



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.

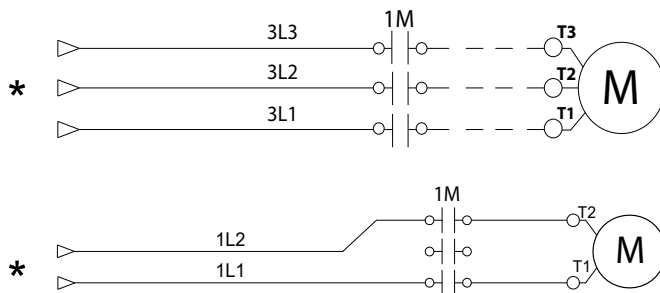


November 2025

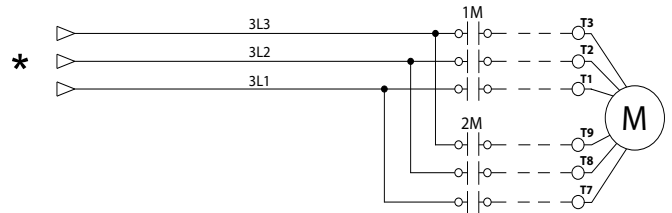


Select starting method

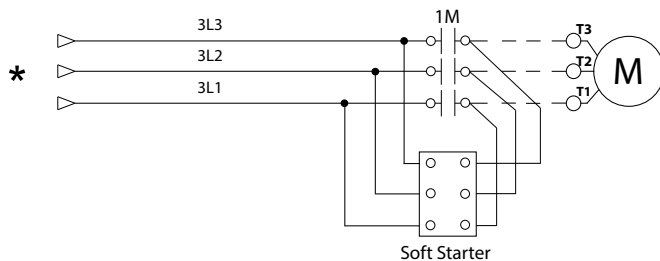
Model GPA Across the line



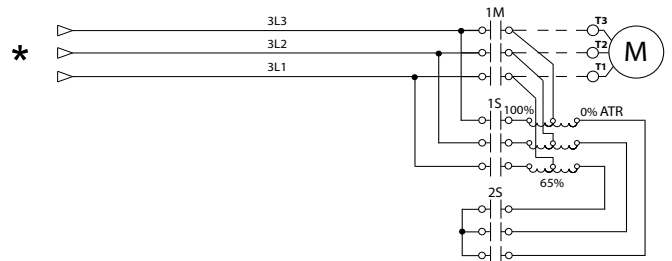
Model GPP Partwinding



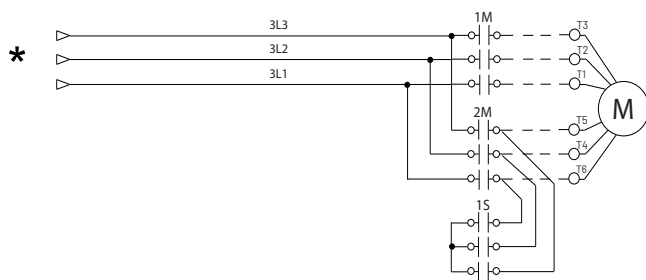
Model GPS Soft Start Soft Stop



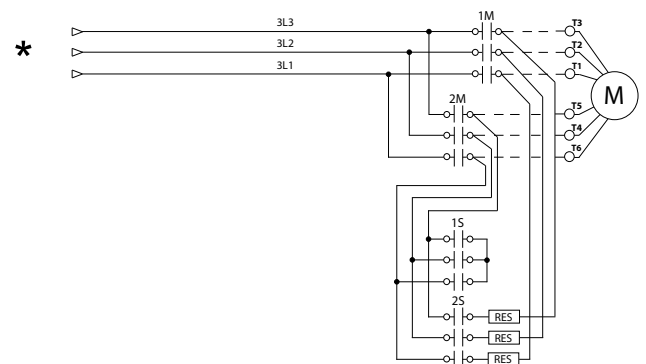
Model GPR Autotransformer



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

Voltage	Select Voltage	kW ²	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: ¹ Only available for Model GPA. Maximum power rating is 30HP.

² kW power ratings only available for Models GPA, GPS and GPY.

³ Maximum power rating is 200HP.

⁴ Maximum power rating is 250HP.

⁵ Maximum power rating is 450HP.

⁶ Maximum power rating is 500HP.



Standard, Listings, Approvals and Certifications	Built to NFPA 20		
	Underwriters Laboratory (UL)	UL218 - Fire Pump Controllers	
	FM Global	Class 1321/1323	
	New York City	Accepted for use in the City of New York by the Department of Buildings	
	CE Mark	Various EN, IEC & CEE directives and standards	
	Built in Canada or U.A.E		Built in Europe
	CE Mark Option		Supplied as Standard
Enclosure	Protection Rating		
	Built in Canada or U.A.E		Built in Europe
	Standard: NEMA 2		Standard: IP55
	Optional		
	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
	Accessories • Bottom entry gland plate • Lifting Lugs • Keylock handle		
	Paint Specifications • 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	Standard	Inter-mediate	High	Standard	Inter-mediate	High	Standard	Inter-mediate	High					
		Option D13	Option D13B		Option D13	Option D13B		Option D13	Option D13B		Option D13	Option D13B		Option D13	Option D13B					
≤150	100kA	150kA	200kA	100kA	150kA	200kA	100kA	150kA	200kA	100kA	150kA	200kA	50kA	100kA	-					
200	50kA	100kA	-																	
250	-	-	-													50kA	100kA	-		
300	-	-	-													-	-	-		
350	-	-	-													-	-	-		
400	-	-	-	-	-	-	50kA	100kA	-											
450	-	-	-	-	-	-	30kA		-							50kA	100kA	-		
500	-	-	-	-	-	-			-										-	



Ambient Temperature Rating	Standard: 4°C to 40°C / 39°F to 104°F Optional: 4°C to 55°C / 39°F to 131°F Controllers built in Dubai, UAE (Tornatech FZE) are supplied standard with 55°C rating.
Surge Suppression	Surge arrestor rated to suppress surges above line voltage
Disconnecting Means	• Isolating switch and circuit breaker assembly: - Door interlocked in the ON position - Isolating switch rated not less than 115% of motor full load current - Circuit breaker continuous rating not less than 115% of motor full load current - Overcurrent sensing non-thermal type, magnetic only - Instantaneous trip setting of not more than 20 times the motor full load current • Common flange mounted operating handle
Service Entrance Rating	Suitable as service entrance equipment (not applicable for installations in Canada).
Emergency Start Handle	• Flange mounted • Pull and latch activation • Integrated limit switch • Across the line start (direct on line)
Locked Rotor Protector	• Operate shunt trip to open circuit breaker • Factory set at 600% of motor full load current • Trip between 8 and 20 seconds
Electrical Readings	• Voltage phase to phase (normal power) • Amperage of each phase when motor is running
Pressure Readings	• Continuous system pressure display • Cut-in and Cut-out pressure settings
Pressure and Event recorder	• Pressure readings with date stamp • Event recording with date stamp • Under regular maintained operation, events are stored in memory for the life of the controller. • Data viewable on operator interface display screen • Downloadable by USB port to external memory device or wireless connection to manufacturers App (mobile device).
Pressure Sensing	• Pressure transducer and run test solenoid valve assembly for fresh water application • Pressure sensing line connection 1/2" Female NPT • Drain connection 3/8" • Rated for 0-500PSI working pressure (standard display at 0-300PSI) • Externally mounted with protective cover



Audible Alarm	Alarm buzzer - 85dB at 3 meters		
Visual Indications	• Power available • Motor run • Periodic test • Manual start	• Deluge valve start • Remote automatic start • Remote manual start • Emergency start	• Pump on demand/Automatic start • Pump room temperature (°F or °C) • Lockout
Visual & Audible Alarms	Visual • Control voltage not healthy • Invalid cut-in • Lock rotor current • Loss of power • Low ambient temperature • Low water level • Motor trouble • Phase reversal (normal power) Visual and audible • Fail to start Overcurrent • Overcurrent • Overvoltage • Phase loss L1 • Phase loss L2 • Phase loss L3 • Phase unbalanced • Pressure transducer fault detected Pump on demand • Pump on demand • Pump room alarm • Service required • Undercurrent • Undervoltage • Check weekly test solenoid • Weekly test cut-in reached		
Remote Alarm Contacts	DPDT-8A-250V.AC • Power available • Phase reversal • Motor run • Common pump room alarm (field re-assignable)** • Overvoltage • Undervoltage • Phase unbalance • Low pump room temperature • High Pump room temperature • Common motor trouble (field re-assignable)** • Overcurrent • Fail to start • Undercurrent • Ground fault • Free (field programmable)**		

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



ViZiTouch V2.1 Operator Interface	• Embedded microcomputer with software PLC logic • 7.0" color touch screen (HMI technology) • Upgradable software • Multi-language		
Communication Protocol Capability	• Protocol: Modbus • Connection type: Shielded female connector RJ45 • Frame Format: TCP/IP • Addresses: See bulletin MOD-GPx		
Operation	Automatic Start	• Start on pressure drop • Remote start signal from automatic device • Deluge valve start	
	Manual Start	• Start pushbutton • Run test pushbutton • Remote start from manual device	
	Stopping	• Manual with Stop pushbutton • Automatic after expiration of minimum run timer ***	
	Timers	Field Adjustable & Visual Countdown	• Minimum run timer ***(off delay) • Sequential start timer (on delay) • Periodic test timer
	Actuation	Visual Indication	• Pressure • Non-pressure
	Mode		• Automatic • Non-automatic

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



A4	Flow switch provision	C17	Flow meter valve loop open c/w visual indication and alarm contact (DPDT)
A8	Foam pump application w/o pressure transducer and run test solenoid valve.	C18	High water reservoir level c/w visual indication and alarm contact (DPDT)
A9	Low zone pump control function	C19	Emergency start alarm contact (DPDT)
A10	Middle zone pump control function	C20	Manual start alarm contact (DPDT)
A11	High zone pump control function	C21	Deluge valve start alarm contact (DPDT)
A13	Non-pressure actuated controller w/o pressure transducer and run test solenoid valve	C22	Remote automatic start alarm contact (DPDT)
A16	Lockout/interlock circuit from equipment installed inside the pump room	C23	Remote manual start alarm contact (DPDT)
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	C24	High pump room temperature alarm contact (DPDT)
B11B	Built in alarm panel same as B11 but 220-240VAC supervisory power	C25	Second set of standard alarm contacts (DPDT) (Typical for city of Los Angeles and Denver)
B19A	High motor temperature c/w thermostat relay and alarm contacts (DPDT)	Cx	Additional visual and alarm contact (Specify function) (DPDT)
B19B	High motor temperature c/w PT100 relay and alarm contacts (DPDT)	D1	Low suction pressure transducer for fresh water rated at 0-500PSI with visual indication and alarm contact
B21	Ground fault alarm detection c/w visual indication and alarm contact (DPDT)	D1A	Low suction pressure transducer for sea water rated at 0-500PSI with visual indication and alarm contact
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)	D5	Pressure transducer and run test solenoid valve for fresh water rated for 0-500PSI (for factory calibration purposes only)
C1	Extra motor run alarm contact (DPDT)	D5D	Pressure transducer and run test solenoid valve for sea water rated for 0-500PSI
C4	Periodic test alarm contact (DPDT)	D10	Omit mounting feet (when applicable)
C6	Low discharge pressure alarm contact (DPDT)	D14	Anti-condensation heater & thermostat
C7	Low pump room temperature alarm contact (DPDT)	D14A	Anti-condensation heater & humidistat
C10	Low water reservoir level alarm contact (DPDT)	D14B	Anti-condensation heater & thermostat & humidistat
C11	High electric motor temperature alarm contact (DPDT)	D15	Tropicalization
C12	High electric motor vibration c/w visual indication and alarm contact (DPDT)	D18	CE Mark with factory certificate
C14	Pump on demand / automatic start alarm contact (DPDT)	D27	Motor heater connection (external single phase power source and heater on/off contact)
C15	Pump fail to start alarm contact (DPDT)	D27A	Motor heater connection (internal single phase power source and heater on/off contact)
C16	Control voltage healthy alarm contact (DPDT)	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

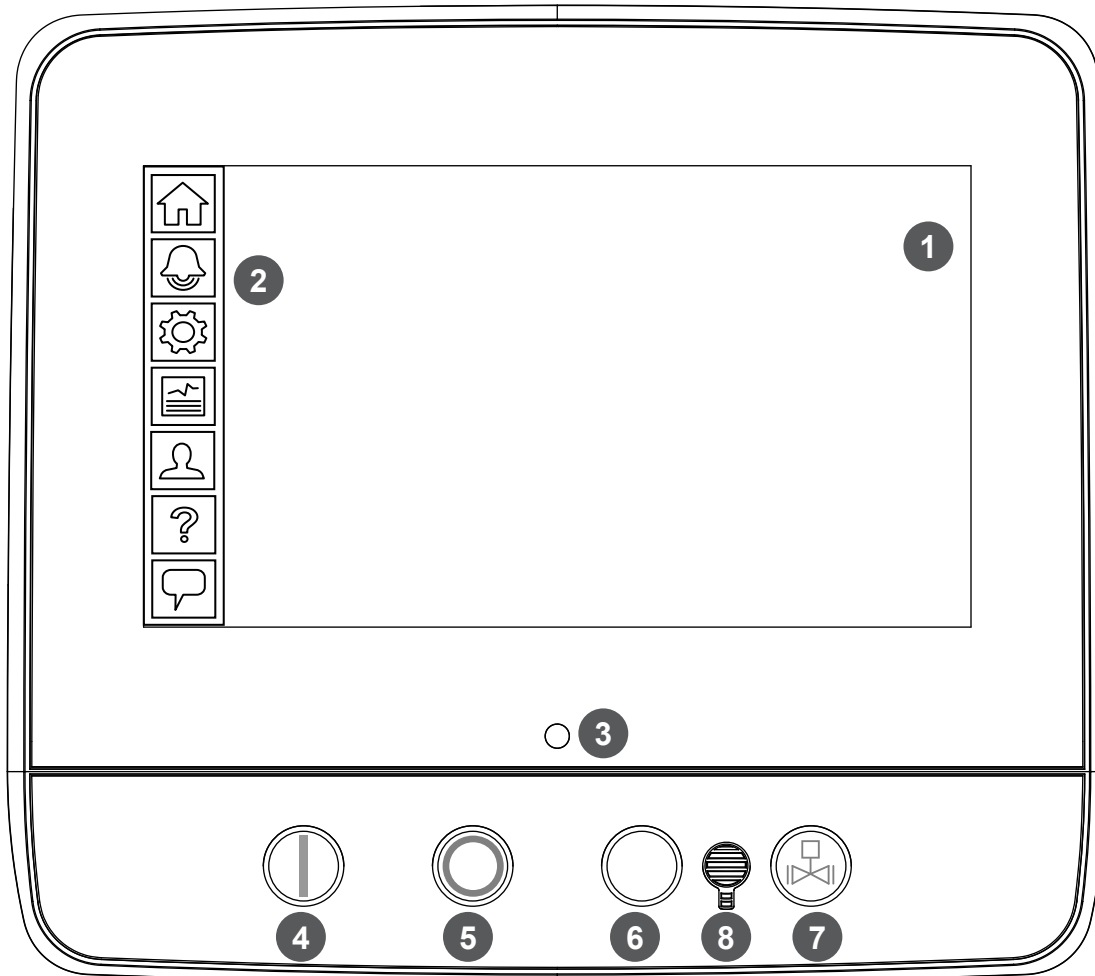
L01	Other language and English (bilingual)
L02	French
L03	Spanish
L04	German
L05	Italian
L06	Polish
L07	Romanian
L08	Hungarian
L09	Slovakian
L10	Croatian
L11	Czech
L12	Portuguese
L13	Dutch
L15	Turkish
L16	Swedish
L21	Danish
L25	Chinese
L28	Finnish
L29	Norwegian

Additional Options:

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

2 - Onscreen menu

- HOME page
- ALARM page
- CONFIGURATION page
- HISTORY page
- SERVICE page
- MANUAL page
- LANGUAGES page

3 - Power LED (3 colors)

4 - START button

5 - STOP button

6 - Not Used

7 - RUN TEST button

8 - Alarm buzzer

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BY DD/MM/YY

DRAWN BY MLC 04/10/24

FINAL APPROVAL FC 07/11/24

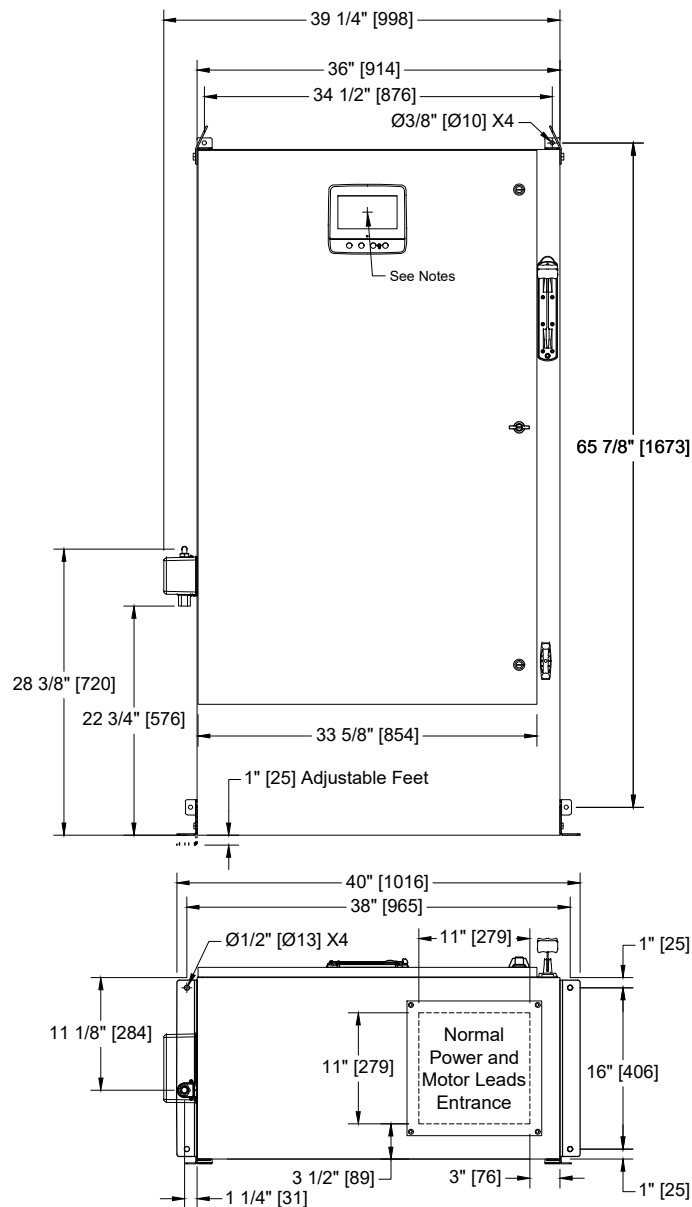
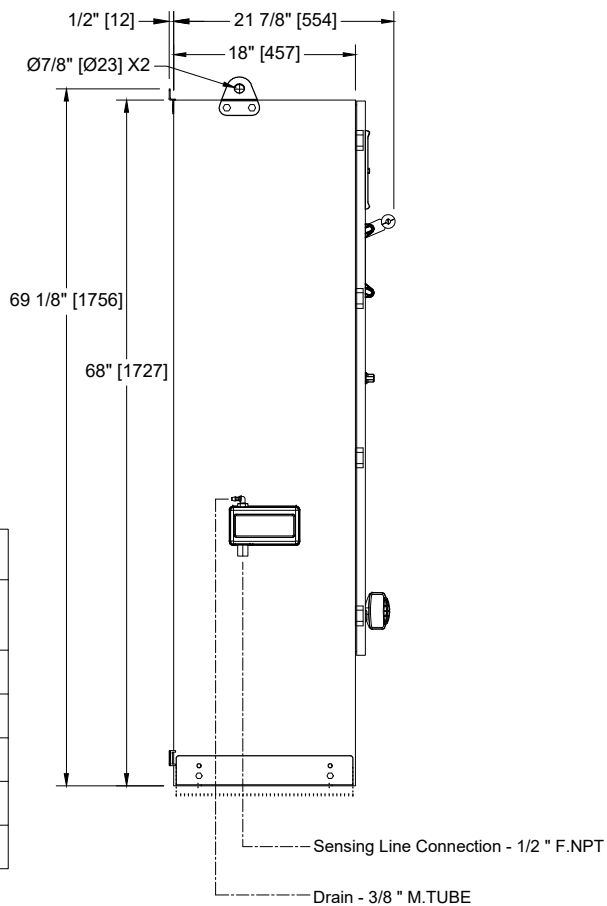
ELECTRIC FIRE PUMP CONTROLLER**MODEL:GPS**

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70

THIRD ANGLE
PROJECTIONDRAWING NUMBER
GPX-DI95 1/E

DWG REV. 0

SHEET 1 OF 1

**Voltage / Power Table**

Voltage	Min HP	Max HP
208	75	125
220 - 240	100	150
380 - 400 - 415	150	250
440 - 480	200	300
600	200	350

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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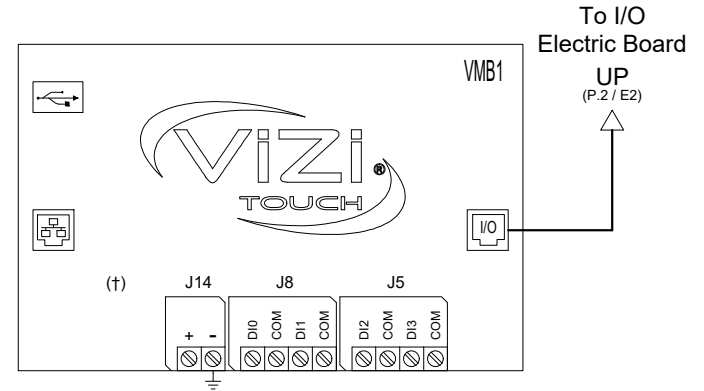
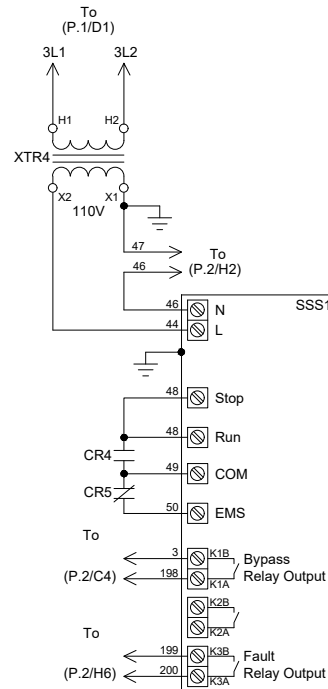
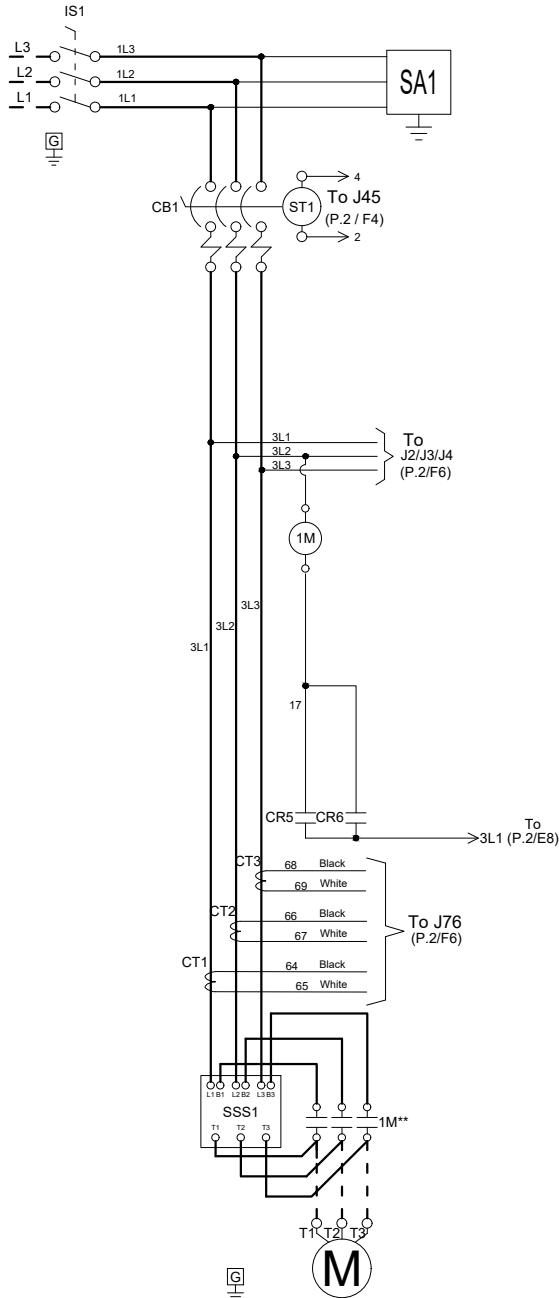
ELECTRIC FIRE PUMP CONTROLLER REDUCED VOLTAGE / SOFT STARTER

MODEL:GPS

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER
GPS-WS900/E
DWG REV. 0
SHEET 1 OF 2



Legend	
1M	Contactors
AB	Alarm Bell
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
SSS	Soft Starter
SV	Solenoid Valve
VMB	Main Board
XTR	Transformer



07/11/24

SHEET 2 OF 2



** Contact closes when emergency start is in "ON" position



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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

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 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 3/0)	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 3/0)	1x (2/0 to 3/0)	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 (1 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	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	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	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	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	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	5 " (127 mm)				8 " (203 mm)				12 " (305 mm)		

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 Voltage	5	7.5	10	15	20	25	30	40	50	60
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	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	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	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	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 (6 to 1/0)	1x (6 to 1/0)	1x (4 to 1/0)	1x (4 to 1/0)	1x (2 to 1/0)

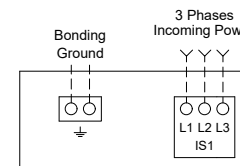
Bending Space	12 " (305 mm)				16 " (406 mm)***						
HP Voltage	75	100	125	150	200	250	300	350	400	450	500
208	2x (2/0 to 500)	2x (4/0 to 500)	2x (300 to 500)	2x (350 to 500)	3x (300 to 500)	-----	-----	-----	-----	-----	-----
220 to 240	1x (350) ** N/A	2x (3/0 to 500)	2x (250 to 500)	2x (300 to 500)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

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

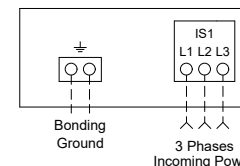
**Consult Factory

*** Aluminum is not permitted in Canada.

Power Terminals



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



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.



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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/GPS

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



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

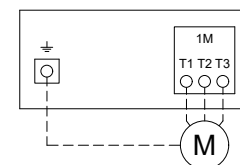
COPPER CONDUCTORS for Motor Connection (1M).

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 (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)
600	1x (10 to 2/0)	1x (10 to 2/0)	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)

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

ALUMINUM 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.



TORNATECH

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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

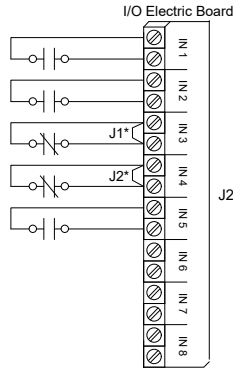


DRAWING NUMBER
GPX-TD803/E
DWG REV. 0
SHEET 1 OF 1

Field Connections

Terminals Wire Size:
24 - 12 AWG
0.5 Nm

Remote Manual
Lockout
Remote Auto
Deluge Valve
Low Water Level



Network Connections

Terminals Wire Size:
Shielded Female Connector RJ45

Modbus TCP/IP RJ45

Located on Main Board



Alarm Contacts

Terminals Wire Size:
24 - 12 AWG
0.5 Nm

Controller Terminal Strip

Motor Run

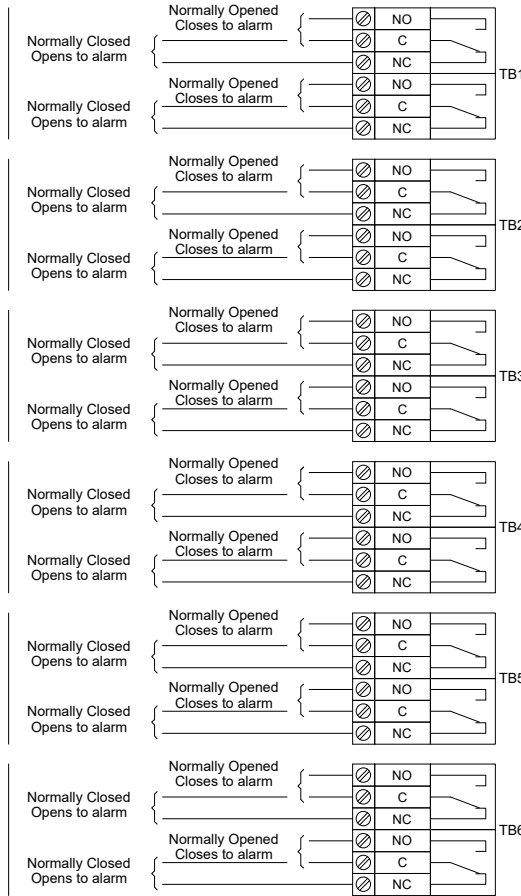
Power Available

Normal Power
Phase Reversal

Pump Room Alarm**

Motor Trouble**

(Field
Programmable***)



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



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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

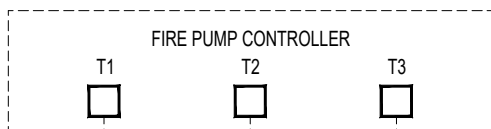
DRAWING NUMBER
GPX-MC001/E

DWG REV. 2

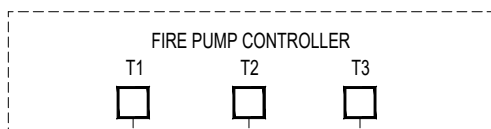
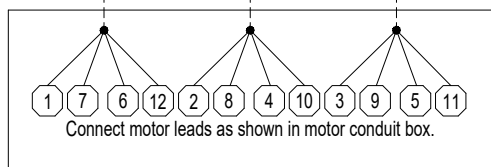
SHEET 1 OF 1

IMPORTANT : - NFPA 20-2022 Art. 9.5.3.2 :

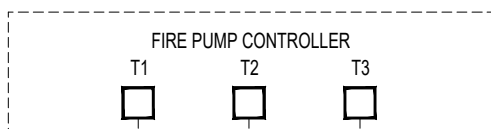
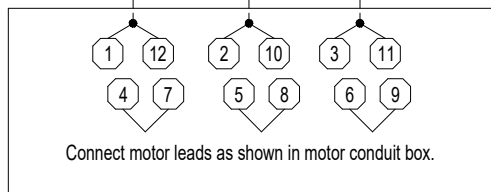
A MOTOR TERMINAL CONNECTING DIAGRAM FOR MULTIPLE LEAD MOTORS SHALL BE FURNISHED BY THE MOTOR MANUFACTURER.



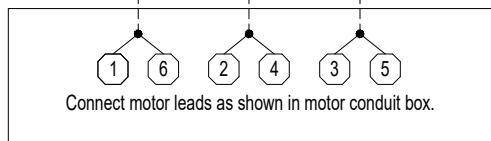
12 LEADS MOTOR
FOR DUAL VOLTAGE MOTOR
OPERATING ON THE LOWER
OF THE TWO VOLTAGES



12 LEADS MOTOR
FOR DUAL VOLTAGE MOTOR
OPERATING ON THE HIGHER
OF THE TWO VOLTAGES



6 LEADS MOTOR
FOR DELTA CONNECTION



**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