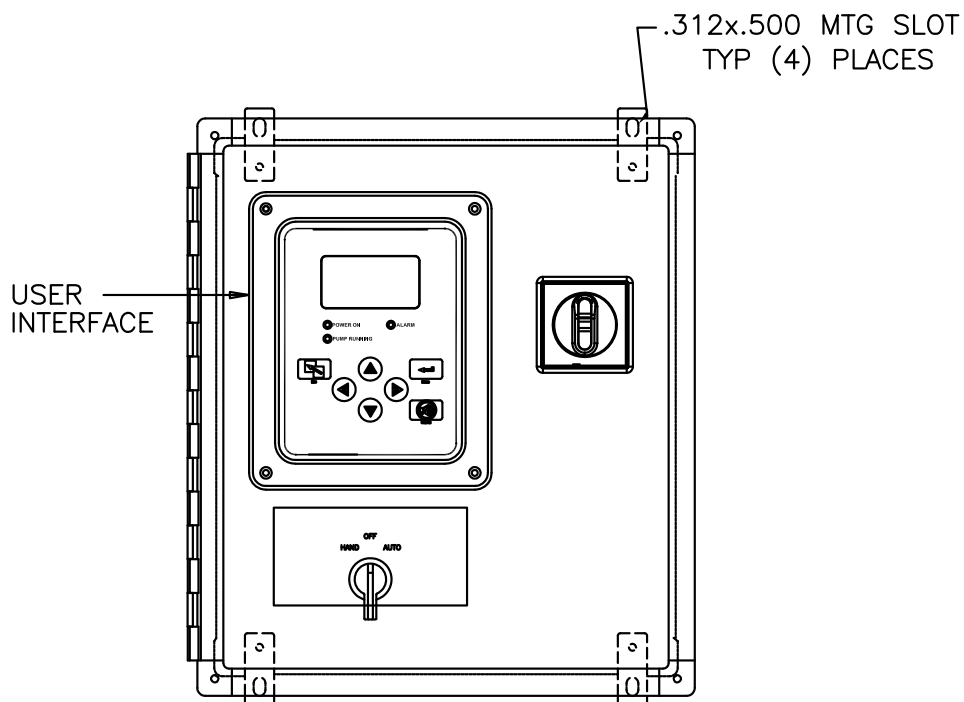


Limited Option Jockey_{XS} Pump Controller

Project Information



(DRAWINGS INCLUDED IN THIS PACKAGE ARE FOR STANDARD CONTROLLERS. ACTUAL "AS BUILT" DRAWINGS MAY DIFFER FROM THOSE SEEN HERE).

Firetrol, Inc.

3412 Apex Peakway
Apex, North Carolina 27502
P 919 460-5200
F 919 460 5250
www.firetrol.com

While every precaution has been taken to ensure accuracy and completeness herein, Firetrol, Inc. assumes no responsibility, and disclaims all liability, for damages resulting from use of this information or for any errors or omissions. Specifications and drawings are subject to change without notice. ©2019 Firetrol, Inc., All Rights Reserved.

Firetrol Limited Option Jockey_{xG} Pump Controller

FTA550F – 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 2/12 (IEC IP22/IP54) polycarbonate, wall mounted enclosure (UL50E Construction).

1.3 Withstand Ratings (Short Circuit Current Ratings)

The jockey shall have standard short circuit current ratings of:

30kA @ 480 Volts Max. (3-Phase)

18kA @ 600 Volts (3-Phase)

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

1.4 Construction

The jockey pump controller shall be full voltage starting, rated for wye-connected power systems above 240V. The controller shall incorporate a horsepower rated manual circuit protector and starting contactor, 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 Start
- 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 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.

1.9 Serial Communications

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

2.0 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.

2.1 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.

2.2 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.

2.3 Manufacturer

The controller shall be a Firetrol brand.

Limited Option Jockey_{XG} Pump Controllers



Description—Firetrol® FTA550F XG Jockey 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 2/12 (IEC IP22/IP54) Polycarbonate enclosure (UL50E Construction)
- Horsepower rated motor circuit protector and starting contactor
- 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 (0-20.7 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: FTA550F XG Jockey Pump Controllers are only available in the voltage/horsepower combinations shown below and with the options shown on the reverse side. For other combinations and options, see documentation for FTA550E series XG Jockey Pump Controllers.

VOLTAGE 3-PHASE (50/60 Hertz) Rating	MAX HP (MCP)	Short Circuit Current
-H 200-208	7.5	30kA
-A 220-240	1030kA	
-F 380-415V-WYE	15	30kA
-B 440-480V-WYE	20	30kA
-C 550-600V-WYE	20	18kA

VOLTAGE 1-PHASE (50/60 Hertz) Rating	MAX HP (MCP)	Short Circuit Current
-D 110-120 Volts	2	5kA
-T 200-208 Volts	3	5kA
-E 220-240 Volts	5	5kA

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

For Model # Information and Options & Modifications see Publication SD550F-01

Firetrol, Inc.

3412 Apex Peakway
Apex, North Carolina 27502
P +1 919 460 5200
F +1 919 460 5250
www.firetrol.com

While every precaution has been taken to ensure accuracy and completeness herein, Firetrol, Inc. assumes no responsibility, and disclaims all liability, for damages resulting from use of this information or for any errors or omissions. Specifications and drawings are subject to change without notice. ©2019 Firetrol, Inc., All Rights Reserved.

Publication PD550F-01 Rev. G

Model Number Selection Guide



FTA550F

Limited Option Jockey_{xG} Pump Controllers

FTA550F JOCKEY_{xG} PUMP CONTROLLERS

FTA550F-A G

(Example: FTA550F-AG015B-T-BY)

FTA NUMBER

FTA550F

TIMER OPTION

-A With Programmable
Running Period Timer

MOTOR CURRENT PROTECTION

-G Manual Motor Protector
Suitable for Use as Service Equipment
Short Circuit Current Rating
3 Phase --200-480V - 30kA /600V - 18kA
1 Phase -- 110-240V - 5kA

HORSEPOWER (KW)

014 - 1/4 HP (.18)	004 - 4 HP (3)
013 - 1/3 HP (.23)	005 - 5 HP (3.7)
012 - 1/2 HP (.37)	006 - 5 1/2 HP (4)
034 - 3/4 HP (.56)	007 - 7 1/2 HP (5.5)
001 - 1 HP (.75)	010 - 10 HP (7.5)
011 - 1 1/2 HP (1.1)	015 - 15 HP (11)
002 - 2 HP (1.5)	020 - 20 HP (15)
003 - 3 HP (2.2)	

(See Voltage Selection for Maximum
HP/Voltage Combinations)

OPTIONS & MODIFICATIONS

(See other side)

VOLTAGE 3-PHASE (50/60 Hertz)

MAX HP

-H 200-208 Volts	7.5
-A 220-240 Volts	10
-F 380-415V - WYE	15
-B 440-480V - WYE	20
-C 550-600V - WYE	20

VOLTAGE 1-PHASE (50/60 Hertz)

MAX HP

-D 110-120 Volts	2
-T 200-208 Volts	3
-E 220-240 Volts	3

NOTE: For requirements not listed here
(higher short circuit ratings, larger
horsepowers, options not listed...
etc) please refer to documentation
for FTA550E series Jockey Pump
Controllers.

Model Number Selection Guide – Options & Modifications

SPECIAL ENCLOSURES

Option	Description
---	Enclosure, NEMA Type 2/12 (IEC IP22/IP54) Polycarbonate enclosure (UL50E Construction)
-E	Enclosure, NEMA Type 4 (IEC IP66), Non-Metallic Enclosure
-F	Enclosure, NEMA Type 4X (IEC IP66), Non-Metallic Enclosure
-T	Enclosure, NEMA Type 3R (IEC IP24), Non-Metallic Enclosure

ANTI-CONDENSATION SPACE HEATERS (power source by others)

Option	Description
None	
-J	Space Heater, 120V Externally Powered with Circuit Breaker & Thermostat
-K	Space Heater, 120V Externally Powered with Circuit Breaker & Humidistat
-M	Space Heater, 120V Externally Powered with Circuit Breaker & Thermostat
-N	Space Heater, 240V Externally Powered with Circuit Breaker & Humidistat

PRESSURE TRANSDUCERS

Option	Description
---	Wetted Parts Including Pressure Sensor, 300 PSI (21 bar), Fresh Water
-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

ALARMS

Option	Description
-AC	Alarm Output Contacts, Pump Operating (2 Sets)
-AM	Alarm Output Contacts, Fail To Start
-BW	Alarm Output Contacts, Phase Failure/Phase Reversal
-BY	Alarm Output Contacts, Pump Overload
-EF	Alarm Output Contacts, Main Switch Not In Auto (1 set)
-HV	Alarm, Audible
-KH	Alarm Output Contacts, Common Alarm

MISCELLANEOUS

Option	Description
-AST	Input Terminals, Automatic Start
-NZ	Input Terminals, Shutdown Interlock
-OSP	Marking, OSHPD Seismic Certification (State of CA)(Requires Option -SEI)
-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 (higher short circuit ratings, larger horsepower, options not listed...etc) please refer to documentation for FTA550E series Jockey Pump Controllers.

Firetrol, Inc.

3412 Apex Peakway
Apex, North Carolina 27502
P +1 919 460 5200
F +1 919 460 5250
www.firetrol.com

While every precaution has been taken to ensure accuracy and completeness herein, Firetrol, Inc. assumes no responsibility, and disclaims all liability, for damages result- ing from use of this information or for any errors or omissions. Specifications and drawings are subject to change without notice. ©2019 Firetrol, Inc., All Rights Reserved.

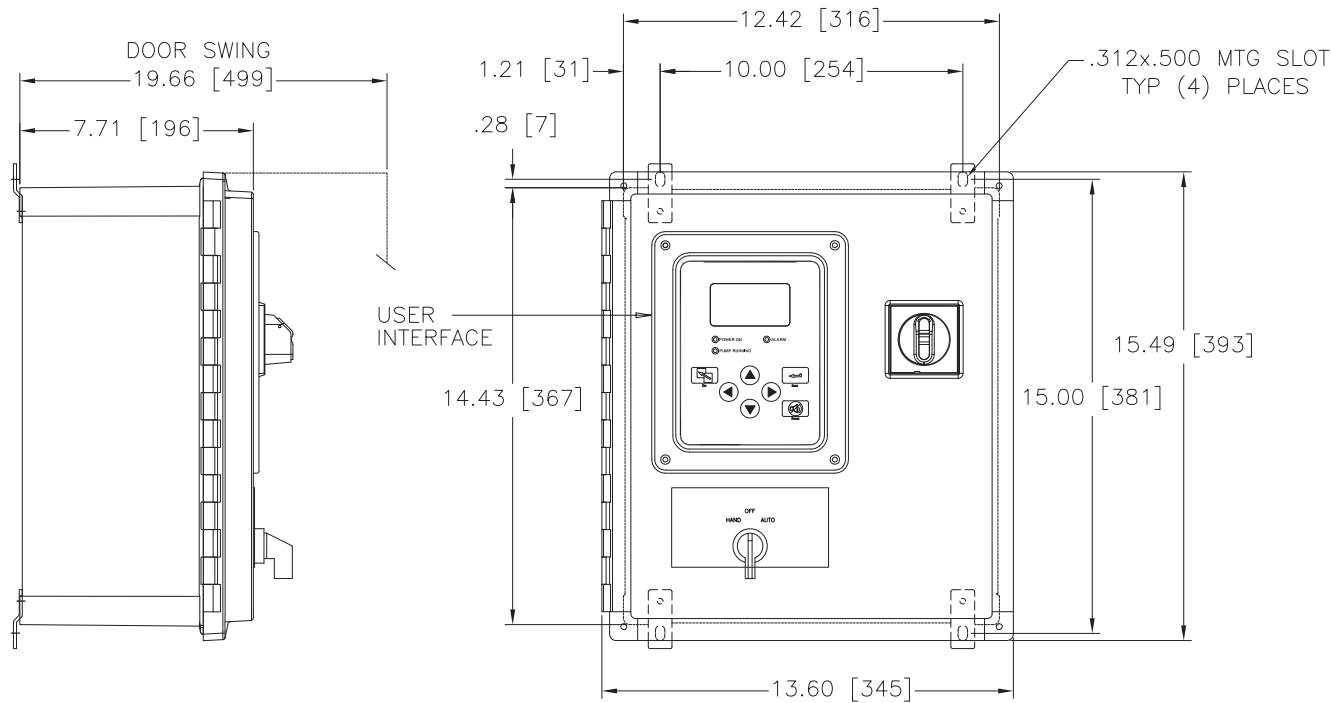
Publication SD550F-01 Rev. G

Dimensions and Shipping Weight



FTA550F

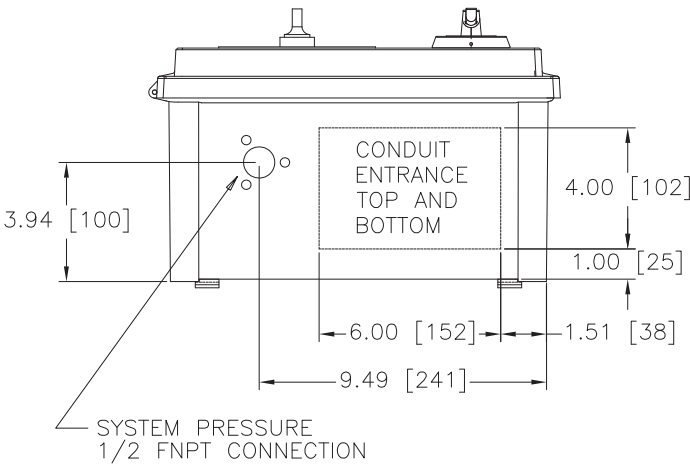
Limited Option Jockey_{XG} Pump Controllers



NOTE
CONDUIT ENTRANCE TOP AND BOTTOM ONLY DO NOT ENTER FROM SIDES.

CAUTION
BONDING BETWEEN CONDUIT CONNECTIONS IS NOT AUTOMATIC AND MUST BE PROVIDED AS PART OF THE INSTALLATION.



DIMENSIONS SHOWN ON THIS DRAWING ARE APPLICABLE FOR NEMA TYPES 2/3R/4/4X/12



SHIPPING WEIGHT
APPROX. 15 [6.8]

MAXIMUM MOTOR HORSEPOWER				
200–208V	220–240V	380–415V	440–480V	550–600V
7 1/2	10	15	20	20

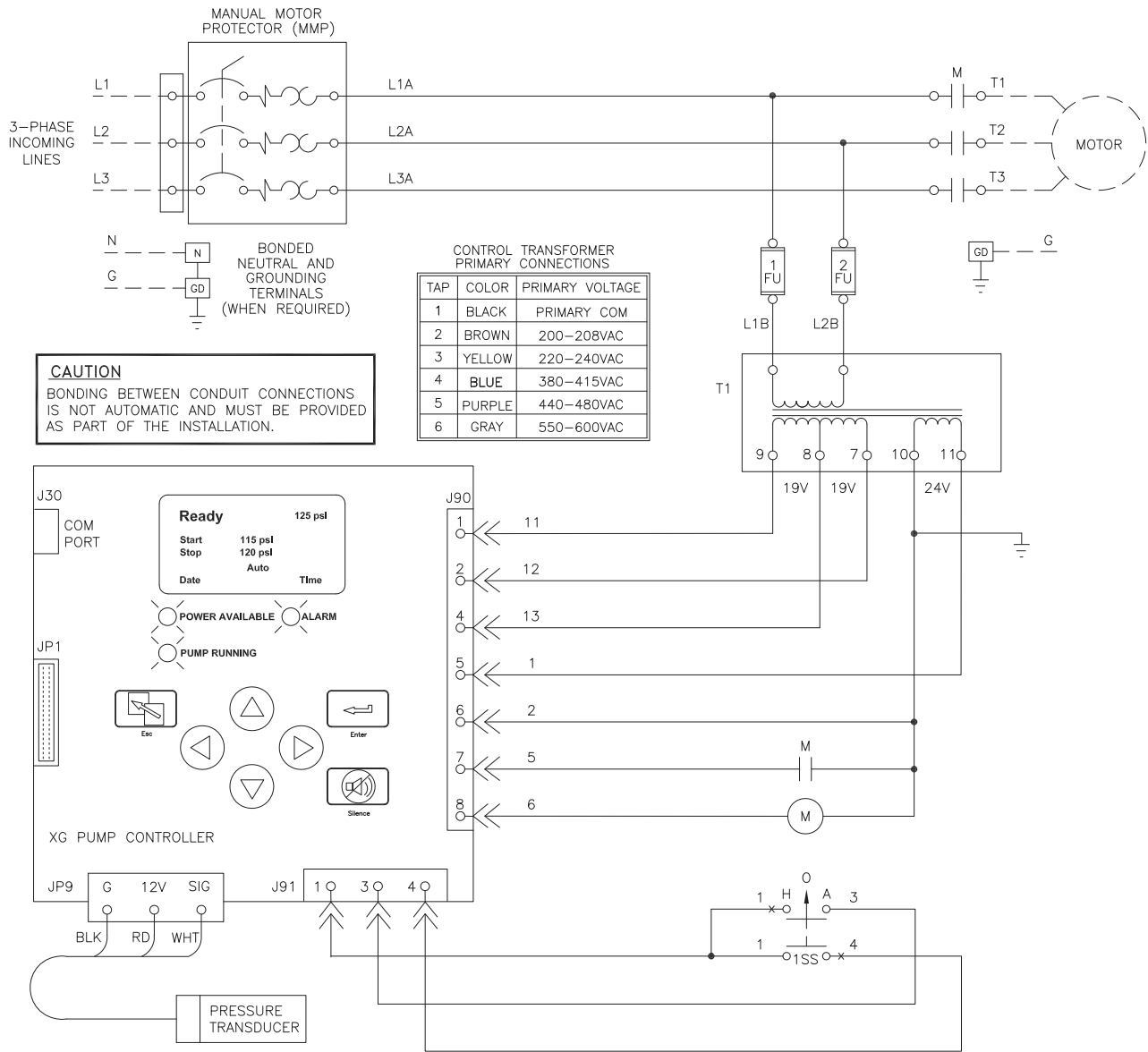
ALL DIMENSIONS – INCHES [MM]
SHIPPING WEIGHT – POUNDS [KG]

 THIRD ANGLE PROJECTION	SIZE A	BY	DATE	 Firetrol, Inc. © Firetrol, Inc. Not for construction. Subject to change without notice.	UPDATED TITLE BLOCK				A	280587	JMW	TEF	08-28-19
	DRAWN BY	TEF	02-29-12		REVISION DESCRIPTION				REV	ECN NO	BY	APP	DATE
	FINAL APPROVAL	TEF	02-29-12		DIMENSIONS & SHIPPING WEIGHT		FTA550F		DRAWING NUMBER DD550-01				
					JOCKEY XG PUMP CONTROLLER (POLYCARBONATE)				DWG REV	A	ECN NO	280587	SHEET 1 OF 1

All rights reserved. This drawing and the information contained or described herein are the sole property of Firetrol, Inc. Copies are communicated to the recipient in strict confidence and may not be retransmitted, published, reproduced, copied or used in any manner, including as the basis for the manufacture or sale of any products, without the express prior written consent of Firetrol, Inc.

All rights reserved. The drawing and the information contained or depicted herein are the sole property of Firetrol, Inc. Copies are communicated to the recipient in strict confidence and may not be retransmitted, published, reproduced, copied or used in any manner, including as the basis for the manufacture or sale of any products, without the express prior written consent of Firetrol, Inc.

Limited Option Jockey_{xG} Pump Controllers with MMP



NEUTRAL AND
GROUND TERMINALS
WIRE CAPACITY (CU)

#14 AWG-#6 AWG
2.5 MM²-16 MM²

PRESSURE SYSTEM
CONNECTION
1/2" FNPT

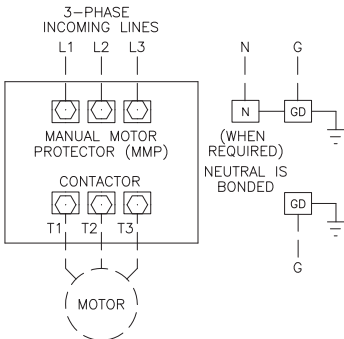
LINE TERMINALS-WIRE CAPACITY (CU)



MAXIMUM MOTOR HORSEPOWER					WIRE SIZE COPPER ONLY
200-208V	220-240V	380-415V	440-480V	550-600V	
7 1/2	10	15	20	20	#10 AWG-#4 AWG 6 MM ² -25 MM ²

MOTOR TERMINALS-WIRE CAPACITY (CU)

MAXIMUM MOTOR HORSEPOWER					WIRE SIZE COPPER ONLY
200-208V	220-240V	380-415V	440-480V	550-600V	
7 1/2	10	15	20	20	#14 AWG-#8 AWG 2.5 MM ² -10 MM ²

1 FOR CORRECT WIRE SIZING, REFER TO
NATIONAL ELECTRICAL CODE, NFPA 70.

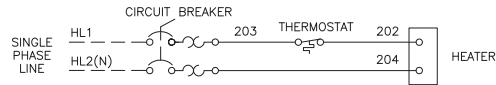


 THIRD ANGLE PROJECTION	SIZE	A	BY	DATE	REVISION DESCRIPTION				REV	ECN NO	BY	APP	DATE
	DRAWN BY	TEF	02-27-12	 Firetrol, Inc. © Firetrol, Inc. Not for construction. Subject to change without notice.		WIRING SCHEMATIC		FTA550F	DRAWING NUMBER WS550-01				
	FINAL APPROVAL	TEF	02-29-12			JOCKEY XG PUMP CONTROLLER WITH MANUAL MOTOR PROTECTOR		DWG REV	A	ECN NO	280587	SHEET 1 OF 1	

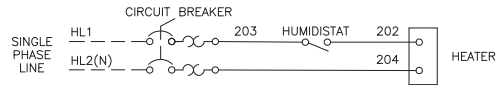
All rights reserved. The drawing and the information contained or depicted herein are the sole property of Firetrol, Inc. Copies are communicated to the recipient in strict confidence and may not be retransmitted, published, reproduced, copied or used in any manner, including as the basis for the manufacture or sale of any products, without the express prior written consent of Firetrol, Inc.

Limited Option Jockey_{xg} Pump Controllers with MMP

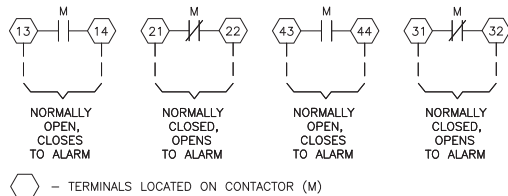
- ☐ MODIFICATION J – SPACE HEATER, 110–120VAC (WITH THERMOSTAT)
☐ MODIFICATION M – SPACE HEATER, 220–240VAC (WITH THERMOSTAT)



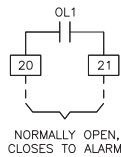
- ☐ MODIFICATION K – SPACE HEATER, 110–120VAC (WITH HUMIDISTAT)
☐ MODIFICATION N – SPACE HEATER, 220–240VAC (WITH HUMIDISTAT)



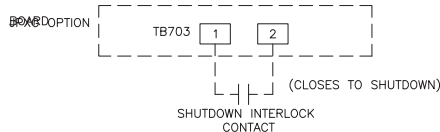
- ☐ MODIFICATION AC – PUMP OPERATING ALARM CONTACTS



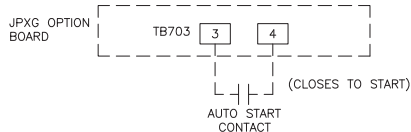
- ☐ MODIFICATION BY – PUMP OVERLOAD REMOTE ALARM CONTACT



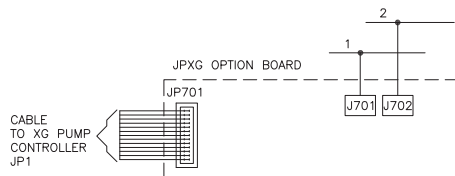
- ☐ MODIFICATION NZ – INTERLOCK SHUTDOWN IN AUTO



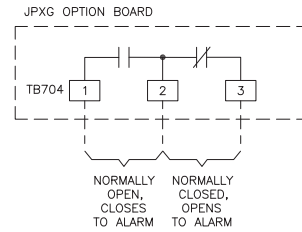
- ☐ MODIFICATION AST – REMOTE AUTO START INPUT



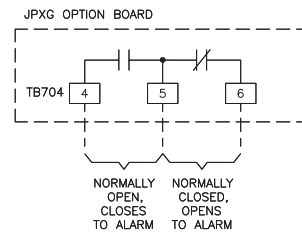
WIRING REQUIRED WHEN JPXG OPTION BOARD IS USED



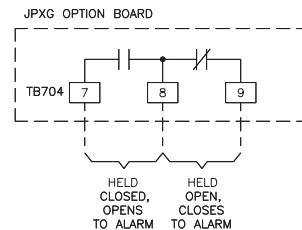
- ☐ MODIFICATION AM – PUMP FAILED TO START REMOTE ALARM CONTACTS



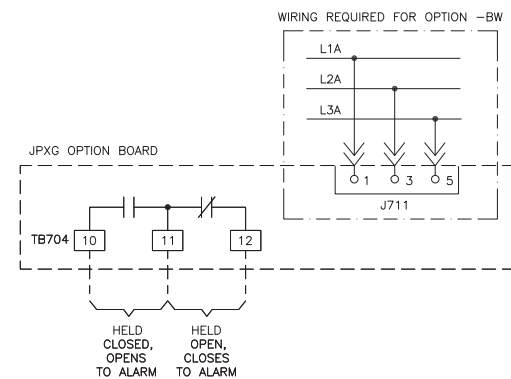
- ☐ MODIFICATION EF – SWITCH NOT IN AUTO REMOTE ALARM CONTACTS



- ☐ MODIFICATION KH – COMMON TROUBLE REMOTE ALARM CONTACTS



- ☐ MODIFICATION BW – PHASE FAILURE/REVERSAL REMOTE ALARM CONTACTS



CONTROL AND ALARM TERMINAL WIRE CAPACITY	
JPXG OPTION BOARD TERMINALS	#18–12 AWG [.75–4 MM ²]
PUMP OPERATING TERMINALS	#18–14 AWG [.75–2.5 MM ²]
CIRCUIT BREAKERS	#14–4 AWG [2.5–25 MM ²]

THIRD ANGLE PROJECTION	SIZE	A	BY	TEF	DATE	02-27-12
	DRAWN BY	TEF	DATE	02-29-12		
	FINAL APPROVAL	TEF				



© Firetrol, Inc. Not for construction.
Subject to change without notice.

UPDATED TITLE BLOCK		A	280587	JMW	TEF	08-28-19
REVISION DESCRIPTION		REV	ECN NO	BY	APP	DATE
WIRING SCHEMATIC			FTA550F			
JOCKEY XG PUMP CONTROLLER WITH MANUAL MOTOR PROTECTOR OPTIONS AND MODIFICATIONS		DRAWING NUMBER WS550-02				
DWG REV A		ECN NO	280587	SHEET 1 OF 1		

All rights reserved. The drawing and the information contained or depicted herein are the sole property of Firetrol, Inc. Copies are communicated to the recipient in strict confidence and may not be retransmitted, published, reproduced, copied or used in any manner, including as the basis for the manufacture or sale of any products, without the express prior written consent of Firetrol, Inc.

Wiring Schematic

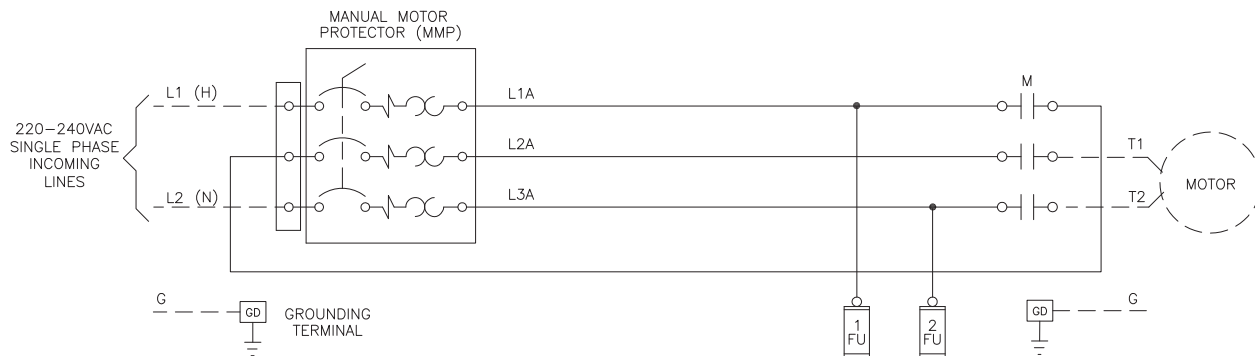
Single Phase

(220-240VAC)



FTA550F

Limited Option Jockey_{xG} Pump Controllers with MMP

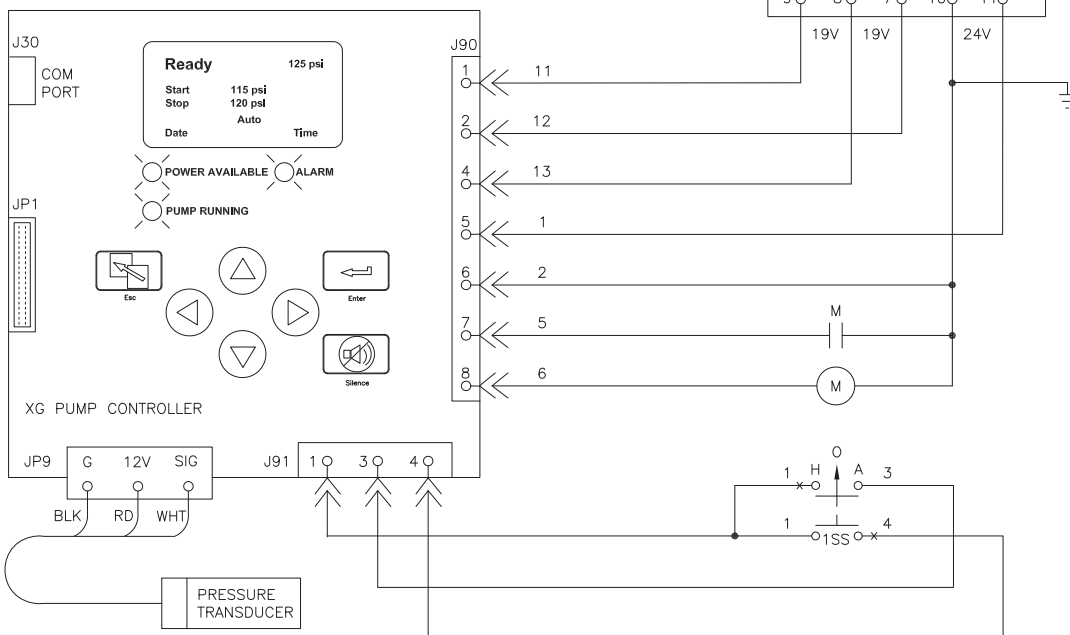


CAUTION

BONDING BETWEEN CONDUIT CONNECTIONS IS NOT AUTOMATIC AND MUST BE PROVIDED AS PART OF THE INSTALLATION.

CONTROL TRANSFORMER PRIMARY CONNECTIONS

TAP	COLOR	PRIMARY VOLTAGE
1	BLACK	PRIMARY COM
3	YELLOW	220-240VAC



GROUND TERMINALS WIRE CAPACITY (CU)

#14 AWG-#6 AWG
2.5 MM² -16 MM²

PRESSURE SYSTEM CONNECTION

1/2" FNPT

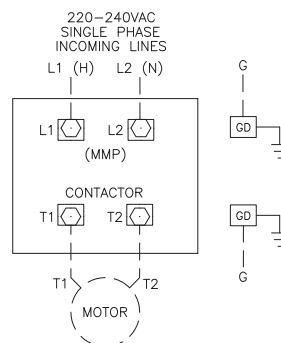
LINE TERMINALS-WIRE CAPACITY (CU)

MAXIMUM MOTOR HORSEPOWER	WIRE SIZE COPPER ONLY
220-240V	
5	#10 AWG-#4 AWG 6 MM ² -25 MM ²

MOTOR TERMINALS-WIRE CAPACITY (CU)

MAXIMUM MOTOR HORSEPOWER	WIRE SIZE COPPER ONLY
220-240V	
5	#14 AWG-#8 AWG 2.5 MM ² -10 MM ²

FOR CORRECT WIRE SIZING, REFER TO
NATIONAL ELECTRICAL CODE, NFPA 70.



SIZE	BY	DATE
A	TEF	08-22-12
THIRD ANGLE PROJECTION		
DRAWN BY	TEF	08-22-12
FINAL APPROVAL	TEF	08-22-12



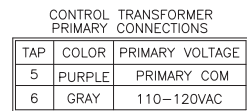
© Firetrol, Inc. Not for construction.
Subject to change without notice.

UPDATED TITLE BLOCK	C	280587	JMW	TEF	08-28-19
SEE ECN	B	239104	TEF	TEF	09-25-12
REVISION DESCRIPTION	REV	ECN NO	BY	APP	DATE
WIRING SCHEMATIC		FTA550F			
SINGLE PHASE JOCKEY XG PUMP CONTROLLER WITH MANUAL MOTOR PROTECTOR (220-240VAC)					
DRAWING NUMBER	DWG	ECN NO	NO	SHEET 1 OF 1	
WS550-13	C	280587			

All rights reserved. The drawing and the information contained or depicted herein are the sole property of Firetrol, Inc. Copies are communicated to the recipient in strict confidence and may not be retransmitted, published, reproduced, copied or used in any manner, including as the basis for the manufacture or sale of any products, without the express prior written consent of Firetrol, Inc.



Limited Option Jockey_{xG} Pump Controllers with MMP



110-120VAC
SINGLE PHASE
INCOMING LINES

L1 (H) L2 (N)

L1 (MMP) N

CONTACTOR

T3 N

T1 T2

MOTOR

G GD

1 FOR CORRECT WIRE SIZING, REFER TO
NATIONAL ELECTRICAL CODE, NFPA 70.

