



# TORNATECH

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

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

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

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

## Technical Data Submittal Document

# Model JFY

Wye-Delta Open Transition Start  
Jockey Pump Controller

### **Contents:**

Data Sheets

Dimensional Data

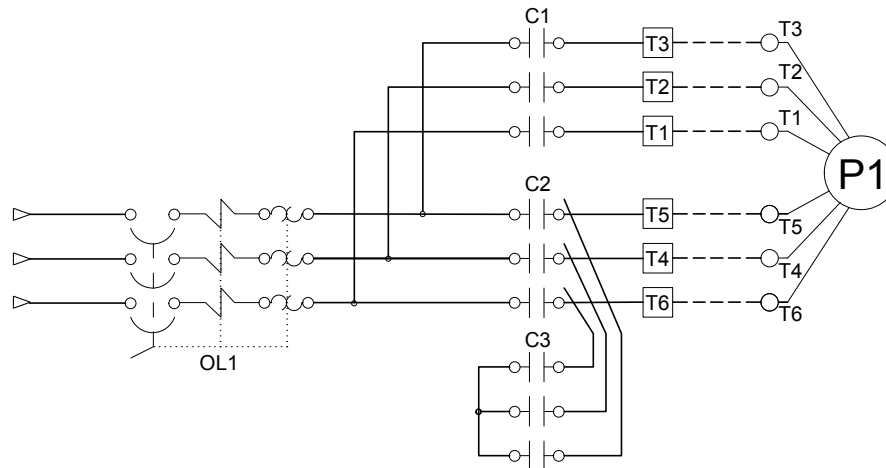
Wiring Schematics

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.



April 2020



|                         |  |   |
|-------------------------|--|---|
| Enclosure               | <b>Protection Rating</b><br>Standard: IP55   |   |
|                         | <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> |
| Fuseless Motor Starter  | <ul style="list-style-type: none"> <li>• Main disconnect – padlockable – rotary type handle – door interlocked</li> <li>• Thermo-magnetic motor protector</li> <li>• Contactor</li> </ul>  |   |
| Control Circuit         | <ul style="list-style-type: none"> <li>• 24V.AC</li> </ul>   |   |
| iPD+ Operator Interface | <ul style="list-style-type: none"> <li>• Solid state controls</li> <li>• All adjustments on door front</li> <li>• Navigation pushbuttons</li> </ul>  |   |
| Pressure Sensing        | <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>  |   |
| Visual Indications      | <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> |

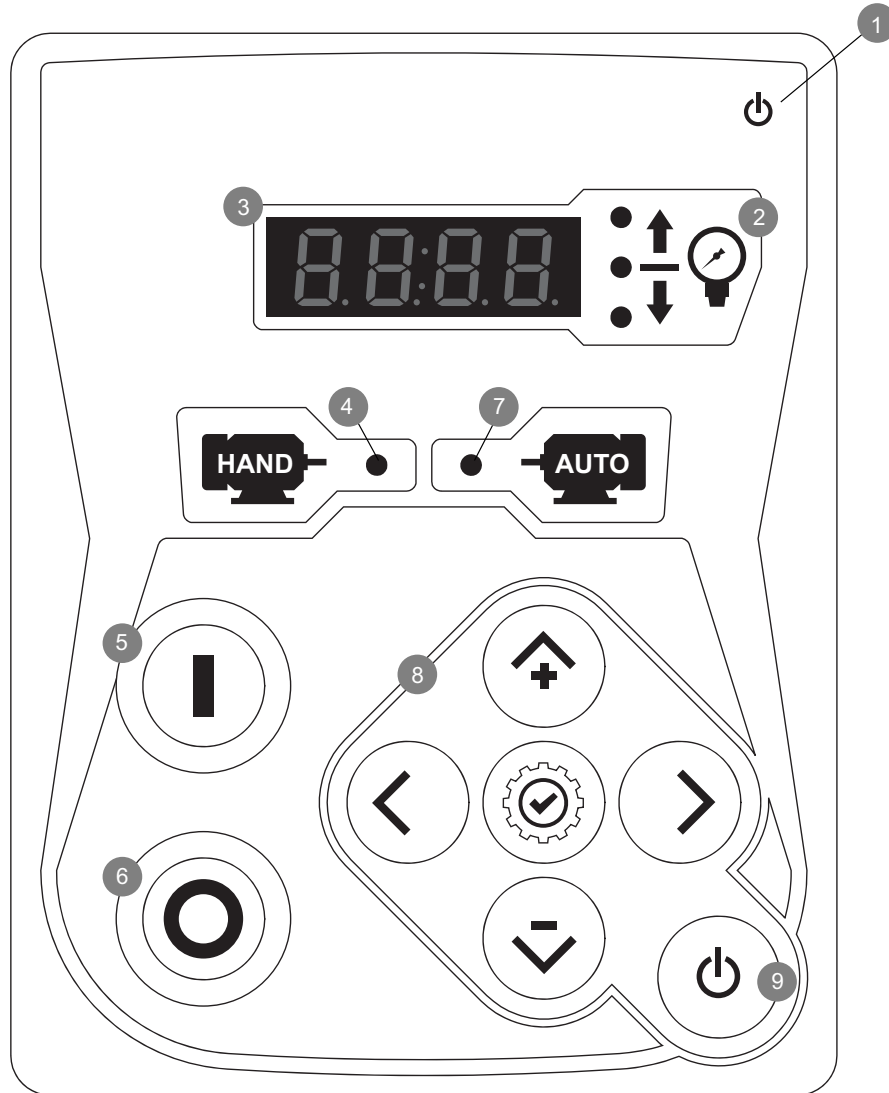
## Options

|      |   |
|------|---|
| A5   | Motor run alarm contact   |
| A6   | Loss of power alarm contact   |
| A7   | Overload or short circuit alarm contact   |
| D11D | Pressure transducer 0-600psi with ½" MNPT 316 stainless steel bushing                       |
| D15  | Less pressure transducer - provision to connect pressure switch (pressure switch by others) |
| D18  | Audible alarm   |
| D19  | Anti-condensation heater and thermostat   |
| D20  | Anti-condensation heater and humidistat   |
| D21  | Tropicalization   |

|     |  |
|-----|--|
| L01 | Other language and English (bilingual) |
| L02 | French                                 |
| L03 | Spanish                                |
| L04 | German                                 |
| L05 | Italian                                |
| L06 | Polish                                 |
| L07 | Romanian                               |
| L08 | Hungarian                              |
| L09 | Slovak                                 |
| L10 | Croatian                               |
| L11 | Czech                                  |
| L12 | Portuguese                             |
| L13 | Dutch                                  |
| L14 | Russian                                |
| L15 | Turkish                                |
| L16 | Swedish                                |
| L17 | Bulgarian                              |
| L18 | Thai                                   |
| L19 | Indonesian                             |
| L20 | Slovenian                              |
| L21 | Danish                                 |
| L22 | Greek                                  |
| L23 | Arabic                                 |
| L24 | Hebrew                                 |
| L25 | Chinese                                |



#### iPD+ Operator Interface



- 1 - Power on LED
- 2 - System status LED
- 3 - Digital display
- 4 - Hand start LED
- 5 - START pushbutton

- 6 - STOP pushbutton
- 7 - Auto start LED
- 8 - Navigation keypad
- 9 - ON - OFF pushbutton

# Jockey Pump Controller

Reduced Voltage/Wye Delta (Open Transition)

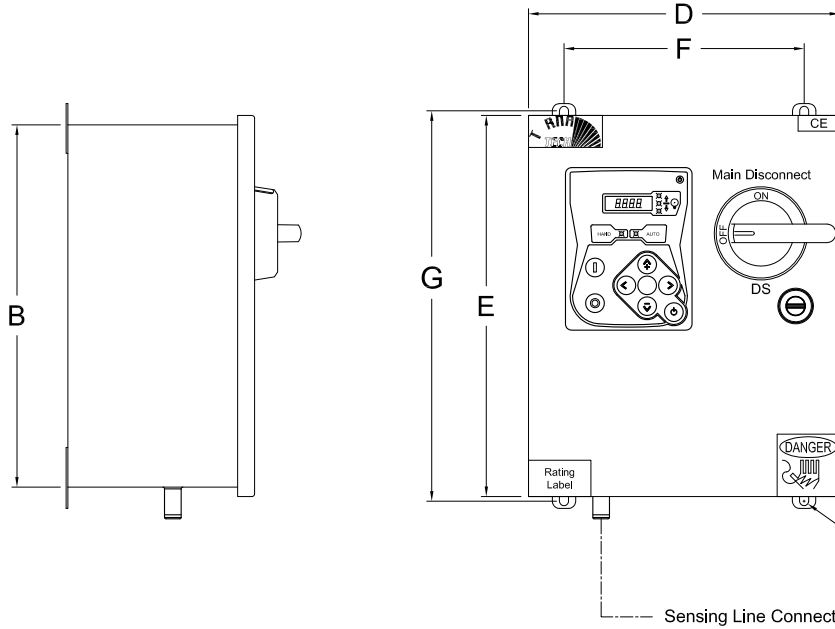
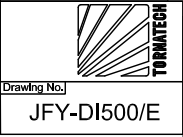
## Dimensions

Model:JFY

PER QUOTE DRAWING No.

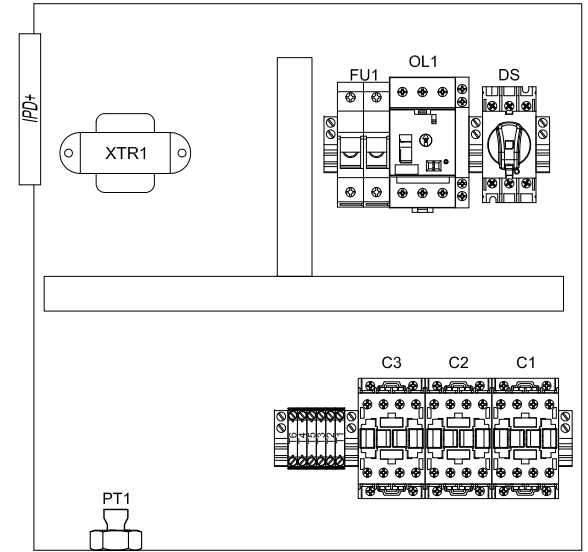
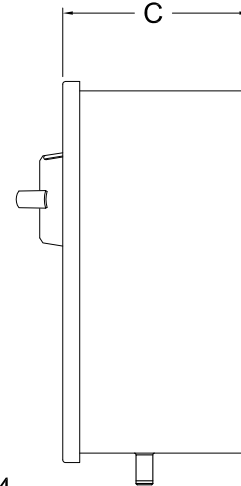
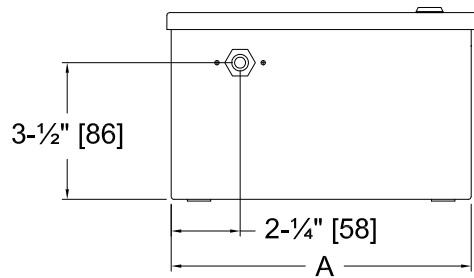


| REV. | DESCRIPTION        | DD/MM/YY |
|------|--------------------|----------|
| 0    | First Issue        | 08/01/16 |
| 1    | Revised logo       | 18/06/18 |
| 2    | Dimension Revision | 02/06/23 |



Ø $\frac{3}{8}$ " [9] x4

Sensing Line Connection 1/2" NPT



Standard Internal Layout

| Dimensions*         |          |          |          |          |                      |                 |                   |
|---------------------|----------|----------|----------|----------|----------------------|-----------------|-------------------|
| Maximum Motor Power |          |          |          |          | 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             |
| 11kW                | 15kW     | 22kW     | 30kW     | 37kW     | 406X406X191          | 419X419         | 356X426           |
| 15kW                | 22kW     | 30kW     | 45kW     | 45kW     | TBD                  | TBD             | TBD               |

### Notes:

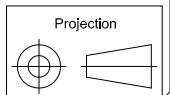
- Standard IP: IP 55
- Standard Paint: Textured Red RAL 3002.
- All Dimensions are in Millimeters [Inches]
- Use Watertight Conduit and Connector Only.
- Protect Equipment Against Drilling Chips.
- Door Swing Equal to Door Width

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

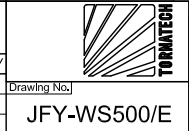
Reduced Voltage/Wye Delta (Open Transition)

Model:JFY

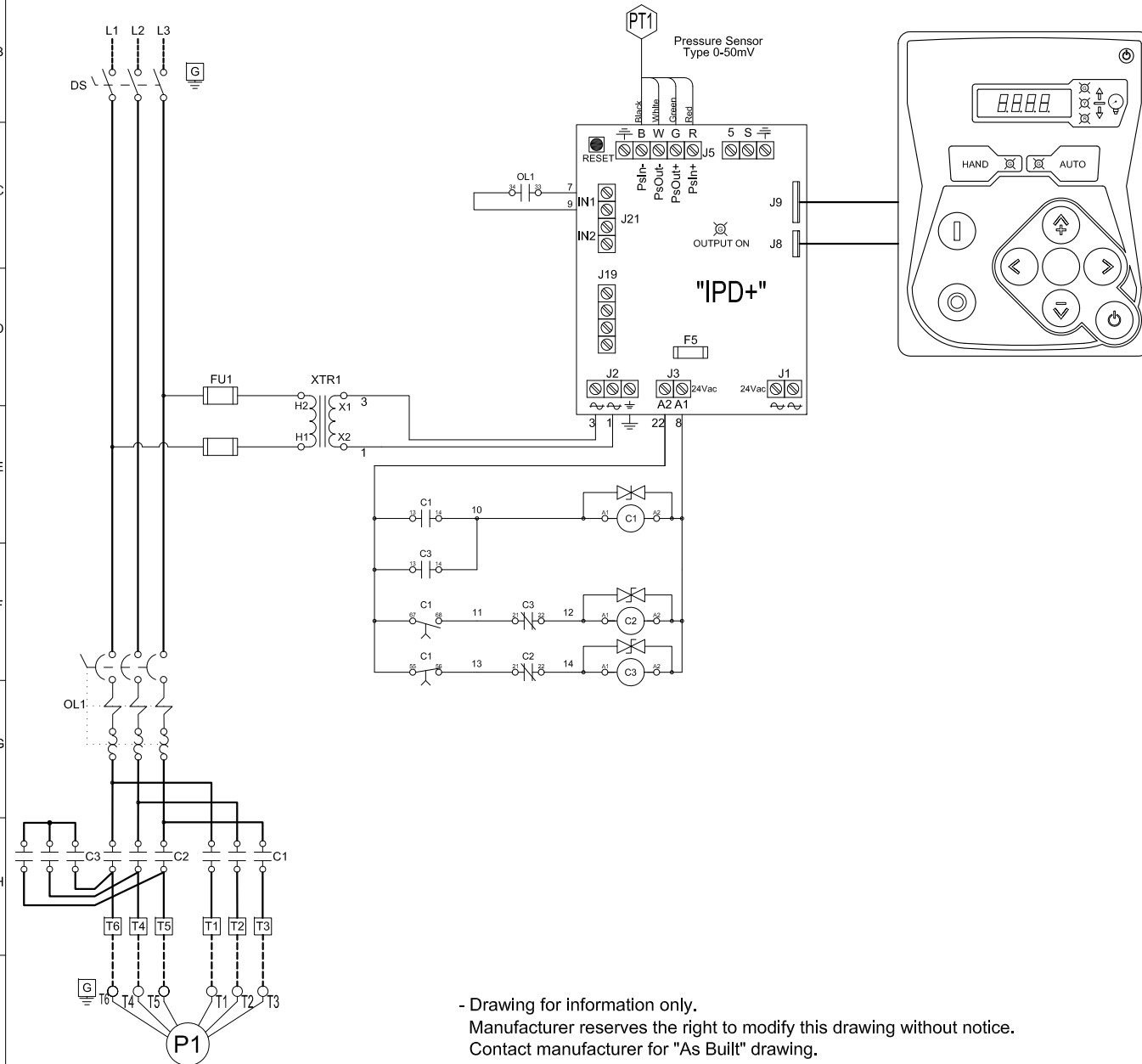
PER QUOTE DRAWING No.



| REV. | DESCRIPTION  | DD/MM/YY |
|------|--------------|----------|
| 0    | First Issue  | 08/01/16 |
| 1    | Revised logo | 18/06/18 |



## Wiring schematic




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

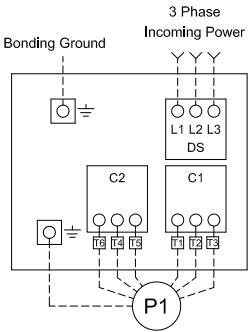
Jockey Pump Controller  
Reduced Voltage/Wye Delta (Open Transition)

Line and Motor Terminal Size

Model:JFY

|                       |              |          |   |
|-----------------------|--------------|----------|---|
| PER QUOTE DRAWING No. |              | CE       |  |
|                       |              |          |   |
| REV.                  | DESCRIPTION  | DD/MM/YY | Drawing No.<br>JFY-TD500/E  |
| 0                     | First Issue  | 08/01/16 |   |
| 1                     | Revised logo | 18/06/18 |   |

Power Connections and Motor Connections



| Line Terminals (L1,L2,L3,GND) |          |          |          |          |  |        |  |
|-------------------------------|----------|----------|----------|----------|--|--------|--|
| Maximum Motor Power           |          |          |          |          | Wire Size Copper Only                    | Torque | Wire Size Ground Copper Only             |
| 200-208V                      | 220-240V | 380-416V | 440-480V | 575-600V |  |        |  |
| 7.5kW                         | 7.5kW    | 15kW     | 15kW     | 18.5kW   | 2.5 mm <sup>2</sup> - 16 mm <sup>2</sup> | 2 Nm   | 2.5 mm <sup>2</sup> - 35 mm <sup>2</sup> |
| 15kW                          | 22kW     | 30kW     | 45kW     | 45kW     | 4 mm <sup>2</sup> - 50 mm <sup>2</sup>   | 6 Nm   | 16 mm <sup>2</sup> - 35 mm <sup>2</sup>  |

| Motor Terminals (T1,T2,T3,GND) |          |          |          |          |  |        |  |
|--------------------------------|----------|----------|----------|----------|--|--------|--|
| Maximum Motor Power            |          |          |          |          | Wire Size Copper Only                    | Torque | Wire Size Ground Copper Only             |
| 200-208V                       | 220-240V | 380-416V | 440-480V | 575-600V |  |        |  |
| 7.5kW                          | 7.5kW    | 11kW     | 15kW     | 18.5kW   | 2.5 mm <sup>2</sup> - 6 mm <sup>2</sup>  | 1.8 Nm | 2.5 mm <sup>2</sup> - 35 mm <sup>2</sup> |
| 11kW                           | 15kW     | 22kW     | 30kW     | 37kW     | 2.5 mm <sup>2</sup> - 16 mm <sup>2</sup> | 2.5 Nm | 4 mm <sup>2</sup> - 35 mm <sup>2</sup>   |
| 15kW                           | 22kW     | 30kW     | 45kW     | 45kW     | 6 mm <sup>2</sup> - 25 mm <sup>2</sup>   | 5 Nm   | 4 mm <sup>2</sup> - 35 mm <sup>2</sup>   |