Q. Care shall be taken to ensure that relay contacts and associated wiring are suitably fused protected.

R. All type of relays shall have a means of visual indication e.g. light emitting diode (LED) or neon bulb mounted within their clear covers connected directly across the relay coil to indicate when the relay is energized. These indicators shall be easily seen when the relay compartment door is opened.

S. A permanent means of identification shall be affixed to both relay and base in line with the circuit diagram reference.

T. Where remote supply voltages are used, a warning label engraved in English and Arabic shall be fitted, clearly identifying the source of supply.

1.3.16.2 Electronic Motor Protection Relay

A. The Motor Protection shall be provided by an intelligent electronic device that is user friendly and user configurable, capable of controlling the motor manually or automatic.

B. EMPR shall be CE marked and confirm to BSEN 60947-1

C. EMPR with LCD display shall be provided in the MCC for each pump motor starter regardless of the rating of the pump (above 3.73 kW).

D. Pump drives up to 3.73 kW inclusive may be provided with ambient compensated bi-metal type thermal overload relay, phase voltage relay and earth leakage.

E. EMPR shall have built – in RS485 communication port utilizing Modbus RTU protocol for serial communication with other devices on the network

F. EMPR shall be supplied with software, user manual and interconnecting cables

G. EMPR shall be provided with user friendly software based communication program allowing easy access to all features with pull down menus

H. The protection features shall include the following as minimum:

   a. Over load protection

   b. Over current protection

   c. Over voltage protection

   d. Under voltage protection

   e. Under current protection