



# Product Description

## FTA1350

### Mark IIx6 Electric Fire Pump Controllers

### Wye-Delta Closed Transition Starting



**Description**—Firetrol® FTA1350 Wye-Delta, Closed Transition Starting Fire Pump Controllers are used with delta-wound squirrel cage motors. FTA1350 controllers are of the closed circuit transition type in which the motor circuit remains closed during the transition from start to run. The controller monitors, displays and records fire pump system information.

Actuating the controller via pressure, START push-button or deluge valve contact closes the start contactor connecting the motor to the line in the wye connection. The motor will draw approximately 33% of its normal inrush current and develop approximately 33% of its normal starting torque. After a time delay, the motor is automatically reconnected in delta, applying full voltage to the motor windings. During this transition, a resistor is connected to each phase, minimizing line disturbances and voltage drop during starting. These controllers are recommended especially for use with generator sets.

**Approvals** – Firetrol fire pump controllers are listed by Underwriters' Laboratories, Inc., in accordance with UL218, *Standard for Fire Pump Controllers*, CSA, *Standard for Industrial Control Equipment*, and approved by Factory Mutual. They are built to meet or exceed the requirements of the approving authorities as well as NEMA and the latest editions of NFPA 20, *Installation of Centrifugal Fire Pumps*, and NFPA 70, *National Electrical Code*.

**Standard Features**—The following are included as standard with each controller:

- Voltage surge protector
- Main Disconnect Switch sized for connected motor horsepower and voltage
- Fire pump Circuit Breaker
- Single handle Isolating Disconnect Switch/Circuit Breaker mechanism

- Motor contactor
- Emergency Manual Run Mechanism to mechanically close motor contactor contacts in an emergency condition
- Built-in Start and Stop push-buttons to bypass automatic start circuits
- Minimum Run Timer / Off Delay Timer
- Daylight Savings Time Option
- Weekly Test Timer
- Elapsed Time Meter
- Door mounted display/interface panel featuring a 128 x 64 pixel backlit LCD Graphical Display, Membrane Type User Control Push-buttons and easy to read LED Indicators for:
  - POWER AVAILABLE
  - ALARM
  - TRANSFER SWITCH NORMAL (If unit ordered with Automatic Power Transfer Switch)
  - TRANSFER SWITCH EMERGENCY (If unit ordered with Automatic Power Transfer Switch)
  - SYSTEM PRESSURE LOW
  - PUMP RUNNING
  - DELUGE OPEN
  - REMOTE START
  - INTERLOCK ON
  - FAIL TO START
  - MOTOR OVERLOAD
  - EMERGENCY ISO SWITCH OFF (If unit ordered with Automatic Power Transfer Switch)
  - PHASE FAILURE
  - PHASE REVERSAL
  - AUTOMATIC SHUTDOWN DISABLED
  - OVERVOLTAGE
  - UNDERVOLTAGE
- Digital Pressure Display
- USB Host Controller and Port
- Solid State Pressure Transducer
- Data Log
- Event Log (3000 Events)
- True RMS Metering with simultaneous 3 Phase Display of Amps, Volts, Frequency, Pressure and Alarm Messages
- Disk Error message
- Disk Near Full message
- Pressure Error message
- Motor Over 320% message
- Local Start message
- Remote Start message
- Emergency Start message
- Fail To Start message
- Undervoltage message
- Overvoltage message
- NEMA Type 2 (IEC IP22) enclosure
- Suitable for use as Service Equipment
- Each standard controller comes with user set options for:
  - Interlock Alarm
  - Low Pressure Audible
  - Low Suction
  - Pump Run
  - User Defined Input
  - Weekly Test

## Product Description – Options & Modifications

### SPECIAL ENCLOSURES

- E Enclosure, NEMA Type 4 (IP66), Painted Steel
- F Enclosure, NEMA Type 4X (IP66), #304 Stainless Steel, Brushed Finish
- FD Enclosure, NEMA Type 4X (IP66), #316 Stainless Steel, Brushed Finish
- FDB Enclosure, NEMA Type 4X (IP66), #316 Stainless Steel, 12 Gauge, Seam-Welded, Brushed Finish
- FDP Enclosure, NEMA Type 4X (IP66), #316 Stainless Steel, Painted Finish
- FXP Enclosure, NEMA Type 4X (IP66), #304 Stainless Steel, Painted Finish
- G Enclosure, NEMA Type 12 (IP54), Painted Steel
- T Enclosure, NEMA Type 3R (IP24), Painted Steel

### CIRCUIT BREAKER OPTION

- N Intermediate withstand rating  
150,000 Amps RMS Sym.
- P High withstand rating  
200,000 Amps RMS Sym

Note: Intermediate and High withstand ratings may not be available for all horsepower and voltages. Consult factory for availability.

### ANTI-CONDENSATION SPACE HEATERS

- H Space Heater, 120V Externally Powered with Circuit Breaker
- J Space Heater, 120V Externally Powered with Circuit Breaker and Thermostat
- K Space Heater, 120V Externally Powered with Circuit Breaker and Humidistat
- L Space Heater, 240V Externally Powered with Circuit Breaker
- M Space Heater, 240V Externally Powered with Circuit Breaker and Thermostat
- N Space Heater, 240V Externally Powered with Circuit Breaker and Humidistat

### PRESSURE TRANSDUCERS

- B Wetted Parts Including Pressure Sensor, 600 psi (42 Bar) Fresh Water
- C Wetted Parts Including Pressure Sensor, 300 psi (21 Bar) Sea Water
- D Wetted Parts Including Pressure Sensor, 600 psi (42 Bar) Fresh Water

### COMBINED AUTOMATIC POWER TRANSFER SWITCHES

- TSA FTA950 Automatic Transfer Switch, Group 5
- TSAB FTA951 Automatic Transfer Switch, J-Bypass Isolation, Group 5

### ALARMS

- AC Alarm Output Contacts Extra, Pump Operating (1 Form A, 1 Form B)
- AF Alarm, Audible/Visible, Low Pump Room Temperature
- AG Alarm, Audible/Visible, Reservoir Low
- AH Alarm, Audible/Visible, Low Suction Pressure
- AM Alarm Output Contacts, Fail to Start
- AV Alarm Output Contacts, Low Pump Room Temperature (Requires option -AF)
- AW Alarm Output Contacts, Reservoir Low (Requires option -AG)
- AY Alarm Output Contacts, Low Suction Pressure (Requires option -AH)

- BW Alarm Output Contacts, Phase Failure/Phase Reversal
- BY Alarm Output Contacts, Pump Overload
- COM Alarm, Audible/Visible/Output Contacts, Low Suction Pressure with Manual Reset Option, Pressure Switch Not Included (Do Not Use Options AH or AY)
- CTS Alarm, Audible/Visible/Output Contacts, Low Suction Pressure Shutdown with Manual Reset Option and Pressure Switch (Do Not Use Options AH or AY)
- EG Alarm, Audible/Visible, Relief Valve Discharge
- EH Alarm Output Contacts, Relief Valve Discharge (Requires option -EG)
- EJ Alarm, Audible/Visible, Flow Meter On
- EK Alarm Output Contacts, Flow Meter On (Requires option -EJ)
- KH Alarm Output Contacts, Common Alarm
- JR Visible Indicator, Jockey Pump Operating
- JT Alarm, Audible/Visible, Jockey Pump Trouble
- P Alarm, Audible/Visible, Built-in 120V Supervisory System (Includes visible supervisory voltage normal indication and audible pump operating, phase failure and phase reversal indication)
- PE Alarm Output Contacts, Low System Pressure (pump on demand)
- PT Alarm, Audible/Visible, Built-in 240V Supervisory System (Includes visible supervisory voltage normal indication and audible pump operating, phase failure and phase reversal indication)

### MISCELLANEOUS

- AZ Thermostat, Low Pump Room Temperature, Mounted and Wired
- ED Output Contacts, Load Shed (Selectable power source and adjustable time delay to remove non-critical loads before starting)
- EL Series Pumping Operation, High Zone Controller
- EM Series Pumping Operation, Mid Zone Controller
- EN Series Pumping Operation, Low Zone Controller
- FZX Rating, Nameplate to be marked 380-400V (Use with voltage code 'F' or 'FZ')
- IEC Marking, CE with External Wet Parts (Requires NEMA Type 12 (IP54) Enclosure as minimum)
- IECI Marking, CE with Internal Wet Parts (Requires NEMA Type 12 (IP54) Enclosure as minimum)
- OSP OSHPD Seismic Certification (State of California) (Requires Option -SEI)
- MZN Neutral Lug, Service Entrance, Non-insulated Bonded to Enclosure
- PK Terminal Blocks, Extra Remote Start
- PY Output Contacts, Motor Space Heater Circuit, Externally Powered
- S Tropicalization
- SEI Marking, Seismic Certified (in accordance with IBC) (Note: Not available on model FTA1500)
- USBX Data Port, External USB
- ZPA Scheduled Service Message (when factory programmed or programmed by Firetrol representative during start-up)
- ZPM Data Port, Serial Modbus RTU Over 2-Wire or 4-Wire RS485
- ZPN Data Port, Serial Modbus RTU Over Ethernet TCP/IP

Export packaging (Wooden crating to conform to IPPC Standards)

## **Firetrol, Inc.**

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