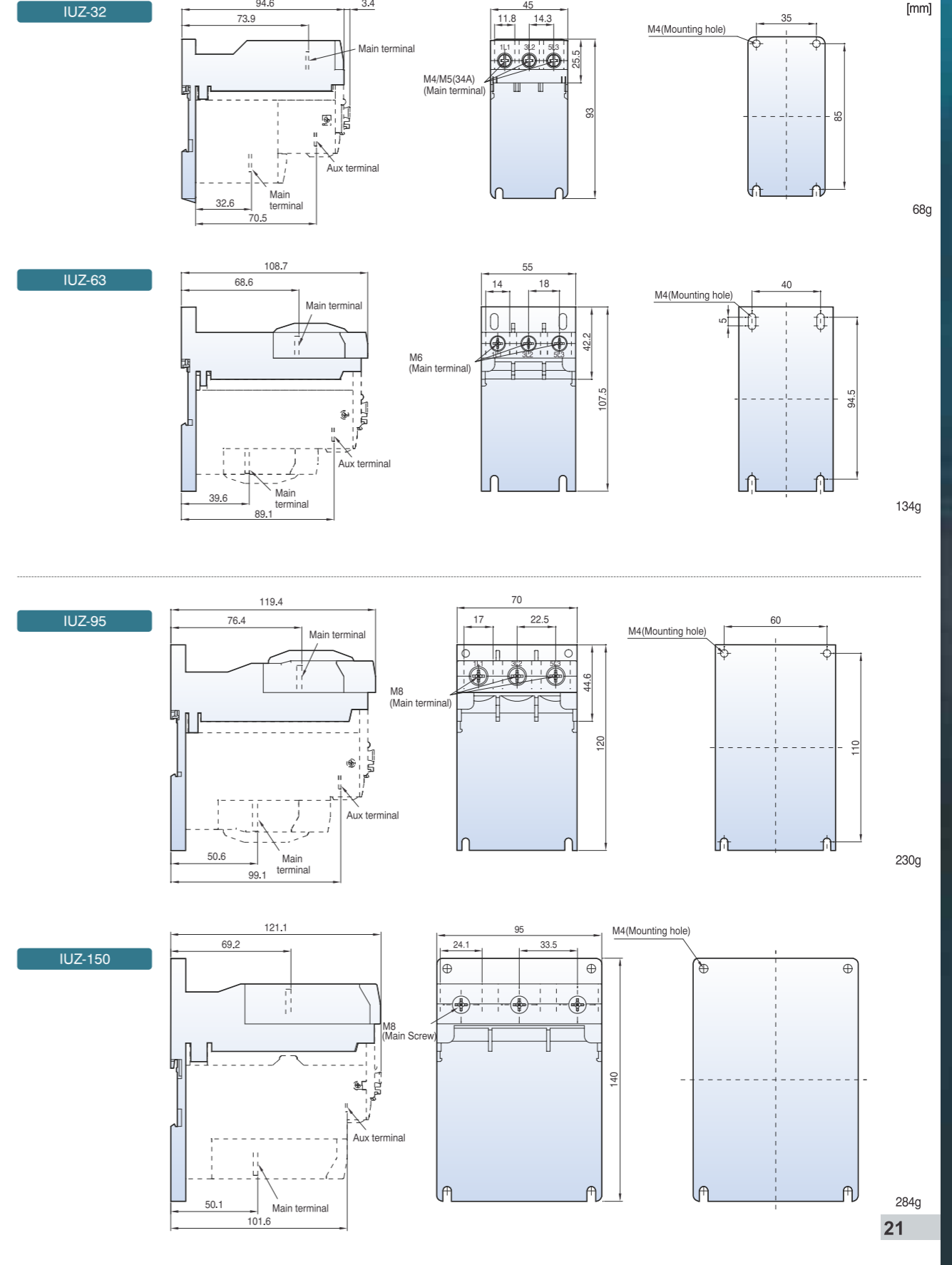


Dimensions (TOR)

Overload Relays



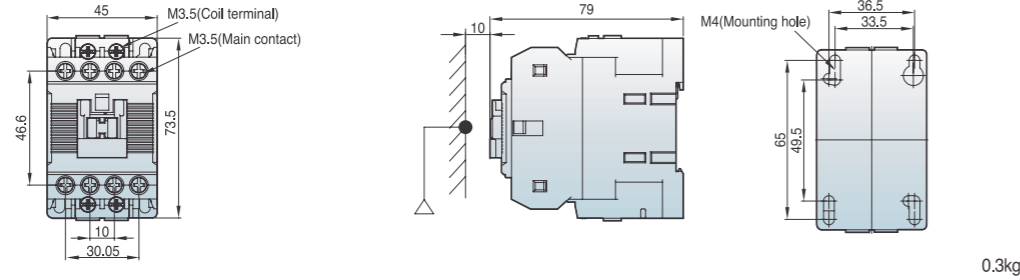
Dimensions (TOR) Separate Mounting Units



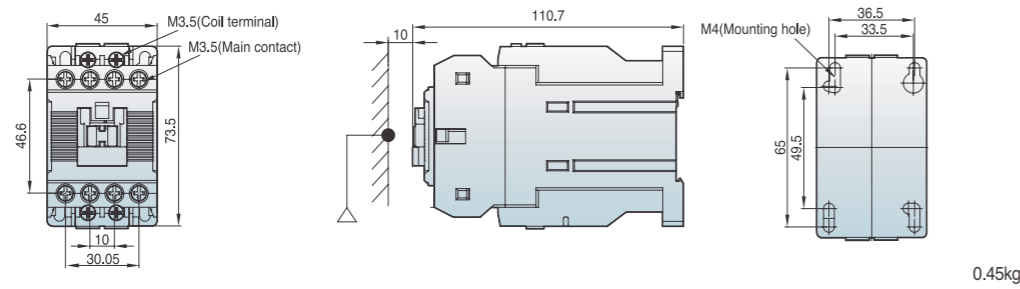
Dimensions (4Pole)

Contactors (IC-6a/4~22a/4)

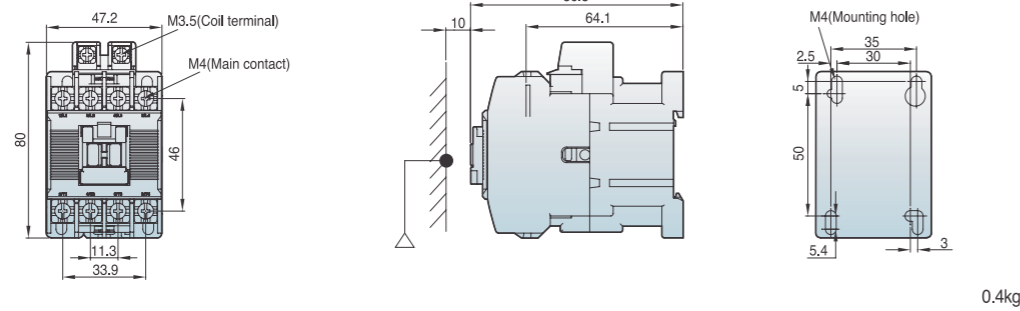
IC-6a/4~18a/4 AC



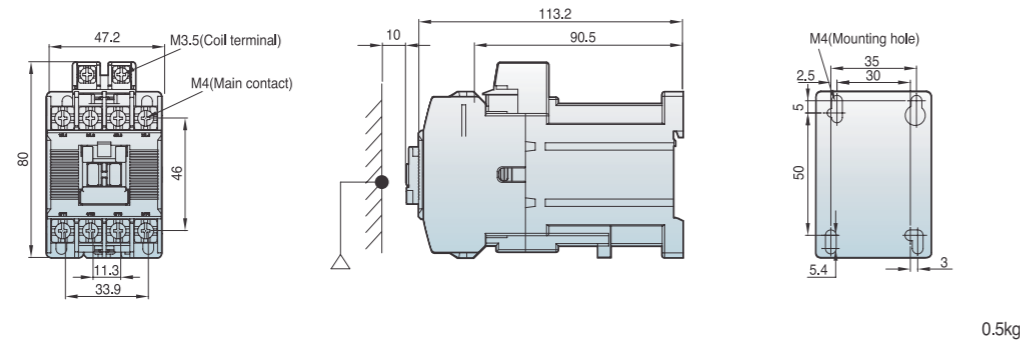
IC-6a/4~18a/4 DC



IC-22a/4 AC



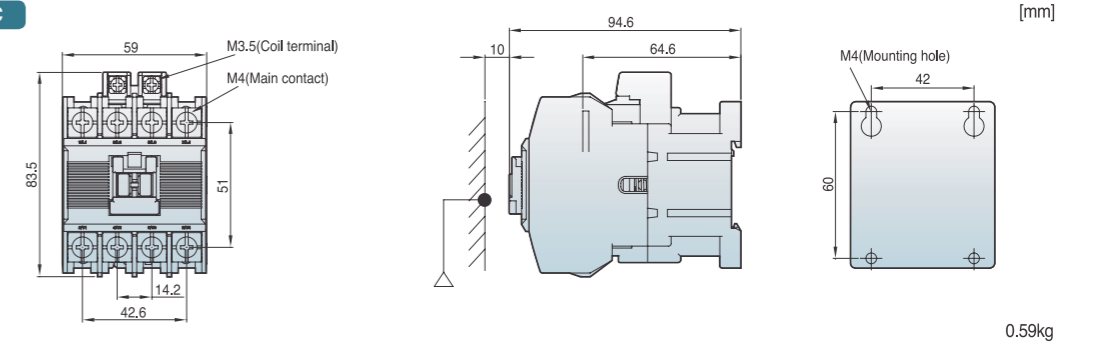
IC-22a/4 DC



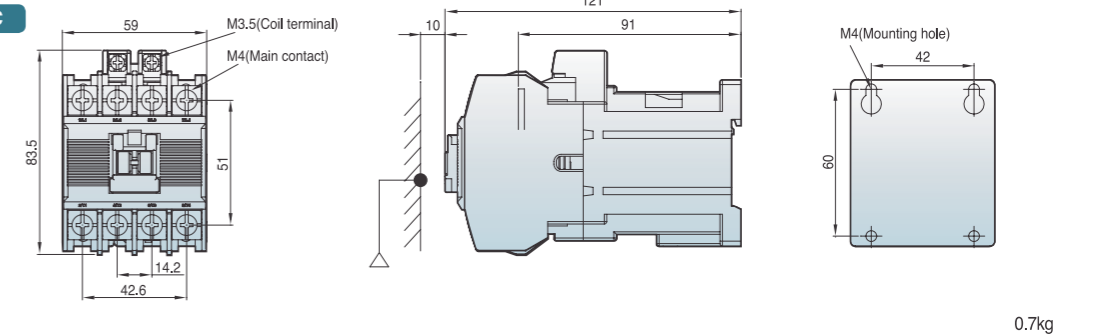
Dimensions (4Pole)

Contactors (IC-32a/4~85a/4)

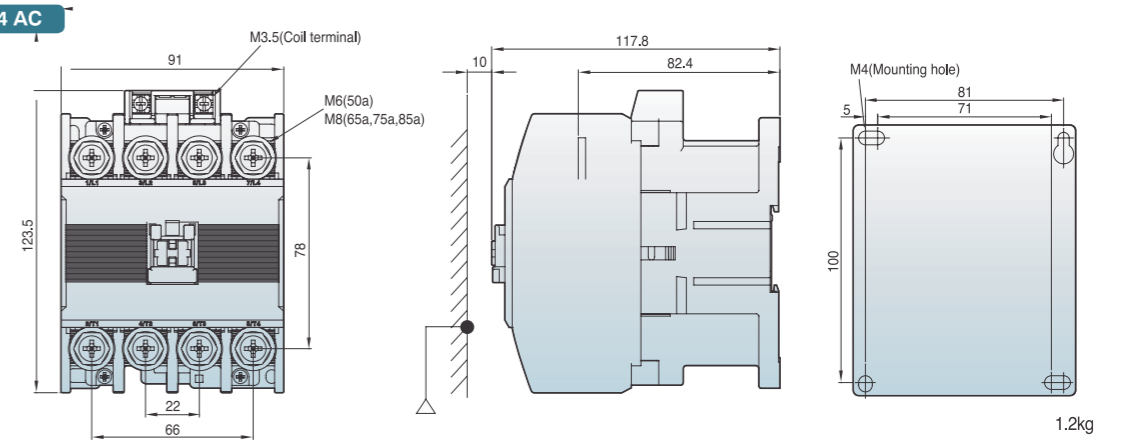
IC-32a/4~40a/4 AC



IC-32a/4~40a/4 DC



IC-50a/4~85a/4 AC



IC-50a/4~85a/4 DC

