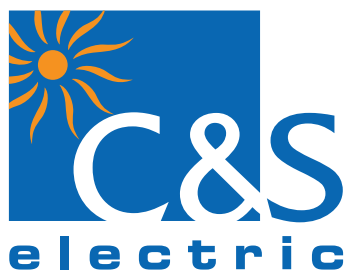


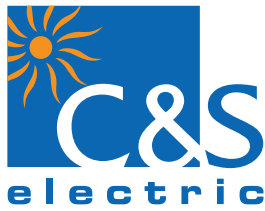
We touch
your **electricity**
everyday!



RoHS
Compliant



**Capacitor Duty
Contactor**



C&S Electric Ltd. is a leading manufacturer of electrical and electronic equipment in India. It is one of India's largest exporters of industrial switchgear & power busbar products. C&S Electric products are used in applications ranging from power generation, transmission and distribution, protection and final consumption.

C&S Electric has the following product verticals:

- LV Switchgear
- LV Switchboards
- LV & MV Busducts
- LV Bustrunking
- Protection and Measurement Devices

MANUFACTURING FACILITIES



MARKET LEADER

C&S is one of the leading supplier in the LV Switchgear business segment and a market leader in the busbar business with more than 50% share in Indian market.

10 MANUFACTURING PLANTS

C&S Electric have 10 state-of-the-art manufacturing facilities in Noida, Haridwar & Guwahati, which are equipped with latest tools and systems to ensure highest level of quality and services.

600+ STOCKISTS

A dedicated network of channel partners, ensuring access to the farthest corners of India, with an obsession for customer services. In addition C&S products are available in 8000+ retail counters nationally.

EXPORTS TO OVER 85 COUNTRIES

C&S exports the entire range of products across all 7 continents, thus reaffirming its position as one of India's largest exporters of industrial electrical products.

5000+ WORKFORCE

5000+Workforce including over 371 engineers, dedicated sales team of 424 people & millions of satisfied customers.

R&D

4 Govt. approved labs/centres, over 20,000 sqft. space dedicated to R&D, 70 R&D engineers, state of the art testing & design facilities ... & most of the all a passion for innovation & excellence.

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Quality Assurance



Features

- Excellent damping of In-rush Current
- Saves energy and reduced watt loss during ON condition.
- Capacitor Bank Switching in parallel without de-rating
- Enhanced equipment life
- Low maintenance & down-time
- Power quality improvement
- Common accessories with exceed / robusta contactors except Add ON blocks.

Benefits



The Solution to switch on Power Capacitors depending upon the amount of Reactive Power required.



Easy to handle and maintain



Cost Effective



Availability of wide range of Capacitor Duty Contactor



Safe, Reliable and Simple





Product Range	
Range	2.5kVAr~100kVAr, 415VAC, 50/60Hz
No. of Poles	3
Conforms	IEC60947-4-1AC-6b utilization category

Capacitor Duty Contactor is specially designed for Capacitor Switching applications. It is required due to the following factors:

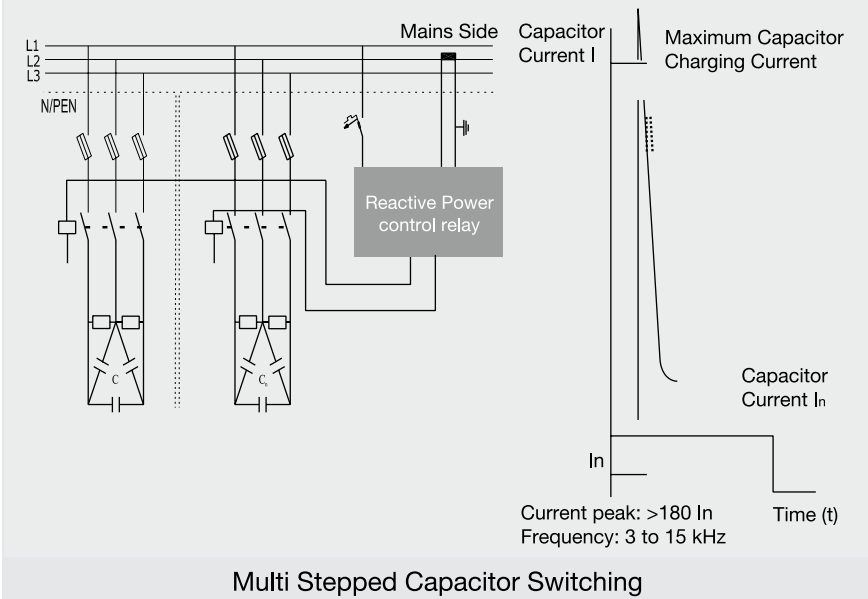
- Network inductances
- Transformer power and short circuit voltage
- Type of power factor correction : fixed or automatic
- Harmonics present in the system

Contactor for capacitor bank switching must be designed to withstand:

- Permanent current that can reach 1.5time the nominal current of capacitor bank.
- Short but high peak current on pole closing.
- Selection of capacitor duty switching device requires careful product selection. It is always recommended to use dedicated Capacitor Duty Switching Contactor for switching Capacitor bank, as It optimizes the switchgear cost & enhances the equipment life.

Operating Principal

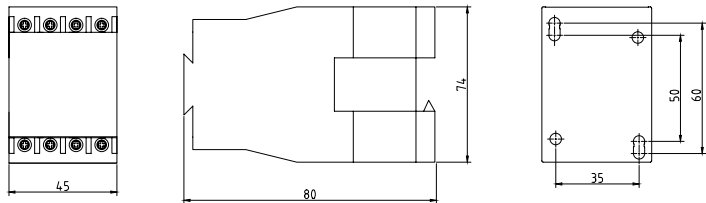
Capacitor contactor are specially designed to meet stringent requirements of capacitor switching as deliberated above. These contactors are fitted with front-mounted block of 3 early make auxiliary contact in series with quick discharge damping six-resistors-2 per phase to limit peak current to value within contactor making capacity such that normal rated capacitor current is carried by main contacts which, after closing, effectively short out the resistors.



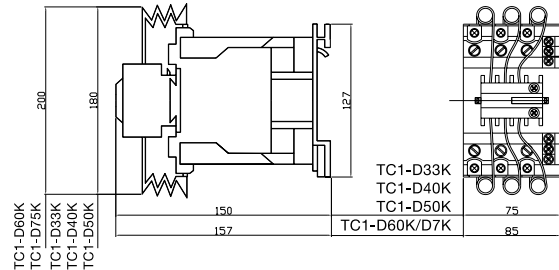
KVR*Rating 50/60Hz ($\theta \leq 55^\circ\text{C}(3)$)			Instataneous Auxiliary Contacts		Maximum Oprating Rate	Electrical Life at Rated Load	Prospective Peak Current at Switch on (I_n)	Product Reference
200V/240V	400V/440V	660V/690V	NO	NC	Operations House	Operations		
1.4	2.5	3	1	0	240	200000	200	TC1-D02K10
			0	1				TC1-D02K01
2.8	5	6.5	1	0	240	200000	200	TC1-D05K10
			0	1				TC1-D05K01
4	7.5	3	1	0	240	200000	200	TC1-D07K11
			0	2				TC1-D07K02
5.5	10	12.5	1	1	240	200000	200	TC1-D10K11
			0	2				TC1-D10K02
6.7	12.5	18	1	1	240	200000	200	TC1-D12K11
			0	2				TC1-D12K02
8.5	16.7	24	1	1	240	200000	200	TC1-D16K11
			0	2				TC1-D16K02
10	20	30	1	1	240	200000	200	TC1-D20K11
			0	2				TC1-D20K02
15	25	36	1	1	240	200000	200	TC1-D25K11
			0	2				TC1-D25K02
20	33.3	48	1	2	100	100000	200	TC1-D33K12
25	40	58	1	2	100	100000	200	TC1-D40K12
30	50	72	1	2	100	100000	200	TC1-D50K12
40	60	92	1	2	100	100000	200	TC1-D60K12
45	75	120	1	2	100	100000	200	TC1-D75K12
48	80	128	1	2	100	100000	200	TC1-D80K12
60	100	143	1	2	100	100000	200	TC1-D100K12

Dimensional Drawing

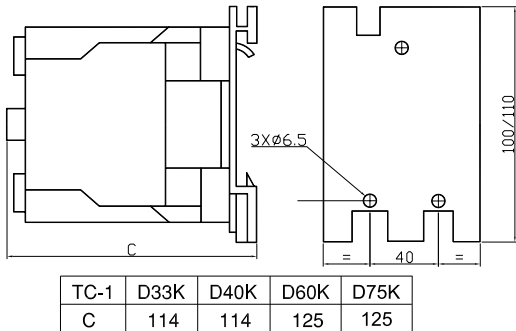
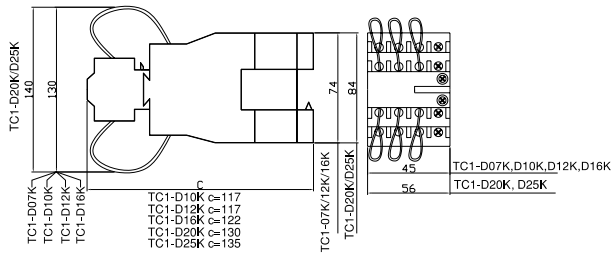
TC1-D02K, D05K



TC1-D33K, D40K, D60K, D75K

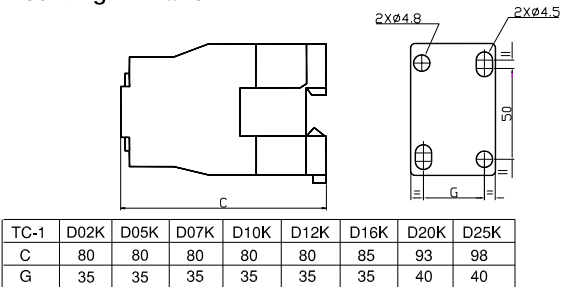


TC1-D07K, D10K, D16K, D20K, D25K



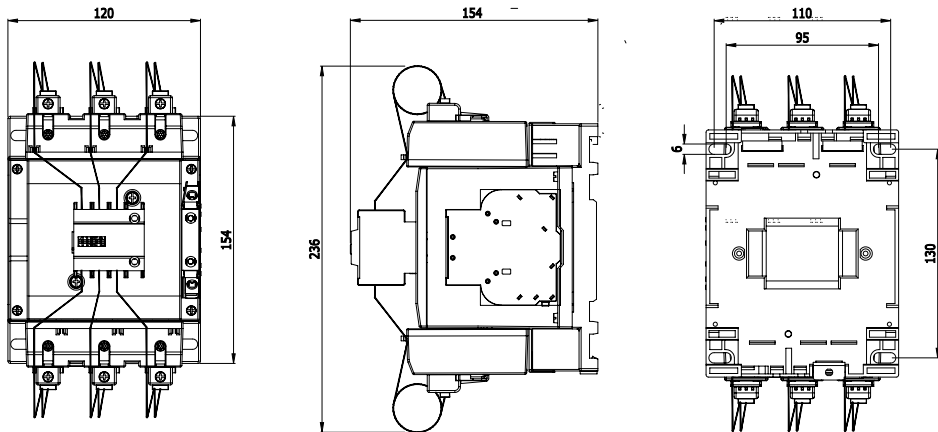
TC-1	D33K	D40K	D60K	D75K
C	114	114	125	125

Mounting in Panel



TC-1	D02K	D05K	D07K	D10K	D12K	D16K	D20K	D25K
C	80	80	80	80	80	85	93	98
G	35	35	35	35	35	35	40	40

TC1-D80K, D100K



ORDERING INFORMATION

Enterprise Code	kVAr Rating	Auxiliary Contact	Coil Reference
TC1-D	K	XX	
	02	10	1NO
	05	01	1NC
	07	11	1NO+1NC
	10	02	2NC
	12	11	1NO+2NC
	16		
	20		
	25		
	33		
	40		
	50		
	60		
	75		
	80		
	100		

Add ON Block Option

Contactor Type / rating	Mounting Details	Type	Auxiliary Contacts
2.5 kVAr onwards	Side Mounting	TA8DN11	1NO+1NC
		TA8DN20	2NO
TC1-D07K-TC1-D25K	Clip - on	35 mm DIN rail	
TC1-D33K-TC1D100K	Clip - on	75 mm DIN rail	

Suffix codes for all Contactors & Coils

For Contactor Type	Coil Reference	Volts	24	48	110	120	208	220	230	240	277	380	400	415	440	480	575	600
TC1D02K-TC1D16K,	TX1-D2	50Hz	B5	E5	F5	-	-	M5	P5	U5	-	Q5	V5	N5	R5	-	-	
TC1D25K	TX1-D4	60Hz	B6	E6	F6	G6	L6	M6		U6	W6	Q6			R6	T6	S6	X6
TC1D33K-TC1D75K	TX1-D6	50/60Hz	B7	E7	F7	G7	-	M7	P7	U7	-	Q7	V7	N7	R7	-	-	
TC1D80K-100K	TX1D8	50Hz	B5	E5	F5			M5	P5	U5		Q5		N5				



NOTE:

[illegible]

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Capacitor Duty
Contractor 01/02/2025

The illustrations and data are not binding. C&S reserve the right to modify the contents of this document based on technical development of the products or change in policy of C&S, without prior notice.

We touch your electricity everyday!