

Table of specifications

MC type Magnetic Contactors



Frame size			18AF				22AF			
Type			MC-6a	MC-9a	MC-12a	MC-18a	MC-9b	MC-12b	MC-18b	MC-22b
	Screws clamp terminals		•	•	•	•	•	•	•	•
	Lug clamp terminals									
Number of poles			3pole				3pole			
Rated operational voltage(Ue)			690V				690V			
Rated insulation voltage(Ui)			690V				690V			
Rated frequency			50/60Hz				50/60Hz			
Rated impulse withstand voltage, Uimp			6kV				6kV			
Maximum operating rate in operating cycles per hour(AC3000)			1800 operations per hour				1800 operations per hour			
Durability	Mechanical		15 mil. operations				15 mil. operations			
Current	Electrical		2.5 mil. operations				2.5 mil. operations			
power	AC-1, Thermal current	[A]	25	25	25	32	25	27	40	45
	AC-3									
	200/240V	[kW]	2.2	2.5	3.5	4.5	2.5	3.5	4.5	5.5
	380/440V	[A]	9	11	13	18	11	13	18	22
	500/550V	[kW]	3	4	5.5	7.5	4	5.5	7.5	11
	690V	[A]	7	9	12	18	9	12	18	22
	1000V	[kW]	3	4	7.5	7.5	4	7.5	7.5	15
	1s	[A]	6	7	12	13	7	12	13	20
	10s	[kW]	3	4	7.5	7.5	4	7.5	7.5	15
	30s	[A]	4	5	9	9	6	9	9	18
	1min	[kW]	-	-	-	-	-	-	-	-
	3min	[A]	-	-	-	-	-	-	-	-
	10min	[A]	210	250	280	300	250	280	300	400
Rated Short-time	≥15min	[A]	105	110	120	130	110	120	154	186
withstand current		[A]	70	70	80	85	70	80	100	130
(IEC 60947)		[A]	61	70	80	85	61	80	84	130
		[A]	40	61	61	70	45	61	60	90
		[A]	45	47	50	50	50	50	60	60
		[A]	30	45	30	40	30	30	40	50
		[A]	25	30	30	40	26	30	30	50
		[A]	25	26	28	30	25	28	40	45
UL rating	Continuous current	[HP]	0.5	25	25	32	0.5	25	2	40
(50/60Hz)	Single 110~120V	[HP]	1.5	0.5	1	2	1.5	1	3	2
	phase 220~240V	[HP]	2	1.5	2	3	2	2	7.5	3
	Three 200~208V	[HP]	3	2	3	7.5	3	3	7.5	7.5
	phase 220~240V	[HP]	5	3	5	7.5	5	5	10	10
	440~480V	[HP]	7.5	5	7.5	10	7.5	7.5	15	15
	550~600V	[kg]		7.5	10	15		10	1	20
	H control size(W×H×D) [mm]		00	00	0	1	00	10	1	20
Size	NEMA size									
and	AC control Weight			0.33				0.34		
weight	DC Weight			45×73.5×80.4				45×73.5×87.4		
				0.4				0.41		
				45×73.5×96.6				45×73.5×103.6		
Auxiliary y(Standard)				1a or 1b				1a1b		
Auxiliary	Side mount			UA-1				UA-1		
	Front mount			UA-2, UA-4				UA-2, UA-4		

Note) Minimum conduct current of Auxiliary contactor is DC 17V 5mA.

MT type Thermal Overload Relays

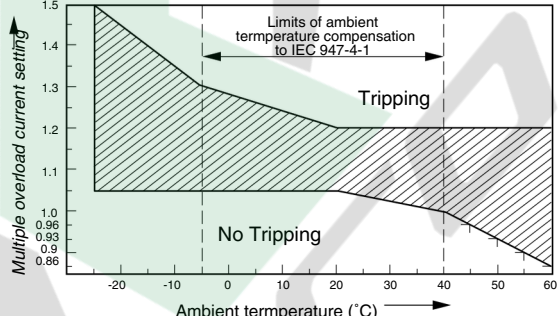
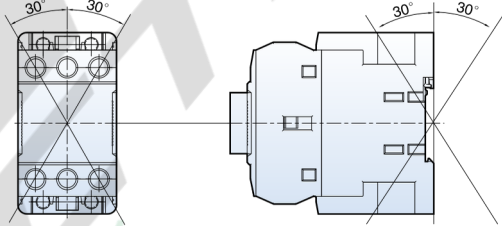


Type			MT-12/	MT-32/
	Screws clamp terminals		•	•
	Lug clamp terminals			
Rated operational voltage, Ue			690V	690V
Rated insulation voltage, Ui			690V	690V
Rated impulse withstand voltage, Uimp			6kV	6kV
Trip class			10A, 20	10A, 20
Setting range			0.1~18A	0.1~40A
Size			0.1	0.17
and	Weight			
weight	Size(W×H×D) [kg]			
	[mm]		45×73.2×63.7	45×75×90

* The safety cover of magnetic contactor and thermal overload relay is optional.

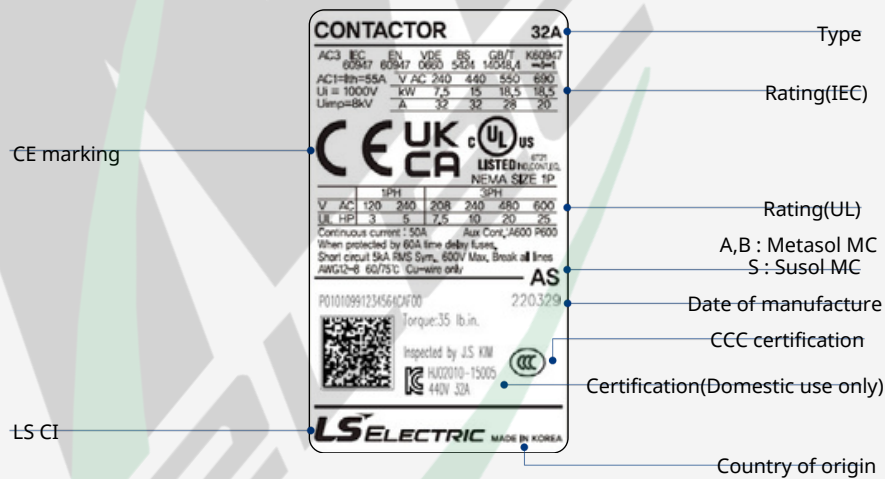
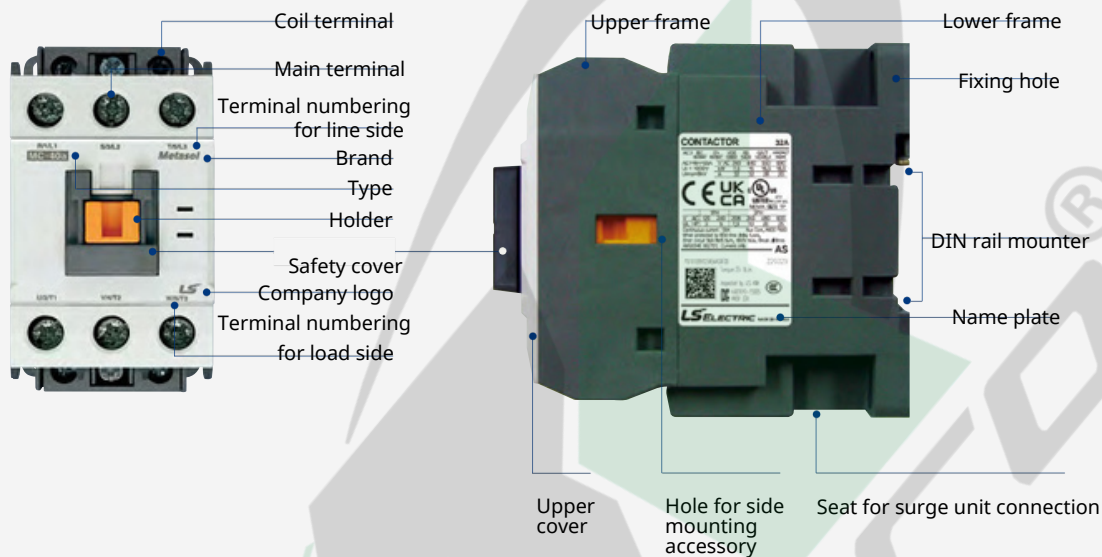
Environment

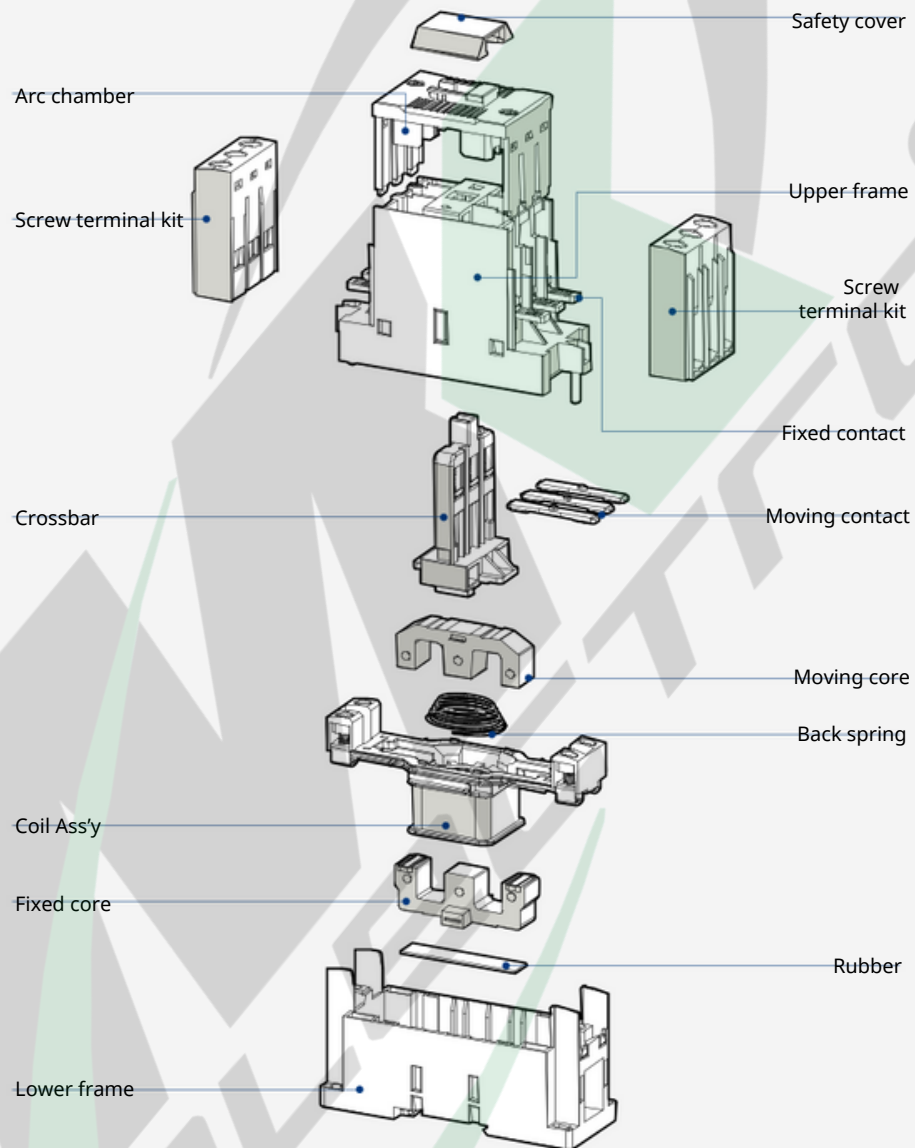


Standards	IEC/EN 60947-1, IEC/EN 60947-4-1, UL508, K60947
Cer tifications	CE, UL, CCC
Rated insulation voltage (Ui)	1000V (6A~22A: 690V, 32A~800A: 1000V)
Rated impulse withstand voltage (Uimp)	8kV (6A~22A: 6kV, 32A~800A: 8kV)
Degree of protection	IP20 (Conforming to IEC60529)
	Storage: -30°C ~ +65°C (MCI : -40 ~ +80°C)
	Operation: -5°C ~ +55°C (AC Type)
	-5°C ~ +40°C (MT, DC Type)
	-25°C ~ +60°C (MT refer to Graph)
	-25°C ~ +55°C(MCI)
Ambient air temperature	
Operating altitude	3000m (8900ft)
Operating positions	
Shock resistance (1/2 sine wave =11ms)	Opened: 8G(MC-2650a / MCI-2650 : 5G) Closed: 10G(MC-2650a / MCI-
Vibration resistance (Conforming to IEC68-2-6) (5...300 Hz)	2650 : 5G) Opened: 2G(MC-2650a / MCI-2650 : 1G) Closed: 4G(MC-
Flame resistance	2650a / MCI-2650 : 1G) Conforming to UL 94: V0 Conforming to IEC 695-2-1: 960°C

Wire type		Main terminal size								Torque			
			(AWG / mm²)						mm(max)	[lb-in]	[Nm]	[kgf-cm]	
Frame													
MC-6a/9a		M3.5	18-10/1-4	18-10 / 1-4			18-10 / 1-4			8.3	10	1.13	12
MC-12a			16-10/1.5-4	16-10 / 1.5-4			16-10 / 1.5-4						
MC-18a			16-10/1.5-6	16-10 / 1.5-6			16-10 / 1.5-6						
MC-9b		M4	18-10/1-4	18-10 / 1-4			18-10 / 1-4			9.6	20	2.25	23
MC-12b			16-10/1.5-6	16-10 / 1.5-6			16-10 / 1.5-6						
MC-18b			16-10/1.5-6	16-10 / 1.5-6			16-10 / 1.5-6						
MC-22b			14-8/2.5-10	14-8 / 2.5-10			14-8 / 2.5-10						
MC-32a		M5	-	12-6 / 2.5-16			12-6 / 2.5-16			12.8	35	4	41
MC-40a			-	12-6 / 2.5-16			12-6 / 2.5-16						
MC-50a		M6	-	10-3 / 4-35			10-3 / 4-35			14	35	4	41
MC-65a			-	10-2 / 4-35			10-2 / 4-35						
MC-75a		M8	-	10-1 / 6-50			10-1 / 6-50			17	45	5.1	52
MC-85a			-	10-1/0 / 6-50			10-1/0 / 6-50						
MC-100a			-	10-2/0 / 6-70			10-2/0 / 6-70						
MC-130a		M8	-	8-3/0 / 10-95			8-3/0 / 10-95			24	80	9.1	93
MC-150a			-	8-250kcmil / 10-120			8-250kcmil / 10-120						
MC-6~150a Aux. / Coil			20~14 / 0.5~2.5	18~12 / 0.75~2.5			18~12 / 0.75~2.5						
MC-185a		M4	-	3-350kcmil / 35-185			3-350kcmil / 35-185			7.6	10	1.13	12
MC-225a			-	3-400kcmil / 35-185			3-400kcmil / 35-185						
MC-265a		M10	-	2-500kcmil / 35-240			2-500kcmil / 35-240			25	130	14.7	150
MC-330a			-	2-250kcmil x 2 / 35-150 x 2			2-250kcmil x 2 / 35-150 x 2						
MC-400a		M12	-	2-350kcmil x 2 / 35-185 x 2			2-350kcmil x 2 / 35-185 x 2			30	200	22.6	230
MC-500a			-										
MC-630a/MCi-900		M16	-	4/0-300kcmil x 3 / 95-240 x 2			4/0-300kcmil x 3 / 95-240 x 2			40	500	56.5	576
MC-800a/MCi-1050			-	95-60 x 5 x 2			95-60 x 5 x 2						
MC-185~800a/MCi-1050 Aux. / Coil			16~10 / 1.25~5.5	95-80 x 5 x 2			95-80 x 5 x 2						
MC-1260a/MCi-1260		M4	-	16~10 / 1.25~5.5			16~10 / 1.25~5.5			7.6	15	1.75	18
MC-1400a			-										
MC-1700a/MCi-1700		M12		50mm×10mm×2ea			-			-	200	22.6	230
MC-2100a/MCi-2100		M12		100mm×5mm×2ea 100mm×5mm×3ea 100mm×5mm×4ea 100mm×10mm×3ea			-			-	200	22.6	230
MC-2650a/MCi-2650			-										

Marking





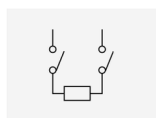
Contactors

Description

- 3-pole(NO) main contact
- Finger proof design
- DIN rail(35mm) or screw mountable
- AC or DC control in different physical size
- Front/side mountable accessories available
- Direct mountable overload relay available rating
- 1NO1NC Auxiliary contact built-in as standard.
- UA-1 is available on only left side
- Degree of protection: IP20



MC-22b



2pole for DC contact



3pole for DC contact

Rating

Contactor type			MC-9b		MC-12b		MC-18b		MC-22b	
			kW	A	kW	A	kW	A	kW	A
AC duty	AC3	200/240	2.5	11	3.5	13	4.5	18	5.5	22
		V	4	9	5.5	12	7.5	18	11	22
		380/440	4	7	7.5	12	7.5	13	15	20
		V 50	4	6	7.5	9	7.5	9	15	18
	AC4	0/550V	1.5	8	2.2	11	3.7	16	3.7	18
		690V	2.2	6	4	9	4	11	5.5	13
DC1 duty (L /R =1ms)	AC1	200/240	-	25	-	27	-	40	-	45
	2-pole in series	V 24v	-	10	-	12	-	18	-	20
		380/440	-	10	-	12	-	18	-	20
		48V	-	6	-	10	-	13	-	15
		V 110v	-	10	-	12	-	18	-	20
	3-pole in series	24V	-	10	-	12	-	18	-	20
		48V	-	10	-	12	-	18	-	20
		110V	-	8	-	12	-	18	-	20
		V	-	8	-	12	-	18	-	20
	DC3, 5 duty (L/R=15ms)	2-pole in series	24V	-	8	-	12	-	12	-
48V			-	4	-	6	-	6	-	15
110V			-	2.5	-	4	-	4	-	8
3-pole in series		24V	-	8	-	12	-	12	-	20
		48V	-	6	-	10	-	10	-	20
		110V	-	4	-	8	-	8	-	15
Directly mountable overload relay			M T-3 2							
Conductor size (Solid, stranded) (the max. number of conducts: 2)	AWG	16~10		16~8		14~8		14~8		
	mm²	1.5~4		1.5~10		2.5~10		2.5~10		
Conductor type			65/75°C Cu-wire only							



Coil voltage

		24, 32, 36, 42, 48, 80, 100, 110, 120, 220, 230, 240, 380, 400, 415, 440, 500, 550V	Cer tification
AC	50H	24, 32, 36, 42, 48, 80, 100, 110, 120, 220, 230, 240, 380, 400, 415, 440, 500, 550V	• CE(IEC) • UL508 • CCC
	z	24, 48, 110, 120, 200, 208, 220, 230, 240, 277, 380, 440, 480, 600V	
DC	60H	12, 20, 24, 30, 48, 60, 80, 100, 110, 125, 200, 220, 250V	

* Please be cautious for wiring control power cable, especially " + " (Positive) and " - " (Negative) polarity should be correctly considered.