

January 2005

FDJ Series Jockey Pump Controllers



NEMA 2 Enclosures

Enclosures have an oven baked powder paint finish and are supplied with NEMA 2 rating, unless otherwise ordered. Available options include: NEMA 1, 3R, 4, 4X, 12. Note: NEMA 4, 4X enclosures are Stainless Steel.

NEMA Rated Operators

EATON Cutler-Hammer NEMA rated 10250T Series oil and dust tight pushbutton operators are used in all jockey pump controllers.

120V Control Power Transformer

All jockey pump controllers are wired with a 120V control power transformer as standard.

Dual Setting Pressure Switch

A dual setting 15-290 PSI pressure switch is used to sense a drop in pressure which actuates the jockey pump starter. The setting adjustment screws are used for setting the pressure range and differential. There is one set of form-C output contacts rated at 10 amps.

Product Description

ACROSS THE LINE JOCKEY PUMP CONTROLLERS

The FDJP jockey pump controllers operate across-the-line. Full voltage is applied to the motor for starting by the use of a single motor starter. Starting inrush current is approximately 600% of rated full load amperes.

WYE-DELTA (Star-Delta) JOCKEY PUMP CONTROLLERS

When six or twelve-lead delta connected jockey pump motors are started wye (star) connected, approximately 58% of line voltage is applied to each winding. The motor develops 33% of full-voltage starting torque and draws 33% of normal locked-rotor current from the line. After a 2 second time delay (during which the motor accelerates), it is reconnected for normal operation.

Product Features

Circuit Breaker Disconnect

All jockey pump controllers are supplied with EATON Cutler-Hammer HMCP circuit breakers as standard.



Safety Door Interlock

The circuit breaker handle mechanisms are equipped with a safety door interlock which does not allow the controller door to be opened when the mechanism is in the ON position.

Technical Data

ACROSS-THE-LINE (Direct On Line) JOCKEY PUMP CONTROLLERS

Line Voltage						
200 - 208V	220 - 240V	380 - 415V	440 - 480V	550 - 600V	120V 1 ph	240V 1 ph
Motor Horsepower						
1/3 - 15Hp	1/3 - 20Hp	1/3 - 50Hp	1/3 - 50Hp	1/3 - 50Hp	1/3 - 5Hp	1/3 - 10Hp

WYE-DELTA (Star-Delta) JOCKEY PUMP CONTROLLERS

Line Voltage				
200 - 208V	220 - 240V	380 - 415V	440 - 480V	550 - 600V
Motor Horsepower				
1/3 - 15Hp (0.25 - 11KW)	1/3 - 20Hp (0.25 - 30KW)	1/3 - 50Hp (0.25 - 37KW)	1/3 - 50Hp (0.25 - 37KW)	1/3 - 50Hp (0.25 - 37KW)

Standards & Certification

The FDJ Series of Jockey Pump Controllers meet or exceed the requirements of Underwriters Laboratories, Underwriters Laboratories Canada, the Canadian Standards Association and New York City building code.



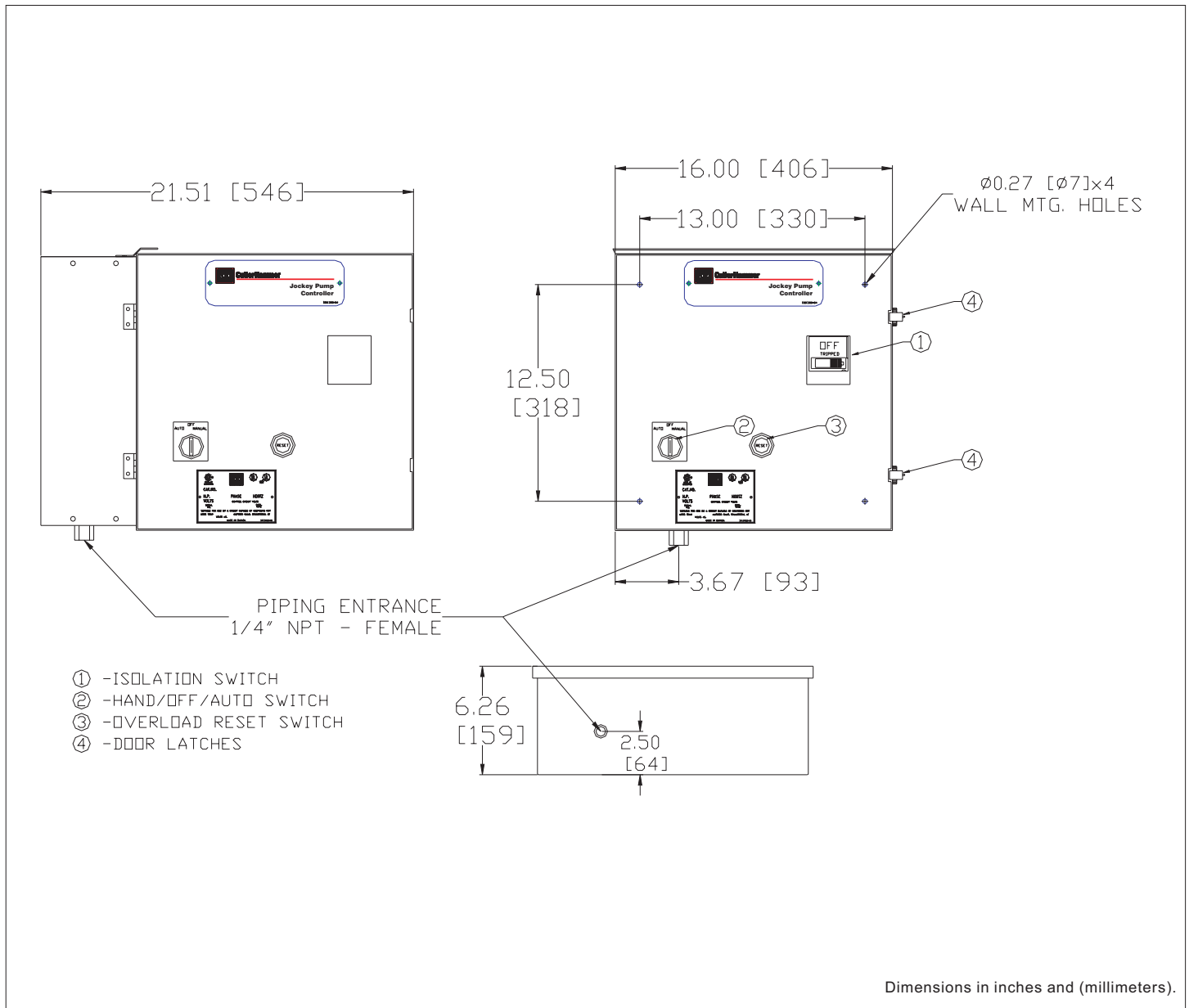
N. Y. C.
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FDJ Series Jockey Pump Controllers

Dimensions

Standard Enclosure - Type NEMA 2, 12



Motor Hp	Line Voltage	Withstand Rating			Approx. Weight Lbs. (Kg)
		Standard	Intermediate	High	
0.33 - 15	200 - 208V	100,000	150,000	200,000	40 (18)
0.33 - 20	220 - 240V				
0.33 - 50	380 - 415V				
0.33 - 50	440 - 480V	25,000	100,000		
0.33 - 50	550 - 600V				
0.33 - 5	120V 1 Ø	100,000	150,000		
0.33 - 10	240V 1 Ø				

Note: 380 - 415V coils are rated for 50/60Hz

NOTES:

1. All enclosures finished in grey.
2. Cable Entrance either top or bottom.
3. Standard Enclosure type NEMA 2.
4. This size enclosure is not suitable for mounting of Mercoid pressure switch. See drawing on page 1-3.

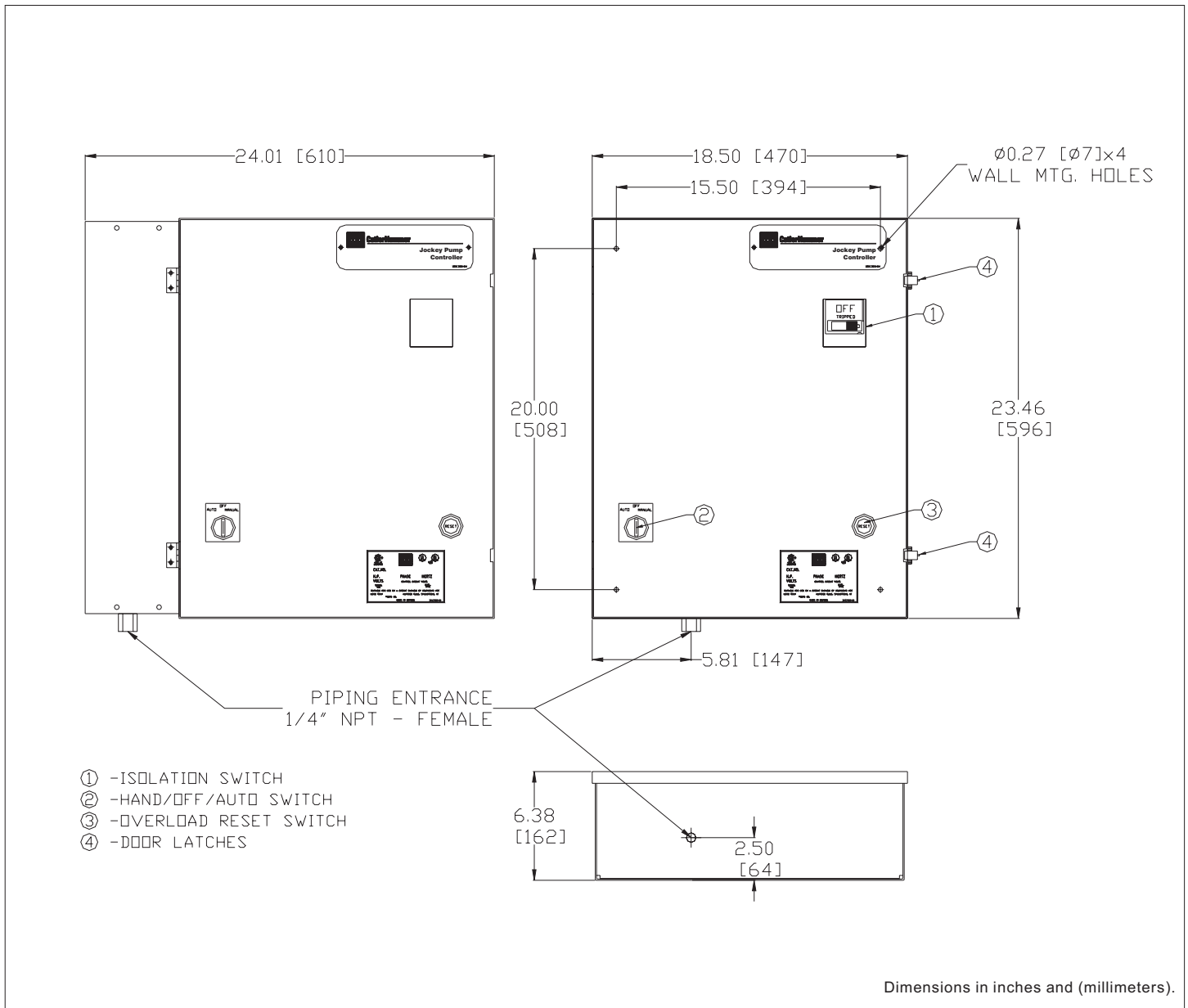


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FDJ Series Jockey Pump Controllers

Dimensions

Special Options Enclosure - Type NEMA 2, 12 - (Consult factory for details).



Motor Hp	Line Voltage	Withstand Rating			Approx. Weight Lbs. (Kg)
		Standard	Intermediate	High	
0.33 - 15	200 - 208V	100,000	150,000	200,000	55 (25)
0.33 - 20	220 - 240V				
0.33 - 50	380 - 415V				
0.33 - 50	440 - 480V	25,000	100,000		
0.33 - 50	550 - 600V				
0.33 - 5	120V 1 ∅	100,000	150,000		
0.33 - 10	240V 1 ∅				

Note: 380 - 415V coils are rated for 50/60Hz

NOTES:

1. All enclosures finished in grey.
2. Cable Entrance either top or bottom.
3. Standard Enclosure type NEMA 2.
4. This size enclosure required for mounting of Mercoid pressure switch.

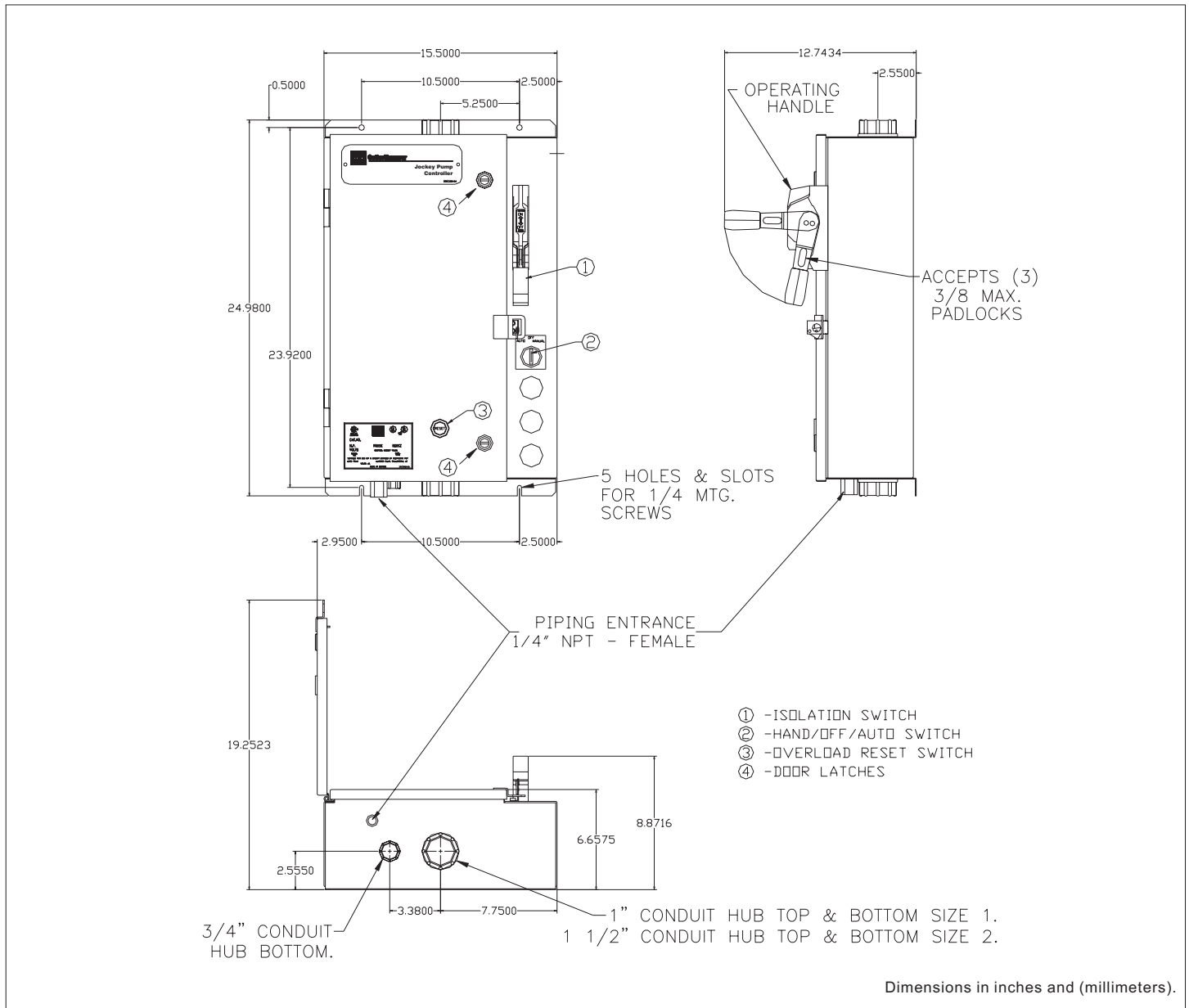


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FDJ Series Jockey Pump Controllers

Dimensions

Standard Enclosure - Type NEMA 3R, 4, 4X,



Motor Hp	Line Voltage	Withstand Rating			Approx. Weight Lbs. (Kg)
		Standard	Intermediate	High	
0.33 - 15	200 - 208V	100,000	150,000	200,000	40 (18)
0.33 - 20	220 - 240V				
0.33 - 50	380 - 415V				
0.33 - 50	440 - 480V	25,000	100,000		
0.33 - 50	550 - 600V				
0.33 - 5	120V 1 ∅	100,000	150,000		
0.33 - 10	240V 1 ∅				

Note: 380 - 415V coils are rated for 50/60Hz

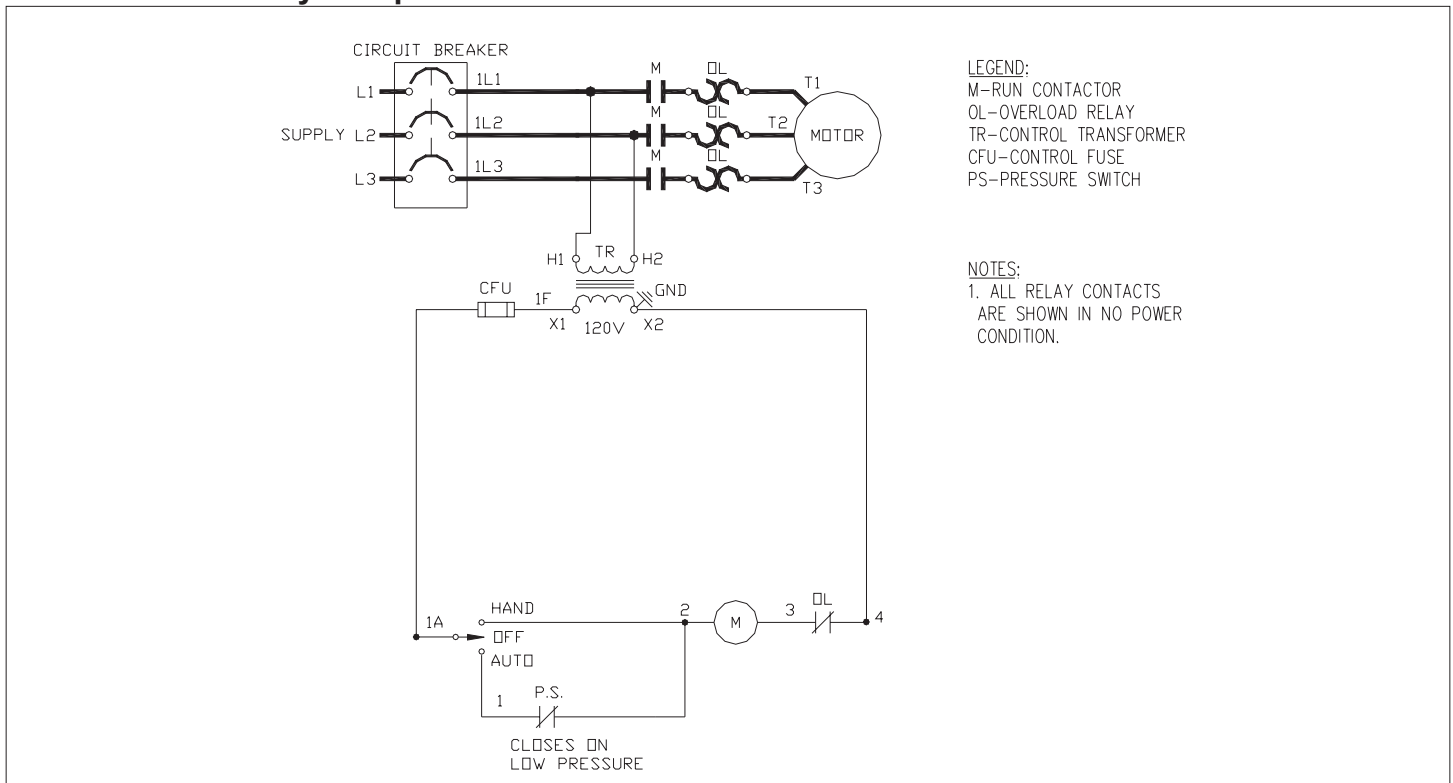
NOTES:

- All enclosures finished in grey.
- Cable Entrance either top or bottom.
- NEMA 4, 4X enclosures are Stainless Steel.

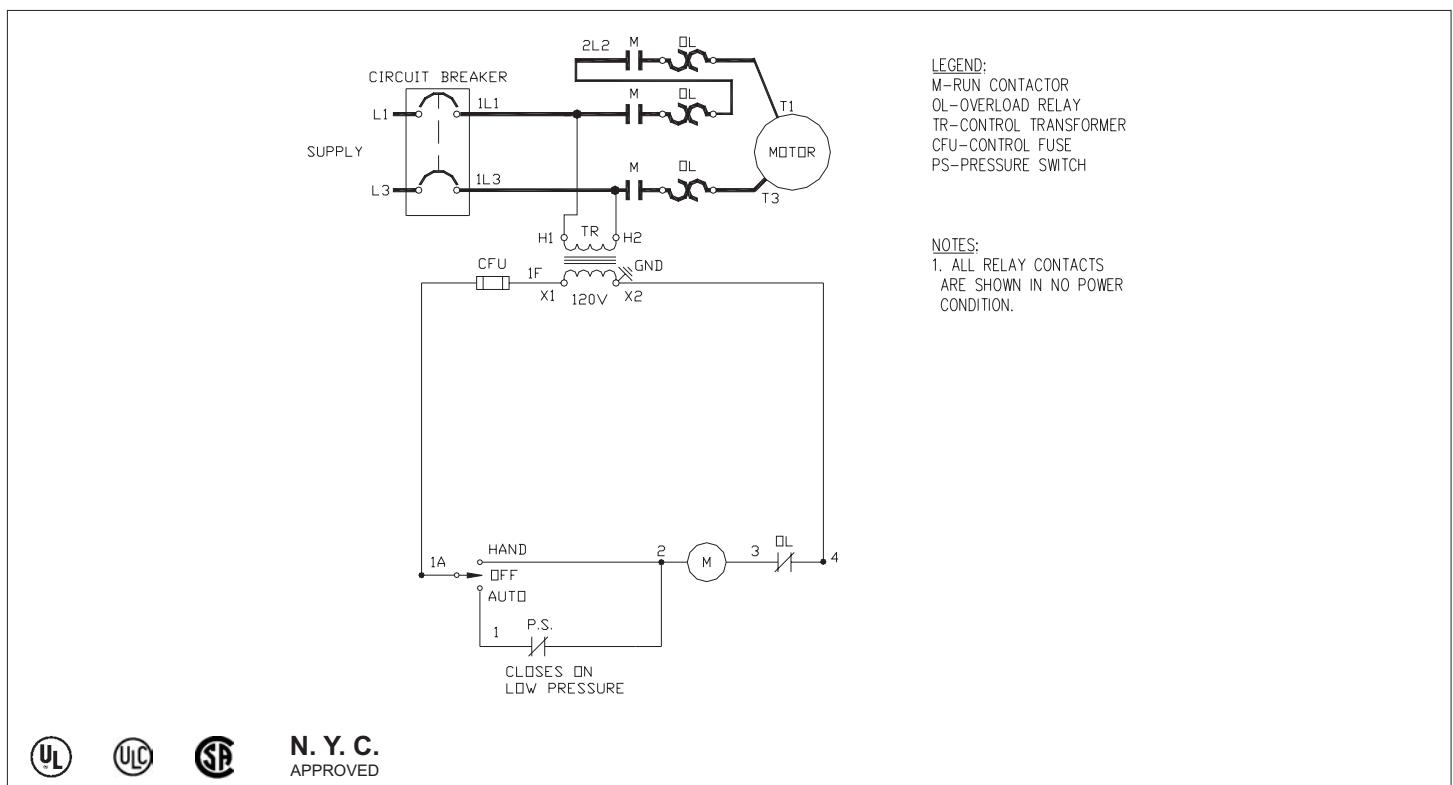


Technical Data - Electrical Schematic

Three Phase Jockey Pump Controller



Single Phase Jockey Pump Controller

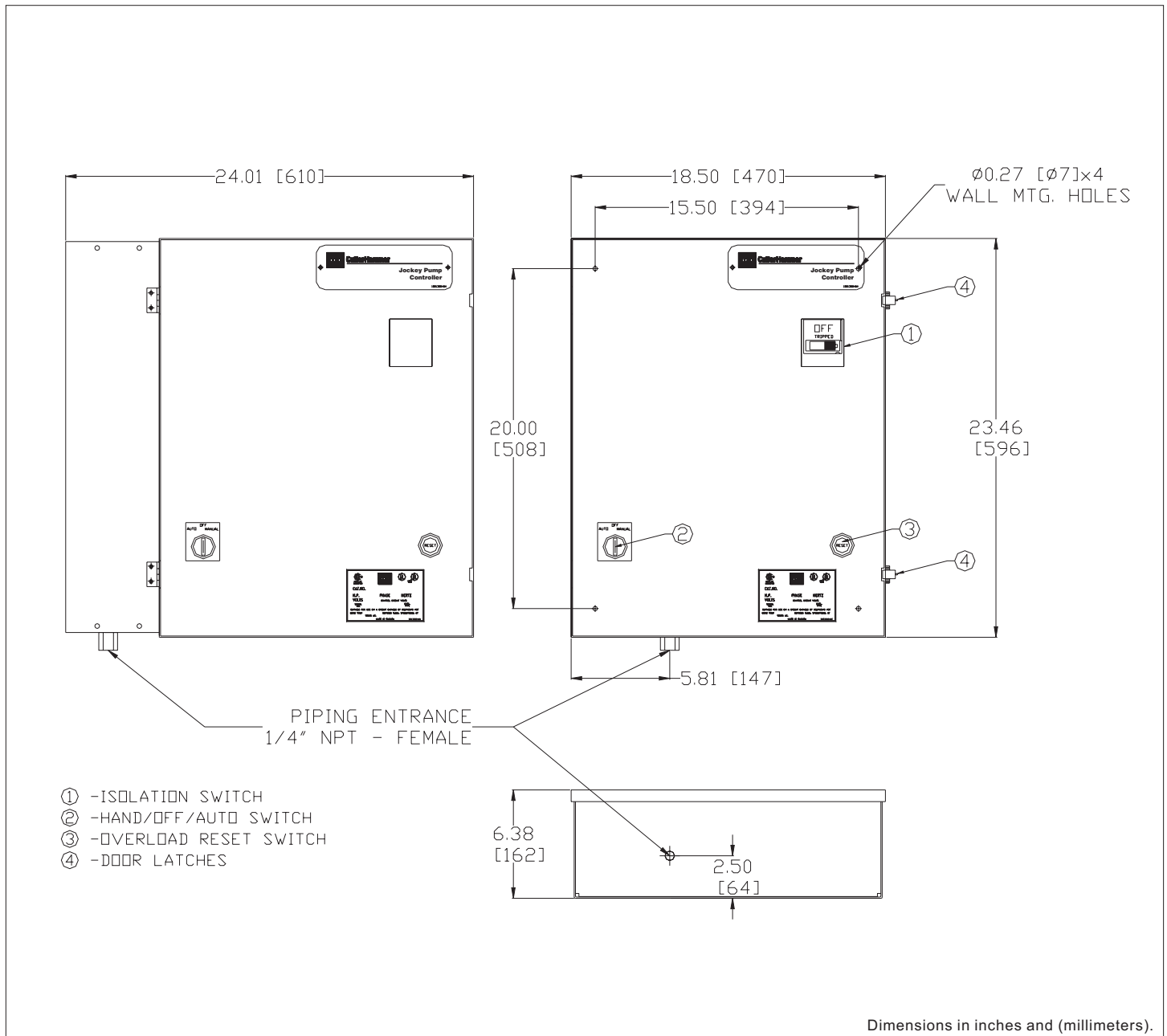


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FDJ Series Jockey Pump Controllers

Dimensions

WYE DELTA (Star-Delta) Jockey Pump Controller



Motor Hp	Motor Kw	Line Voltage	Withstand Rating			Approx. Weight Lbs. (Kg)
			Standard	Intermediate	High	
0.33 - 15	0.25 - 11	200 - 208V	100,000	150,000	200,000	55 (25)
0.33 - 40	0.25 - 37	220 - 240V				
0.33 - 50	0.25 - 37	380 - 415V				
0.33 - 50	0.25 - 37	440 - 480V				
0.33 - 50	0.25 - 37	550 - 600V	25,000	100,000		

Note: 380 - 415V coils are rated for 50/60Hz

NOTES:

1. All enclosures finished in grey.
2. Cable Entrance either top or bottom.
3. Standard Enclosure type NEMA 2.

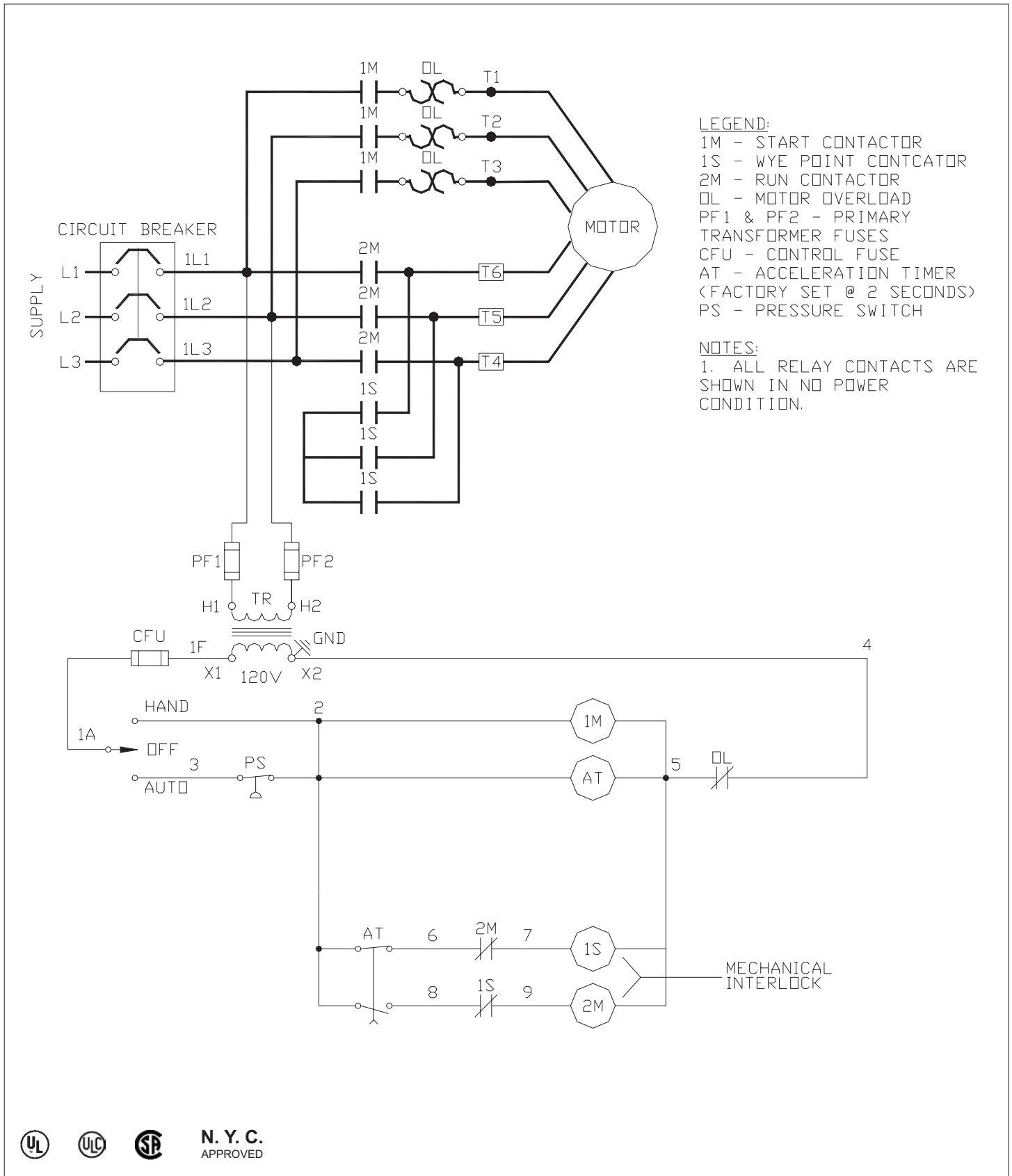


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FDJ Series Jockey Pump Controllers

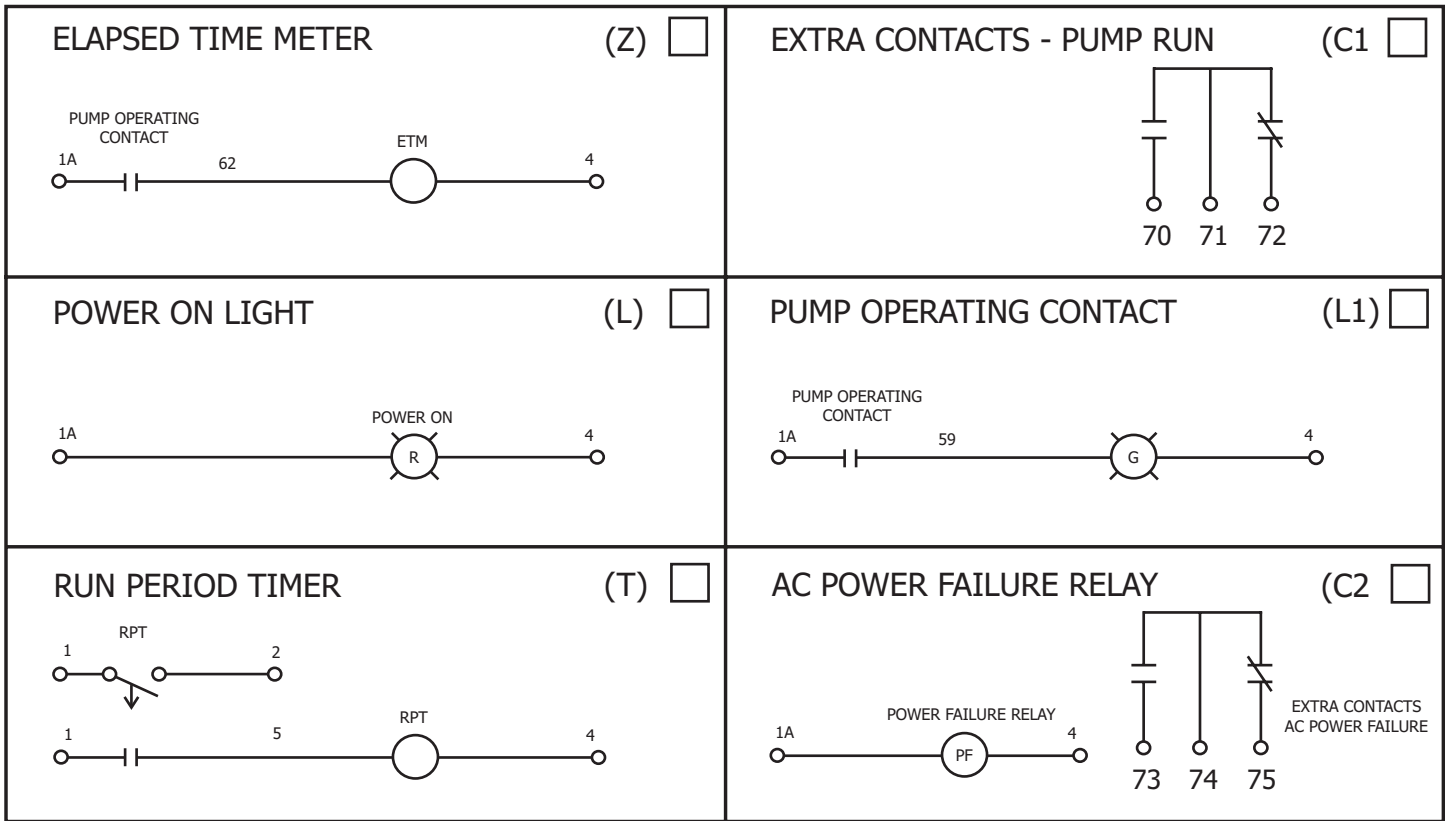
Electric Motor Connections

WYE DELTA (Star-Delta) Jockey Pump Controller



FDJ Series Jockey Pump Controllers

Options - Wiring Diagram



**FDJP
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Horsepower (KW)	
1/3	(0.25)
1/2	(0.373)
3/4	(0.56)
1	(0.75)
1.5	(1.1)
2	(1.5)
3	(2.25)
5	(3.75)
7.5	(5.6)
10	(7.5)
15	(11)
20	(15)
25	(18.6)
30	(22)
40	(30)
50	(37)

Voltage	
A =	200 - 208V 60 HZ
B =	220 - 240V 60 HZ
C =	380 - 415V 50/60 HZ
D =	440 - 480V 60 HZ
E =	550 - 600V 60 HZ
F =	416 V 60 HZ
G1 =	120V Single Phase (FDJP only)
G2 =	240V Single Phase (FDJP only)

Options	
C1	Extra Contacts "Pump Run" (one N.O. std.)
C2	Extra Contacts "AC Power Failure"
E1	NEMA 3R - Raintight Enclosure (Refer to drawing on page 1-4)
E2	NEMA 4 - Watertight Enclosure (Refer to drawing on page 1-4)
E3	NEMA 12 - Industrial Dust Tight Enclosure (Refer to drawing on page 1-2)
E5	NEMA 4X - Stainless Steel Enclosure (Refer to drawing on page 1-4)
E7	NEMA 1 - Enclosure (23.46"H x 10.50"W x 6.38"D) **
E8	Tropicalization
EX	Export Crating
POL	"Power-On" Light
PRL	"Pump Run" Light
P1	Mercoird 10-300 PSI Pressure Switch *
P2	Mercoird 25-600 PSI Pressure Switch *
P3	ALCO 90-450 PSI Pressure Switch
P5	ALCO 15-260 PSI Pressure Switch
P7	Low Suction Pressure Switch and Alarm Pilot Light
P8	Low Suction Shutdown (Requires P7)
P11	Pressure Switch (10-300psi) - Sea Water (Stainless Steel Mercoird Switch)
P12	Pressure Switch (25-600psi) - Sea Water (Stainless Steel Mercoird Switch)
R1	Space Heater (120 / 220V)
R2	Space Heater c/w Thermostat
R3	Space Heater c/w Humidistat
S	Sequential Start
T	Running Period Timer
Z	Elapsed Run Time Meter

* Includes oversized enclosure, refer to drawing on page 1-3.
** Refer to drawing MD05805056K @ www.chfire.com.