ENGINEER'S SPECIFICATION

EPG Series L825 PumpMaster™ Controller

1Ø CONTROL PANEL

Furnish one EPG Companies Inc., UL listed 508A/698A, Series L825 controller to operate pump motor and auxiliary equipment in manual or automatic mode. The control panel enclosure shall be NEMA type _____.

The enclosure shall be equipped with a window in the outer door, an inner door, a stainless steel drip shield, and a tamper resistant latch. The NEMA 4 (standard) enclosure is finished with polyester urethane paint. The NEMA 4X (optional) enclosure can be either stainless steel or non-metallic.

The control system will operate from a _____ Volt, 60 Hertz, single phase power supply. Pump control components will be sized to operate pump motor of specified horsepower.

The control panel shall include the following as standard features:

* Main Disconnect Switch: The main disconnect switch shall be _____ Amp rated and will prevent opening of control panel while power is on, and includes _____ Volt, _____ Amp dual element fuses.
* "Hand-Off-Auto" Selector Switch: Allows manual or automatic operation. The selector switch shall be a heavy duty, oil tight, NEMA 4 rated switch mounted on the inner door. The hand position shall be momentary with a spring return.
* Motor Contactor: The motor contactor shall be sized to the pump motor horsepower.
* Motor Start Winding Control with Start Capacitor and Start Winding Relay: Capacitor is used to start motor. Relay is used to remove start winding from circuit when motor reaches operating speed.
* Control Transformer: Transformer with fused primary and secondary shall isolate control circuit from power circuit and provide easier and safer field wiring of accessories. It shall lower incoming voltage to 120 Volts.
* Run Light: Indicates energization of motor circuit. It shall be heavy duty, oil tight, NEMA 4 rated and shall have an LED lamp with 100,000 hour life. The light shall be mounted on the inner door and will be green in color.
* Load Monitor: Shall detect unloaded condition when the pump runs dry and will shut off pump. This will protect the pump and motor from damage.
* Lightning Arrestor: Shall be grounded, metal-to-metal, to water strata.
* Terminal Strip: Labeled and numbered terminal strip provides easy connection of external components.
* Corrosion Inhibitor Emitter: Inclusion of an industrial corrosion inhibitor emitter shall protect internal components of control panel from corrosion for up to one year and shall be replaceable.
* Options are available to meet specific needs.

SYSTEM LOGIC AND FUNCTION

The controller is designed to control a submersible pump using a load monitor. During each run cycle the pump draws liquid from the sump down to the pump intake. The load monitor detects the unloaded condition and stops the pump. It allows the pump to run for a few seconds while it checks the load. If the pump is running within the preset range, it completes the next cycle. If not, it will go through another off delay period.