



# TORNATECH

Project: \_\_\_\_\_

Customer: \_\_\_\_\_

Engineer: \_\_\_\_\_

Pump Manufacturer: \_\_\_\_\_

## Technical Data Submittal Document

### Model JPY

Wye-Delta Open Transition Start  
Jockey Pump Controller



#### Contents:

Data Sheets  
Dimensional Data  
Wiring Schematics  
Field Connections

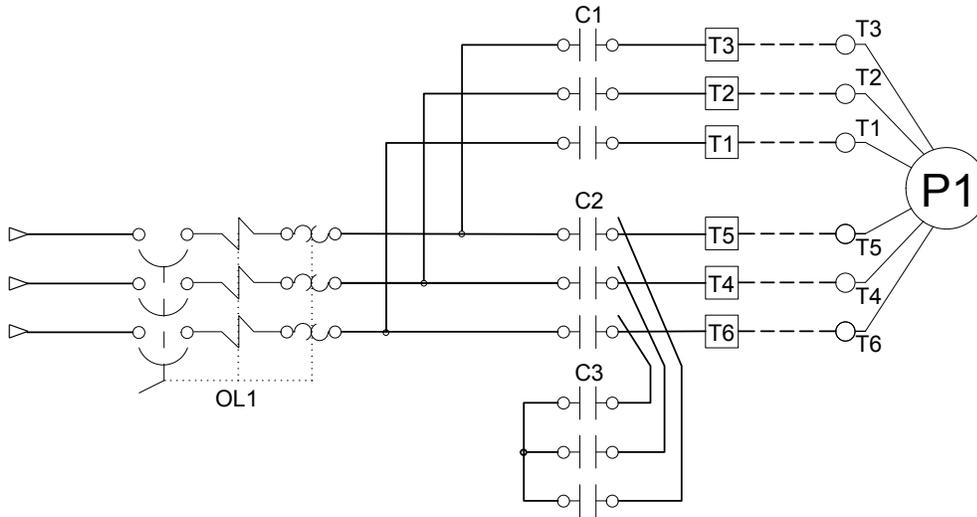
**Note:** The drawings included in this package are for controllers covered under our standard offering. Actual AS BUILT drawings may differ from what is shown in this package.



N.Y.C.  
APPROVED



August 2020



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



<b>Wye-Delta Open Transition Fuseless Motor Starter</b>	<ul style="list-style-type: none"> <li>• Main disconnect - rotary type - door interlocked</li> <li>• Thermo-magnetic motor protector</li> <li>• Wye-delta open transition contactor set</li> </ul>		
<b>Control Circuit</b>	<ul style="list-style-type: none"> <li>• 24V.AC</li> </ul>		
<b>iPD+ Operator Interface</b>	<ul style="list-style-type: none"> <li>• Solid state controls</li> <li>• All adjustments on door front</li> <li>• Navigation pushbuttons</li> </ul>		
<b>Pressure Sensing</b>	<ul style="list-style-type: none"> <li>• Pressure transducer for fresh water application 316 stainless steel construction</li> <li>• Rated for 0-600psi working pressure</li> <li>• Pressure sensing line connection 1/2" brass Male NPT</li> </ul>		
<b>Visual Indications</b>	<ul style="list-style-type: none"> <li>• Manual motor start/run LED</li> <li>• Automatic motor start/run LED</li> <li>• Motor overload</li> <li>• Pressure reading               <ul style="list-style-type: none"> <li>• Start pressure</li> <li>• Stop pressure</li> <li>• System pressure</li> </ul> </li> <li>• System pressure diagnostic LED's               <ul style="list-style-type: none"> <li>• Green: system pressure at or above stop pressure</li> <li>• Yellow: system pressure between start and stop pressure</li> <li>• Red: system pressure at or below start pressure</li> </ul> </li> <li>• AUTO mode</li> <li>• OFF mode</li> </ul>		
<b>Timers</b>	<ul style="list-style-type: none"> <li>• Minimum run timer (off delay)</li> <li>• Delay start timer (on delay)</li> <li>• Visual countdown</li> </ul>		
<b>Counters</b>	<ul style="list-style-type: none"> <li>• Pump start counter</li> <li>• Elapsed timer meter (hours / non-resettable)</li> </ul>		
<b>Operators</b>	<ul style="list-style-type: none"> <li>• OFF-AUTO pushbutton</li> <li>• Start and Stop pushbutton</li> </ul>		
<b>Operation</b>	Automatic Start	Start on pressure drop	
	Manual Start	Start pushbutton	
	Stopping	Stop pushbutton	
	Timers	Field adjustable & visual countdown	<ul style="list-style-type: none"> <li>• Minimum run timer (off delay)</li> <li>• Delay start timer (on delay)</li> </ul>

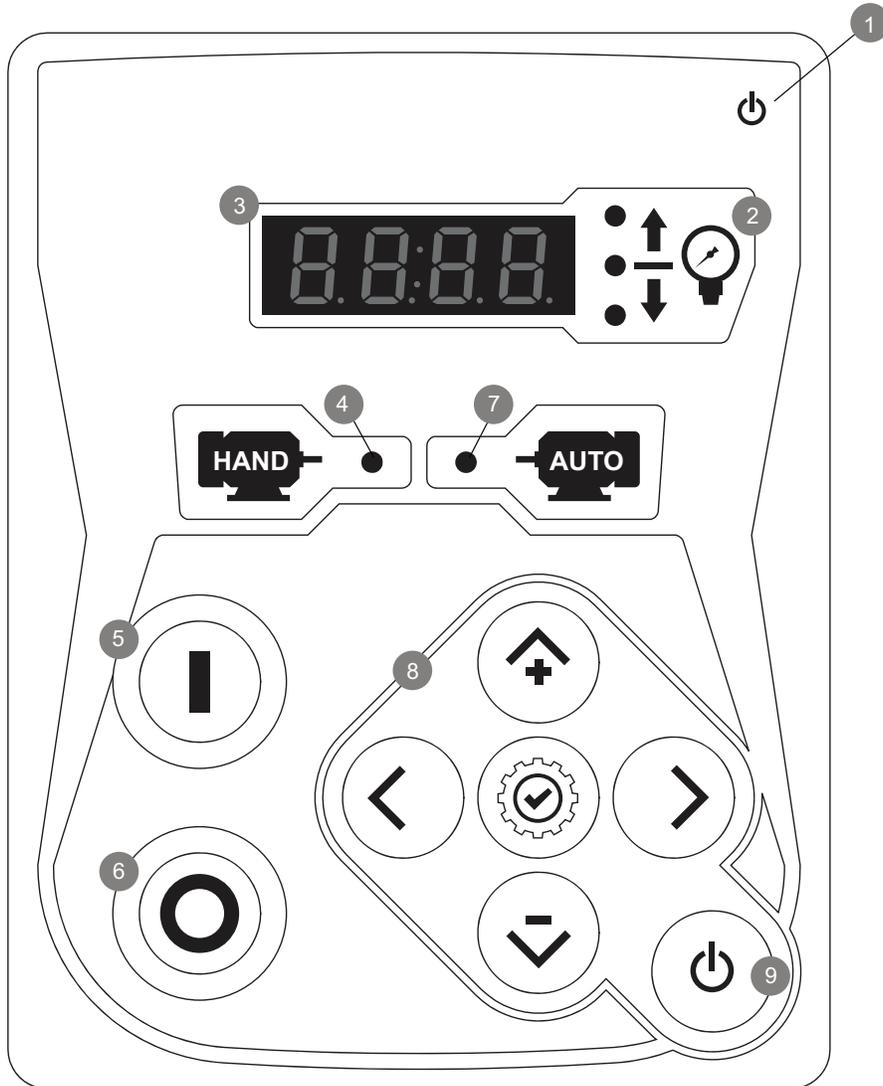


<input type="checkbox"/> A4	Elapsed time meter (time totalizer)
<input type="checkbox"/> A5	Motor run alarm contact
<input type="checkbox"/> A6	Loss of power alarm contact
<input type="checkbox"/> A7	Overload or short circuit alarm contact
<input type="checkbox"/> A7A	Overload pilot light
<input type="checkbox"/> 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  |                         |

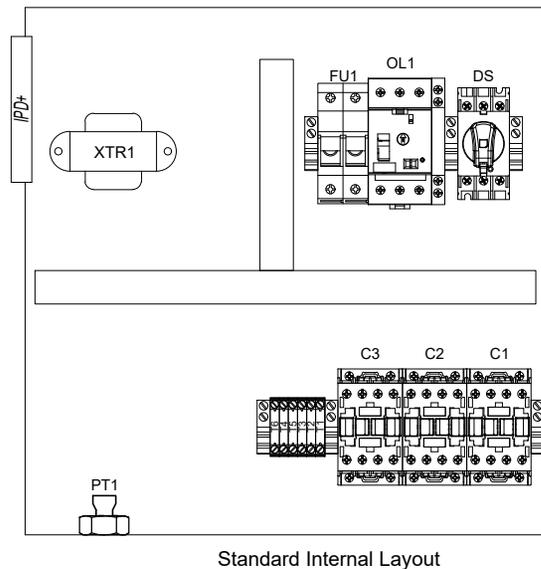
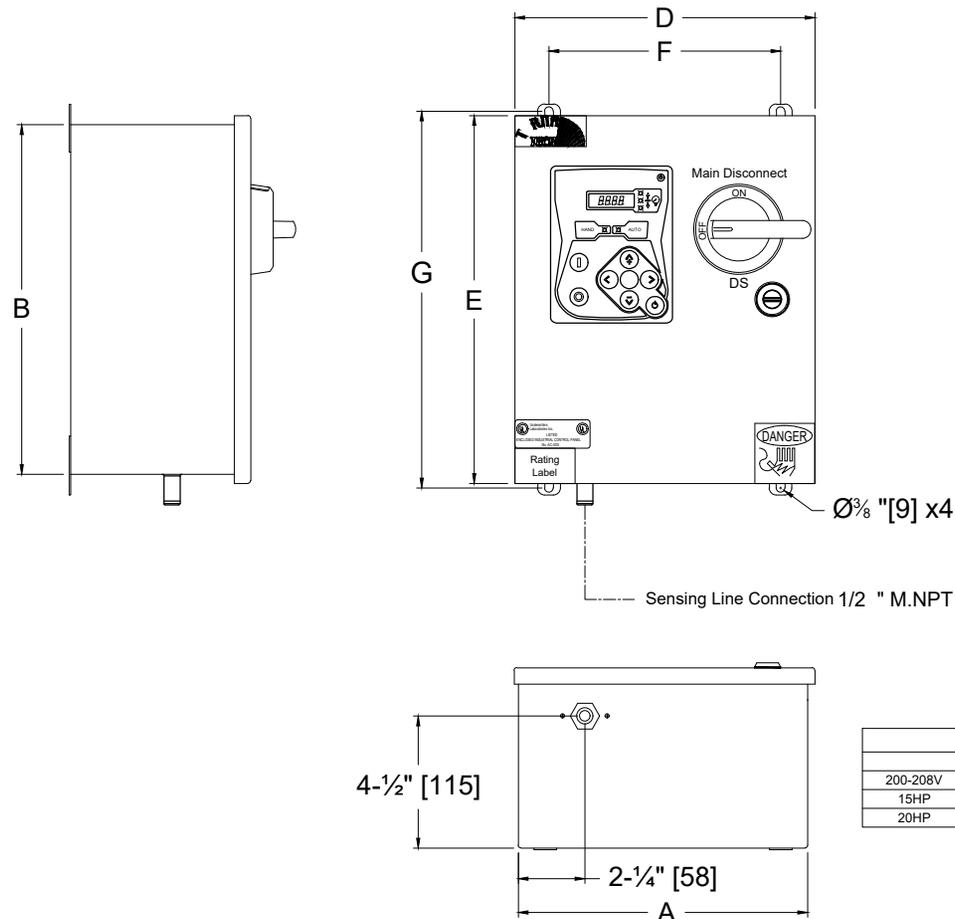
# Jockey Pump Controller

Reduced Voltage/Wye Delta (Open Transition)

## Model: JPY

PER QUOTE DRAWING No.		NYC Dpt of Building Approved		
REV	DESCRIPTION	DD/MM/YY	Drawing No.	
8	Sensing line connection changed	25/03/20	JPY-DI500/E	
9	UL logo updated CSA logo removed	14/07/20		
10	Removed Seismic logo (optional)	18/05/22		

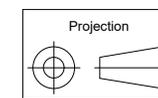
### Dimensions



Maximum Motor Horsepower					Enclosure Dimensions	Door Dimensions	Anchor Dimensions
200-208V	220-240V	380-416V	440-480V	575-600V	A X B X C	D X E	F X G
15HP	20HP	30HP	40HP	50HP	16"X16"X7-1/2"	16-1/2"X16-1/2"	14"X16-3/4"
20HP	30HP	40HP	60HP	60HP	TBD	TBD	TBD

- 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.



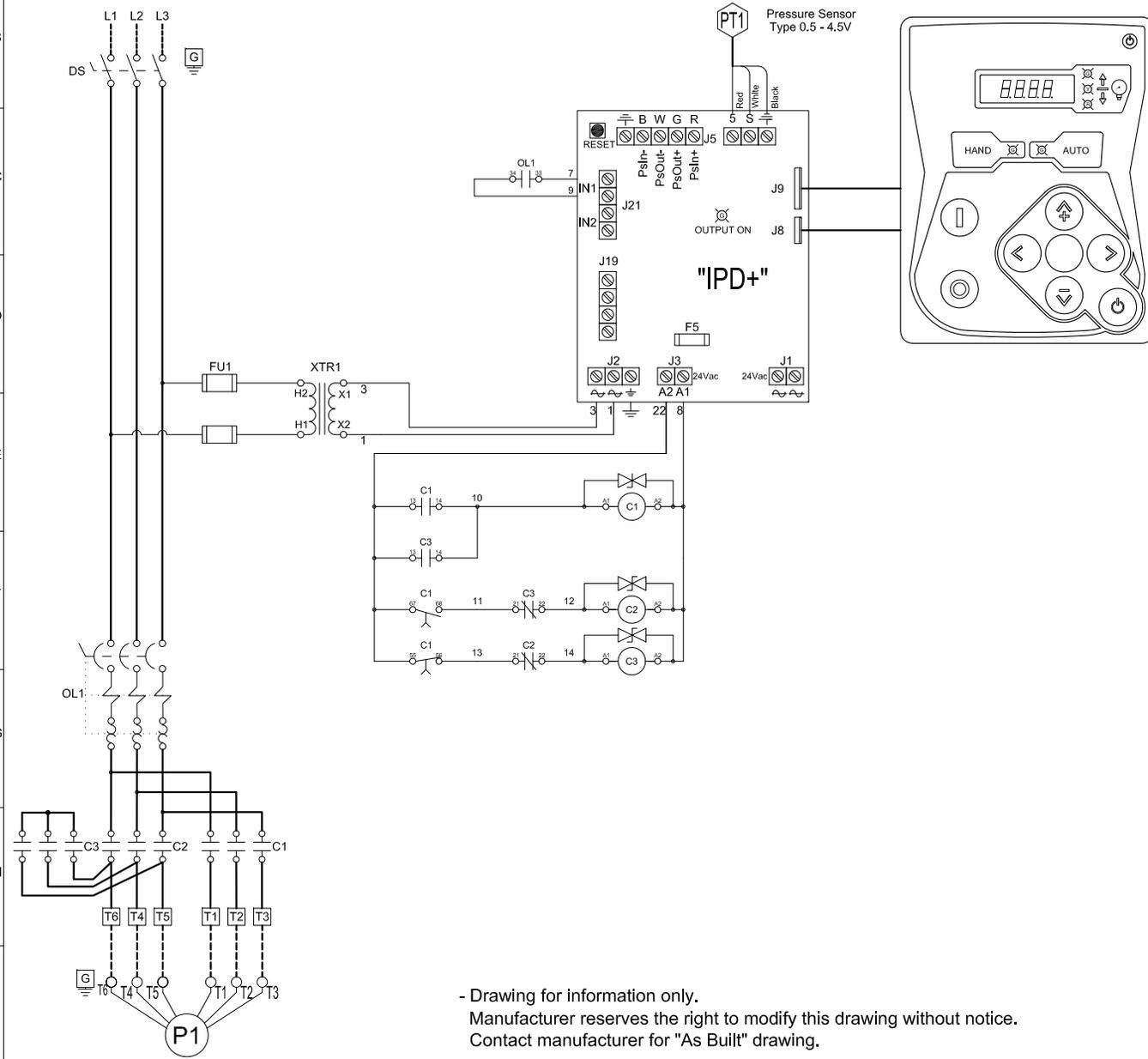
# Jockey Pump Controller

Reduced Voltage/Wye Delta (Open Transition)

## Model:JPY

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

### Wiring schematic



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

# Jockey Pump Controller

Reduced Voltage/Wye Delta (Open Transition)

## Model:JPY

PER QUOTE DRAWING No.

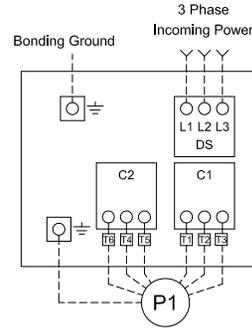


REV.	DESCRIPTION	DD/MM/YY
6	Modified J19 Outputs ID	10/06/16
7	Revised logo	18/06/18
8	UL logo updated CSA logo removed	14/07/20

Drawing No: JPY-TD500/E

### Line and Motor Terminal Size

### 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			
10HP	10HP	20HP	20HP	25HP	#14 AWG - #6 AWG	2 Nm	#14 AWG - #2 AWG
20HP	30HP	40HP	60HP	60HP	#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			
10HP	10HP	15HP	20HP	25HP	#14 AWG - #10 AWG	1.8 Nm	#14 AWG - #2 AWG
15HP	20HP	30HP	40HP	50HP	#14 AWG - #6 AWG	2.5 Nm	#12 AWG - #2 AWG
20HP	30HP	40HP	60HP	60HP	#10 AWG - #3 AWG	5 Nm	#12 AWG - #2 AWG