



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 confirming 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 27000+ 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.





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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		
As per 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
°C	-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
°C	-5°C to +60°C	-5°C to +60°C	-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	2.5~10	2.5~10
	16~10AWG	16~8AWG	14~8AWG
	16~8AWG	14~8AWG	14~8AWG
	0.3	0.3	0.3
	0.3	0.3	0.3
	45*73.5*86	45*73.5*86	45*73.5*86
	45*73.5*86	45*73.5*86	45*73.5*86
	0.4	0.4	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	45*73.5*103.6	45*73.5*103.6
	1NO + 1NC	1NO + 1NC	1NO + 1NC
	1NO + 1NC	1NO + 1NC	1NO + 1NC
	16	16	16
	16	16	16
	1.9	1.9	1.9
	1.9	1.9	1.9
	1~2.5	1~2.5	1~2.5
	1~2.5	1~2.5	1~2.5
	24 to 550V	24 to 550V	24 to 550V
	24 to 550V	24 to 550V	24 to 550V
	70	70	70
	70	70	70
	9	9	9
	9	9	9
	2.3	2.3	2.3
	2.3	2.3	2.3
	85-110%	85-110%	85-110%
	85-110%	85-110%	85-110%
	30-60%	30-60%	30-60%
	30-60%	30-60%	30-60%



Specifications

IC type - 3 Pole Power Contactors



Frame Size		
Type		
As per 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		IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947			IEC /EN 60947-1, IEC/EN-60947-4-1, UL508, K60947	
3	3	3	3	3	3	3
690	690	690	690	690	690	690
1000	1000	1000	1000	1000	1000	1000
8	8	8	8	8	8	8
500	650	750	850	1050	1200	1500
400	520	600	650	840	960	1200
70	100	110	135	160	160	210
50	65	75	85	105	130	150
32	47	52	62	75	90	110
40	45.7	54	60	62	NA	NA
22	30	37	45	45		
70	90	90	100	100	120	150
70	90	90	100	100	120	150
60	80	80	85	85	100	150
55	75	75	80	80	120	150
50	65	65	70	70	90	130
35	55	55	60	60	80	120
12	12	12	12	12	5	5
2	2	2	2	2	1	1
1800	1800	1800	1800	1800	1200	1200
-5°C to +60°C	-5°C to +60°C	-5°C to +60°C	-5°C to +60°C	-5°C to +60°C	-5°C to +60°C	-5°C to +60°C
6~25	10~35	10~35	10~50	10~70	35~70	35~95
10~4AWG	8~3AWG	8~2AWG	8~00AWG	8~0AWG	3~00AWG	3~00AWG
0.9	0.9	1.8	1.8	1.8	2.4	2.4
55*106*119	55*106*119	70*140*135.8	70*140*135.8	70*140*135.8	95*158*130.3	95*158*130.3
1.2	1.2	2.7	2.7	2.7	2.4	2.4
55*106*146.4	55*106*146.4	79*140*172.3	79*140*172.3	94*140*172.3	95*158*130.3	95*158*130.3
NA	NA	NA	NA	NA	NA	NA
16	16	16	16	16	16	16
1.9	1.9	1.9	1.9	1.9	1.9	1.9
1~2.5	1~2.5	1~2.5	1~2.5	1~2.5	1~2.5	1~2.5
24 to 550V	24 to 550V	24 to 550V	24 to 550V	24 to 550V	24 to 500V	24 to 500V
110	110	240	240	240	110	110
13	13	17	17	17	18	18
2.8	2.8	5.4	5.4	5.4	2.7	2.7
85-110%	85-110%	85-110%	85-110%	85-110%	85-110%	85-110%
30-60%	30-60%	30-60%	30-60%	30-60%	30-60%	30-60%



Specifications

IC type - 3 Pole Power Contactors



Frame Size		
Type		
As per 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			
As per 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	
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	40AF		85AF			
IC-22a/4	IC-32a/4	IC-40a/4	IC-50a/4	IC-65a/4	IC-75a/4	IC-85a/4
IEC/EN60947-4-1, UL508, K60947	IEC/EN60947-1, IEC/EN60947-4-1, UL508, K60947		IEC/EN60947-1, IEC/EN60947-4-1, UL508, K60947			
4	4		4			
690V	690V		690V			
690V	690V		1000V			
50/60Hz	50/60Hz		50/60Hz			
6kV	6kV		8kV			
1800 operations	1800 operations per hour		1800 operations per hour			
15 mil. Operations	15 mil. Operations		12 mil. Operations			
1 mil. Operations	1 mil. Operations		1 mil. Operations			
40	50	60	80	100	110	135
15	18	22	30	37	41	51
40	50	60	80	100	110	135
27	35	42	56	70	76	95
40	50	60	80	100	110	135
35	43	52	70	88	97	120
40	50	60	80	100	110	135
44	55	66	88	110	120	150
40	50	60	80	100	110	135
0.4	0.59		1.2			
47.2x80x86.8	59x83.5x94.5		91x123.5x117.8			
0.5	0.7		1.29			
47.2x80x113.2	59x83.5x121		91x123.5x117.8			
-	-		-			
IAU-11	IAU-11		IAU-11			
IUA2, IUA4	IUA2, IUA4		IUA2, IUA4			
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			
95	95		220			
9	9		17			
2	2		5			
85-110%	85-110%		85-110%			
30-60%	30-60%		30-60%			



Specifications

IR & IC Type - 4 Pole Control & Power Contactors



Frame size			
Type			
As per 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
		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
IEC/EN60947-1, IEC/EN60947-4-1, UL508, K60947		
4		
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
9.9		
206x243x205		
9.9		
206x243x205		
2NO+2NC		
IAU-100, IAU-100E		
-		
16		
1.9		
1~2.5		
100~500V		
571		
14		
5		
85-110%		
30-60%		

IC-500a/4	IC-630a/4	IC-800a/4
IEC/EN60947-1, IEC/EN60947-4-1, UL508, K60947		
4		
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
26.3		
346x310x244		
26.3		
346x310x244		
2NO+2NC		
IAU-100, IAU-100E		
-		
16		
1.9		
1~2.5		
100~500V		
571		
14		
5		
85-110%		
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
As Per 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	1.5	1.5	1.5
	0.75	0.75	0.75
	0.47	0.47	0.47
	0.375	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	1~10
Aux terminal capacity Wire(mm ²)	2*2.5	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				IUA1
18AF	IUT	IUA2, IUA4	IUA2, IUA4	IUA1	IAU
22AF					
40AF					
65AF					
85AF					
100AF					
150AF					
225AF		-			
400AF	NA	-		IAU100,IAU100E	IAU100,IAU100E
800AF					



IT 95	IT 150	IT 225	IT 400	IT 800
IEC /EN 60947-1, IEC/EN-60947-4-1				
34---50	80---105	100---160	160---240	200---300
45---65	95---130	120---185	200---330	260---400
54---75	110---150	160---240	260---400	400---600
63---85				520---800
70---95				
80---100				
Direct/Separate	Direct/Separate	Direct/Separate	Direct/Separate	Direct/Separate
IC-75a,85a,100a(100AF)	IC-130a,150a(150AF)	IC-185a,225a(225AF)	IC-265a,330a,400a(400AF)	IC-500a,630a,800a(800AF)
690	690	690	690	690
690	690	690	690	690
6	6	6	6	6
	-5°c to +60°c			
Stop/Test/ Reset	Stop/Test/ Reset	Stop/Test/ Reset	Stop/Test/ Reset	Stop/Test/ Reset
1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC	1NO+1NC
5	5	5	5	5
1.5	1.5	2.5	2.5	2.5
0.75	0.75	2	2	2
0.47	0.47	0.47	0.47	0.47
0.375	0.375	0.375	0.375	0.375
10A	10A & 20	10A & 20	10A & 20	10A & 20
2.5~35	10~50	35~120	50~240	2*185~240
2*2.5	2*2.5	2*2.5	2*2.5	2*2.5
IUZ-95	IUZ-150	NA	NA	NA

Mechanical Interlock Unit		Mechanical Latch Unit	Spare Coil	Surge Suppressor
3 Pole	4 Pole	3 Pole/4 Pole	3 Pole/4 Pole	3 Pole/4 Pole
IUR-02	IUR-02	IML-65	IXC22AF/IXC22AF	IUS/IUS
	IAR-9		IXC22AF/IXC404P	IUS/IAS
	-	IXC404P/IXC404P	IXC65AF/NA	
IAR-180	IAR-180	IML-150	NA/IXC854P	
IAR-600	IAR-600	IAR-220	IXC100AF/NA	IAS/IAS
		IAR-400	IXC150AF/NA	
		-	IXC225AF/IXC2254P	
			IXC400AF/IXC4004P	
			IXC800AF/IXC8004P	



Overload Relay Tripping Curves

Class 10A

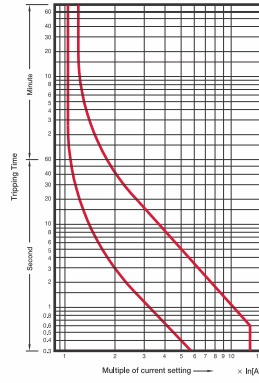
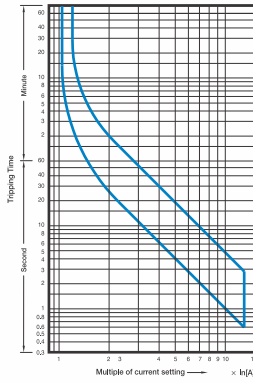
Cold Starting

Hot Starting

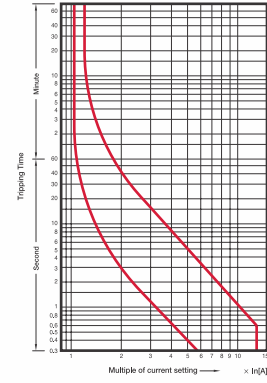
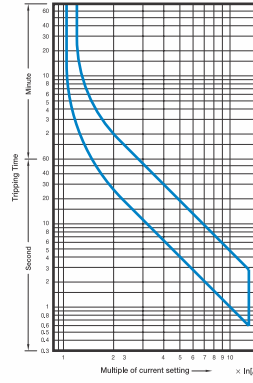
Cold Starting

Hot Starting

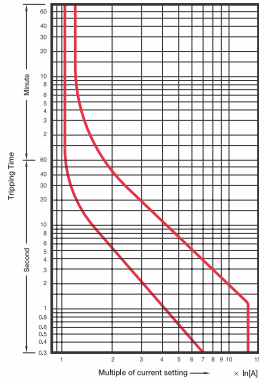
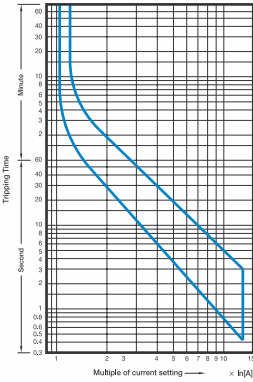
IT-12/3K



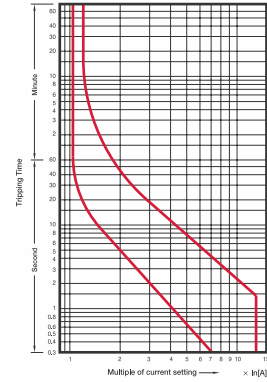
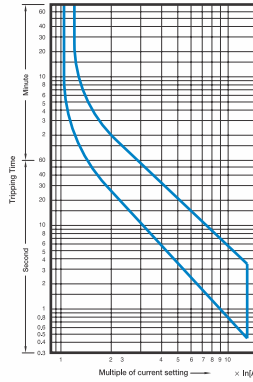
IT-32/3K



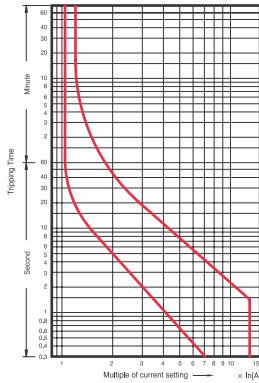
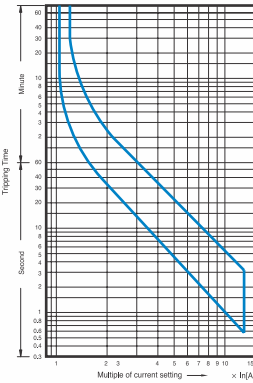
IT-63/3K



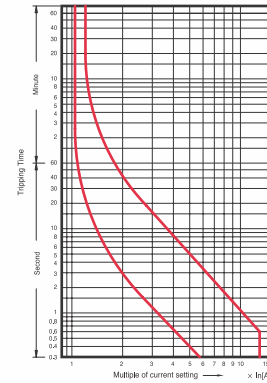
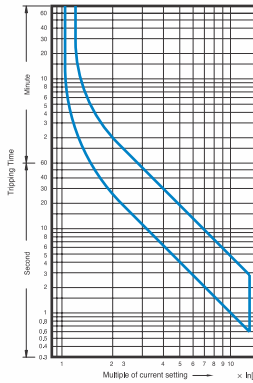
IT-95/3K



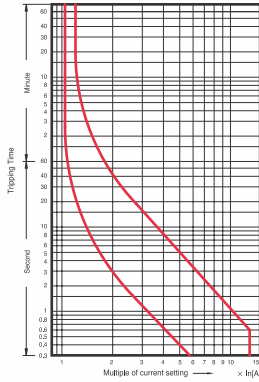
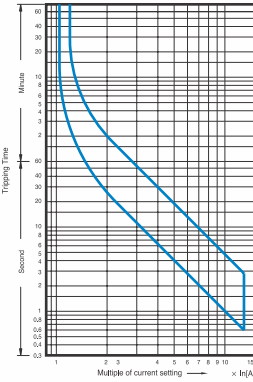
IT-150/3K



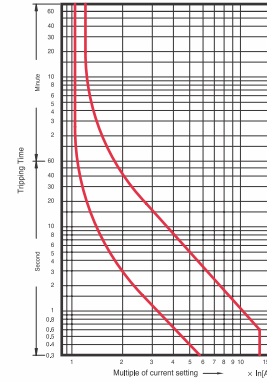
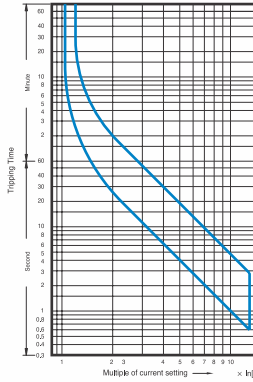
IT-225/3K



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.

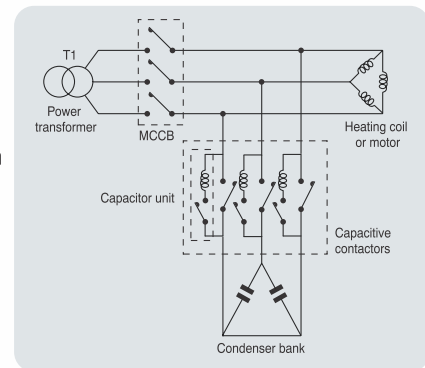
Features of capacitor unit (Pre-loading resistor)

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

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

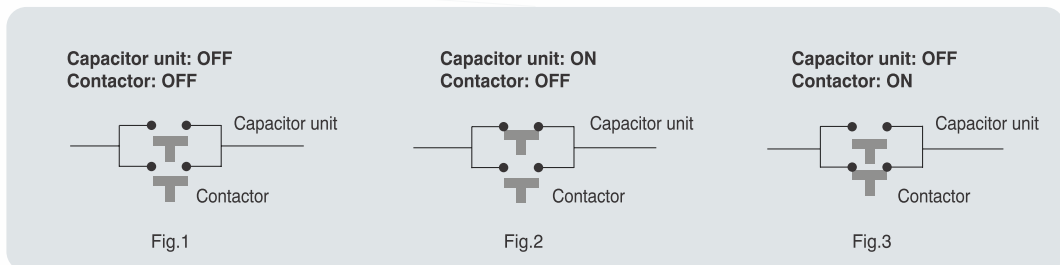
Features of capacitor unit(Pre-loading resistor)

- 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

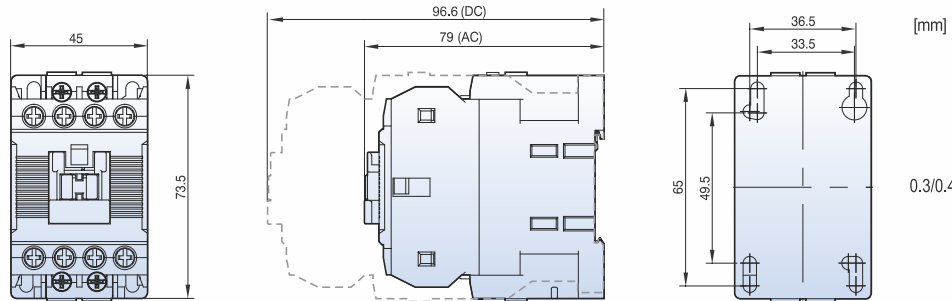




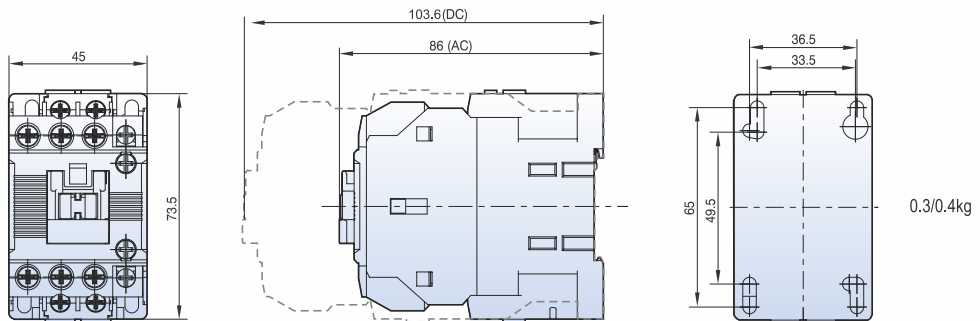
Dimensions (3Pole)

Power Contactors (IC-6a~100a)

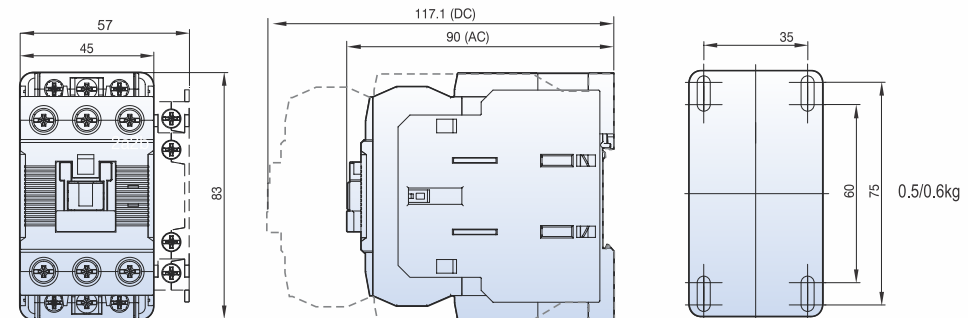
IC-6a~18a AC/DC



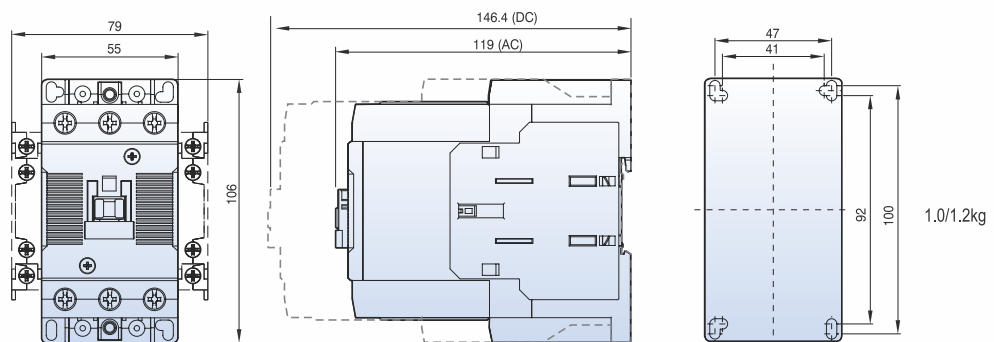
IC-9b~22b AC/DC



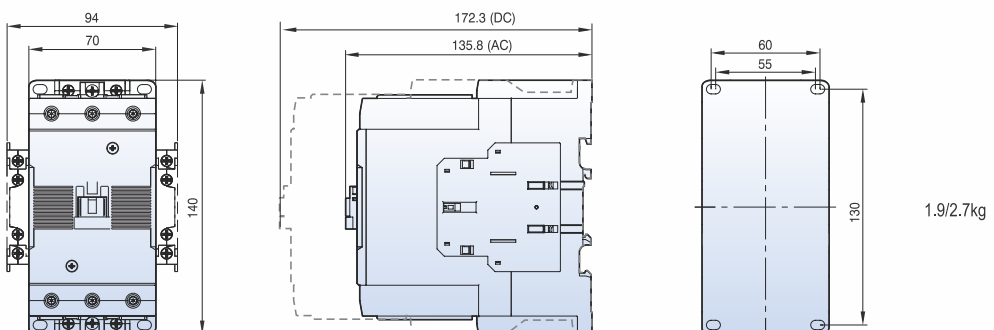
IC-32a~40a AC/DC



IC-50a~65a AC/DC



IC-75a~100a AC/DC

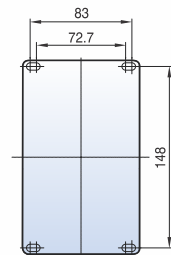
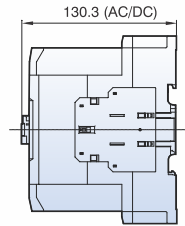
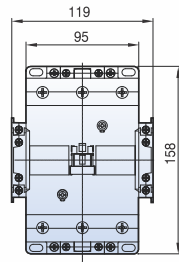




Dimensions (3Pole)

Power Contactors (IC-130a~800a)

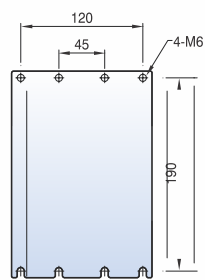
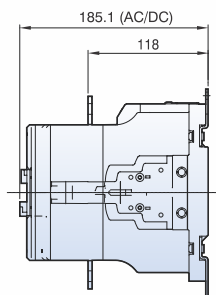
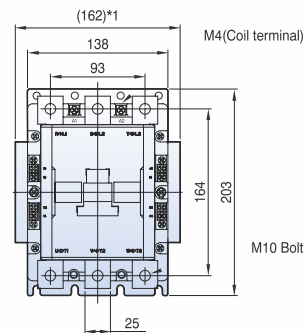
IC-130a~150a AC/DC



[mm]

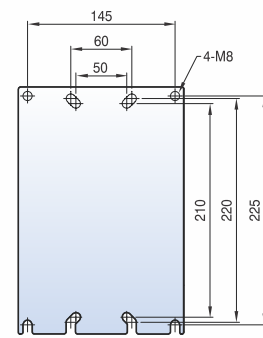
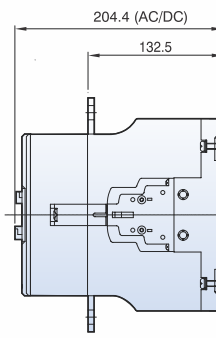
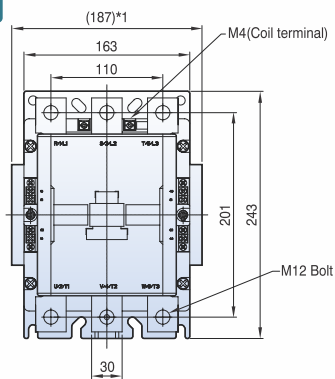
2.4kg

IC-185a~225a AC/DC



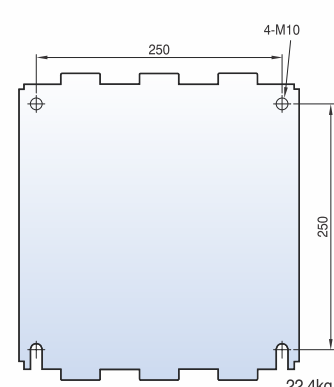
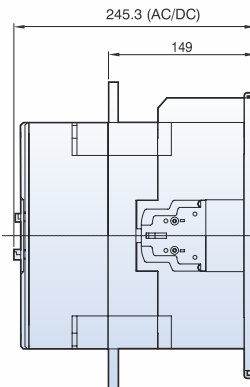
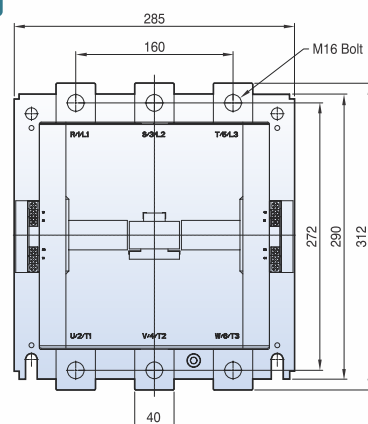
5.4kg

IC-265a~400a AC/DC



9.2kg

IC-500a~800a AC/DC



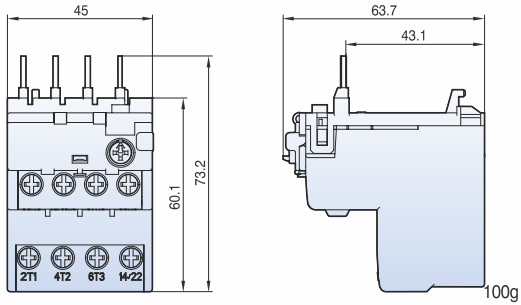
22.4kg



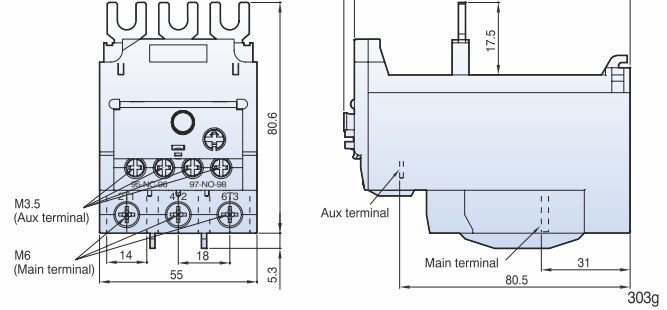
Dimensions (TOR)

Overload Relays

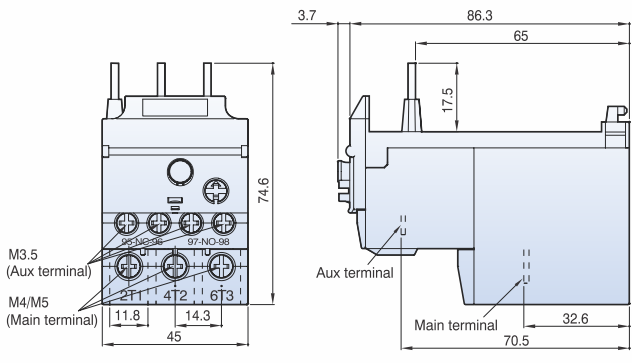
IT-12



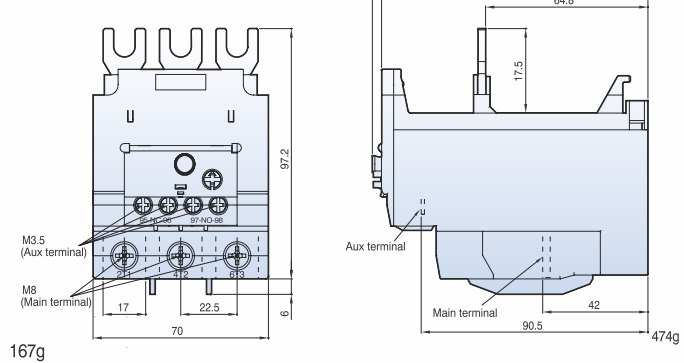
IT-63



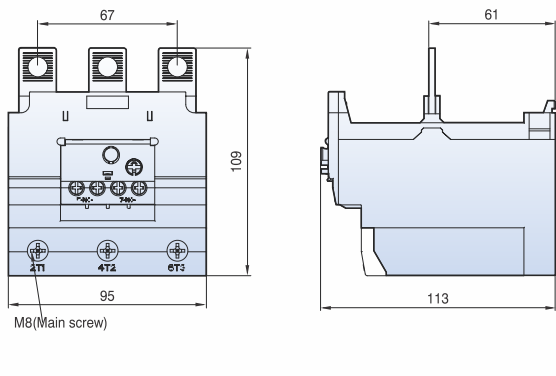
IT-32



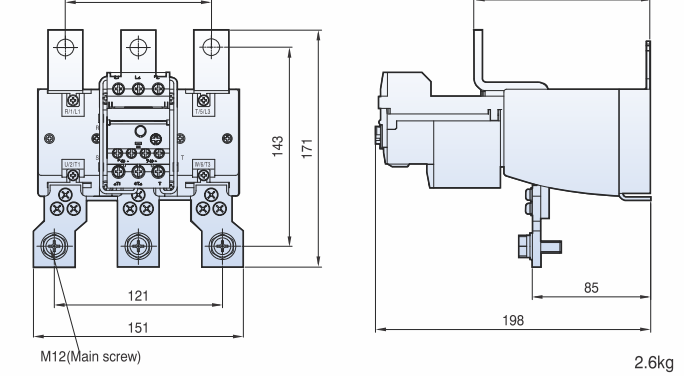
IT-95



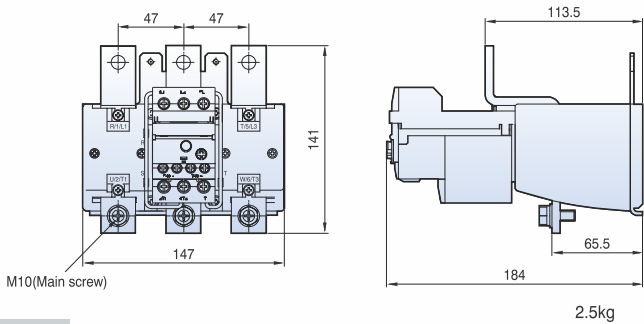
IT-150



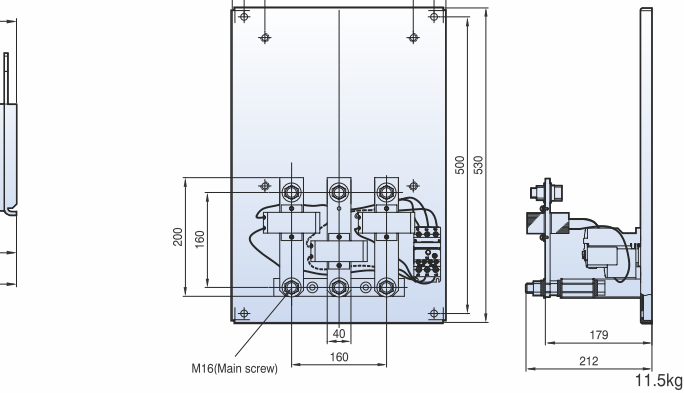
IT-400



IT-225



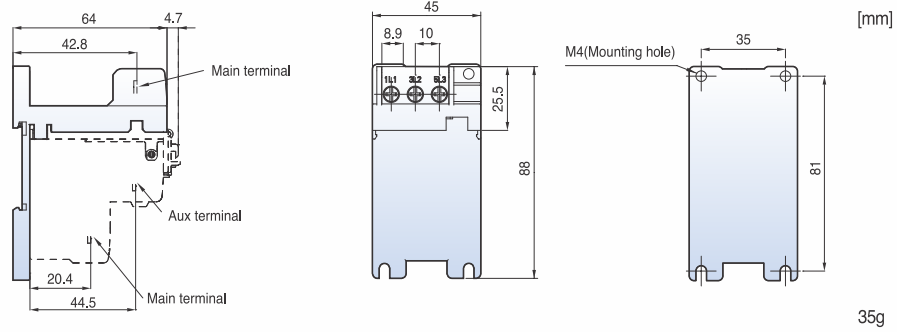
IT-800



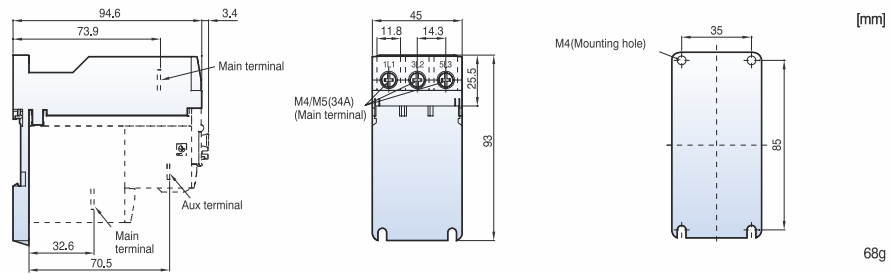


Dimensions (TOR) Separate Mounting Units

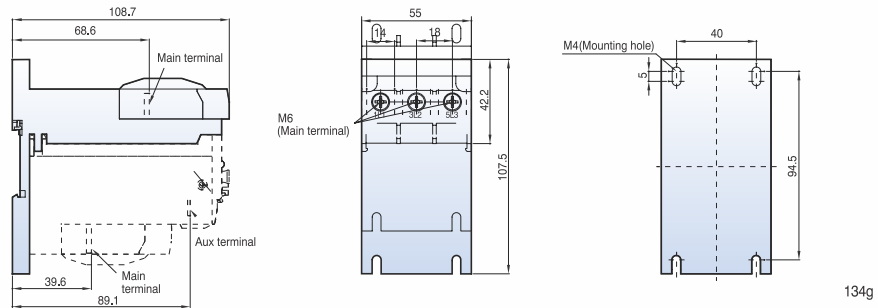
IUZ-12



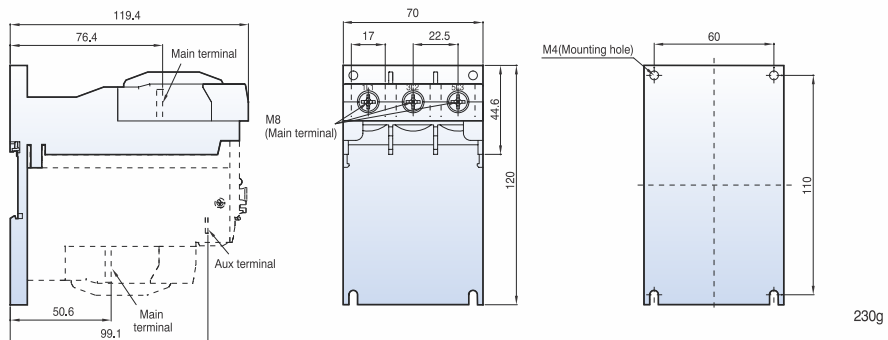
IUZ-32



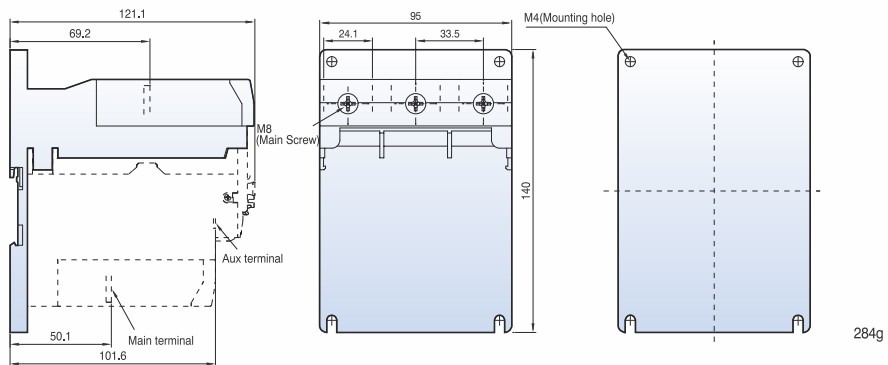
IUZ-63



IUZ-95



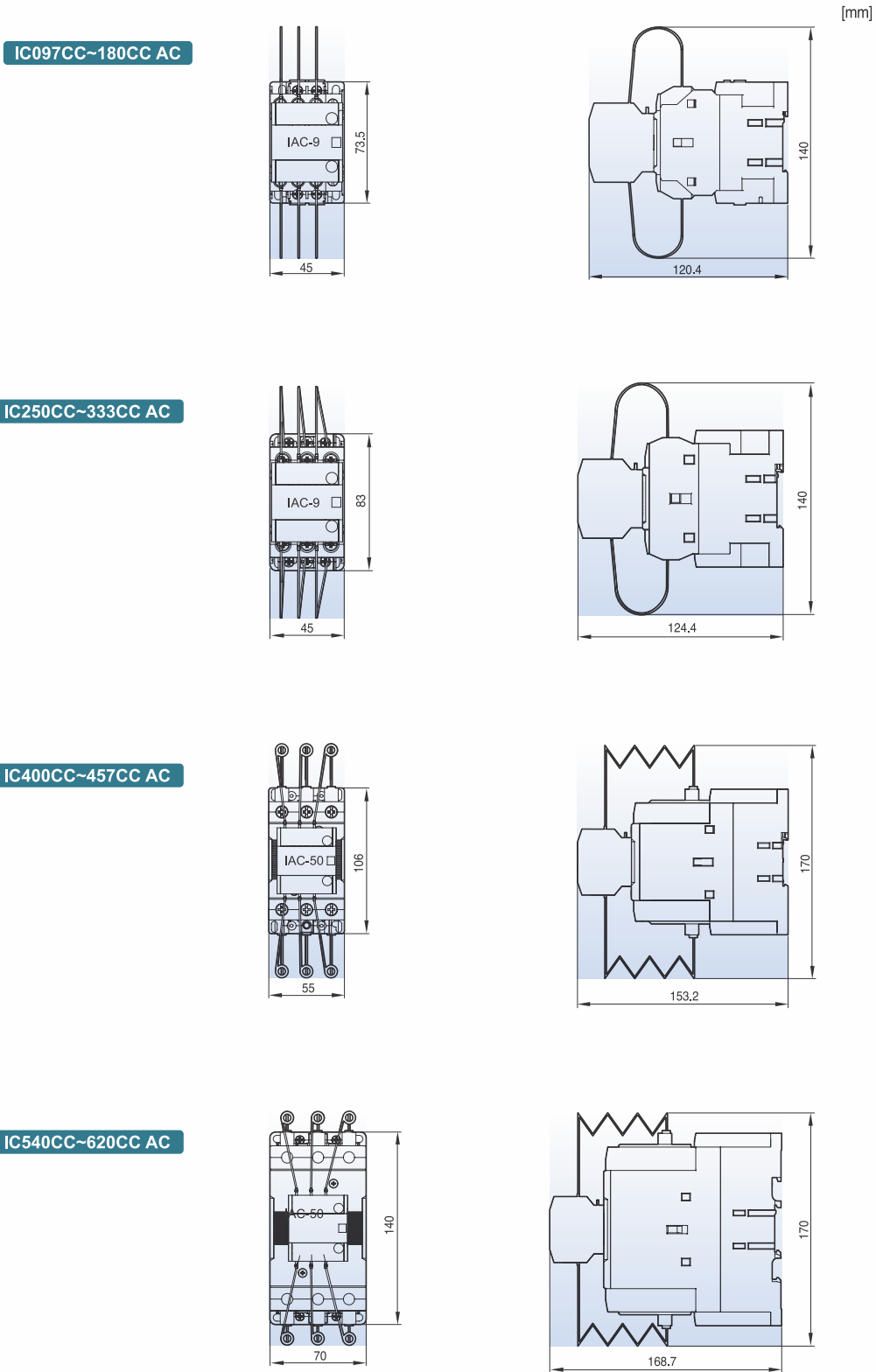
IUZ-150





Dimensions (3Pole)

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

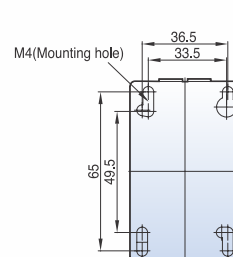
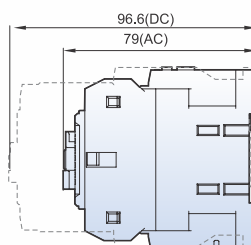
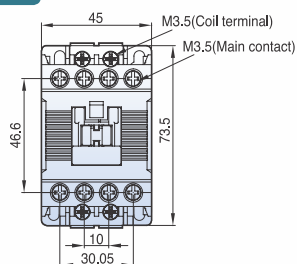




Dimensions (4Pole)

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

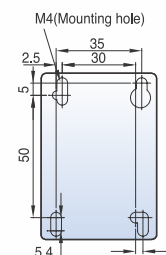
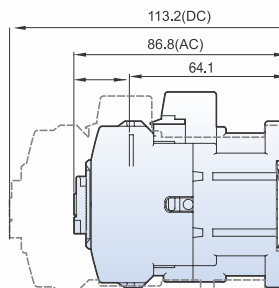
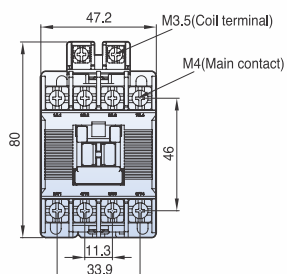
IR & IC-6a/4~18a/4 AC/DC



[mm]

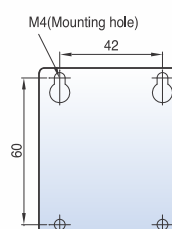
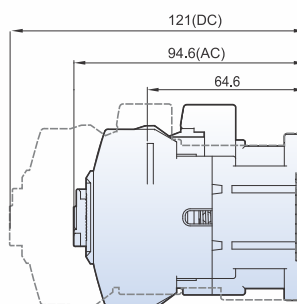
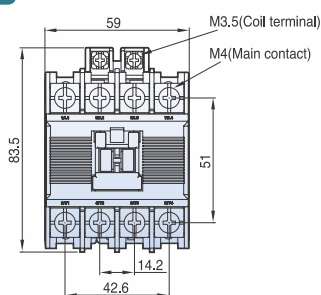
0.3/0.45kg

IC-22a/4 AC/DC



0.4/0.55kg

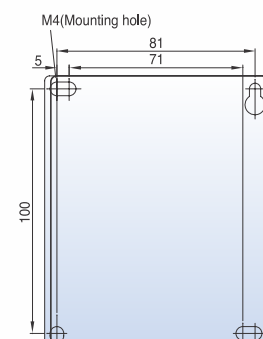
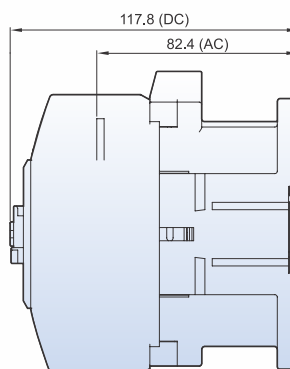
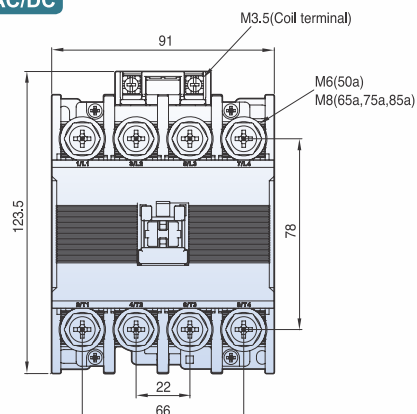
IC-32a/4~40a/4 AC/DC



[mm]

0.6/0.7kg

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



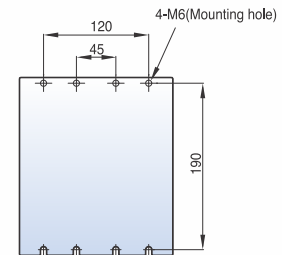
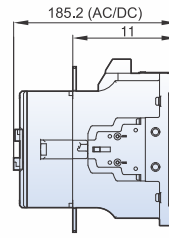
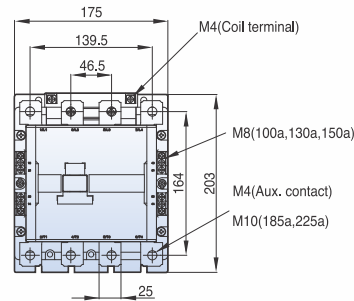
1.2/1.3kg



Dimensions (4Pole)

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

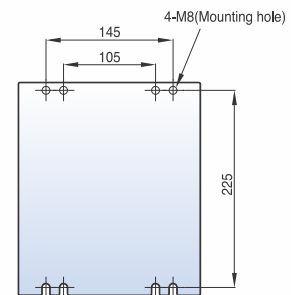
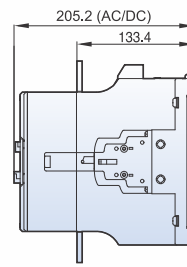
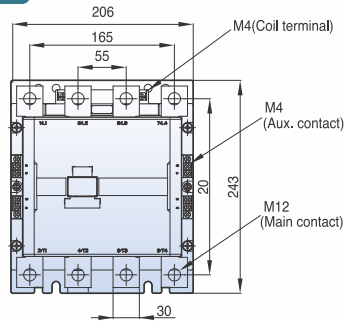
IC-100a/4~225a/4 AC/DC



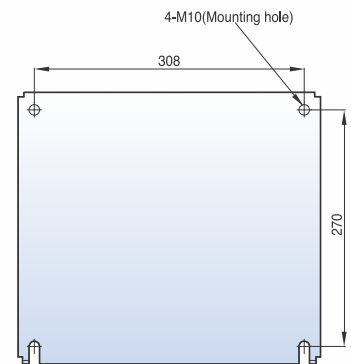
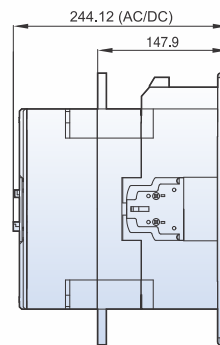
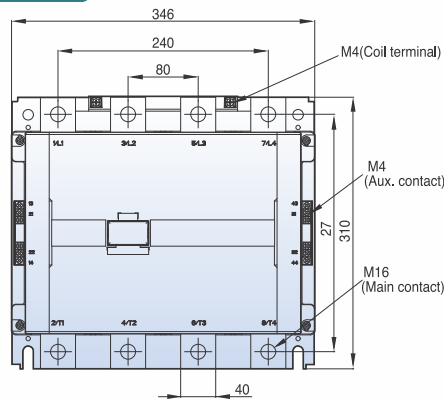
[mm]

5.6kg

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



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



9.9kg

26.3kg



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Customer Care No. :
18004190198

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