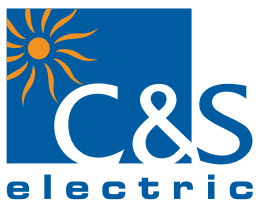


We touch your **electricity** everyday!



Capacitor Duty Contactor

Product Application

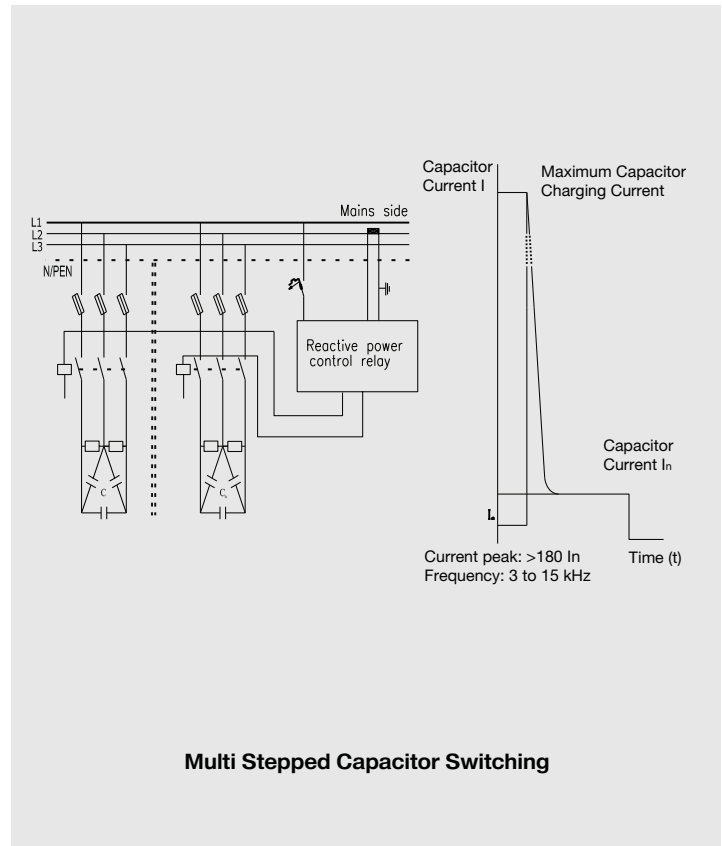
In Low Voltage installations, when a Capacitor is switched 'ON', it results in resonant circuit damped to a greater degree. In addition to the rated current, over current of high amplitude ($>180 I_n$) and high frequencies (3~15 KHz) occur during transit period (1 to 2 ms). The resultant high in-rush current peaks, caused due to capacitor switching, depends upon following factors:

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

The in-rush current of such high magnitudes is undesirable and it is likely to weld main poles of any standard contactor. Therefore, contactor for capacitor bank switching must be designed to withstand :

- Permanent current that can reach 1.5 time the nominal current of capacitor bank
- Short but high peak current on pole closing

Hence, 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, which 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.

Product Range

- Eight Ratings: 10kVAR ~ 60kVAR
3 P, 415VAC, 50/60 Hz
- Conforms to IEC 60947-4-1 and IS 13947-4-1 AC -6b utilization category

Features and Benefits

- Excellent damping of In-rush Current
- Reduced watt loss during 'ON' condition, saves energy
- Capacitor Bank Switching in parallel without de-rating
- Enhanced equipment life
- Low maintenance & down -time
- Power quality improvement
- Optimized solution cost



Specification

KVAR ratings at 50/60 Hz		Instantaneous Auxiliary Contacts		Maximum Operating Rate	Electrical life at rated load	Product Reference
$\theta \leq 55^\circ \text{C}$ (3)		NO	NC	Operations hour	Operations	
200V / 240V	400V / 440V					
5.5	10.0	1 0	1 2	240	200000	TC1-D10K11 ■ TC1-D10K02 ■
6.7	12.5	1 0	1 2	240	200000	TC1-D12K11 ■ TC1-D12K02 ■
8.5	16.7	1 0	1 2	240	200000	TC1-D16K11 ■ TC1-D16K02 ■
10.0	20.0	1 0	1 2	240	100000	TC1-D20K11 ■ TC1-D20K02 ■
15.0	25.0	1 0	1 2	240	100000	TC1-D25K11 ■ TC1-D25K02 ■
20.0	33.3	1	2	240	100000	TC1-D33K12 ■
25.0	40.0	1	2	100	100000	TC1-D40K12 ■
40.0	60.0	1	2	100	100000	TC1-D60K12 ■

Notes

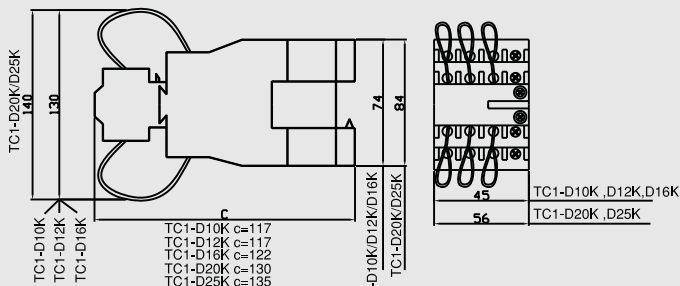
- (1) Additional Auxiliary Contact block (Side mounted) type TA8DN11 or TA8DN20 can be mounted, if required
- (2) Contactor Type TC1D12K - TC1D25K : Suitable type clip-on mounting into 35mm DIN rail
Contactor Type TC1D33K-TC1D60K : Suitable type clip-on mounting into 75mm DIN rail
- (3) Average temperature over a 24-hour period, in accordance with IEC 70 and 831
- (4) Standard Control Circuit Voltage / Frequency

AC Coil Voltage - Capacitor Duty Contactors

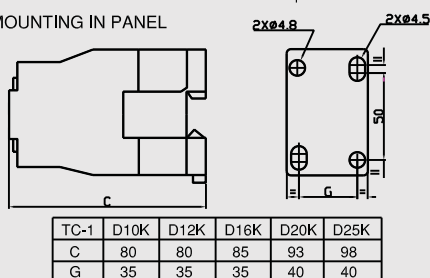
Contactor TC1-D**K	24V	110V	220V	240V	415V
50Hz	B5	F5	M5	U5	N5
50/60Hz	B7	F7	M7	U7	N7

Dimensional Drawing

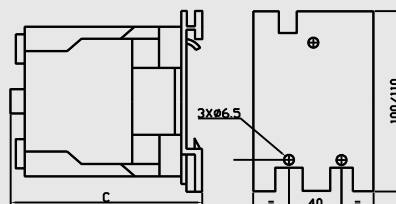
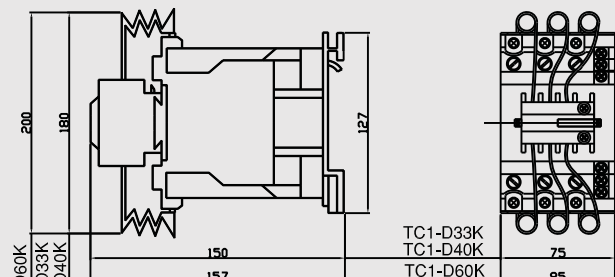
TC1-D10K, D12K, D16K, D20K, D25K



MOUNTING IN PANEL



TC1-D33K, D40K, D60K



TC-1	D33K	D40K	D60K
C	114	114	125

www.cselectric.co.in

Capacitor Duty Contactor

State of the art Manufacturing Facilities



Haridwar, Noida Ph-I
& Noida Ph-II Plant

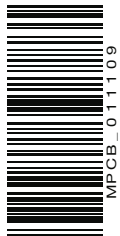


C&S Electric Ltd.

Corporate Office : 222, Okhla Industrial Estate, New Delhi - 110 020
Tel. : +91-11-3088 7520 - 29, **Fax:** +91-11-2684 7154, 2682 9063

International Business Division: **Tel. :** +91-11-4161 3503, 3088 7520-29, **Fax:** +91-11-2683 8291, 2684 7342
email : exports@cselectric.co.in

Central Marketing Office: **Tel. :** +91-11-3088 7520-29, **Fax:** +91-11-2684 8241, 2684 7342
email : cmo@cselectric.co.in, info@cselectric.co.in



We touch your electricity everyday!