

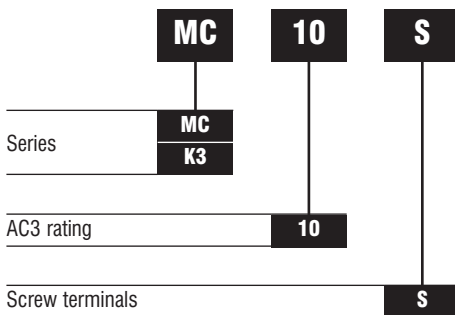
Contactors and Overloads MC



- Up to 700A AC3
- Up to 1000A AC1
- DIN rail mounting to 115A, 55kW
- Add on auxiliary contacts top or side mounted
- International approvals
- Designed to EN60947-1
- Compact design for panel space saving, only 45mm wide upto 40A AC3



Options and ordering codes



Coil Voltage

Standard Coils Standard coils 24V AC, 110V AC, 230V AC, 400V AC

00	No auxiliaries
10	1 make auxiliary
01	1 break auxiliary
11	1 make 1 break auxiliary
22	2 make 2 break auxiliary



3-pole contactors

Standard coil voltages

- 24V 50/60Hz, 110V 50/60Hz
- 220-240V 50Hz, 380-415V 50Hz
- 24V DC

6mm² cable terminal



	Type:	MC10-S-10..	MC14-S-10..	MC18-S-10..	MC22-S-10..
AC operated	Auxiliary contacts:	1NO	1NO	1NO	1NO
	Type:	MC10-S-01..	MC14-S-01..	MC18-S-01..	MC22-S-01..
DC operated	Auxiliary contacts:	1NC	1NC	1NC	1NC
	Type:	MC10-S-10=	MC14-S-10=	MC18-S-10=	MC22-S-10=
	Auxiliary contacts:	1NO	1NO	1NO	1NO
Main contacts	Type:	MC10-S-01=	MC14-S-01=	MC18-S-01=	MC22-S-01=
	Auxiliary contacts:	1NC	1NC	1NC	1NC
	AC1 690V at 40°C A	25	25	32	32
	AC3 A	10	14	18	22
	230V kW	3	4	5	6
Cable cross-section	380/400V kW	4	5.5	7.5	11
	500V kW	5.5	7.5	10	15
	660/690V kW	5.5	7.5	10	10
	Solid mm ²	1.5-6	1.5-6	1.5-6	1.5-6
Auxiliary contacts	Flexible mm ²	1.5-4	1.5-4	1.5-4	1.5-4
	Cables per clamp	2	2	2	2
	I _m at 40°C A	6	16	16	16
Coil AC operated	AC15 at 230V A	12	12	12	12
	at 400V A	4	4	4	4
	Inrush VA	33-45	33-45	33-45	33-45
Additional aux. contact blocks	Hold VA	7-10	7-10	7-10	7-10
	Front mounting: type	MCA-10/MCA-01 – MCAH-10/MCAH-01			
Overload relay	Side mounting: type				
	Type:	MCOR-1..	MCOR-1..	MCOR-1..	MCOR-1..

3-pole contactors

Standard coil voltages

24V 50/60Hz, 110V 50/60Hz
220-240V 50Hz, 380-415V 50Hz
24V DC



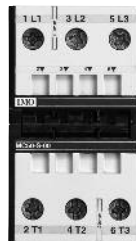
25mm² cable terminal

AC operated	Type:	MC24-S-00..	MC32-S-00..	MC40-S-00..
	Auxiliary contacts:	-	-	-
	Type:	-	-	-
	Auxiliary contacts:	-	-	-
DC operated	Type:	MC24-S-00=	MC32-S-00=	MC40-S-00=
	Auxiliary contacts:	-	-	-
	Type:	-	-	-
	Auxiliary contacts:	-	-	-
Main contacts	AC1 690V at 40°C A	50	65	80
	AC3 A	24	32	40
	230V kW	6	8.5	11
	380/400V kW	11	15	18.5
	500V kW	15	18.5	18.5
	660/690V kW	15	18.5	18.5
Cable cross-section	Solid mm ²	2.5-25	2.5-25	2.5-25
	Flexible mm ²	2.5-16	2.5-16	2.5-16
	Cables per clamp	1+1	1+1	1+1
Auxiliary contacts	I _m at 40°C A	-	-	-
	AC15 at 230V A	-	-	-
	at 400V A	-	-	-
Coil AC operated	Inrush VA	90-115	90-115	90-115
	Hold VA	9-13	9-13	9-13
Additional aux. contact blocks	Front mounting: type	MCA-10/MCA-01 – MCAH-10/MCAH-01		
	Side mounting: type	MCAS-11	MCAS-11	MCAS-11
Overload relay	Type:	MCOR-1../MCOR-2..	MCOR-1../MCOR-2..	MCOR-2..

3-pole contactors

Standard coil voltages

24V 50/60Hz, 110V 50/60Hz
220-240V 50Hz, 380-415V 50Hz
24V DC



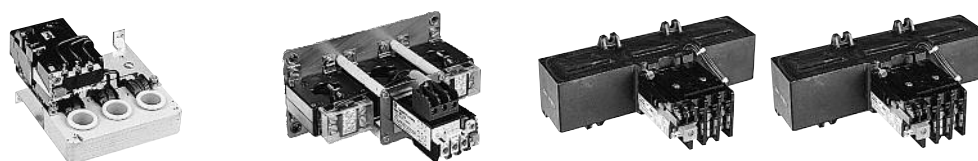
25mm² cable terminal

AC operated	Type:	MC50-S-00..	MC62-S-00..	MC74-S-00..
	Auxiliary contacts:	-	-	-
	Type:	-	-	-
	Auxiliary contacts:	-	-	-
DC operated	Type:	MC50-S-00=	MC62-S-00=	MC74-S-00=
	Auxiliary contacts:	-	-	-
	Type:	-	-	-
	Auxiliary contacts:	-	-	-
Main contacts	AC1 690V at 40°C A	115	130	140
	AC3 A	50	62	74
	230V kW	12.5	18.5	22
	380/400V kW	22	30	37
	500V kW	30	37	45
	660/690V kW	30	37	45
Cable cross-section	Solid mm ²	4-50	4-50	-50
	Flexible mm ²	6-35	6-35	6-35
	Cables per clamp	1+1	1+1	1+1
Auxiliary contacts	I _m at 40°C A	-	-	-
	AC15 at 230V A	-	-	-
	at 400V A	-	-	-
Coil AC operated	Inrush VA	140-165	140-165	40-165
	Hold VA	13-18	13-18	13-18
Additional aux. contact blocks	Front mounting: type	MCA-10/MCA-01 – MCAH-10/MCAH-01		
	Side mounting: type	MCAS-11	MCAS-11	MCAS-11
Overload relay	Type:	MCOR-3..	MCOR-3..	MCOR-3..

Contactors and Overloads MC continued




Contactors			MC90	MC115	K3-151	K3-176	K3-210	K3-316	K3-450	K3-550	K3-700			
Main Contacts			3	3	3	3	3	3	3	3	3			
Ratings at 400V AC	AC1 40°C Amps		160	200	200	250	350	450	600	760	1000			
	60°C Amps		120	135	160	200	250	320	450	550	750			
	AC3 Amps		90	115	150	175	200	315	450	550	700			
	HP		65	75	100	130	160	230	330	420	550			
	kW		45	55	75	90	110	160	250	315	400			
Cable cross-section	Solid mm ²		120 + 95		Busbar		Busbar	Busbar	Busbar	Busbar	Busbar			
	Flexible mm ²		95 + 70		18 x 5		22 x 4	25 x 5	30 x 5	40 x 6	50 x 8			
	Cables per clamp		1 + 1		1		1	1	2	2	2			
Auxiliary Contact Ratings at 400V AC	AC1 40°C Amps		10			10			10					
	60°C Amps		2			2			2					
	AC15 400V Amps		3			3			3					
	230V Amps		0.75 - 2.5			0.5 - 4			0.5 - 4					
Cable cross-section	Solid mm ²		0.75 - 2.5			0.5 - 2.5			0.5 - 2.5					
	Flexible mm ²		2			2			2					
	Cables per clamp		280			550		1100	2300	800 - 950	800 - 950	1350 - 1600		
Coil	Inrush VA		5			130		66	120	9 - 11	9 - 11	21 - 25		
	Hold VA		0.85 - 1.1			0.85 - 1.1		0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1	0.85 - 1.1		
	Voltage range		13 - 30			12 - 30		30 - 40	25 - 50	50 - 100	50 - 100	50 - 100		
Operate times	Energise mS		8 - 15			15 - 40		15 - 45	15 - 30	150 - 200	150 - 200	150 - 200		
	Release mS		-40 to +60			-40 to +70			-40 to +70			-40 to +70		
Max. ambient temperature	Contactors °C		-25 to +40			-25 to +60			-25 to +55			-25 to +55		
	With overload °C		Base			Base			Base			Base		
Mounting			Base			Base			Base			Base		



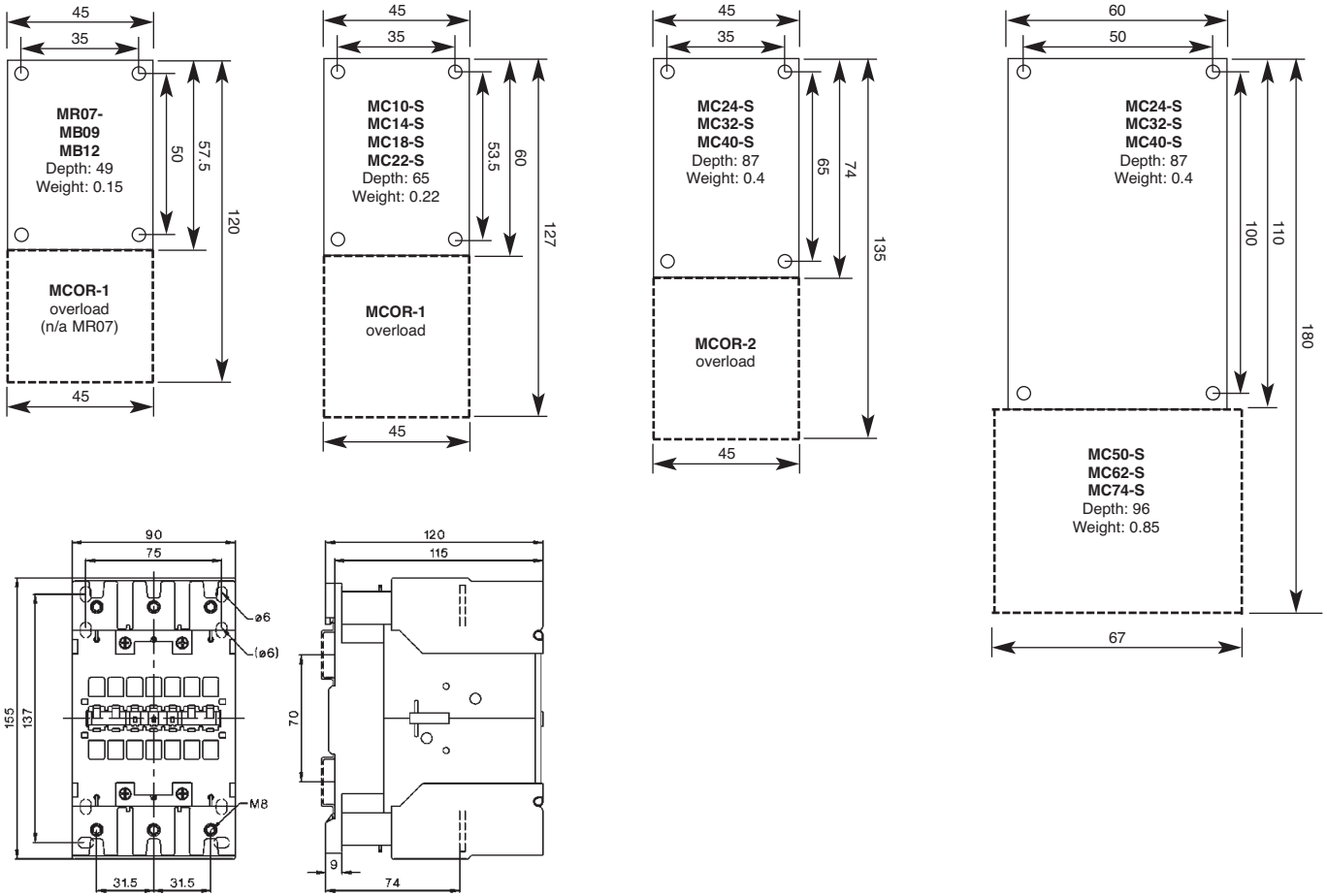
Thermal overload relays	U85		U205		U840	
	Current ranges Amps	Product	Current ranges Amps	Product	Current ranges Amps	Product
Single-phase protection	60-90	U85 90	100-150	U205 150	200-340	U840 340
Hand reset	80-120	U85 120	140-210	U205 210	320-540	U840 340
Trip and alarm contacts	120-180	U85 180			500-840	U840 840

For DC coil contactors please contact IMO for further information

Accessories

	Auxiliary Contacts			
	For use with MC10 to MC74			
	Twin bifurcated for low level switching		1 make	MCA10
	Rating	AC1 @ 690V 10A	1 break	MCA01
		AC15 @ 400V 2A – @ 230V 3A	Early make	MCA10U
	Maximum of 4 per contactor		Late break	MCA01U
	For use with K3-150 – K3-175 max 1 piece		1M 1B INSIDE	HKS11
	For use with K3-150 – K3-175 max 2 pieces		1M 1B OUTSIDE	HKS11A
	For use with K3-200 – K3-315 max 3 pieces		1M 1B	HKD11
	For use with K3-450 – K3-700 max 1 piece		2M 2B	HKF22
Rating	AC1 @ 690V 10A			
	AC15 @ 400V 2A – @230V 3A			
	Electronic Timer			
	For use with MC10 to MC74		Delay-on	
	Delay timer with LED indicator		1-30 secs	MCT-A30
	Repeat accuracy 1% – Recovery time 50mS		10-180 secs	MCT-A180
	Rating AC15 0.75A @ 60V-0.15A @ 250V		30-600 secs	MCT-A600
			Delay-off	
	Max. inrush 25A – min. switching 5mA		1-30 secs	MCT-B30
Delay-on supply 24-60V AC or DC – 100-250V AC or DC		10-180 secs	MCT-B180	
Delay-off supply 24-60V AC, 100-120V AC or 200-250V AC		30-600 secs	MCT-B600	
	Indicator			
	For use with MC10 to MC74			
	Current indicator		Green (LED)	MC-ING
	24-660V AC or DC (voltage drop 2V)		Red (LED)	MC-INR
	Voltage indicator			
220 – 415V AC or DC		White (Lamp)	MC-UN	
24 – 120V AC or DC		Red (LED)	MC-UNR	
	Auxiliary Contacts			
	Interface Relay			
	For use with MC10 to MC74			
Relay to interface with electronic circuits			MC-IM 24V	
1 make contact rated 0.75A max 250V AC 30V DC				
	Mechanical Interlock			
	For use with MC10 to MC40			MCI-W
	MC24 to MC74			MCI-X
	K85A22 to K110A22			LG8511
	K3-150A11 to K3-175A11			LG10397H
	K3-200A11			LG10398H
	K3-315A11 to K3-550A22			LG10400H
K3-700A22			LG10402H	
	Coil Suppressor			
	For use with	MC10 to MC22	12-24V AC/DC	MC-E24
			24-48V AC/DC	MC-E48
			110-230V AC/DC	MC-E220
			250-415V AC/DC	MC-E380
		MC24 to MC74	12-24V AC/DC	VG-MC/24
			24-48V AC/DC	VG-MC/48
			110-230V AC/DC	VG-MC/250
		250-415V AC/DC	VG-MC/415	
	Overload Mounting			
	For separate mounting of overloads			
For use with	U1216	With terminal	U12SM	

3-pole contactors dimensions (mm) and weights (kg)



MC90, MC115

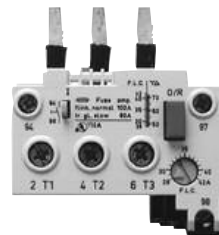
Overload relays



MCOR-1
for use with MC10-S to MC32-S

Setting range

DOL Star	Delta
0.12-0.18	—
0.18-0.27	—
0.27-0.4	—
0.4-0.6	—
0.6-0.9	—
0.8-1.2	—
1.2-1.8	—
1.8-2.7	3.1-4.7
2.7-4	4.7-7
4-6	7-10.5
6-9	10.5-15.5
8-11	14-19
10-14	18-24
13-18	23-31
17-24	30-41
23-32	40-52



MCOR-2
for use with MC24-S to MC40-S

Setting range

DOL Star	Delta
10-18	18-24
14-20	24-35
20-28	35-48
28-42	48-73



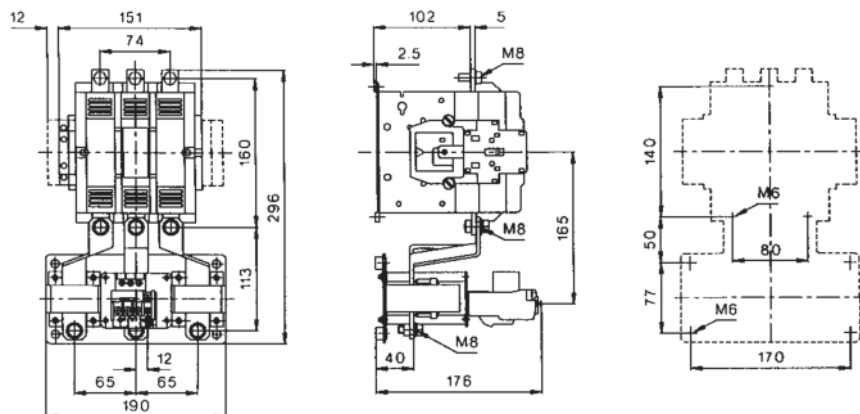
MCOR-3
for use with MC50-S to MC74-S

Setting range

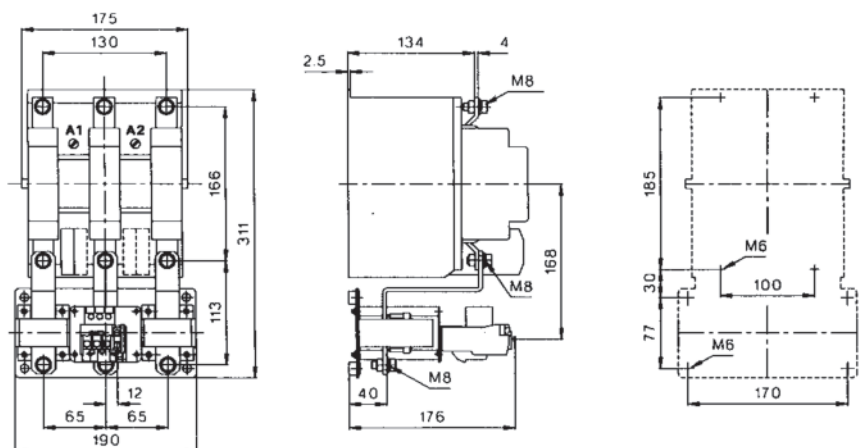
DOL Star	Delta
20-28	35-48
28-42	48-73
40-52	70-90
52-65	90-112
60-74	104-128

Dimensions (mm)

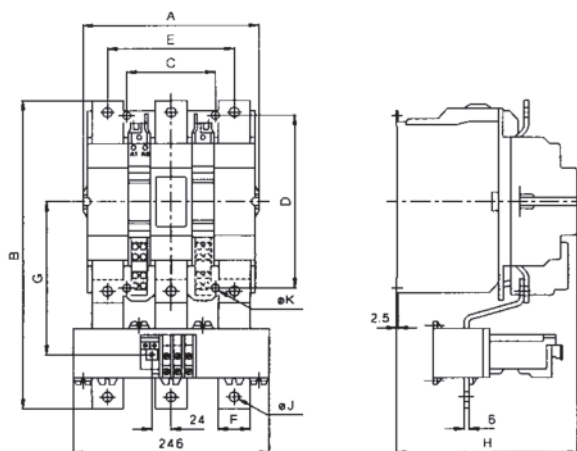
K3-150 to K3-175A11 + U205



K3-200A11 + U205



U840 + K3-...



U840	A	B	C	D	E	F	G	H	J	K
+K3-315	210	366	110	158	158	40	179	220	12.5	9
+K3-450	220	372	110	220	158	40	185	233	12.5	9
+K3-550	220	395	110	220	158	40	196	258	12.5	9
+K3-700	280	487	175	280	202	50	257	291	14.5	11
+K3-860	280	540	175	280	202	50	280	291	14.5	11

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