



# TORNATECH

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

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

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

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

Technical Data  
Submittal Document

## GPx Series

Full Service  
Electric Fire Pump Controller

### Contents:

Data Sheets  
Dimensional Data  
Wiring Schematics  
Field Connections

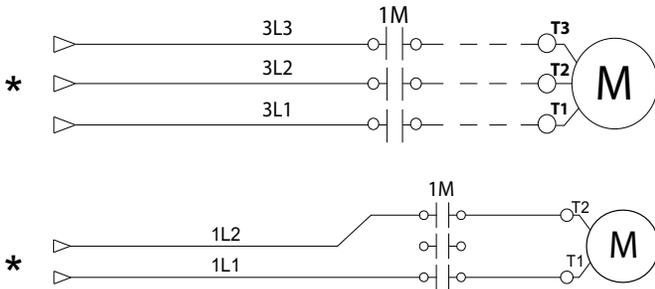
**Note:** The drawings included in this package are for controllers covered under our standard offering. Actual AS BUILT drawings may differ from what is shown in this package.



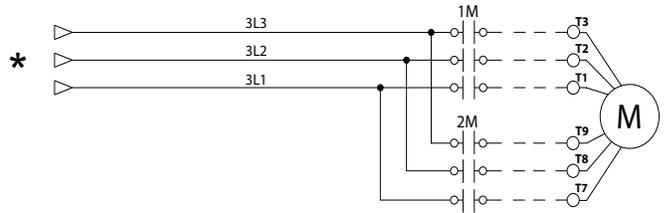
November 2025

### Select starting method

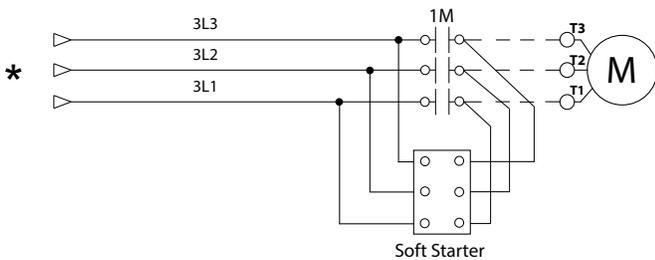
#### Model GPA Across the line



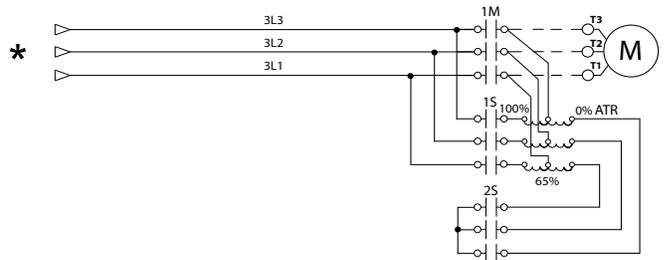
#### Model GPP Partwinding



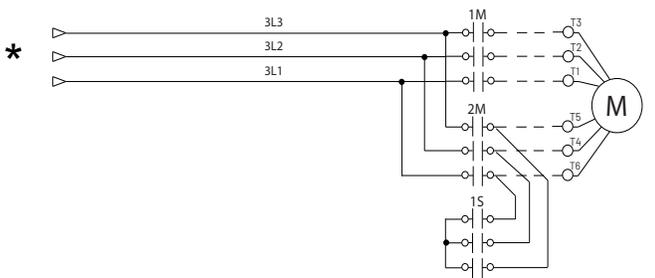
#### Model GPS Soft Start Soft Stop



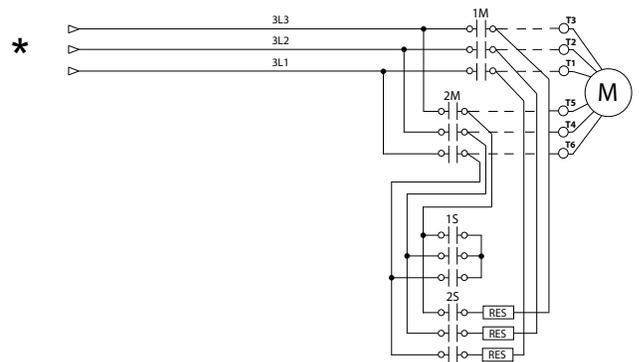
#### Model GPR Autotransformer



#### Model GPY Wye-Delta Open



#### Model GPW Wye-Delta Closed



\*From normal incoming power through Disconnecting Means (IS/CB)

\*Please see Disconnecting Means details on page 4





#### Select voltage and power rating

Voltage	Select Voltage	HP	Select HP
120V/1ph/60Hz <sup>1</sup>		5	
200V/1ph/60Hz <sup>1</sup>		7.5	
208V/1ph/60Hz <sup>1</sup>		10	
220V/1ph/60Hz <sup>1</sup>		15	
230V/1ph/60Hz <sup>1</sup>		20	
240V/1ph/60Hz <sup>1</sup>		25	
200V/3ph/50-60Hz <sup>3</sup>		30	
208V/3ph/50-60Hz <sup>3</sup>		40	
220V/3ph/50-60Hz <sup>4</sup>		50	
230V/3ph/50-60Hz <sup>4</sup>		60	
240V/3ph/50-60Hz <sup>4</sup>		75	
380V/3ph/50-60Hz <sup>5</sup>		100	
400V/3ph/50-60Hz <sup>5</sup>		125	
415V/3ph/50-60Hz <sup>5</sup>		150	
440V/3ph/50-60Hz <sup>6</sup>		200	
460V/3ph/50-60Hz <sup>6</sup>		250	
480V/3ph/50-60Hz <sup>6</sup>		300	
575V/3ph/60Hz <sup>6</sup>		350	
600V/3ph/60Hz <sup>6</sup>		400	
		450	
		500	

Voltage	Select Voltage	kW <sup>2</sup>	Select kW
380V/3ph/50-60Hz		4	
400V/3ph/50-60Hz		5.5	
415V/3ph/50-60Hz		7.5	
		11	
		15	
		18.5	
		22	
		30	
		37	
		45	
		55	
		75	
		90	
		110	
		132	
		160	
		200	
		250	
		315	
		355	
		400	
		450	

- Notes: <sup>1</sup> Only available for Model GPA. Maximum power rating is 30HP.  
<sup>2</sup> kW power ratings only available for Models GPA, GPS and GPY.  
<sup>3</sup> Maximum power rating is 200HP.  
<sup>4</sup> Maximum power rating is 250HP.  
<sup>5</sup> Maximum power rating is 450HP.  
<sup>6</sup> Maximum power rating is 500HP.



<b>Standard, Listings, Approvals and Certifications</b>	<b>Built to NFPA 20</b>			
	<b>Underwriters Laboratory (UL)</b>	UL218 - Fire Pump Controllers		
	<b>FM Global</b>	Class 1321/1323		
	<b>New York City</b>	Accepted for use in the City of New York by the Department of Buildings		
	<b>CE Mark</b>	Various EN, IEC & CEE directives and standards		
	Built in Canada or U.A.E		Built in Europe	
	CE Mark Option		Supplied as Standard	
<b>Enclosure</b>	<b>Protection Rating</b>			
	Built in Canada or U.A.E		Built in Europe	
	Standard: NEMA 2		Standard: IP55	
	<b>Optional</b>			
	NEMA 12	NEMA 4X-304 sst painted	IP54	
	NEMA 3	NEMA 4X-304 sst brushed finish	IP55	
	NEMA 3R	NEMA 4X-316 sst painted	IP65	
	NEMA 4	NEMA 4X-316 sst brushed finish	IP66	
	<b>Accessories</b> • Bottom entry gland plate • Lifting Lugs • Keylock handle		<b>Paint Specifications</b> • Red RAL3002 • Powder coating • Glossy textured finish	

Short Circuit Withstand Ratings																				
HP	200V to 208V 50/60Hz/3ph			220V to 240V 50/60Hz/3ph			380V to 415V 50/60Hz/3ph			440V to 480V 50/60Hz/3ph			575V to 600V 60Hz/3ph							
	Standard	Inter-mediate	High	Standard	Inter-mediate	High														
		Option D13	Option D13B		Option D13	Option D13B														
≤150	100kA	150kA	200kA	50kA	100kA	-														
200	50kA	100kA	-													-	-	-	-	-
250	-	-	-	50kA	100kA	-		-	-		-	-				-	-	-	-	-
300	-	-	-	-	-	-		-	-		-	-				-	-	-	-	-
350	-	-	-	-	-	-	50kA	100kA	-	50kA	100kA	-	-	-	-					
400	-	-	-	-	-	-										-	-	-	-	-
450	-	-	-	-	-	-	30kA	-	-	50kA	100kA	-	-	-	-					
500	-	-	-	-	-	-										-	-	-	-	-



<b>Ambient Temperature Rating</b>	<b>Standard:</b> 4°C to 40°C / 39°F to 104°F  <b>Optional:</b> 4°C to 55°C / 39°F to 131°F  Controllers built in Dubai, UAE (Tornatech FZE) are supplied standard with 55°C rating.
<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>Service Entrance Rating</b>	Suitable as service entrance equipment (not applicable for installations in Canada).
<b>Emergency Start Handle</b>	<ul style="list-style-type: none"> <li style="width: 50%;">• Flange mounted</li> <li style="width: 50%;">• Integrated limit switch</li> <li style="width: 50%;">• Pull and latch activation</li> <li style="width: 50%;">• Across the line start (direct on line)</li> </ul>
<b>Locked Rotor Protector</b>	<ul style="list-style-type: none"> <li style="width: 50%;">• Operate shunt trip to open circuit breaker</li> <li style="width: 50%;">• Trip between 8 and 20 seconds</li> <li style="width: 50%;">• Factory set at 600% of motor full load current</li> </ul>
<b>Electrical Readings</b>	<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>
<b>Pressure Readings</b>	<ul style="list-style-type: none"> <li>• Continuous system pressure display</li> <li>• Cut-in and Cut-out pressure settings</li> </ul>
<b>Pressure and Event recorder</b>	<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 are stored in memory for the life of the controller.</li> <li>• Data viewable on operator interface display screen</li> <li>• Downloadable by USB port to external memory device or wireless connection to manufacturers App (mobile device).</li> </ul>
<b>Pressure Sensing</b>	<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 (standard display at 0-300PSI)</li> <li>• Externally mounted with protective cover</li> </ul>



<b>Audible Alarm</b>	Alarm buzzer - 85dB at 3 meters
<b>Visual Indications</b>	<ul style="list-style-type: none"> <li>• Power available</li> <li>• Motor run</li> <li>• Periodic test</li> <li>• Manual start</li> <li>• Deluge valve start</li> <li>• Remote automatic start</li> <li>• Remote manual start</li> <li>• Emergency start</li> <li>• Pump on demand/Automatic start</li> <li>• Pump room temperature (°F or °C)</li> <li>• Lockout</li> </ul>
<b>Visual &amp; Audible Alarms</b>	<p>Visual</p> <ul style="list-style-type: none"> <li>• Control voltage not healthy</li> <li>• Invalid cut-in</li> <li>• Lock rotor current</li> <li>• Loss of power</li> <li>• Low ambient temperature</li> <li>• Low water level</li> <li>• Motor trouble</li> <li>• Phase reversal (normal power)</li> <li>• Overcurrent</li> <li>• Overvoltage</li> <li>• Phase loss L1</li> <li>• Phase loss L2</li> <li>• Phase loss L3</li> <li>• Phase unbalanced</li> <li>• Pressure transducer fault detected</li> <li>• Pump on demand</li> <li>• Pump room alarm</li> <li>• Service required</li> <li>• Undercurrent</li> <li>• Undervoltage</li> <li>• Check weekly test solenoid</li> <li>• Weekly test cut-in reached</li> </ul> <p>Visual and audible</p> <ul style="list-style-type: none"> <li>• Fail to start</li> </ul>
<b>Remote Alarm Contacts</b>	<p>DPDT-8A-250V.AC</p> <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>

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



<b>ViZiTouch V2.1 Operator Interface</b>	<ul style="list-style-type: none"> <li>• Embedded microcomputer with software PLC logic</li> <li>• 7.0" color touch screen (HMI technology)</li> <li>• Upgradable software</li> <li>• Multi-language</li> </ul>		
<b>Communication Protocol Capability</b>	<ul style="list-style-type: none"> <li>• Protocol: Modbus</li> <li>• Connection type: Shielded female connector RJ45</li> <li>• Frame Format: TCP/IP</li> <li>• Addresses: See bulletin MOD-GPx</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> <li>• Deluge valve start</li> </ul>	
	<b>Manual Start</b>	<ul style="list-style-type: none"> <li>• Start pushbutton</li> <li>• Run test pushbutton</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>

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



A4	Flow switch provision
A8	Foam pump application w/o pressure transducer and run test solenoid valve.
A9	Low zone pump control function
A10	Middle zone pump control function
A11	High zone pump control function
A13	Non-pressure actuated controller w/o pressure transducer and run test solenoid valve
A16	Lockout/interlock circuit from equipment installed inside the pump room
B11	Built in alarm panel (120V.AC supervisory power) providing indication for: • Audible alarm & silence pushbutton for motor run, phase reversal, loss of phase. • Pilot lights for loss of phase & supervisory power available
B11B	Built in alarm panel same as B11 but 220-240VAC supervisory power
B19A	High motor temperature c/w thermostat relay and alarm contacts (DPDT)
B19B	High motor temperature c/w PT100 relay and alarm contacts (DPDT)
B21	Ground fault alarm detection c/w visual indication and alarm contact (DPDT)
B25	Digital flow test feature complete with access to Pump Curve menu, display of flow rate on main screen and 25ft cable (Option ONLY suitable for connection with Tornatech digital flow meter)
C1	Extra motor run alarm contact (DPDT)
C4	Periodic test alarm contact (DPDT)
C6	Low discharge pressure alarm contact (DPDT)
C7	Low pump room temperature alarm contact (DPDT)
C10	Low water reservoir level alarm contact (DPDT)
C11	High electric motor temperature alarm contact (DPDT)
C12	High electric motor vibration c/w visual indication and alarm contact (DPDT)
C14	Pump on demand / automatic start alarm contact (DPDT)
C15	Pump fail to start alarm contact (DPDT)
C16	Control voltage healthy alarm contact (DPDT)

C17	Flow meter valve loop open c/w visual indication and alarm contact (DPDT)
C18	High water reservoir level c/w visual indication and alarm contact (DPDT)
C19	Emergency start alarm contact (DPDT)
C20	Manual start alarm contact (DPDT)
C21	Deluge valve start alarm contact (DPDT)
C22	Remote automatic start alarm contact (DPDT)
C23	Remote manual start alarm contact (DPDT)
C24	High pump room temperature alarm contact (DPDT)
C25	Second set of standard alarm contacts (DPDT) (Typical for city of Los Angeles and Denver)
Cx	Additional visual and alarm contact (Specify function) (DPDT)
D1	Low suction pressure transducer for fresh water rated at 0-500PSI with visual indication and alarm contact
D1A	Low suction pressure transducer for sea water rated at 0-500PSI with visual indication and alarm contact
D5	Pressure transducer and run test solenoid valve for fresh water rated for 0-500PSI (for factory calibration purposes only)
D5D	Pressure transducer and run test solenoid valve for sea water rated for 0-500PSI
D10	Omit mounting feet (when applicable)
D14	Anti-condensation heater & thermostat
D14A	Anti-condensation heater & humidistat
D14B	Anti-condensation heater & thermostat & humidistat
D15	Tropicalization
D18	CE Mark with factory certificate
D27	Motor heater connection (external single phase power source and heater on/off contact)
D27A	Motor heater connection (internal single phase power source and heater on/off contact)
D28	Customized drawing set

\*For fire pump controller section only.

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



D34A	Field programmable I/O board - 5 Input / 5 output
D36	Redundant pressure transducer for fresh water rated for 0-500PSI
D36A	Redundant pressure transducer for sea water rated for 0-500PSI
D43	Seismic Certification compliant to CBC 2019, IBC 2018 rigid base/wall mounted only
D44	Special Seismic Certification compliant to OSHPD rigid base/wall mounted only

L01	Other language and English (bilingual)
L02	French
L03	Spanish
L04	German
L05	Italian
L06	Polish
L07	Romanian
L08	Hungarian
L09	Slovakian
L10	Croatian
L11	Czech
L12	Portuguese
L13	Dutch
L15	Turkish
L16	Swedish
L21	Danish
L25	Chinese
L28	Finnish
L29	Norwegian

Additional Options:

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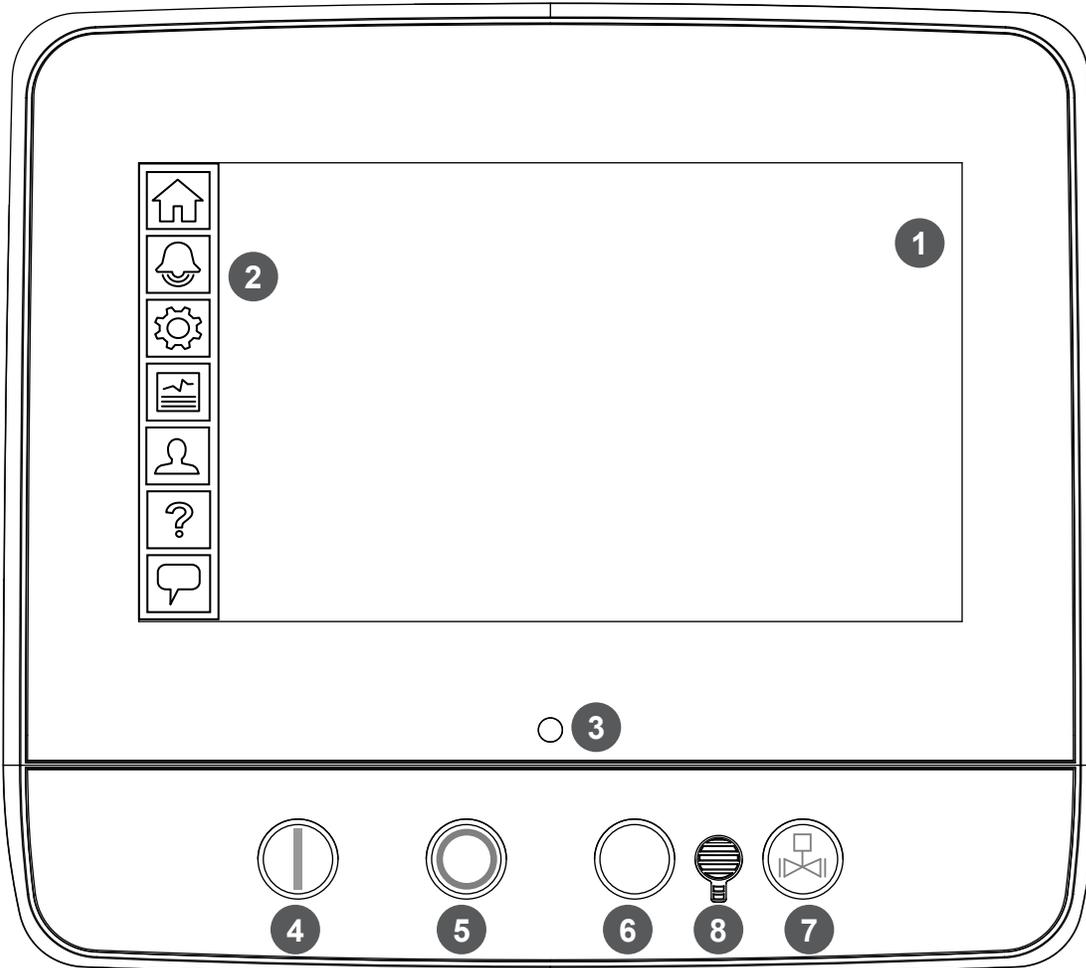
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Note: Options chosen from this page are not electrically represented on the wiring schematics in this submittal package.

**ViZiTouch V2.1 Operator Interface**



- |                        |                          |
|------------------------|--------------------------|
| 1 - Color touch screen | 3 - Power LED (3 colors) |
| 2 - Onscreen menu      | 4 - START button         |
| • HOME page            | 5 - STOP button          |
| • ALARM page           | 6 - Not Used             |
| • CONFIGURATION page   | 7 - RUN TEST button      |
| • HISTORY page         | 8 - Alarm buzzer         |
| • SERVICE page         |                          |
| • MANUAL page          |                          |
| • LANGUAGES page       |                          |



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BY		DD/MM/YY
DRAWN BY	MLC	04/10/24
FINAL APPROVAL	FC	07/11/24

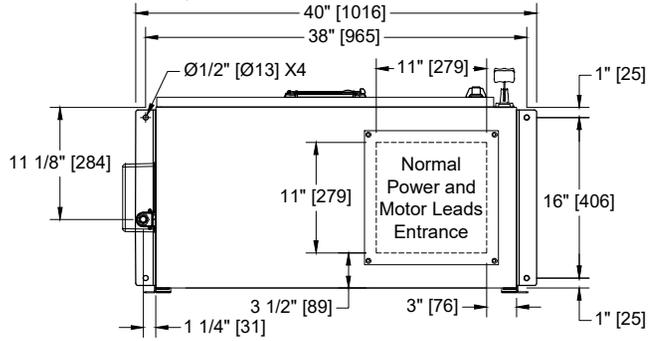
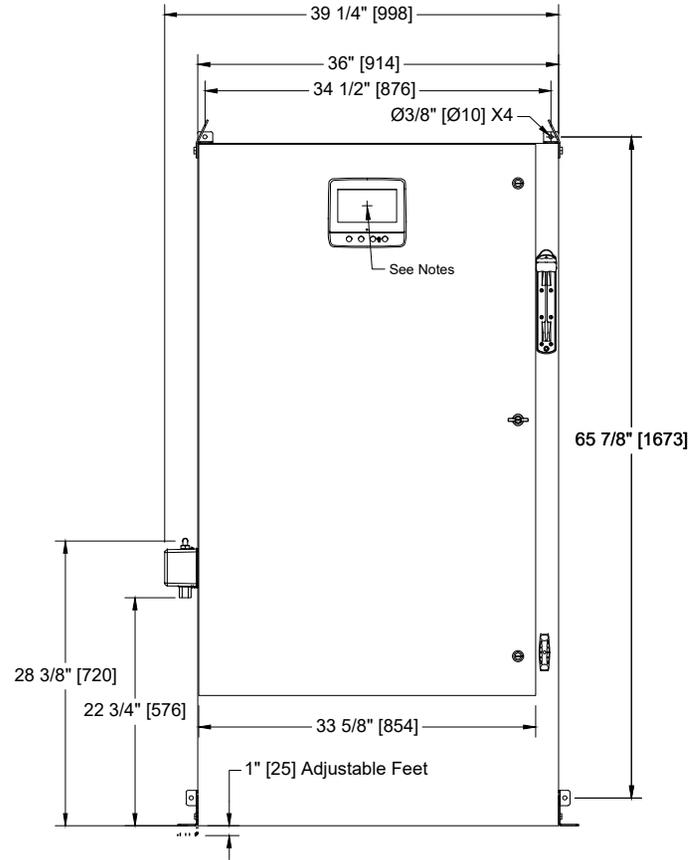
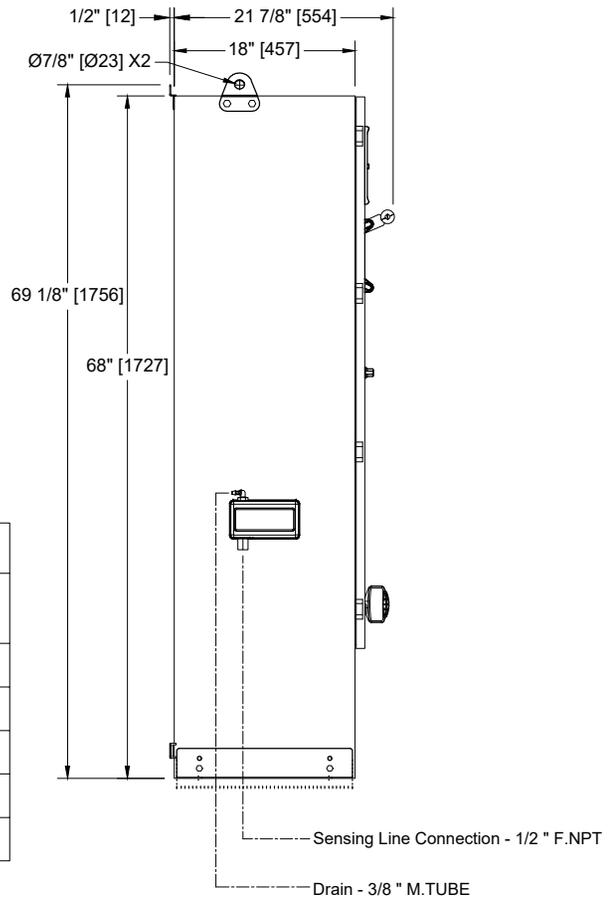
# ELECTRIC FIRE PUMP CONTROLLER

**MODEL: GPR/GPW**

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER	GPX-DI93 1/E
DWG REV. 0	
SHEET 1 OF 1	



Voltage / Power Table		
Voltage	Min HP	Max HP
208	75	150
220 - 240	100	200
380 - 400 - 415	150	300
440 - 480	200	350
600	200	500

**Notes:**

- Standard NEMA: NEMA 2
- Standard paint : textured red RAL 3002.
- All dimensions are in inches [millimeters].
- Center of screen: 61-5/8" [1564] from bottom.
- Bottom conduit entrance through removable gland plate recommended.
- Use watertight conduit and connector only.
- Protect equipment against drilling chips.
- Door swing equal to door width.



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FINAL APPROVAL	FC	11/01/24

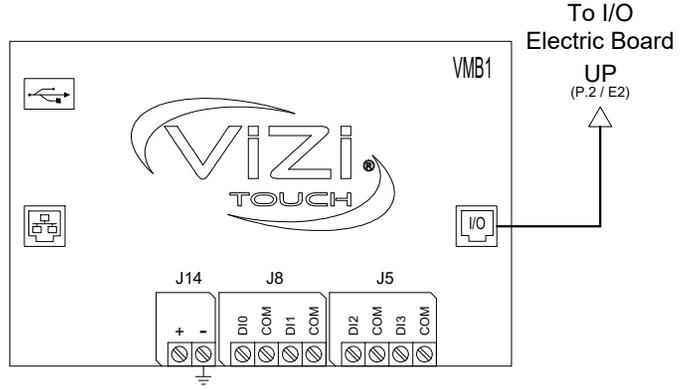
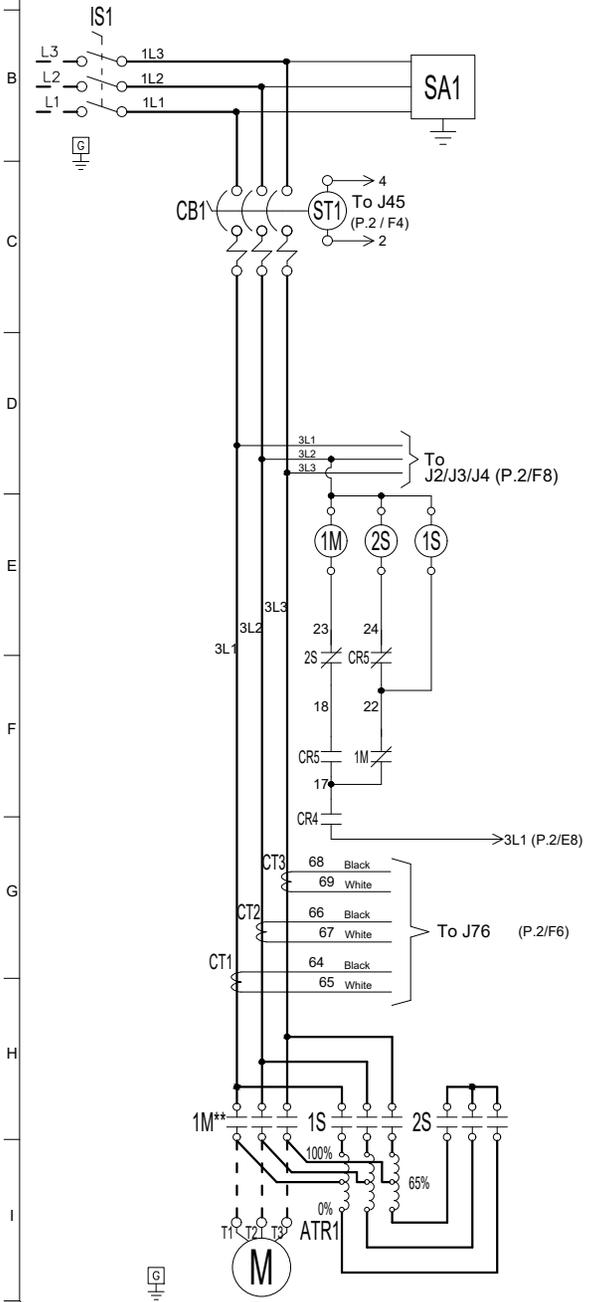
# ELECTRIC FIRE PUMP CONTROLLER REDUCED VOLTAGE / AUTOTRANSFORMER

**MODEL:GPR**

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER	GPR-WS800/E
DWG REV. 1	
SHEET 1 OF 2	



Legend	
1M	Contactors
1S-2S	Contactors
AB	Alarm Bell
ATR	Autotransformer
CB	Circuit Breaker
CR	Control Relay
CT	Current Transformer
EB	Electric I/O Board
IS	Isolating Switch
J	Jumper
LS	Limit Switch
PT	Pressure Transducer
SA	Surge Arrester
ST	Shunt Trip
SV	Solenoid Valve
VMB	Main Board
XTR	Transformer



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FINAL APPROVAL	FC 11/01/24

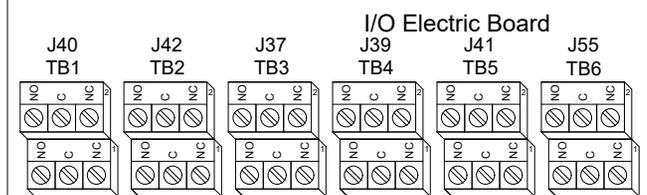
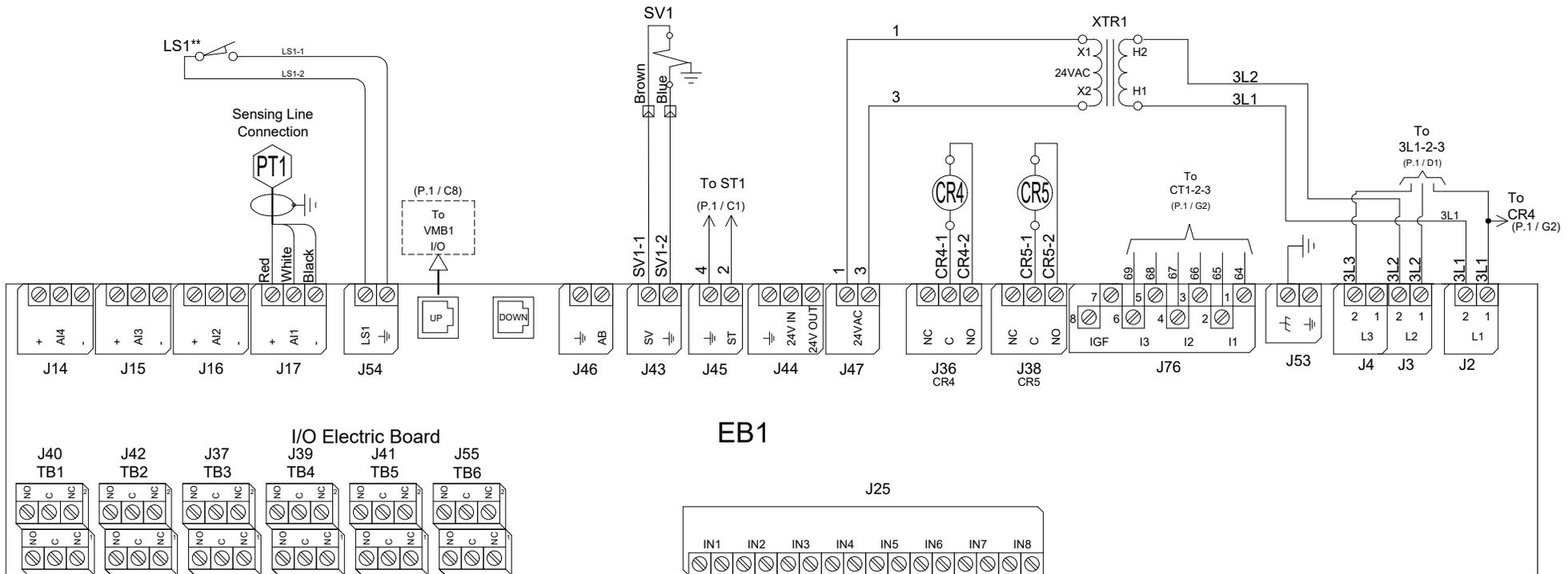
# ELECTRIC FIRE PUMP CONTROLLER REDUCED VOLTAGE / AUTOTRANSFORMER

**MODEL:GPR**

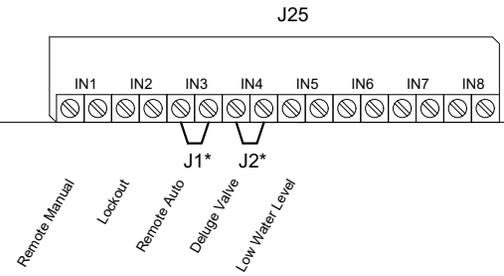
BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER	GPR-WS800/E
DWG REV. 1	
SHEET 2 OF 2	



Motor Run  
Power Available  
Normal Power Phase Reversal  
Pump Room Alarm  
Motor Trouble



Remote Manual  
Lockout  
Remote Auto  
Deluge Valve  
Low Water Level

\* Remove jumper to use this feature  
\*\* Contact closes when emergency start is in "ON" position



BY DD/MM/YY  
 DRAWN BY MLC 04/10/24  
 FINAL APPROVAL FC 07/11/24

# ELECTRIC FIRE PUMP CONTROLLER

**MODEL: GPX**

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER  
**GPX-TD907/E**  
 DWG REV. 0  
 SHEET 1 OF 1

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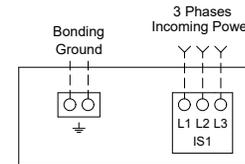
## COPPER CONDUCTORS for Isolating Switch (IS1).

Field Wiring According to Bending Space (AWG or MCM). Terminals L1 - L2 - L3

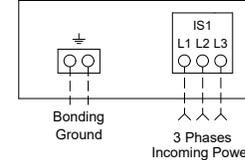
Bending Space	5" (127 mm)							8" (203 mm)			
	HP	5	7.5	10	15	20	25	30	40	50	60
208	208	1x (10 to 1/0)	1x (8 to 1/0)	1x (8 to 1/0)	1x (6 to 1/0)	1x (4 to 1/0)	1x (3 to 1/0)	1x (2 to 1/0)	1x (1/0 to 3/0)	1x (3/0 to 250)	1x (4/0 to 250)
220 to 240	220 to 240	1x (10 to 1/0)	1x (10 to 1/0)	1x (8 to 1/0)	1x (6 to 1/0)	1x (4 to 1/0)	1x (3 to 1/0)	1x (2 to 1/0)	1x (1 to 3/0)	1x (2/0 to 3/0)	1x (3/0 to 250)
380 to 416	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 (1 to 1/0)
440 to 480	440 to 480	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	600	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	208	2x (1/0 to 500)	2x (2/0 to 500)	2x (4/0 to 500)	2x (250 to 500)	3x (4/0 to 500)	-----	-----	-----	-----	-----	-----	
220 to 240	220 to 240	1x (250)	2x (2/0 to 500)	2x (3/0 to 500)	2x (4/0 to 500)	2x (350 to 500)	3x (250 to 500)	-----	-----	-----	-----	-----	
380 to 416	380 to 416	1x (1/0 to 250)	1x (3/0 to 250)	1x (250)	1x (300 to 500)	1x (500)	2x (4/0 to 500)	2x (300 to 500)	3x (4/0 to 500)	3x (250 to 500)	4x (3/0 to 500)	-----	
440 to 480	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)	1x (500)	2x (4/0 to 500)	2x (300 to 500)	3x (3/0 to 500)	3x (4/0 to 500)	3x (250 to 500)	
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)	1x (500)	2x (4/0 to 500)	2x (250 to 500)	2x (300 to 500)	2x (350 to 500)	
Bending Space	Bending Space	5" (127 mm)				8" (203 mm)				12" (305 mm)			

## Power Terminals



\*\*\*Only for 16"(406 mm) bending space



## ALUMINUM CONDUCTORS for Isolating Switch (IS1).\*\*\*

Field Wiring According to Bending Space (AWG or MCM). Terminals L1 - L2 - L3

Bending Space	5" (127 mm)							8" (203 mm)		10" (254 mm)	
	HP	5	7.5	10	15	20	25	30	40	50	60
208	208	1x (10 to 1/0)	1x (6 to 1/0)	1x (6 to 1/0)	1x (4 to 1/0)	1x (3 to 1/0)	1x (1 to 1/0)	1x (1/0)	1x (3/0)	1x (4/0 to 250)	1x (300) ** or 1x (250) 90°C *
220 to 240	220 to 240	1x (10 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 to 1/0)	1x (2/0 to 3/0)	1x (3/0) 90°C *	1x (250)
380 to 416	380 to 416	1x (10 to 1/0)	1x (10 to 1/0)	1x (10 to 1/0)	1x (6 to 1/0)	1x (6 to 1/0)	1x (4 to 1/0)	1x (4 to 1/0)	1x (2 to 1/0)	1x (1 to 1/0)	1x (1/0)
440 to 480	440 to 480	1x (10 to 1/0)	1x (10 to 1/0)	1x (10 to 1/0)	1x (8 to 1/0)	1x (6 to 1/0)	1x (6 to 1/0)	1x (6 to 1/0)	1x (4 to 1/0)	1x (2 to 1/0)	1x (1 to 1/0)
600	600	1x (10 to 1/0)	1x (8 to 1/0)	1x (6 to 1/0)	1x (6 to 1/0)	1x (4 to 1/0)	1x (4 to 1/0)	1x (2 to 1/0)			

Bending Space	12" (305 mm)				16" (406 mm)***								
	HP	75	100	125	150	200	250	300	350	400	450	500	
208	208	2x (2/0 to 500)	2x (4/0 to 500)	2x (300 to 500)	2x (350 to 500)	3x (300 to 500)	-----	-----	-----	-----	-----	-----	
220 to 240	220 to 240	1x (350) ** N/A	2x (3/0 to 500)	2x (250 to 500)	2x (300 to 500)	2x (500)	3x (400 to 500)	-----	-----	-----	-----	-----	
380 to 416	380 to 416	1x (3/0 to 250)	1x (250)	Consult Factory	1x (500)	Consult Factory	2x (300 to 500)	2x (500)	3x (300 to 500)	3x (350 to 500)	3x (400 to 500)	-----	
440 to 480	440 to 480	1x (1/0 to 250)	1x (3/0 to 250)	1x (250)	1x (250) 90°C *	1x (500)	Consult Factory	2x (300 to 500)	2x (400 to 500)	3x (250 to 500)	3x (300 to 500)	3x (350 to 500)	
600	600	1x (1 to 1/0)	1x (2/0 to 250)	1x (4/0 to 250)	1x (4/0 to 250)	1x (350 to 500)	1x (500)	Consult Factory	2x (300 to 500)	2x (350 to 500)	2x (400 to 500)	2x (500)	
Bending Space	Bending Space	5" (127 mm)				8" (203 mm)				12" (305 mm)			

### Notes:

- 1 - For proper wire sizing, refer to NFPA70 and NEC (USA) or CEC (Canada) or local code.
- 2 - Controller suitable for use as service equipment in USA.
- 3 - Controller use as service equipment prohibited in Canada.
- 4 - For more accurate motor connections refer to motor manufacturer or motor nameplate.
- 5 - Controller is phase sensitive. Incoming lines must be connected in ABC sequence.

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

\*For standard enclosure, use 90°C aluminium wire. Consult Factory for Use of Conductors Rated Lower than 90°C.

\*\* Consult Factory

\*\*\* Aluminum is not permitted in Canada.



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Subject to change without notice.

BY		DD/MM/YY
DRAWN BY	MLC	04/10/24
FINAL APPROVAL	FC	07/11/24

# ELECTRIC FIRE PUMP CONTROLLER

## MODEL: GPR/GPS

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER	GPX-TD903/E
DWG REV. 0	
SHEET 1 OF 1	

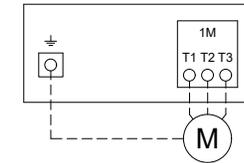
### COPPER CONDUCTORS for Motor Connection (1M).

Field Wiring According to Bending Space (AWG or MCM). Terminals T1 - T2 - T3

HP Voltage	5	7.5	10	15	20	25	30	40	50	60
208	1x (10 to 2)	1x (8 to 2)	1x (8 to 2)	1x (6 to 2)	1x (4 to 2)	1x (3 to 2/0)	1x (2 to 2/0)	1x (1/0 to 3/0)	1x (3/0)	1x (4/0 to 300)
220 to 240	1x (10 to 2)	1x (10 to 2)	1x (8 to 2)	1x (6 to 2)	1x (4 to 2)	1x (4 to 2/0)	1x (3 to 2/0)	1x (1 to 3/0)	1x (2/0 to 3/0)	1x (3/0)
380 to 416	1x (10 to 2/0)	1x (10 to 2/0)	1x (10 to 2/0)	1x (8 to 2/0)	1x (8 to 2/0)	1x (6 to 2/0)	1x (6 to 2/0)	1x (4 to 2/0)	1x (3 to 2/0)	1x (1 to 2/0)
440 to 480	1x (10 to 2/0)	1x (8 to 2/0)	1x (8 to 2/0)	1x (6 to 2/0)	1x (6 to 2/0)	1x (4 to 2/0)	1x (3 to 2/0)			
600	1x (10 to 2/0)	1x (8 to 2/0)	1x (8 to 2/0)	1x (6 to 2/0)	1x (6 to 2/0)	1x (4 to 2/0)				

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

### Motor Terminals



Models: GPR/GPS

### ALUMINIUM CONDUCTORS for Contactor (1M).\*\*\*

Field Wiring According to Bending Space (AWG or MCM). Terminals T1 - T2 - T3

HP Voltage	5	7.5	10	15	20	25	30	40	50	60
208	1x (10 to 2/0) **	1x (10 to 2/0) **	1x (6 to 2/0) **	1x (4 to 2/0) **	1x (3 to 2/0) **	1x (1 to 2/0) **	1x (1/0 to 2/0) **	1x (2/0) 90°C *	Consult Factory	1x (300)
220 to 240	1x (10 to 2/0) **	1x (10 to 2/0) **	1x (8 to 2/0) **	1x (4 to 2/0) **	1x (3 to 2/0) **	1x (2 to 2/0) **	1x (1 to 2/0) **	1x (2/0)	1x (3/0) 90°C *	Consult Factory
380 to 416	1x (12 to 2/0) **	1x (12 to 2/0) **	1x (10 to 2/0) **	1x (8 to 2/0) **	1x (6 to 2/0) **	1x (4 to 2/0) **	1x (4 to 2/0) **	1x (2 to 2/0) **	1x (1 to 2/0) **	1x (1/0 to 2/0)
440 to 480	1x (12 to 2/0) **	1x (12 to 2/0) **	1x (10 to 2/0) **	1x (8 to 2/0) **	1x (8 to 2/0) **	1x (6 to 2/0) **	1x (6 to 2/0) **	1x (4 to 2/0) **	1x (2 to 2/0) **	1x (1 to 2/0)
600	1x (12 to 2/0) **	1x (12 to 2/0) **	1x (12 to 2/0) **	1x (10 to 2/0) **	1x (8 to 2/0) **	1x (8 to 2/0) **	1x (8 to 2/0) **	1x (4 to 2/0) **	1x (4 to 2/0) **	1x (2 to 2/0)

HP Voltage	75	100	125	150	200	250	300	350	400	450	500
208	1x (300) 90°C *	2x (4/0 to 300)	2x (300)	2x (300) 90°C *	2x (600)	-----	-----	-----	-----	-----	-----
220 to 240	1x (300) 90°C *	2x (3/0 to 300)	2x (250 to 300)	2x (300)	2x (500)	2x (600)	-----	-----	-----	-----	-----
380 to 416	1x (3/0)	Consult Factory	1x (300) 90°C *	Consult Factory	2x (4/0 to 300)	2x (300)	2x (500 to 600)	2x (600)	2x (600) 90°C *	2x (600) 90°C *	-----
440 to 480	1x (1/0 to 2/0)	1x (3/0)	1x (250 to 300)	1x (300)	2x (3/0 to 300)	2x (250 to 300)	2x (300 to 600)	2x (400 to 600)	2x (500 to 600)	2x (600)	2x (600) 90°C *
600	1x (1 to 2/0)	1x (2/0 to 3/0)	1x (4/0 to 300)	1x (4/0 to 300)	2x (1/0 to 300)	2x (3/0 to 300)	2x (4/0 to 300)	2x (300 to 600)	2x (350 to 600)	2x (400 to 600)	2x (500 to 600)

\*For standard enclosure, use 90°C aluminium wire. Consult Factory for Use of Conductors Rated Lower than 90°C.

\*\* Option V659 required.

\*\*\* Aluminum is not permitted in Canada.

#### Notes:

- 1 - For proper wire sizing, refer to NFPA70 and NEC (USA) or CEC (Canada) or local code.
- 2 - Controller suitable for use as service equipment in USA.
- 3 - Controller use as service equipment prohibited in Canada.
- 4 - For more accurate motor connections refer to motor manufacturer or motor nameplate.
- 5 - Controller is phase sensitive. Incoming lines must be connected in ABC sequence.

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



BY		DD/MM/YY
DRAWN BY	ACD	18/12/23
FINAL APPROVAL	FC	19/12/23

# ELECTRIC FIRE PUMP CONTROLLER

**MODEL: GPX**

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70

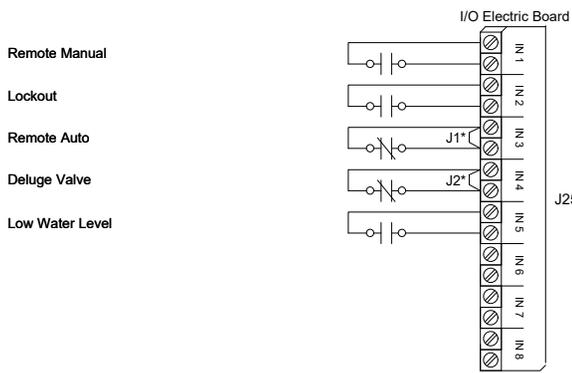


DRAWING NUMBER	GPX-TD803/E
DWG REV. 0	
SHEET 1 OF 1	

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## Field Connections

Terminals Wire Size:  
24 - 12 AWG  
0.5 Nm



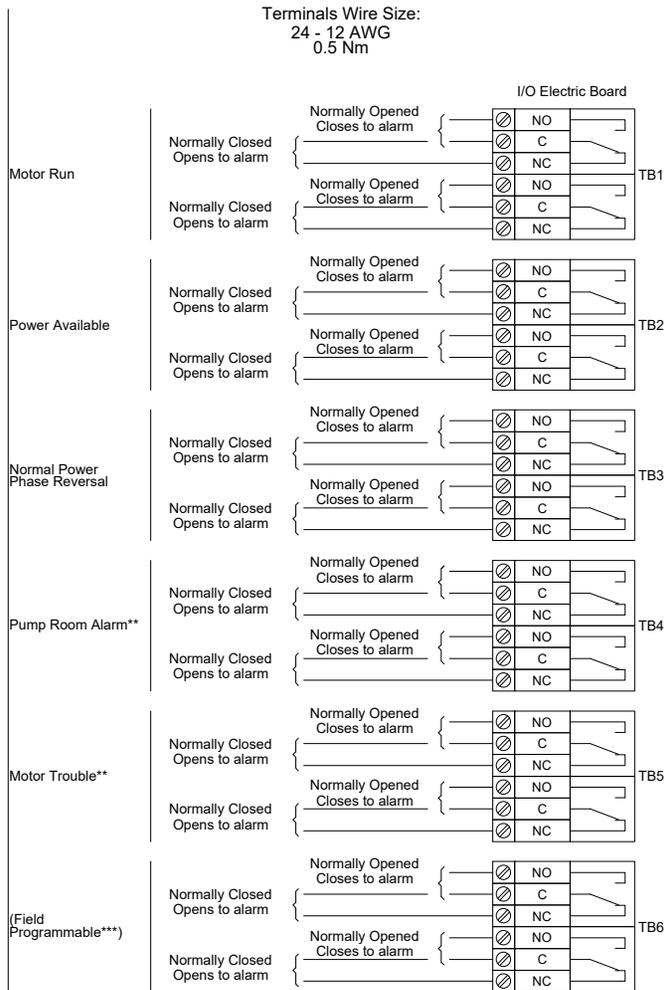
## Network Connections

Terminals Wire Size:  
Shielded Female Connector RJ45



## Alarm Contacts

Terminals Wire Size:  
24 - 12 AWG  
0.5 Nm



\* Remove jumper to use this feature  
\*\* Re-assignable  
\*\*\*\* Not available on GPS models



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Subject to change without notice.

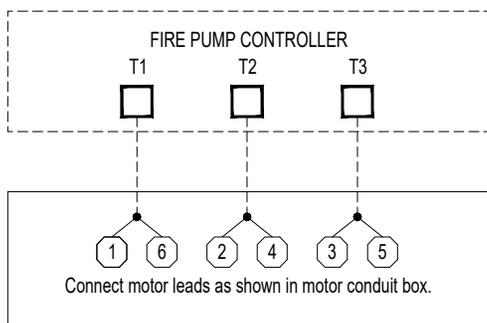
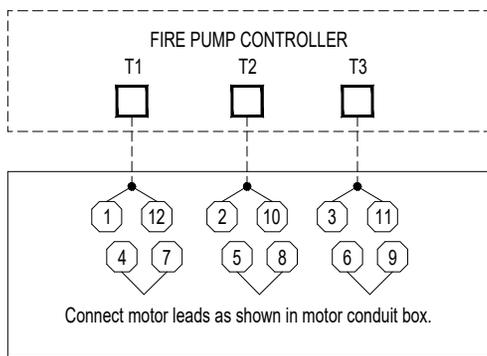
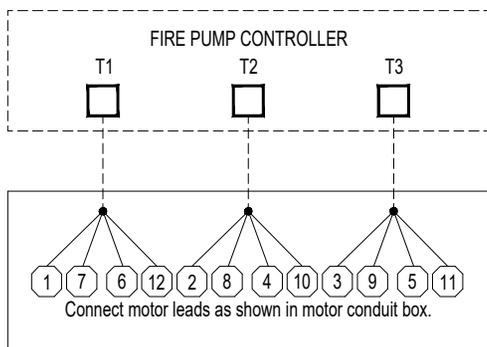
BY		DD/MM/YY
DRAWN BY	ACD	21/11/24
FINAL APPROVAL	FC	21/11/24

## ELECTRIC FIRE PUMP CONTROLLER MOTOR CONNECTIONS

MODEL: GPA/GPR/GPS

DRAWING NUMBER  
GPX-MC001/E  
DWG REV. 2  
SHEET 1 OF 1

**IMPORTANT :** - NFPA 20-2022 Art. 9.5.3.2 :  
*A MOTOR TERMINAL CONNECTING DIAGRAM FOR MULTIPLE LEAD MOTORS SHALL BE FURNISHED BY THE MOTOR MANUFACTURER.*



**Tornatech Inc. ASSUMES NO  
LIABILITY FOR INCORRECT WIRING  
OF THE MOTOR TO THE  
CONTROLLER**

**WARNING :**  
- THIS DRAWING IS FOR GENERAL INFORMATION.  
- CONSULT MOTOR MANUFACTURER BEFORE CONNECTING TO CONTROLLER.  
- CONNECT MOTOR LEADS AS SHOWN IN MOTOR CONDUIT BOX