



Project: \_\_\_\_\_  
Customer: \_\_\_\_\_  
Engineer: \_\_\_\_\_  
Pump Manufacturer: \_\_\_\_\_

## Technical Data Submittal Document

**Model GPR + GPU  
Full Service Reduced Voltage  
Autotransformer  
Electric Fire Pump Controller  
with Automatic Power Transfer Switch**



### **Contents:**

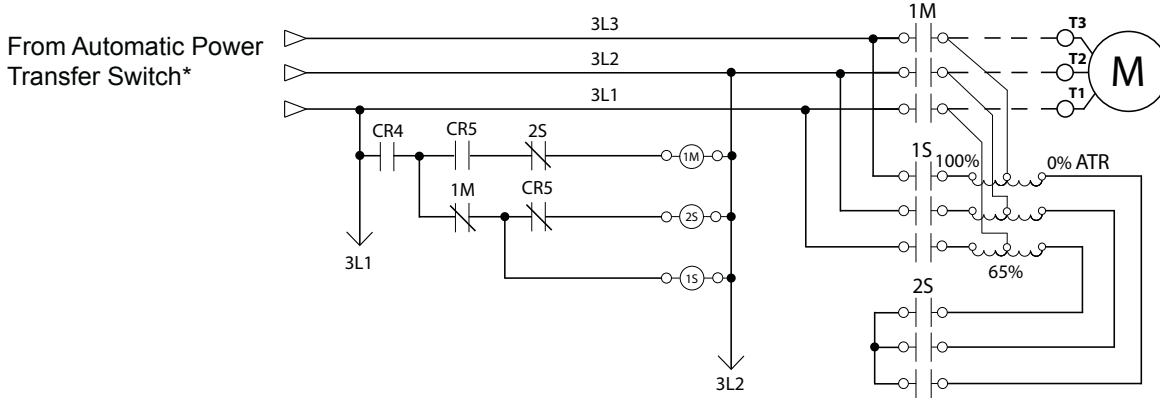
- **Data Sheets**
- **Dimensional Data**
- **Wiring Schematics**
- **Field Connections**

**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.**



# Technical Data

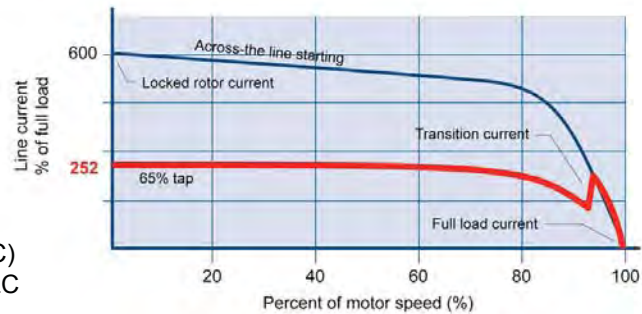
## Model GPR + GPU Electric Fire Pump Controller with Automatic Power Transfer Switch



N.Y.C.  
APPROVED



**Starting Method:** Reduced Voltage Autotransformer  
**Typical Voltage Applied at Start:** 65%  
**Inrush Current:** 42% of normal load current  
**Starting Torque:** 42%  
**Motor Type:** Across the line (direct on line)  
**No. of Contactors:** 2 at 42%, 1 at 33% of full load current (FLC)  
**Min. ampacity of motor conductors:** 3 at 125% x 100% of FLC



|   |  |   |
|---|--|---|
| <b>Standard, Listings, Approvals and Certifications</b> | Built to NFPA 20 (latest edition)  |   |
|   | Underwriters Laboratory (UL)   | <ul style="list-style-type: none"> <li>• UL218 - Fire Pump Controllers</li> <li>• UL 1008 - Automatic power transfer switches for fire pump controllers</li> <li>• CSA C22.2 No. 14 Industrial Control Equipment</li> </ul> |
|   | FM Global  | Class 1321/1323   |
|   | 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)<br><b>Optional</b>  |   |
|   | <input type="checkbox"/> NEMA 12<br><input type="checkbox"/> NEMA 3<br><input type="checkbox"/> NEMA 3R<br><input type="checkbox"/> NEMA 4 | <input type="checkbox"/> NEMA 4X-304 sst painted<br><input type="checkbox"/> NEMA 4X-304 sst brushed finish<br><input type="checkbox"/> NEMA 4X-316 sst painted<br><input type="checkbox"/> NEMA 4X-316 sst brushed finish  |
|   | <b>Accessories</b>   | <b>Paint Specifications</b>   |
|   | <ul style="list-style-type: none"> <li>• Bottom entry gland plate</li> <li>• Lifting Lugs</li> <li>• Keylock handle</li> </ul>             | <ul style="list-style-type: none"> <li>• Red RAL3002</li> <li>• Powder coating</li> <li>• Glossy textured finish</li> </ul>   |

\*Please see Disconnecting Means details on page 3.



# Technical Data

## Model GPR + GPU Electric Fire Pump Controller with Automatic Power Transfer Switch

| Shortcircuit Withstand Rating           | 200V to 208V<br>60Hz |                 | 220V to 240V<br>60Hz |                 | 380V to 416V<br>50 Hz / 60Hz |                 | 440V to 480V<br>60Hz |                 | 575V to 600V<br>60Hz |                 |
|---|----------------------|-----------------|----------------------|-----------------|------------------------------|-----------------|----------------------|-----------------|----------------------|-----------------|
|   | Normal Power         | Alternate Power | Normal Power         | Alternate Power | Normal Power                 | Alternate Power | Normal Power         | Alternate Power | Normal Power         | Alternate Power |
|   | HP (kw)              |                 |                      |                 |                              |                 |                      |                 |                      |                 |
| <input type="checkbox"/> Standard 100kA | 5-150 (3.7 - 110)    |                 | 5-200 (3.7 - 147)    |                 | 5-300 (3.7 - 220)            |                 | 5-450 (3.7 - 335)    |                 | n/a                  |                 |
| <input type="checkbox"/> Optional 150kA |                      |                 |                      |                 |                              |                 |                      |                 |                      |                 |
| <input type="checkbox"/> Standard 50kA  | 200 (147)            |                 | 250 (184)            |                 | 350 - 450 (257 - 335)        |                 | 500 (373)            |                 | 5-500<br>(3.7 - 373) |                 |
| <input type="checkbox"/> Optional 100kA | n/a                  |                 | n/a                  |                 | n/a                          |                 | n/a                  |                 |                      |                 |

|                            |  |  |
|----------------------------|--|--|
| Ambient Temperature Rating | <b>Standard:</b>                                     | <b>Optional:</b>   |
|                            | <input type="checkbox"/> 5°C to 40°C / 41°F to 104°F | <input type="checkbox"/> 5°C to 50°C / 41°F to 122°F<br><input type="checkbox"/> 5°C to 55°C / 41°F to 131°F |

|                             |   |
|-----------------------------|---|
| Surge Suppression           | Surge arrester rated to suppress surges above line voltage  |
| Disconnecting Means         | <ul style="list-style-type: none"> <li>Isolating switch and circuit breaker assembly:               <ul style="list-style-type: none"> <li>Door interlocked in the ON position</li> <li>Isolating switch rated not less than 115% of motor full load current</li> <li>Circuit breaker continuous rating not less than 115% of motor full load current</li> <li>Overcurrent sensing non-thermal type, magnetic only</li> <li>Instantaneous trip setting of not more than 20 times the motor full load current</li> </ul> </li> <li>Common flange mounted operating handle</li> </ul> |
| Service Entrance Rating     | Suitable as service entrance equipment  |
| Emergency Start Handle      | <ul style="list-style-type: none"> <li>Flange mounted</li> <li>Integrated limit switch</li> <li>Pull and latch activation</li> <li>Across the line start (direct on line)</li> </ul>  |
| Locked Rotor Protector      | <ul style="list-style-type: none"> <li>Operate shunt trip to open circuit breaker</li> <li>Factory set at 600% of motor full load current</li> <li>Trip between 8 and 20 seconds</li> </ul>   |
| Electrical Readings         | <ul style="list-style-type: none"> <li>Voltage phase to phase (normal power)</li> <li>Amperage of each phase when motor is running</li> </ul>   |
| Pressure Readings           | <ul style="list-style-type: none"> <li>Continuous system pressure display</li> <li>Cut-in and Cut-out pressure settings</li> </ul>  |
| Pressure and Event recorder | <ul style="list-style-type: none"> <li>Pressure readings with date stamp</li> <li>Event recording with date stamp</li> <li>Under regular maintained operation, events can be stored in memory for up to 5 years.</li> <li>Data viewable on operator interface display screen</li> <li>Downloadable by USB port to external memory device</li> </ul>   |
| Pressure Sensing            | <ul style="list-style-type: none"> <li>Pressure transducer and run test solenoid valve assembly for fresh water application</li> <li>Pressure sensing line connection 1/2" Female NPT</li> <li>Drain connection 3/8"</li> <li>Rated for 0-500PSI working pressure (calibrated at 0-300psi)</li> <li>Externally mounted with protective cover</li> </ul>   |



# Technical Data

## Model GPR + GPU Electric Fire Pump Controller with Automatic Power Transfer Switch

|  |  |  |   |
|--|--|--|---|
| <b>Audible Alarm</b>                   | 4" alarm bell - 85 dB at 10ft. (3m)  |  |   |
| <b>Visual Indications &amp; Alarms</b> | <ul style="list-style-type: none"> <li>• Power available</li> <li>• Phase reversal</li> <li>• Motor run</li> <li>• Pump room alarm</li> <li>• Motor trouble</li> <li>• Phase loss</li> <li>• Phase unbalance</li> <li>• Low water level</li> </ul>   | <ul style="list-style-type: none"> <li>• Locked rotor</li> <li>• Periodic test</li> <li>• Fail to start</li> <li>• Low discharge pressure</li> <li>• Low pump room temperature</li> <li>• Pump room temperature (°F or °C)</li> <li>• Pump on demand/Automatic start</li> <li>• Emergency start</li> </ul> | <ul style="list-style-type: none"> <li>• Manual start</li> <li>• Deluge valve start</li> <li>• Remote automatic start</li> <li>• Remote manual start</li> <li>• Overcurrent</li> <li>• Undercurrent</li> <li>• Undervoltage</li> <li>• Overvoltage</li> </ul> |
| <b>Remote Alarm Contacts</b>           | SPDT-8A-250V.AC <ul style="list-style-type: none"> <li>• Power available</li> <li>• Phase reversal</li> <li>• Motor run</li> <li>• Common pump room alarm (field re-assignable)**               <ul style="list-style-type: none"> <li>• Overvoltage</li> <li>• Undervoltage</li> <li>• Phase unbalance</li> <li>• Low pump room temperature</li> <li>• High Pump room temperature</li> </ul> </li> <li>• Common motor trouble (field re-assignable)**               <ul style="list-style-type: none"> <li>• Overcurrent</li> <li>• Fail to start</li> <li>• Undercurrent</li> <li>• Ground fault</li> </ul> </li> <li>• Free (field programmable)**</li> </ul> |  |   |
| <b>ViZiTouch Operator Interface</b>    | <ul style="list-style-type: none"> <li>• Embedded microcomputer with software PLC logic</li> <li>• 4.2" color touch screen (HMI technology)</li> <li>• Upgradable software</li> <li>• Expandable storage</li> <li>• Multi-language</li> </ul>  |  |   |
| <b>Operation</b>                       | <b>Automatic Start</b>   | <ul style="list-style-type: none"> <li>• Start on pressure drop</li> <li>• Remote start signal from automatic device</li> </ul>  |   |
|  | <b>Manual Start</b>  | <ul style="list-style-type: none"> <li>• Start pushbutton</li> <li>• Run test pushbutton</li> <li>• Deluge valve start</li> <li>• Remote start from manual device</li> </ul>   |   |
|  | <b>Stopping</b>  | <ul style="list-style-type: none"> <li>• Manual with Stop pushbutton</li> <li>• Automatic after expiration of minimum run timer ***</li> </ul>   |   |
|  | <b>Timers</b>  | Field Adjustable & Visual Countdown  | <ul style="list-style-type: none"> <li>• Minimum run timer ***(off delay)</li> <li>• Sequential start timer (on delay)</li> <li>• Periodic test timer</li> </ul>  |
|  | <b>Actuation</b>   | Visual Indication  | <ul style="list-style-type: none"> <li>• Pressure</li> <li>• Non-pressure</li> </ul>  |
|  | <b>Mode</b>  |  | <ul style="list-style-type: none"> <li>• Automatic</li> <li>• Non-automatic</li> </ul>  |

\*\*Tornatech reserves the right to use any of these three alarm points for special specific application requirements.

\*\*\*Can only be used if approved by the AHJ



## Technical Data

### Model GPR + GPU Electric Fire Pump Controller with Automatic Power Transfer Switch

|  |  |   |
|--|--|---|
| <b>Automatic Power Transfer Switch</b>   | <b>Surge Suppression</b>   | Surge arrestor rated to suppress surges above line voltage  |
|  | <b>Disconnecting Means</b>   | <ul style="list-style-type: none"> <li>• Isolating switch and circuit breaker assembly:               <ul style="list-style-type: none"> <li>- Door interlocked in the ON position</li> <li>- Isolating switch rated not less than 115% of motor full load current</li> <li>- Circuit breaker continuous rating not less than 115% of motor full load current</li> <li>- Overcurrent sensing non-thermal type, magnetic only</li> <li>- Instantaneous trip setting of not more than 20 times the motor full load current</li> </ul> </li> <li>• Common flange mounted operating handle</li> </ul> |
|  | <b>Locked Rotor Protector</b>  | <ul style="list-style-type: none"> <li>• Operate shunt trip to open circuit breaker</li> <li>• Factory set at 600% of motor full load current</li> <li>• Trip between 8 and 20 seconds</li> </ul>   |
|  | <b>Visual Indications</b>  | <ul style="list-style-type: none"> <li>• Alternate (emergency) isolating switch in the OFF position</li> <li>• Alternate (emergency) voltage phase to phase</li> <li>• Transfer switch in normal position</li> <li>• Transition timers</li> </ul>   |
|  | Transfer switch test pushbutton  |   |
|  | Bypass for re-transfer and generator shutdown  |   |
|  | Electrically operated and mechanically held in the normal or alternate position  |   |
|  | Provision for manual operation   |   |
|  | <b>Remote Alarm Contacts</b>   |   |
|  | SPDT-8A-250VAC <ul style="list-style-type: none"> <li>• Isolating switch in the OFF position</li> <li>• Transfer switch in normal position</li> <li>• Transfer switch in alternate (emergency) position</li> </ul>   |   |
|  | <b>Time Delays</b>   |   |
|  | <ul style="list-style-type: none"> <li>• Momentary normal power outage override (factory set at 3 sec - field adjustable 1 to 3 sec)</li> <li>• Alternate (emergency) power available delay (factory set at 3 sec - field adjustable 1 to 3 sec)</li> <li>• Transfer trouble delay (factory set at 20 sec - field adjustable 1 to 60 sec)</li> <li>• Retransfer to normal (factory set at 5 min - field adjustable 1 to 20 min)</li> <li>• Generator cooldown (factory set at 5 min - field adjustable 1 to 20 min)</li> </ul> |   |
|  | <b>Voltage Sensing</b>   |   |
| <ul style="list-style-type: none"> <li>• Transfer to alternate (normal power dropout) 85% of nominal - field adjustable 0 to 100%</li> <li>• Phase reversal transfer to alternate</li> <li>• Retransfer to normal (normal power pickup) 90% of nominal - field adjustable 0 to 100%</li> </ul> |  |   |
| <b>Audible Alarm (AIS Open)</b>  |  |   |
| 4" alarm bell - 85 dB at 10ft. (3m)  |  |   |
| <b>Generator Start Connection</b>  |  |   |
| SPDT-8A-250V.AC  |  |   |



## Technical Data Model GPR + GPU Electric Fire Pump Controller with Automatic Power Transfer Switch

|                               |  |
|-------------------------------|--|
| <input type="checkbox"/> A4   | Flow switch provision  |
| <input type="checkbox"/> A8   | Foam pump application w/o pressure transducer and run test solenoid valve  |
| <input type="checkbox"/> A9   | Low zone pump control function   |
| <input type="checkbox"/> A10  | Medium zone pump control function  |
| <input type="checkbox"/> A11  | High zone pump control function  |
| <input type="checkbox"/> A13  | Non-pressure actuated controller w/o pressure transducer and run test solenoid valve   |
| <input type="checkbox"/> A16  | Lockout/interlock circuit from equipment installed inside the pump room  |
| <input type="checkbox"/> B11  | Built in alarm panel (120V.AC supervisory power) providing indication for:<br>• Audible alarm & silence pushbutton for motor run, phase reversal, loss of phase.<br>• Pilot lights for loss of phase & supervisory power available |
| <input type="checkbox"/> B11B | Built in alarm panel same as B11 but 220-240VAC supervisory power  |
| <input type="checkbox"/> B19  | High motor temperature thermistor relay c/w visual indication and alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> B21  | Ground fault alarm detection c/w visual indication and alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> C1   | Extra motor run alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> C4   | Periodic test alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> C6   | Low discharge pressure alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> C7   | Low pump room temperature alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> C10  | Low water reservoir level alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> C11  | High electric motor temperature alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> C12  | High electric motor vibration c/w visual indication and alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> C14  | Pump on demand/automatic start alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> C15  | Pump fail to start alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> C16  | Control voltage healthy alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> C17  | Flow meter valve loop open c/w visual indication and alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> C18  | High water reservoir level c/w visual indication and alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> C19  | Emergency start alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> C20  | Manual start alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> C21  | Deluge valve start alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> C22  | Remote automatic start alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> C23  | Remote manual start alarm contact (Form C-SPDT)  |
| <input type="checkbox"/> C24  | High pump room temperature alarm contact (Form C-SPDT)   |
| <input type="checkbox"/> Cx   | Additional visual and alarm contact (specify function) (Form C-SPDT)   |

|                               |  |
|-------------------------------|--|
| <input type="checkbox"/> D1   | Low suction pressure transducer for fresh water rated at 0-300PSI with visual indication and alarm contact         |
| <input type="checkbox"/> D1A  | Low suction pressure transducer for sea water rated at 0-300PSI with visual indication and alarm contact           |
| <input type="checkbox"/> D5   | Pressure transducer and run test solenoid valve for fresh water rated for 0-500PSI (for calibration purposes only) |
| <input type="checkbox"/> D5D  | Pressure transducer and run test solenoid valve for sea water rated for 0-500PSI                                   |
| <input type="checkbox"/> D10  | Omit mounting feet (when applicable)   |
| <input type="checkbox"/> D13  | High withstand rating for (normal power section)<br>• 208V to 480V = 150kA<br>• 600V = 100kA                       |
| <input type="checkbox"/> D14  | Anti-condensation heater & thermostat (normal power section)   |
| <input type="checkbox"/> D14A | Anti-condensation heater & humidistat (normal power section)   |
| <input type="checkbox"/> D14B | Anti-condensation heater & thermostat & humidistat (normal power section)  |
| <input type="checkbox"/> D15  | Tropicalization  |
| <input type="checkbox"/> D18  | CE Mark with factory certificate   |
| <input type="checkbox"/> D26  | Modbus RTU provision   |
| <input type="checkbox"/> D26A | Modbus TCP/IP provision  |
| <input type="checkbox"/> D27  | Motor heater connection (external single phase power source and heater on/off contact)                             |
| <input type="checkbox"/> D27A | Motor heater connection (internal single phase power source and heater on/off contact)                             |
| <input type="checkbox"/> D28  | Customized drawing set   |
| <input type="checkbox"/> D34  | Field programmable I/O board - 8 Input / 5 output  |
| <input type="checkbox"/> D35  | Field programmable I/O board - 8 Input / 10 output   |
| <input type="checkbox"/> D36  | Redundant pressure transducer for fresh water rated for 0-500PSI (calibrated at 0-300PSI)                          |
| <input type="checkbox"/> D36A | Redundant pressure transducer for sea water rated for 0-500PSI (calibrated at 0-300PSI)                            |
| <input type="checkbox"/> D37  | Window kit for operator interface  |
| <input type="checkbox"/> E1   | Permanent load shedding contacts   |
| <input type="checkbox"/> E2   | Temporary pump motor start period load shedding contacts   |
| <input type="checkbox"/> E3   | Temporary & permanent load shedding contacts   |
| <input type="checkbox"/> F2   | Anti condensation heater & thermostat (alternate power section)  |
| <input type="checkbox"/> F2A  | Anti condensation heater & humidistat (alternate power section)  |
| <input type="checkbox"/> F2B  | Anti condensation heater & thermostat & humidistat (alternate power section)                                       |
| <input type="checkbox"/> F6   | High withstand rating for (model GPU only) :<br>• 208V to 480V=150kA<br>• 600V=100kA                               |

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



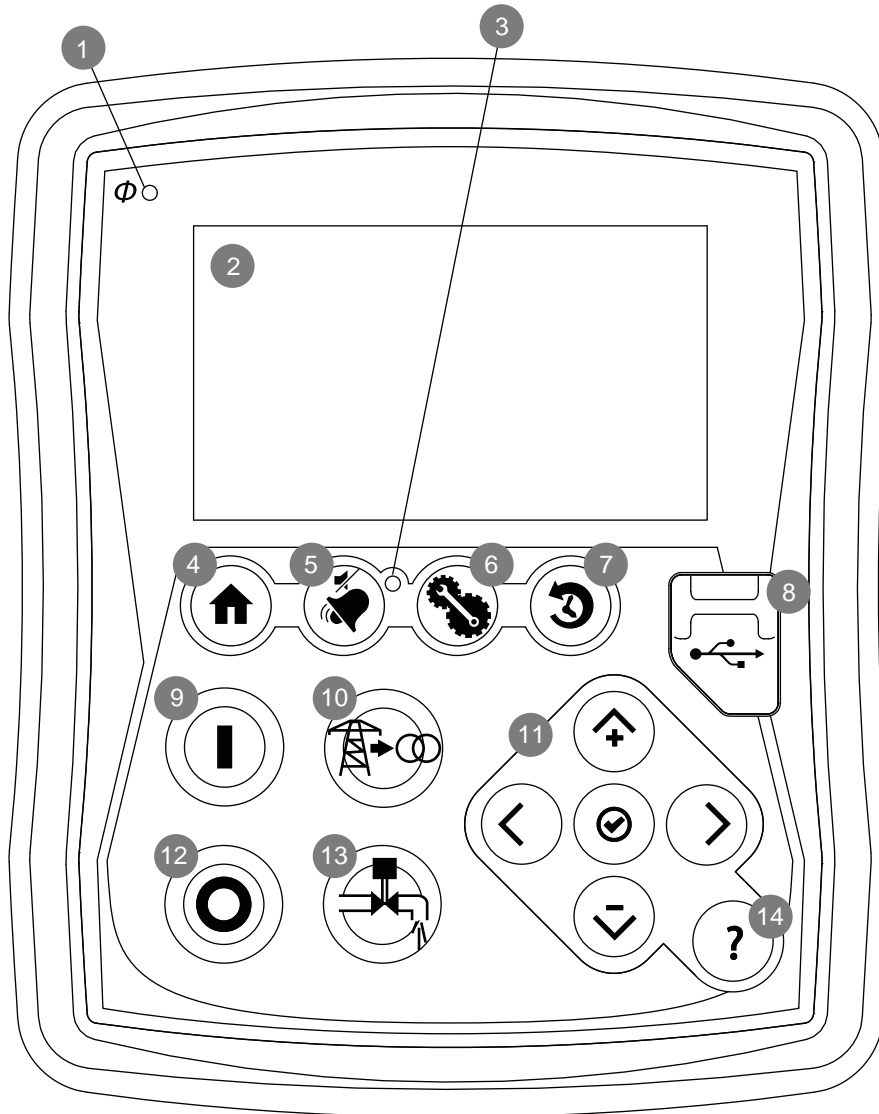
## Technical Data Model GPR + GPU Electric Fire Pump Controller with Automatic Power Transfer Switch

|                              |  |
|------------------------------|--|
| <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.

ViZiTouch Operator Interface



- |                               |                                  |
|-------------------------------|----------------------------------|
| 1 - Power on LED              | 8 - USB port                     |
| 2 - Color touch screen        | 9 - START button                 |
| 3 - Alarm LED                 | 10 - TRANSFER SWITCH TEST button |
| 4 - HOME page button          | 11- Contextual navigation pad    |
| 5 - ALARM page button         | 12 - STOP button                 |
| 6 - CONFIGURATION page button | 13 - RUN TEST button             |
| 7 - HISTORY page button       | 14 - HELP button                 |

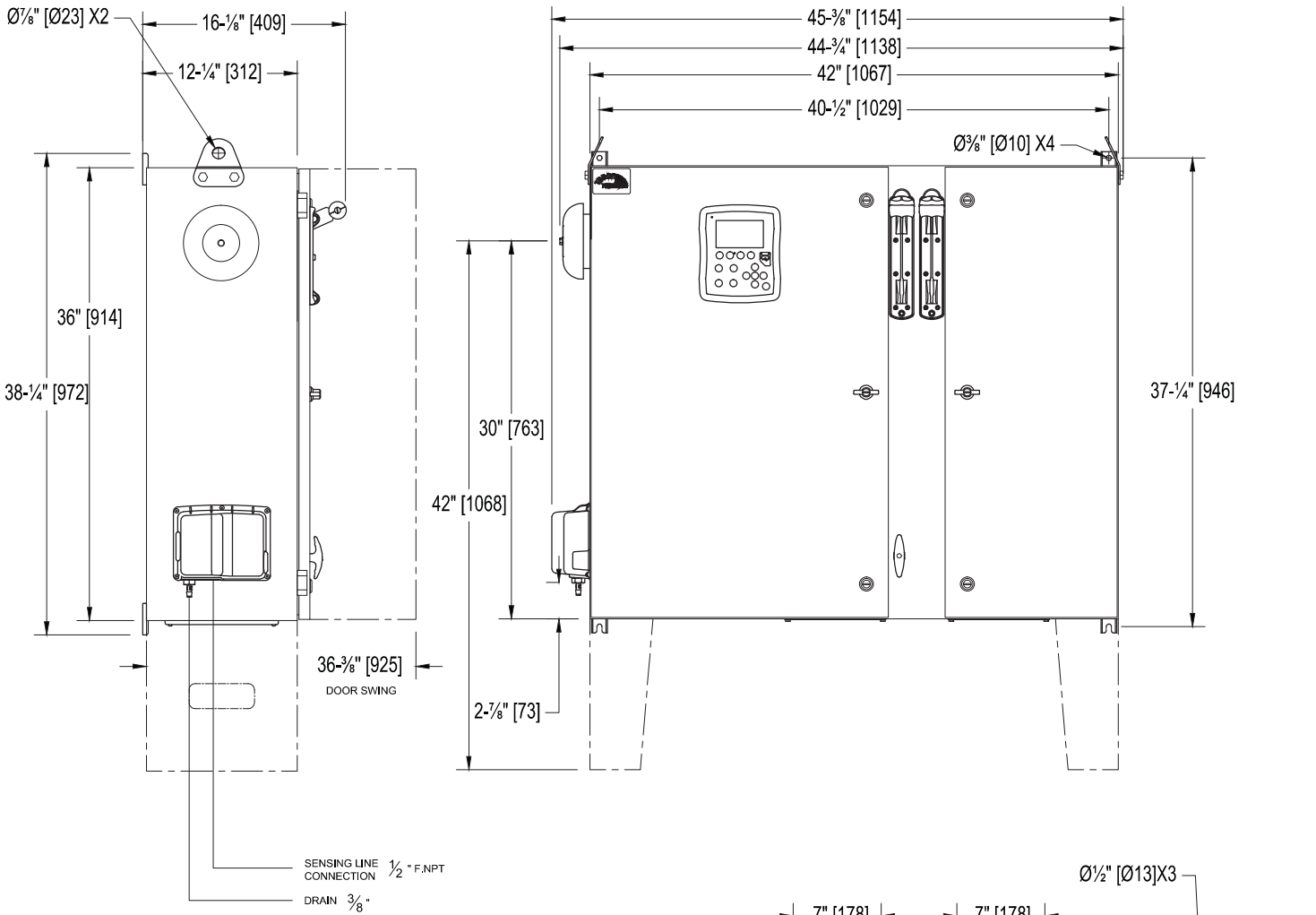


# ELECTRIC FIRE PUMP CONTROLLER WITH AUTOMATIC TRANSFER SWITCH

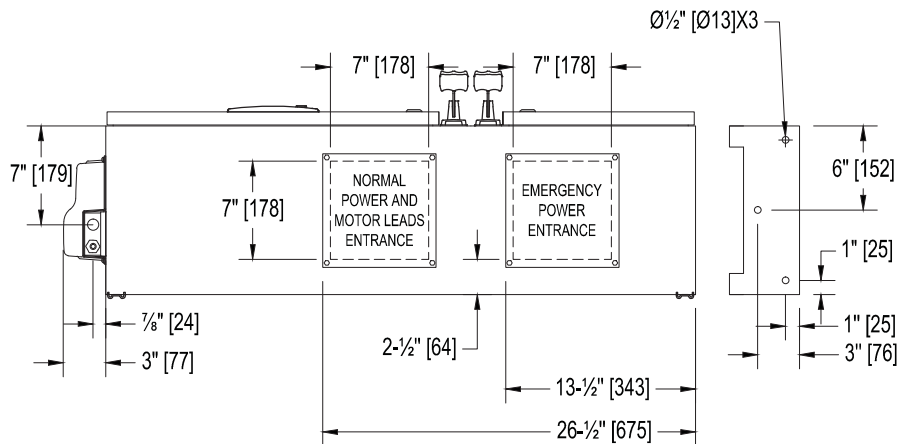
MODEL :GPR/GPS/GPW  
+GPU

## Dimensions

BUILT TO THE LATEST EDITION OF THE NFPA20 STANDARD



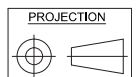
| Voltage / HP Table |        |        |
|--------------------|--------|--------|
| Voltage            | Min HP | Max HP |
| 208                | 5      | 30     |
| 220 - 240          | 5      | 30     |
| 380 - 400 - 415    | 5      | 60     |
| 440 - 480          | 5      | 60     |
| 600                | 5      | 75     |



### NOTES :

- ALL DIMENSIONS ARE IN INCHES (MILLIMETERS).
- PAINT : TEXTURED RED RAL 3002.
- BOTTOM CONDUIT ENTRANCE THROUGH REMOVABLE GLAND PLATE RECOMMENDED
- USE WATERTIGHT CONDUIT CONNECTOR ONLY.
- PROTECT EQUIPMENT AGAINST DRILLING CHIPS.
- AMBIENT TEMPERATURE : BETWEEN 41°F (5°C) AND 104°F (40°C).

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



| GPXDIM | REV. | DATE     | DESCRIPTION              | APP. |
|--------|------|----------|--------------------------|------|
| 8.     |      | 13/01/29 | FEET                     |      |
| 7.     |      | 13/01/14 | HP TABLE                 | DES. |
| 6.     |      | 12/07/20 | PLATE DIM. AND IDENTIFI. | VER. |

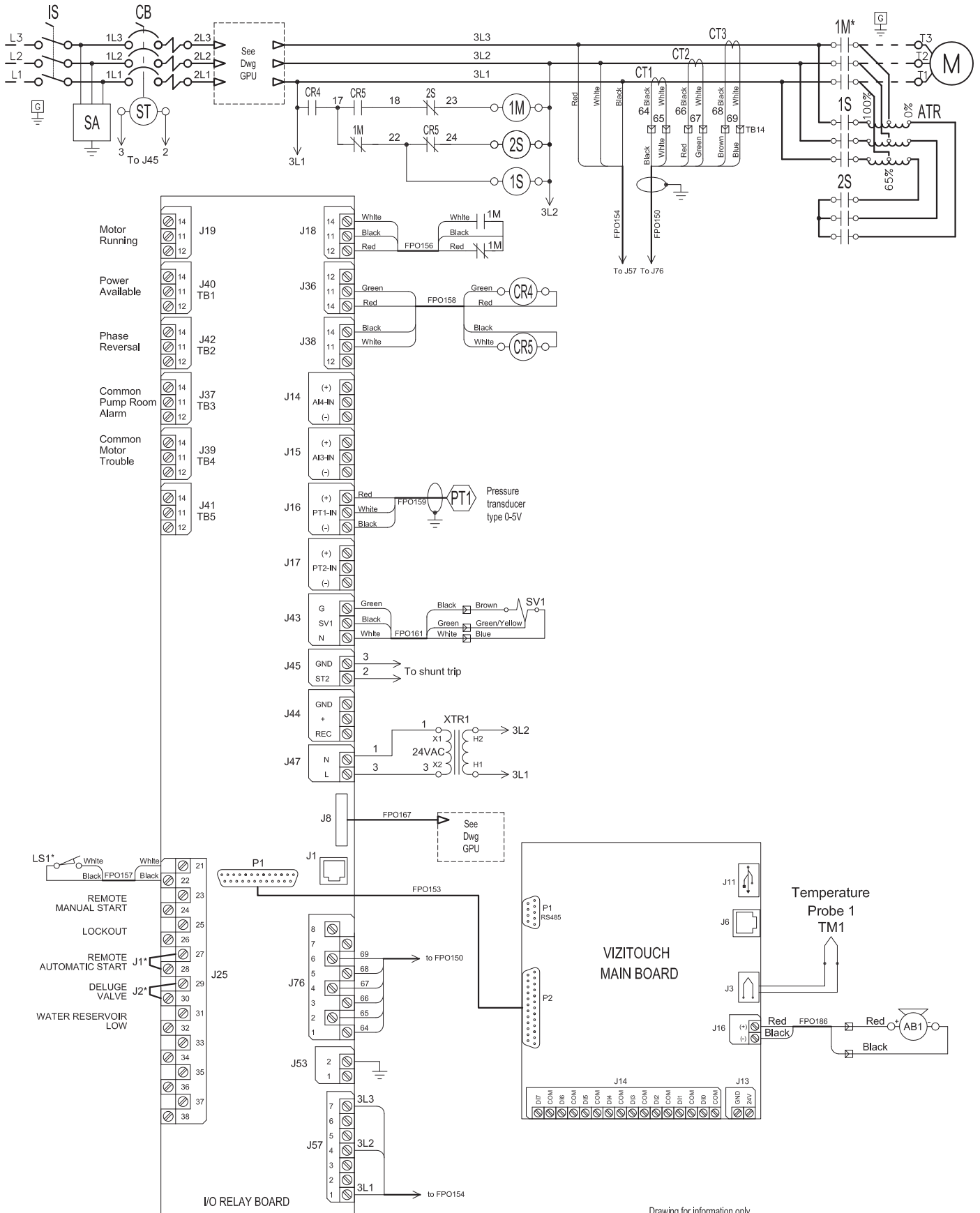
DRAWING No. **GPX-DI122** /E

# ELECTRIC FIRE PUMP CONTROLLER REDUCED VOLTAGE / AUTOTRANSFORMER WITH AUTOMATIC POWER TRANSFER SWITCH

MODEL : GPR + GPU

Wiring schematic

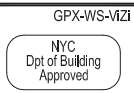
BUILT TO THE LATEST EDITION OF THE NFPA20 STANDARD



\* REMOVE JUMPER TO USE THIS FEATURE

\* Contact closed when Emergency Start is in ON position

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



| REV. | DATE     | DESCRIPTION          | APP. |
|------|----------|----------------------|------|
| 2.   | 12/11/21 | General Revision     | DES. |
| 1.   | 12/05/30 | Correct Signal Input | VER. |

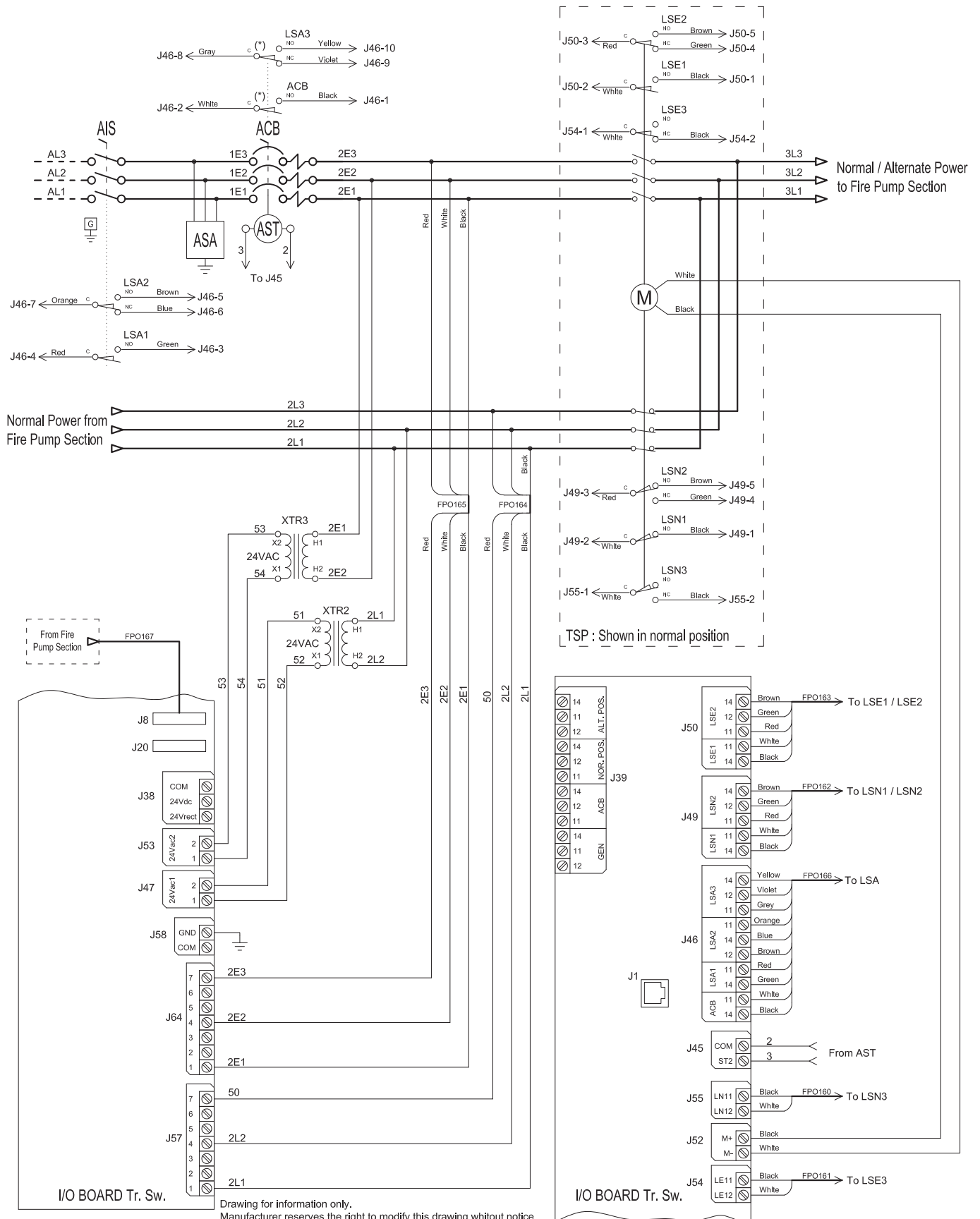
Drawing No.  
GPR-WS510 /E

# AUTOMATIC TRANSFER SWITCH

MODEL : GPU

Wiring schematic

BUILT TO LATEST NFPA 20 STANDARD EDITION



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

(\*) Under 75 FLA, micro-switches are reversed.

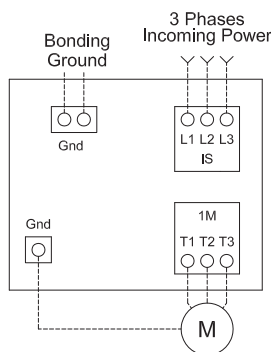


GPU-WS-VIZI

| REV. | DATE     | DESCRIPTION      | DES. | VER. | APP. |
|------|----------|------------------|------|------|------|
| 1.   | 11/10/05 | GENERAL REVISION | DES. |      |      |
| 0.   | 11/03/10 | FIRST ISSUE      | VER. |      |      |

Drawing No.  
**GPU-WS500 /E**

### Power Terminals Models : GPA, GPR & GPS



- Notes:
- 1 - For proper wire sizing, refer to NFPA70 and NEC (USA) or CEC (Canada) or local code.
  - 2 - Controller suitable for service entrance in USA.
  - 3 - For more accurate motor connections refer to motor manufacturer or motor nameplate.
  - 4 - Controller is phase sensitive. Incoming lines must be connected in ABC sequence.
  - 5 - Field wiring and lug sizes base on copper conductors only.  
Do not use aluminium conductors.

**Isolating Switch (IS) Field Wiring according to Bending Space (AWG or MCM), TERMINALS L1 - L2 - L3**

(Use Copper Conductors Only)

| Bending Space | 5 " (127 mm)   |                |                |                |                |               |               | 8 " (203 mm)    |                 |                 |
|---------------|----------------|----------------|----------------|----------------|----------------|---------------|---------------|-----------------|-----------------|-----------------|
|               | HP             | 5              | 7.5            | 10             | 15             | 20            | 25            | 30              | 40              | 50              |
| 208           | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (8 to 1/0)  | 1x (6 to 1/0)  | 1x (4 to 1/0)  | 1x (3 to 1/0) | 1x (2 to 1/0) | 1x (1/0 to 250) | 1x (3/0 to 250) | 1x (4/0 to 250) |
| 220 to 240    | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (6 to 1/0)  | 1x (4 to 1/0)  | 1x (4 to 1/0) | 1x (3 to 1/0) | 1x (1 to 250)   | 1x (2/0 to 250) | 1x (3/0 to 250) |
| 380 to 416    | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (8 to 1/0)  | 1x (6 to 1/0) | 1x (6 to 1/0) | 1x (4 to 1/0)   | 1x (3 to 1/0)   | 1x (3 to 1/0)   |
| 440 to 480    | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (8 to 1/0) | 1x (6 to 1/0) | 1x (6 to 1/0)   | 1x (4 to 1/0)   | 1x (3 to 1/0)   |
| 600           | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0) | 1x (8 to 1/0) | 1x (6 to 1/0)   | 1x (6 to 1/0)   | 1x (4 to 1/0)   |

| Bending Space | 12 " (305 mm)   |                 |                 |                 | 16 " (406 mm)   |                 |                 |                                    |                 |                 |                 |       |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------------------|-----------------|-----------------|-----------------|-------|
|               | HP              | 75              | 100             | 125             | 150             | 200             | 250             | 300                                | 350             | 400             | 450             | 500   |
| 208           | 1x (300 to 500) | 1x (500)        | 2x (4/0 to 500) | 2x (250 to 500) | 2x (400 to 600) | -----           | -----           | -----                              | -----           | -----           | -----           | ----- |
| 220 to 240    | 1x (250 to 500) | 1x (350 to 500) | 2x (3/0 to 500) | 2x (4/0 to 500) | 2x (350 to 500) | 2x (500 to 600) | -----           | -----                              | -----           | -----           | -----           | ----- |
| 380 to 416    | 1x (1/0 to 250) | 1x (3/0 to 250) | 1x (250)        | 1x (300 to 500) | 2x (3/0 to 250) | 2x (4/0 to 500) | 2x (300 to 500) | 2x (400 to 500)<br>2x (400 to 500) | 2x (500 to 600) | 2x (600)        | -----           | ----- |
| 440 to 480    | 1x (1 to 250)   | 1x (2/0 to 250) | 1x (3/0 to 250) | 1x (4/0 to 250) | 1x (350 to 500) | 2x (3/0 to 250) | 2x (4/0 to 500) | 2x (300 to 500)                    | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | ----- |
| 600           | 1x (3 to 1/0)   | 1x (1 to 250)   | 1x (2/0 to 250) | 1x (3/0 to 250) | 1x (250 to 500) | 1x (350 to 500) | 2x (3/0 to 250) | 2x (4/0 to 500)                    | 2x (250 to 500) | 2x (300 to 500) | 2x (350 to 500) | ----- |

**Wiring Size for motor connection for Model GPA, GPR and GPS (AWG or MCM), TERMINALS T1 - T2 - T3**

(Use Copper Conductors Only)

| HP         | 5        |                 |                 |                 |                 |               |               |                 |          |                 | 7.5             |                 |                 |                 |                 |                 |                 |                 |                 |                 | 10              |                 |                 |                 |                 |                 |                 |                 |                 |                 | 15              |                 |                 |                 |                 |                 |                 |                 |                 |                 | 20              |                 |                 |                 |                 |                 |                 |                 |                 |                 | 25              |                 |                 |                 |                 |                 |          |                 |                 |          | 30 |  |  |  |  |  |  |  |  |  | 40 |  |  |  |  |  |  |  |  |  | 50 |  |  |  |  |  |  |  |  |  | 60 |  |  |  |  |  |  |  |  |  |
|------------|----------|-----------------|-----------------|-----------------|-----------------|---------------|---------------|-----------------|----------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----------|-----------------|-----------------|----------|----|--|--|--|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|--|----|--|--|--|--|--|--|--|--|--|
|            | HP       | 5               | 7.5             | 10              | 15              | 20            | 25            | 30              | 40       | 50              | 60              | 5               | 7.5             | 10              | 15              | 20              | 25              | 30              | 40              | 50              | 60              | 5               | 7.5             | 10              | 15              | 20              | 25              | 30              | 40              | 50              | 60              | 5               | 7.5             | 10              | 15              | 20              | 25              | 30              | 40              | 50              | 60              | 5               | 7.5             | 10              | 15              | 20              | 25              | 30              | 40              | 50              | 60              |                 |                 |                 |                 |                 |          |                 |                 |          |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |
| 208        | 1x (10)  | 1x (10)         | 1x (8 to 2)     | 1x (6 to 2)     | 1x (4 to 1/0)   | 1x (3 to 1/0) | 1x (2 to 1/0) | 1x (1/0 to 3/0) | 1x (3/0) | 1x (4/0 to 300) | 1x (12 to 10)   | 1x (10)         | 1x (8 to 2)     | 1x (6 to 2)     | 1x (4 to 1/0)   | 1x (4 to 1/0)   | 1x (3 to 1/0)   | 1x (1 to 3/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (14 to 10)   | 1x (12 to 10)   | 1x (8 to 2)     | 1x (8 to 2)     | 1x (8 to 2)     | 1x (6 to 2)     | 1x (6 to 1/0)   | 1x (4 to 1/0)   | 1x (3 to 1/0)   | 1x (3 to 1/0)   | 1x (14 to 10)   | 1x (14 to 10)   | 1x (14 to 10)   | 1x (12 to 10)   | 1x (10)         | 1x (8 to 2)     | 1x (8 to 2)     | 1x (6 to 2)     | 1x (6 to 2)     | 1x (6 to 2)     | 1x (4 to 1/0)   | 1x (3 to 1/0)   | 1x (14 to 10)   | 1x (14 to 10)   | 1x (14 to 10)   | 1x (12 to 10)   | 1x (10)         | 1x (8 to 2)     | 1x (8 to 2)     | 1x (6 to 2)     | 1x (6 to 2)     | 1x (6 to 2)     | 1x (4 to 1/0)   | 1x (3 to 1/0)   |                 |                 |          |                 |                 |          |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |
| 220 to 240 | 1x (300) | 2x (2/0 to 300) | 2x (4/0 to 300) | 2x (250 to 300) | 2x (400 to 600) | -----         | -----         | -----           | -----    | -----           | 1x (250 to 300) | 2x (2/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (350 to 500) | 2x (500 to 600) | -----           | -----           | -----           | -----           | 1x (1 to 2/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (4/0 to 300) | 2x (1/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (400 to 500) | 2x (500 to 600) | 2x (600)        | 1x (300)        | 2x (2/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (1/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | 2x (600)        | 1x (3 to 1/0)   | 1x (1 to 2/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (4/0 to 300) | 2x (1/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | 2x (600)        |          |                 |                 |          |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |
| 380 to 416 | 1x (300) | 2x (2/0 to 300) | 2x (4/0 to 300) | 2x (250 to 300) | 2x (400 to 600) | -----         | -----         | -----           | -----    | -----           | 1x (1/0 to 3/0) | 1x (3/0)        | 1x (250 to 300) | 1x (300)        | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (400 to 500) | 2x (500 to 600) | 2x (600)        | 1x (1/0 to 3/0) | 1x (3/0)        | 1x (250 to 300) | 1x (300)        | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (400 to 500) | 2x (500 to 600) | 2x (600)        | 1x (1/0 to 3/0) | 1x (3/0)        | 1x (250 to 300) | 1x (300)        | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (400 to 500) | 2x (500 to 600) | 2x (600)        | 1x (1/0 to 3/0) | 1x (3/0)        | 1x (250 to 300) | 1x (300)        | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (400 to 500) | 2x (500 to 600) | 2x (600)        | 1x (1/0 to 3/0) | 1x (3/0)        | 1x (250 to 300) | 1x (300)        | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300) | 2x (400 to 500) | 2x (500 to 600) | 2x (600) |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |
| 440 to 480 | 1x (300) | 2x (2/0 to 300) | 2x (4/0 to 300) | 2x (250 to 300) | 2x (400 to 600) | -----         | -----         | -----           | -----    | -----           | 1x (1 to 2/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (4/0 to 300) | 2x (1/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | 1x (1 to 2/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (4/0 to 300) | 2x (1/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | 2x (600)        | 1x (1 to 2/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (4/0 to 300) | 2x (1/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | 2x (600)        | 1x (1 to 2/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (4/0 to 300) | 2x (1/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (300)        | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | 2x (600) |                 |                 |          |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |
| 600        | 1x (300) | 2x (2/0 to 300) | 2x (4/0 to 300) | 2x (250 to 300) | 2x (400 to 600) | -----         | -----         | -----           | -----    | -----           | 1x (3 to 1/0)   | 1x (1 to 2/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (250 to 300) | 2x (2/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (250 to 300) | 2x (300)        | 2x (350 to 500) | 2x (400 to 600) | 1x (3 to 1/0)   | 1x (1 to 2/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (250 to 300) | 2x (2/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (250 to 300) | 2x (300)        | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | 2x (600)        | 1x (3 to 1/0)   | 1x (1 to 2/0)   | 1x (2/0 to 3/0) | 1x (3/0)        | 1x (250 to 300) | 2x (2/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 300) | 2x (250 to 300) | 2x (300)        | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | 2x (600)        |                 |                 |                 |                 |                 |                 |          |                 |                 |          |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |    |  |  |  |  |  |  |  |  |  |

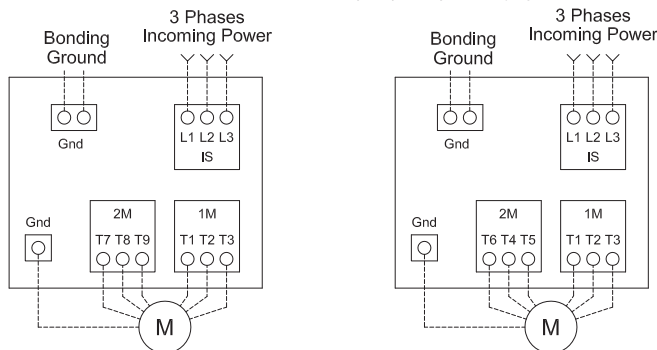
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For drawing for approval or installation, please contact manufacturer.



| REV. | DATE     | DESCRIPTION          | APP. |
|------|----------|----------------------|------|
| 4.   | 13/11/11 | FIELD PROGRAMMABLE   | DES. |
| 3.   | 13/01/04 | DATA ADDED TO TABLES | VER. |

Drawing No.  
**GPX-TD500 1/3 /E**

### Power Terminals



Model : GPP

Models : GPW & GPY

- Notes:
- 1 - For proper wire sizing, refer to NFPA70 and NEC (USA) or CEC (Canada) or local code.
  - 2 - Controller suitable for service entrance in USA.
  - 3 - For more accurate motor connections refer to motor manufacturer or motor nameplate.
  - 4 - Controller is phase sensitive. Incoming lines must be connected in ABC sequence.
  - 5 - Field wiring and lug sizes base on copper conductors only.  
Do not use aluminium conductors.

### Isolating Switch (IS) Field Wiring according to Bending Space (AWG or MCM). TERMINALS L1 - L2 - L3

(Use Copper Conductors Only)

| Bending Space | 5 " (127 mm)   |                |                |                |                |               |               | 8 " (203 mm)    |                 |                 |
|---------------|----------------|----------------|----------------|----------------|----------------|---------------|---------------|-----------------|-----------------|-----------------|
|               | HP             | 5              | 7.5            | 10             | 15             | 20            | 25            | 30              | 40              | 50              |
| 208           | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (8 to 1/0)  | 1x (6 to 1/0)  | 1x (4 to 1/0)  | 1x (3 to 1/0) | 1x (2 to 1/0) | 1x (1/0 to 250) | 1x (3/0 to 250) | 1x (4/0 to 250) |
| 220 to 240    | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (6 to 1/0)  | 1x (4 to 1/0)  | 1x (4 to 1/0) | 1x (3 to 1/0) | 1x (1 to 250)   | 1x (2/0 to 250) | 1x (3/0 to 250) |
| 380 to 416    | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (8 to 1/0)  | 1x (6 to 1/0) | 1x (6 to 1/0) | 1x (4 to 1/0)   | 1x (3 to 1/0)   | 1x (3 to 1/0)   |
| 440 to 480    | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (8 to 1/0) | 1x (6 to 1/0) | 1x (6 to 1/0)   | 1x (4 to 1/0)   | 1x (3 to 1/0)   |
| 600           | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0) | 1x (8 to 1/0) | 1x (6 to 1/0)   | 1x (6 to 1/0)   | 1x (4 to 1/0)   |

| Bending Space | 12 " (305 mm)   |                 |                 |                 | 16 " (406 mm)   |                 |                 |                                    |                 |                 |                 |       |
|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------------------|-----------------|-----------------|-----------------|-------|
|               | HP              | 75              | 100             | 125             | 150             | 200             | 250             | 300                                | 350             | 400             | 450             | 500   |
| 208           | 1x (300 to 500) | 1x (500)        | 2x (4/0 to 500) | 2x (250 to 500) | 2x (400 to 600) | -----           | -----           | -----                              | -----           | -----           | -----           | ----- |
| 220 to 240    | 1x (250 to 500) | 1x (350 to 500) | 2x (3/0 to 500) | 2x (4/0 to 500) | 2x (350 to 500) | 2x (500 to 600) | -----           | -----                              | -----           | -----           | -----           | ----- |
| 380 to 416    | 1x (1/0 to 250) | 1x (3/0 to 250) | 1x (250)        | 1x (300 to 500) | 2x (3/0 to 250) | 2x (4/0 to 500) | 2x (300 to 500) | 2x (400 to 500)<br>2x (400 to 500) | 2x (500 to 600) | 2x (600)        | -----           | ----- |
| 440 to 480    | 1x (1 to 250)   | 1x (2/0 to 250) | 1x (3/0 to 250) | 1x (4/0 to 250) | 1x (350 to 500) | 2x (3/0 to 250) | 2x (4/0 to 500) | 2x (300 to 500)                    | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) | ----- |
| 600           | 1x (3 to 1/0)   | 1x (1 to 250)   | 1x (2/0 to 250) | 1x (3/0 to 250) | 1x (250 to 500) | 1x (350 to 500) | 2x (3/0 to 250) | 2x (4/0 to 500)                    | 2x (250 to 500) | 2x (300 to 500) | 2x (350 to 500) | ----- |

| Bending Space | 5 " (127 mm) | 8 " (203 mm) | 12 " (305 mm) |
|---------------|--------------|--------------|---------------|
| 5 " (127 mm)  | 5 " (127 mm) | 8 " (203 mm) | 12 " (305 mm) |

### Wiring Size for motor connection for Model GPP, GPW and GPY (AWG or MCM). TERMINALS T1 - T2 - T3 - T4 - T5 - T6 - T7 - T8 - T9

(Use Copper Conductors Only)

| HP         | 5             | 7.5           | 10            | 15            | 20            | 25            | 30            | 40            | 50            | 60            |
|------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|---------------|
| 208        | 1x (14 to 10) | 1x (12 to 10) | 1x (10)       | 1x (8 to 2)   | 1x (8 to 2)   | 1x (6 to 2)   | 1x (6 to 1/0) | 1x (4 to 2/0) | 1x (2 to 3/0) | 1x (1 to 3/0) |
| 220 to 240 | 1x (14 to 10) | 1x (12 to 10) | 1x (10)       | 1x (8 to 2)   | 1x (8 to 2)   | 1x (6 to 2)   | 1x (6 to 1/0) | 1x (4 to 2/0) | 1x (3 to 2/0) | 1x (2 to 3/0) |
| 380 to 416 | 1x (14 to 10) | 1x (14 to 10) | 1x (14 to 10) | 1x (12 to 10) | 1x (10)       | 1x (10)       | 1x (8 to 2)   | 1x (6 to 2)   | 1x (6 to 2)   | 1x (4 to 1/0) |
| 440 to 480 | 1x (14 to 10) | 1x (14 to 10) | 1x (14 to 10) | 1x (12 to 10) | 1x (12 to 10) | 1x (10)       | 1x (10 to 2)  | 1x (8 to 2)   | 1x (6 to 2)   | 1x (6 to 2)   |
| 600        | 1x (14 to 10) | 1x (14 to 10) | 1x (14 to 10) | 1x (14 to 10) | 1x (12 to 10) | 1x (12 to 10) | 1x (10)       | 1x (10 to 2)  | 1x (8 to 2)   | 1x (8 to 2)   |

| HP         | 75              | 100           | 125             | 150             | 200             | 250             | 300             | 350             | 400             | 450             | 500             |
|------------|-----------------|---------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| 208        | 1x (2/0 to 3/0) | 1x (3/0)      | 1x (250 to 300) | 2x (1/0 to 300) | 2x (3/0 to 350) | -----           | -----           | -----           | -----           | -----           | -----           |
| 220 to 240 | 1x (1/0 to 3/0) | 1x (3/0)      | 1x (4/0 to 300) | 1x (300)        | 2x (2/0 to 300) | 2x (4/0 to 350) | -----           | -----           | -----           | -----           | -----           |
| 380 to 416 | 1x (4 to 2/0)   | 1x (2 to 2/0) | 1x (1/0 to 3/0) | 1x (2/0 to 3/0) | 1x (4/0 to 300) | 1x (300)        | 2x (2/0 to 300) | 2x (3/0 to 300) | 2x (4/0 to 350) | 2x (4/0 to 350) | -----           |
| 440 to 480 | 1x (4 to 2/0)   | 1x (3 to 2/0) | 1x (2 to 3/0)   | 1x (1/0 to 3/0) | 1x (2/0 to 3/0) | 1x (4/0 to 300) | 1x (300)        | 2x (1/0 to 300) | 2x (2/0 to 300) | 2x (3/0 to 350) | 2x (4/0 to 350) |
| 600        | 1x (6 to 2)     | 1x (4 to 2/0) | 1x (3 to 2/0)   | 1x (2 to 3/0)   | 1x (1/0 to 3/0) | 1x (2/0 to 3/0) | 1x (4/0 to 300) | 1x (250 to 300) | 1x (300)        | 2x (1/0 to 300) | 2x (2/0 to 300) |

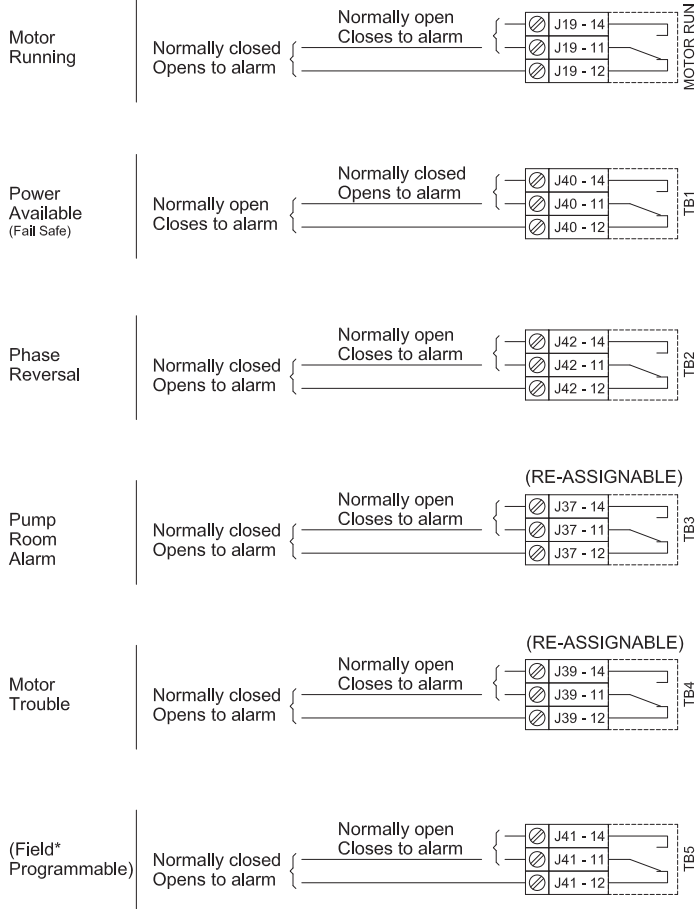
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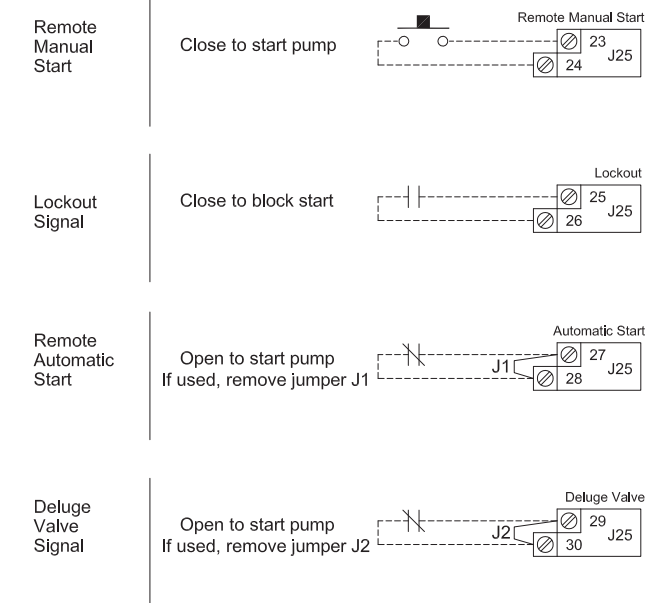
| REV. | DATE     | DESCRIPTION          | APP. |
|------|----------|----------------------|------|
| 4.   | 13/11/11 | FIELD PROGRAMMABLE   | DES. |
| 3.   | 13/01/04 | DATA ADDED TO TABLES | VER. |

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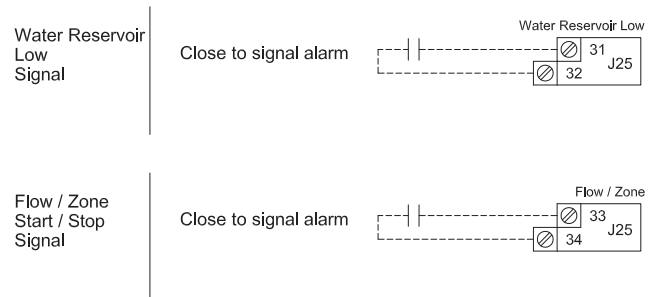
### Remote Alarm Terminals (I/O board)



### Control Terminals (I/O board)



### Filed Connections for External Devices (I/O board)



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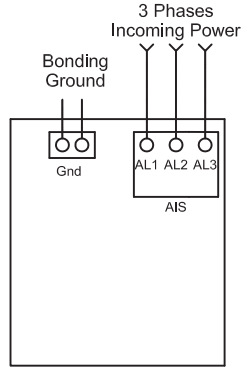
\*Not Available in GPS Models



| REV. | DATE     | DESCRIPTION          | APP. |
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| 4.   | 13/11/11 | FIELD PROGRAMMABLE   | DES. |
| 3.   | 13/01/04 | DATA ADDED TO TABLES | VER. |

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**GPX-TD500 3/3 /E**

### Power Terminals



**Notes:**

- 1 - Controller is phase sensitive. Incoming lines must be connected in ABC
- 2 - Field wiring and lug sizes base on copper conductors only. Do not use aluminium conductors.

Isolating Switch (IS) Field Wiring according to Bending Space (AWG or MCM). TERMINALS AL1 - AL2 - AL3

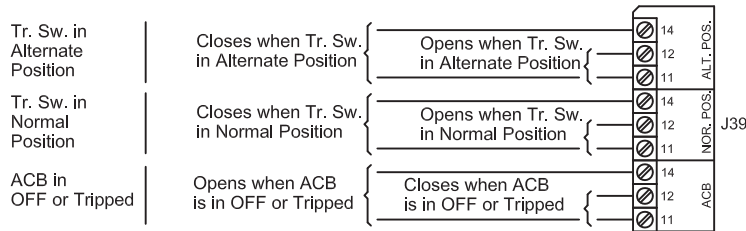
(Use Copper Conductors Only)

| Bending Space | 5" (127 mm) |                |                |                |                |                |               | 8" (203 mm)   |                 |                 |                 |
|---------------|-------------|----------------|----------------|----------------|----------------|----------------|---------------|---------------|-----------------|-----------------|-----------------|
|               | HP Voltage  | 5              | 7.5            | 10             | 15             | 20             | 25            | 30            | 40              | 50              | 60              |
| 208           |             | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (8 to 1/0)  | 1x (6 to 1/0)  | 1x (4 to 1/0)  | 1x (3 to 1/0) | 1x (2 to 1/0) | 1x (1/0 to 250) | 1x (3/0 to 250) | 1x (4/0 to 250) |
| 220 to 240    |             | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (6 to 1/0)  | 1x (4 to 1/0)  | 1x (4 to 1/0) | 1x (3 to 1/0) | 1x (1 to 250)   | 1x (2/0 to 250) | 1x (3/0 to 250) |
| 380 to 416    |             | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (8 to 1/0)  | 1x (6 to 1/0) | 1x (6 to 1/0) | 1x (4 to 1/0)   | 1x (3 to 1/0)   | 1x (3 to 1/0)   |
| 440 to 480    |             | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0)  | 1x (8 to 1/0) | 1x (6 to 1/0) | 1x (6 to 1/0)   | 1x (4 to 1/0)   | 1x (3 to 1/0)   |
| 600           |             | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (10 to 1/0) | 1x (8 to 1/0) | 1x (8 to 1/0) | 1x (6 to 1/0)   | 1x (6 to 1/0)   | 1x (4 to 1/0)   |

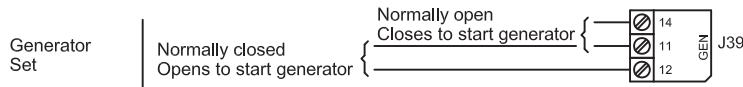
  

| Bending Space | 12" (305 mm) |                 |                 |                 | 16" (406 mm)    |                 |                 |                 |                                    |                 |                 |                 |
|---------------|--------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------------------------|-----------------|-----------------|-----------------|
|               | HP Voltage   | 75              | 100             | 125             | 150             | 200             | 250             | 300             | 350                                | 400             | 450             | 500             |
| 208           |              | 1x (300 to 500) | 1x (500)        | 2x (4/0 to 500) | 2x (250 to 500) | 2x (400 to 600) | -----           | -----           | -----                              | -----           | -----           | -----           |
| 220 to 240    |              | 1x (250 to 500) | 1x (350 to 500) | 2x (3/0 to 500) | 2x (4/0 to 500) | 2x (350 to 500) | 2x (500 to 600) | -----           | -----                              | -----           | -----           | -----           |
| 380 to 416    |              | 1x (1/0 to 250) | 1x (3/0 to 250) | 1x (250)        | 1x (300 to 500) | 2x (3/0 to 250) | 2x (4/0 to 500) | 2x (300 to 500) | 2x (400 to 500)<br>2x (400 to 500) | 2x (500 to 600) | 2x (600)        | -----           |
| 440 to 480    |              | 1x (1 to 250)   | 1x (2/0 to 250) | 1x (3/0 to 250) | 1x (4/0 to 250) | 1x (350 to 500) | 2x (3/0 to 250) | 2x (4/0 to 500) | 2x (300 to 500)                    | 2x (350 to 500) | 2x (400 to 600) | 2x (500 to 600) |
| 600           |              | 1x (3 to 1/0)   | 1x (1 to 250)   | 1x (2/0 to 250) | 1x (3/0 to 250) | 1x (250 to 500) | 1x (350 to 500) | 2x (3/0 to 250) | 2x (4/0 to 500)                    | 2x (250 to 500) | 2x (300 to 500) | 2x (350 to 500) |
|               |              | 5" (127 mm)     |                 | 8" (203 mm)     |                 |                 | 12" (305 mm)    |                 |                                    |                 |                 |                 |

### Remote Alarm Terminal (I/O board Tr. Sw.)



### Field Connections for External Devices (I/O board Tr. Sw.)



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| REV. | DATE     | DESCRIPTION          | APP. |
|------|----------|----------------------|------|
| 2.   | 13/01/04 | DATA ADDED TO TABLES | DES. |
| 1.   | 12/06/12 | ADD COPPER NOTES     | VER. |

Drawing No.  
**GPU-TD500 /E**