

- F. The thermal overload relay shall have MAN/AUTO field convertible Reset button located on top of the relay for resetting of the relay after trip. Additionally a facility shall be provided on the door of starter compartment to reset the relay.
- G. The thermal overload relay shall have two characteristics, the one when the relay bi-metals are in cold state that will break the contacts of the relay within 8-10 seconds and the other when in hot state the contacts breaking shall be reduced to approximately one third of the tripping time as indicated for the cold characteristics. The tripping time may be allowed to vary depending upon the starting of the motor such as normal/heavy-duty.
- H. The thermal overload relay shall have been type tested and ASTA certified to achieve Type 2 co-ordination in accordance with BS EN 60947.

#### **1.3.16.5 Thermistor Relay**

- A. All motors where provided by the manufacturer as per requirements of motor specifications, shall be protected against excessive temperature, poor cooling, high ambient temperature, high starting frequency etc. by providing thermistors.
- B. Thermistors shall be of PTC (Positive Temperature Coefficient) type made of platinum wire Pt100 having resistance of 100 ohms at 0 degree C. These shall be embedded in the stator winding/slot and the leads of the elements shall be brought out to a separate terminal block located within the junction box of the motor.
- C. Thermistors shall have a tamper proof pre-set point and fast response time.
- D. Thermistors shall be designed to include the following features:-
  - a. Tamperproof
  - b. Rapid responding
  - c. UL/CSA recognized component
  - d. Eliminates nuisance trips
  - e. Field-proven Klaxon design
  - f. Requiring no field adjustment
  - g. Allows full use of motor rating
  - h. Directly senses winding over-heating
- E. Thermistors shall protect the motor against the following conditions:-