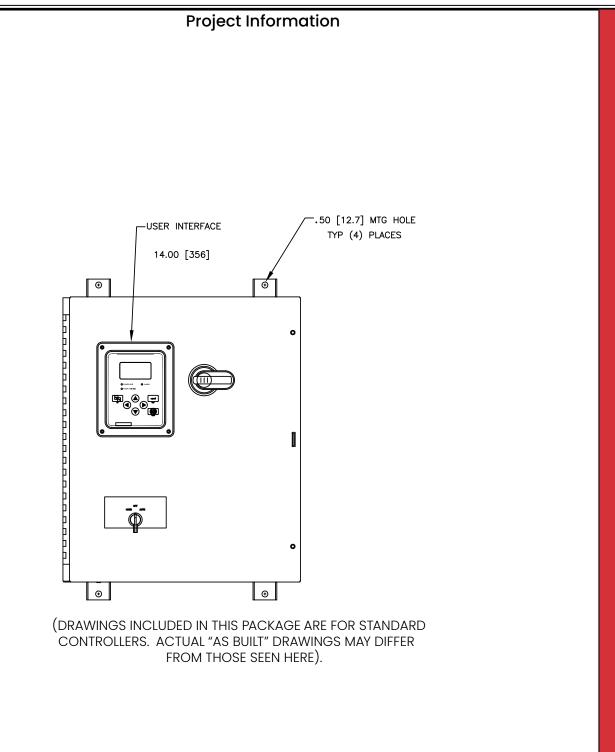


FTA550E

Jockeyxg Pump Controllers



Firetrol, Inc.

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Firetrol Jockeyxg Pump Controller

FTA550E - Full Voltage Starting

Specifications

1.0 Main Fire 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) 5kA @ 240 Volts Max. (1-Phase)

1.4 Construction

The jockey pump controller shall be full voltage starting. 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, HAND-OFF-AUTOMATIC selector switch and a 0-300 psi (0-20.7 bar) stainless steel solid state pressure transducer.

1.5 Operator Interface

The fire pump controller shall feature an operator interface with user keypad. The interface shall monitor and display motor operating conditions, including all alarms, events, and pressure conditions. All alarms, events, and pressure conditions shall be displayed with a time and date stamp. The display shall be a 128x64 Backlit LCD capable of customized graphics. The display and interface shall be NEMA rated for Type 2, 3R, 4, 4X, and 12 protection and shall be fully accessible without opening the controller door. The display and user interface shall utilize multiple levels of password protection for system security. A minimum of 3 password levels shall be provided.

1.6 Digital Status/Alarm Messages

The digital display shall indicate text messages for the status and alarm conditions of:

- Pump Running
- Low System Pressure
 Automatic Start
 Main Switch Position
- Sequential Start Time
- Pump Restart Timer System Overpressure
- User Selectable #2¹
- Minimum Run Time
- Fail to StartUser Selector User Selectable #1¹
- ¹User may choose from the following to be shown on main display (stop pressure setting, start pressure setting, cycles/period, cycles/month, cycles/day, cycles/hour, total cycle count, pump total run time)

The Sequential Start Timer, Minimum Run Timer/Off Delay Timer and Pump Restart Timer shall be displayed as numeric values reflecting the value of the remaining time.

1.7 LED Visual Indicators

LED indicators, visible with the door closed, shall indicate:

- Power ON • Alarm

Pump Running

1.8 Data Logging

The digital display shall monitor the system and log the following data:

- Motor Calls/Starts Pump Total Run Time
- Total Controller Pwr On Time
- Min/Max System Pressure
- Cycle Counts

- Pump Last Run Time
- Last Pump Start
- Last Phase Fail/Reverse

1.9 Event Recording Memory - The controller shall record all operational and alarm events to system memory. All events shall be time and date stamped and include an index number. The system memory shall have the capability of storing 3000 events and allow the user access to the event log via the user interface. The user shall have the ability to scroll through the stored messages in groups of 1 or 10.

2.0 Serial Communications

The controller shall feature a RS485 serial communications port for use with 2 or 4 wire Modbus RTU communications.

2.1 Solid State Pressure Transducer

The controller shall be supplied with a solid state pressure transducer with a range of 0-300 psi (0-20.7 bar) ±1 psi. The solid state pressure switch shall be used for both display of the system pressure and control of the fire 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.

2.2 Seismic Certification

The controller shall be certified to meet or exceed the requirements of the 2012 International Building Code and the 2013 California Building Code for Importance Factor 1.5 Electrical Equipment for Sds equal to 1.88 or less severe seismic regions. Qualifications shall be based upon successful tri-axial shake-table testing in accordance with ICC-ES AC-156. Certification without testing shall be unacceptable. Controller shall be clearly labeled as rated for installation in seismic areas and a Certificate of Conformance shall be provided with the controller.

2.3 Controller Operation

A digitally set On Delay (Sequential Start) timer shall be provided as standard. Upon a call to start, the user interface shall display a message indicating the remaining time value of the On Delay timer.

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. A pump restart delay timer shall be provided to allow the residual voltage of the motor to decay prior to restarting the motor and to prevent severe short cycling of the motor. The timer shall be programmable through the user interface.

A Lamp Test feature shall be included. The user interface shall also have the ability to display the status of the system inputs and outputs.

An' Audible Test feature shall be included to test the operation of the audible alarm device (if supplied).

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.

2.4 Manufacturer

The controller shall be a Firetrol brand.

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Product Description



FTA550E

Jockeyxg Pump Controllers



Description—Firetrol® FTA550E JockeyxG Pump Controllers are intended for use with fire pump systems. They are used for pressure maintenance in fire pump installations to prevent unnecessary operation of the main fire pump.

Approvals—Firetrol jockey pump controllers are listed by Underwriters' Laboratories, Inc., in accordance with UL508A, *Standard for Industrial Controls*, and CSA, *Standard for Industrial Control Equipment*. They are built to meet or exceed the requirements of the approving authorities as well as NEMA and the latest edition NFPA 70, *National Electrical Code*.

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

- NEMA Type 2 (IEC IP22) Painted Steel Enclosure
- Circuit Breaker
- Horsepower rated motor starter
- Suitable for use as service equipment
- HAND-OFF-AUTO selector switch
- Minimum run timer
- On-Delay timer
- Pump Restart Timer
- Control circuit transformer with 24VAC secondary
- 0-300 psi['](0-21 bar) stainless steel solid state pressure transducer
- Overpressure indication
- Low Pressure indication
- Failed to start indication

- Main switch not in "Auto" alarm
- Pressure recording
- Event log (3000 events stored in controller memory)
- Data log (including cycle counter)
- Door mounted display/user interface featuring a 128 x 64 pixel backlit LCD Graphical Display, Membrane Type User Controller Push-buttons and LED indication for:
 - Power ON
 - Pump Running
 - Alarm
- 2 lines of user selectable display information

NOTE: FTA550E XG Jockey Pump Controllers are available as standard in the voltage/horsepower combinations shown below and with the options shown on the reverse side. For other combinations and options, please consult your Firetrol representative or the factory.

 VOLTAGE 3-PHASE
 MAX HP
 Short Circuit

 (50/60 Hertz)
 Current

 Rating
 -H
 200 - 208V
 25
 65kA

 -A
 220 - 240V
 30
 65kA

-F	380 - 415V	40	65kA
-B	440 - 480V	50	65kA
-C	550 - 600V	50	14kA
	TAGE 1-PHASE* /60 Hertz) ng	MAX HP	Short Circuit Current
-D	110-120V	5	5kA
-T	200-208V	15	5kA
-E	220-240V	15	5kA
* ~ .		•	

* Single phase units supplied standard with fusible disconnect switch and fuses

NOTE: Firetrol Brand Jockey Pump controllers DO NOT CONTAIN MERCURY filled pressure switches.

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, #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

HIGHER SHORT CIRCUIT CURRENT RATING

(See selection data sheet)

Fusible Disconnect Switch with Fuses (100kA)

ANTI-CONDENSATION SPACE HEATERS¹

- -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

¹ Power source supplied by others

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), Sea Water

MISCELLANEOUS

- -AC Alarm Output Contacts, Pump Operating (2 Sets)
- -AG Ålarm, Åudible/Visible, Reservoir Low
- -AM Alarm Output Contacts, Fail To Start
- -AST Input Terminals, Automatic Start
- -AW Alarm Output Contacts, Reservoir Low (Requires option -AG)
- -BW Alarm Output Contacts, Phase Fail/Phase Reversal
- -BY Alarm Output Contacts, Pump Overload
- -CPL Alarm Output Contacts, Overpressure
- -EF Alarm Output Contacts, Main Switch Not In Auto (1 Set)
- -HV Alarm, Audible
- -IEC Marking, CE with External Wet Parts
- -IECI Marking, CE with Internal Wet Parts
- -KH Alarm Output Contacts, Common Alarm
- -NZ Input Terminals, Shutdown Interlock
- -OSP Marking, OSHPD Seismic Certification (State of California) - (Requires option -SEI)
- -PE Alarm Output Contacts, Low System Pressure
- -S Tropicalization
- -SEI Marking, Seismic Certified
- -ZPA Scheduled Service Message
- -ZPJ Data Port, Serial Modbus RTU Over 2-Wire or 4-Wire RS485

*Export Packaging available for additional cost

NOTE: For requirements not listed here, please contact your Firetrol representative or the factory.

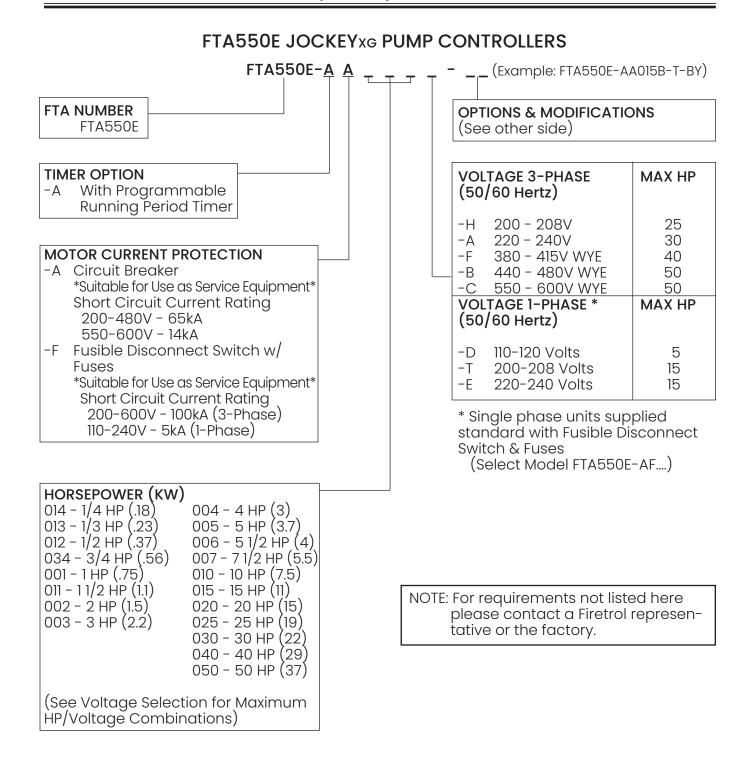
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Jockeyxg Pump Controllers



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- -G Enclosure, NEMA Type 12 (IP54), Painted Steel
- -T Enclosure, NEMA Type 3R (IP24), Painted Steel

HIGHER SHORT CIRCUIT CURRENT RATING

(See selection data sheet) Fusible Disconnect Switch with Fuses (100kA)

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- -H Space Heater, 120V Externally Powered with Circuit Breaker
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- -SEI Marking, Seismic Certified
- -ZPA Scheduled Service Message
- -ZPJ Data Port, Serial Modbus RTU Over 2-Wire or 4-Wire RS485

*Export Packaging available for additional cost

NOTE: For requirements not listed here, please contact your Firetrol representative or the factory.

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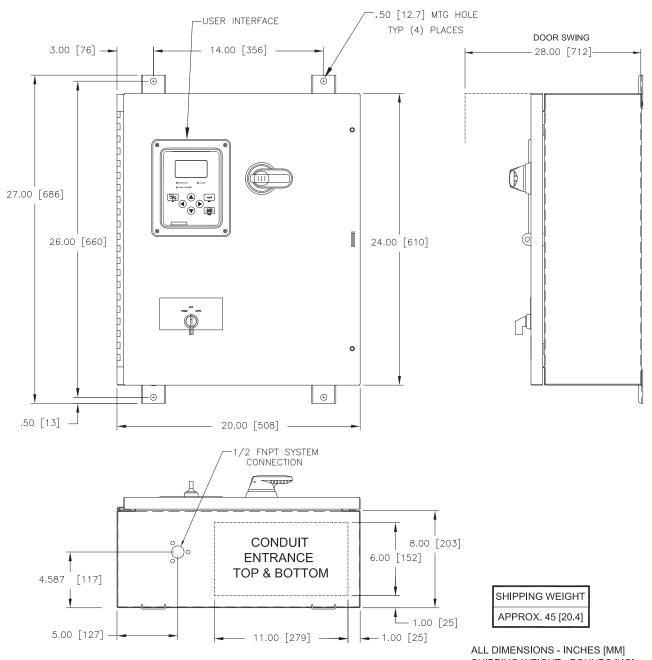
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Dimensions and Shipping Weight



FTA550E

Jockeyxg Pump Controllers



SHIPPING WEIGHT - POUNDS [KG]

NOTES:

NOTES.										
FOR ADDITIONAL HORSEPOWER RATINGS CONSULT FACTORY.	DISCONNECT	MAXIMUM MOTOR HORSEPOWER								
DIMENSIONS SHOWN ON THIS DRAWING	TYPE	200-208V	220-240V	380-415V	440-48	80V	550-60	70C		
ARE APPLICABLE FOR NEMA TYPES 2 - 3R - 4 - 4X - 12	CIRCUIT BREAKER OR FUSIBLE DISCONNECT	25	30	40	50		50)		
	UPDATED TITLE BLOCK				A 280	587	JMW TEF	08-28		

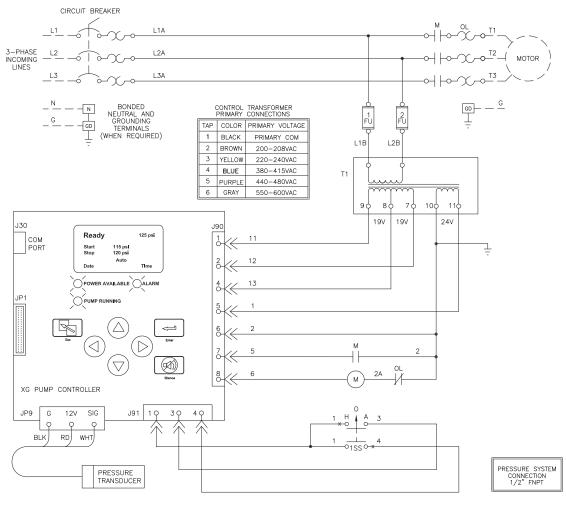
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THIRD ANGLE PROJECTION	size A	BY	DATE		REVISION DESCRIPTION	REV	ECN NO	BY	APP	DATE	
	DRAWN BY CIR	N BY CIR 4-25-12	Firetrol, Inc.	DIMENSIONS AND SHIPPING WEIGHT FTA550E		DRAWING NUMBER					
			IR 4-25-12		FTA550E JOCKEY XG PUMP CONTROLLER		DD550-05				
	FINAL APPROVAL	TEF	4-25-12				ECN 280	0587	SI	HEET 1 OF 1	
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Wiring Schematic



FTA550E

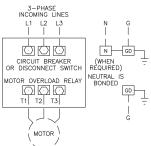
Jockeyxg Pump Controllers



FOR ADDITIONAL OPTIONS AND MODIFICATIONS, REFER TO DRAWING WS550-06

LINE TERMINALS-WIRE CAPACITY AND QUANTITY (CU)

-rusible	DISCONNI	LCT OF HO	N I			
	MAXIMUN	MOTOR H	DRSEPOWER		WIRE SIZE (CU)	WIRE SIZE (CU) NEUTRAL AND GROUND
200-208V	220-240V	380-415V	440-480V	550-600V	PER PHASE	TERMINALS
5	7 1/2	10	15	20	(1) #14 AWG-#6 AWG (1) 2 MM ² -13 MM ²	(1) #14 AWG-#6 AWG (1) 2.5 MM ² -16 MM ²
15	15	25	30	50	(1) #10 AWG-#6 AWG (1) 6 MM ² -16 MM ²	(1) #14 AWG-#6 AWG (1) 2.5 MM ² -16 MM ²
25	30	40	50		<pre>(1) #12 AWG-#1 AWG (1) 16 MM²-42 MM²</pre>	(2) #14 AWG-#1/0 AWG (2) 2.5 MM ² -50 MM ²



motor terminals-wire capacity and quantity (CU) $~~\fbox$

	MAXIMUM	WIRE SIZE (CU)			
200-208V	220-240V	380-415V	440-480V	550-600V	PER PHASE
3	5	7.5	10	10	(1) #14 AWG-#10 AWG (1) 2.5 MM ² - 6 MM ²
7.5	10	15	20	25	<pre>(1) #14 AWG-#8 AWG (1) 2.5 MM²-10 MM²</pre>
20	20	30	40	50	(1) #14 AWG-#2 AWG (1) 2.5 MM ² -35 MM ²
25	30	40	50	-	<pre>(1) #10 AWG-#1 AWG (1) 4 MM²-42 MM²</pre>

LINE TERMINALS-WIRE CAPACITY AND QUANTITY (CU) $\fbox{1}$ -CIRCUIT BREAKER OPTION

	MAXIMUM	MOTOR H	ORSEPOWER		WIRE SIZE (CU)
200-208V	220-240V	380-415V	440-480V	550-600V	PER PHASE
25	30	40	50	50	<pre>(1) #14 AWG-#1 AWG (1) 2.5 MM²- 42 MM²</pre>
G FO	R CORRECT	WIRE SIZIN	IG. REFER 1	0	

1 NATIONAL ELECTRICAL CODE, NFPA 70.

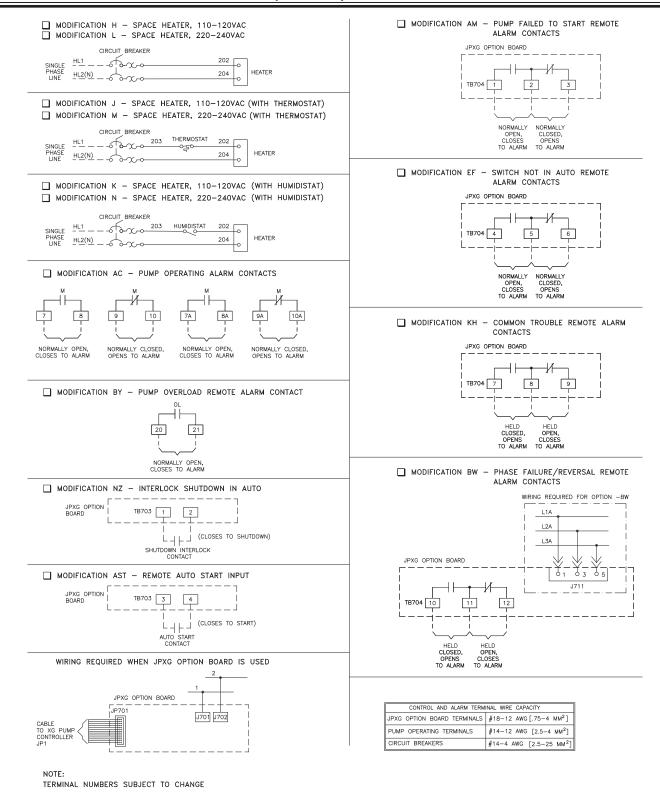
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					UPDATE FOR SCHNEIDER COMPONENTS			277127	TDC	TDC	02-08-19	
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THIRD ANGLE	51011151		00 11 12					WS550-05				
PROJECTION	FINAL APPROVAL	TEF	05-14-12	© Firetrol, Inc. Not for construction. Subject to change without notice.	JOCKEY XG PUMP CONTROLLER		DWG REV B	ECN 280587		SF	SHEET 1 OF 1	

Wiring Schematic Options & Modifications



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Jockeyxg Pump Controllers



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THIRD ANGLE				-				1 103330-00				
	FINAL APPROVAL	TEF	05-14-12	© Firetrol, Inc. Not for construction. Subject to change without notice.	JOCKEY XG PUMP CONTROLLER OPTIONS AND MODIFICATIONS		dwg Rev A	ECN 280)587	SH	IEET 1 OF 1	
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