

電容器專用接觸器

CAPACITOR DUTY CONTACTORS

KC 12, KC 16, KC 20, KC 25, KC 33, KC 40, KC 60



When switched on, a capacitor can function as a short-circuit element. The capacitor inrush or charging current magnitude depends on AC voltage at turn-on and on the impedance of connection cables and a power supply transformer.

In case of individual capacitor load, charging current peaks that are 30-time greater than rated capacitor current can occur. In case of a multi-stage capacitor the inrush current can exceed 180-time rated capacitor current.

Such a strong current can flow through a contactor from the beginning when inrush current occurs from power supply network and the capacitor is already connected. Such inrush current is undesirable since main contacts of standard duty contactors are likely to weld.

A new capacitor duty contactor is designed to meet the requirements of capacitor duty applications. Contactors are fitted with a block of three auxiliary contacts connected in series with six quick discharge damping resistors, two per each phase. Peak current is limited to the value within the contactor making capacity.

Advantages

- Conforms to utilization category AC-6b
- Saves costs of expensive replacement
- Long electrical life
- Reduces watt losses during "ON" condition, saves energy
- High safety
- No risk of dangerous voltage
- Switching of capacitor bank in parallel without de-rating
- Less maintenance and downtime

Three-pole contactors from 10 kVar to 60 kVar are available in seven ratings complying with the IEC 60070 and IEC 60830 standards. They have the UL certificate.

TECHNICAL DATA

Designation of basic versions with control voltage and fixing mode ¹	kVar ratings at 50/60 Hz $t < 55^{\circ}\text{C}$ ²				PInstantaneous auxiliary contacts		Max. operating frequency op. c./h	Electrical life at rated load op. c.	
	Type	220 V	400 V	500 V	660 V	NO			NC
		240 V	440 V	525	690 V				
KC 12-11	6.7	12.5	14.0	18.0	1	1	240	200.000	
KC 16-11	8.5	16.7	16.7	24.0	1	1	240	200.000	
KC 20-11	10.0	20.0	23.0	30.0	1	1	240	100.000	
KC 25-11	15.0	25.0	28.0	36.0	1	1	240	100.000	
KC 33-12	20.0	33.0	37.0	48.0	1	2	240	100.000	
KC 40-12	25.0	40.0	44.0	58.0	1	2	100	100.000	
KC 60-12	40.0	60.0	66.0	92.0	1	2	100	100.000	
Coil consumption									
KC12, KC16	in rush					70			
	sealed					8			
KC20, KC25	in rush					100			
	sealed	VA					8.5		
KC33, KC40, KC60	in rush					245			
	sealed					28			

¹ For KC 12 to KC 25: clip-on mounting on 35 mm wide rail
For KC 33 – KC 60: clip-on mounting on 75 mm wide rail

² Average ambient temperature should not exceed 45°C within the 24-hour period in accordance with IEC 60070 and IEC 60831

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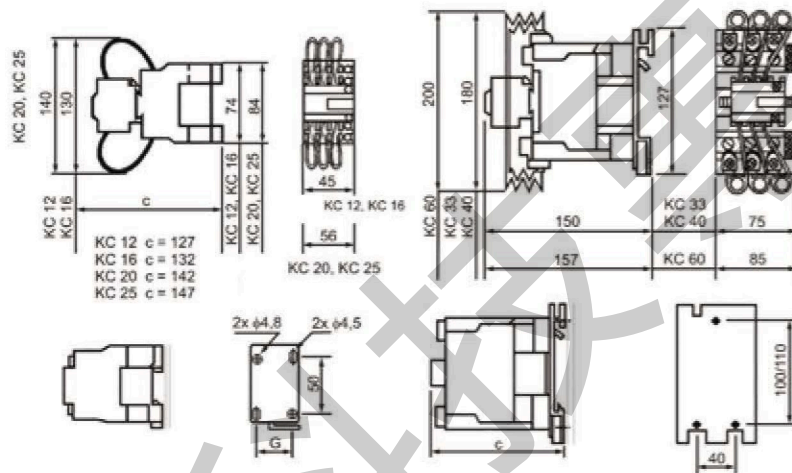
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MOUNTING AND CONNECTION 安裝及連結

KC12, KC16, KC20, KC25

KC33, KC40, KC60



							
	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(mm ²)	(Nm)	(Nm)
KC 10, KC 12	2,5	1,5	4	4			1,2
KC 16	4	2,5	6	6			1,7
KC 20	4	4	10	6			1,85
KC 25	6	4	16	10			2,5
KC 33	16	6	25	16		5	
KC 40	16	6	25	16		5	
KC 60	50	25	50	35	10	9	

	Philips N°2
	φ6 ... 48
AWG 16	= 1,31 mm ²
AWG 14	= 2,08 mm ²
AWG 12	= 3,31 mm ²
AWG 10	= 5,26 mm ²
AWG 8	= 8,37 mm ²
AWG 5	= 13,3 mm ²
AWG 4	= 21,15 mm ²
AWG 3	= 26,31 mm ²
AWG 2	= 33,62 mm ²
AWG 1	= 42,41 mm ²
AWG 1/0	= 53,49 mm ²