

THYRISTOR SWITCH



MODEL – ZC THYRISTOR SWITCH

THYRISTOR SWITCHES

The thyristor switch has a very compact design, convenient connection, integral overheating protection (thermal switch) and LED indications for the switching signal (external ON), thyristor on and power supply. Thyristor switches are resistant to mechanical wear, operate without noise and capable of practically transient free switching without inrush currents, normally associated with the electromechanical contactor switching. An unlimited number of switching are possible, without applying stress on the capacitors. The thyristor switch works according to 2 phase switching principle, i.e. only 2 phases will be switched and 3rd phase will be directly taken without switching circuit.

Features:

- **Four LED indications** : THY Switch 1 & 2 ON (current flow condition), Power ON, Ext.Signal ON
- **Cooling Fan** : ON Automatically when switch temp. rises above 60 deg.C
 - Natural cooling upto 20 KVAR rating
 - Forced cooling for 25 KVAR & above rating
- **Over temperature trip**: When temperature rises above 90deg.C (could be due to fan failure)

General Technical Data:

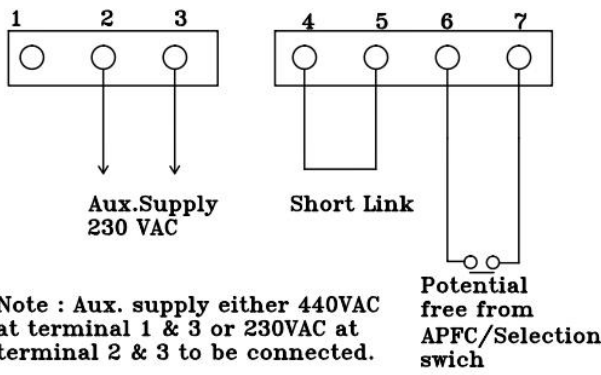
Design	: Two Controlled Phases (Semi Controlled)
Stage KVAR	: 5, 10, 15, 20, 25, 50, 75, 100 KVAR.
System Operating Voltage range	: 380V to 440V available.
Control Supply	: 240V, 415V +/-10%, 50Hz, < 10VA
External trigger signal	: 10 to 24 VDC, Potential free contact (At a time only one Ext. signal is applicable)
Recovery Time	: Typically 1 period
Max. Altitude	: 1000m a.s.l.
Ambient Operating Temperature	: -10 °C to +50 °C
Relative Humidity	: 10 to 95%
Degree of Protection	: IP 10
Switch Size	: 162 mm (L) X 215 mm (W) X 182 mm (H) (For 5, 10 & 15 KVAR) 200 mm (L) X 215 mm (W) X 260 mm (H) (For 20, 25 & 50 KVAR) 288 mm (L) X 225 mm (W) X 260 mm (H) (For 75 & 100 KVAR)

ADVANTAGES :

- Resistant to mechanical wear
- Operates without noise
- Capable of transient free switching without inrush currents normally associated with electromechanical contactor switching
- An unlimited number of switching is possible, without applying significant stress to the capacitors.
- Capacitor life is enhanced to minimum three times of normal life due to smooth connection & disconnection.

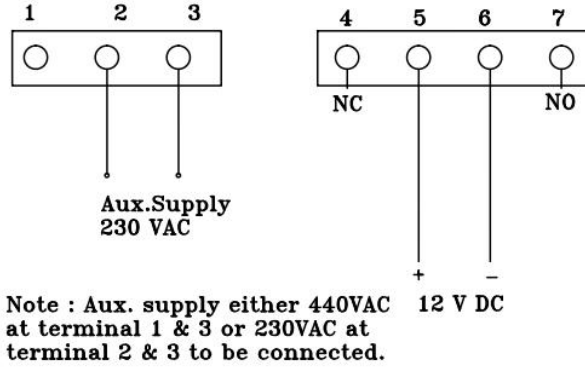
WIRING DIAGRAM

OPTION-1 POTENTIAL FREE SWITCHING



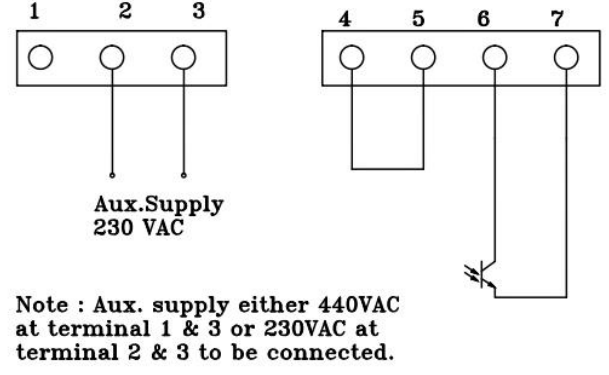
NOTE : For more than one switch terminal No.7 will be common, Terminal No. 6 will be NO Contact of individual stage from APFC Relay.

OPTION-2 DC POTENTIAL SWITCHING



NOTE : For more than one switch '+ve will be common. Only '-ve will switch through APFC Relay OR selection switch.

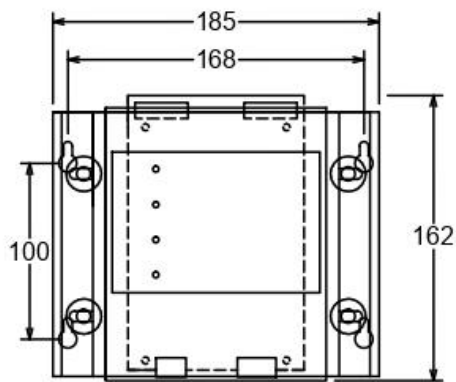
OPTION-3 TRANSISTOR SWITCHING



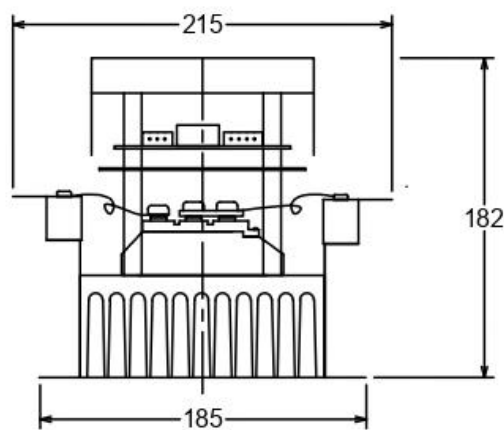
NOTE : For more than one switch terminal No. 7 will be common, Terminal No. 6 will be NO Contact of individual stage from APFC Relay.

DIMENSIONAL DRAWING

FOR 5,10 & 15 KVAR

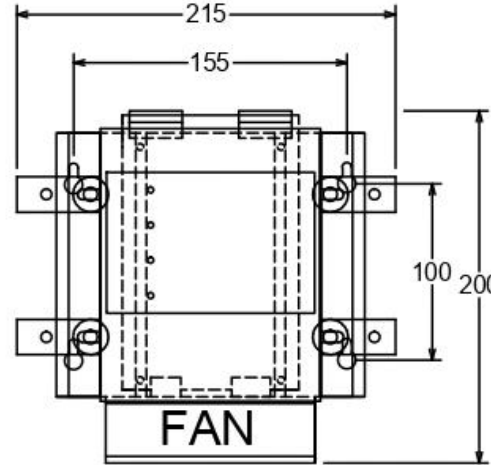


TOP VIEW

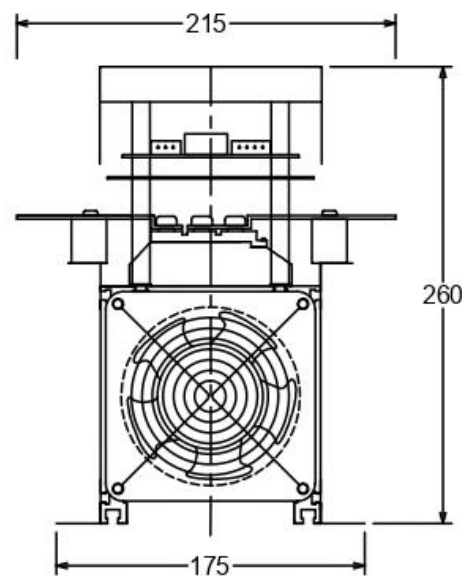


FRONT VIEW

FOR 20,25 & 50 KVAR

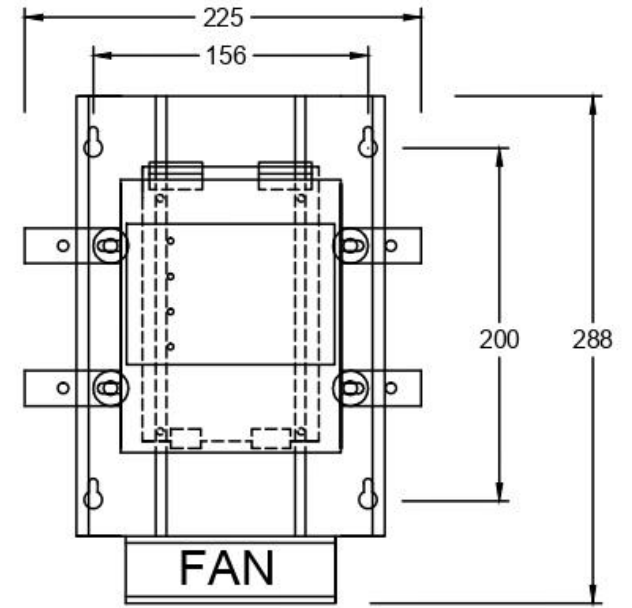


TOP VIEW

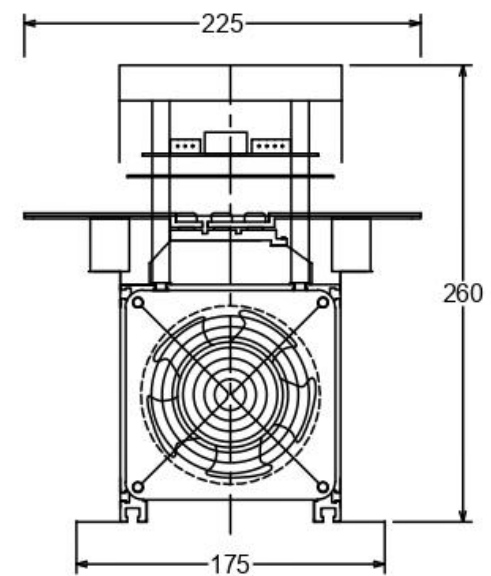


FRONT VIEW

FOR 75 & 100 KVAR



TOP VIEW



FRONT VIEW