

# Firetrol Jockey Pump Controller

## FTA566E – Wye Delta Open Transition Starting Specifications

### 1.0 Jockey Pump Controller

The auxiliary jockey pump controller, if required and specified on the plans and specifications, shall be factory assembled, wired, and tested and specifically designed for this type of service. This controller shall be of the same manufacturer as the main fire pump controller.

### 1.1 Standards, Listings & Approvals

The controller shall conform to all the requirements of the latest editions of:

- NFPA 70, *National Electrical Code*.

The controller shall be listed by:

- Underwriters Laboratories, Inc., in accordance with UL508A, *Standard for Industrial Controls*
- Canadian Standards Association CSA-C22.2, *Standard for Industrial Control Equipment* (cUL)

### 1.2 Enclosure

The controller components shall be housed in a NEMA Type 2 (IEC IP22) painted steel, wall mounted enclosure (UL50E Construction).

### 1.3 Withstand Ratings (Short Circuit Current Ratings w/Circuit Breaker)

The jockey shall have standard short circuit current ratings of:

- 65kA @ 480 Volts Max. (3-Phase)

- 14kA @ 600 Volts (3-Phase)

### 1.4 Construction

The Jockey Pump Controller shall use Wye-Delta Open Transition Starting which reduces motor current. When starting the motor will be connected in a wye configuration and draw approximately 33% of its normal inrush current and develop approximately 33% of its normal starting torque. After a time delay, the motor shall be automatically reconnected in delta, applying full voltage to the motor windings.

The controller shall incorporate a circuit breaker and horsepower rated motor starter, control circuit transformer with 24VAC secondary and 200-600V multi-tap primary, main disconnect switch, and a 0-600 psi (0-42 bar) solid state pressure transducer.

### 1.5 Operator Interface

The jockey pump controller shall feature an operator interface with user keypad. The interface shall feature a 4 digit digital display. LED indication of pressure above stop setting (Green), pressure between stop and start settings (Yellow), and pressure below the start setting (Red). LED indication of motor run (manual start and automatic start). Start/Stop and Off/Automatic push-buttons. User settings such as start/stop pressure settings, timer settings and units of measure shall be programmable from the user interface without opening the enclosure door.

## 1.6 Solid State Pressure Transducer

The controller shall be supplied with a solid state pressure transducer with a range of 0–600 psi (0–42 bar)  $\pm 1$  psi. The solid state pressure switch shall be used for both display of the system pressure and control of the jockey pump controller. Systems using analog pressure devices or mercury switches for operational control will not be accepted. The START, STOP and SYSTEM PRESSURE shall be digitally displayed and adjustable through the user interface. The pressure transducer shall be mounted inside the controller to prevent accidental damage. The pressure transducer shall be directly pipe mounted to a bulkhead pipe coupling without any other supporting members. Field connections shall be made externally at the controller coupling to prevent distortion of the pressure switch element and mechanism.

## 1.7 Controller Operation

A digitally set On Delay (Sequential Start) timer shall be provided as standard. The controller shall include a Minimum Run Timer to allow the motor to run for a set period of timer after starting. The timer shall be programmable through the user interface. The disconnect switch shall be mechanically interlocked so that the enclosure door cannot be opened with the handle in the ON position except by a hidden tool operated defeater mechanism. The disconnect switch shall be capable of being padlocked in the OFF position for installation and maintenance safety.

## 1.8 Manufacturer

The controller shall be a Firetrol brand.

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