



TORNATECH

Project: _____

Customer: _____

Engineer: _____

Pump Manufacturer: _____

**Technical Data
Submittal Document**

GPx Foam Series

Full Service

Electric Additive (Foam) 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.



August 2025



TORNATECH

Technical Data

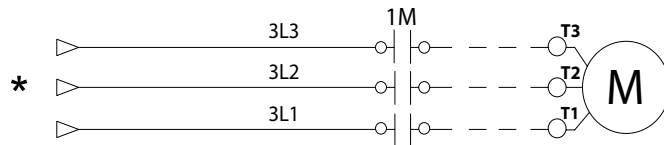
GPx Foam Series Electric Additive (Foam) Pump Controller

Select starting method



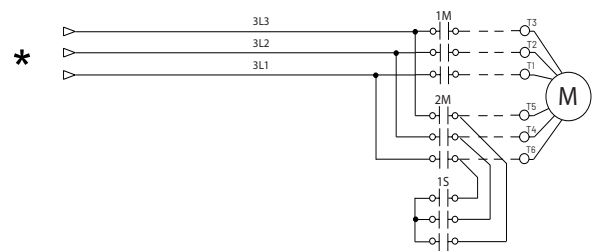
Model GPA

Across the line



Model GPY

Wye-Delta Open



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





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 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		
	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	
	<table border="0"> <tr> <td style="vertical-align: top;"> Accessories • Bottom entry gland plate • Lifting Lugs • Keylock handle </td> <td style="vertical-align: top;"> Paint Specifications • Red RAL3002 • Powder coating • Glossy textured finish </td> </tr> </table>			Accessories • Bottom entry gland plate • Lifting Lugs • Keylock handle
Accessories • Bottom entry gland plate • Lifting Lugs • Keylock handle	Paint Specifications • Red RAL3002 • Powder coating • Glossy textured finish			
Additive (Foam) Pump Controllers	Choose one of the following configurations: ☐ A8 - Additive (Foam) pump controller / non pressure actuated without pressure transducer and run test solenoid valve ☐ A8A - Additive (Foam) pump controller with pressure transducer and run test solenoid valve ☐ A8B - Additive (Foam) pump controller with pressure transducer and run test solenoid valve in stainless steel			
	Add any of the following options if required: ☐ D40 - Dump valve circuitry, 24VDC Max2A ☐ Cx79 - Low foam additive level complete with visual indication and alarm contact (DPDT) ☐ Cx081 - Provision for proof pressure switch for low additive pressure complete with visual indication and alarm contact. (Proof pressure switch provided by others.)			



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 - Integrated limit switch - Pull and latch activation - 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
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 - Deluge valve start - Pump on demand/Automatic start - Motor run - Remote automatic start - Pump room temperature (°F or °C) - Periodic test - Remote manual start - Lockout - Manual start - Emergency start



GPx Foam Series Electric Additive (Foam) Pump Controller

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 • Overvoltage • Phase loss L1 • Phase loss L2 • Phase loss L3 • Phase unbalanced • Pressure transducer fault detected • 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.

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	-	-	-												
300	-	-	-												
350	-	-	-												
400	-	-	-	-	-	-	50kA	-	100kA	50kA	-	100kA	50kA	100kA	-
450	-	-	-	-	-	-		-							
500	-	-	-	-	-	-		-			-				



GPx Foam Series Electric Additive (Foam) Pump Controller

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



GPx Foam Series Electric Additive (Foam) Pump Controller

☐ A4	Flow switch provision	☐ C20	Manual start alarm contact (DPDT)
☐ A9	Low zone pump control function	☐ C21	Deluge valve start alarm contact (DPDT)
☐ A10	Middle zone pump control function	☐ C22	Remote automatic start alarm contact (DPDT)
☐ A11	High zone pump control function	☐ C23	Remote manual start alarm contact (DPDT)
☐ A13	Non-pressure actuated controller w/o pressure transducer and run test solenoid valve	☐ C24	High pump room temperature alarm contact (DPDT)
☐ A16	Lockout/interlock circuit from equipment installed inside the pump room	☐ C25	Second set of standard alarm contacts (DPDT) (Typical for city of Los Angeles and Denver)
☐ 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	☐ Cx	Additional visual and alarm contact (Specify function) (DPDT)
☐ B11B	Built in alarm panel same as B11 but 220-240VAC supervisory power	☐ D1	Low suction pressure transducer for fresh water rated at 0-300PSI with visual indication and alarm contact
☐ B19A	High motor temperature c/w thermostat relay and alarm contacts (DPDT)	☐ D1A	Low suction pressure transducer for sea water rated at 0-300PSI with visual indication and alarm contact
☐ B19B	High motor temperature c/w PT100 relay and alarm contacts (DPDT)	☐ D5	Pressure transducer and run test solenoid valve for fresh water rated for 0-500PSI (for factory calibration purposes only)
☐ B21	Ground fault alarm detection c/w visual indication and alarm contact (DPDT)	☐ D5D	Pressure transducer and run test solenoid valve for sea water rated for 0-500PSI
☐ C1	Extra motor run alarm contact (DPDT)	☐ D10	Omit mounting feet (when applicable)
☐ C4	Periodic test alarm contact (DPDT)	☐ D14	Anti-condensation heater & thermostat
☐ C6	Low discharge pressure alarm contact (DPDT)	☐ D14A	Anti-condensation heater & humidistat
☐ C7	Low pump room temperature alarm contact (DPDT)	☐ D14B	Anti-condensation heater & thermostat & humidistat
☐ C10	Low water reservoir level alarm contact (DPDT)	☐ D15	Tropicalization
☐ C11	High electric motor temperature alarm contact (DPDT)	☐ D18	CE Mark with factory certificate
☐ C12	High electric motor vibration c/w visual indication and alarm contact (DPDT)	☐ D26	Modbus with RTU frame format and RS485 connection
☐ 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
☐ C17	Flow meter valve loop open c/w visual indication and alarm contact (DPDT)	☐ D34A	Field programmable I/O board - 5 Input / 5 output
☐ C18	High water reservoir level c/w visual indication and alarm contact (DPDT)	☐ D36	Redundant pressure transducer for fresh water rated for 0-500PSI
☐ C19	Emergency start alarm contact (DPDT)		

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



GPx Foam Series Electric Additive (Foam) Pump Controller

☐ 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

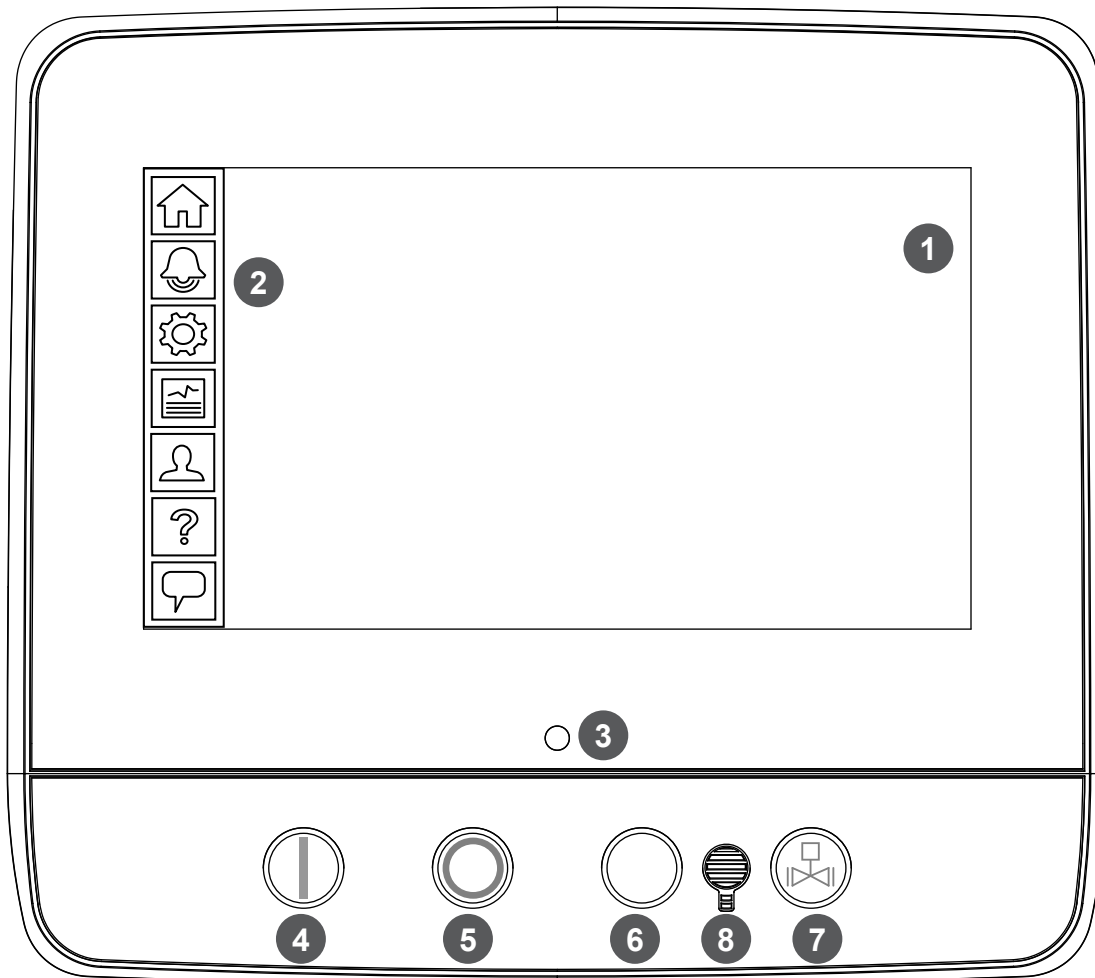
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☐ L02	French
☐ L03	Spanish
☐ L04	German
☐ L05	Italian
☐ L06	Polish
☐ L07	Romanian
☐ L08	Hungarian
☐ L09	Slovakian
☐ L10	Croatian
☐ L11	Czech
☐ L12	Portuguese
☐ L13	Dutch
☐ L15	Turkish
☐ L16	Swedish
☐ L21	Danish
☐ L25	Chinese
☐ L28	Finnish
☐ L29	Norwegian

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 ACD 10/07/25

FINAL APPROVAL FC 10/07/25

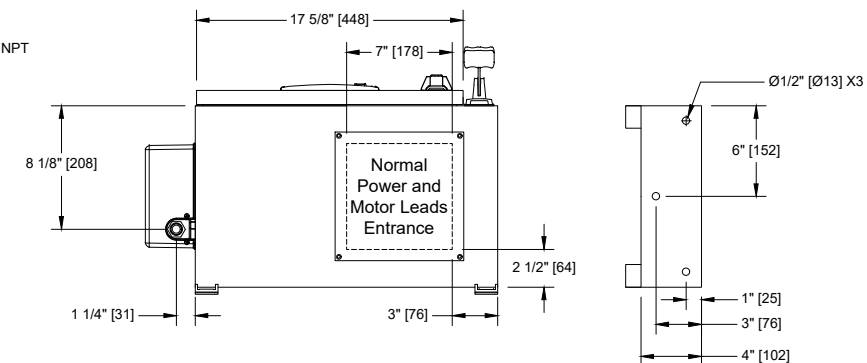
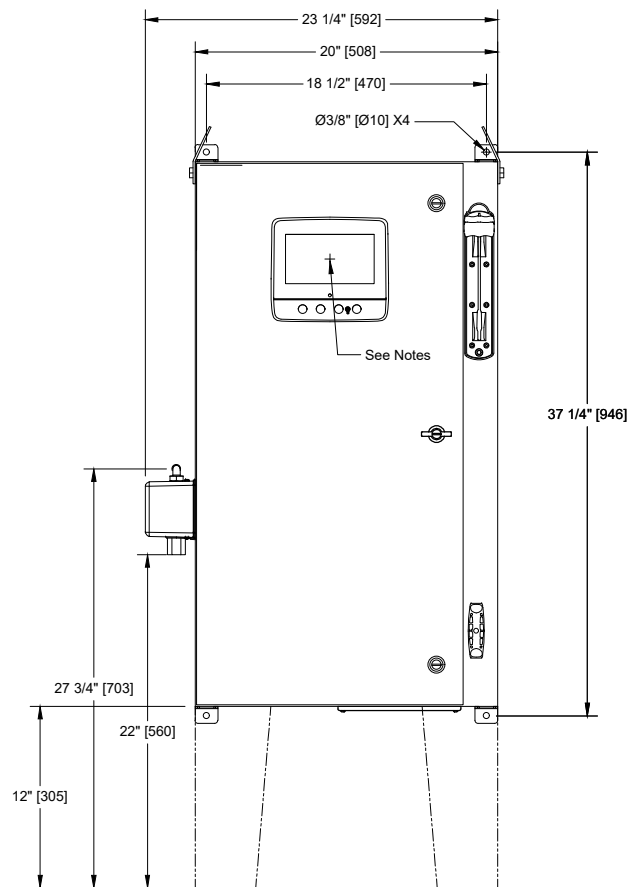
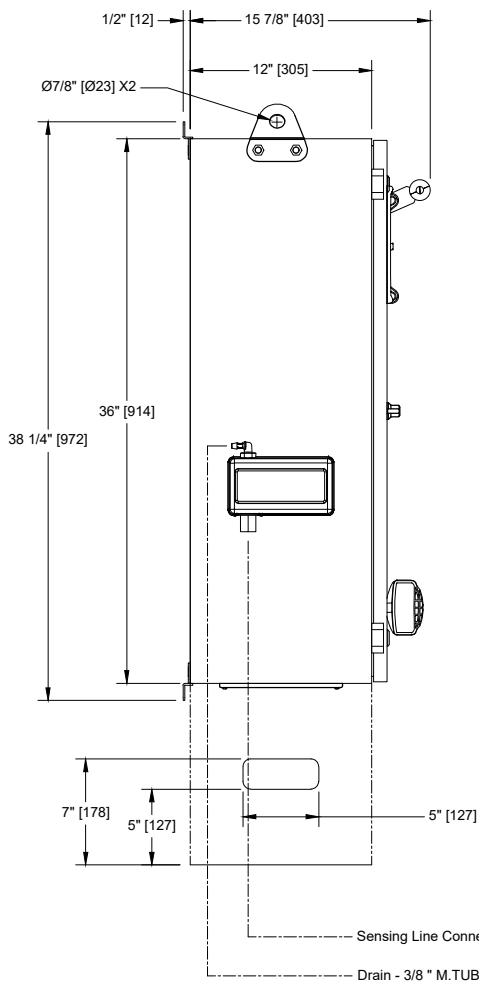
ELECTRIC ADDITIVE (FOAM) PUMP CONTROLLER**MODEL: GPA/GPY**

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70

THIRD ANGLE
PROJECTIONDRAWING NUMBER
GPX-DI971/E

DWG REV. 0

SHEET 1 OF 1

**Voltage / Power 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:

- Standard: NEMA 2
- Standard paint : textured red RAL 3002.
- All dimensions are in inches [millimeters].
- Center of screen: 29-5/8" [751] from bottom (no feet).
- 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 08/09/23

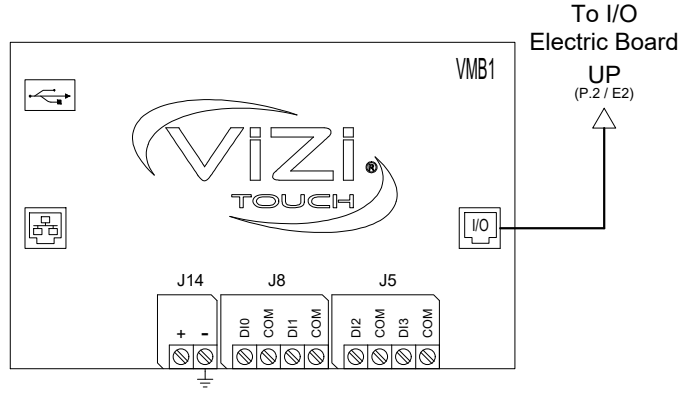
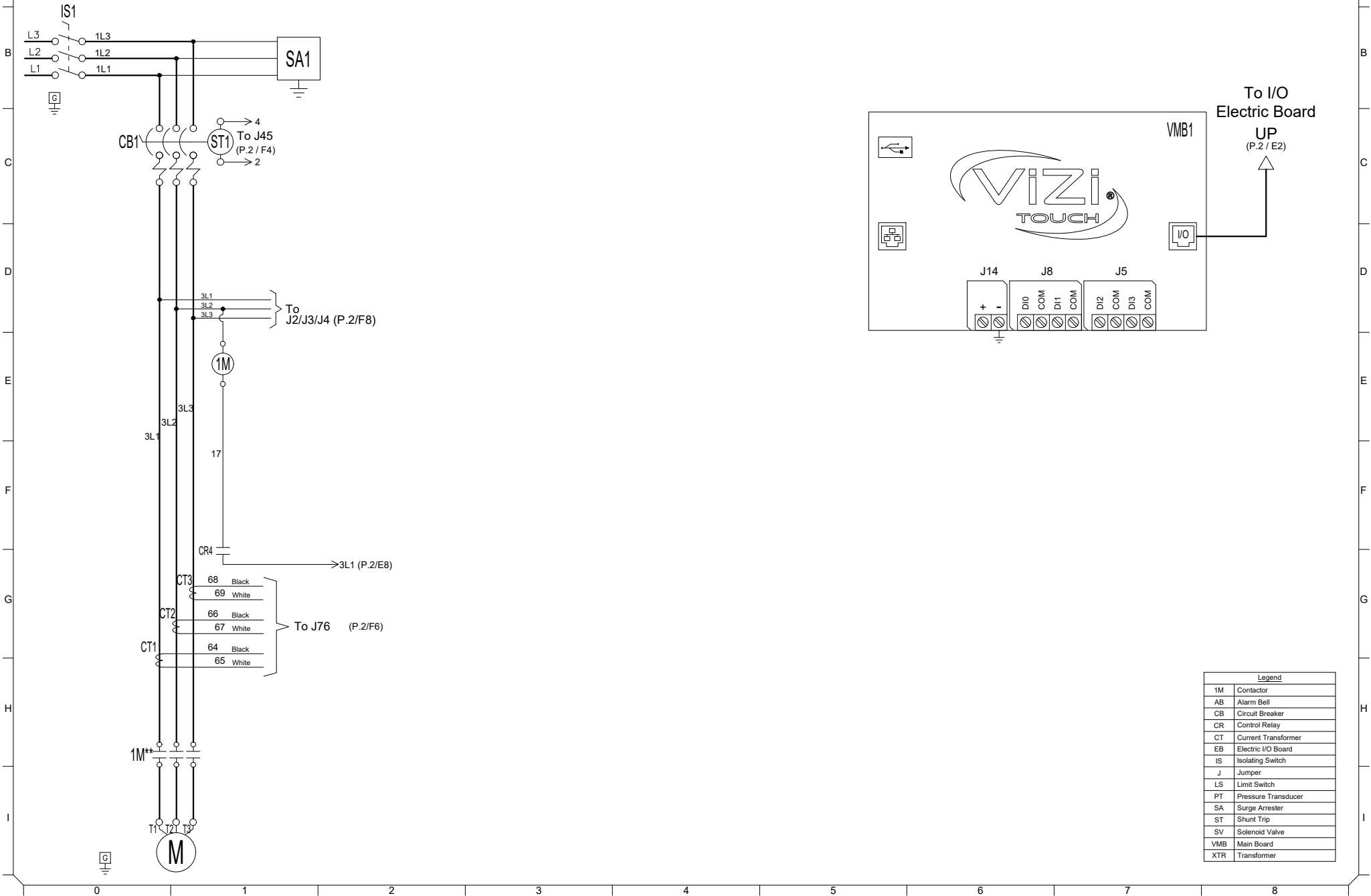
ELECTRIC ADDITIVE (FOAM) PUMP CONTROLLER FULL VOLTAGE / ACROSS THE LINE

MODEL:GPA

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER
GPA-WS870/E
DWG REV. 0
SHEET 1 OF 2



Legend	
1M	Contactor
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
ST	Shunt Trip
SV	Solenoid Valve
VMB	Main Board
XTR	Transformer

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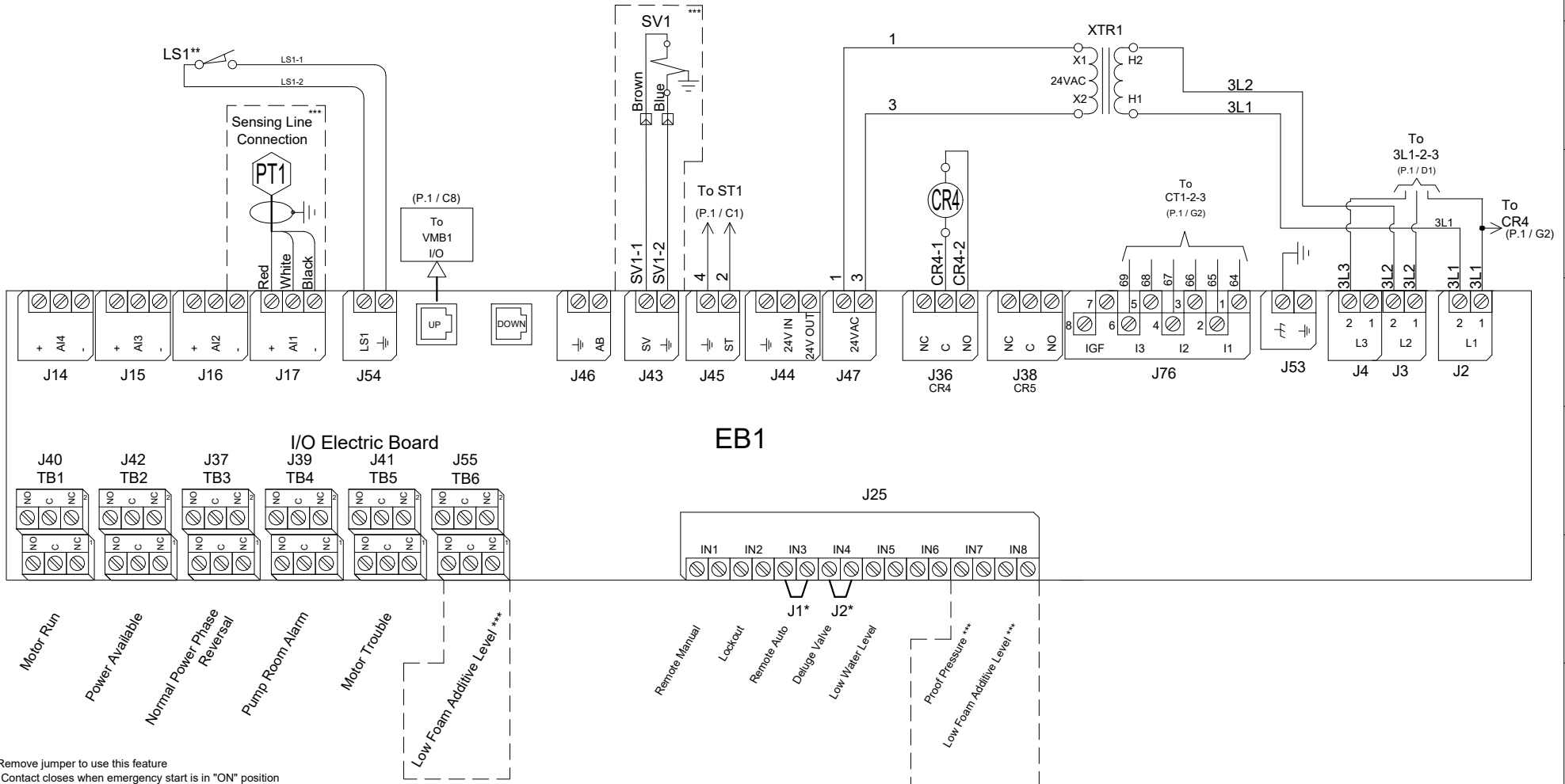
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FINAL APPROVAL FC 08/09/23

ELECTRIC ADDITIVE (FOAM) PUMP CONTROLLER
FULL VOLTAGE / ACROSS THE LINE**MODEL:GPA**

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70

DRAWING NUMBER
GPA-WS870/E
DWG REV. 0
SHEET 2 OF 2

* Remove jumper to use this feature

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

*** Optional



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ELECTRIC ADDITIVE (FOAM) PUMP CONTROLLER

MODEL:GPX

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER
GPX-TD970/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)

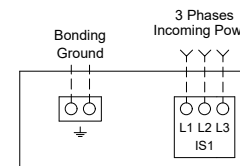
Bending Space	12 " (305 mm)				16 " (406 mm)***						
HP Voltage	75	100	125	150	200	250	300	350	400	450	500
208	2x (2/0 to 500)	2x (4/0 to 500)	2x (300 to 500)	2x (350 to 500)	3x (300 to 500)	-----	-----	-----	-----	-----	-----
220 to 240	1x (350) ** N/A	2x (3/0 to 500)	2x (250 to 500)	2x (300 to 500)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

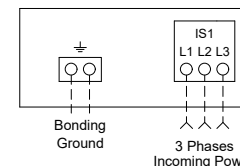
**Consult Factory

*** 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

ACD

10/07/25

FINAL
APPROVAL

FC

10/07/25

ELECTRIC ADDITIVE (FOAM) PUMP CONTROLLER

MODEL: GPA

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER
GPX-TD971/E
DWG REV. 0
SHEET 1 OF 1

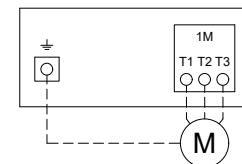
COPPER CONDUCTORS for Motor Connection (1M).

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 4)	1x (10 to 4)	1x (10 to 4)	1x (8 to 4)	1x (8 to 4)	1x (6 to 4)	1x (6 to 4)	1x (4 to 2)	1x (3 to 2)	1x (1 to 2/0)
440 to 480	1x (10 to 4)	1x (10 to 4)	1x (10 to 4)	1x (10 to 4)	1x (8 to 4)	1x (8 to 4)	1x (6 to 4)	1x (6 to 4)	1x (4 to 2)	1x (3 to 2/0)
600	1x (10 to 4)	1x (10 to 4)	1x (10 to 4)	1x (10 to 4)	1x (10 to 4)	1x (8 to 4)	1x (8 to 4)	1x (6 to 4)	1x (6 to 2)	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



Model: GPA

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.
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BY DD/MM/YY

DRAWN BY ZS 08/09/23

FINAL APPROVAL FC 08/09/23

ELECTRIC ADDITIVE (FOAM) PUMP CONTROLLER

MODEL:GPA/GPY

BUILT TO THE LATEST EDITION OF THE NFPA20 & NFPA70



DRAWING NUMBER
GPX-TD873/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

Proof Pressure ***

Low Foam Additive Level ***

I/O Electric Board

IN 1

IN 2

IN 3

IN 4

IN 5

IN 6

IN 7

IN 8

J1*

J2*

J25

Controller Terminal Strip

Network Connections

Terminals Wire Size:
Shielded Female Connector RJ45

Located on Main Board

Modbus TCP/IP RJ45



Alarm Contacts

Terminals Wire Size:
24 - 12 AWG
0.5 Nm

I/O Electric Board

NO

C

NC

NO

C

NC

TB1

NO

C

NC

NO

C

NC

TB2

NO

C

NC

NO

C

NC

TB3

NO

C

NC

NO

C

NC

TB4

NO

C

NC

NO

C

NC

TB5

NO

C

NC

NO

C

NC

TB6

Motor Run

Power Available

Normal Power
Phase Reversal

Pump Room Alarm**

Motor Trouble**

Low Foam Additive
Level ***

* Remove jumper to use this feature

** Re-assignable

*** Optional



TORNATECH

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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

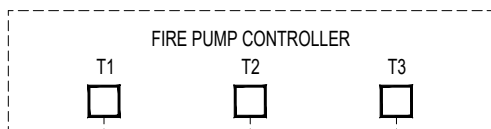
DRAWING NUMBER
GPX-MC001/E

DWG REV. 2

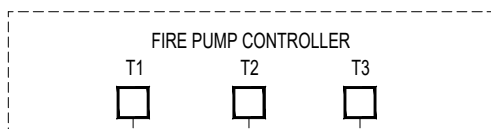
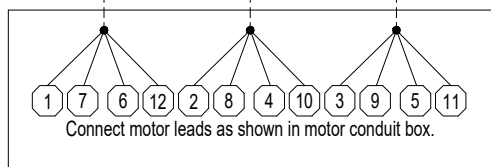
SHEET 1 OF 1

IMPORTANT : - NFPA 20-2022 Art. 9.5.3.2 :

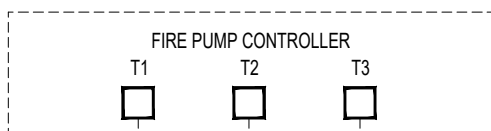
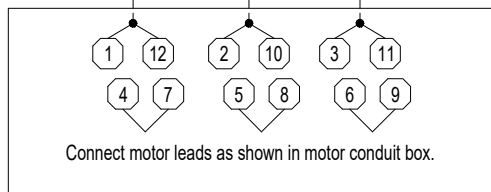
**A MOTOR TERMINAL CONNECTING DIAGRAM FOR MULTIPLE LEAD
MOTORS SHALL BE FURNISHED BY THE MOTOR MANUFACTURER.**



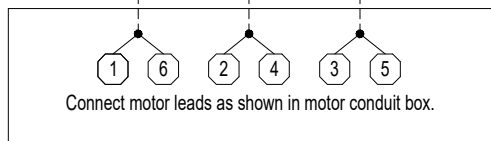
12 LEADS MOTOR
FOR DUAL VOLTAGE MOTOR
OPERATING ON THE LOWER
OF THE TWO VOLTAGES



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