



DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
OFFICE OF STATEWIDE HOSPITAL PLANNING AND DEVELOPMENT

APPLICATION FOR HCAI SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP-0454

HCAI Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Tornatech, Inc.

Manufacturer's Technical Representative: Felix Turcotte

Mailing Address: 4100 Desserte Sud, (A-440 Ouest), Laval, QC H7T0H3

Telephone: (514) 334-2503 Email: felix@tornatech.com

Product Information

Product Name: Varies, see attachment.

Product Model Number(s): Varies, see attachment.

Product Category: Electrical Control Panels on Life Safety/Critical Branch

Product Sub-Category: Fire Protection & Security Panels

General Description: Electric and diesel fire pump controllers with various subcomponents with carbon or stainless enclosures.

Mounting Description: Several - See Certified Product Tables

Tested Seismic Enhancements: None

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates

Contact Person: Daniel Zentner

Mailing Address: 233 SW Wilson Ave, Suite 101, Bend, OR 97702

Telephone: (541) 292-5839 Email: dzentner@structint.com

Title: Program Manager



**DEPARTMENT OF HEALTH CARE ACCESS AND INFORMATION
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California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.

Name: LACHEZAR HANDZHIYSKI

California License Number: S6515

Mailing Address: 5215 Hellyer Avenue, Suite 210, San Jose, CA 95138

Telephone: (669) 437-0200

Email: Lhandzhiyski@StructInt.com

Certification Method

☐ GR-63-Core

☒ ICC-ES AC156

☐ IEEE 344

☐ IEEE 693

☐ NEBS 3

☐ Other (Please Specify): _____

Testing Laboratory

Company Name: CLARK TESTING LABORATORY, INC.

Contact Person: Devon Lohr

Mailing Address: 1801 Route 51, Jefferson Hills PA 15025

Telephone: (412) 387-1001

Email: dlohr@clarktesting.com

Company Name: ENVIRONMENTAL TESTING LABORATORIES, INC. (ETL)

Contact Person: Jeremy Lange

Mailing Address: 11034 Indian Trail, Dallas TX 75229-3513

Telephone: (972) 247-9657

Email: jeremy@etldallas.com



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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) =	1.50 (SDS = 2.0 at $z/h = 1$); 1.44 (SDS = 3.2 at $z/h = 0$)
SDS (Design spectral response acceleration at short period, g) =	2.0 ($z/h = 1$); 3.2 ($z/h = 0$)
a_p (Amplification factor) =	2.5
R_p (Response modification factor) =	6.0
Ω_0 (System overstrength factor) =	2.0
I_p (Importance factor) =	1.5
z/h (Height ratio factor) =	0 and 1
Natural frequencies (Hz) =	See Attachment
Overall dimensions and weight =	See Attachment

HCAI Approval (For Office Use Only) - Approval Expires on 09/15/2031

Date:	9/15/2025		
Name:	Timothy Piland	Title:	Senior Structural Engineer
Special Seismic Certification Valid Up to:	SDS (g) = See Above	z/h =	See Above
Condition of Approval (if applicable):			

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

2100139-CR-001-R3



Manufacturer: Tornatech Inc.						TABLE 1	
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx							
Certified Product Construction Summary: Painted carbon steel & stainless steel enclosure.							
Certified Options Summary: Anti-condensation heater, thermostat and humidistat. Field programmable I/O board							
Mounting Configuration: Base/wall mounted - rigid Note: Installed mounting must be of similar configuration and equivalent strength and stiffness to those tested.							
Building Code: CBC 2022		Seismic Certification Limits:				$S_{DS}= 2.0\text{ g}\quad z/h=1.0$ $S_{DS}= 3.2\text{ g}\quad z/h=0.0$	$I_p= 1.5$
Model Line	Model ^{1,2}	Dimensions (in)			Weight (lbs.)	Notes	UUT
		Depth	Width	Height			
Across-the-line Starter	GPA	12.0	20.0	48.0	170		Interp.
		14.0	24.0	54.0	230		Interp.
		18.0	30.0	68.0	400		Interp.
		18.0	36.0	68.0	450		Interp.
		20.0	40.0	75.0	600		Interp.
Across-the-line Starter w/ Automatic Power Transfer Switch	GPA+GPU	12.0	36.0	48.0	280	UUT11: 229 lbs.	11
		14.0	44.0	54.0	390		Interp.
		18.0	54.0	68.0	850		Interp.
		18.0	72.0	68.0	1,000	UUT12: 955 lbs.	12
		20.0	80.0	75.0	1,150	UUT19: 1,130 lbs.	19
Partwinding Starter	GPP	12.0	20.0	48.0	170		Interp.
		14.0	24.0	54.0	230		Interp.
		18.0	30.0	68.0	400		Interp.
		18.0	36.0	68.0	450		Interp.
		20.0	40.0	75.0	600		Interp.
Partwinding Starter w/ Automatic Power Transfer Switch	GPP+GPU	12.0	36.0	48.0	280		Interp.
		14.0	44.0	54.0	390		Interp.
		18.0	54.0	68.0	850		Interp.
		18.0	60.0	68.0	1,000		Interp.
		20.0	80.0	75.0	1,200		Interp.

Notes:
1. The model numbers listed in this table represent specific sets of subcomponents. Test units 1-4, 9, 11-19 cover the range of materials, enclosures, and subcomponents for all models. Models that do not list a UUT are interpolated between the test units.

Notes:

1. The model numbers listed in this table represent specific sets of subcomponents. Test units 1-4, 9, 11-19 cover the range of materials, enclosures, and subcomponents for all models. Models that do not list a UUT are interpolated between the test units.

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	TABLE 1
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	

Certified Product Construction Summary:
Painted carbon steel & stainless steel enclosure.

Certified Options Summary:
Anti-condensation heater, thermostat and humidistat. Field programmable I/O board

Mounting Configuration:
Base/wall mounted - rigid
Note: Installed mounting must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: CBC 2022 **Seismic Certification Limits:** $S_{DS} = 2.0g$ $z/h=1.0$ $I_p = 1.5$
 $S_{DS} = 3.2g$ $z/h=0.0$

Model Line	Model ^{1,2}	Dimensions (in)			Weight (lbs.)	Notes	UUT
		Depth	Width	Height			
Wye-Delta Closed Starter	GPW	12.0	26.0	48.0	275		Interp.
		14.0	30.0	54.0	350		Interp.
		18.0	36.0	68.0	510	UUT3: 510 lbs.	3
		18.0	60.0	68.0	600		Interp.
		20.0	65.0	75.0	750		Interp.
Wye-Delta Closed Starter w/ Automatic Power Transfer Switch	GPW+GPU	12.0	42.0	48.0	315		Interp.
		14.0	50.0	54.0	440		Interp.
		18.0	60.0	68.0	850		Interp.
		18.0	72.0	68.0	1,150		Interp.
		20.0	80.0	75.0	1,300		Interp.
Wye-Delta Open Starter	GPY	12.0	20.0	48.0	200		Interp.
		14.0	24.0	54.0	300		Interp.
		18.0	30.0	68.0	500		Interp.
		20.0	40.0	75.0	650		Interp.
Wye-Delta Open Starter w/ Automatic Power Transfer Switch	GPY+GPU	12.0	36.0	48.0	300		Interp.
		14.0	44.0	54.0	490		Interp.
		18.0	54.0	68.0	990		Interp.
		18.0	60.0	68.0	1,100		Interp.
		20.0	80.0	75.0	1,200		Interp.

Notes:
1. The model numbers listed in this table represent specific sets of subcomponents. Test units 1-4, 9, 11-19 cover the range of materials, enclosures, and subcomponents for all models. Models that do not list a UUT are interpolated between the test units.

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

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Manufacturer: Tornatech Inc.						TABLE 1	
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx							
Certified Product Construction Summary: Painted carbon steel & stainless steel enclosure.							
Certified Options Summary: Anti-condensation heater, thermostat and humidistat. Field programmable I/O board							
Mounting Configuration: Base/wall mounted - rigid Note: Installed mounting must be of similar configuration and equivalent strength and stiffness to those tested.							
Building Code: CBC 2022						Seismic Certification Limits: $S_{DS}= 2.0\text{ g}$ $z/h=1.0$ $S_{DS}= 3.2\text{ g}$ $z/h=0.0$ $I_p= 1.5$	
Model Line	Model ^{1,2}	Dimensions (in)			Weight (lbs.)	Notes	UUT
		Depth	Width	Height			
Soft Start/Soft Stop	GPS	12.0	26.0	48.0	200	UUT13: 158 lbs.	13
		12.0	26.0	48.0	200	UUT15: 153 lbs.	15
		12.0	26.0	48.0	200	UUT28: 164 lbs.	28
		12.0	26.0	48.0	200	UUT26: 183 lbs.	26
		12.0	26.0	48.0	200	UUT4: 189 lbs.	4
		14.0	30.0	54.0	320		Interp.
		18.0	36.0	68.0	475	UUT16: 409 lbs.	16
		18.0	36.0	68.0	475	UUT2: 453 lbs.	2
		18.0	54.0	68.0	600		Interp.
		18.0	60.0	68.0	750		Interp.
		18.0	60.0	68.0	769	UUT14: 769 lbs.	14
		20.0	65.0	75.0	800		Interp.
		20.0	68.0	75.0	1,176	UUT29: 1,176 lbs.	29
		20.0	80.0	75.0	1,338	UUT27: 1,338 lbs.	27
Soft Start/Soft Stop w/ Automatic Power Transfer Switch	GPS+GPU	12.0	42.0	48.0	335		Interp.
		14.0	50.0	54.0	600		Interp.
		18.0	60.0	68.0	1,050		Interp.
		20.0	105.0	75.0	1,350		Interp.
Autotransformer Starter	GPR	12.0	26.0	48.0	310		Interp.
		14.0	30.0	54.0	425		Interp.
		18.0	36.0	68.0	765		Interp.
		18.0	60.0	68.0	1,210		Interp.
		20.0	65.0	75.0	1,350		Interp.
Notes: 1. The model numbers listed in this table represent specific sets of subcomponents. Test units 1-4, 9, 11-19 cover the range of materials, enclosures, and subcomponents for all models. Models that do not list a UUT are interpolated between the test units.							

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

2100139-CR-001-R3



Manufacturer: Tornatech Inc.						TABLE 1	
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx							
Certified Product Construction Summary: Painted carbon steel & stainless steel enclosure.							
Certified Options Summary: Anti-condensation heater, thermostat and humidistat. Field programmable I/O board							
Mounting Configuration: Base/wall mounted - rigid Note: Installed mounting must be of similar configuration and equivalent strength and stiffness to those tested.							
Building Code: CBC 2022		Seismic Certification Limits:				$S_{DS}= 2.0\text{ g}$ $z/h=1.0$ $S_{DS}= 3.2\text{ g}$ $z/h=0.0$	$I_p= 1.5$
Model Line	Model ^{1,2}	Dimensions (in)			Weight (lbs.)	Notes	UUT
		Depth	Width	Height			
Autotransformer Starter w/ Automatic Power Transfer Switch	GPR+GPU	12.0	42.0	48.0	600		Interp.
		14.0	50.0	54.0	810		Interp.
		18.0	60.0	68.0	1,210	UUT1: 1,210 lbs.	1
		18.0	72.0	68.0	1,210	UUT9: 1,003 lbs.	9
		20.0	105.0	75.0	2,000		Interp.
Pressure Limiting (VFD) w/ Across-the-line Bypass	VPA	12.0	52.0	48.0	270		Interp.
		14.0	60.0	54.0	650		Interp.
		18.0	72.0	68.0	900		Interp.
		30.0	107.0	75.0	1,350		Interp.
Pressure Limiting (VFD) w/ Across-the-line Bypass w/ Automatic Power Transfer Switch	VPA+VPU	12.0	68.0	48.0	375	UUT17: 375 lbs.	17
		14.0	80.0	54.0	800		Interp.
		18.0	96.0	68.0	1,300		Interp.
		30.0	147.0	75.0	1,800		Interp.
Pressure Limiting (VFD) w/ Soft Start Bypass	VPS	12.0	52.0	48.0	350		Interp.
		14.0	60.0	54.0	820		Interp.
		18.0	72.0	68.0	1,100		Interp.
		30.0	107.0	75.0	2,200	UUT18: 2,181 lbs.	18

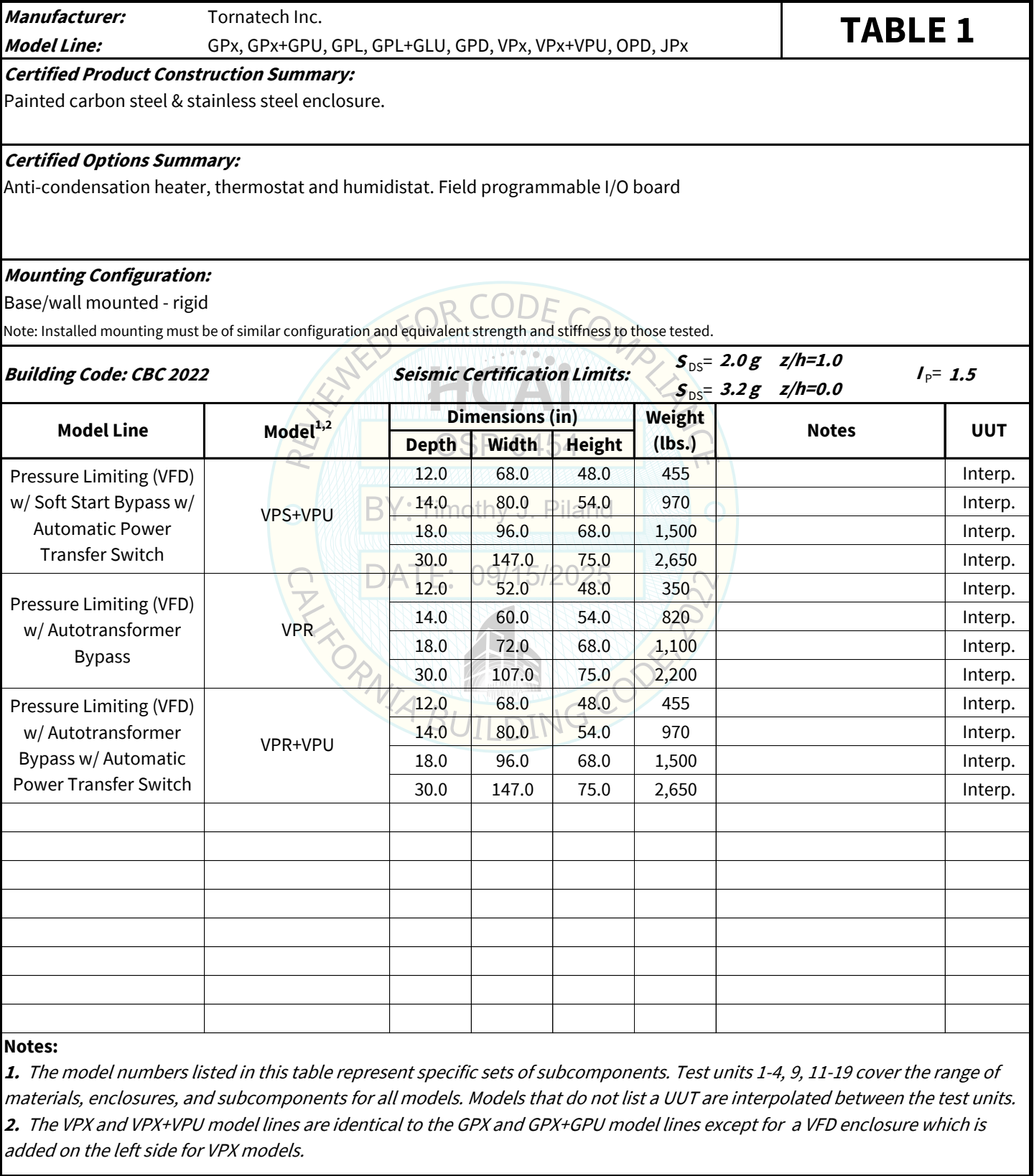
Notes:
1. The model numbers listed in this table represent specific sets of subcomponents. Test units 1-4, 9, 11-19 cover the range of materials, enclosures, and subcomponents for all models. Models that do not list a UUT are interpolated between the test units.
2. The VPX (VPX+VPU) model lines are identical to the GPX (GPX+GPU) model lines except for a VFD enclosure which is added on the left side for VPX models.

Notes:

1. The model numbers listed in this table represent specific sets of subcomponents. Test units 1-4, 9, 11-19 cover the range of materials, enclosures, and subcomponents for all models. Models that do not list a UUT are interpolated between the test units.

2. The VPx (VPx+VPU) model lines are identical to the GPx (GPx+GPU) model lines except for a VFD enclosure which is added on the left side for VPx models.

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SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

2100139-CR-001-R3



Manufacturer:		Tornatech Inc.				TABLE 2	
Model Line:		GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx					
Certified Product Construction Summary: Painted carbon steel & stainless steel enclosure.							
Certified Options Summary: GPD Models: CE compliance (disconnect switch), Engine block heater, Anti-condensation heater, thermostat and humidistat, field programmable I/O board.							
Mounting Configuration: Wall mounted - rigid Note: Installed mounting must be of similar configuration and equivalent strength and stiffness to those tested.							
Building Code: CBC 2022		Seismic Certification Limits:				$S_{DS}= 2.0\text{ g}$ $z/h=1.0$ $S_{DS}= 3.2\text{ g}$ $z/h=0.0$	$I_p= 1.5$
Model Line	Model	Dimensions (in)			Weight (lbs.)	Notes	UUT
		Depth	Width	Height			
Diesel Engine Driven Fire Pump Controller	GPD	8.0	23.6	27.5	90	UUT8: 73 lbs.	8
		8.0	30.0	40.0	132		10
	GPD/GFD	7.9	23.6	27.6	76	UUT30: 76 lbs.	30
Limited Service Fire Pump Controller	GPL	8.0	20.0	24.0	140		Interp.
	GPL+GLU	8.0	40.0	24.0	140		7
Jockey Fire Pump Controller	JP1	6.0	10.0	12.0	20		5
		7.0	16.0	16.0	40		Interp.
	JP2	6.0	10.0	12.0	20		Interp.
		7.0	16.0	16.0	40		Interp.
	JP3	6.0	9.5	12.0	20	UUT25: 17 lbs.	25
		7.0	16.0	16.0	40	UUT6: 38 lbs.	6
		8.0	20.0	24.0	60	UUT24: 56 lbs.	24
Disconnecting Device	OPD	11.0	12.0	22.0	40	UUT21: 38 lbs. UUT23: 36 lbs.	21, 23
		11.0	14.0	26.0	75		Interp.
		11.0	16.0	30.0	100		Interp.
		12.5	18.0	42.0	130	UUT20: 120 lbs. UUT22: 129 lbs.	20, 22

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

2100139-CR-001-R3



Manufacturer: Tornatech Inc.		Table Description: Base/Wall Mounted Enclosures					TABLE 3
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx							
Building Code: CBC 2022		Seismic Certification Limits: $S_{DS} = 2.0\text{ g}$ $z/h = 1.0$ $S_{DS} = 3.2\text{ g}$ $z/h = 0.0$ $I_p = 1.5$					
Model Line (Manufacturer)	Model	Dimension (in)			Material	Notes	UUT
		Depth	Width	Height			
Enclosure (Tornatech)	2BOX101A/2BOX201A	12.0	20.0	48.0	Carbon & Stainless Steel		Extrap.
	2BOX101B/2BOX201B	12.0	26.0	48.0	Carbon & Stainless Steel	UUT: Carbon Steel	4, 13, 15
	2BOX101C/2BOX201C	12.0	36.0	48.0	Carbon & Stainless Steel	UUT: Stainless Steel	11
	2BOX101D/2BOX201D	12.0	42.0	48.0	Carbon & Stainless Steel		Interp.
	2BOX102A/2BOX202A	14.0	24.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX102B/2BOX202B	14.0	30.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX102C/2BOX202C	14.0	44.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX102D/2BOX202D	14.0	50.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX103A/2BOX203A	18.0	30.0	68.0	Carbon & Stainless Steel		Interp.
	2BOX103B/2BOX203B	18.0	36.0	68.0	Carbon & Stainless Steel	UUT: Carbon Steel	2, 3, 16
	2BOX103C/2BOX203C	18.0	54.0	68.0	Carbon & Stainless Steel		Interp.
	2BOX103D/2BOX203D	18.0	60.0	68.0	Carbon & Stainless Steel	UUT: Carbon Steel	1, 14
	2BOX103G/2BOX203G	18.0	72.0	68.0	Carbon & Stainless Steel	UUT: Stainless Steel	9, 12
	2BOX301A	12.0	20.0	48.0	Carbon & Stainless Steel		Extrap.
	2BOX301B	12.0	26.0	48.0	Carbon & Stainless Steel	UUT: Carbon Steel	26, 28
	2BOX301C	12.0	36.0	48.0	Carbon & Stainless Steel		Interp.
	2BOX301D	12.0	42.0	48.0	Carbon & Stainless Steel		Interp.
	2BOX302A	14.0	24.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX302B	14.0	30.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX302C	14.0	44.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX302D	14.0	50.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX303A	18.0	30.0	68.0	Carbon & Stainless Steel		Interp.
	2BOX303B	18.0	36.0	68.0	Carbon & Stainless Steel		Interp.

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SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

2100139-CR-001-R3



Manufacturer: Tornatech Inc.		Table Description: Base/Wall Mounted Enclosures				TABLE 3	
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx							
Building Code: CBC 2022		Seismic Certification Limits:				$S_{DS} = 2.0\text{ g} \quad z/h = 1.0$ $S_{DS} = 3.2\text{ g} \quad z/h = 0.0$ $I_p = 1.5$	
Model Line (Manufacturer)	Model	Dimension (in)			Material	Notes	UUT
		Depth	Width	Height			
Enclosure (Tornatech)	2BOX303C	18.0	54.0	68.0	Carbon & Stainless Steel		Interp.
	2BOX303D	18.0	60.0	68.0	Carbon & Stainless Steel		Interp.
	2BOX303G	18.0	72.0	68.0	Carbon & Stainless Steel		Interp.
	2BOX201B+ENENC0007 ¹	12.0	52.0	48.0	Carbon & Stainless Steel		Interp.
	2BOX201D+ENENC0007 ¹	12.0	68.0	48.0	Carbon & Stainless Steel	UUT: Carbon Steel	17
	2BOX202B+ENENC0008 ¹	14.0	60.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX202D+ENENC0008 ¹	14.0	80.0	54.0	Carbon & Stainless Steel		Interp.
	2BOX203B+ENENC0009 ¹	18.0	72.0	68.0	Carbon & Stainless Steel		Interp.
	2BOX203D+ENENC0009 ¹	18.0	96.0	68.0	Carbon & Stainless Steel		Interp.
	ENENC0003	20.0	40.0	75.0	Carbon & Stainless Steel		Interp.
	ENENC0004	20.0	80.0	75.0	Carbon & Stainless Steel	UUT: Stainless Steel	19
	ENENC0003+ENENC0006 ¹	30.0	65.0	75.0	Carbon & Stainless Steel	UUT: Carbon Steel	29
	ENENC0003+ENENC0003 ¹	30.0	80.0	75.0	Carbon & Stainless Steel	UUT: Carbon Steel	27
	ENENC0003+ENENC0005 ¹	30.0	82.0	75.0	Carbon & Stainless Steel		Interp.
	ENENC0003+ENENC0005 +ENENC0006 ¹	30.0	107.0	75.0	Carbon & Stainless Steel	UUT: Carbon Steel	18
	ENENC0004+ENENC0005 ¹	30.0	122.0	75.0	Carbon & Stainless Steel		Interp.
	ENENC0004+ENENC0005 +ENENC0006 ¹	30.0	147.0	75.0	Carbon & Stainless Steel		Interp.

Notes:
1. Configuration consists of several individual enclosures installed side by side. Individual enclosures have been tested in standalone and side by side configurations.

Notes:

1. Configuration consists of several individual enclosures installed side by side. Individual enclosures have been tested in standalone and side by side configurations.

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

2100139-CR-001-R3



Manufacturer: Tornatech Inc.		Table Description: Wall Mounted Enclosures					TABLE 4
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx							
Building Code: CBC 2022		Seismic Certification Limits:			$S_{DS} = 2.0\text{ g} \quad z/h = 1.0$ $S_{DS} = 3.2\text{ g} \quad z/h = 0.0$		$I_p = 1.5$
Model Line (Manufacturer)	Model	Dimension (in)			Material	Notes	UUT
		Depth	Width	Height			
Enclosure (Tornatech)	2BOX13A	6.0	10.0	12.0	Carbon & Stainless Steel	UUT: Carbon Steel	5
	2BOX13C	7.0	16.0	16.0	Carbon & Stainless Steel	UUT: Carbon Steel	6
	2BOX08A	8.0	20.0	24.0	Carbon & Stainless Steel		Interp.
	2BOX08A x2	8.0	40.0	24.0	Carbon & Stainless Steel	UUT: Carbon Steel	7
	2BOX11A	8.0	23.6	27.5	Carbon & Stainless Steel	UUT: Carbon Steel	8
	2BOX11D	8.0	30.0	40.0	Carbon & Stainless Steel	UUT: Stainless Steel	10
	2BOX16A	11.0	12.0	22.0	Carbon & Stainless Steel	UUT: Carbon Steel	21, 23
	2BOX213A	6.0	9.5	12.0	Carbon & Stainless Steel	UUT: Carbon Steel	25
	2BOX213B	6.0	12.0	12.0	Carbon & Stainless Steel		Interp.
	2BOX311A	8.0	23.6	27.5	Carbon & Stainless Steel	UUT: Carbon Steel	30
	ENENC0025	8.0	20.0	24.0	Carbon & Stainless Steel	UUT: Carbon Steel	24
	ENENC0014	11.0	16.0	30.0	Carbon & Stainless Steel		Interp.
	ENENC0015	12.5	18.0	42.0	Carbon & Stainless Steel	UUT: Carbon Steel	20, 22

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

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Manufacturer: Tornatech Inc.		Table Description: Base/Wall Mounted Electrical Components			TABLE 5
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx					
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Component Type	Manufacturer	Model	Description	Notes	UUT
Soft-starter	Schneider	ATS22D17S6U	17A		13
		ATS22D32S6U	32A		Interp.
		ATS22D47S6U	47A		Interp.
		ATS22D62S6U	62A		Interp.
		ATS22D75S6U	75A		Interp.
		ATS22D88S6U	88A		Interp.
		ATS22C11S6U	110A		Interp.
		ATS22C14S6U	140A		Interp.
		ATS22C17S6U	170A		Interp.
		ATS22C21S6U	210A		Interp.
		ATS22C25S6U	250A		Interp.
		ATS22C32S6U	320A		Interp.
		ATS22C41S6U	410A		Interp.
		ATS22C48S6U	480A		Interp.
		ATS22C59S6U	590A		18
		ATS480D17Y	17A		Interp.
		ATS480D22Y	22A		Interp.
		ATS480D32Y	32A		Interp.
		ATS480D38Y	38A		Interp.
		ATS480D47Y	47A		Interp.
		ATS480D62Y	62A		Interp.
		ATS480D75Y	75A		Interp.
		ATS480D88Y	88A		Interp.

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Component Type	Manufacturer	Model	Description	Notes	UUT
Soft-starter	Schneider	ATS480C11Y	110A		26
		ATS480C14Y	140A		Interp.
		ATS480C17Y	170A		Interp.
		ATS480C21Y	210A		Interp.
		ATS480C25Y	250A		Interp.
		ATS480C32Y	320A		Interp.
		ATS480C41Y	410A		Interp.
		ATS480C48Y	480A		Interp.
		ATS480C59Y	590A		Interp.
		ATS48C66Y/ATS480C66Y	660A		14
		ATS480C79Y	790A		Interp.
		ATS480M10Y	1000A		27
	Lovato	ADXL 0030 600	30A		15
		ADXL 0045 600	45A		Interp.
		ADXL 0060 600	60A		Interp.
		ADXL 0075 600	75A		Interp.
		ADXL 0085 600	85A		Interp.
		ADXL 0115 600	115A		Interp.
		ADXL 0135 600	135A		Interp.
		ADXL 0162 600	162A		Interp.
		ADXL 0195 600	195A		Interp.
		ADXL 0250 600	250A		Interp.
		ADXL 0320 600	320A		16

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Component Type	Manufacturer	Model	Description	Notes	UUT
Soft-starter	3L3	SOFNK0015-6D	15A		28
		SOFNK0022-6D	22A		Interp.
		SOFNK0030-6D	30A		Interp.
		SOFNK0037-6D	37A		Interp.
		SOFNK0044-6D	44A		Interp.
		SOFNK0060-6D	60A		Interp.
		SOFNK0074-6D	74A		Interp.
		SOFNK0090-6D	90A		Interp.
		SOFNK0110-6D	110A		Interp.
		SOFNK0150-6D	150A		Interp.
		SOFNK0180-6D	180A		Interp.
		SOFNK0220-6D	220A		Interp.
		SOFNK0264-6D	264A		Interp.
		SOFNK0320-6D	320A		Interp.
		SOFNK0370-6D	370A		Interp.
		SOFNK0440-6D	440A		Interp.
		SOFNK0500-6D	500A		Interp.
		SOFNK0560-6D	560A		Interp.
		SOFNK0630-6D	630A		Interp.
		SOFNK0710-6D	710A		Interp.
		SOFNK0800-6D	800A		Interp.
		SOFNK0900-6D	900A		Interp.
		SOFNK1000-6D	1000A		29

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Component Type	Manufacturer	Model	Description	Notes		UUT
Soft-starter	Siemens	3RW4427	93A			4
		3RW4056	115-230 VAC, 145-162A			Interp.
		3RW4075	480V, 315A			2
Circuit Breaker	Siemens	MCP 100A	100A			4
		MCP 125A	125A			Interp.
		MCP 250A	250A			Interp.
		MCP 400A	400A			2, 3
		MCP 600A	600A			4
	Schneider	HJL36050M72	50A			13, 15
		HJL36150M74	150A			11
		JJL36250M75	250A			Interp.
		LJL36400M37X	400A			16
		LJL36600M37X	600A			Interp.
		PJL36080M68	800A			12, 14
		PJL36100M69	1000A			27
		PJL36120M70	1200A			19
Transfer Switches	Socomec	97233010	100A			11
		97233020	200A			Interp.
		97233026	260A			Interp.
		97233040	400A			Interp.
		97233060	600A			Interp.
		97233080	800A			12
		97233120	1200A			19

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Component Type	Manufacturer	Model	Description	Notes	UUT
Molded Case Circuit Breaker	3L3	MCPNK0015M1F	15A		17
		MCPNK0025M1F	25A		Interp.
		MCPNK0040M1F	40A		Interp.
		MCPNK0060M1F	60A		Interp.
		MCPNK0100M1F	100A		Interp.
		MCPNK0150M2F	150A		Interp.
		MCPNK0225M2F	225A		Interp.
		MCPNK0250M3F	250A		Interp.
		MCPNK0400M3F	400A		Interp.
		MCPNK0600M4F	600A		Interp.
		MCPNK0800M5F	800A		Interp.
		MCPNK0800M6F	800A		Interp.
		MCPNK1000M6F	1000A		Interp.
		MCPNK1200M6F	1200A		19, 29
		Switches	3L3	MCSNK0100M1F	100A
MCSNK0150M2F	150A				Interp.
MCSNK0225M2F	225A				Interp.
MCSNK0250M3F	250A				Interp.
MCSNK0400M3F	400A				Interp.
MCSNK0600M4F	600A				Interp.
MCSNK0800M5F	800A				Interp.
MCSNK0800M6F	800A				Interp.
MCSNK1000M6F	1000A				Interp.
		MCSNK1200M6F	1200A		19, 29

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Component Type	Manufacturer	Model	Description	Notes	UUT
Switches	Siemens	MCS 100A	100A		4
		MCS 125A	125A		Interp.
		MCS 250A	250A		Interp.
		MCS 400A	400A		2
		MCS 600A	600A		1, 3, 9
		3VL9400-2AB01	1NO+1NC	UUT: (2) installed	4
		A01JLD64	1NO+1NC	UUT: (4) installed	1, 9
	Schneider	HGL36000S15	150A		11, 13, 15
		JGL36000S25	250A		Interp.
		LGL36000S40X	400A		16
		LGL36000S60X	600A		Interp.
		PJL36000S80	800A		12, 14
		PJL36000S10	1000A		27
		PJL36000S12	1200A		19
	Saia-Burgess	XGG6-88-P27Z1	16A, 250V, 60mm lever		1, 3, 9
Shunt Trip	Siemens	S17JLD6	24VAC	Installs in MCS	1, 3, 9
		3VL9400-1SC01	24VAC/DC	Installs in MCS	2
Fan	Orion	0A172SAP-11-1TB	115VAC, 235 CFM		1, 9
	Rittal	3241.100	230VAC	Wall-mounted Fan and filter unit	17
		3243.100	230VAC	Wall-mounted Fan and filter unit	Interp.
		3244.100	230VAC	Wall-mounted Fan and filter unit	18
		3140.100	230VAC	Roof-mounted Fan and filter unit	18
		3243.200		Wall-mounted Outlet filter	18

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				$S_{DS} = 3.2\text{ g}$ $z/h = 0.0$					
Component Type	Manufacturer	Model	Description	Notes	UUT				
Transformers	Transfab	DL 150VA 208-240V	For 100/200/260/400A versions		Extrap.				
		DL 150VA 380/400/415-240V	For 100/200/260/400A versions		11				
		DL 150VA 440/460/480-240V	For 100/200/260/400A versions		Interp.				
		DL 150VA 600-240V	For 100/200/260/400A versions		Interp.				
		DL 200VA 208-240V	For 600/800A versions		Interp.				
		DL 200VA 380/400/415-240V	For 600/800A versions		Interp.				
		DL 200VA 440/460/480-240V	For 600/800A versions		Interp.				
		DL 200VA 600-240V	For 600/800A versions		12				
		EXS114340	600/120V, 100VA, 50-60Hz.		1, 2, 9, 14, 16				
		ET5841	Toroidal 4000:1		1, 2, 3, 9, 14, 16				
		ET5874	Toroidal 3600:1		4, 13, 15				
		DL 8849QB	600/24V, 25VA, 50-60Hz.		1, 9				
		DL 8882QB	600/24V, 50VA, 60Hz.		1, 4, 9, 13, 15				
	Rex Manufacturing	RS75J	75kVA	GPR only	9				
		RS150J	150kVA	GPR only	Interp.				
		RS400J	400kVA	GPR only	1				
	Marcus Transformer	MTC250	600/120V, 250VA, 60Hz.		2, 4, 13, 14, 15, 16				

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Component Type	Manufacturer	Model	Description	Notes	UUT
Resistor	I-Gard Corp.	TR-600-75	Wye-Delta, 600V, 75HP		9
		TR-600-150	Wye-Delta, 600V, 150HP	GPW only	Interp.
		TR-600-400	Wye-Delta, 600V, 400HP	GPW only	3
	Huntington Vishay	ALSR5F-5-1.0-1%	1 Ohm, 5W, 1% Ceramic		1-4, 9, 13, 14, 15, 16
Solenoid Valve	Granzow	1ASC024	24VDC		1-4, 9, 13, 14, 15, 16
Alarm Bell	Newsmart	1NEW001	12VDC, Ø150mm, red		1-4, 13, 14, 15, 16
		1NEW002	24VDC, Ø150mm, red		9, 11
Pressure Transducer	Telemecanique	XMLP600PPF13Q3	600psi, 0.5-4.5V, 1/4" NPT		1-4, 9, 13, 14, 15, 16
Control Relay	Siemens	3RH1122-1AB00	24VAC, 2NO/2NC, 50/60Hz.		1-4, 9, 13, 14, 15, 16
Contactor	Siemens	3RT103	Frame size S2		Extrap.
		3RT104	Frame size S3		4
		3RT105	Frame size S6		1, 3
		3RT106	Frame size S10		1, 2, 3, 9
		3RT107	Frame size S12		1, 9
		3RH1921-1DA11	1NO+1NC		4
		3RH1921-1FA22	2NO+2NC	UUT: (2) installed	1, 9
		3RH1921-1FC22	2NO+2NC, Late break	UUT: (2) installed	3
		3RT1016-1BB41	24VDC Contactor 9A		11, 12
		3RA1912-2H	Mechanical Interlock		11, 12

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Component Type	Manufacturer	Model	Description	Notes	UUT
Contactor	Schneider	LC1D25	3-Pole, 25A		11
		LC1D40	3-Pole, 40A		13, 15
		LC1D65A	3-Pole, 65A		Interp.
		LC1D80	3-Pole, 80A, 4 lbs.		Interp.
		LC1D95	3-Pole, 95A, 4 lbs.		Interp.
		LC1D115	3-Pole, 115A, 4 lbs.		Interp.
		LC1F185	3-Pole, 185A, 12 lbs.		Interp.
		LC1F225	3-Pole, 225A, 12 lbs.		Interp.
		LC1F265	3-Pole, 265A, 19 lbs.		Interp.
		LC1F330	3-Pole, 330A, 21 lbs.		Interp.
		LC1F400	3-Pole, 400A, 18 lbs.		16
		LC1F630	3-Pole, 630A, 34 lbs.		14
		LC1F800	3-Pole, 800A, 41 lbs.		12
		LC1G115	3-Pole, 115A, 8 lbs.		26
		LC1G150	3-Pole, 150A, 8 lbs.		Interp.
		LC1G185	3-Pole, 185A, 8 lbs.		Interp.
		LC1G225	3-Pole, 225A, 8 lbs.		Interp.
		LC1G265	3-Pole, 265A, 15 lbs.		Interp.
		LC1G330	3-Pole, 330A, 15 lbs.		Interp.
		LC1G400	3-Pole, 400A, 15 lbs.		Interp.
		LC1G500	3-Pole, 500A, 15 lbs.		Interp.
		LC1G630	3-Pole, 630A, 31 lbs.		Interp.
		LC1G800	3-Pole, 800A, 31 lbs.		27

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				$S_{DS} = 3.2\text{ g}$ $z/h = 0.0$	
Component Type	Manufacturer	Model	Description	Notes	UUT
Contactor	3L3	CONNK0009	3-Pole, 9A		17
		CONNK0012	3-Pole, 12A		Interp.
		CONNK0018	3-Pole, 18A		Interp.
		CONNK0025	3-Pole, 25A		Interp.
		CONNK0032	3-Pole, 32A		Interp.
		CONNK0040	3-Pole, 40A		28
		CONNK0050	3-Pole, 50A		Interp.
		CONNK0065	3-Pole, 65A		Interp.
		CONNK0080	3-Pole, 80A		Interp.
		CONNK0095	3-Pole, 95A		Interp.
		CONNK0115	3-Pole, 115A		Interp.
		CONNK0150	3-Pole, 150A		Interp.
		CONNK0185	3-Pole, 185A		Interp.
		CONNK0225	3-Pole, 225A		Interp.
		CONNK0265	3-Pole, 265A		Interp.
		CONNK0330	3-Pole, 330A		Interp.
		CONNK0400	3-Pole, 400A		Interp.
		CONNK0500	3-Pole, 500A		Interp.
		CONNK0630	3-Pole, 630A		Interp.
		CONNK0800	3-Pole, 800A		Interp.
		CONNK1000	3-Pole, 1000A		19, 29
Contactor Replacement Parts	Siemens	3RT202	Replacement for 3RT102		11
		3RT203	Replacement for 3RT103		12

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Component Type	Manufacturer	Model	Description	Notes	UUT
Switch Contact Block	Siemens	3SB3400-0B	10A, 1NO		1-4, 9, 13, 14, 15, 16
HMI	Tornatech	2VIZ001	Programmable Logic Controller		1, 2, 3, 4
		VZASS0001	Programmable Logic Controller		9, 11-16, 18
		VZASS0003	Programmable Logic Controller		17, 19
I/O Board	Tornatech	2VIZ002/2VIZ102	I/O Board Electric		1-4, 9, 11-19
		2VIZ003/2VIZ103	I/O Board Transfer Switch		1, 9, 11, 12, 17, 19
		2VIZ005/2VIZ105	I/O Board Expander		2, 9, 14, 16, 17, 18
Surge Arrester	Square D	SDSA 3650	40kA Surge Current Rating per Phase		1, 2, 3, 4
	Citel	DS44US-480D	40kA Surge Current Rating per Phase		13, 14, 15, 16
		DS44US-600D	40kA Surge Current Rating per Phase		Extrap.
3-Way Valve	Granzow	1ASC028	24VDC 3-Way Valve 500 psi Brass		11
		1ASC029	24VDC 3-Way Valve 500 psi Stainless		Interp.
		1ASC030	12VDC 3-Way Valve 500 psi Brass		Interp.
		1ASC031	12VDC 3-Way Valve 500 psi Stainless		12
Auxiliary Contact	Socomec	1SOC011	Aux. Contact NO/NC		11
Heater	DBK	HP06-2-15-240	160W, 110/240V		2, 14, 16
Thermostat	DBK	FGT100	0-60°C, NC		2, 14, 16
Humidistat	DBK	RFHSS-112	24V-230V, 50/60Hz., 40-90% rH		2, 14, 16
Trip Module	Tornatech	2PLA048	24VDC	For CB Sentron 100A, 125A	4

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Component Type	Manufacturer	Model	Description	Notes	UUT				
Line Reactor	Transfab TMS	KDRB25H	208-240V, 5 Hp	4"D x 6"W x 5"H	Interp.				
		KDRB26H	208-240V, 7.5 Hp	4"D x 6"W x 5"H	17				
		KDRD21H	208-240V, 10 Hp	4.25"D x 7.2"W x 5.75"H	Interp.				
		KDRD22H	208-240V, 15 Hp	4.25"D x 7.2"W x 5.75"H	Interp.				
		KDRC22H	208-240V, 20 Hp	4.25"D x 7.2"W x 5.75"H	Interp.				
		KDRF28H	208-240V, 25 Hp	6"D x 9"W x 7"H	Interp.				
		KDRF25H	208-240V, 30 Hp	7"D x 9"W x 7"H	Interp.				
		KDRF26H	208-240V, 40 Hp	7"D x 9"W x 7"H	Interp.				
		KDRH24H	208-240V, 50 Hp	7"D x 11"W x 9"H	Interp.				
		KDRH23H	208-240V, 60 Hp	7.5"D x 11"W x 9"H	Interp.				
		KDRI22H	208-240V, 75 Hp	8.25"D x 11"W x 9"H	Interp.				
		KDRI21H	208-240V, 100 Hp	8.25"D x 11"W x 9"H	Interp.				
		KDRAA3H2	480V, 5 Hp	2.64"D x 4.25"W x 4.44"H	Interp.				
		KDRAA4H2	480V, 7.5 Hp	2.64"D x 4.25"W x 4.44"H	Interp.				
		KDRAA5H2	480V, 10 Hp	2.64"D x 4.25"W x 4.44"H	Interp.				
		KDRB2H	480V, 15 Hp	4"D x 6"W x 5"H	Interp.				
		KDRC3H	480V, 20 Hp	5"D x 7.2"W x 5.75"H	Interp.				
		KDRC1H	480V, 25 Hp	5"D x 7.2"W x 5.75"H	Interp.				
		KDRE2H	480V, 30 Hp	5"D x 7.2"W x 5.75"H	Interp.				
		KDRF4H	480V, 40 Hp	6"D x 9"W x 7"H	Interp.				
		KDRF1H	480V, 50 Hp	6"D x 9"W x 7"H	Interp.				
		KDRF2H	480V, 60 Hp	6"D x 9"W x 7"H	Interp.				
		KDRH2H	480V, 75 Hp	7.25"D x 11"W x 9"H	Interp.				

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SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

2100139-CR-001-R3



Manufacturer: Tornatech Inc.		Table Description: Base/Wall Mounted Electrical Components			TABLE 5
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx					
Building Code: CBC 2022		Seismic Certification Limits: $S_{DS} = 2.0\text{ g}$ $z/h = 1.0$ $S_{DS} = 3.2\text{ g}$ $z/h = 0.0$			$I_P = 1.5$
Component Type	Manufacturer	Model	Description	Notes	UUT
Line Reactor	Transfab TMS	KDRI2H	480V, 100 Hp	7"D x 11"W x 9"H	Interp.
		KDRG3H	480V, 125 Hp	8"D x 11"W x 9"H	Interp.
		KDRG1H	480V, 150 Hp	8.12"D x 11"W x 9"H	Interp.
		KDRJ1H	480V, 200 Hp	9.75"D x 11"W x 9"H	Interp.
		KDRL1H	480V, 250 Hp	9.31"D x 14.5"W x 11.38"H	Interp.
		KDRL2H	480V, 300 Hp	11"D x 14.5"W x 11.38"H	Interp.
		KDRL3H	480V, 350 Hp	9.31"D x 14.5"W x 11.38"H	Interp.
		KDRL4H	480V, 400 Hp	12"D x 15"W x 11.38"H	Interp.
		KDRL5H	480V, 450 Hp	12.25"D x 15"W x 11.38"H	18
		KDRL6H	480V, 500 Hp	12.25"D x 15"W x 11.38"H	Interp.
		KDRS1H	480V, 600 Hp	13.25"D x 15"W x 11.38"H	Interp.
		KDRAA58H2	600V, 5 Hp	2.64"D x 4.25"W x 4.44"H	Interp.
		KDRB42H	600V, 7.5 Hp	4"D x 6"W x 5"H	Interp.
		KDRB43H	600V, 10 Hp	4"D x 6"W x 5"H	Interp.
		KDRB44H	600V, 15 Hp	4"D x 6"W x 5"H	Interp.
		KDRD41H	600V, 20 Hp	4.25"D x 7.2"W x 5.75"H	Interp.
		KDRC43H	600V, 25 Hp	5"D x 7.2"W x 5.75"H	Interp.
		KDRE42H	600V, 30 Hp	5"D x 7.2"W x 5.75"H	Interp.
		KDRF44H	600V, 40 Hp	6"D x 9"W x 7"H	Interp.
		KDRF45H	600V, 50 Hp	6"D x 9"W x 7"H	Interp.
		KDRH43H	600V, 60 Hp	6"D x 11"W x 9"H	Interp.
		KDRH42H	600V, 75 Hp	6"D x 11"W x 9"H	Interp.
		KDRI41H	600V, 100 Hp	7.25"D x 11"W x 9"H	Interp.

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Manufacturer: Tornatech Inc.		Table Description: Base/Wall Mounted Electrical Components			TABLE 5
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx					
Building Code: CBC 2022		Seismic Certification Limits:		$S_{DS} = 2.0\text{ g}$ $z/h = 1.0$	$I_P = 1.5$
				$S_{DS} = 3.2\text{ g}$ $z/h = 0.0$	
Component Type	Manufacturer	Model	Description	Notes	UUT
Variable Frequency Drive (VFD)	Schneider	ATV630U40M3	200-240V 3PH AC, 5 Hp, 4 kW	Frame Size 1	17
		ATV630U55M3	200-240V 3PH AC, 7.5 Hp, 5.5 kW	Frame Size 2	Interp.
		ATV630U75M3	200-240V 3PH AC, 10 Hp, 7.5 kW	Frame Size 3	Interp.
		ATV630D11M3	200-240V 3PH AC, 15 Hp, 11 kW	Frame Size 3	Interp.
		ATV630D15M3	200-240V 3PH AC, 20 Hp, 15 kW	Frame Size 4	Interp.
		ATV630D18M3	200-240V 3PH AC, 25 Hp, 18.5 kW	Frame Size 4	Interp.
		ATV630D22M3	200-240V 3PH AC, 30 Hp, 22 kW	Frame Size 4	Interp.
		ATV630D30M3	200-240V 3PH AC, 40 Hp, 30 kW	Frame Size 5	Interp.
		ATV630D37M3	200-240V 3PH AC, 50 Hp, 37 kW	Frame Size 5	Interp.
		ATV630D45M3	200-240V 3PH AC, 60 Hp, 45 kW	Frame Size 5	Interp.
		ATV630D55M3	200-240V 3PH AC, 75 Hp, 55 kW	Frame Size 6	Interp.
		ATV630D75M3	200-240V 3PH AC, 100 Hp, 75 kW	Frame Size 6	Interp.
		ATV630U40N4	380-480V 3PH AC, 5 Hp, 4 kW	Frame Size 1	Interp.
		ATV630U55N4	380-480V 3PH AC, 7.5 Hp, 5.5 kW	Frame Size 1	Interp.
		ATV630U75N4	380-480V 3PH AC, 10 Hp, 7.5 kW	Frame Size 2	Interp.
		ATV630D11N4	380-480V 3PH AC, 15 Hp, 11 kW	Frame Size 2	Interp.
		ATV630D15N4	380-480V 3PH AC, 20 Hp, 15 kW	Frame Size 3	Interp.
		ATV630D18N4	380-480V 3PH AC, 25 Hp, 18.5 kW	Frame Size 3	Interp.
		ATV630D22N4	380-480V 3PH AC, 30 Hp, 22 kW	Frame Size 3	Interp.
		ATV630D30N4	380-480V 3PH AC, 40 Hp, 30 kW	Frame Size 4	Interp.
		ATV630D37N4	380-480V 3PH AC, 50 Hp, 37 kW	Frame Size 4	Interp.
		ATV630D45N4	380-480V 3PH AC, 60 Hp, 45 kW	Frame Size 4	Interp.
		ATV630D55N4	380-480V 3PH AC, 75 Hp, 55 kW	Frame Size 5	Interp.

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SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

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Manufacturer: Tornatech Inc.		Table Description: Base/Wall Mounted Electrical Components			TABLE 5
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx					
Building Code: CBC 2022		Seismic Certification Limits: $S_{DS} = 2.0\text{ g}$ $z/h = 1.0$ $S_{DS} = 3.2\text{ g}$ $z/h = 0.0$			$I_p = 1.5$
Component Type	Manufacturer	Model	Description	Notes	UUT
Variable Frequency Drive (VFD)	Schneider	ATV630D75N4	380-480V 3PH AC, 100 Hp, 75 kW	Frame Size 5	Interp.
		ATV630D90N4	380-480V 3PH AC, 125 Hp, 90 kW	Frame Size 5	Interp.
		ATV630C11N4	380-480V 3PH AC, 150 Hp, 110 kW	Frame Size 6	Interp.
		ATV630C13N4	380-480V 3PH AC, 200 Hp, 132 kW	Frame Size 6	Interp.
		ATV630C16N4	380-480V 3PH AC, 250 Hp, 160 kW	Frame Size 6	Interp.
		ATV630C22N4	380-480V 3PH AC, 350 Hp, 220 kW	Frame Size 7A	Interp.
		ATV630C25N4	380-480V 3PH AC, 400 Hp, 250 kW	Frame Size 7B	Interp.
		ATV630C31N4	380-480V 3PH AC, 500 Hp, 315 kW	Frame Size 7B	18
		ATV630U55Y6	500-690V 3PH AC, 5 Hp, 4 kW	Frame Size 3Y	Interp.
		ATV630U75Y6	500-690V 3PH AC, 7.5 Hp, 5.5 kW	Frame Size 3Y	Interp.
		ATV630D11Y6	500-690V 3PH AC, 10 Hp, 7.5 kW	Frame Size 3Y	Interp.
		ATV630D15Y6	500-690V 3PH AC, 15 Hp, 11 kW	Frame Size 3Y	Interp.
		ATV630D18Y6	500-690V 3PH AC, 20 Hp, 15 kW	Frame Size 3Y	Interp.
		ATV630D22Y6	500-690V 3PH AC, 25 Hp, 18.5 kW	Frame Size 3Y	Interp.
		ATV630D30Y6	500-690V 3PH AC, 30 Hp, 22 kW	Frame Size 3Y	Interp.
		ATV630D37Y6	500-690V 3PH AC, 40 Hp, 30 kW	Frame Size 5Y	Interp.
		ATV630D45Y6	500-690V 3PH AC, 50 Hp, 37 kW	Frame Size 5Y	Interp.
		ATV630D55Y6	500-690V 3PH AC, 60 Hp, 45 kW	Frame Size 5Y	Interp.
		ATV630D75Y6	500-690V 3PH AC, 75 Hp, 55 kW	Frame Size 5Y	Interp.
		ATV630D90Y6	500-690V 3PH AC, 100 Hp, 75 kW	Frame Size 5Y	Interp.

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SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

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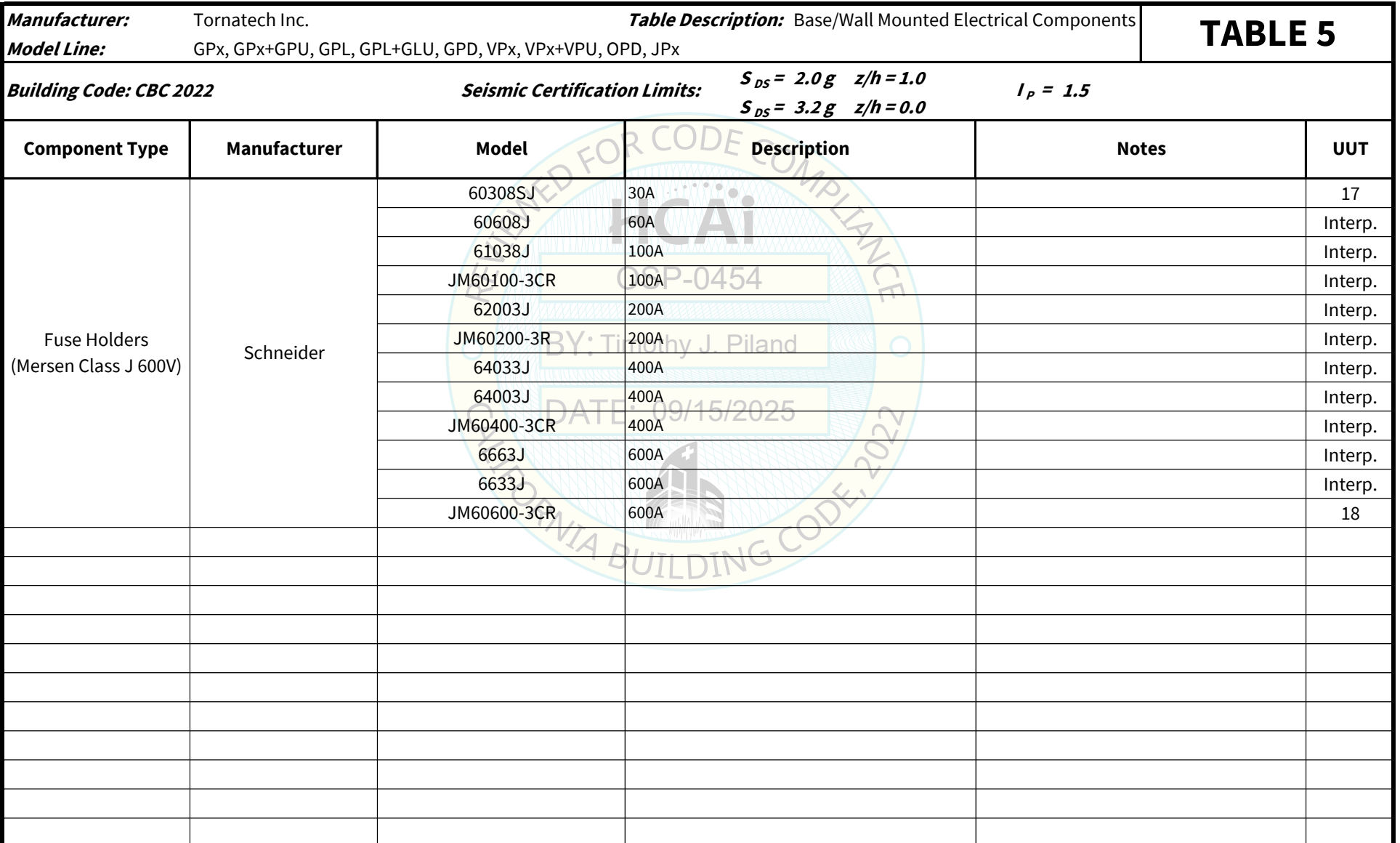


Manufacturer: Tornatech Inc.		Table Description: Base/Wall Mounted Electrical Components			TABLE 5		
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx							
Building Code: CBC 2022		Seismic Certification Limits: $S_{DS} = 2.0\text{ g}$ $z/h = 1.0$ $S_{DS} = 3.2\text{ g}$ $z/h = 0.0$			$I_p = 1.5$		
Component Type	Manufacturer	Model	Description	Notes	UUT		
Fuse (Mersen Class J Time Delay Fuse 600V)	Schneider	AJT15	15A		Interp.		
		AJT20	20A		Interp.		
		AJT25	25A		17		
		AJT30	30A		Interp.		
		AJT35	35A		Interp.		
		AJT40	40A		Interp.		
		AJT45	45A		Interp.		
		AJT50	50A		Interp.		
		AJT60	60A		Interp.		
		AJT70	70A		Interp.		
		AJT80	80A		Interp.		
		AJT90	90A		Interp.		
		AJT100	100A		Interp.		
		AJT110	110A		Interp.		
		AJT150	150A		Interp.		
		AJT175	175A		Interp.		
		AJT200	200A		Interp.		
		AJT250	250A		Interp.		
		AJT315	315A		Interp.		
		AJT350	350A		Interp.		
		AJT500	500A		Interp.		
			AJT600	600A		18	

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SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

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Manufacturer: Tornatech Inc.		Table Description: Wall Mounted Electrical Components			TABLE 6
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx					
Building Code: CBC 2022		Seismic Certification Limits: $S_{DS} = 2.0 g$ $z/h = 1.0$ $S_{DS} = 3.2 g$ $z/h = 0.0$			$I_p = 1.5$
Component Type	Manufacturer	Model	Description	Notes	UUT
Circuit Breakers	Lovato	P1MB1PD10	Miniature CB, 1 pole, D curve, 10A		10
		P1MB1PB16	Miniature CB, 1 pole, B curve, 16A		10
		P1MB1PC25	Miniature CB, 1 pole, C curve, 25A		10
	3L3	MCPNK0025M1F	25A M1 Frame CB		23
		MCPNK0030M1F	30A M1 Frame CB		Interp.
		MCPNK0040M1F	40A M1 Frame CB		Interp.
		MCPNK0050M1F	50A M1 Frame CB		Interp.
		MCPNK0060M1F	60A M1 Frame CB		Interp.
		MCPNK0070M1F	70A M1 Frame CB		Interp.
		MCPNK0100M1F	100A M1 Frame CB		Interp.
		MCPNK0150M1F	150A M1 Frame CB		Interp.
		MCPNK0150M2F	150A M2 Frame CB		Interp.
		MCPNK0225M2F	225A M2 Frame CB		Interp.
		MCPNK0250M3F	250A M3 Frame CB		Interp.
		MCPNK0400M3F	400A M3 Frame CB		Interp.
		MCPNK0600M4F	600A M4 Frame CB		Interp.
		MCPNK0800M5F	800A M5 Frame CB		Interp.
		MCPNK1000M6F	1000A M6 Frame CB		Interp.
		MCPNK1200M6F	1200A M6 Frame CB		22
		Schneider	Multi 9	15A, 1 pole, curve C	
	MG-24506		10A		8
	MG-17406		15A		8
	BJL36100		100A		24

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SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

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Manufacturer: Tornatech Inc.		Table Description: Wall Mounted Electrical Components			TABLE 6
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx					
Building Code: CBC 2022		Seismic Certification Limits: $S_{DS} = 2.0\text{ g}$ $z/h = 1.0$ $S_{DS} = 3.2\text{ g}$ $z/h = 0.0$			$I_p = 1.5$
Component Type	Manufacturer	Model	Description	Notes	UUT
Circuit Breakers	Schneider	H(J/L/R)L36050M72	50A H Frame CB		21
		H(J/L/R)L36100M73	100A H Frame CB		Interp.
		H(J/L/R)L36150M74	150A H Frame CB		Interp.
		J(J/L/R)L36250M75	250A J Frame CB		Interp.
		L(J/L/R)L36400M37X	400A L Frame CB		Interp.
		L(J/L/R)L36600M37X	600A L Frame CB		Interp.
		P(J/L/R)L36080M68	800A P Frame CB		Interp.
		P(J/L/R)L36100M69	1000A P Frame CB		Interp.
		P(J/L/R)L36120U31A	1200A P Frame CB		20
Switches	3L3	MMSNK00403PH-F	4A	Type F Manual Motor Starter	25
	Katko	KU325N	25A		5
		KU340N	40A		8
		VKA3100N	100A		6
	Lovato	GA025A	25A Disconnect Switch		10
		GA040A	40A Disconnect Switch		Interp.
		GA063A	63A Disconnect Switch		Interp.
		GA080A	80A Disconnect Switch		10
		GAX7200	Disconnect Switch Handle		10
Transformer	Transfab	DO 0025HC	25VA, 120/240-12/24V, 50/60Hz, 1PH		5
		ET5874	3600:1		7
		DL 8848FB	208/24V, 25VA, 50/60Hz.		7
		DL 9316SB	208/240V, 24V, 50VA, 50/60Hz.		7
		DL 9997SB	100VA, 208/240-24V, 50/60Hz		6

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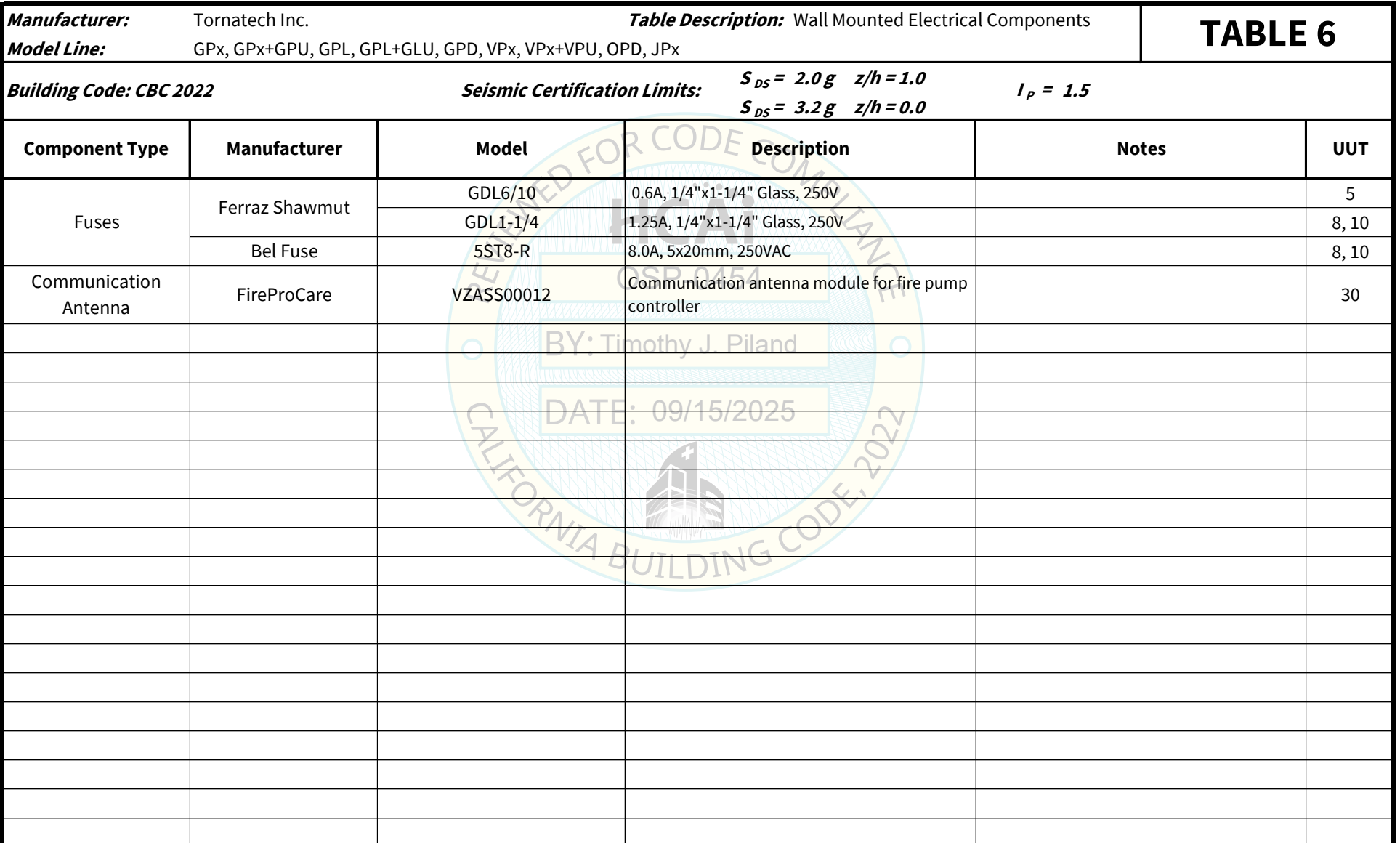


Manufacturer: Tornatech Inc.		Table Description: Wall Mounted Electrical Components			TABLE 6
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx					
Building Code: CBC 2022		Seismic Certification Limits: $S_{DS} = 2.0 g$ $z/h = 1.0$ $S_{DS} = 3.2 g$ $z/h = 0.0$ $I_p = 1.5$			
Component Type	Manufacturer	Model	Description	Notes	UUT
Solenoid Valve	Granzow	1ASC025	12VDC		8, 10
Alarm Bell	Newsmart	1NEW002	24VDC, Ø150mm, red		10
Pressure Transducer	Telemecanique	XMLP600PPF13Q3	600PSI, 0.5-4.5V, 1/4" NPT		8, 10
Contactor	Schneider	LC1D65A	65A		24
Contact Block	Schneider	GV-AE11	1NO/1NC		5
	Siemens	3SB3400-0B	1 NO Contact, 10A		8, 10
HMI	Tornatech	2VIZ001	Programmable Logic Controller		7, 8
		VZASS0001	Programmable Logic Controller		10
		VZASS0002	Programmable Logic Controller	Same as VZASS0001	Interp.
		VZASS0004	Programmable Logic Controller		24, 25
Battery Charger	Lovato	BCG1212	12V		10
		BCG1024	24V		8
	3L3	BCGNK150W12V	12V		30
		BCGNK300W24V	24V	Same as BCGNK150W12V	Interp.
I/O Board	Tornatech	2VIZ002/2VIZ102	I/O Board Electric		7
		2VIZ003/2VIZ103	I/O Board Transfer Switch		7
		2VIZ004/2VIZ104	I/O Board Diesel		8, 10
		2VIZ005/2VIZ105	I/O Board Expander		8, 10
EMC Filter	EPCOS/TDK	B84111F0000B110	1PH, 250V, 50/60Hz., 10A		8, 10
Heater	DBK	HP06-2-15-240	160W, 110-240V		8, 10
Thermostat	DBK	FGT100	0-60 °C, NC		8, 10
Humidistat	DBK	RFHSS-112	24V-230V, 50/60Hz., 40-90% rH		8, 10
Surge Arrester	Square D	SDSA 3650	40kA Surge Current Rating per Phase		7

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UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer: Tornatech Inc.

Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx

UUT	Unit Description (Mounting)	Report Number (UUT#)	Testing Lab	Year Tested	ISO 17025 Accredited?	S _{DS}	z/h	I _p
1	GPR + GPU-600/400/3/60 (Base/wall mounted - rigid)	13729 Rev.2 (UUT1)	Environmental Testing Lab (ETL)	2015	Yes	2.0 3.2	1.0 0.0	1.5
2	GPS-600/300/3/60 (Base/wall mounted - rigid)	13729 Rev.2 (UUT2)	Environmental Testing Lab (ETL)	2015	Yes	2.0 3.2	1.0 0.0	1.5
3	GPW-600/400/3/60 (Base/wall mounted - rigid)	13729 Rev.2 (UUT3)	Environmental Testing Lab (ETL)	2015	Yes	2.0 3.2	1.0 0.0	1.5
4	GPS-600/60/3/60 (Base/wall mounted - rigid)	13729 Rev.2 (UUT4)	Environmental Testing Lab (ETL)	2015	Yes	2.0 3.2	1.0 0.0	1.5
5	JP1-120/0.25/1/60 (Wall mounted - rigid)	13729 Rev.2 (UUT5)	Environmental Testing Lab (ETL)	2015	Yes	2.0 3.2	1.0 0.0	1.5
6	JP3-220/20/3/60 (Wall mounted - rigid)	13729 Rev.2 (UUT6)	Environmental Testing Lab (ETL)	2015	Yes	2.0 3.2	1.0 0.0	1.5
7	GPL+GLU-208/30/3/60 (Wall mounted - rigid)	13729 Rev.2 (UUT7)	Environmental Testing Lab (ETL)	2015	Yes	2.0 3.2	1.0 0.0	1.5
8	GPD-24-220 (Wall mounted - rigid)	13729 Rev.2 (UUT8)	Environmental Testing Lab (ETL)	2015	Yes	2.0 3.2	1.0 0.0	1.5
9	GPR + GPU-800/400/3/60 (Base/wall mounted - rigid)	JID 15-01258 (UUT9)	Clark Testing	2015	Yes	2.0 3.2	1.0 0.0	1.5
10	GPD-12-220 (Wall mounted - rigid)	JID 15-01258 (UUT10)	Clark Testing	2015	Yes	2.0 3.2	1.0 0.0	1.5
11	GPA+GPU-220/60/3/60 (Base/wall mounted - rigid)	14599 Rev.1 (UUT11)	Environmental Testing Lab (ETL)	2015	Yes	2.0 3.2	1.0 0.0	1.5

Notes:

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer: Tornatech Inc.

Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx

UUT	Unit Description (Mounting)	Report Number (UUT#)	Testing Lab	Year Tested	ISO 17025 Accredited?	S _{DS}	z/h	I _p
12	GPA+GPU-600/400/3/60 (Base/wall mounted - rigid)	14599 Rev.1 (UUT12)	Environmental Testing Lab (ETL)	2017	Yes	2.0 3.2	1.0 0.0	1.5
13	GPS-480/5/3/60 (Base/wall mounted - rigid)	2100139-TR-001 (UUT1)	Environmental Testing Lab (ETL)	2021	Yes	2.0 3.2	1.0 0.0	1.5
14	GPS-480/500/3/60 (Base/wall mounted - rigid)	2100139-TR-001 (UUT2)	Environmental Testing Lab (ETL)	2021	Yes	2.0 3.2	1.0 0.0	1.5
15	GPS-480/5/3/60 (Base/wall mounted - rigid)	2100139-TR-001 (UUT3)	Environmental Testing Lab (ETL)	2021	Yes	2.0 3.2	1.0 0.0	1.5
16	GPS-480/250/3/60 (Base/wall mounted - rigid)	2100139-TR-001 (UUT4)	Environmental Testing Lab (ETL)	2021	Yes	2.0 3.2	1.0 0.0	1.5
17	VPA+VPU-200/5/3/60 (Base/wall mounted - rigid)	2101253-TR-001 (UUT17)	Environmental Testing Lab (ETL)	2022	Yes	2.0 3.2	1.0 0.0	1.5
18	VPS-480/450/3/60 (Base/wall mounted - rigid)	2101253-TR-001 (UUT18)	Environmental Testing Lab (ETL)	2022	Yes	2.0 3.2	1.0 0.0	1.5
19	GPA+GPU-230/400/3/60 (Base/wall mounted - rigid)	2101253-TR-001 (UUT19)	Environmental Testing Lab (ETL)	2022	Yes	2.0 3.2	1.0 0.0	1.5
20	OPD-480/350/3/60 (Schneider CB) (Wall mounted - rigid)	2101253-TR-001 (UUT20)	Environmental Testing Lab (ETL)	2022	Yes	2.0 3.2	1.0 0.0	1.5
21	OPD-480/5/3/60 (Schneider CB) (Wall mounted - rigid)	2101253-TR-001 (UUT21)	Environmental Testing Lab (ETL)	2022	Yes	2.0 3.2	1.0 0.0	1.5
22	OPD-480/350/3/60 (3L3 CB) (Wall mounted - rigid)	2101253-TR-001 (UUT22)	Environmental Testing Lab (ETL)	2022	Yes	2.0 3.2	1.0 0.0	1.5

Notes:

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer: Tornatech Inc.								
Model Line: GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx								
UUT	Unit Description (Mounting)	Report Number (UUT#)	Testing Lab	Year Tested	ISO 17025 Accredited?	S _{DS}	z/h	I _p
23	OPD-480/5/3/60 (3L3 CB) (Wall mounted - rigid)	2101253-TR-001 (UUT23)	Environmental Testing Lab (ETL)	2022	Yes	2.0 3.2	1.0 0.0	1.5
24	JP3-480/40/3/60 (Wall mounted - rigid)	2101253-TR-001 (UUT24)	Environmental Testing Lab (ETL)	2022	Yes	2.0 3.2	1.0 0.0	1.5
25	JP3-480/2/3/60 (Wall mounted - rigid)	2101253-TR-001 (UUT25)	Environmental Testing Lab (ETL)	2022	Yes	2.0 3.2	1.0 0.0	1.5
26	GPS-200/30/3/60 (Base/wall mounted - rigid)	17770, Rev. 0 (UUT26)	Environmental Testing Lab (ETL)	2025	Yes	2.0 3.2	1.0 0.0	1.5
27	GPS-230/350/3/60 (Base/wall mounted - rigid)	17770, Rev. 0 (UUT27)	Environmental Testing Lab (ETL)	2025	Yes	2.0 3.2	1.0 0.0	1.5
28	GPS-230/5/3/60 (Base/wall mounted - rigid)	17770, Rev. 0 (UUT28)	Environmental Testing Lab (ETL)	2025	Yes	2.0 3.2	1.0 0.0	1.5
29	GPS-230/400/3/60 (Base/wall mounted - rigid)	17770, Rev. 0 (UUT29)	Environmental Testing Lab (ETL)	2025	Yes	2.0 3.2	1.0 0.0	1.5
30	GPD/GFD-12-120 (Wall mounted - rigid)	17770, Rev. 0 (UUT30)	Environmental Testing Lab (ETL)	2025	Yes	2.0 3.2	1.0 0.0	1.5
Notes:								

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 1
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPR + GPU-600/400/3/60	
Serial Number:	N/A	
		Test Report: 13729 Rev.2 (UUT1)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,210	18.0	60.0	68.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 14 ga. Carbon Steel Enclosure (2BOX103D/2BOX203D)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Alarm Bell	Newsmart	1NEW001	
Contactor	Siemens	3RT105, 3RT106, 3RT107, 3RH1921-1FA22	
Control Relay	Siemens	3RH1122-1AB00	
Fan	Orion	0A172SAP-11-1TB	
HMI	Tornatech	2VIZ001	
I/O Board	Tornatech	2VIZ002/2VIZ102, 2VIZ003/2VIZ103	
Pressure Transducer	Telemecanique	XMLP600PPF13Q3	
Resistor	Huntington Vishay	ALSR5F-5-1.0-1%	
Shunt Trip	Siemens	S17JLD6	
Solenoid Valve	Granzow	1ASC024	
Surge Arrester	Square D	SDSA 3650	
Switches	Saia-Burgess	XGG6-88-P27Z1	
	Siemens	MCS 600A, A01JLD64	
Switch Contact Block	Siemens	3SB3400-0B	
Transformer	Rex Mfg.	RS400J	
	Transfab	EXS114340, ET5841, DL8849QB, DL8882QB	

UUT1 was Base and Wall mounted - rigid.
Base: Four (4) 7/16" Grade 5 bolts and washers.
Wall: Two (2) 3/8" Grade 5 bolts and washers,
Wall Bracket: Two (2) M10-1.5mm Grade 8.8 bolts and washers.
Unit maintained structural integrity and remained functional per
manufacturer requirement after shake table test. Contents were
included in testing per operating conditions.

UUT1 was Base and Wall mounted - rigid.
 Base: Four (4) 7/16" Grade 5 bolts and washers.
 Wall: Two (2) 3/8" Grade 5 bolts and washers,
 Wall Bracket: Two (2) M10-1.5mm Grade 8.8 bolts and washers.
 Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 2
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPS-600/300/3/60	
Serial Number:	N/A	
		Test Report: 13729 Rev.2 (UUT2)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
453	18.0	36.0	68.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:	
Painted 14 ga. Carbon Steel Enclosure (2BOX103B/2BOX203B)				
Options/Subcomponent Summary:				
Description	Mfr.	Part Number		
Alarm Bell	Newsmart	1NEW001		
Circuit Breaker	Siemens	MCP 400A		
Contactor	Siemens	3RT106		
Control Relay	Siemens	3RH1122-1AB00)		
Heater	DBK	HP06-2-15-240		
HMI	Tornatech	2VIZ001		
Humidistat	DBK	RFHSS-112		
I/O Board	Tornatech	2VIZ002/2VIZ102, 2VIZ005/2VIZ105		
Pressure Transducer	Telemecanique	XMLP600PPF13Q3		
Resistor	Huntington Vishay	ALSR5F-5-1.0-1%		
Shunt Trip	Siemens	3VL9400-1SC01		
Soft-Started	Siemens	3RW4075		
Solenoid Valve	Granzow	1ASC024		
Surge Arrester	Square D	SDSA 3650		
Switches	Siemens	MCS 400A		
Switch Contact Block	Siemens	3SB3400-0B		
Thermostat	DBK	FGT100		
Transformer	Marcus Transformer	MTC250-39	UUT2 was Base and Wall mounted - rigid. Base: Four (4) 7/16" Grade 5 bolts and washers. Wall: Two (2) 3/8" Grade 5 bolts and washers. Wall Bracket: Two (2) M10-1.5mm Grade 8.8 bolts and washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.	
	Transfab	EXS114340, ET5841		

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 3
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPW-600/400/3/60	
Serial Number:	N/A	
		Test Report: 13729 Rev.2 (UUT3)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
510	18.0	36.0	68.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 14 ga. Carbon Steel Enclosure (2BOX103B/2BOX203B)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Alarm Bell	Newsmart	1NEW001	
Circuit Breaker	Siemens	MCP 400A	
Contactor	Siemens	3RT105, 3RT106, 3RH1921-1FC22	
Control Relay	Siemens	3RH1122-1AB00	
HMI	Tornatech	2VIZ001	
I/O Board	Tornatech	2VIZ002/2VIZ102	
Pressure Transducer	Telemecanique	XMLP600PPF13Q3	
Resistor	Huntington Vishay	ALSR5F-5-1.0-1%	
	I-Gard Corp.	TR-600-400	
Shunt Trip	Siemens	S17JLD6	
Solenoid Valve	Granzow	1ASC024	
Surge Arrester	Square D	SDSA 3650	
Switches	Saia-Burgess	XGG6-88-P27Z1	
	Siemens	MCS 600A	
Switch Contact Block	Siemens	(3SB3400-0B	
Transformer	Transfab	ET5841	
			UUT3 was Base and Wall mounted - rigid. Base: Four (4) 7/16" Grade 5 bolts and washers Wall: Two (2) 3/8" Grade 5 bolts and washers, Wall Bracket: Two (2) M10-1.5mm Grade 8.8 bolts and washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 4
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPS-600/60/3/60	
Serial Number:	N/A	
		Test Report: 13729 Rev.2 (UUT4)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
189	12.0	26.0	48.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX101B/2BOX201B)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Alarm Bell	Newsmart	1NEW001	
Circuit Breaker	Siemens	MCP 100A, MCP 600A	
Contactors	Siemens	3RT104, 3RH1921-1DA11	
Control Relay	Siemens	3RH1122-1AB00	
HMI	Tornatech	2VIZ001	
I/O Board	Tornatech	2VIZ002/2VIZ102	
Pressure Transducer	Telemechanique	XMLP600PPF13Q3	
Resistor	Huntington Vishay	ALSR5F-5-1.0-1%	
Soft-Started	Siemens	3RW4427	
Solenoid Valve	Granzow	1ASC024	
Surge Arrester	Square D	SDSA 3650	
Switches	Siemens	MCS100A, 3VL9400-2AB0	
Switch Contact Block	Siemens	3SB3400-0B	
Transformer	Transfab	ET5874, DL8882QB	
	Marcus Transformer	MTC250-39	
Trip Module	Tornatech	2PLA048	
			UUT4 was Base and Wall mounted - rigid. Base: Four (4) 7/16" Grade 5 bolts and washers Wall: Two (2) 3/8" Grade 5 bolts and washers, Wall Bracket: Two (2) M10-1.5mm Grade 8.8 bolts and washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 5
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	JP1-120/0.25/1/60	
Serial Number:	N/A	
		Test Report: 13729 Rev.2 (UUT5)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
20	6.0	10.0	12.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX13A)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Contact Block	Schneider	GV-AE11	
Fuses	Ferraz Shawmut	GDL6/10	
Switches	Katko	KU325N	
Transformers	Transfab	DO 0025HC	
UUT5 wall mounted - rigid using four (4) 1/4" Grade 8 bolts and washers			

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 6
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	JP3-220/20/3/60	
Serial Number:	N/A	
		Test Report: 13729 Rev.2 (UUT6)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
38	7.0	16.0	16.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX13C)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Switches	Katko	VKA3100N	
Transformers	Transfab	DL 9997SB	
UUT6 wall mounted - rigid using four (4) 1/4" Grade 8 bolts and washers			
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.			

2100139-CR-001-R3



Test Report: 13729 Rev.2 (UUT7)

N/

0.85 |

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

2100139-CR-001-R3



UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 9
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPR + GPU-800/400/3/60	
Serial Number:	N/A	
		Test Report: JID 15-01258 (UUT9)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,003	18.0	72.0	68.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 14 ga. Stainless Steel Enclosure (2BOX103G/2BOX203G)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Alarm Bell	Newsmart	1NEW001	
Contactor	Siemens	3RT106, 3RT107, 3RH1921-1FA22	
Control Relay	Siemens	3RH1122-1AB00	
Fan	Orion	0A172SAP-11-1TB	
Control Relay	Siemens	3RH1122-1AB00	
HMI	Tornatech	VZASS0001	
I/O Board	Tornatech	2VIZ002/2VIZ102, 2VIZ003/2VIZ103, 2VIZ005/2VIZ105	
Pressure Transducer	Telemecanique	XMLP600PPF13Q3	
Resistor	Huntington Vishay	ALSR5F-5-1.0-1%	
	I-Gard Corp.	TR-600-75	
Shunt Trip	Siemens	S17JLD6	
Solenoid Valve	Granzow	1ASC024	
Switches	Saia-Burgess	XGG6-88-P27Z1	
	Siemens	MCS 600A, A01JLD64	
Switch Contact Block	Siemens	3SB3400-0B	
Transformer	Rex Mfg.	RS75J	
	Transfab	EXS114340, ET5841, DL 8849QB, DL 8882QB	

UUT 9 was Base and Wall mounted - rigid

Base: Four (4) 7/16" Grade 5 bolts and lock washers

Wall: Two (2) 3/8" Grade 5 bolts and lock washers

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UUT 9 was Base and Wall mounted - rigid
 Base: Four (4) 7/16" Grade 5 bolts and lock washers
 Wall: Two (2) 3/8" Grade 5 bolts and lock washers
 Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

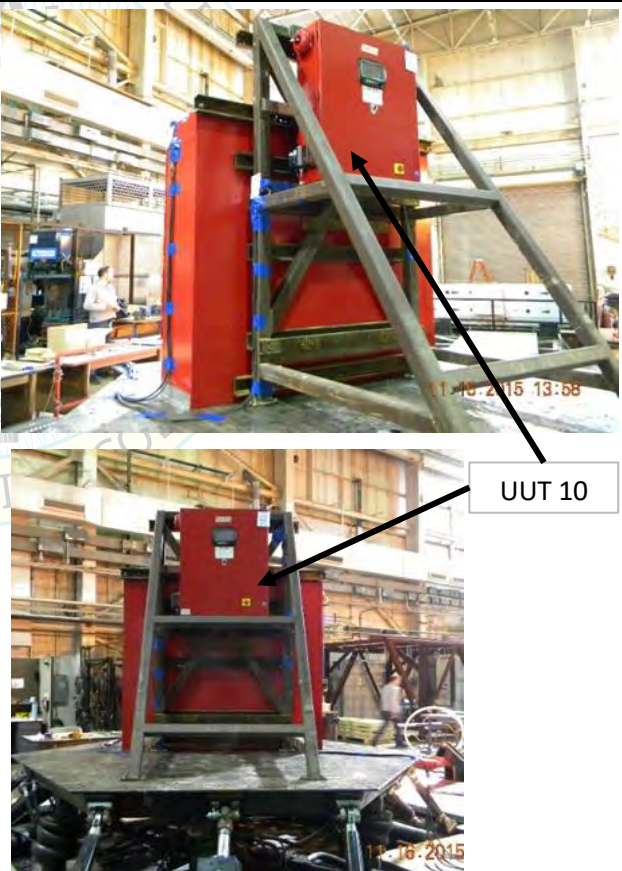
2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 10
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPD-12-220	
Serial Number:	N/A	
		Test Report: JID 15-01258 (UUT10)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
132	8.0	30.0	40.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:	
Painted 16 ga. Stainless Steel Enclosure (2BOX11D)				
Options/Subcomponent Summary:				
Description	Mfr.	Part Number		
Alarm Bell	Newsmart	1NEW002		
Battery Charger	Lovato	BCG1212		
Circuit Breaker	Schneider	P1MB1PD10, P1MB1PB16, P1MB1PC25		
Contact Block	Siemens	3SB3400-0B		
EMC Filter	EPCOS/TDK	B84111F0000B110		
Fuses	Bel Fuse	5ST8-R		
	Ferraz Shawmut	GDL1-1/4		
Heater	DBK	HP06-2-15-240		
HMI	Tornatech	VZASS0001		
Humidistat	DBK	RFHSS-112		
I/O Board	Tornatech	2VIZ004/2VIZ104, 2VIZ005/2VIZ105		
Pressure Transducer	Telemecanique	XMLP600PPF13Q3		
Solenoid Valve	Granzow	1ASC025		
Switches	Katko	GA025A, GA080A, GAX7200		
Thermostat	DBK	FGT100		

UUT10 wall mounted - rigid using four (4) 3/8-14" Grade 5 bolts and lock washers

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

2100139-CR-001-R3



2100139-CR-001-R3



2100139-CR-001-R3



The image shows three red electrical cabinets, labeled VUT 3, VUT 1, and VUT 4, arranged in a row. A yellow dashed circle highlights the central cabinet, VUT 1. Each cabinet has a digital display and various control buttons. The cabinets are mounted on a metal frame.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 14
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPS-480/500/3/60	
Serial Number:	N/A	
		Test Report: 2100139-TR-001 (UUT2)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
769	18.0	60.0	68.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX103D/2BOX203D)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Alarm Bell	Newsmart	1NEW001	
Circuit Breaker	Schneider	PJL36080M68	
Contactor	Schneider	LC1F630	
Control Relay	Siemens	3RH1122-1AB00	
Heater	DBK	HP06-2-15-240	
HMI	Tornatech	VZASS0001	
Humidistat	DBK	RFHSS-112	
I/O Board	Tornatech	2VIZ002/2VIZ102, 2VIZ005/2VIZ105	
Pressure Transducer	Telemecanique	XMLP600PPF13Q3	
Resistor	Huntington Vishay	ALSR5F-5-1.0-1%	
Soft-Starter	Schneider	ATS48C66Y/ATS480C66Y	
Solenoid Valve	Granzow	1ASC024	
Surge Arrester	Citel	DS44US-480D	
Switches	Schneider	PJL36000S80	
Switch Contact Block	Siemens	3SB3400-0B	
Thermostat	DBK	FGT100	
Transformer	Marcus Transformer	MTC250-39	
	Transfab	EXS114340, ET5841	

UUT14 was Base and Wall mounted - rigid.

Base: Four (4) 7/16" Grade 5 bolts and washers

Wall: Two (2) 3/8" Grade 5 bolts and washers

Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UUT14 was Base and Wall mounted - rigid.
 Base: Four (4) 7/16" Grade 5 bolts and washers
 Wall: Two (2) 3/8" Grade 5 bolts and washers
 Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

2100139-CR-001-R3



UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 16
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPS-480/250/3/60	
Serial Number:	N/A	
		Test Report: 2100139-TR-001 (UUT4)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
409	18.0	36.0	68.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX103B/2BOX203B)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Alarm Bell	Newsmart	1NEW001	
Circuit Breaker	Schneider	LJL36400M37X	
Contactor	Schneider	LC1F400	
Control Relay	Siemens	3RH1122-1AB00	
Heater	DBK	HP06-2-15-240	
HMI	Tornatech	VZASS0001	
Humidistat	DBK	RFHSS-112	
I/O Board	Tornatech	2VIZ002/2VIZ102, 2VIZ005/2VIZ105	
Pressure Transducer	Telemecanique	XMLP600PPF13Q3	
Resistor	Huntington Vishay	ALSR5F-5-1.0-1%	
Soft-Starter	Lovato	ADXL 0320 600	
Solenoid Valve	Granzow	1ASC024	
Surge Arrester	Citel	DS44US-480D	
Switches	Schneider	LGL36000S40X	
Switch Contact Block	Siemens	3SB3400-0B	
Thermostat	DBK	FGT100	
Transformer	Marcus Transformer	MTC250-39	
	Transfab	EXS114340, ET5841	

UUT16 was Base and Wall mounted - rigid.
Base: Four (4) 7/16" Grade 5 bolts and washers
Wall: Two (2) 3/8" Grade 5 bolts and washers
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UUT16 was Base and Wall mounted - rigid.
Base: Four (4) 7/16" Grade 5 bolts and washers
Wall: Two (2) 3/8" Grade 5 bolts and washers
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

2100139-CR-001-R3

A red industrial control cabinet with a digital display and various labels. The cabinet is mounted on a wooden floor against a wall. The display shows '0.00'. Labels include '375 LBS', 'VUT 17', 'VIR. 100V 50A', and 'ELECTRIC JARVIS'. There are also warning labels and a 'CAUTION' label. The cabinet has a white vent on the left side and a red handle on the right side.

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A photograph of three red industrial cabinets, likely for power distribution or control. The cabinets are arranged side-by-side. The leftmost cabinet has two large white ventilation grilles at the bottom. The middle cabinet has one large white ventilation grille at the bottom. The rightmost cabinet has a digital display and control panel near the top, with a label that reads "UNIT 18". The cabinets are mounted on a wooden pallet.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 19
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPA+GPU-230/400/3/60	
Serial Number:	WZ1244958	
		Test Report: 2101253-TR-001 (UUT19)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,130	20.0	80.0	75.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:	Test Mounting Details:
Painted 16 ga. Stainless Steel Enclosure (ENENC0004)	

Options/Subcomponent Summary:		
Description	Mfr.	Part Number
Circuit Breaker	3L3	MCPNK1200M6F
	Schneider	PJL36120M70
Contactor	3L3	CONNK1000
HMI	Tornatech	VZASS0003
I/O Board	Tornatech	2VIZ002/2VIZ102, 2VIZ003/2VIZ103
Switches	3L3	MCSNK1200M6F
	Schneider	PJL36000S12
	Socomec	97233120

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 20
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	OPD-480/350/3/60 (Schneider CB)	
Serial Number:	WZ1244955	
		Test Report: 2101253-TR-001 (UUT20)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
120	12.5	18.0	42.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (ENENC0015)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Circuit Breakers	Schneider	P(J/L/R)L36120U31A	

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 21
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	OPD-480/5/3/60 (Schneider CB)	
Serial Number:	WZ1244953	
		Test Report: 2101253-TR-001 (UUT21)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
38	11.0	12.0	22.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX16A)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Circuit Breakers	Schneider	H(J/L/R)L36050M72	

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 22
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	OPD-480/350/3/60 (3L3 CB)	
Serial Number:	WZ1244956	
		Test Report: 2101253-TR-001 (UUT22)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
129	12.5	18.0	42.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (ENENC0015)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Circuit Breakers	3L3	MCPNK1200M6F	

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 23
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	OPD-480/5/3/60 (3L3 CB)	
Serial Number:	WZ1244954	
		Test Report: 2101253-TR-001 (UUT23)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
36	11.0	12.0	22.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX16A)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Circuit Breakers	3L3	MCPNK0025M1F	

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 24
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	JP3-480/40/3/60	
Serial Number:	FZ1244957	
		Test Report: 2101253-TR-001 (UUT24)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
56	8.0	20.0	24.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (ENENC0025)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Circuit Breakers	Schneider	BJL36100	
Contactors	Schneider	LC1D65A	
HMI	Tornatech	VZASS0004	
</			

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 25
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	JP3-480/2/3/60	
Serial Number:	WZ1244959	
		Test Report: 2101253-TR-001 (UUT25)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
17	6.0	9.5	12.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX213A)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
HMI	Tornatech	VZASS0004	
Switches	3L3	MMSNK00403PH-F	
UUT25 was wall - mounted rigid using four (4) 1/4" Grade 5 bolts and washers.			Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 26
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPS-200/30/3/60	
Serial Number:	N/A	
		Test Report: 17770, Rev. 0 (UUT26)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
183	12.0	26.0	48.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX301B)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	UUT26 was Base and Wall mounted - rigid. Base: Four (4) 3/8" Grade 5 bolts and washers. Wall: Two (2) 3/8" Grade 5 bolts and washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.
Contactor	Schneider	LC1G115	
Soft-Starter	Schneider	ATS480C11Y	

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 27
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPS-230/350/3/60	
Serial Number:	N/A	
		Test Report: 17770, Rev. 0 (UUT27)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,338	20.0	80.0	75.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:	Test Mounting Details:
Painted 14 ga. Carbon Steel Enclosure (ENENC0003+ENENC0003)	

Options/Subcomponent Summary:		
Description	Mfr.	Part Number
Circuit Breaker	Schneider	PJL36100M69
Contactor	Schneider	LC1G800
Soft-Starter	Schneider	ATS480M10Y
Switches	Schneider	PJL36000S10

UNIT UNDER TEST (UUT) SUMMARY SHEET

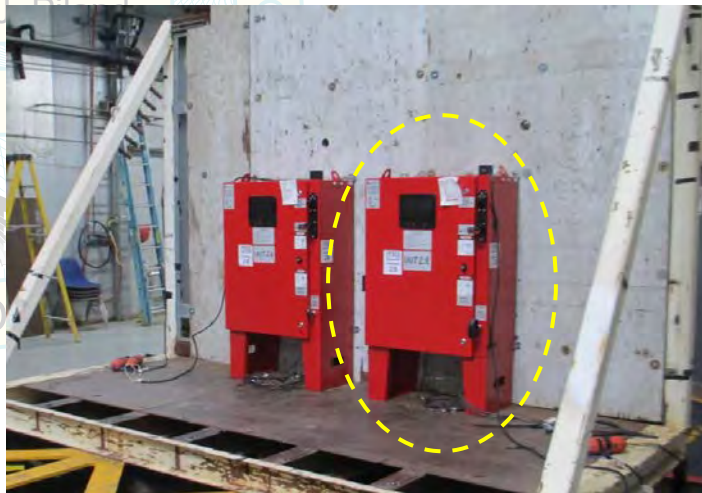
2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 28
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPS-230/5/3/60	
Serial Number:	N/A	
		Test Report: 17770, Rev. 0 (UUT28)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
164	12.0	26.0	48.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX301B)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	UUT28 was Base and Wall mounted - rigid. Base: Four (4) 3/8" Grade 5 bolts and washers. Wall: Two (2) 3/8" Grade 5 bolts and washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.
Contactors	3L3	CONNK0040	
Soft-Starter	3L3	SOFNK0015-6D	

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 29
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPS-230/400/3/60	
Serial Number:	N/A	
		Test Report: 17770, Rev. 0 (UUT29)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1,176	20.0	68.0	75.0	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 14 ga. Carbon Steel Enclosure (ENENC0003+ENENC0006)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Circuit Breaker	3L3	MCPNK1200M6F	
Contactor	3L3	CONNK1000	
Soft-Starter	3L3	SOFNK1000-6D	
Switches	3L3	MCSNK1200M6F	

UNIT UNDER TEST (UUT) SUMMARY SHEET

2100139-CR-001-R3



Manufacturer:	Tornatech Inc.	UUT 30
Model Line:	GPx, GPx+GPU, GPL, GPL+GLU, GPD, VPx, VPx+VPU, OPD, JPx	
Model Number:	GPD/GFD-12-120	
Serial Number:	N/A	
		Test Report: 17770, Rev. 0 (UUT30)

UUT Properties						
Weight (lbs.)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
76	7.9	23.6	27.6	N/A	N/A	N/A

UUT Highest Passed Seismic Run Information									
Building Code	Test Criteria	S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CBC 2022	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85	
		3.2	0.0						

Product Construction Summary:			Test Mounting Details:
Painted 16 ga. Carbon Steel Enclosure (2BOX311A)			
Options/Subcomponent Summary:			
Description	Mfr.	Part Number	
Battery Charger	3L3	BCGNK150W12V	
Communication Antenna	FireProCare	VZASS0012	