



TORNATECH

Project: _____

Customer: _____

Engineer: _____

Pump Manufacturer: _____

Technical Data Submittal Document

Model JPD Across the Line Start Duplex Jockey Pump Controller



Contents:
Data Sheets
Dimensional Data
Wiring Schematics
Field Connections

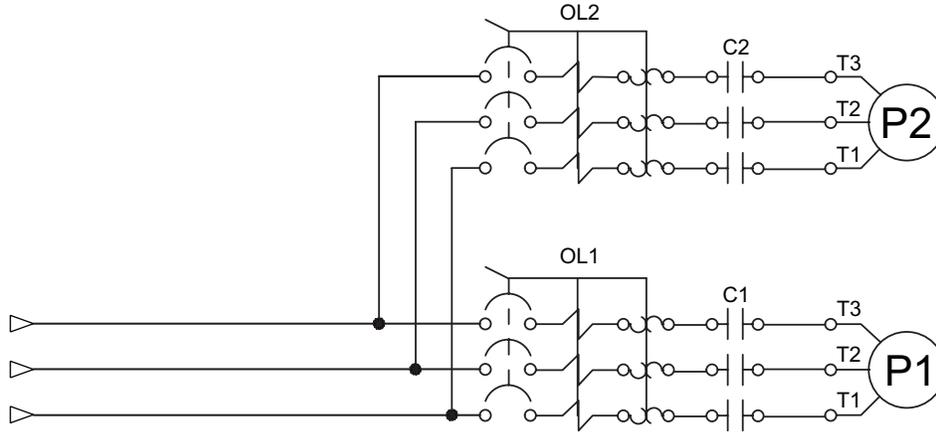
Note: The drawings included in this package are for controllers covered under our standard offering. Actual AS BUILT drawings may differ from what is shown in this package.



N.Y.C.
APPROVED



August 2020



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APPROVED



Listing	Underwriters Laboratory (UL)	UL508A - Industrial Pump Controllers
	New York City	Accepted for use in the City of New York by the Department of Buildings
	Optional	
	<input type="checkbox"/> CE Mark	Various EN, IEC & CEE directives and standards
Enclosure	Protection Rating <input type="checkbox"/> Standard: NEMA 2 (IP31) Optional <input type="checkbox"/> NEMA 12 <input type="checkbox"/> NEMA 4X-304 sst painted <input type="checkbox"/> NEMA 3 <input type="checkbox"/> NEMA 4X-304 sst brushed finish <input type="checkbox"/> NEMA 3R <input type="checkbox"/> NEMA 4X-316 sst painted <input type="checkbox"/> NEMA 4 <input type="checkbox"/> NEMA 4X-316 sst brushed finish	
	Accessories <ul style="list-style-type: none"> • Wall mounting lugs (x4) 	Paint Specifications <ul style="list-style-type: none"> • Red RAL3002 • Powder coating • Glossy textured finish



Fuseless Duplex Motor Starter	<ul style="list-style-type: none"> • Main disconnect - rotary type - door interlocked • Thermo-magnetic motor protectors • Contactors 		
Control Circuit	<ul style="list-style-type: none"> • 24V.AC 		
iPD+ Operator Interface	<ul style="list-style-type: none"> • Solid state controls • All adjustments on door front • Navigation pushbuttons 		
Pressure Sensing	<ul style="list-style-type: none"> • Pressure transducer for fresh water application 316 stainless steel construction • Rated for 0-600psi working pressure • Pressure sensing line connection 1/2" brass Male NPT 		
Visual Indications	<ul style="list-style-type: none"> • Manual motor start/run LED • Automatic motor start/run LED • Pressure reading <ul style="list-style-type: none"> • Start pressure • Stop pressure • System pressure • System pressure diagnostic LED's <ul style="list-style-type: none"> • Green: system pressure at or above stop pressure • Yellow: system pressure between start and stop pressure • Red: system pressure at or below start pressure • AUTO mode • OFF mode 		
Timers	<ul style="list-style-type: none"> • Minimum run timer (off delay) • Delay start timer (on delay) • Visual countdown 		
Operators	<ul style="list-style-type: none"> • OFF-AUTO pushbutton • Start and Stop pushbutton • Four (4) position selector switch (P1, P2, P1+P2, AUTO) 		
Operation	Automatic Start	Start on pressure drop	
	Manual Start	Start pushbutton	
	Stopping	Stop pushbutton	
	Timers	Field adjustable & visual countdown	<ul style="list-style-type: none"> • Minimum run timer (off delay) • Delay start timer (on delay)
	Lead / Stand-by	Full redundancy, next pump start, in case of short circuit or overload	
	Alternation	After every start/stop	

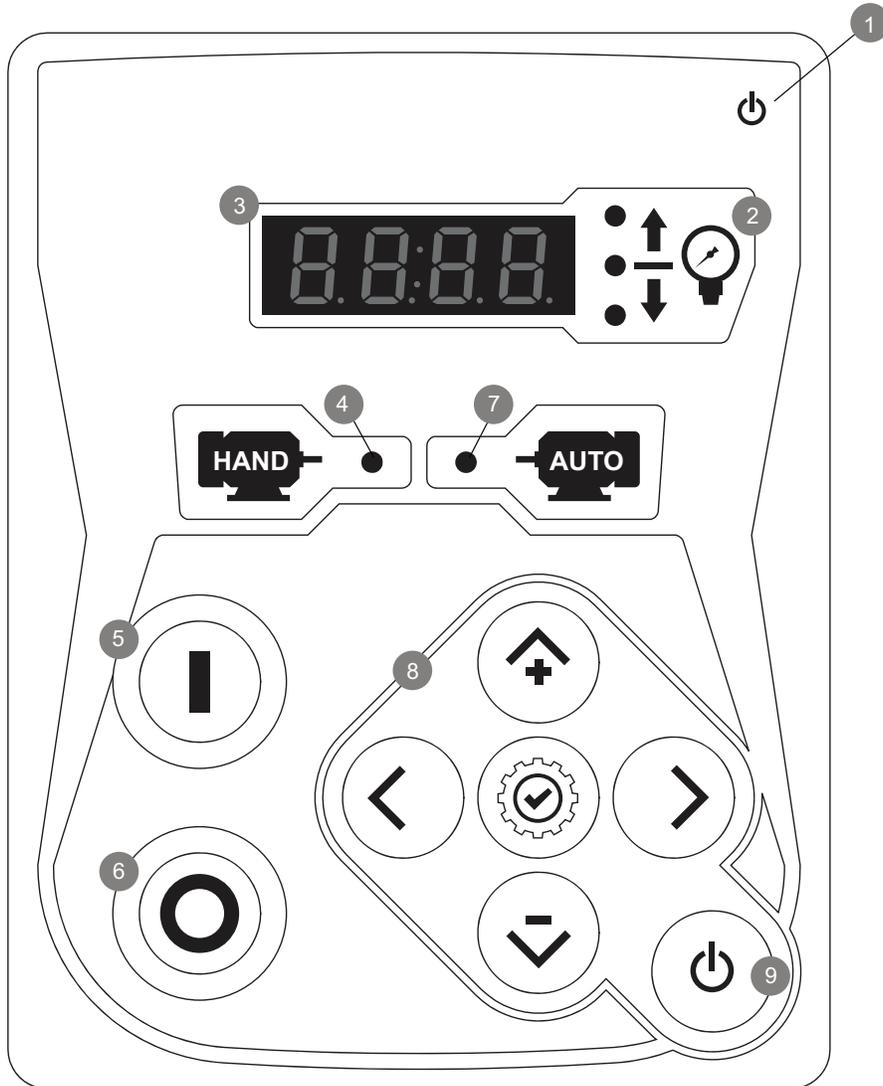


<input type="checkbox"/> A4	Elapsed time meter (time totalizer)
<input type="checkbox"/> A5	Motor run alarm contact
<input type="checkbox"/> A6	Loss of power alarm contact
<input type="checkbox"/> A7	Overload or short circuit alarm contact
<input type="checkbox"/> A7A	Overload pilot light
<input type="checkbox"/> D11D	Pressure transducer 0-600psi with 1/2" MNPT 316 stainless steel bushing
<input type="checkbox"/> D12	CE Mark c/w externally mounted wetted parts
<input type="checkbox"/> D13A	Externally mounted wetted parts
<input type="checkbox"/> D14	Export packing for 1 controller
<input type="checkbox"/> D18	Audible alarm
<input type="checkbox"/> D19	Anti-condensation heater and thermostat
<input type="checkbox"/> D20	Anti-condensation heater and humidistat
<input type="checkbox"/> D21	Tropicalization
<input type="checkbox"/> D22	Phase reversal / failure pilot light and alarm contact
<input type="checkbox"/> D23	Controller power healthy pilot light and alarm contact
<input type="checkbox"/> D24	Pump failure via current sensing relay with pilot light and dry alarm contact
<input type="checkbox"/> D25	Low zone pump control function
<input type="checkbox"/> D26	Mid zone pump control function
<input type="checkbox"/> D27	High zone pump control function
<input type="checkbox"/> D28	Controller in auto alarm contacts
<input type="checkbox"/> D29	Controller in off alarm contacts
<input type="checkbox"/> D30	Motor heater circuit
<input type="checkbox"/> D32	Service entrance rated - 100kA short circuit withstand rating: • 120V/1ph (0.5hp max.) • 240V/1ph (1hp max.) • 200V-208V - 60hz (2hp max.) • 220V-240V - 60hz (3hp max.) • 380V-416V - 50hz - 60hz (5hp max.) • 440V-480V - 60hz (5hp max.)
<input type="checkbox"/> D33	Service entrance rated - 65kA short circuit withstand rating: • 120V/1ph (0.5hp max.) • 240V/1ph (1hp max.) • 200V-208V - 60hz (3hp-15hp max.) • 220V-240V - 60hz (515hp max.) • 380V-416V - 50hz - 60hz (7.5hp - 40hp max.) • 440V-480V - 60hz (7.5hp-40hp max.)
<input type="checkbox"/> D34	Service entrance rated - 42kA short circuit withstand rating: • 600V - 60hz (7.5hp max.)

<input type="checkbox"/> L01	Other language and English (bilingual)
<input type="checkbox"/> L02	French
<input type="checkbox"/> L03	Spanish
<input type="checkbox"/> L04	German
<input type="checkbox"/> L05	Italian
<input type="checkbox"/> L06	Polish
<input type="checkbox"/> L07	Romanian
<input type="checkbox"/> L08	Hungarian
<input type="checkbox"/> L09	Slovak
<input type="checkbox"/> L10	Croatian
<input type="checkbox"/> L11	Czech
<input type="checkbox"/> L12	Portuguese
<input type="checkbox"/> L13	Dutch
<input type="checkbox"/> L14	Russian
<input type="checkbox"/> L15	Turkish
<input type="checkbox"/> L16	Swedish
<input type="checkbox"/> L17	Bulgarian
<input type="checkbox"/> L18	Thai
<input type="checkbox"/> L19	Indonesian
<input type="checkbox"/> L20	Slovenian

Note: Options chosen from this page are not electrically represented on the wiring schematics in this submittal package.

iPD+ Operator Interface



- | | |
|-----------------------|-------------------------|
| 1 - Power on LED | 6 - STOP pushbutton |
| 2 - System status LED | 7 - Auto start LED |
| 3 - Digital display | 8 - Navigation keypad |
| 4 - Hand start LED | 9 - ON - OFF pushbutton |
| 5 - START pushbutton | |

Duplex Jockey Pump Controller

Across The Line / 3 Phase

Model: JPD

Dimensions

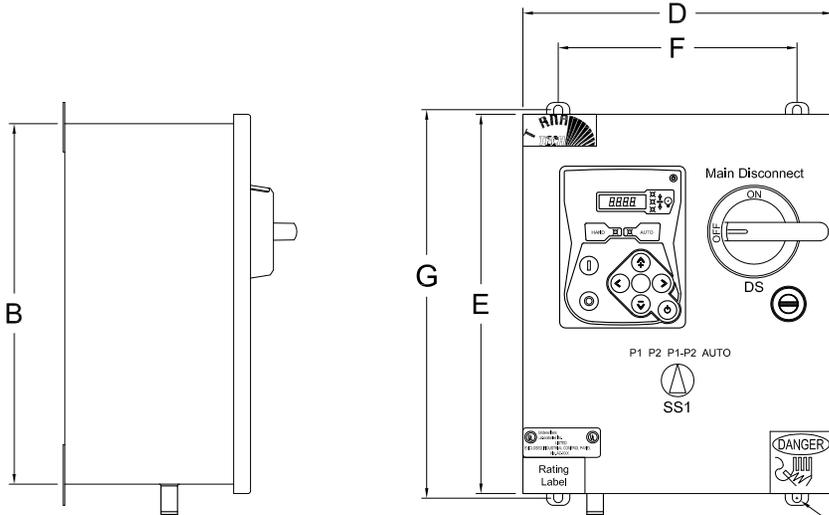
Built to the latest edition of the UL 508A & CSA C22.2 No.14 standard

PER QUOTE DRAWING No.



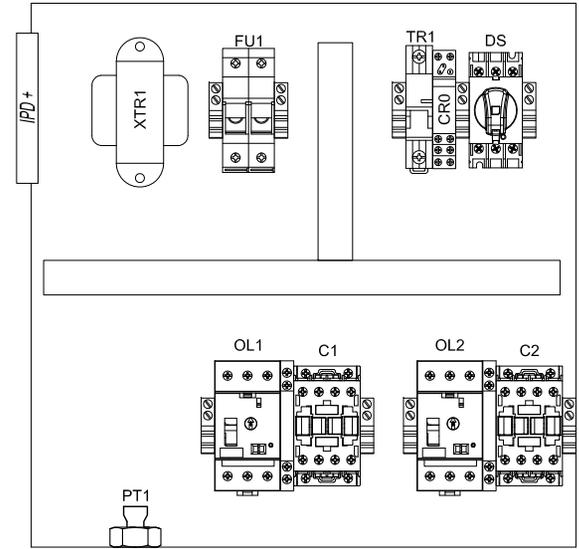
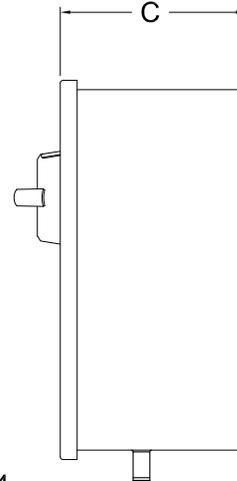
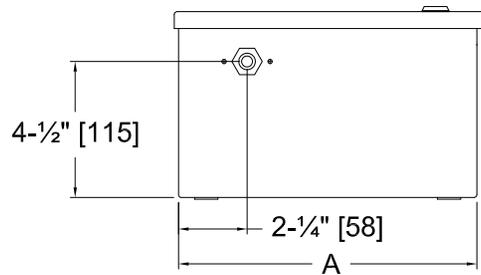
REV.	DESCRIPTION	DD/MM/YY
7	Revised logo	18/06/18
8	Sensing line connection changed	25/03/25
9	UL logo updated CSA logo removed	14/07/20

Drawing No: JPD-DI500/E



Ø 3/8" [9] x4

Sensing Line Connection 1/2" M,NPT



Standard Internal Layout

Dimensions*					Enclosure Dimensions A X B X C	Door Dimensions D X E	Anchor Dimensions F X G
Maximum Motor Horsepower							
200-208V	220-240V	380-416V	440-480V	575-600V	16"X16"X7-1/2"	16-1/2"X16-1/2"	14"X16-3/4"
15HP	15HP	30HP	30HP	30HP			

Notes:

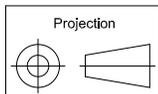
- Standard NEMA: NEMA 2
- Standard Paint: Textured Red RAL 3002.
- All Dimensions are in Inches [Millimeters]
- Use Watertight Conduit and Connector Only.
- Protect Equipment Against Drilling Chips.
- Door Swing Equal to Door Width

Drawing for information only.

Manufacturer reserves the right to modify this drawing without notice.

Contact manufacturer for "As Built" drawing.

*Dimensions may change depending on option required. Consult Factory for exact dimensions.



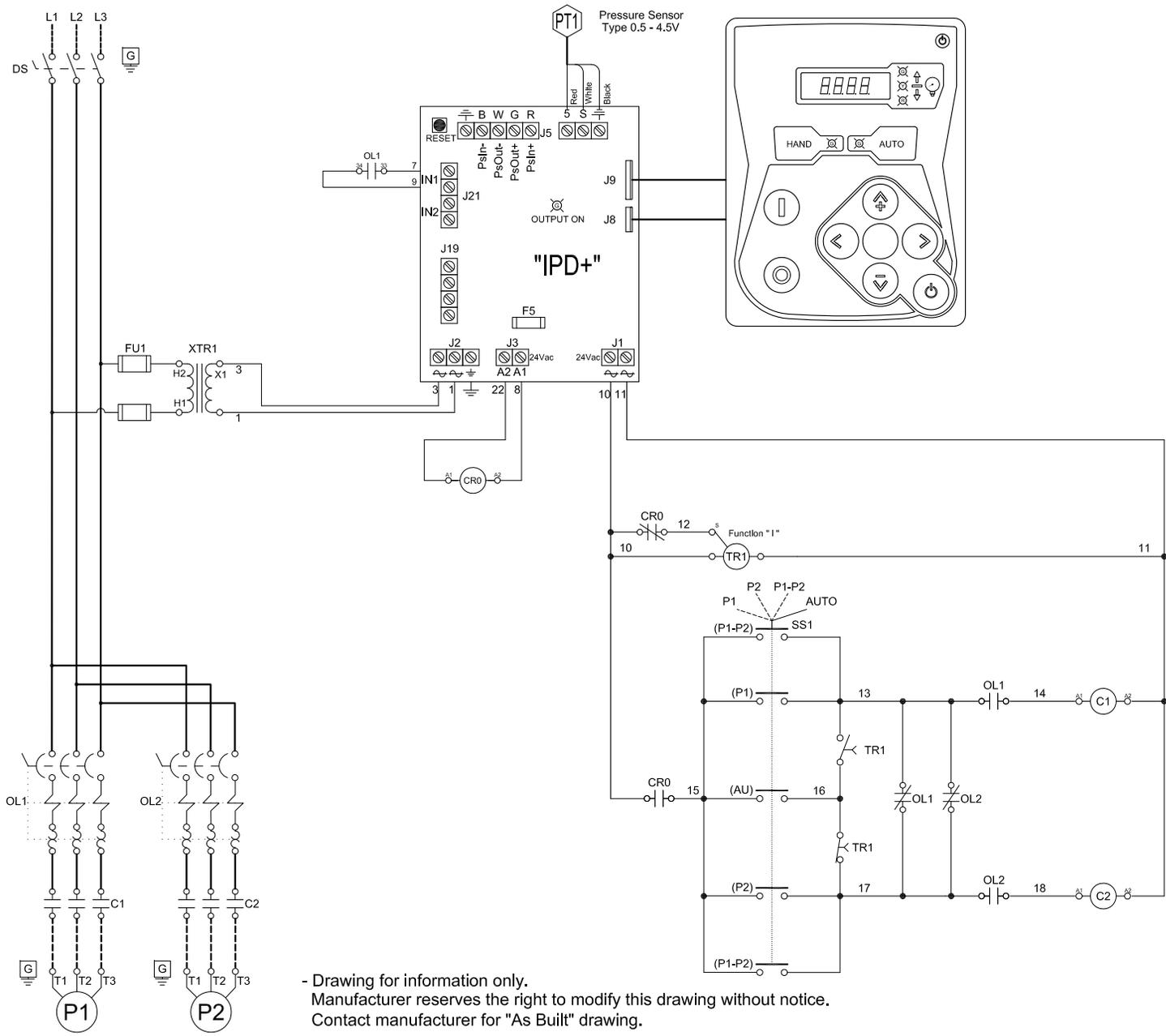
Duplex Jockey Pump Controller

Across The Line / 3 Phase

Model:JPD

Wiring schematic

PER QUOTE DRAWING No.		SEISMIC COMPLIANT	UL US	NYC Dept of Building Approved	TORNATECH
REV.	DESCRIPTION	DD/MM/YY		Drawing No.	
6	Modified J19 Outputs ID	10/06/16		JPD-WS500/E	
7	Revised logo	18/06/18			
8	UL logo updated CSA logo removed	14/07/20			



- Drawing for information only.
 Manufacturer reserves the right to modify this drawing without notice.
 Contact manufacturer for "As Built" drawing.

Duplex Jockey Pump Controller

Across The Line / 3 Phase

Model:JPD

Line and Motor Terminal Size

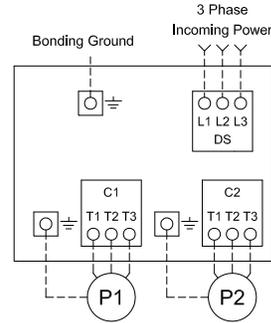
PER QUOTE DRAWING No.



REV.	DESCRIPTION	DD/MM/YY
6	Modified J19 Outputs ID	10/06/16
7	Revised logo	18/06/18
8	UL logo updated CSA logo removed	14/07/20

Drawing No:
JPD-TD500/E

Power Connections and Motor Connections



Line Terminals (L1,L2,L3,GND)

Maximum Motor Horsepower					Wire Size Copper Only	Torque	Wire Size Ground Copper Only
200-208V	220-240V	380-416V	440-480V	575-600V			
2x5HP	2x5HP	2x10HP	2x10HP	2x10HP	#14 AWG - #6 AWG	2 Nm	#14 AWG - #2 AWG
2x15HP	2x15HP	2x30HP	2x30HP	2x30HP	#12 AWG - #1 AWG	6 Nm	#6 AWG - #2 AWG

Motor Terminals (T1,T2,T3,GND)

Maximum Motor Horsepower					Wire Size Copper Only	Torque	Wire Size Ground Copper Only
200-208V	220-240V	380-416V	440-480V	575-600V			
5HP	7.5HP	10HP	15HP	20HP	#14 AWG - #10 AWG	1.8 Nm	#14 AWG - #2 AWG
10HP	10HP	15HP	20HP	25HP	#14 AWG - #6 AWG	2.5 Nm	#12 AWG - #2 AWG
15HP	15HP	30HP	30HP	30HP	#10 AWG - #3 AWG	5 Nm	#12 AWG - #2 AWG