

Wye-Delta, Closed Transition Starting Type



General

Joslyn Clark Fire Pump Controllers are designed and listed specifically for fire pump service. These controllers meet or exceed all requirements of the National Fire Protection Association Standard NFPA 20, are listed by Underwriters Laboratories Inc., and approved by the Factory Mutual System.

Wye-Delta Closed Transition Controllers have two Contactors that connect the motor in a Wye Connection. Starting current is 33.3% of across-the-line starting inrush (approximately 200% rated motor full load amperes) and starting torque is approximately 33.3% of normal starting torque. After a 3 second time delay, the Start Contactor drops out and the Run Contactor reconnects the motor in the Delta connection. During the transition, a contactor connects a resistor bank to keep the motor partially energized. The motor now runs at full torque and horsepower. Wye-Delta Controllers are Combined Manual and Automatic starting.

Standard Equipment

- Microprocessor based design using distributed microprocessors
- Single handle operator for easy operation of isolating switch and breaker.
- Automatic Start responsive to a change in water pressure.
- Stainless Steel Pressure Transducer, 0-600 PSI, side mounted internally
- Automatic Stop via Programmable Running Period Timer.
- Sequence Delay Start via Programmable setpoint.
- Standard Units programmed for Manual Stop and No Delay on Start
- Deluge start or Remote Automatic Start from other fire protection equipment having a normally closed contact which opens to start.
- Manual Start and Stop pushbuttons on Operator Interface Module.
- Manual Remote Start utilizing remote mounted, normally open contacts that close to start. Controller must be Manually Stopped at the controller.
- Emergency Start by simply lifting the mechanical start handle.
- Operator Interface Module includes 2 Line, 20 Character LCD display of Line Pressure and Cut In / Cut Out Setpoints, viewing of Events with Date and Time stamp, Real Time Data with all 3-phase voltages, line-line currents.
- PMR, microprocessor based relay which provides locked rotor protection, voltage pickup, and current pickup for display on Operator Interface Module. PMR is factory set for horsepower and voltage, no field adjustment required.
- Programmable Weekly Timer to automatically start and run the pump for Preset time once a week.

Visual Indicators and Alarms

- Visual indicators are provided to indicate the following:

Power Available	Phases Reversed	Pump Run	System Alarm
Comm Status	Start Delay	Low Pressure	RPT On
- 3 phase Currents, and 3 Phase-to-Phase Voltages on two-line Display.
- 2 line Pressure Display with Cut IN / Cut OUT Pressure Settings.
- 2 Sets OF SPDT contacts for remote alarm of Pump Run, Power Available, Phase Reversal.
- Built-in Pressure Recorder provides a review of Max, Min Pressures.
- Ethernet Modbus TCP Communications for Event History Information
- (With Optional Automatic Transfer Switch), Alternate Isolating Switch Open and Transfer Switch Position Indicators and Contacts
- System Fault Messages: Reverse Phase, Locked Rotor, Motor Overload, Low Voltage, High Voltage, Fail to Start, Low Frequency, High Frequency, Voltage Unbalance, Power Not Available, No Comm with LRD, Low Temperature, Low Suction, No Comm with I/O Board.





Modifications E-Series Controller

E10600

Modification Numbering System for Main Pump Controllers

Type E10620, E10630, E10640, E10650, E10670, E10680, E10690, E10663

ID	Option Name
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- 5 Pressure Transducer 0-600 PSI for fresh water (standard)
- 7 PS 0-600 PSI for salt water

- 3R Nema Type 3R - Outdoor, raintight
- 3R w/T 3R with Option T or TU (see pg 12)
- 4P Nema Type 4 - Raintight (painted steel)
- 4P w/T 4P with Option T or TU (see pg 12)
- 4X Nema Type 4X Watertight, corrosion, resistant (#304 Stainless Steel)
- 4X w/T 4X with Option T or TU (see pg 12)
- 12 Nema Type 12 Dust-Tight
- 12 w/T 12 with Option T or TU (see pg 12)

- G Built In Audible Alarm
- H2 Extra Light - Specify Functions
- J, J21, J22 Lockout Relay - Controller Interlock (J = External input J21 & J22 to interlock 2 electric controllers)

- K Control Fuse
- Sequence Start (Standard)
- L Series Pumping Controls For -L1 High Zone & L2 Low Zone Controllers Anti-Condensation Space Heaters with
- M Transformer
- M M w/transfer switch
- N Space heater only 100 watt, 120 V
- N N w/transfer switch

- N1 Space heater only 100 watt, 240 V.
- N1 N w/transfer switch
- P1 Thermostat only, use w/Mod M & N
- P1 P1 with Transfer Switch
- P2 Humidistat only, use w/Mod M & N
- P2 P2 with Transfer Switch
- P3 Humidistat & Thermostat w/Mod. M & N
- P3 P3 with Transfer Switch

- M & P2 Tropicalization

ID	Option Name
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- R5 Load Shed Includes NO & NC inst. contacts & time delay start
- R7 Loadshed w/time delay for cont. w/ATS Pump Failure to Start Indicator & NO & NC
- S1 Pump Over Current Indicator & NO&NC
- S2 Extra Phase Reversal Alarm Contacts
- S3 Remote Low Pressure Alarm Contacts
- S4 Extra Pump Run NO & NC
- S5 Extra Power Failure NO & NC
- S6 Extra Power Available NO & NC

- S8 Low Voltage Alarm 83% NO & NC
- S81 Low Reservoir Indicator & NO & NC
- S82 High Reservoir Indicator & NO & NC
- S83 Specify Function- Indicator & NO & NC
- S84 Specify Function- Indicator & NO & NC

- V Pump Room Temperature Sensor
- S85 Low Room Temp Indicator & NO & NC,

- W Extra SPDT Contact for remote indications of transfer switch position

- J31 Suction Pressure Transducer
- J32 Low Suction Pressure Shut Down Indicator & NO & NC Contacts

- Y CE Marking (Consult Factory)
- D1 Italian Nameplate
- D2 Dutch Nameplate
- D3 German Nameplate
- D4 French Nameplate
- D5 Spanish Nameplate
- D6 Portugese Nameplates

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