



Contactors & Overload Relays



intelli **CONTROL**
intelligent control

RANGE



Corporate Information

HPL's vision of creating a niche, as a major player in India Electrical Industry with commitment to state-of-the-art technology & world class products.

HPL Group possess nine most modern manufacturing units, ISO 9001 : 2000; ISO 14001; OHSAS 18001 certified located at Gurgaon, Kundli, Sonapat, Panipat and Himachal Pradesh having 5,00,000 sq. feet covered area to manufacture products conforming to International and India standards.

HPL Products Profile has the following Strategic Business Units :

- **LV Switchgears & Controlgear**
- **LV Protection Devices**
- **Metering and Energy Management Systems**
- **Lighting**
- **Luminaires**
- **Wires & Cables**
- **Electrical Wiring Accessories**

HPL Products are tested at CPRI, ERDA, ERTL, NPL etc. according to Indian Standards, whereas MCB's Rewireable Switches & Electronic Energy Meters carry ISI marking. Further HPL products have approvals from CPWD state PWD's, MES, BSNL & many more Institutional users.

HPL Group with Head Office at New Delhi has extensive Sales & Marketing Network of 90 Branche Offices & Representative Office, over 2000 Authorised Dealers and 12000 Retailers across country, who are committed to provide solutions and services to customer's delight. HPL is also exporting its products to Middle East, SAARC and European Countries.

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 system, GIS and green technologies solutions.





Contactors and Overload Relays

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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 Power 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) as per IEC		
Rated Breaking Capacity(A) as per IEC		
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 (kVAR)	Fitted with capacitor unit	AC-6b
	Without capacitor unit	
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 (AC)		
Voltages available for Uc V, 50/60 Hz		
Pick Up	VA	
Hold on	VA	
Heat Dissipation	Watts	
Limit of Operations	Pick up(%Uc)	
	Drop out(%Uc)	

IC-6a	IC-9a
3	3
690	690
690	690
6	6
70	90
56	72
25	25
9	9
5	6
NA	9.7
3	4
20	20
20	20
15	15
18	18
15	15
12	12
15	15
2.5	2.5
1800	1800
-5°C to +60°C	-5°C to +60°C
1.5~4	1.5~4
18~10AWG	16~10AWG
0.3	0.3
45*73.5*79	45*73.5*79
0.4	0.4
45*73.5*96.6	45*73.5*96.6
1NO or 1NC	1NO or 1NC
16	16
1.9	1.9
1~2.5	1~2.5
24 to 550V	24 to 550V
70	70
9	9
2.3	2.3
85-110%	85-110%
30-60%	30-60%



18AF	
IC-12a	IC-18a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947	
3	3
690	690
690	690
6	6
120	180
96	144
25	32
12	18
9	11
12.5	16.7
5.5	7.5
20	20
20	20
15	15
18	18
15	15
12	12
15	15
2.5	2.5
1800	1800
-5°C to +60°C	-5°C to +60°C
1.5~10	2.5~10
16~8AWG	14~8AWG
0.3	0.3
45*73.5*79	45*73.5*79
0.4	0.4
45*73.5*96.6	45*73.5*96.6
1NO or 1NC	1NO or 1NC
16	16
1.9	1.9
1~2.5	1~2.5
24 to 550V	24 to 550V
70	70
9	9
2.3	2.3
85-110%	85-110%
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	40	40
9	12	18	22
6	9	11	13
9.7	12.5	16.7	18
4	5.5	7.5	11
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
0.4	0.4	0.4	0.4
45*73.5*103.6	45*73.5*103.6	45*73.5*103.6	45*73.5*103.6
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
70	70	70	70
9	9	9	9
2.3	2.3	2.3	2.3
85-110%	85-110%	85-110%	85-110%
30-60%	30-60%	30-60%	30-60%



Specifications

IC type - 3 Pole Power 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) as per IEC		
Rated Breaking Capacity(A) as per IEC		
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 (kVAR)	Fitted with capacitor unit	AC-6b
	Without capacitor unit	
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 (AC)		
Voltages available for Uc V, 50/60Hz		
Pick Up	VA	
Hold on	VA	
Heat Dissipation	Watts	
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
15	18.5
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
90	90
12	12
2.7	2.7
85-110%	85-110%
30-60%	30-60%



65AF

100AF

150AF

IC- 50a IC- 65a

IC- 75a IC- 85a IC- 100a

IC- 130a IC- 150a

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
22	30
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%

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
37	45	45
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
240	240	240
17	17	17
5.4	5.4	5.4
85-110%	85-110%	85-110%
30-60%	30-60%	30-60%

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
110	110
18	18
2.7	2.7
85-110%	85-110%
30-60%	30-60%



Specifications

IC type - 3 Pole Power 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) as per IEC		
Rated Breaking Capacity(A) as per IEC		
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 (kVAR)	Fitted with capacitor unit	AC-6b
	Without capacitor unit	
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 (AC)		
Voltages available for Uc V, 50/60Hz		
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*185.1
5.4	5.4
138*203*185.1	138*203*185.1
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

800AF

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	1
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%

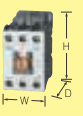
IC- 500a	IC- 630a	IC- 800a
IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947		
3	3	3
690	690	690
1000	1000	1000
8	8	8
5000	6300	8000
4000	5040	6400
580	660	900
500	630	800
350	400	630
NA	NA	NA
400	630	800
400	630	800
400	630	800
400	630	800
280	630	630
200	630	630
2.5	2.5	2.5
0.5	0.5	0.5
1200	1200	1200
-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

IR & IC Type - 4 Pole Control & Power Contactors



Frame size			
Type			
Conforms to Standard			
POWER CONTACTS			
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 (No. of operations)		
	Electrical (No. of operations)		
Current and Power	Ith/AC1	Thermal current	A
			200/240V kW
			A
			380/400V kW
			A
		500/550V kW	
		A	
		690V kW	A
Size and weight	AC Control	Weight	kg
		Size(W × H × D)	mm
	DC Control	Weight	kg
		Size(W × H × D)	mm
AUXILIARY CONTACTS			
No. of Built in Aux Contacts			
Additional Aux Contacts(Side Mounted)			
Additional Aux Contacts (Top Mounted)			
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 (AC)			
Voltages available for Uc V,50/60Hz			
Pick Up	VA		
Hold on	VA		
Heat Dissipation	Watts		
Limit of Operations	Pick up(%Uc)		
	Drop out(%Uc)		



18AF				
IR	IC-6a/4	IC-9a/4	IC-12a/4	IC-18a/4
IEC/EN60947-1,IEC/EN60947-4-1,UL508,K60947				
4				
690V				
690V				
50/60Hz				
6kV				
1800 operations per hour				
10 Million	15 Million			
0,5 Million	0,5 mil. Operations		0,8 mil. Operations	
16	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
0.33				
45x73.5x79				
0.4				
45x73.5x96.6				
-				
IUA1-11				
IUA2,IUA4				
16				
1.9				
1~2.5				
24 to 550V				
70				
9				
2.3				
85-110%				
30-60%				



22AF

IC-22a/4
IEC/EN60947-4-1, UL508, K60947

4
690V
690V
50/60Hz
6kV
1800 operations
15 mil. Operations
1 mil. Operations
40
15
40
27
40
35
40
44
40

0.4
47.2x80x86.8

0.5
47.2x80x113.2

-

IAU-11
IUA2, IUA4

16
1.9
1~2.5
-

24 to 550V

95
9
2

85-110%
30-60%

40AF

IC-32a/4 | IC-40a/4
IEC/EN60947-1, IEC/EN60947-4-1, UL508, K60947

4
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

0.59
59x83.5x94.5

0.7
59x83.5x121

-

IAU-11
IUA2, IUA4

16
1.9
1~2.5
-

24 to 550V

95
9
2

85-110%
30-60%

85AF

IC-50a/4 | IC-65a/4 | IC-75a/4 | IC-85a/4
IEC/EN60947-1, IEC/EN60947-4-1, UL508, K60947

4
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

1.2
91x123.5x117.8

1.29
91x123.5x117.8

-

IAU-11
IUA2, IUA4

16
1.9
1~2.5
-

24 to 550V

220
17
5

85-110%
30-60%



Specifications

IR & IC Type - 4 Pole Control & Power Contactors



Frame size				
Type				
Conforms to Standard				
POWER CONTACTS				
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 (No. of operations)			
	Electrical (No. of operations)			
Current and Power	Ith/AC1	Thermal current	A	
			200/240V	kW
			380/400V	kW
				A
			500/550V	kW
		690V	kW	
			A	
Size and weight	AC Control	Weight	kg	
		Size(W × H × D)	mm	
	DC Control	Weight	kg	
		Size(W × H × D)	mm	
AUXILIARY CONTACTS				
No. of Built in Aux Contacts				
Additional Aux Contacts(Side Mounted)				
Additional Aux Contacts (Top Mounted)				
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(AC)				
Voltages available for Uc V,50/60Hz				
Pick Up	VA			
Hold on	VA			
Heat Dissipation	Watts			
Limit of Operations	Pick up(%Uc)			
	Drop out(%Uc)			



225AF				
IC-100a/4	IC-130a/4	IC 150a/4	IC-185a/4	IC-225a/4
IEC/EN60947-1,IEC/EN60947-4-1,UL508,K60947				
4				
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
5.6				
175x203x185				
5.6				
175x203x185				
2NO+2NC				
IAU-100, IAU-100E				
-				
16				
1.9				
1~2.5				
100~500V				
380				
11.6				
4.7				
85-110%				
30-60%				



400AF

800AF

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

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

IEC/EN60947-1, IEC/EN60947-4-1, UL508, K60947

IEC/EN60947-1, IEC/EN60947-4-1, UL508, K60947

4

4

690V

690V

1000V

1000V

50/60Hz

50/60Hz

8kV

8kV

1200 operations per hour

1200 operations per hour

15 mil. Operations

12 mil. Operations

0.5 mil. Operations

0.5 mil. Operations

360	420	500
-----	-----	-----

630	750	900
-----	-----	-----

115	135	160
-----	-----	-----

245	255	310
-----	-----	-----

300	350	420
-----	-----	-----

630	660	800
-----	-----	-----

215	250	300
-----	-----	-----

450	470	570
-----	-----	-----

300	350	420
-----	-----	-----

630	660	800
-----	-----	-----

265	315	375
-----	-----	-----

560	590	710
-----	-----	-----

300	350	420
-----	-----	-----

630	660	800
-----	-----	-----

335	390	470
-----	-----	-----

710	740	900
-----	-----	-----

300	350	420
-----	-----	-----

630	660	800
-----	-----	-----

9,9

26,3

206x243x205

346x310x244

9,9

26,3

206x243x205

346x310x244

2NO+2NC

2NO+2NC

IAU-100, IAU-100E

IAU-100, IAU-100E

-

-

16

16

1.9

1.9

1~2.5

1~2.5

100~500V

100~500V

571

571

14

14

5

5

85-110%

85-110%

30-60%

30-60%



Specifications

IT type - 3 Pole

Thermal Overload Relays

(Protection against Overloads, Phase unbalance, Loss of Phase & Prolonged Stalling of motor)



Type	IT 12	IT 32	IT 63
Conforms to Standards			
Range (A)	0.1---0.16	0.63---1.0	24---36
	0.16---0.25	1---1.6	28---40
	0.25---0.40	1.6---2.5	34---50
	0.40---0.63	2.5---4.0	45---65
	0.63---1.0	4---6	
	1---1.6	5---8	
	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/Separate	Direct/Separate	Direct/Separate
Suitable for Contactor Frame Size	IC 6a,9a,12a,18a(18AF)	IC-9b,12b, 18b,22b(22AF) 32a,40a (40AF)	IC-50a,65a (65AF)
Rated Operational voltage(V),Ue	690	690	690
Rated Insulation voltage(V),Ui	690	690	690
Rated Impulse withstand voltage(kV), Uimp	6	6	6
Service Temp			
Stop/Test/ Reset (H/A)	Test/Reset	Stop/Test/ Reset	Stop/Test/ Reset
Built in contacts	1NO+1NC	1NO+1NC	1NO+1NC
Rated Operational Current(A),Ie Aux Contacts	5	5	5
AC-15 Duty	110/120 V	1.5	1.5
	220/240V	0.75	0.75
	380/415V	0.47	0.47
	480V	0.375	0.375
Trip Class	10A & 20	10A & 20	10A & 20
Main Terminal capacity(Max 2 no conductors)	Lug(mm ²)	1~2.5	1~10
Aux terminal capacity	Wire(mm ²)	2*2.5	2*2.5
Separate Mounting Unit	IUZ-12	IUZ-32	IUZ-63

Accessories & Spares for Contactors

Contactor Frame	Timer	Additional Aux. Contacts(Top)		Additional Aux. Contacts(Side)	
		3 Pole	4 Pole	3 Pole	4 Pole
3 Pole / 4 Pole	3 Pole / 4 Pole				
18AF	IUT	IUA2, IUA4	IUA2, IUA4	IUA1	IUA1
22AF					
40AF					
65AF					
85AF					
100AF					
150AF					
225AF		-			
400AF	NA	-		IAU100,IAU100E	IAU100,IAU100E
800AF					



Overload Relay Tripping Curves

Class 10A

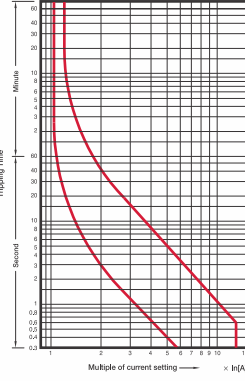
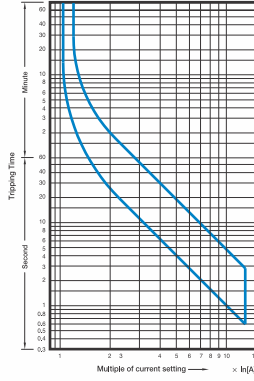
Cold Starting

Hot Starting

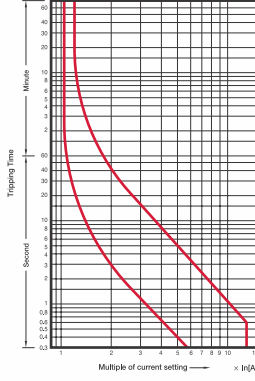
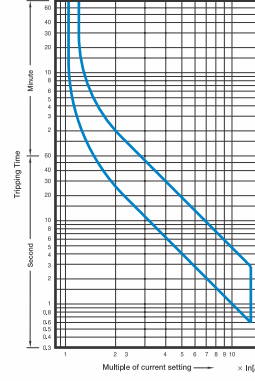
Cold Starting

Hot Starting

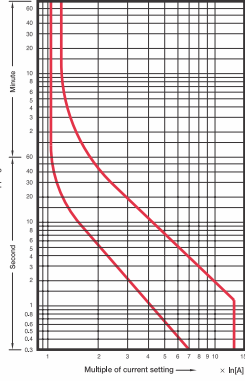
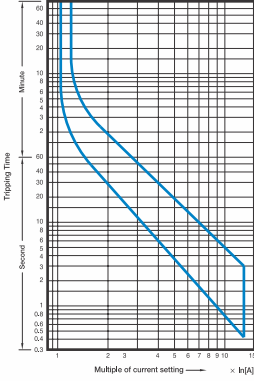
IT-12/3K



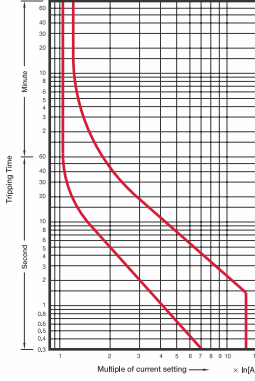
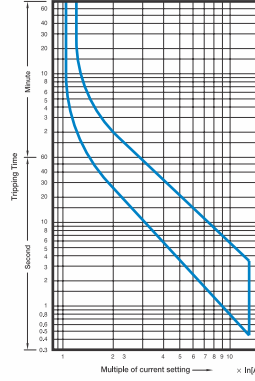
IT-32/3K



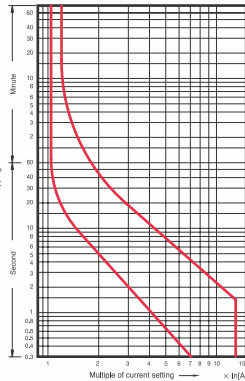
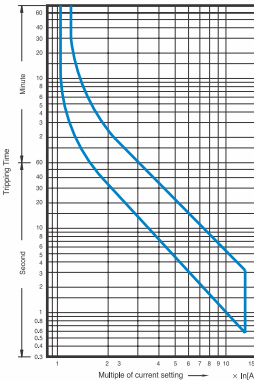
IT-63/3K



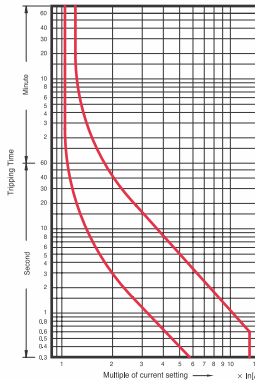
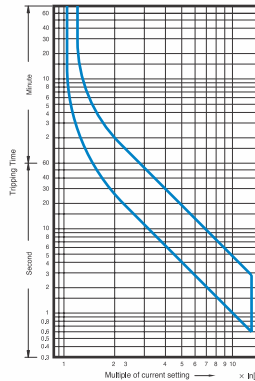
IT-95/3K



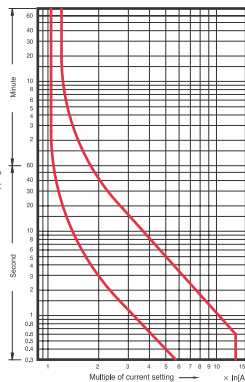
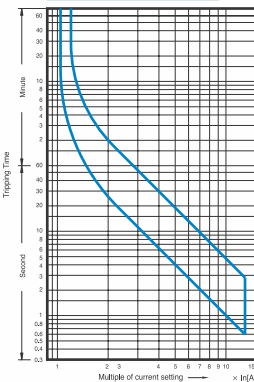
IT-150/3K



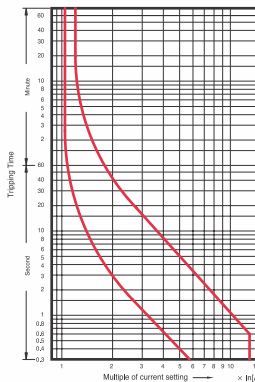
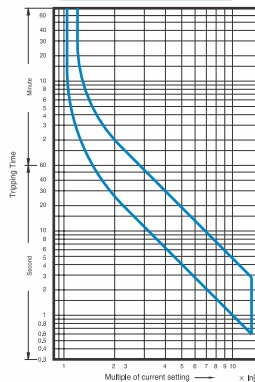
IT-225/3K



IT-400/3K



IT-800/3K



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)	Contactor Frame
	220 ~ 240V	400 ~ 440V	600~690V		
IC097CC	5	9.7	14	14	18AF
IC125CC	6.7	12.5	18	18	18AF
IC167CC	8.5	16.7	24	24	18AF
IC180CC	10	18	26	26	22AF
IC250CC	15	25	36	36	40AF
IC333CC	20	33.3	48	48	40AF
IC400CC	20	40	58	58	65AF
IC457CC	25	45.7	66	66	65AF
IC540CC	29.7	54	78	78	100AF
IC600CC	35	60	92	92	100AF
IC620CC	37	62	94	94	100AF

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.

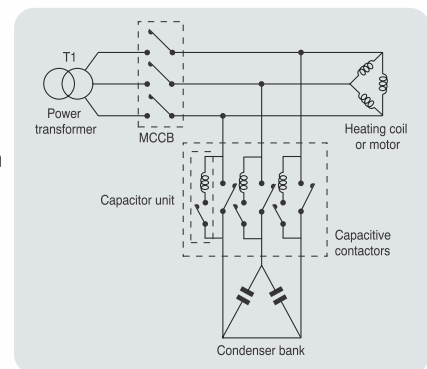
Features of capacitor unit (Pre-loading resistor)

These capacitive contactors are suitable for switching single-step or multiple-step condenser bank.

It is standardized by IEC-60947-4941, UL and CSA.

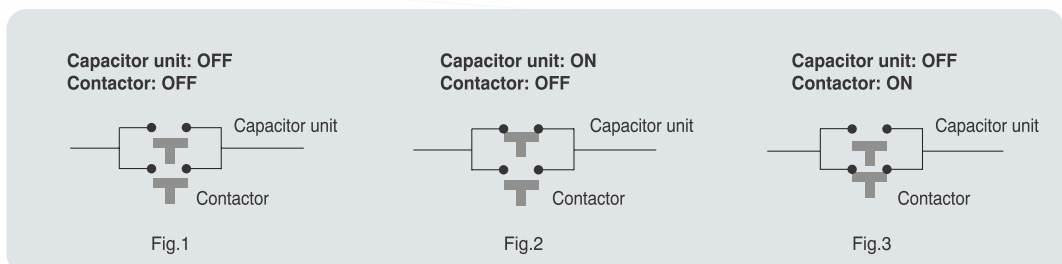
Features of capacitor unit(Pre-loading resistor)

- 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



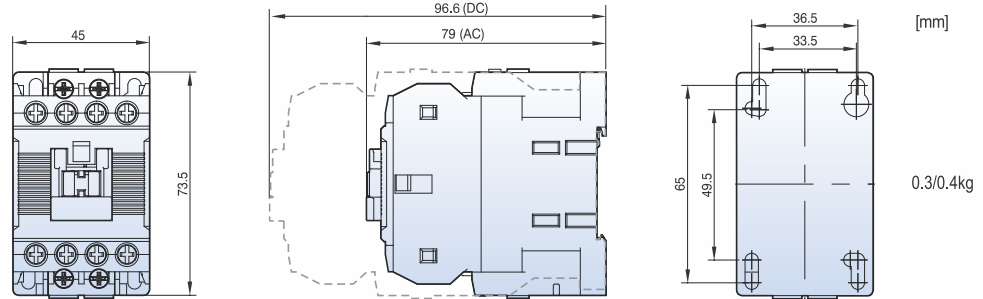
Note) Closing sequence: Fig.1 => Fig.2 => Fig.3
 Opening sequence: Fig.3 => Fig.1



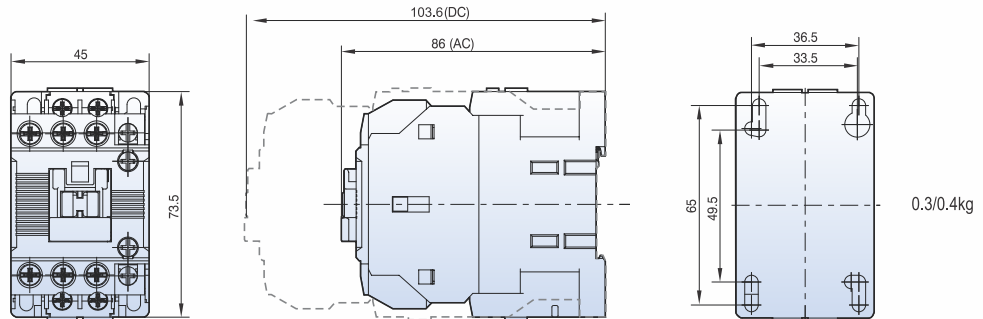
Dimensions (3Pole)

Power Contactors (IC-6a~100a)

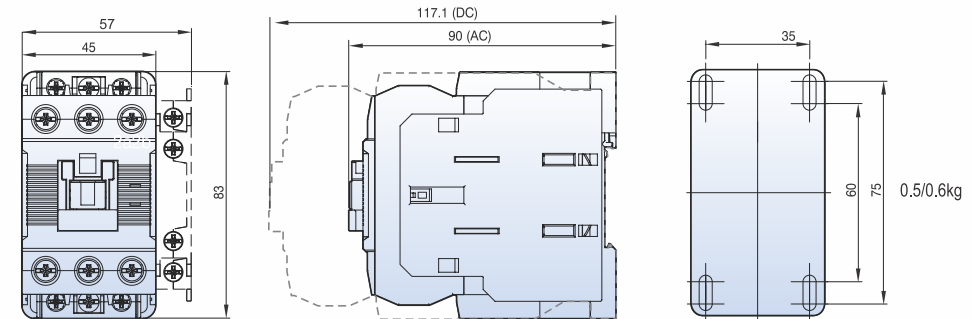
IC-6a~18a AC/DC



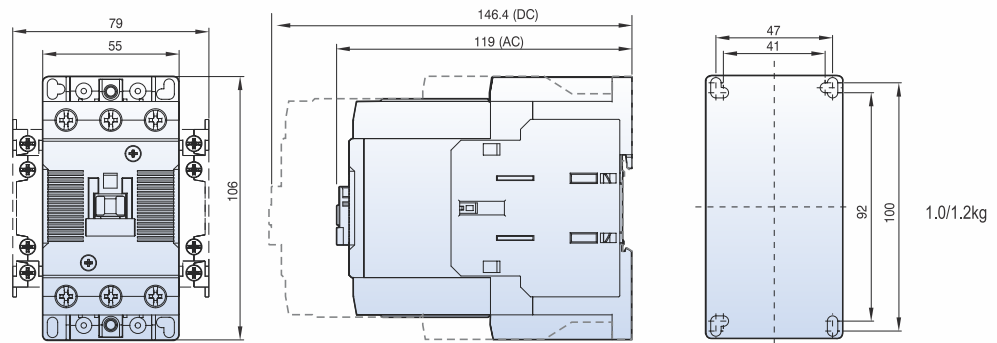
IC-9b~22b AC/DC



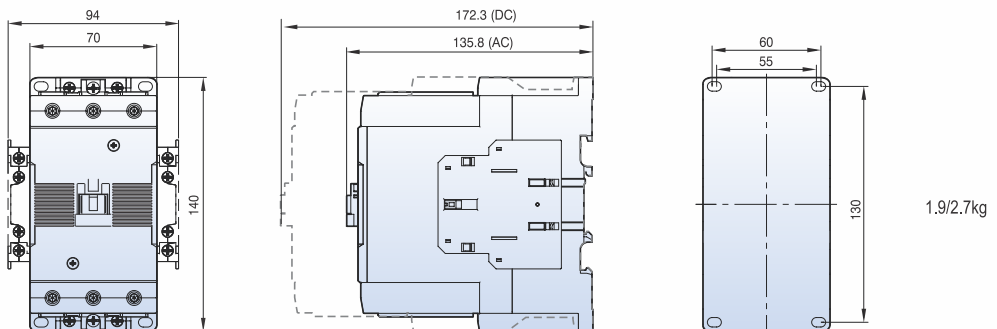
IC-32a~40a AC/DC



IC-50a~65a AC/DC



IC-75a~100a AC/DC

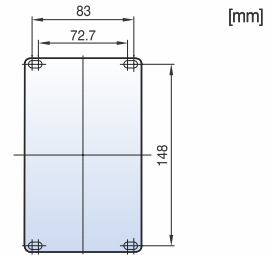
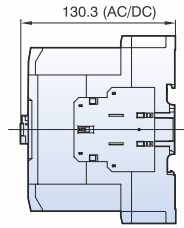
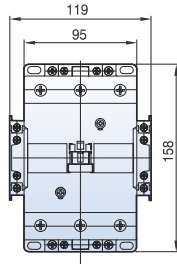




Dimensions (3Pole)

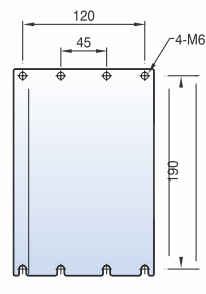
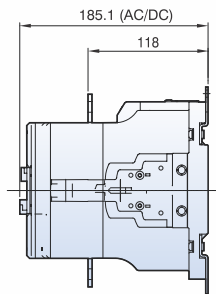
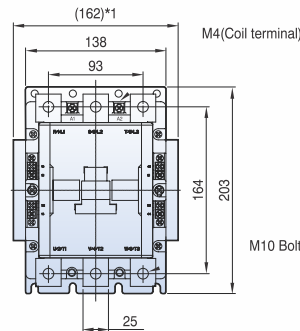
Power Contactors (IC-130a~800a)

IC-130a~150a AC/DC



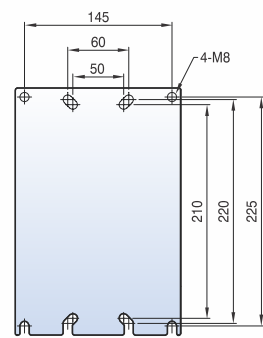
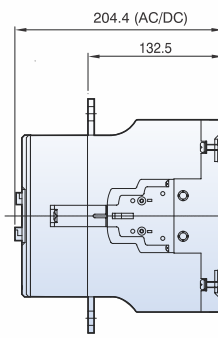
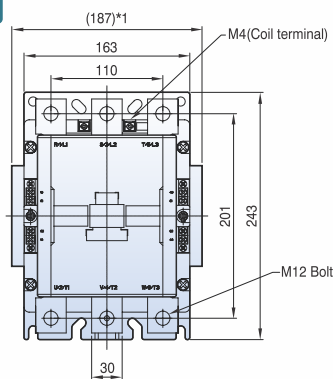
2.4kg

IC-185a~225a AC/DC



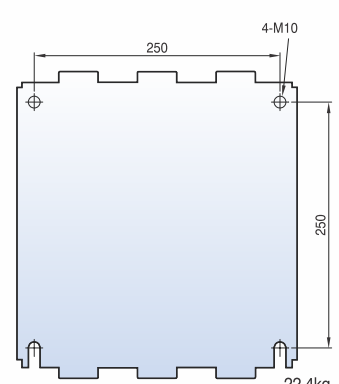
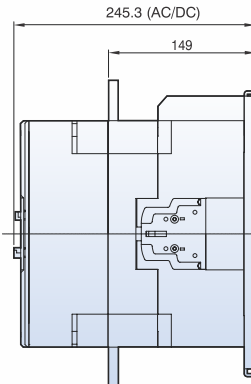
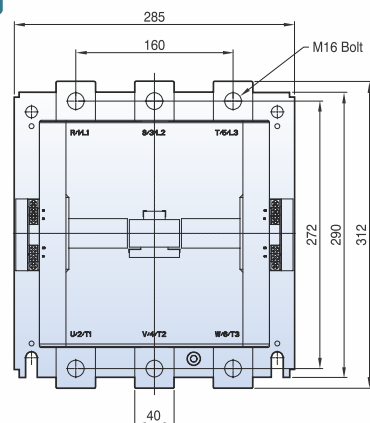
5.4kg

IC-265a~400a AC/DC



9.2kg

IC-500a~800a AC/DC



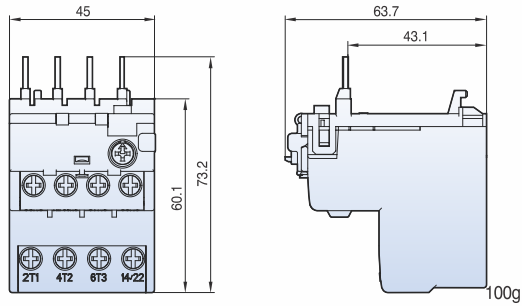
22.4kg



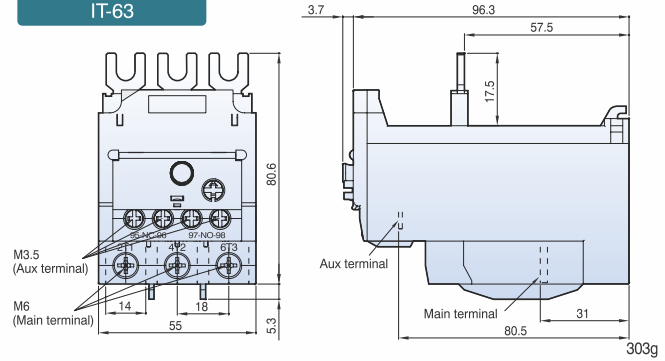
Dimensions (TOR)

Overload Relays

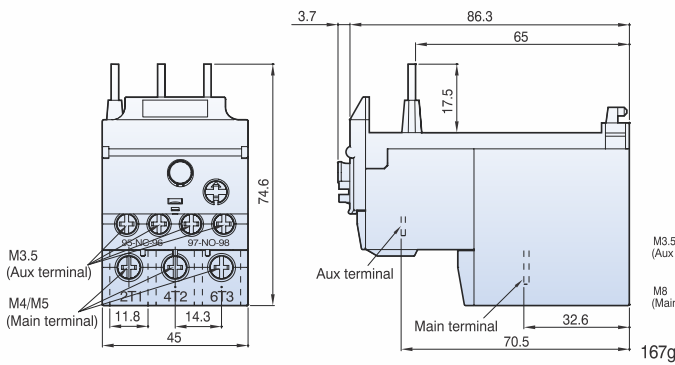
IT-12



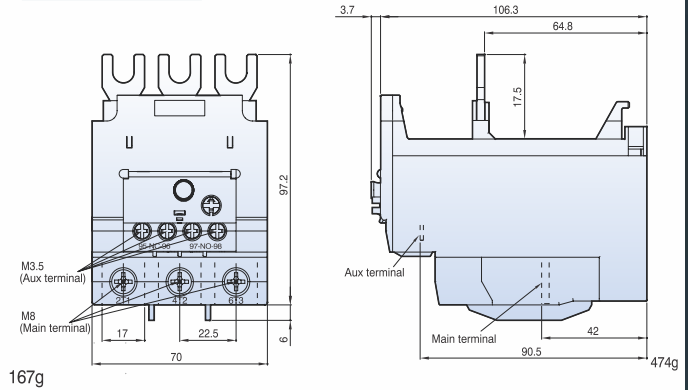
IT-63



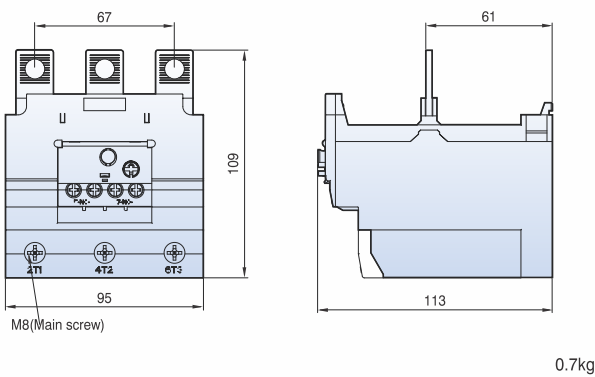
IT-32



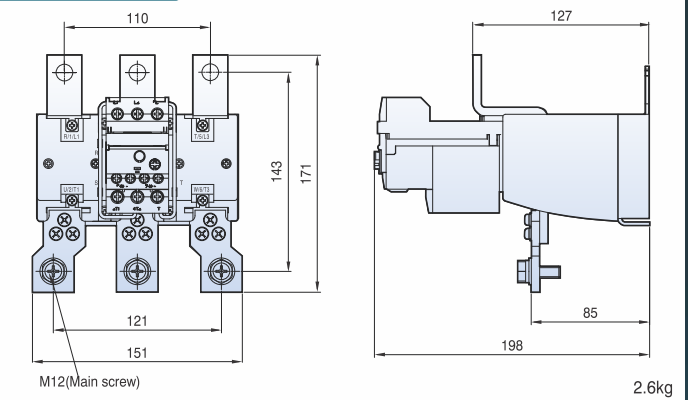
IT-95



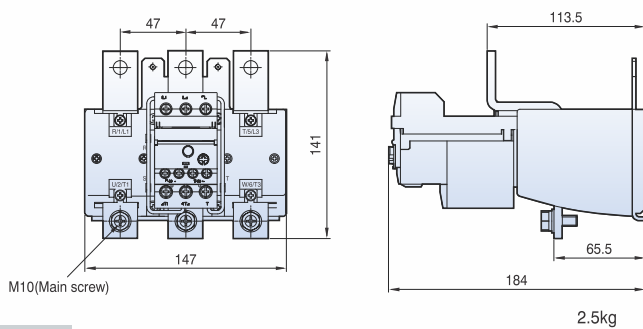
IT-150



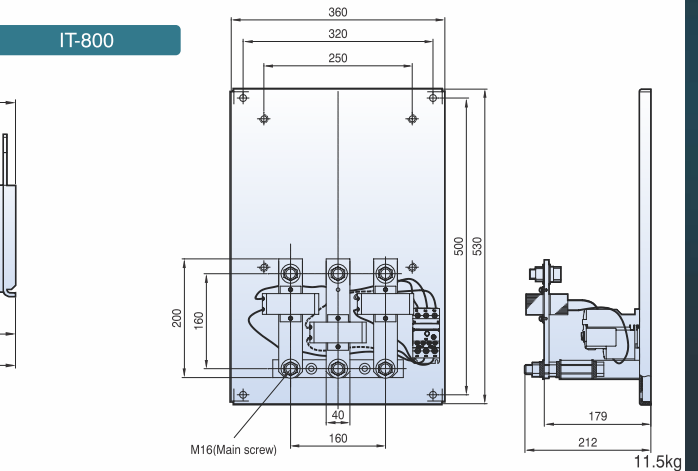
IT-400



IT-225



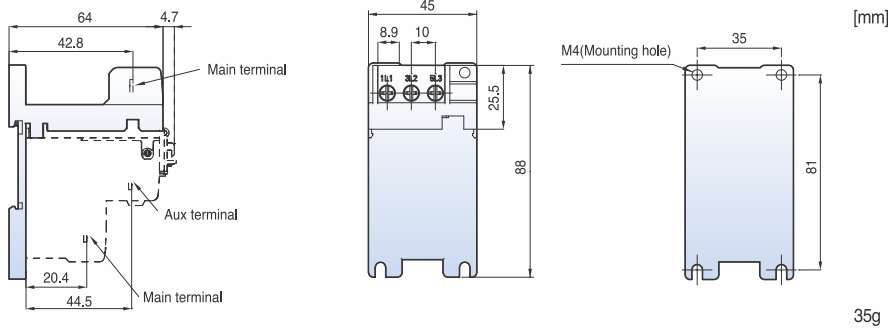
IT-800





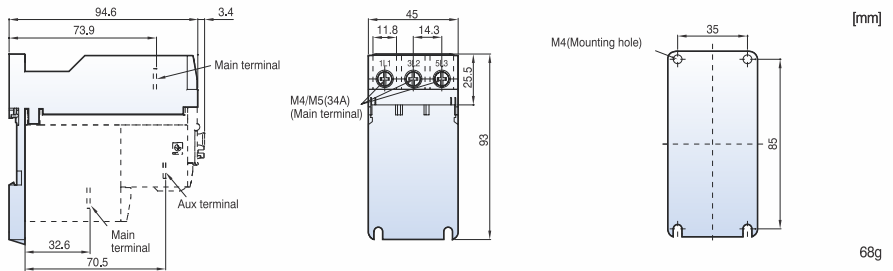
Dimensions (TOR) Separate Mounting Units

IUZ-12



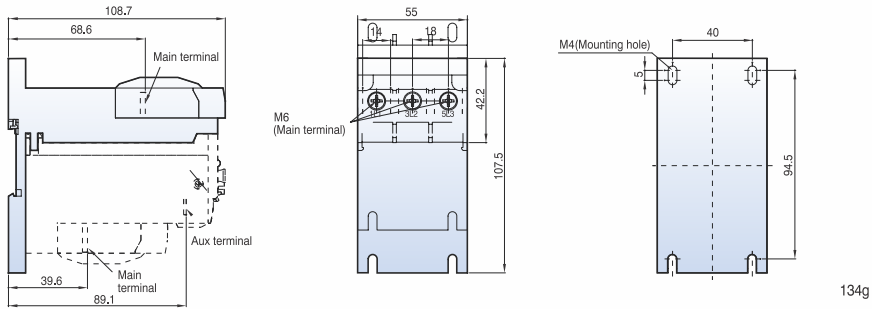
35g

IUZ-32



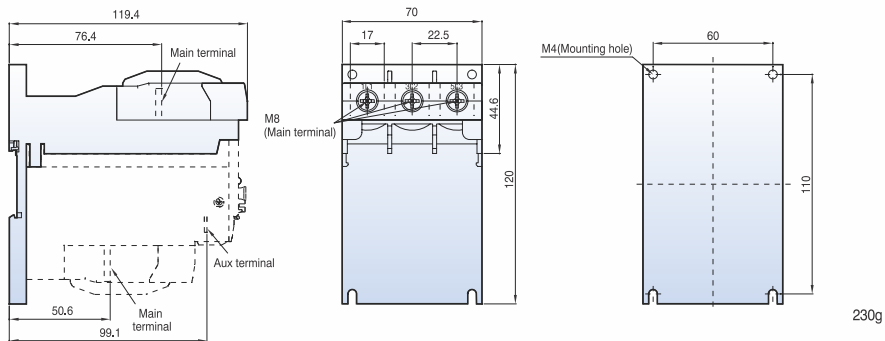
68g

IUZ-63



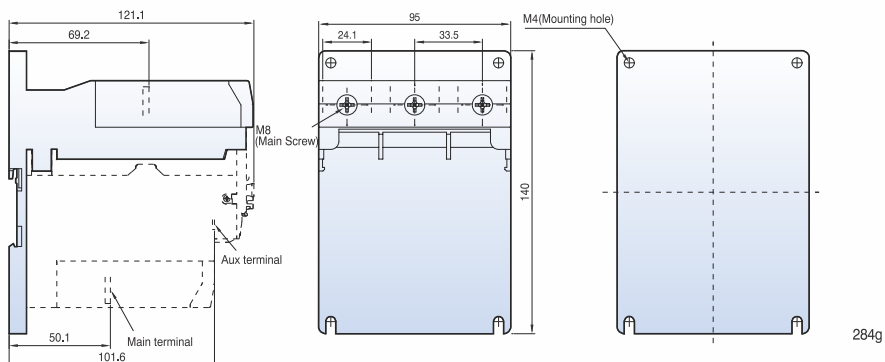
134g

IUZ-95



230g

IUZ-150



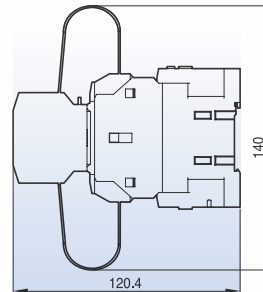
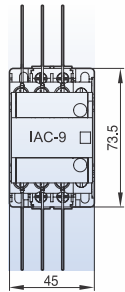
284g

Dimensions (3Pole)

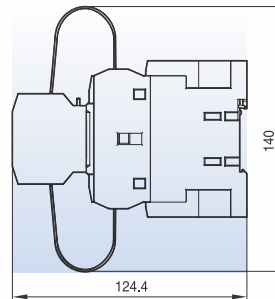
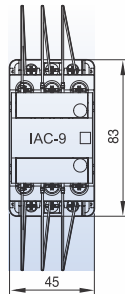
Capacitor Duty Contactors (IC-097CC~620CC)

[mm]

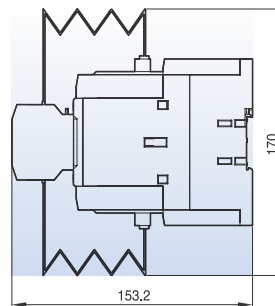
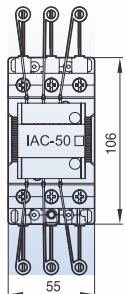
IC097CC~180CC AC



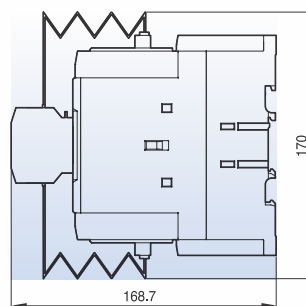
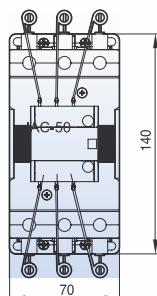
IC250CC~333CC AC



IC400CC~457CC AC



IC540CC~620CC AC

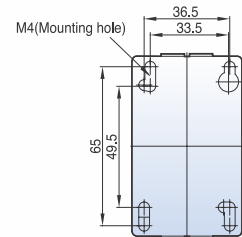
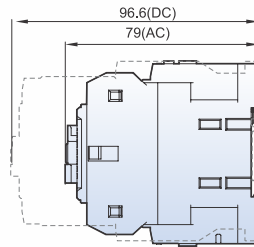
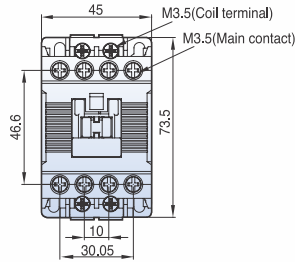




Dimensions (4Pole)

Control & Power Contactors (IR, IC-6a/4~85a/4)

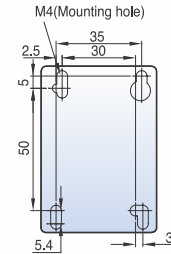
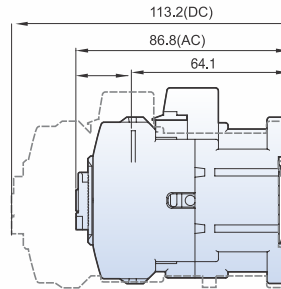
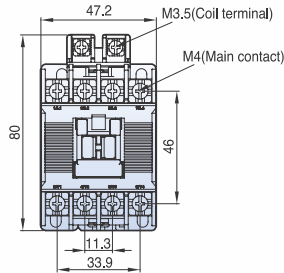
IR & IC-6a/4~18a/4 AC/DC



[mm]

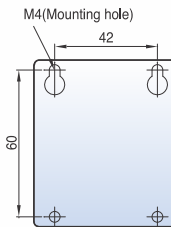
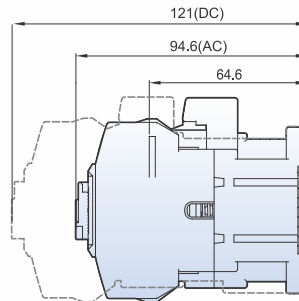
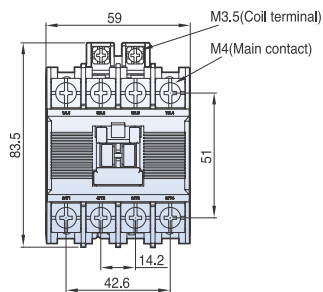
0.3/0.45kg

IC-22a/4 AC/DC



0.4/0.55kg

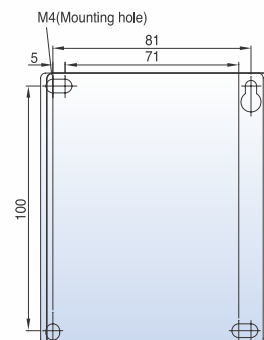
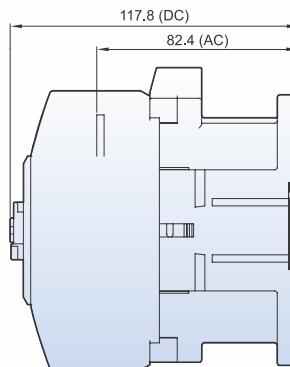
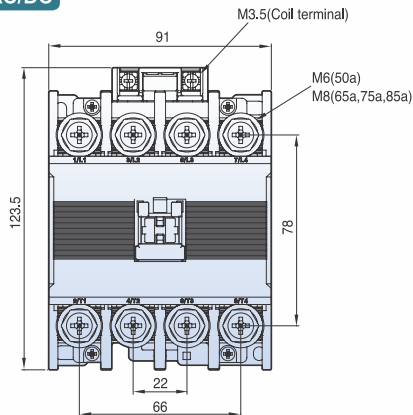
IC-32a/4~40a/4 AC/DC



[mm]

0.6/0.7kg

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



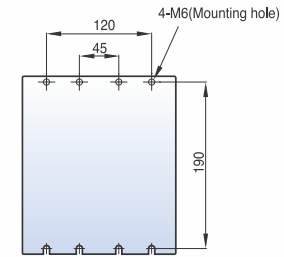
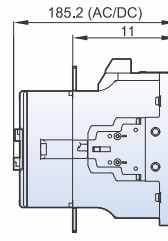
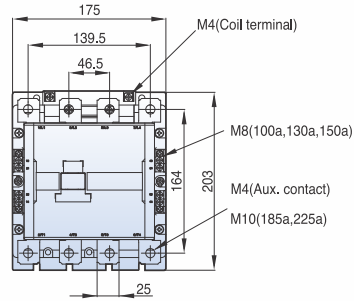
1.2/1.3kg



Dimensions (4Pole)

Control & Power Contactors (IC-100a/4~800a/4)

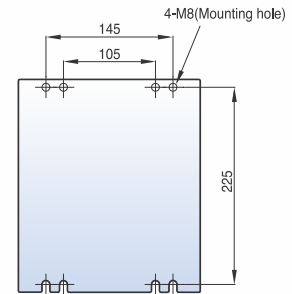
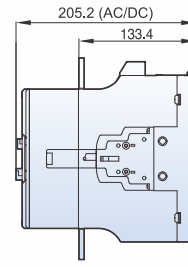
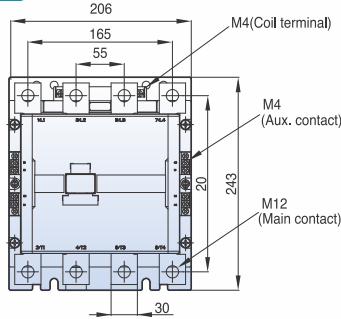
IC-100a/4~225a/4 AC/DC



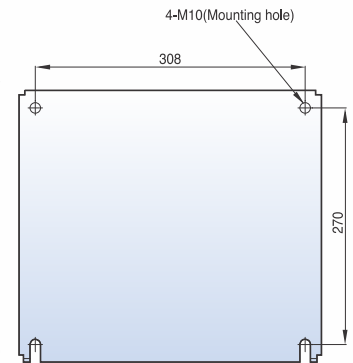
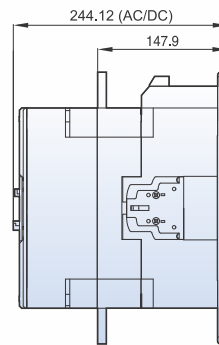
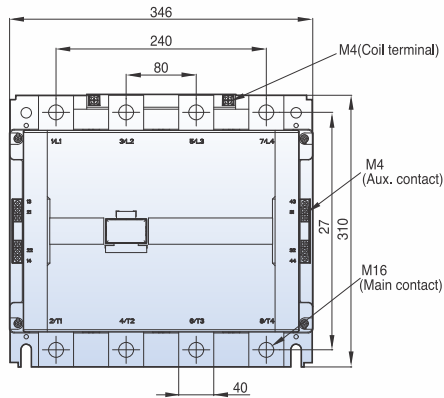
[mm]

5.6kg

IC-265a/4~400a/4 AC/DC



IC-500a/4~800a/4 AC/DC



9.9kg

26.3kg



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