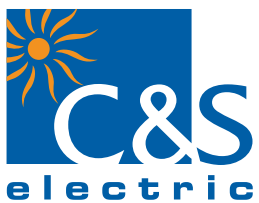


We touch your **electricity** everyday!

Type TC1DX



Industrial Motor Starter

# Industrial Motor Starter Type TC1DX

Industrial Motor Starter Type TC1DX incorporates robust construction 4 Pole contactor, thermal overload relay assure protection against operational overload, single phasing protection, unbalance voltages, NO/NC potential free contacts, flag indicator for relay tripping, temperature compensated (-) 40°C to (+) 60°C, trip class 10, conforming to IS13947-4-1. Motor Starter Type TC1DX are available in two variants

- Motor Starter Type TC1DX-P incorporates overload relay (LR1DM) with built-in single phase protection having Manual re-set facility
- Motor Starter Type TC1DX-A incorporates overload relay (TR2) with built-in single phase protection having Auto/Manual re-set facility

## DOL Starter Type TC1DX-P with 4 Pole Contactor in S.S. enclosure

Std. Power Rating for 3 Phase Motor at 415V		Reference Code	Relay LR1DM range (Amps.)
HP	KW		
1.50	1.10	BE1-DXP204■307	1.6~2.5
2.00	1.50	BE1-DXP204■308	2.5~4.0
3.00	2.20	BE1-DXP204■310	4.0 ~6.0
5.00	3.70	BE1-DXP204■312	5.5~8.0
5.50	4.00	BE1-DXP204■314	7.0~10
7.50	5.50	BE1-DXP204■316	10~13
12.00	9.00	BE1-DXP204■321	13~18
12.00	9.00	BE1-DXP254■321H	13~18
15.00	11.00	BE1-DXP254■322	18~25



## Automatic Star Delta Starter TC1DX-P with 4 Pole contactor & Electronic Star Delta Timer in S.S. enclosure

7.5	5.5	BE3-DXP204■312	5.5~8.0
12.0	9.0	BE3-DXP204■314	7.0~10
15.0	11.0	BE3-DXP204■316	10~13
20.0	15.0	BE3-DXP204■321	13~18
20.0	15.0	BE3-DXP254■321H	13~18
25.0	18.0	BE3-DXP254■322	18~25



## DOL Starter Type TC1DX-A with 4 Pole Contactor in S.S. enclosure

Std. Power Rating for 3 Phase Motor at 415V		Reference Code	Relay TR2D range (Amps.)
HP	KW		
7.50	5.50	BE1-DXA204■316	9.0~13
12.0	9.0	BE1-DXA204■321	12~18
15.0	11.0	BE1-DXA254■322	17~25



## Automatic Star Delta Starter TC1DX-A with 4 Pole contactor & Electronic Star Delta Timer in S.S. enclosure

7.5	5.5	BE3-DXA204■312	5.5~8.0
12.0	9.0	BE3-DXA204■314	7.0~10
15.0	11.0	BE3-DXA204■316	9.0~13
20.0	15.0	BE3-DXA204■321	12~18
20.0	15.0	BE3-DXA254■321	12~18
25.0	18.0	BE3-DXA254■322	17~25



## AC Coil Voltage Codes (Standard) for Industrial Starter

Industrial Starter	Voltage		
	220#	380#	415#
BE1DX (P or A)	220#	380#	415#
BE3DX (P or A)	-	380#	415#
	M	Q	N

#Wide band Coils

■Please specify Coil Voltage.

# Industrial Motor Starter Type TC1DX

## Contactor 4 Pole Type TC1DX

### Robust construction: Superior Performance

- Thick inter-phase moulding walls with liberal clearance & creepage minimises phase to phase shorting risk, assures safety & durability
- Encapsulated H class magnet coil withstand wide voltage range
- Provision of pole spring locator for ease of moving contact positioning in contact carrier

### Long Life

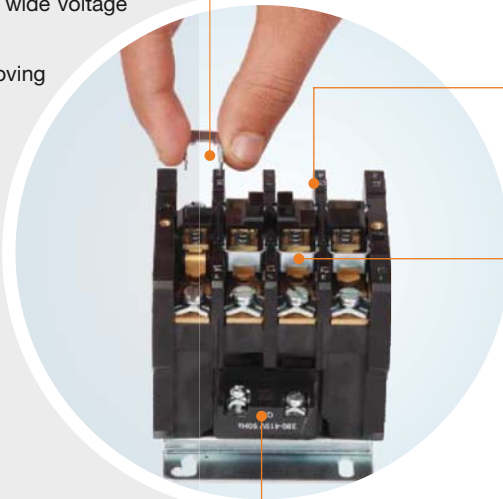
- Unique steel Blow-Out design ensures quick arc quenching for long electrical endurance
- Fixed/Moving contacts with large dia silver alloy tips ensures operational longevity

### Easy Maintenance

- Field replaceable Fixed / Moving contacts
- Easy coil replacement, when required

### User Friendly

- Front & side mounted Add-On block options
- Provision of Mechanical Interlock facility
- Large terminal capacity



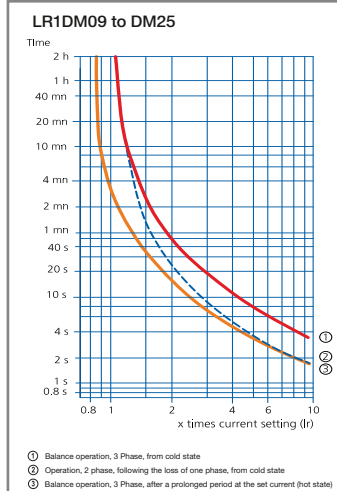
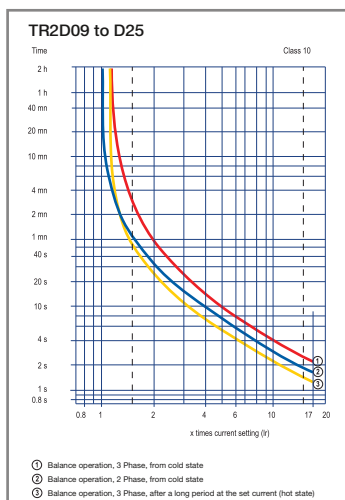
- Unique steel blow out
- Thick inter-phase moulding walls
- Large fixed & moving contact tips
- Encapsulated H class magnet coil

## Easy Maintenance

- Heavy Duty 4 Pole contactor affords extremely easy maintenance
- Moving contact can be inspected / replaced, if required, easily without any tool
- Fixed contact are also replaceable with ease when required
- Easy coil replacement
- Contactor maintenance requires low down time

## Thermal Overload relay Tripping Curve

- Built-in single phase protection
- Yellow flag for trip indication
- Potential free NO/NC contact
- Auto/Manual re-set
- IP20 finger proof

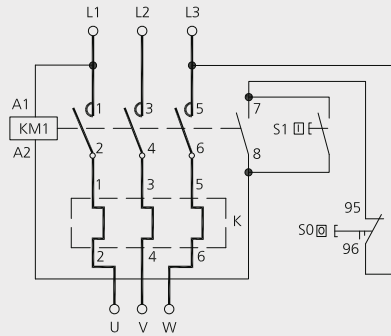


- Built-in single phase protection
- Yellow flag for trip indication
- Potential free NO/NC contact
- Manual re-set



## DOL Type BE1-DXP

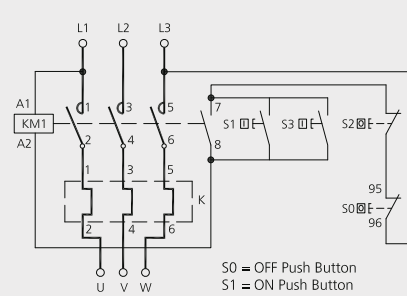
Fig.1 For DOL Motor Starter



S0 = OFF Push Button  
 S1 = ON Push Button  
 KM1 = Contactor  
 K = Bimetal Relay

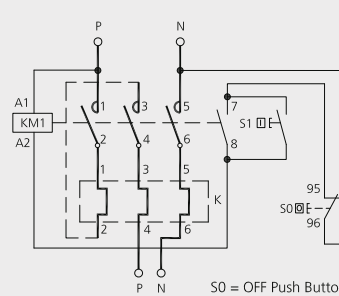
- Diagram shows connections made for contactor coil rated 380V & 415V.
- For coils rated 220V 50Hz, disconnect the wire b/w 5 & 96 and connect the neutral of the supply system to the terminal 96 of the relay.

Fig.2 For Remote Control



S0 = OFF Push Button  
 S1 = ON Push Button  
 S2 = Remote OFF Push Button  
 S3 = Remote ON Push Button  
 KM1 = Contactor  
 K = Bimetal Relay

Fig.3 For Single Phase



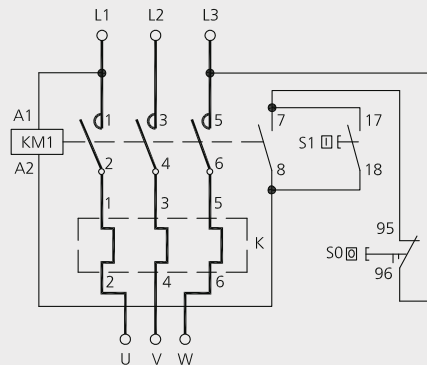
S0 = OFF Push Button  
 S1 = ON Push Button  
 KM1 = Contactor  
 K = Bimetal Relay

**Note:**  
 Connect 3(KM1) to 2(K) by cable of suitable size 2 (max 10 mm<sup>2</sup>)

For single phase operation, coil voltage should be 220V AC only.  
 coil code: M

## DOL Type BE1-DXA

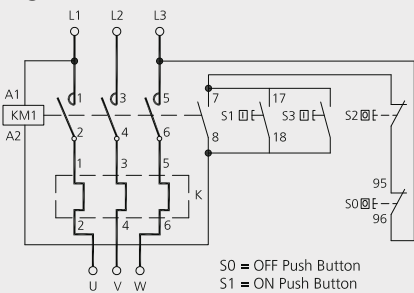
Fig.1 For DOL Motor Starter



S0 = OFF Push Button  
 S1 = ON Push Button  
 KM1 = Contactor  
 K = Bimetal Relay

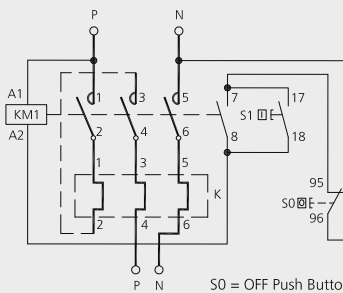
- Diagram shows connections made for contactor coil rated 380V & 415V.
- For coils rated 220V 50Hz, disconnect the wire b/w 5 & 96 and connect the neutral of the supply system to the terminal 96 of the relay.

Fig.2 For Remote Control



S0 = OFF Push Button  
 S1 = ON Push Button  
 S2 = Remote OFF Push Button  
 S3 = Remote ON Push Button  
 KM1 = Contactor  
 K = Bimetal Relay

Fig.3 For Single Phase

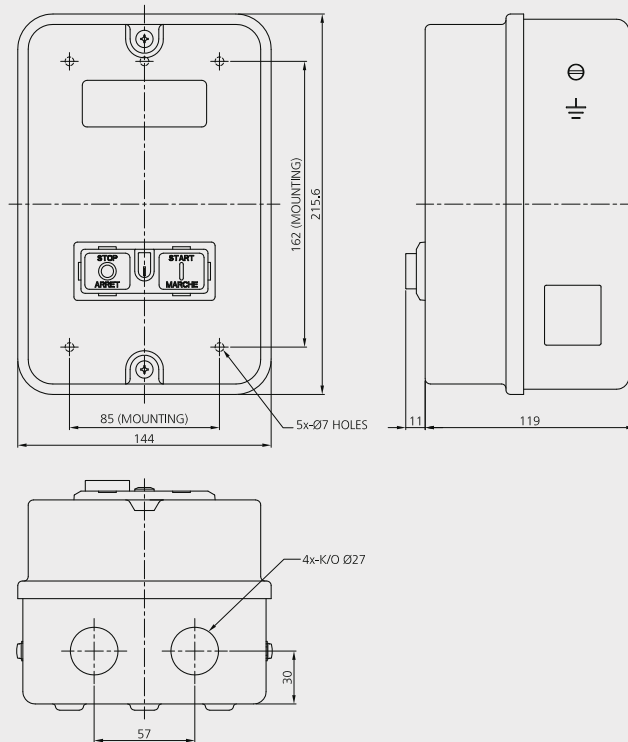


S0 = OFF Push Button  
 S1 = ON Push Button  
 KM1 = Contactor  
 K = Bimetal Relay

**Note:**  
 Connect 3(KM1) to 2(K) by cable of suitable size 2 (max 10 mm<sup>2</sup>)

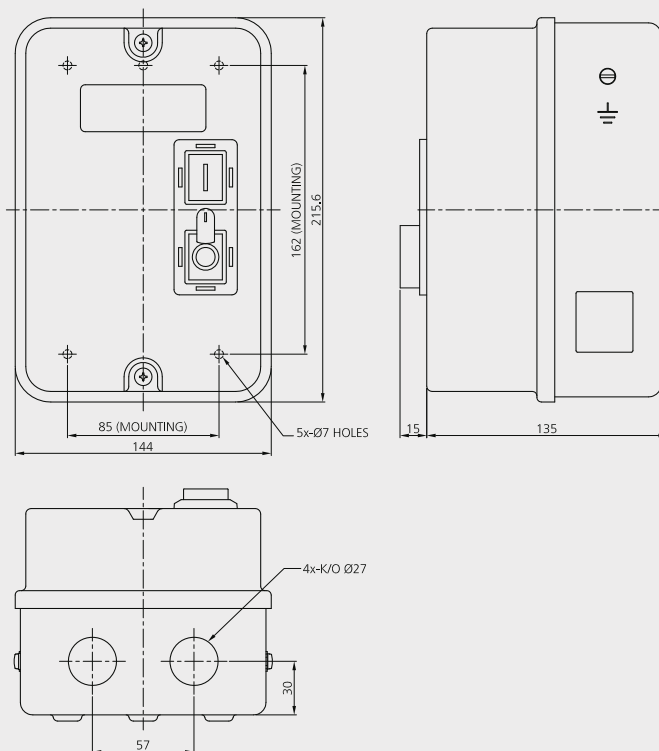
For single phase operation, coil voltage should be 220V AC only.  
 coil code: M

## DOL Type BE1-DXP



Mounting screw size: M5  
All dimensions are in mm.

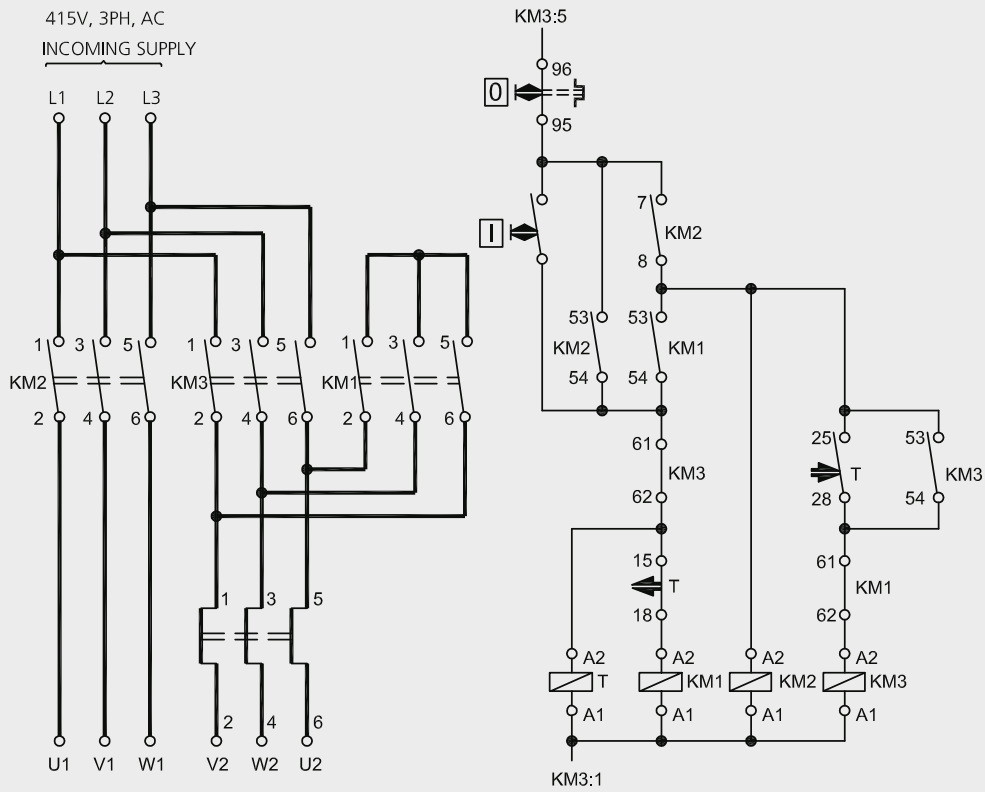
## DOL Type BE1-DXA



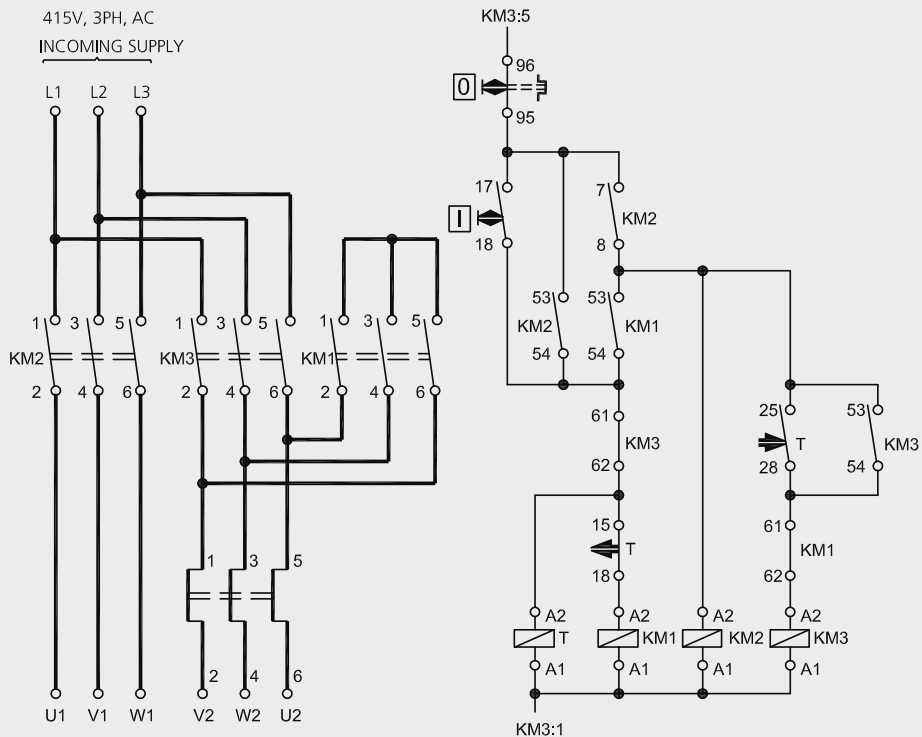
Mounting screw size: M5  
All dimensions are in mm.

# Circuit diagram

## Automatic Star Delta Type BE3-DXP

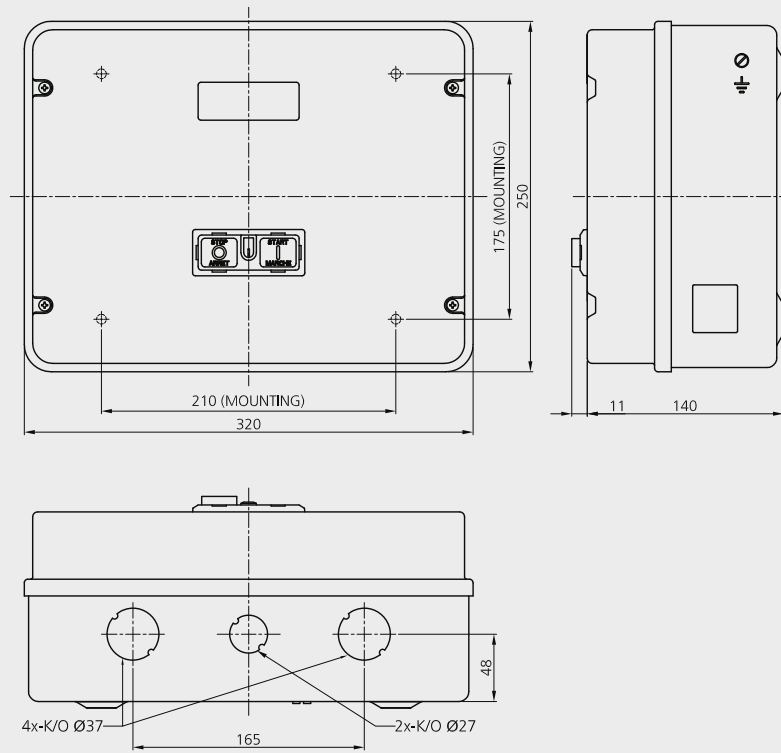


## Automatic Star Delta Type BE3-DXA



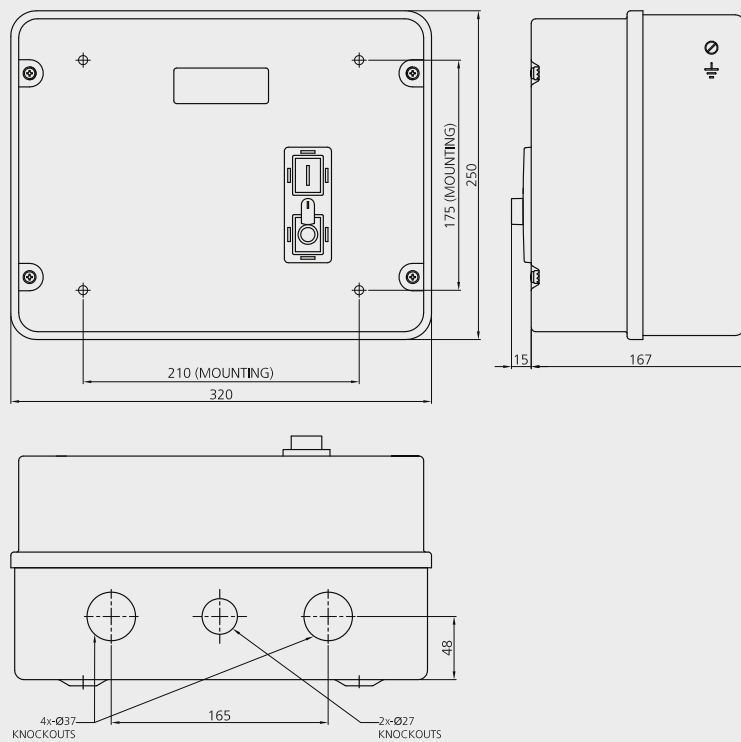
# Dimension

## Automatic Star Delta Type BE3-DXP



Mounting screw size: M5  
All dimensions are in mm.

## Automatic Star Delta Type BE3-DXA



Mounting screw size: M5  
All dimensions are in mm.

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## Industrial Motor Starter - Type TC1DX

### State of the art Manufacturing Facilities



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& Noida Ph-II Plant



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