Modular Contactor

Leading Manufacturer Protects Solar Power Safety

Rev3.0 2023/04/04

40A-63A
single pole AC contactor

- **Higher Current**
  18mm 1MU width, maximum current up to 63A
- **Greater Wiring Capacity**
  M5 wiring screw, maximum wiring capacity 25mm²
- **More Secure**
  Hidden coil terminals for larger and safer electrical clearances
- **Two Types Of Contacts**
  Normally open and normally closed two kinds of contacts are optional

Company Introduction

ONCCY started the switch and circuit breaker manufacturing in 1988. With over 30 years of experience and high investment in R&D, ONCCY is now a specialist in the intelligent electric component sector.

ONCCY is an ISO9001:2015 and ISO14001 accredited company. Located in Wenzhou, our production base owned the UL-approved laboratory, more than 30,000 square meters plant and multiple automated production lines. At present, it has more than 500 employees and approximately 30% are R&D technicians. Thanks to its strong ability of independent innovation, all ONCCY products are developed and manufactured with the focus on reliability, safety and convenience according to the latest international standards.

Our main products are including DC and AC circuit breaker (MCB), DC and AC isolation switch, DC molded case circuit breaker (MCCB), DC fuse, DC lighting surge protector (SPD) and so on. Dealing with the needs of the market, ONCCY can not only provide customized products but also integrates leading products into the overall solution, providing customers with a one-stop integrated service experience.

Innovation is the only way to the future. As one of the earliest electrical switch companies to obtain UL certification in China, ONCCY has also obtained CE, IEC, TUV, CCC, SAA and other authoritative certifications and all products have passed the strict testing requirements of GB and IEC standards. It is widely used in more than 40 countries and regions such as Europe, North America, and the Asia Pacific, serving nearly a thousand key engineering projects.

So far, we have provided intelligent electrical solutions for hundreds of domestic and foreign customers such as CAT, LG, BYD, Panasonic, Honeywell, Huawei etc., and have been highly recognized by the professional market.

Fully-Functional Laboratory

Our laboratory has a complete set of testing equipment, which can conduct effective and reliable tests on materials and products, and has been approved by UL.




Our Certificates

ONCCY ensures that its products have obtained important certifications and recognitions from international authoritative organizations in order to have excellent effects in various scenarios.


ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFICATION
Certificate
ONCCY Electrical Co.,LTD


CERTIFICATE


CERTIFICATE OF APPROVAL


CB TEST CERTIFICATE

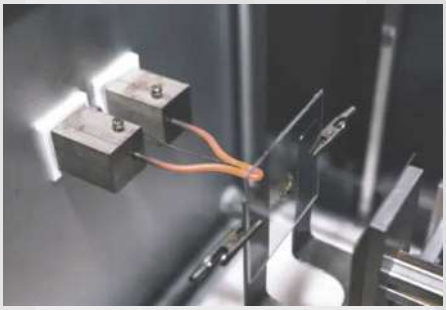

SAA
Certificate of Suitability
"Addendum"

Strict Quality Tests


Electrical Cycle Test


UV Aging Test


High Low-Temperature Humid-Heat Test


Glow-Wire Test


High-Temperature Test


IPX5-6 Strong Water Spray Test

Pruduct Catalog

EMC1 Modular contactor

High degree of Electrical life

The EMC1 modular contactor has been tested to withstand 100,000 times full load switch ON or OFF under AC-a load Utilization category

Noiseless and hum free

The EMC1 contactor eliminates the obvious impact sound of the traditional contactor at the moment of pull-in, and eliminates contactor in the low-frequency hum noise of operating.
Applicable to most electric areas of commercial building . In particular, the modular contactor AC / DC series achieves free noise and creates a quiet environment for you

Energy Saving

The EMC1 contactor has an optimized electromagnetic system, which greatly reduces the holding power of contactor.。

Compact design

The width of EMC1 contactors is much smaller than traditional AC Contactors, which saves users more installation space and can be conveniently installed in ordinary distribution boxes

Auxiliary function

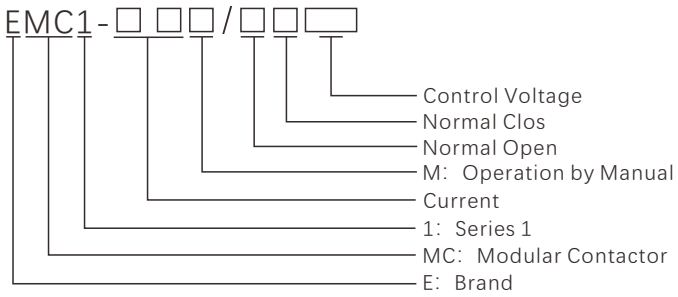
The EMC1 contactor can be extended with auxiliary contacts on the right side of the product, which is more suitable for signal feedback requirements in an intelligent control environment

Applicable scope

The EMC1 modular contactor (hereinafter referred to as contactor) is mainly suitable for AC 50Hz (or 60Hz), rated working voltage to 400V and rated current operation in the circuit up to 125A, it can control the low-inductance and low-inductance load of household appliances and similar purposes; it can also be used to control the load of household motors. The power should be reduced accordingly.

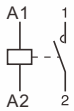
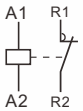
The EMC1 contactors according to standard IEC/EN61095 ， IEC60947-4-1 and are used mainly in buildings for switching and controlling lighting, heating, ventilation and pumps. They are part of the complete range of Din rail products and can be integrated easily in dedicated panels.

Modular contactor

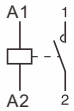
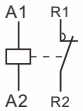


(eg. EMC1-25/20 230V . It is 25A , 2NO ,230V AC current coil voltage)

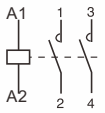
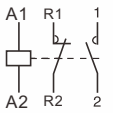
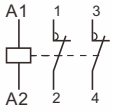
AC 1P,1modules

Contactor Model	Ie Rating AC-7a AC-1	Ie Rating AC-7b AC-3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1-16/10	16A	6A	24 110 230	
EMC1-20/10	20A	7A		
EMC1-25/10	25A	9A		
EMC1-16/01	16A	6A	24 110 230	
EMC1-20/01	20A	7A		
EMC1-25/01	25A	9A		

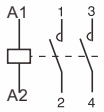
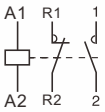
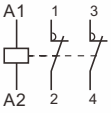
AC 1P,2modules

Contactor Model	Ie Rating AC-7a AC-1	Ie Rating AC-7b AC-3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1-32/10	32A	12A	24 110 230	
EMC1-40/10	40A	18A		
EMC1-63/10	63A	25A		
EMC1-32/01	32A	12A	24 110 230	
EMC1-40/01	40A	18A		
EMC1-63/01	63A	25A		

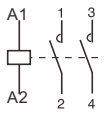
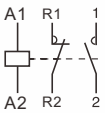
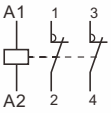
AC 2P,1modules

Contactor Model	Ie Rating AC–7a AC–1	Ie Rating AC–7b AC–3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1–16/20	16A	6A	24 110 230	
EMC1–20/20	20A	7A		
EMC1–25/20	25A	9A		
EMC1–16/11	16A	6A	24 110 230	
EMC1–20/11	20A	7A		
EMC1–25/11	25A	9A		
EMC1–16/02	16A	6A	24 110 230	
EMC1–20/02	20A	7A		
EMC1–25/02	25A	9A		

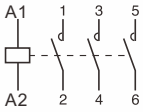
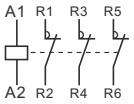
AC 2P,2modules

Contactor Model	Ie Rating AC–7a AC–1	Ie Rating AC–7b AC–3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1–32/20	32A	12A	24 110 230	
EMC1–40/20	40A	18A		
EMC1–63/20	63A	25A		
EMC1–32/11	32A	12A	24 110 230	
EMC1–40/11	40A	18A		
EMC1–63/11	63A	25A		
EMC1–32/02	32A	12A	24 110 230	
EMC1–40/02	40A	18A		
EMC1–63/02	63A	25A		

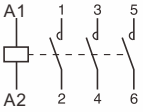
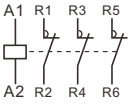
AC 2P,3modules

Contactor Model	Ie Rating AC–1	Ie Rating AC–3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1–80/20	80A	32A	24 110 230	
EMC1–100/20	100A	40A		
EMC1–125/20	125A	50A		
EMC1–80/11	80A	32A	24 110 230	
EMC1–100/11	100A	40A		
EMC1–125/11	125A	50A		
EMC1–80/02	80A	32A	24 110 230	
EMC1–100/02	100A	40A		
EMC1–125/02	125A	50A		

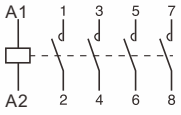
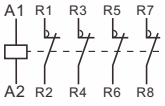
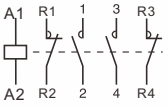
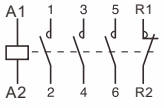
AC 3P,2modules

Contactor Model	Ie Rating AC-7a AC-1	Ie Rating AC-7b AC-3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1-16/30	16A	6A	24 110 230 380	
EMC1-20/30	20A	7A		
EMC1-25/30	25A	9A		
EMC1-16/03	16A	6A	24 110 230 380	
EMC1-20/03	20A	7A		
EMC1-25/03	25A	9A		

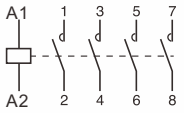
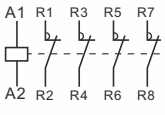
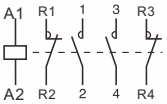
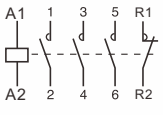
AC 3P,3modules

Contactor Model	Ie Rating AC-7a AC-1	Ie Rating AC-7b AC-3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1-32/30	32A	12A	24 110 230 380	
EMC1-40/30	40A	18A		
EMC1-63/30	63A	25A		
EMC1-32/03	32A	12A	24 110 230 380	
EMC1-40/03	40A	18A		
EMC1-63/03	63A	25A		

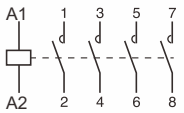
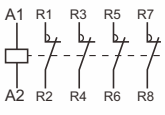
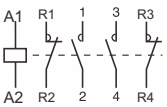
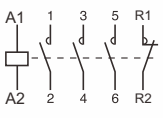
AC 4P,2modules

Contactor Model	Ie Rating AC-7a AC-1	Ie Rating AC-7b AC-3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1-16/40	16A	6A	24 110 230 380	
EMC1-20/40	20A	7A		
EMC1-25/40	25A	9A		
EMC1-16/04	16A	6A	24 110 230 380	
EMC1-20/04	20A	7A		
EMC1-25/04	25A	9A		
EMC1-16/22	16A	6A	24 110 230 380	
EMC1-20/22	20A	7A		
EMC1-25/22	25A	9A		
EMC1-16/31	16A	6A	24 110 230 380	
EMC1-20/31	20A	7A		
EMC1-25/31	25A	9A		

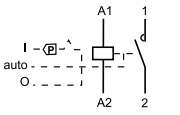
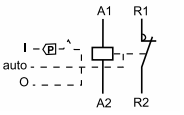
AC 4P,3modules

Contactor Model	Ie Rating		Uc (V AC)(50Hz)	Circuit Diagram
	AC–7a AC–1	AC–7b AC–3		
EMC1–32/40	32A	12A	24 110 230 380	
EMC1–40/40	40A	18A		
EMC1–63/40	63A	25A		
EMC1–32/04	32A	12A	24 110 230 380	
EMC1–40/04	40A	18A		
EMC1–63/04	63A	25A		
EMC1–32/22	32A	12A	24 110 230 380	
EMC1–40/22	40A	18A		
EMC1–63/22	63A	25A		
EMC1–32/31	32A	12A	24 110 230 380	
EMC1–40/31	40A	18A		
EMC1–63/31	63A	25A		

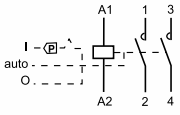
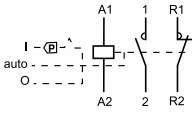
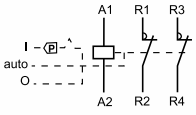
AC 4P,6modules

Contactor Model	Ie Rating		Uc (V AC)(50Hz)	Circuit Diagram
	AC–1	AC–3		
EMC1–80/40	80A	32A	24 110 240	
EMC1–100/40	100A	40A		
EMC1–125/40	125A	50A		
EMC1–80/04	80A	32A	24 110 240	
EMC1–100/04	100A	40A		
EMC1–125/04	125A	50A		
EMC1–80/22	80A	32A	24 110 240	
EMC1–100/22	100A	40A		
EMC1–125/22	125A	50A		
EMC1–80/31	80A	32A	24 110 240	
EMC1–100/31	100A	40A		
EMC1–125/31	125A	50A		

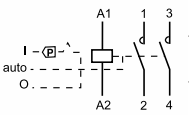
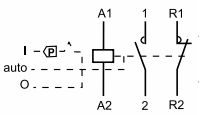
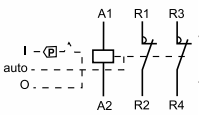
AC 1P,1modules

Contactor Model	Ie Rating AC-7a AC-1	Ie Rating AC-7b AC-3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1-16M/10	16A	6A	24 110 230	
EMC1-20M/10	20A	7A		
EMC1-25M/10	25A	9A		
EMC1-16M/01	16A	6A	24 110 230	
EMC1-20M/01	20A	7A		
EMC1-25M/01	25A	9A		

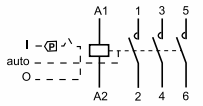
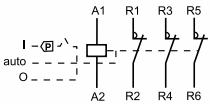
AC 2P,1modules

Contactor Model	Ie Rating AC-7a AC-1	Ie Rating AC-7b AC-3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1-16M/20	16A	6A	24 110 230	
EMC1-20M/20	20A	7A		
EMC1-25M/20	25A	9A		
EMC1-16M/11	16A	6A	24 110 230	
EMC1-20M/11	20A	7A		
EMC1-25M/11	25A	9A		
EMC1-16M/02	16A	6A	24 110 230	
EMC1-20M/02	20A	7A		
EMC1-25M/02	25A	9A		

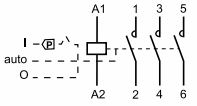
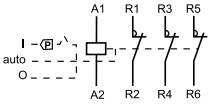
AC 2P,2modules

Contactor Model	Ie Rating AC-7a AC-1	Ie Rating AC-7b AC-3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1-32M/20	32A	12A	24 110 230	
EMC1-40M/20	40A	18A		
EMC1-63M/20	63A	25A		
EMC1-32M/11	32A	12A	24 110 230	
EMC1-40M/11	40A	18A		
EMC1-63M/11	63A	25A		
EMC1-32M/02	32A	12A	24 110 230	
EMC1-40M/02	40A	18A		
EMC1-63M/02	63A	25A		

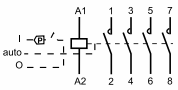
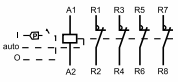
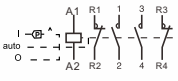
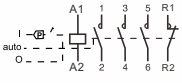
AC 3P,2modules

Contactor Model	Ie Rating AC–7a AC–1	Ie Rating AC–7b AC–3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1–16M/30	16A	6A	24 110 230 380	
EMC1–20M/30	20A	7A		
EMC1–25M/30	25A	9A		
EMC1–16M/03	16A	6A	24 110 230 380	
EMC1–20M/03	20A	7A		
EMC1–25M/03	25A	9A		

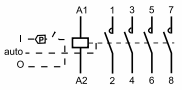
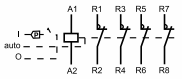
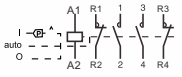
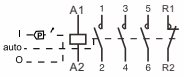
AC 3P,3modules

Contactor Model	Ie Rating AC–7a AC–1	Ie Rating AC–7b AC–3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1–32M/30	32A	12A	24 110 230 380	
EMC1–40M/30	40A	18A		
EMC1–63M/30	63A	25A		
EMC1–32M/03	32A	12A	24 110 230 380	
EMC1–40M/03	40A	18A		
EMC1–63M/03	63A	25A		

AC 4P,2modules

Contactor Model	Ie Rating AC–7a AC–1	Ie Rating AC–7b AC–3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1–16M/40	16A	6A	24 110 230 380	
EMC1–20M/40	20A	7A		
EMC1–25M/40	25A	9A		
EMC1–16M/04	16A	6A	24 110 230 380	
EMC1–20M/04	20A	7A		
EMC1–25M/04	25A	9A		
EMC1–16M/22	16A	6A	24 110 230 380	
EMC1–20M/22	20A	7A		
EMC1–25M/22	25A	9A		
EMC1–16M/31	16A	6A	24 110 230 380	
EMC1–20M/31	20A	7A		
EMC1–25M/31	25A	9A		

AC 4P,3modules

Contactor Model	Ie Rating AC-7a AC-1	Ie Rating AC-7b AC-3	Uc (V AC)(50Hz)	Circuit Diagram
EMC1-32M/40	32A	12A	24 110 230 380	
EMC1-40M/40	40A	18A		
EMC1-63M/40	63A	25A		
EMC1-32M/04	32A	12A	24 110 230 380	
EMC1-40M/04	40A	18A		
EMC1-63M/04	63A	25A		
EMC1-32M/22	32A	12A	24 110 230 380	
EMC1-40M/22	40A	18A		
EMC1-63M/22	63A	25A		
EMC1-32M/31	32A	12A	24 110 230 380	
EMC1-40M/31	40A	18A		
EMC1-63M/31	63A	25A		

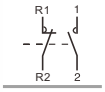
AC Modular contactor power consumption

Poles	Ie Rating AC-7a	Ie Rating AC-7b	Uc (VAC)(50Hz)	Power consumption Hold on	Power consumption Pull in	Max Power
IP	16A	6A	230	2.8VA	11.5VA	1.2W
	20A	7A	230	2.8VA	11.5VA	1.2W
	25A	9A	230	2.8VA	11.5VA	1.2W
2P	16A	6A	230	2.8VA	11.5VA	1.2W
	20A	7A	230	2.8VA	11.5VA	1.2W
	25A	9A	24	3.0VA	11.5VA	1.3W
			230	2.8VA	11.5VA	1.2W
	32A	12A	230	4.1VA	31VA	1.6W
	40A	18A	230	4.1VA	31VA	1.6W
	63A	25A	230	4.1VA	31VA	1.6W
	100A	–	230	4.1VA	31VA	2.1W
3P	16A	6A	230	4.1VA	31VA	1.6W
	20A	7A	230	4.1VA	31VA	1.6W
	25A	9A	230	4.1VA	31VA	1.6W
	32A	12A	230	7VA	48VA	2.1W
	40A	18A	230	7VA	48VA	2.1W
	63A	25A	230	7VA	48VA	2.1W
4P	16A	6A	230	4.1VA	31VA	1.6W
	20A	7A	230	4.1VA	31VA	1.6W
	25A	9A	24	4.8VA	33VA	1.6W
			230	4.1VA	31VA	1.6W
	32A	12A	230	7VA	48VA	2.1W
	40A	18A	230	7VA	48VA	2.1W
	63A	25A	230	7VA	48VA	2.1W
	100A	–	230	13VA	106VA	4.2W

Modular contactor auxiliary

Auxiliary Contacts

The Auxiliary contacts are indicator contactor contacts status switch OFF or ON

	AC–12		AC–15		DC–13		Rated Current	Circuit Diagram
	C.V.	C.A.	C.V.	C.A.	C.V.	C.A.		
EMC1–AUC11	240V	5A	230V	2A	DC 130V	1A	5A	
EMC1–AUC20	240V	5A	230V	2A	DC 130V	1A	5A	

Spacing piece

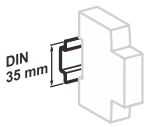
Spacers are used to reduce the temperature rise of devices mounted side by side. It is recommended to separate electronic equipment (temperature adjustment devices, programmable timer etc.) from electromechanical equipment (impulse relays, contactors)

	Technical specifications
Spacing piece	3mm Spacing piece
	9mm Spacing piece

Main parameter and technical performance

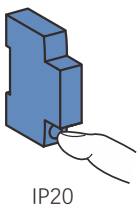
Power circuit		
Voltage rating(Ue)	1P,2P	250V AC
	3P,4P	400V AC
Frequency		50/60Hz
Endurance(O–C)		1,000,000 cycles
Electrical		100,000 cycles
Maximum number of switching operation a day		100
Insulation vwltage(Ui)		500 V AC
Pollution degree		2
Rated impulse withstand voltage(Uimp)		2.5kV(4kV for 12/24/48VAC)
Degree of protection (IEC 60529)	Device only	IP20
	Device in modular enclosure	IP40
Operating temperature		–5℃~+60℃
Storage temperature		–40℃~+70℃
Tropicalization(IEC 60068.1)		Treatment 2 (relative humidity 95% at 55℃
ELSV compliance(Extra Low Safety Voltage)for 12/24/48vac versions		
The product control conforms to the SELV(safety extra low voltage)requirements		

(1)In the case of contactor mounting in a enclosure for which the interior temperature is in range detween 50 ℃ and 60 ℃,it is necessary to use a spacer, between each contactor

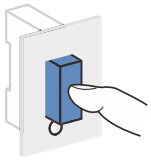


Clip on DIN rail 35 mm

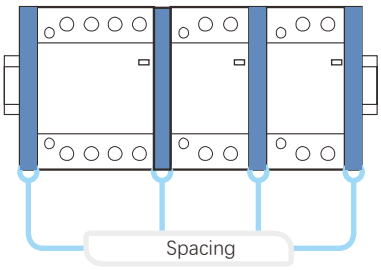
±30°vertical.



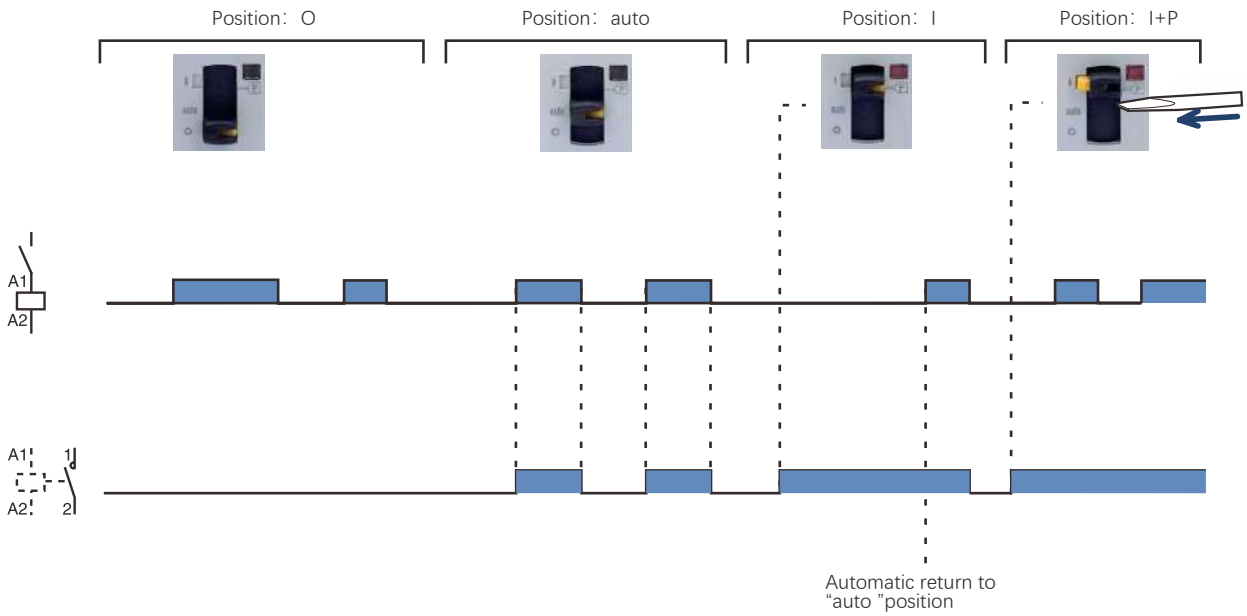
IP20



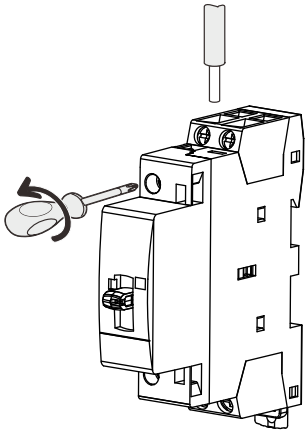
IP40



Operation(Manual control contactor)



Connection parameter



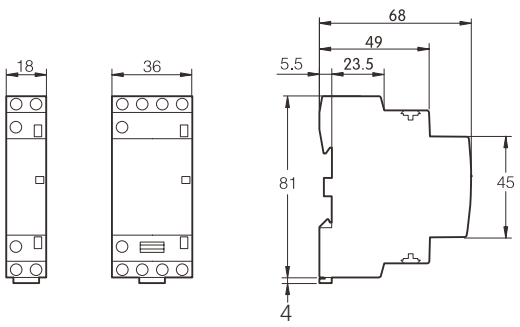
Type		Rating	Lenght tripping	Circuit	Tightening torque	Copper cables	
						Rigid	Flexible or ferrule
							
EMC1	PZ1:4mm	16–100A	9mm	Control	0.8N.m	1.5~2.5mm² 2×1.5mm²	1.5~2.5mm² 2×2.5mm²
		16and25A				1.5~6mm²	1~4mm²
	PZ2:6mm	40A–63A	14mm	Power	3.5N.m	6~25mm²	6~16mm²
		100A				6~35mm²	6~35mm²
EACTs	PZ1:4mm	–	9mm	–	0.8N.m	1.5~2.5mm² 2×1.5mm²	1.5~2.5mm² 2×2.5mm²

Packing information

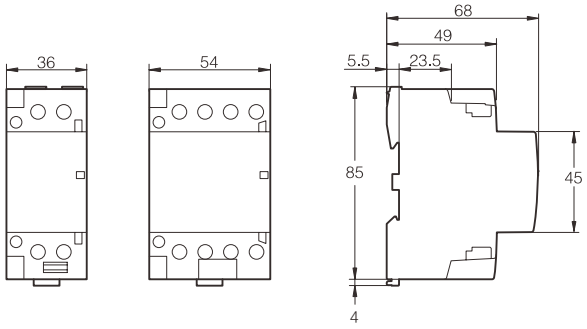
Poles	Rated Current (A)	BOX QTY	CTN QTY	Automatic Contactor		Manual Contactor		CARTON SIZE (mm)
				G.W.(kg)	N.W.(kg)	G.W.(kg)	N.W.(kg)	
AC 1P	16	12	120	16.3	14.1	16.3	14.1	500×260×190
	20	12	120	16.3	14.1	16.3	14.1	500×260×190
	25	12	120	16.3	14.1	16.3	14.1	500×260×190
AC 2P	16	12	120	16.3	14.1	16.3	14.1	500×260×190
	20	12	120	16.3	14.1	16.3	14.1	500×260×190
	25	12	120	16.3	14.1	16.3	14.1	500×260×190
	32	6	60	15.7	13.9	15.7	13.9	500×260×190
	40	6	60	15.7	13.9	15.7	13.9	500×260×190
	63	6	60	15.7	13.9	15.7	13.9	500×260×190
	100	4	40	13.6	12.7	–	–	500×260×190
AC 3P	16	6	60	14.2	12.4	14.2	12.4	500×260×190
	20	6	60	14.2	12.4	14.2	12.4	500×260×190
	25	6	60	14.2	12.4	14.2	12.4	500×260×190
	32	4	40	15.0	13.3	15.0	13.3	500×260×190
	40	4	40	15.0	13.3	15.0	13.3	500×260×190
	63	4	40	15.0	13.3	15.0	13.3	500×260×190
AC 4P	16	6	60	14.2	12.3	13.9	12.3	500×260×190
	20	6	60	14.2	12.3	13.9	12.3	500×260×190
	25	6	60	14.2	12.3	13.9	12.3	500×260×190
	32	4	40	15.0	13.3	15.0	13.3	500×260×190
	40	4	40	15.0	13.3	15.0	13.3	500×260×190
	63	4	40	15.0	13.3	15.0	13.3	500×260×190
	100	2	30	20.1	18.8	–	–	500×260×190

Type	Box Qty	CTN Qty	G.W.(kg)	N.W.(kg)	Carton Size (mm)
Auxiliary Contacts	12	120	5.56	3.96	500×260×190
3mm Spacing piece	72	720	5.56	3.36	500×260×190
9mm spacing piece	24	360	6.38	5.18	455×230×240

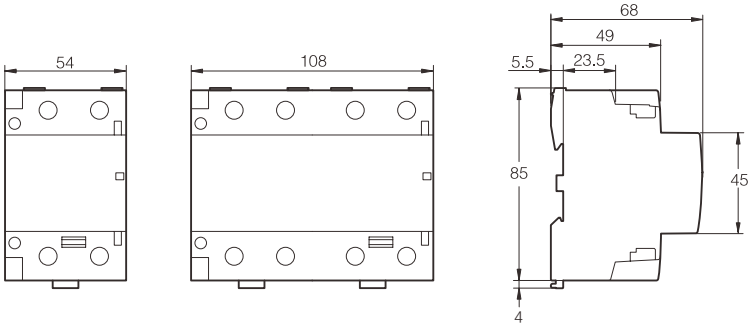
Product dimensions (mm)



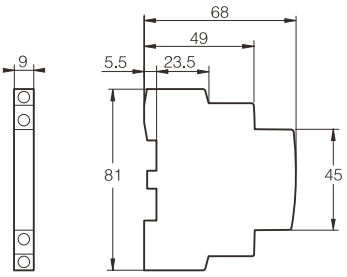
EMC1-16/20/25A



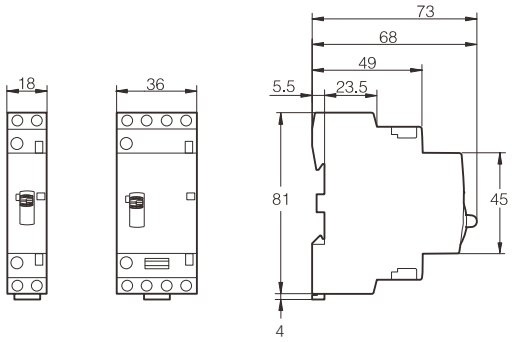
EMC1 32/40/63A



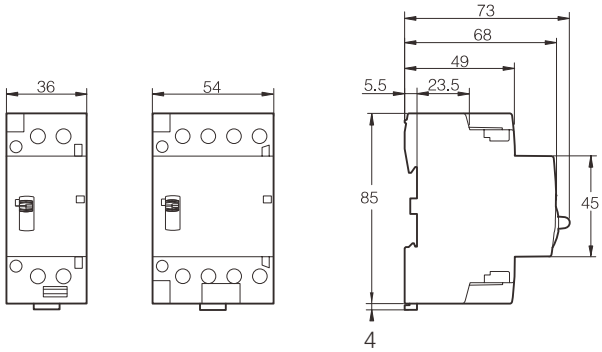
EMC1 100A



EACTs



EMC1 Manual Contactor16/20/25A



EMC1 Manual Contactor 32/40/63A

Modular contactors and impulse relays do not use the same technologies. Their rating is determined according to different standards and does not correspond to the rated current of the circuit.
For example, for a given rating, an impulse relay is more efficient than a modular contactor for the control of light fittings with a strong inrush current, or with a low power factor (non-compensated inductive circuit)

Relay rating

- The table below shows the maximum number of light fittings for each relay, according to the type, power and configuration of a given lamp. As an indication, the total acceptable power is also mentioned.
- These values are given for a 230 V circuit with 2 active conductors (single-phase phase/neutral or two-phase phase/phase). For 110 V circuits, divide the values in the table by 2.
- To obtain the equivalent values for the entire 230 V three-phase circuit, multiply the number of lams and the maximum power output:
  - by (1.73) for circuits with 230 V between phases without neutral;
  - by for circuits with 230 V between phase and neutral or 400 V between phases.

Note: The power ratings of the lamps most commonly used are shown in bold. For powers not mentioned, use a proportional rule with the nearest values.

Choice table

Products			EMC1 Modularcontactors					
Type of lamp	Unit power and capacitance of power factor correction capacitor		Maximum number of light fittings for a single-phase circuit and maximum power output					
			16 A		25 A		40 A	
Basic incandescent lamps, LV halogen lamps, replacement mercury vapour lamps (without ballast)								
	40 W		38	1550 W	57	2300 W	115	4600 W
	60 W		30	to	45	to	85	to
	75 W		25	2000 W	38	2850 W	70	5250 W
	100 W		19		28		50	
	150 W		12		18		35	
	200 W		10		14		26	
	300 W		7	2100 W	10	3000 W	18	5500 W
	500 W		4		6		10	to
	1000 W		2		3		6	6000 W
	1500 W		1		2		4	
ELV 12 or 24 V halogen lamps								
With ferromagnetic transformer	20 W		15	300 W	23	450 W	42	850 W
	50 W		10	to	15	to	27	to
	75 W		8	600 W	12	900 W	23	1950 W
	100 W		6		8		18	
With electronic transformer	20 W		62	1250 W	90	1850 W	182	3650 W
	50 W		25	to	39	to	76	to
	75 W		20	1600 W	28	2250 W	53	4200 W
	100 W		16		22		42	
Fluorescent tubes with starter and ferromagnetic ballast								
1 tube without compensation (1)	15W		22	330 W	30	450 W	70	1050 W
	18 W		22	to	30	to	70	to
	20 W		22	850 W	30	1200 W	70	2400 W
	36 W		20		28		60	
	40 W		20		28		60	
	58 W		13		17		35	
	65 W		13		17		35	
	80 W		10		15		30	
	115 W		7		10		20	
1 tube without with parallel compensation (2)	15 W	5 µF	15	200 W	20	300 W	40	600 W
	18 W	5 µF	15	to	20	to	40	to
	20 W	5 µF	15	800 W	20	1200 W	40	2400 W
	36 W	5 µF	15		20		40	
	40 W	5 µF	15		20		40	
	58 W	7 µF	10		15		30	
	65 W	7 µF	10		15		30	
	80 W	7 µF	10		15		30	
	115 W	16 µF	5		7		14	
2 or 4tube with seriesl compensation	2 x 18 W		30	1100 W	46	1650 W	80	2900 W
	4 x 18 W		16	to	24	to	44	to
	2 x 36 W		16	1500 W	24	2400 W	44	3800 W
	2 x 58 W		10		16		27	
	2 x 65 W		10		16		27	
	2 x 80 W		9		13		22	
	2 x 115W		6		10		16	

Choice table (cont.)

Products			EMC1 Modular contactors								
Type of lamp	Unit power and capacitance of power factor correction capacitor		Maximum number of light fittings for a single-phase circuit and maximum power output per circuit								
			16 A				16 A		25 A		40 A
Fluorescent tubes with electronic ballast											
1 or 2 tubes	18 W		74	1300 W	111	2000 W	222	4000 W			
	36 W		38	to	58	to	117	to			
	58 W		25	1400 W	37	2200 W	74	4400 W			
	2 x 18 W		36		55		111				
	2 x 36 W		20		30		60				
	2 x 58 W		12		19		38				
Compact fluorescent lamps											
With external electronic ballast	5 W		210	1050 W	330	1650 W	670	3350 W			
	7 W		150	to	222	to	478	to			
	9 W		122	1300 W	194	2000 W	383	4000 W			
	11 W		104		163		327				
	18 W		66		105		216				
	26 W		50		76		153				
With integral electronic ballast (replacement for incandescent lamps)	5 W		160	800 W	230	1650 W	470	2350 W			
	7 W		114	to	164	to	335	to			
	9 W		94	900 W	133	1300 W	266	2600 W			
	11 W		78		109		222				
	18 W		48		69		138				
	26 W		34		50		100				
High-pressure mercury vapour lamps with ferromagnetic ballast without ignito Replacement high-pressure sodium vapour lamps with ferromagnetic ballast with integral ignitor (3))											
Without compensation (1)	50W		15	750 W	20	1000 W	34	1700 W			
	80W		10	to	15	to	27	to			
	125 / 110 W (3)		8	1000 W	10	1600 W	20	2800 W			
	250 / 220 W (3)		4		6		10				
	400 / 350 W (3)		2		4		6				
	700 W		1		2		4				
With parallel compensation (2)	50W	7 µF	10	500 W	15	750 W	28	1400 W			
	80W	8 µF	9	to	13	to	25	to			
	125 / 110 W (3)	10 µF	9	1400 W	10	1600 W	20	3500 W			
	250 / 220 W (3)	18 µF	4		6		11				
	400 / 350 W (3)	25 µF	3		4		8				
	700 W	40 µF	2		2		5				
	1000 W	60 µF	0		1		3				
Low-pressure sodium vapour lamps with ferromagnetic ballast with external ignitor											
Without compensation (1)	35 W		5	270 W	9	320 W	14	500 W			
	55 W		5	to	9	to	14	to			
	90 W		3	360 W	6	720 W	9	1100 W			
	135 W		2		4		6				
	180 W		2		4		6				
With parallel compensation (2)	35 W	20 µF	3	100 W	5	175 W	10	350 W			
	55 W	20 µF	3	to	5	to	10	to			
	90 W	26 µF	2	180 W	4	360 W	8	720 W			
	135 W	40 µF	1		2		5				
	180 W	45 µF	1		2						

Products			EMC1 Modular contactors					
Type of lamp	Unit power and capacitance of power factor correction capacitor		Maximum number of light fittings for a single-phase circuit and maximum power output per circuit					
			16 A		25 A		40 A	
High-pressure sodium vapour lamps Metal-iodide lamps								
With ferromagnetic ballast with external ignitor,without compensation (1)	35 W		16	600 W	24	850 W	42	1450 W
	70 W		8		12	to	20	to
	150 W		4		7	1200 W	13	2000 W
	250 W		2		4		8	
	400 W		1		3		5	
	1000 W		0		1		2	
With ferromagnetic ballast with external ignitor and parallel compensation (2)	35 W	6 µF	12	450 W	18	650 W	31	1100 W
	70 W	12 µF	6	to	9	to	16	to
	150 W	20 µF	4	1000 W	6	2000 W	10	4000 W
	250 W	32 µF	3		4		7	
	400 W	45 µF	2		3		5	
	1000 W	60 µF	1		2		3	
	2000 W	85 µF	0		1		2	
With electronic ballast	35 W		24	850 W	38	1350 W	68	2400 W
	70 W		18	to	29	to	51	to
	150 W		9	1350 W	14	2200 W	26	4000 W
LED lamps								
With driver	10 W		48	500 W	69	700 W	98	1000 W
	30 W		38	to	54	to	77	to
	50 W		27	1400 W	39	1950 W	56	3000 W
	75 W		17		25		36	
	150 W		9		12		18	
	200 W		7		9		15	

(1)Circuits with non-compensated ferromagnetic ballasts consume twice as much current for a given lamp power output. This explains the small number of lamps in this configuration.

(2)The total capacitance of the power factor correction capacitors in parallel in a circuit limits the number of lamps that can be controlled by a contactor. The total downstream capacitance of a modular contactor of rating 16, 25, 40 or 63 A should not exceed 75, 100, 200 or 300µF respectively. Allow for these limits to calculate the maximum acceptable number of lamps if the capacitance values are different from those in the table.

(3)High-pressure mercury vapour lamps without ignitor, of power 125, 250 and 400 W, are gradually being replaced by high-pressure sodium vapour lamps with integral ignitor, and respective power of 110, 220 and 350 W.

Heating application

● Contactor rating to be chosen according to the power to be controlled and the number of operations a day

230 V heating		
Type of heatin application	Maximum power for a given rating EMC1 Modular contactor	
	25 A	40 A
25	5.4 kW	8.6 kW
50	5.4 kW	8.6 kW
75	4.6 kW	7.4 kW
100	4 kW	6 kW
250	2.5 kW	3.8 kW
500	1.7 kW	2.7 kW
400 V heating		
25	16 kW	26 kW
50	16 kW	26 kW
75	14 kW	22 kW
100	11kW	17 kW
250	5 kW	8 kW
500	3.5 kW	6 kW

Small motor application

● Contactor rating to be chosen according to the power to be controlled

Asynchronous single-phase motor with capacitor		
Small motor application type	Maximum power for a given rating EMC1 Modular contactor	
Voltage	25 A	40 A
230 V	1.4	2.5
Asynchronous three-phase motor		
400 V	4	7.5
Universal motor		
230 V	0.9	1.4

EMC1 Modular contactor loading type characteristics

● IEC61095 Standard suitable for residential with similar use . Its Different with IEC60947-4 (Its for industrial use). It is also has specials require for staff and equipments safty.

Application	Industry IEC 60947-4	Residential IEC 61095
Motor	AC3	AC7b
Heating	AC1	AC7a
Lighting	Ac5a and b	Ac5a and b

This document has been
printed on ecological paper

ONCCY

ON THE WAY TO FUTURE ELECTRICITY

Email: contact@onccy.com
Fax: +86-21-60250600

www.onccy.com

As standards, specifications and designs change
from time to time, please ask for confirmation of the
information given in this publication.