

and be insulated throughout to Class F of BS 2757 or equivalent with a temperature rise limit of Class B. This provision shall be in addition to any adjustments necessary for ambient temperatures at site of 55°C

- B. Motors operating voltage and connection type shall be clearly stated on the motor nameplate.
- C. Motor winding connection in motor terminal box shall be as per starting method, detailed in this specification.
- D. For high voltage motors, the stator windings shall use a modern synthetic resin insulation system based on mica glass tape continuously wound on the coils to give a void-free homogeneous structure. The end windings shall be securely braced to prevent harmful movement arising from electro-magnetic and mechanical forces. The rotor bars shall be securely keyed into the rotor. The rotor shall be shrunk and keyed onto the shaft.

1.3.9.4 Thermal Protection

- A. Class II thermal protection as defined in BS 4999 Part 111 or equivalent shall be provided on motors rated at 11kW and above and on all motors used with variable frequency/variable speed drives. A minimum of 3 nos. PTC thermistors shall be incorporated in each motor.
- B. Refer to motor starters and MCC in this specification for the type of motor protection.
- C. On motors rated at 55kW and above, two sets of thermistors shall be provided, one for alarm and one for trip functions. Additional continuous temperature monitoring shall be provided for motors rated 100kW for submersible pumps and for motors above 250 kW.
- D. On submersible pump motors thermostats and/or thermistors shall be included, but preferably thermistors., as appropriate to the design. Where thermostats or thermistors are used in explosion proof designs, the devices must be of the same type used to obtain the potentially explosive hazardous area motor certification.

1.3.9.5 Anti-Condensation Heaters

- A. All three phase motors, (except for submersible motors, or single phase motors up to IHP), shall be fitted with anti-condensation heaters of an appropriate size to maintain the temperature of the windings 5°C above ambient.