

# Capacitor 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 control coil on selection
- 3-pole(NO) main contact
- Finger proof design
- DIN rail or screw mountable
- IEC 60947-4-1 AC 6b

## Rating

Type	Rating (kVar, A)			
	220~240V	400~440V	500~550V	600~690V
MC-9b with AC-9	5kVar 13A	9.7kVar 14A	14kVar 16A	16kVar 15A
MC-12b with AC-9	6.7kVar 18A	12.5kVar 18A	18kVar 21A	18kVar 17A
MC-18b with AC-9	8.5kVar 22A	16.7kVar 24A	24kVar 28A	26kVar 25A
MC-22b with AC-9	10kVar 26A	18kVar 26A	26kVar 30A	30kVar 29A
MC-32a with AC-9	15kVar 39A	25kVar 36A	36kVar 42A	40kVar 38A
MC-40a with AC-9	20kVar 52A	33.3kVar 48A	48kVar 55A	53kVar 51A
MC-50a with AC-50	20kVar 52A	40kVar 58A	58kVar 67A	65kVar 63A
MC-65a with AC-50	25kVar 66A	45.7kVar 66A	66kVar 76A	73kVar 70A
MC-75a with AC-75	29.7kVar 78A	54kVar 78A	78kVar 90A	85kVar 82A
MC-85a with AC-75	35kVar 92A	60kVar 87A	92kVar 106A	100kVar 96A
MC-100a with AC-75	37kVar 97A	62kVar 89A	94kVar 109A	105kVar 101A

Type	Rating (kVar, A)	
	500~550V	600~690V
MC-9b	4kVar 4.6A	3.5kVar 3.4A
MC-12b	4kVar 4.6A	4kVar 3.8A
MC-18b	5kVar 5.8A	4.5kVar 4.3A
MC-22b	8kVar 9.2A	8kVar 7.7A
MC-32a	17kVar 20A	14kVar 13A
MC-40a	25kVar 29A	18kVar 17A
MC-50a	30kVar 35A	25kVar 24A
MC-65a	40kVar 46A	35kVar 34A
MC-75a	50kVar 58A	40kVar 38A
MC-85a	55kVar 64A	45kVar 43A
MC-100a	60kVar 69A	48kVar 46A
MC-130a	70kVar 81A	60kVar 58A
MC-150a	90kVar 104A	78kVar 75A
MC-185a	120kVar 139A	100kVar 96A
MC-225a	130kVar 150A	105kVar 101A
MC-265a	140kVar 162A	115kVar 111A
MC-330a	185kVar 214A	140kVar 135A
MC-400a	195kVar 225A	160kVar 154A
MC-500a	330kVar 381A	290kVar 279A
MC-630a	340kVar 393A	300kVar 289A
MC-800a	370kVar 427A	320kVar 308A



- Note) 1. When the switch is closed condenser must be discharged before recharged. (Maximum residual voltage at terminals  $\leq 50V$ )  
 2. To prevent short current, gG type fuse must be 1.5-2 times than rated current.

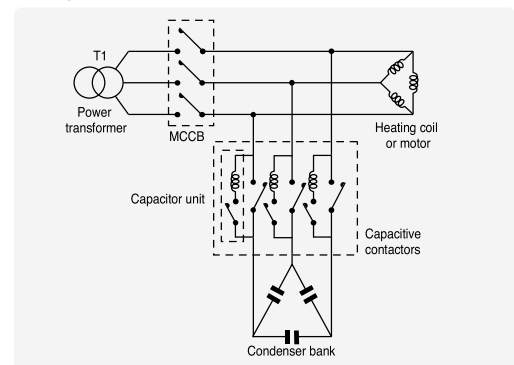


## Coil voltage

AC	50Hz	24, 32, 42, 48, 80, 100, 110, 220, 230, 240, 380, 400, 500, 550V
	60Hz	24, 48, 100, 110, 120, 200, 208, 220, 230, 240, 277, 380, 480, 600V

- 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 closed 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



## Capacitor unit

Capacitor unit is connected to the terminals of the contactor to reduce the high inrush current.  
IEC 60947-5-1

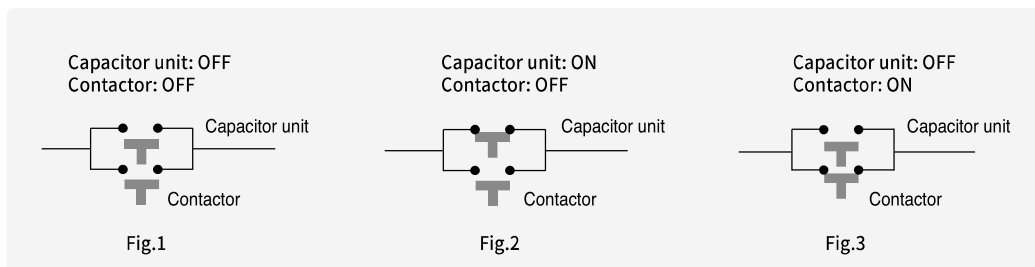


Type (AUX Contact 1b)		AC-9 (1b)	AC-50 (1b)	AC-75 (1b)		
Rating thermal current (Ith)		16A	16A	16A		
Current	AC-15	Rated Operational Current (A)	120V	6	6	6
			240V	3	3	3
			380V	1.9	1.9	1.9
			480V	1.5	1.5	1.5
			500V	1.4	1.4	1.4
			600V	1.2	1.2	1.2
	DC-13	Rated Operational Current (A)	125V	0.55	0.55	0.55
			250V	0.27	0.27	0.27
			400V	0.15	0.15	0.15
			500V	0.13	0.13	0.13
			600V	0.1	0.1	0.1

### 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 closed 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

### Operation sequence



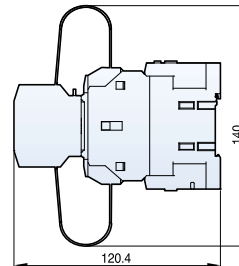
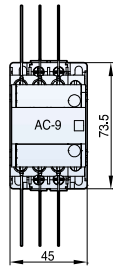
Note) Closing sequence: Fig.1 => Fig.2 => Fig.3  
Opening sequence: Fig.3 => Fig.1

# Dimension

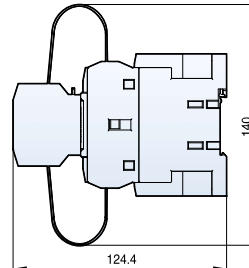
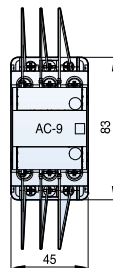
## Capacitor contactors MC-9b~40a with AC-9, MC 50a~100a with AC-50

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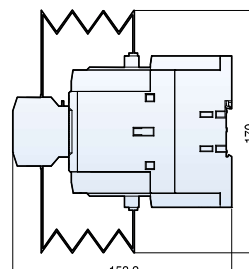
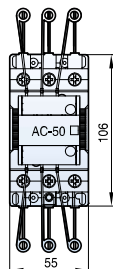
MC-9b~22b  
with AC-9



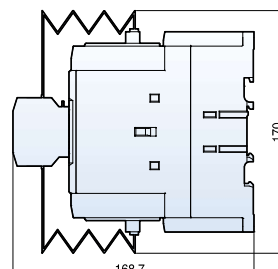
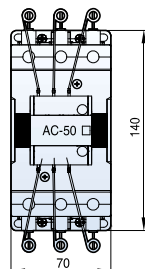
MC-32a,40a  
with AC-9



MC-50a,65a  
with AC-50

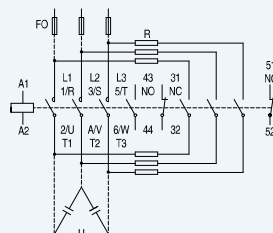


MC-75a~100a  
with AC-50



Circuit diagram

MC-9b~22b with AC-9



MC-32a, 40a with AC-9 MC 50a~100a with AC-50

