

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

	MC	10	S	10	Coil Voltage
Series	MC K3				Standard Coils Standard coils 24V AC, 110V AC, 230V AC, 400V AC
AC3 rating		10			
Screw terminals			S		
				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

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

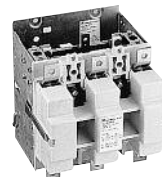
24V DC

25mm² cable terminal

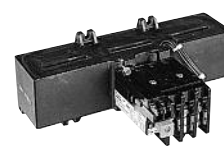
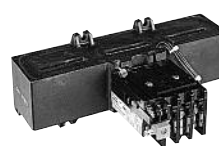
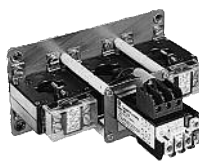
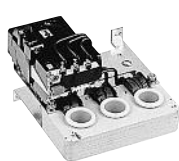


AC operated	Type:	MC50-S-00..	MC62-S-00..	MC74-S-00..
	Auxiliary contacts:	-	-	-
	Type:	-	-	-
	Auxiliary contacts:	-	-	-
DC operated	Type:	MC50-S-00=	MC62-S-00=	MC74-S-00=
	Auxiliary contacts:	-	-	-
	Type:	-	-	-
	Auxiliary contacts:	-	-	-
Main contacts	AC1 690V at 40°C A	115	130	140
	AC3 A	50	62	74
	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..

Contactor 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 mm²		120 + 95		Busbar		Busbar	Busbar	Busbar	Busbar	Busbar
	Flexible mm²		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										
	AC15 400V Amps		2				2		2		
	230V Amps		3				3		3		
Cable cross-section	Solid mm²		0.75 - 2.5				0.5 - 4		0.5 - 4		
	Flexible mm²		0.75 - 2.5				0.5 - 2.5		0.5 - 2.5		
	Cables per clamp		2				2		2		
Coil	Inrush VA		280	550		1100	2300	800 – 950	800 - 950	1350 - 1600	
	Hold VA		5	130		66	120	9 - 11	9 - 11	21 - 25	
	Voltage range		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	
Operate times	Energise mS		13 - 30	12 - 30		30 - 40	25 - 50	50 - 100	50 - 100	50 - 100	
	Release mS		8 - 15	15 - 40		15 - 45	15 - 30	150 - 200	150 - 200	150 - 200	
Max. ambient temperature	Contactor °C		-40 to +60		-40 to +70		-40 to +70		-40 to +70		
	With overload °C		-25 to +40		-25 to +60		-25 to +55		-25 to +55		
Mounting			Base		Base		Base		Base		



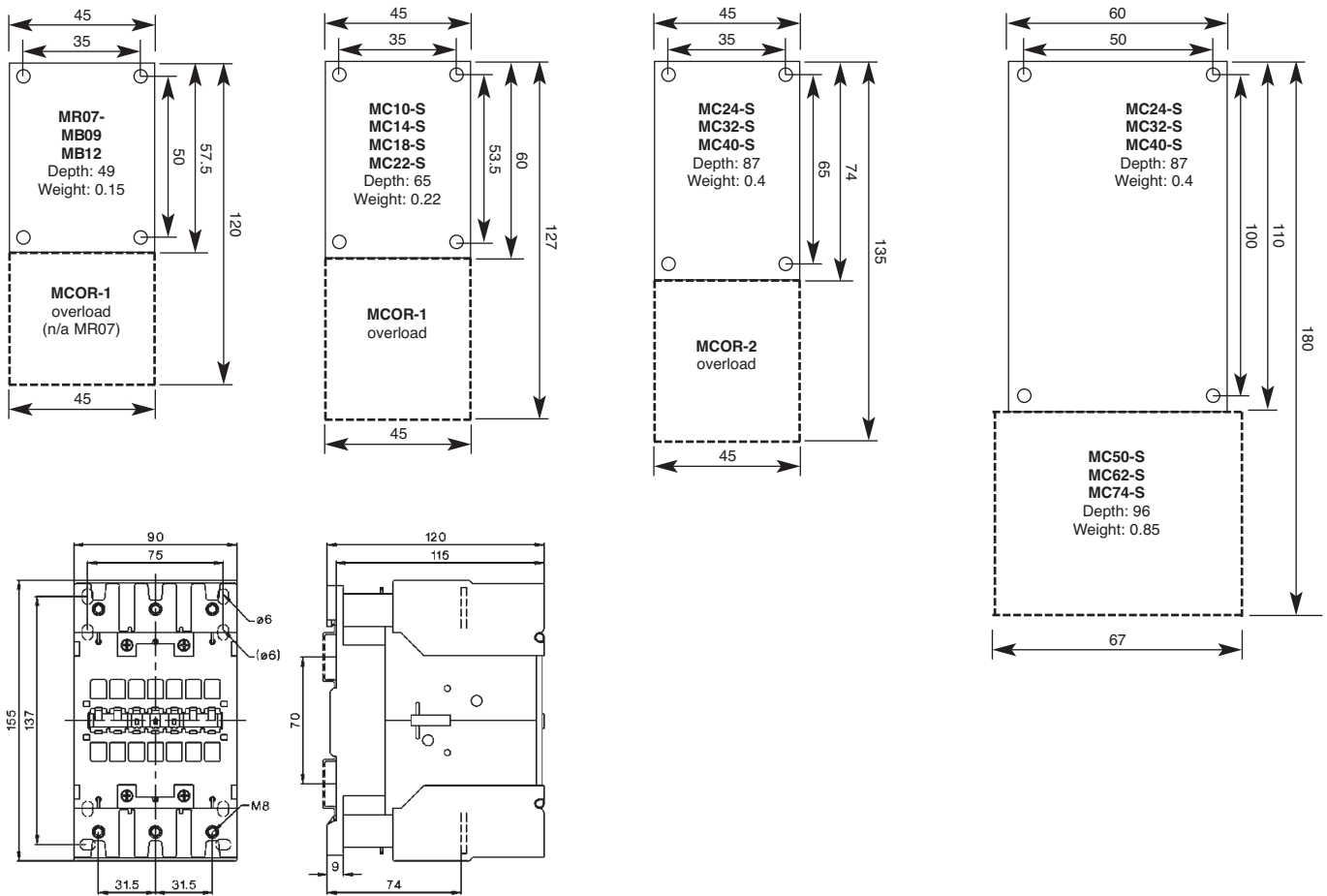
Thermal overload relays Single-phase protection Hand reset Trip and alarm contacts	U85		U205		U840	
	Current ranges Amps	Product	Current ranges Amps	Product	Current ranges Amps	Product
	60-90	U85 90	100-150	U205 150	200-340	U840 340
	80-120	U85 120	140-210	U205 210	320-540	U840 340
	120-180	U85 180	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

For DC coil contactors please contact IMO for further information

Accessories

	Auxiliary Contacts		Description	Product
	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	
			Red (LED)	MC-UNR
	Auxiliary Contacts		Description	Product
	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)



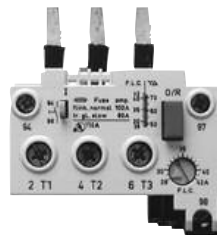
MC90, MC115

Overload relays



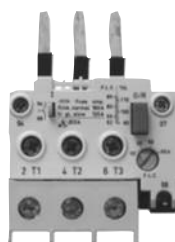
MCOR-1
for use with MC10-S to MC32-S

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

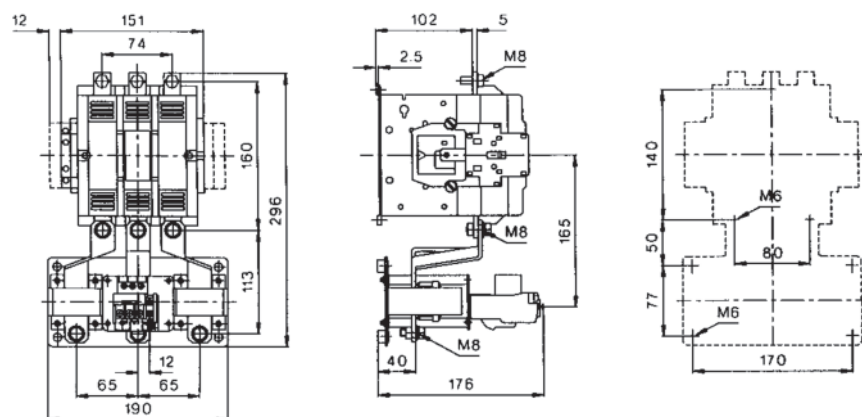


MCOR-3
for use with MC50-S to MC74-S

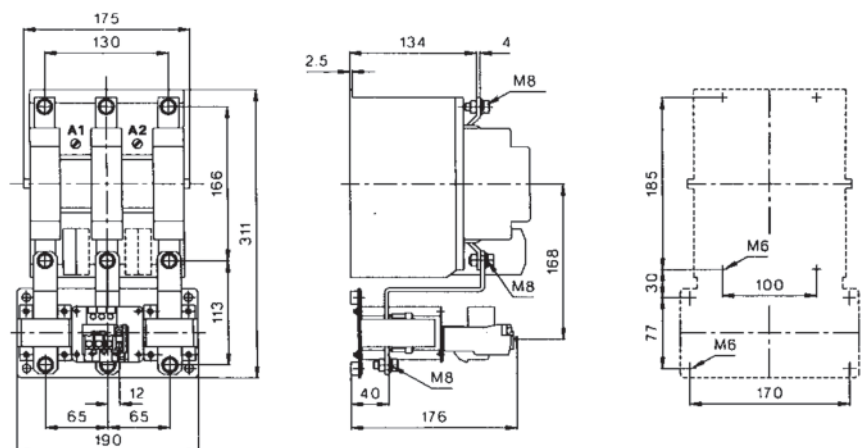
Setting range	
DOL Star	Delta
20-28	35-48
28-42	48-73
40-52	70-90
52-65	90-112
60-74	104-128

Dimensions (mm)

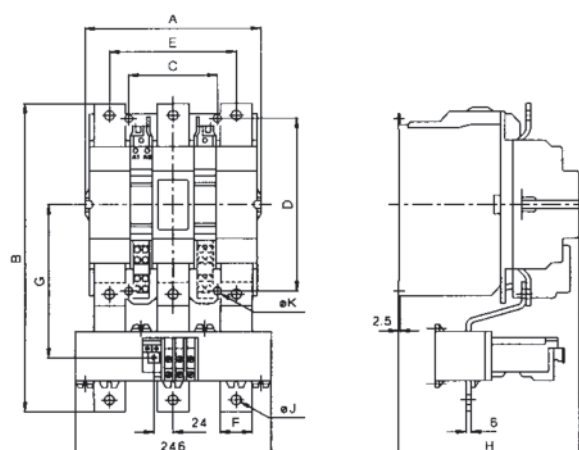
K3-150 to K3-175A11 + U205



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