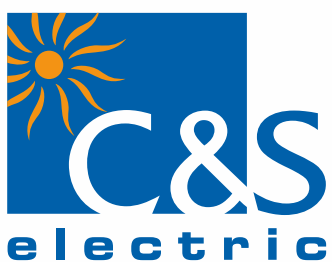


We touch your **electricity** everyday!



UL CE RoHS
Compliant



Capacitor Duty
Contactor

Capacitor Duty Contactor

Product Application

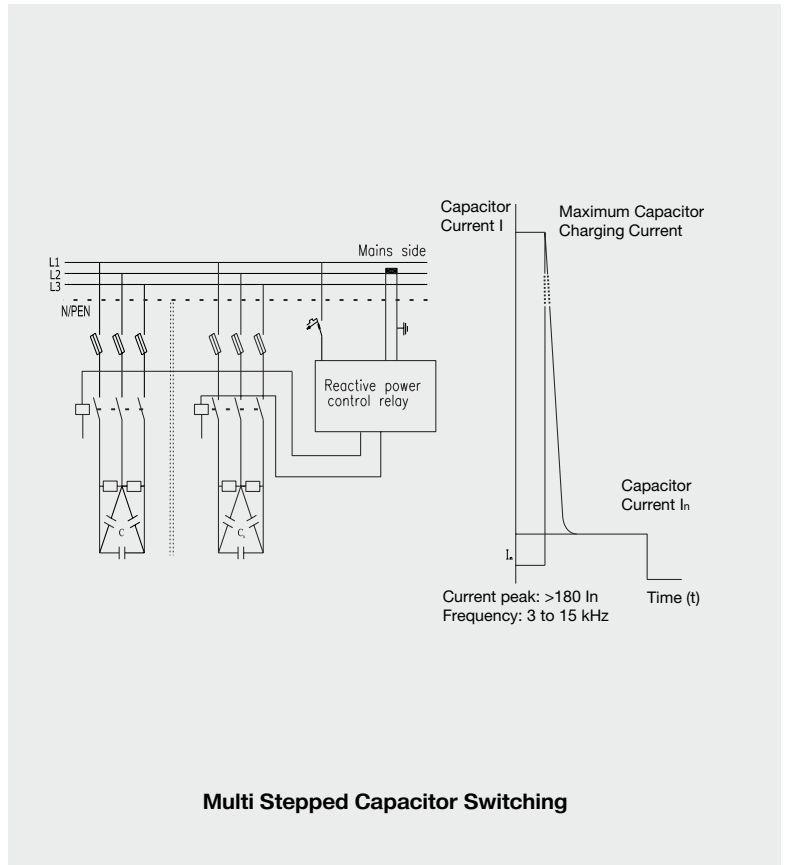
In Low Voltage installations, when a Capacitor is switched 'ON', it results in resonant circuit damped to a greater degree. In addition to the rated current, over current of high amplitude ($>180 I_n$) and high frequencies (3~15 KHz) occur during transit period (1 to 2 ms). The resultant high in-rush 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: 7kVAR ~ 100kVAR
3 P, 415V AC, 50/60 Hz
- Conforms to IEC 60947-4-1 and IS/IEC 60947-4-1 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



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

Specifications

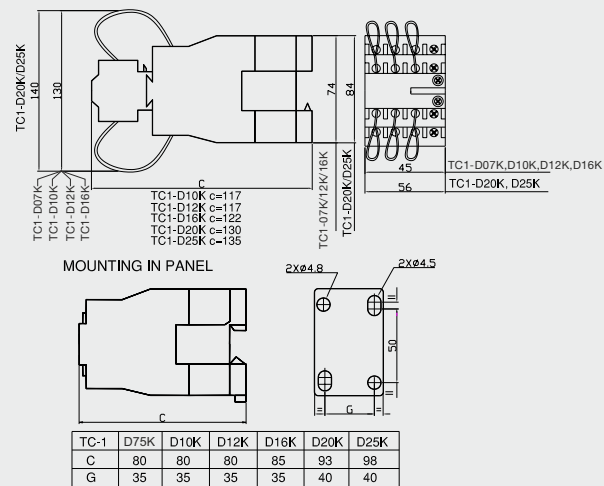
KVAR ratings at 50/60 Hz		Instantaneous Auxiliary Contacts		Maximum Operating Rate	Electrical life at rated load	Product Reference
$q \leq 55^\circ \text{C} (3)$						
200V / 240V	400V / 440V	NO	NC	Operations hour	Operations	
4	7.5	1 0	1 2	240	200000	TC1-D07K11 ■ TC1-D07K02 ■
5.5	10	1 0	1 2	240	200000	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	20	1 0	1 2	240	200000	TC1-D20K11 ■ TC1-D20K02 ■
15	25	1 0	1 2	240	200000	TC1-D25K11 ■ TC1-D25K02 ■
20	33.3	1	2	240	150000	TC1-D33K12 ■
25	40	1	2	100	100000	TC1-D40K12 ■
40	60	1	2	100	100000	TC1-D60K12 ■
40	75	1	2	100	100000	TC1-D75K12 ■
48	80	1	2	100	100000	TC1-D80K12 ■
60	100	1	2	100	100000	TC1-D100K12 ■

NOTES:

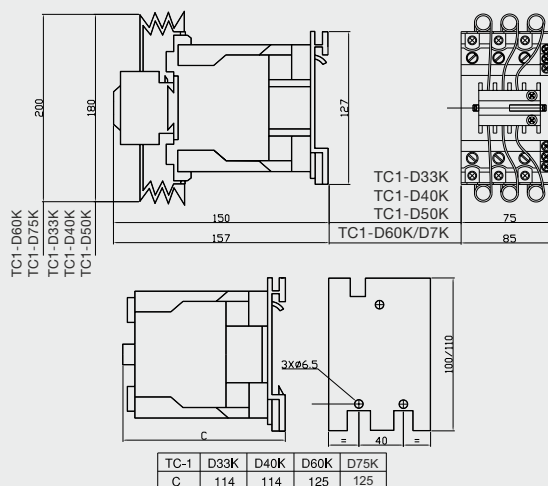
- (1) Additional Auxiliary Contact block (Side mounted) type TA8DN11 or TA8DN20 can be mounted, if required
- (2) Contactor Type TC1-D07K~TC1-D25K: Suitable type clip-on mounting into 35mm DIN rail
Contactor Type TC1-D33K~TC1-D100K: Suitable type clip-on mounting into 75mm DIN rail
- (3) Average temperature over a 24-hour period, in accordance with IEC 70 and 831
- (4) Standard Control Circuit Voltage / Frequency

Dimensional Drawing

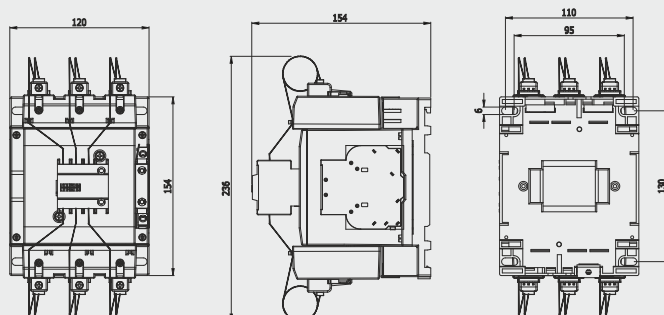
TC1-D07K, D10K, D16K, D20K, D25K



TC1-D33K, D40K, D60K, D75K



TC1-D80K, D100K



Marketing Offices spread all over India

CENTRAL MARKETING OFFICE

222, Okhla Industrial Estate, Phase - III, New Delhi - 110 020

Ph. : (+91 11) 3384 9000 - 09 • Fax : (+91 11) 26847342 • E-Mail : cmo@cselectric.co.in

CUSTOMER CARE

Toll Free Number: 1800 3010 2012

NORTHERN REGION

DELHI

Ph. : (+91 11) 3384 9000 - 09

Fax : (+91 11) 26847342

E-Mail : cmo@cselectric.co.in

CHANDIGARH

Ph. : (+91 172) 3021144

Fax : (+91 172) 2631059-3201144

E-Mail : chandigarh@cselectric.co.in

LUDHIANA

Ph. : (+91 161) 2541900, 2541800

Fax : (+91 161) 2541900, 2541800

E-Mail : ludhiana@cselectric.co.in

LUCKNOW

Ph. : (+91 522) 3917843, 4102044

E-Mail : lucknow@cselectric.co.in

KANPUR

Ph. : (+91 522) 3917843, 4102044

E-Mail : kanpur@cselectric.co.in

INDORE

Ph. : (+91 731) 4035761, 3918020

E-Mail : indore@cselectric.co.in

RAIPUR

Ph. : (+91 771) 4061404

E-Mail : raipur@cselectric.co.in

NAGPUR

Ph. : (+91 712) 2565215 , 2547295

Fax : (+91 712) 2528923

E-Mail : nagpur@cselectric.co.in

EASTERN REGION

KOLKATA

Ph. : (+91 33) 39212100-01

Fax : (+91 33) 22275849

E-Mail : kolkata@cselectric.co.in

GUWAHATI

Ph. : (+91 361) 2469950

E-Mail : guwahati@cselectric.co.in

RANCHI

Ph. : (+91 651) 2242202, 2242224

E-Mail : ranchi@cselectric.co.in

BHUBANESWAR

Ph. : (+91 674) 2580788, 9778070465

E-Mail : bhubaneswar@cselectric.co.in

WESTERN REGION

MUMBAI

Ph. : (+91 22) 24114727-28, 30484071-73

Fax : (+91 22) 24126631

E-Mail : mumbai@cselectric.co.in

AHMEDABAD

Ph. : (+91 79) 30653015

Fax : (+91 79) 30074519

E-Mail : ahmedabad@cselectric.co.in

BARODA

Ph. : (+91 265) 2339479, 2356293

Fax : (+91 265) 2338754

E-Mail : baroda@cselectric.co.in

PUNE

Ph. : (+91 20) 30283239 - 40

Fax : (+91 20) 30283239

E-Mail : pune@cselectric.co.in

SURAT

Ph. : (+91 261) 6544024-28

E-Mail : surat@cselectric.co.in

JAIPUR

Ph. : (+91 141) 4037651

Fax : (+91 141) 4033954

E-Mail : jaipur@cselectric.co.in

SOUTHERN REGION

CHENNAI

Ph. : (+91 44) 33534500-01

Fax : (+91 44) 39180514

E-Mail : chennai@cselectric.co.in

COIMBATORE

Ph. : (+91 422) 3048406 - 20

Fax : (+91 422) 3048412

E-Mail : coimbatore@cselectric.co.in

KOCHI

Ph. : (+91 484) 3071715 (10 LINES)

Fax : (+91 484) 3071716

E-Mail : cochin@cselectric.co.in

MADURAI

E-Mail : commercial.madurai@cselectric.co.in

BENGALURU

Ph. : (+91 80) 3065 9400

Fax : (+91 80) 25594939

E-Mail : bangalore@cselectric.co.in

SECUNDERABAD

Ph. : (+91 40) 48534080

Fax : (+91 40) 27812987

E-Mail : hyderabad@cselectric.co.in

VIJAYAWADA

Ph. : (+91 866) 2496265 / 67

E-Mail : vijayawada@cselectric.co.in

RESIDENT ENGINEERS

Agra | Allahabad | Aurangabad | Bareilly | Bhopal | Dehradun | Goa | Gorakhpur | Haridwar | Hubli | Jabalpur | Jammu | Kolhapur | Kollam | Mangalore | Mehsana | Nashik | Patna | Rajkot | Rourkela | Siliguri | Srinagar | Tirupathi | Trichey | Udaipur | Una | Vapi | Visakhapatnam

WAREHOUSES

NATIONAL WAREHOUSE

NOIDA - A-7 & 8, Sector-VIII, Noida -201 301, Distt. Gautam Budh Nagar, (UP) Ph.: (+91 120) 3914301-02 Fax: (+ 91 120) 3914303

REGIONAL WAREHOUSES

DELHI	Khasra No. 915 & 916, 2nd Floor, Near Rice Mill, Village Rithala, Delhi-85 Ph.: (+91 11) 27049211
LUCKNOW	3rd Floor, E-143, Phase-I, Transport Nagar, Kanpur Road, Lucknow - 17 Ph.: (+91 522) 4103460
INDORE	Liberty Agencies 53, Udyog Nagar, Near Musakhedi Square, Ring Road, Indore-452001 Ph.: (+91) 88780-62000 / 64000
KOLKATA	113, Chetla Road, New Alipur, Kolkata - 700 053, Ph.: (+91 33) 22275849 - 51
RANCHI	Plot No. 145/C, Mandir Marg-D, Road No. 4, Ashok Nagar, Distt. Ranchi, Jharkhand - 834002 Ph.: (91 651) 2242202, 2242224
BHUBANESWAR	Rasharaj Geetikunj, Plot No. 224/A, Sec-A, Zone-B, Mancheswar Industrial Estate, Bhubaneswar-751 010 Ph.: (+91 674) 2580788
MUMBAI	E-5, Parasnath Complex. Gala No.8, Village 'VAL' Dapode Road, Taluka Bhiwandi, District, Thane - 421302 Ph.: (+91 2522) 314830
AHMEDABAD	B-25-B/C Meldi Industrial Estate, Opp. West Coast Pharmaceutical, Nr. Gota Over Bridge, Gota, Ahmedabad - 382481 Ph.: (+91 79) 65453044
BENGALURU	No. 17, 1st Main Road, Sampangiram Nagar, Bengaluru - 560 027 Ph.: (+91 80) 41125467

