



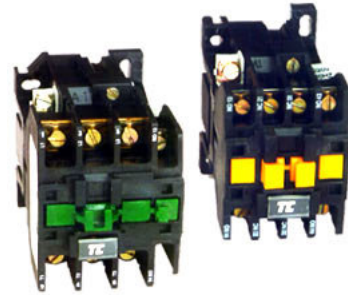
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# Contactors

## Introduction – Contactors

### Power Contactors

**D Range 9 – 80Amp**



**T Range 9 – 95Amp**



**F Range 115 – 780Amp**



### Capacitor Duty Contactor

**10KVAR – 60KVAR**





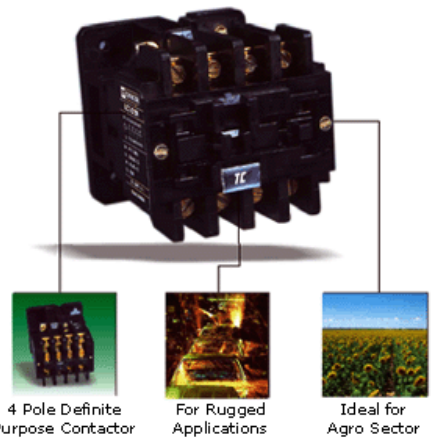
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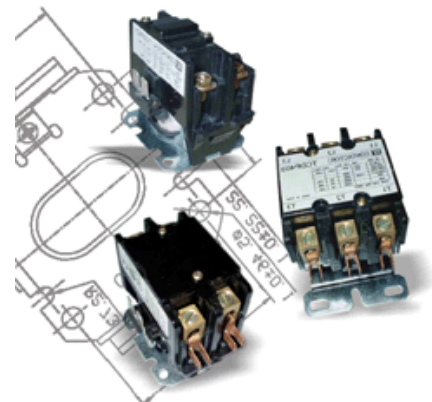
## Mini Contactors



## Agro Contactors



## Definite Purpose Contactors

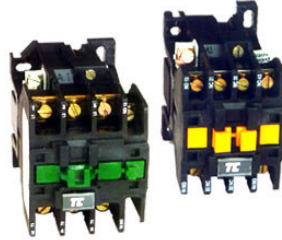




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# Contactors

## Power Contactors



### D – Range Contactors

#### Power Contactors

Contactors is available in rating 9A to 80A in 4 frame sizes providing selection of exact power in 10 ratings giving the flexibility of selection to suit several applications of end users & OEMs alike.

D-range contactors are very compact: 45mm frame size 4 ratings, 56mm frame size 2 ratings, 75mm frame size 3 ratings & 85mm frame size 1 rating.

They are of modular design with common add-on accessories such as auxiliary contact block, pneumatic timer block, mechanical latching block, mechanical inter - lock & coil suppresser. The add-on accessories can also be used with D-range control relays.

The modular design helps in design flexibility & helps saving inventory cost. The contactors are suitable for DIN Rail mounting with assist in instant installation, and/or modifications at site. All contactors carry international power & auxiliary contact configurations markings for easy identification besides facility of identification labels on top of the product.

D-Range contactors are UL listed, CSA certify & carry CE marking. Also the entire range has been tested at Central Power Research Institute (CPRI) conforming to IS 13947-4/1993

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### T – Range Contactors

T-Range product line is available in power rating 4kW to 45kW, 10 ratings in 6 frame sizes, providing freedom of selection, to meet exact power rating options to meet diverse application requirements of consultants, OEMs End users, and other customers across globe.

#### Range

Contactors comes in total 10 Ratings in 3 pole versions from 9A to 95A with DIN channel mounting /screw mounting facility. Also 4-Pole Power Contactors in AC 1 ratings of 25A , 40A, 60A & 80A available.

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The range includes control relays for AC or DC control circuits. It has choice of AC or DC control circuits in various control voltages including wide operating limits coils.

## Small Size

Compact in size: 45mm frame size 4 ratings, 56mm frame size 2 ratings, 75mm frame size 3 ratings & 85mm frame size 2 rating. The contactors rating Range product line is available in power rating 4kW to 45kW, 10 ratings in 6 frame sizes, providing freedom of selection, to meet exact power rating options to meet diverse application requirements of consultants, OEMs End users, and other customers across globe.

## Design Flexibility

Common snap-on accessories for design, selection & installation flexibility which can also be used with T-Range Control Relay.

- Front mounted contact block: 1, 2, 4 pole auxiliary contact
- Side mounted contact block : 2 pole auxiliary contact
- Front mounted pneumatic timer ON delay or OFF delay: up to 3 s; 30s; 180s
- Front mounted pneumatic star delta timer: up to 30s
- Front mounted mechanical latching block
- Mechanical interlock horizontally mounted
- Coil suppressors

## Helps in reduction of inventory cost, saves installation & maintains time

### Features & Benefits

Performance reliability

- Unique contact design, E-E magnet geometry reduces contact bounce, assuring increased mechanical & electrical endurance
- Suitable for operating temperature up to 55 Degree C without derating
- Suitable for operating voltage 690V & insulation voltage 1000V
- Tested for power rating at 600V AC for compliance to CSA-14

### Safety

IP 20 guarded power & control terminals ensures operator safety

User friendly / Maintenance ease

- Three terminal coils, provides ease of wiring, saves wiring time & cost.
- Screw type power terminals have captive, backed-out self-lifting pressure plates with  $\pm$  screws - reduced wiring time.
- Box lug pressure type terminals from 40A to 90A rating reduces termination time during installation or maintenance.
- Clearly marked power and auxiliary terminals as per IEC minimizes wiring errors.
- Blank identification tag for marking
- Common coils for same frame size Contactors.
- Easy front accessibility of coils reduces down time.

### Standards & Approvals

- Designed to meet or exceed IEC, UL, CSA, VDE, BS & BIS standards
- Compliance to IEC 947-4-1 & BIS 13947-4-1
- UL listed
- CSA Certified
- CE Marked
- ISO 9001:2000 certified company



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## F – Range Contactors

F-Range power contactors, suitable for demanding, rugged industrial applications, are available in power rating 59kW to 425kW, 10 ratings in 6 frame sizes, to meet diverse requirements of steel mills, cement mills, mines rock quarries, furnace, crane and Hoist etc. where sturdy durable contactor is needed.

### Range

F-range contactors comes in total 10 Ratings in 3 pole versions from 115A to 780A & also 4-Pole Power Contactors in AC 1 ratings of 700A, 1000A & 1600A. It has choice of AC or DC control circuits in various control voltages.

It has AC coils for Hoisting application in the rating 400A, 500A & 630A.

### Design Flexibility

Common snap-on accessories for design, selection & installation flexibility which can also be used with F-Range Contactors.

- Front mounted contact block: 1, 2, 4 pole auxiliary contact
- Front mounted pneumatic timer ON delay or OFF delay: up to 3 s; 30s; 180s
- Front mounted pneumatic star delta timer: up to 30s
- Mechanical interlock vertical or horizontally mounted
- Protective shrouds available on request.

### Features & Benefits

#### Performance reliability

- Suitable for operating temperature up to 55 Degree C without derating
- Suitable for operating voltage 1000V

#### User friendly / Maintenance ease

Clearly marked power and auxiliary terminals as per IEC minimizes wiring errors

- Blank identification tag for marking.
- Common coils for same frame size Contactors, saves inventory cost.
- AC/ DC Coils suitable for same magnetic system.
- Easy Coil replacement from side without disturbing power terminals.
- Unique contact wear indicator for efficient maintenance.



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# Contactors



## Capacitor Duty Contactors

Capacitor Duty Contactors are specially design to meet capacitor switching applications. They are fitted with contact block of 3 early make auxiliary contacts in series with quick discharge damping resistor to limit pick current to the value within contactor making capacity such that normal rated capacitor current is carried by main contacts which, after closing, effectively by-pass the damping resistors. These contactors conform to IEC 947-4-1 & IS 13947-4-1.

### Range

Capacitor Duty Contactors, 3 Pole, are available in 8 ratings to meet exact applications need in ratings 10 kVAR; 12.5 kVAR; 16.7 kVAR; 20 kVAR; 25 kVAR; 30.3 kVAR; 40 kVAR; 60 kVAR., suitable for clip-on or base mounting.

It has provision of 1 NO + 1NC or 2NC auxiliary contacts & extra auxiliary contacts are feasible by using side snap-on blocks. The contactors are suitable for operating temperature of 50 degree C without de-rating.

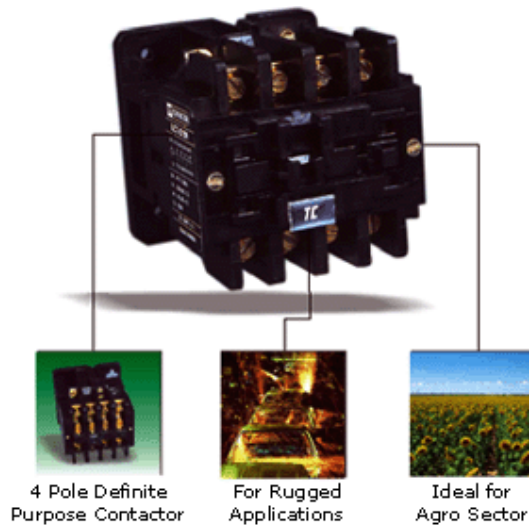
### Benefits

- Saves cost of expensive replacements
- Saves energy; reduced watt loss during "ON" conditions
- Operator safety through IP 20 shrouds on power & control terminals
- Higher safety in operations
- Switching of capacitor bank in parallel without de-rating
- Less maintenance & down timing.
- Higher electrical life



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# Contactors



## Agro Contactors

Agro 4 Pole contactors, AC1-D range has been especially designed for the rugged application requirements of agro sector, where supply voltage wide fluctuations needs reliable & trouble free, cost effective operations.

It is available in rating 20A & 25A, AC3 duty at 415V AC in same frame size, conforming to IS 13947-4-1.

Agro 4 pole contactors are suitable for switching & controlling squirrel cage motors, mono block pumps, submersible pumps & also other AC loads such as heating loads, Lighting loads etc.

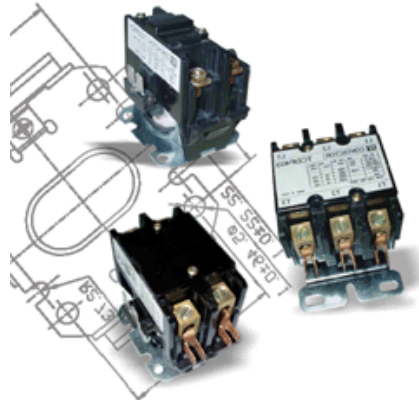
### Benefits

- Designed to suit Indian or similar tropical conditions
- Magnet E-E geometry with dampers for high mechanical life
- Specially designed low contact bounce assures high electrical life
- Fixed & moving contacts, filed replaceable, by removing top cover
- Magnet coil accessible from front by removing top housing assembly



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## Definite Purpose Contactors

TC Definite Purpose Contactors are suitable for commercial applications including air conditioning, refrigeration, resistive heating, lighting and many other installations where a low cost, high performance contactor is needed. These devices offer flexibility and are designed to meet or exceed electrical and mechanical requirements as defined by Definite Purpose Contactors standards of USA/Canada.

### Range

The TCDP Definite Purpose Contactors product line is available in 1, 2, 3 pole contactors rated to 600V AC. The 1 Pole contactor model are rated at 25, 30 & 40 FLA. The 2 Pole contactors have rating 20, 30, 40 FLA. Where as 3 Pole contactors range up to 40 FLA.

### Flexibility and Convenience

TCDP contactors series are compact in size and offer three convenient methods of wire connection: quick connect terminals, screws or box lugs. These models are supplied as standard with combination quick connect terminals and screws that accept hex, slotted or Phillips screwdrivers.

### Standards & Approvals

- Designed to meet or exceed UL, CSA standards
- Compliance to UL 508 & CSA 14
- UL listed, CSA certified & CE marked
- ISO 9001:2000 certified company