



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0016 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Square D by Schneider Electric North America

Manufacturer's Technical Representative: Jeffrey A. Gatscher, Fellow Engineer

Mailing Address: 330 Weakley Lane, Smyrna, TN 37167

Telephone: 615-459-8466

Email: jeff.gatscher@schneider-electric.com

Product Information

Product Name: Square D NEMA Power Panelboards and Square D NEMA Lighting Panelboards

Product Type: NEMA Panelboards – Low Voltage (600 Volts and Below)

Product Model Number: (see Certified Product Listing tables)
NEMA Power Panelboards Type HC*, CP and QMB and Lighting Panelboards Type NF / NQ

(List all unique product identification numbers and/or part numbers)

General Description: Panelboards are integrated, low voltage, power and control systems and may include Powerlink, PowerLogic, and other interior components (see Certified Major Sub-Component tables). Sheet metal framed enclosures come in NEMA Type 1, 1A, 2, 3R, 4, 4X, 5 and Type 12 ratings. Seismic enhancements made to the UUTs & modifications required to address anomalies observed during the tests shall be incorporated into the production units.

Mounting Description: Rigid wall mounted

Applicant Information

Applicant Company Name: Square D by Schneider Electric

Contact Person: Ralph Sanders

Mailing Address: 1010 Airpark Center Drive, Nashville, TN 37217

Telephone: 615-844-8426

Email: rd.sanders@schneider-electric.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

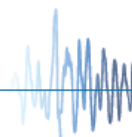
Signature of Applicant:

Date: 07/26/2016

Title: Marketing Manager

Company Name: Schneider Electric

"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"





**OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION**

California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)

Company Name: Forell/Elsesser Engineers, Inc.
Name: Marco Scanu, SE California License Number: S4454
Mailing Address: 160 Pine St., 6th Flr., San Francisco, CA 94111
Telephone: (415) 837-0700 Email: m.scanu@forell.com

Supports and Attachments Preapproval

- ☐ Supports and attachments are preapproved under OPM-
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
☒ Supports and attachments are not preapproved

Certification Method

- ☒ Testing in accordance with: ☒ ICC-ES AC156
☐ Other (Please Specify): _____

Testing Laboratory 1

Company Name: NTS Huntsville (formerly Wyle Laboratories)
Contact Name: Don Smith – Manager, Commercial Test Services
Mailing Address: 7800 Highway 20 West, Huntsville, AL 35806
Telephone: 256-716-4221 Email: don.smith@wyle.com

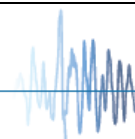
Testing Laboratory 2

Company Name: Applied Technical Services, Inc
Contact Name: David N. Common – Senior Test Engineer, Dynamics Testing
Mailing Address: 1049 Triad Court, Marietta, GA 30062
Telephone: 678-444-2905 Email: dcommon@atslab.com

Testing Laboratory 3

Company Name: QualTech NP (formerly Trentec, Inc.)
Contact Name: Garry V. Chapman
Mailing Address: 4600 East Tech Drive, Cincinnati, OH 45245
Telephone: 513-528-7900 Email: _____

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Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: ☒ Yes ☐ No

Design Basis of Equipment or Components (F_p/W_p) = See Certified Product Listing tables

S_{DS} (Design spectral response acceleration at short period, g) = See Certified Product Listing tables

a_p (In-structure equipment or component amplification factor) = 2.5

R_p (Equipment or component response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = See Certified Product Listing tables

Equipment or Component Natural Frequencies (Hz) = See UUT Summary Sheets

Overall dimensions and weight (or range thereof) = See Certified Product Listing tables

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: ☐ Yes ☒ No

Design Basis of Equipment or Components (V/W) = _____

S_{DS} (Design spectral response acceleration at short period, g) = _____

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = _____

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = _____

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = _____

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2015: ☐ Yes ☒ No

List of Attachments Supporting Special Seismic Certification

☒ Test Report(s) ☐ Drawings ☒ Calculations ☒ Manufacturer's Catalog

☒ Other(s) (Please Specify): Certified Products Table, Certified Subcomponents Table, UUT Summary Sheets

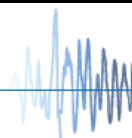
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature:  Date: 12/02/2016

Print Name: M. R. Karim Title: SHFR

Special Seismic Certification Valid Up to : S_{DS} (g) = See Above z/h = See Above

Condition of Approval (if applicable): _____





Certified Product Listing Panelboards

Manufacturer: Square D by Schneider Electric

Product Category: NEMA Panelboards – Low Voltage (600 Volts and Below)

Product Line Models: Square D NEMA Power Panelboards

Product Options: Panelboards are integrated, low voltage, power and control systems and may include Powerlink, PowerLogic, and other interior components (see Certified Major Sub-Component tables). Sheet metal framed enclosures come in NEMA Type 1, 1A, 2, 3R, 4, 4X, 5 and Type 12 ratings.

Product Mounting: Rigid Wall Mount

Square D NEMA Power Panelboards ⁶																
Panelboard Type	Max Voltage Rating	Ampacity Rating (A)	Width ¹ (in.)	Depth (in.)	Max Height ² (in.)	Weight (lbs.)	NEMA Enclosure Type	Enclosure Material Type ³	Test Status	Certification Level ⁴						
										z/h = 0		z/h = 1				
										S _{DS} (g)	F _p /W _p	S _{DS} (g)	F _p /W _p			
CP	48 V DC 600 V AC	15–1200	26	9.5	86	388	1	CS	Wyle 70891R13 UUT-3	2.04	0.92	2.04	1.53			
						625	1, 1A, 2	CS	Interpolated	2.04	0.92	2.04	1.53			
				10	92	645	3R / 5 / 12	CS	Interpolated	2.04	0.92	2.04	1.53			
						625	1, 1A, 2	CS	Interpolated	2.04	0.92	2.04	1.53			
			28	13.5	86	725	3R / 5 / 12	CS	Interpolated	2.04	0.92	2.04	1.53			
							3R / 4 / 4X / 5 / 12	SS	Interpolated	2.04	0.92	2.04	1.53			
							8	86	650	1, 1A, 2	CS	Interpolated	2.04	0.92	2.04	1.53
							9.5	86	690	1, 1A, 2	CS	Interpolated	2.04	0.92	2.04	1.53
			32	11	86	710	3R / 5 / 12	CS	Interpolated	2.04	0.92	2.04	1.53			
							3R / 4 / 4X / 5 / 12	SS	Interpolated	2.04	0.92	2.04	1.53			
							86	690	1, 1A, 2	CS	Interpolated	2.04	0.92	2.04	1.53	
							91	710	3R / 5 / 12	CS	Interpolated	2.04	0.92	2.04	1.53	
			44	9.5	86	614	1	CS	Wyle 70891R13 UUT-2	3.30	1.49	3.30	2.48			
						848	1, 1A, 2	CS	Interpolated	2.04	0.92	2.04	1.53			
						848	1, 1A, 2	CS	Interpolated	2.04	0.92	2.04	1.53			
						816	3R / 4 / 4X / 5 / 12	SS	NTS PR047058-TR-16 UUT2	3.64	1.64	2.78	2.09			
				14.6	86	848	3R / 4 / 4X / 5 / 12	SS	Extrapolated	2.04	0.92	2.04	1.53			
							3R / 5 / 12	CS	Extrapolated	2.04	0.92	2.04	1.53			
						11.5	96	656	1	CS	Trentec 0Q016.0, 0Q016-06-01-01	2.70	1.22	2.00	1.50	
								762	1, 1A, 2	CS	Interpolated	2.70	1.22	2.00	1.50	
15	96	782	1 / 3R / 5 / 12	CS	Interpolated			2.70	1.22	2.00	1.50					
			3R / 4 / 4X / 5 / 12	SS	NTS PR047058-TR-16 UUT1	3.64	1.64	2.78	2.09							

Notes:

1. Width does not include optional 14" enclosure side extensions.
2. Maximum height does not include optional 12" enclosure box extensions.
3. Enclosure types are constructed of either carbon steel (CS) sheet with UL-CSA listed acrylic/alkyd baked enamel finish or TGIC powder coat or stainless steel (SS) sheet.
4. Certification level is limited to the lower rating of either the Certified Product Listing, as listed here, or the internal sub-components, as listed on the Certified Major Sub-Components table.
5. "*" represents J, M, P, or R which corresponds to molded case circuit breaker frame size used in panelboard, see Certified Major Sub-Component Listing.
6. All Power Panelboards use the same family of enclosures.



Certified Product Listing Panelboards

Manufacturer: Square D by Schneider Electric

Product Category: NEMA Panelboards – Low Voltage (600 Volts and Below)

Product Line Models: Square D NEMA Power Panelboards

Product Options: Panelboards are integrated, low voltage, power and control systems and may include Powerlink, PowerLogic, and other interior components (see Certified Major Sub-Component tables). Sheet metal framed enclosures come in NEMA Type 1, 1A, 2, 3R, 4, 4X, 5 and Type 12 ratings.

Product Mounting: Rigid Wall Mount

Square D NEMA Power Panelboards (Cont.) ⁶													
Panelboard Type	Max Voltage Rating	Ampacity Rating (A)	Width ¹ (in.)	Depth (in.)	Max Height ² (in.)	Weight (lbs.)	NEMA Enclosure Type	Enclosure Material Type ³	Test Status	Certification Level ⁴			
										z/h = 0		z/h = 1	
										S _{DS} (g)	F _p /W _p	S _{DS} (g)	F _p /W _p
HC* ⁵	250 V DC 600 V AC	15–1200	26	9.5	86	625	1, 1A, 2	CS	Extrapolated	3.27	1.47	2.17	1.63
				10	92	645	3R / 5 / 12	CS	Extrapolated	3.27	1.47	2.17	1.63
				12	86	625	1, 1A, 2	CS	Extrapolated	3.27	1.47	2.17	1.63
			28	13.5	86	725	3R / 5 / 12	CS	Extrapolated	3.27	1.47	2.17	1.63
							3R / 4 / 4X / 5 / 12	SS	Extrapolated	3.27	1.47	2.17	1.63
			32	8	86	650	1, 1A, 2	CS	Extrapolated	3.27	1.47	2.17	1.63
				9.5	86	690	1, 1A, 2	CS	Extrapolated	3.27	1.47	2.17	1.63
				11	86	710	3R / 5 / 12	CS	Extrapolated	3.27	1.47	2.17	1.63
							3R / 4 / 4X / 5 / 12	SS	Extrapolated	3.27	1.47	2.17	1.63
				12	86	690	1, 1A, 2	CS	Extrapolated	3.27	1.47	2.17	1.63
					91	710	3R / 5 / 12	CS	Extrapolated	3.27	1.47	2.17	1.63
			42	9.5	98	528	1	CS	NTS PR047058-TR-16 UUT 5	3.61	1.62	2.79	2.09
					86	848	1, 1A, 2	CS	Interpolated	3.27	1.47	2.17	1.63
				12	86	848	1, 1A, 2	CS	Interpolated	3.27	1.47	2.17	1.63
							3R / 5 / 12	CS	Interpolated	3.27	1.47	2.17	1.63
							3R / 4 / 4X / 5 / 12	SS	Interpolated	3.27	1.47	2.17	1.63
				13	86	848	3R / 5 / 12	CS	Interpolated	3.27	1.47	2.17	1.63
							1	CS	Wyle 58514R11-1 UUT-1	3.27	1.47	2.17	1.63
			44	9.5	86	848	1, 1A, 2	CS	Interpolated	3.27	1.47	2.17	1.63
							1, 1A, 2	CS	Interpolated	3.27	1.47	2.17	1.63
				12	86	848	1, 1A, 2	CS	Interpolated	3.27	1.47	2.17	1.63
							816	3R / 4 / 4X / 5 / 12	SS	NTS PR047058-TR-16 UUT2	3.64	1.64	2.78
				14.6	86	848	3R / 5 / 12	CS	Extrapolated	3.27	1.47	2.17	1.63
			3R / 4 / 4X / 5 / 12				SS	Extrapolated	3.27	1.47	2.17	1.63	

Notes:

- Width does not include optional 14" enclosure side extensions.
- Maximum height does not include optional 12" enclosure box extensions.
- Enclosure types are constructed of either carbon steel (CS) sheet with UL-CSA listed acrylic/alkyd baked enamel finish or TGIC powder coat or stainless steel (SS) sheet.
- Certification level is limited to the lower rating of either the Certified Product Listing, as listed here, or the internal sub-components, as listed on the Certified Major Sub-Components table.
- "*" represents J, M, P, or R which corresponds to molded case circuit breaker frame size used in panelboard, see Certified Major Sub-Component Listing.
- All Power Panelboards use the same family of enclosures.



Certified Product Listing Panelboards

Manufacturer: Square D by Schneider Electric

Product Category: NEMA Panelboards – Low Voltage (600 Volts and Below)

Product Line Models: Square D NEMA Lighting Panelboards

Product Options: Panelboards are integrated, low voltage, power and control systems and may include Powerlink, PowerLogic, and other interior components (see Certified Major Sub-Component tables). Sheet metal framed enclosures come in NEMA Type 1, 1A, 2, 3R, 4, 4X, 5 and Type 12 ratings.

Product Mounting: Rigid Wall Mount

Square D NEMA Lighting Panelboards ⁵																
Panelboard Type	Max Voltage Rating	Ampacity Rating (A)	Width ¹ (in.)	Depth (in.)	Max Height ² (in.)	Weight (lbs.)	NEMA Enclosure Type	Enclosure Material Type ³	Test Status	Certification Level ⁴						
										z/h = 0		z/h = 1				
										S _{DS} (g)	F _P /W _P	S _{DS} (g)	F _P /W _P			
NQ	48 V DC 240 V AC	10–225	8.5	5	62	90	1	CS	NTS PR047058-TR-16 UUT3	3.61	1.62	2.79	2.09			
			14	5.75	38	220	1, 1A, 2	CS	Interpolated	1.96	0.88	1.91	1.43			
		10–600	20	6	44	97	1	CS	ATS D202932 UUT1	1.96	0.88	1.91	1.43			
				5.75	86	297	3R, 5, 12	CS	Interpolated	1.96	0.88	1.91	1.43			
				6.5		258	3R / 4 / 4X / 5 / 12	SS	Interpolated	1.96	0.88	1.91	1.43			
				6		297	3R, 5, 12	CS	Interpolated	1.96	0.88	1.91	1.43			
						3R / 4 / 4X / 5 / 12	SS	Interpolated	1.96	0.88	1.91	1.43				
				8.75		297	3R, 5, 12	CS	Interpolated	1.96	0.88	1.91	1.43			
				5.75	92	300	1, 1A, 2	CS	Interpolated	1.96	0.88	1.91	1.43			
				8.75		300	1, 1A, 2	CS	Interpolated	1.96	0.88	1.91	1.43			
			26	5.75	86	290	1, 1A, 2	CS	Interpolated	1.96	0.88	1.91	1.43			
				8.75	92	300	1, 1A, 2	CS	Interpolated	1.96	0.88	1.91	1.43			
				8.75	92	300	1	CS	Trentec 2Q007.0, 2Q007-02-01-01	3.43	1.54	2.33	1.75			
				NF	600 V AC	10–800	20	5.75	86	297	3R, 5, 12	CS	Extrapolated	3.43	1.54	2.33
			6.5					258		3R / 4 / 4X / 5 / 12	SS	NTS PR047058-TR-16 UUT4	3.61	1.62	2.79	2.09
			6					297		3R, 5, 12	CS	Interpolated	3.43	1.54	2.33	1.75
3R / 4 / 4X / 5 / 12	SS	Interpolated						3.43		1.54	2.33	1.75				
8.75	92	297	3R, 5, 12				CS	Interpolated	3.43	1.54	2.33	1.75				
5.75		300	1, 1A, 2				CS	Interpolated	3.43	1.54	2.33	1.75				
8.75		300	1, 1A, 2				CS	Interpolated	3.43	1.54	2.33	1.75				
8.75		92	300				1	CS	Trentec 2Q007.0, 2Q007-02-01-01	3.43	1.54	2.33	1.75			

- Notes:**
- Width does not include optional 14" enclosure side extensions.
 - Maximum height does not include optional 12" enclosure box extensions.
 - Enclosure types are constructed of either carbon steel (CS) sheet with UL-CSA listed acrylic/alkyd baked enamel finish or TGIC powder coat or stainless steel (SS) sheet.
 - Certification level is limited to the lower rating of either the Certified Product Listing, as listed here, or the internal sub-components, as listed on the Certified Major Sub-Components table.
 - All Lighting Panelboards use the same family of enclosures.



Certified Major Sub-Components Listing Panelboards

Square D NEMA Panelboard Enclosure Extensions								
Option Type	Manufacturer	Panel Type	Description / Identifier	Test Status ¹	Certification Level ²			
					Grade (z/h = 0)		Roof (z/h = 1)	
					S _{DS} (g)	F _p /W _p	S _{DS} (g)	F _p /W _p
Top/Bottom Extension	Square D by Schneider Electric	Power / Lighting	Max 6" Top/ Bottom Mounted Enclosure Extension	Extrapolated	3.61	1.62	2.79	2.09
Top/Bottom Extension	Square D by Schneider Electric	Power	Max 9" Top/ Bottom Mounted Enclosure Extension	Extrapolated	3.61	1.62	2.79	2.09
Top/Bottom Extension	Square D by Schneider Electric	Power / Lighting	Max 12" Top/ Bottom Mounted Enclosure Extension	NTS PR047058-TR-16 UUT 5	3.61	1.62	2.79	2.09
Side Gutter/Extension	Square D by Schneider Electric	Lighting	Max 12" Side Gutter Extension	Extrapolated	3.27	1.47	2.17	1.63
Side Gutter/Extension	Square D by Schneider Electric	Power	Max 14" Side Gutter Extension	Wyle 58514R11-1 UUT-1	3.27	1.47	2.17	1.63
Notes: 1. The sub-components listed here include part numbers which provided identify configuration, manufacturer, and materials. Tested sub-components and interpolated items have the same manufacturer and materials and have similar configuration and construction as the tested units. 2. Certification level is limited to the lower rating of either the Certified Major Sub-Components Listing, as listed here, or the product section, as listed on the Certified Product Listing table.								

Certified Major Sub-Components Listing Panelboards

Square D NEMA Panelboard Interiors									
Sub-Component Type	Rated Voltage (V)	Rated Current (A)	Manufacturer	Part Number / Identifier	Test Status ¹	Certification Level ²			
						Grade (z/h = 0)		Roof (z/h = 1)	
						S _{DS} (g)	F _p /W _p	S _{DS} (g)	F _p /W _p
NQ Interior	NA	NA	Schneider Electric	NQ8442B2C	NTS PR047058-TR-16 UUT3	3.61	1.62	2.79	2.09
	NA	NA	Schneider Electric	NA ³	Interpolated	1.96	0.88	1.91	1.43
	NA	NA	Schneider Electric	NQ430L2	ATS D202932 UUT1	1.96	0.88	1.91	1.43
NF Interior	NA	NA	Schneider Electric	NF466L2	NTS PR047058-TR-16 UUT4	3.61	1.62	2.79	2.09
	NA	NA	Schneider Electric	NA ³	Interpolated	3.43	1.54	2.33	1.75
	NA	NA	Schneider Electric	NF442L8C	Trentec 2Q007.0, 2Q007-02-01-01	3.43	1.54	2.33	1.75
CP Interior	NA	NA	Schneider Electric	CP1886N4F2	Wyle 70891R13 UUT-3	2.04	0.92	2.04	1.53
	NA	NA	Schneider Electric	NA ³	Interpolated	2.04	0.92	2.04	1.53
	NA	NA	Schneider Electric	CP32868N44F6C	Wyle 70891R13 UUT-2	3.30	1.49	3.30	2.48
QMB Interior	NA	NA	Schneider Electric	012788399-005-01	Trentec 0Q016.0 0Q016-06-01-01	2.70	1.22	2.00	1.50
	NA	NA	Schneider Electric	NA ³	Interpolated	2.70	1.22	2.00	1.50
	NA	NA	Schneider Electric	379257990010001	NTS PR047058-TR-16 UUT1	3.64	1.64	2.78	2.09
HC Interior	NA	NA	Schneider Electric	HCP20566	NTS PR047058-TR-16 UUT 5	3.61	1.62	2.79	2.09
	NA	NA	Schneider Electric	NA ³	Interpolated	3.27	1.47	2.17	1.63
	NA	NA	Schneider Electric	HCRU548612U	Wyle 58514R11 UUT1	3.27	1.47	2.17	1.63
Notes: 1. The sub-components listed here include part numbers which provided identify configuration, manufacturer, and materials. Tested sub-components and interpolated items have the same manufacturer and materials and have similar configuration and construction as the tested units. 2. Certification level is limited to the lower rating of either the Certified Major Sub-Components Listing, as listed here, or the product section, as listed on the Certified Product Listing table. 3. Panelboard interiors do not have a numbering system that corresponds to a unique configuration. They are custom generated at the time of customer ordering.									

Certified Major Sub-Components Listing Panelboards

Square D NEMA Panelboard Major Sub-Components									
Sub-Component Type	Rated Voltage (V)	Rated Current (A)	Manufacturer	Part Number / Identifier	Test Status ¹	Certification Level ²			
						Grade (z/h = 0)		Roof (z/h = 1)	
						S _{DS} (g)	F _p /W _p	S _{DS} (g)	F _p /W _p
Molded Case Circuit Breaker / Switch	120–240	15–100	Schneider Electric	QOB320	NTS PR047058-TR-16 UUT 3	3.61	1.62	2.79	2.09
	120–240	10–150	Schneider Electric	QO*	Interpolated	3.61	1.62	2.78	2.09
	120–600	15–125	Schneider Electric	E*	Interpolated	3.61	1.62	2.78	2.09
	208–600	15–100	Schneider Electric	FA*, FH*	Interpolated	3.61	1.62	2.78	2.09
	208–600	15–125	Schneider Electric	B*	Interpolated	3.61	1.62	2.78	2.09
	208–600	15–150	Schneider Electric	H*	Interpolated	3.61	1.62	2.78	2.09
	208–600	70–250	Schneider Electric	J*	Interpolated	3.61	1.62	2.78	2.09
	70–250	70–250	Schneider Electric	Q*	Interpolated	3.61	1.62	2.78	2.09
	208–600	200–400	Schneider Electric	LA*, LH*	Interpolated	3.61	1.62	2.78	2.09
	208–600	70–600	Schneider Electric	L*	Interpolated	3.61	1.62	2.78	2.09
	208–600	300–800	Schneider Electric	M*	Interpolated	3.61	1.62	2.78	2.09
	208–600	100–1200	Schneider Electric	P*	Interpolated	3.61	1.62	2.78	2.09
	208–600	240–1200	Schneider Electric	R*	Interpolated	3.61	1.62	2.78	2.09
	208–600	240–1200	Schneider Electric	RJA36120	NTS PR047058-TR-16 UUT 2	3.64	1.64	2.78	2.09
Plug on Lug Kits	208–600	10–1200	Schneider Electric	SL400	Wyle 70891R13 UUT-3	2.04	0.92	2.04	1.53
			Schneider Electric	SL*, S33*	Interpolated	2.04	0.92	2.04	1.53
			Schneider Electric	S33930	NTS PR047058-TR-16 UUT2	3.64	1.64	2.78	2.09
Surge Protection Device (Lighting or Power) ³	480	NA	Schneider Electric	HL4IMA12C1	NTS PR047058-TR-16 UUT2	3.64	1.64	2.78	2.09
	120–600	NA	Schneider Electric	*IMA*	Extrapolated	3.64	1.64	2.78	2.09
Surge Protection Device (Lighting) ⁴	120–240	NA	Schneider Electric	SSP*	Interpolated	1.96	0.88	1.91	1.43
		NA	Schneider Electric	SSP02BIA24PBQ1	ATS D202932 UUT1	1.96	0.88	1.91	1.43
Fusible Branch Switch	600	30	Schneider Electric	QMB361HW	NTS PR047058-TR-16 UUT 1	3.64	1.64	2.78	2.09
	240–600	30–800	Schneider Electric	QM*	Interpolated	3.64	1.64	2.78	2.09
	600	800	Schneider Electric	QMB367W	NTS PR047058-TR-16 UUT 1	3.64	1.64	2.78	2.09

Notes:

1. The sub-components listed here include part numbers which provided identify configuration, manufacturer, and materials. Tested sub-components and interpolated items have the same manufacturer and materials and have similar configuration and construction as the tested units.
2. Certification level is limited to the lower rating of either the Certified Major Sub-Components Listing, as listed here, or the product section, as listed on the Certified Product Listing table.
3. All Lighting and Power Surge Protection Devices are structurally identical, the only difference is rating and software.
4. All Lighting Surge Protection Devices are structurally identical, the only difference is rating and software.



Certified Major Sub-Components Listing Panelboards

Square D NEMA Panelboard Major Sub-Components (Cont.)									
Sub-Component Type	Rated Voltage (V)	Rated Current (A)	Manufacturer	Part Number / Identifier	Test Status ¹	Certification Level ²			
						Grade (z/h = 0)		Roof (z/h = 1)	
						S _{DS} (g)	F _p /W _p	S _{DS} (g)	F _p /W _p
Lighting Contactor/Controls	120–480	225	Schneider Electric	PBW11BV28	NTS PR047058-TR-16 UUT4	3.61	1.62	2.79	2.09
		30–225	Schneider Electric	PB*	Interpolated	2.80	1.26	2.00	1.50
		10–600	Schneider Electric	NF*	Interpolated	2.80	1.26	2.00	1.50
		600	Schneider Electric	NF3000G3	Wyle 56963R09 UUT1	2.80	1.26	2.00	1.50
AL Bus Bar Material	NA	NA	Schneider Electric	NA	NTS PR047058-TR-16 UUT4	3.61	1.62	2.79	2.09
	NA	NA	Schneider Electric	NA	Interpolated	3.61	1.62	2.79	2.09
	NA	NA	Schneider Electric	NA	NTS PR047058-TR-16 UUT 5	3.61	1.62	2.79	2.09
CU Bus Bar Material	NA	NA	Schneider Electric	NA	NTS PR047058-TR-16 UUT 1	3.64	1.64	2.78	2.09
	NA	NA	Schneider Electric	NA	Interpolated	3.64	1.64	2.78	2.09
	NA	NA	Schneider Electric	NA	NTS PR047058-TR-16 UUT2	3.64	1.64	2.78	2.09
Notes: 1. The sub-components listed here include part numbers which provided identify configuration, manufacturer, and materials. Tested sub-components and interpolated items have the same manufacturer and materials and have similar configuration and construction as the tested units. 2. Certification level is limited to the lower rating of either the Certified Major Sub-Components Listing, as listed here, or the product section, as listed on the Certified Product Listing table.									

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UUT Summary

Panelboard – NEMA Power

UUT Product Information			
Manufacturer	Product Category	Product Line Model	Identification Number
Square D by Schneider Electric	Panelboards – Low Voltage	Panelboard – I-Line Series	HCR548612U

UUT Test Report Association				
Test Lab	Report No.	Report Date	Test Run No.	UUT Designation
NTS Huntsville	PR047058-TR-16	07-06-2016	5	UUT-2

UUT Notes / Description
1. The UUT is a low voltage, three phase I-Line panelboard with a 1200A main breaker, with branch breakers packaged in a NEMA Type 3R/4/4x/5/12 enclosure. 2. NEMA Type 3R/4/4x/5/12 enclosure is constructed of Stainless Steel sheet. 3. UUT full of contents during testing.

UUT Properties (As Tested)								
Weight (lbs.)	Dimensions (in.)			Lowest Natural Frequency (Hz)			Shake-Table Attachment	
	Height	Width	Depth	F-B	S-S	V	Type	Anchorage
816	86	44	14.63	N/A	N/A	N/A	Rigid wall mount	(4) 3/8-16 grade 5 bolts and flat washers at 25 ft-lbs torque.

UUT Seismic Test Parameters								
Building Codes	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 2016	ICC-ES AC156	2.78	1	1.5	4.45	3.34	1.86	0.75

UUT Seismic Test Results	
✓	The UUT maintained structural integrity and functionality as confirmed in post test inspection and active operation validation checks

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UUT Summary Panelboard – NEMA Power

UUT Product Information			
Manufacturer	Product Category	Product Line Model	Identification Number
Square D by Schneider Electric	Panelboards – Low Voltage	Panelboard – I-Line Series	HCR548612U

UUT Test Report Association				
Test Lab	Report No.	Report Date	Test Run No.	UUT Designation
Wyle Laboratories	58514R11-1	05-26-2011	5	UUT-1

UUT Notes / Description	
- The UUT is a low voltage, three phase I-Line panelboard with a 1200A main breaker, with branch breakers packaged in a NEMA Type 1 enclosure, with a 14" wide side extension. - NEMA Type 1 enclosure is constructed of carbon steel sheet with powder-coated finish. - UUT full of contents during testing.	

UUT Properties (As Tested)								
Weight (lbs.)	Dimensions (in.)			Lowest Natural Frequency (Hz)			Shake-Table Attachment	
	Height	Width	Depth	F-B	S-S	V	Type	Anchorage
848	86	44	9.5	N/A	N/A	N/A	Rigid wall mount	(8) 3/8-16 grade 5 bolts and flat washers at 30 ft-lbs torque on the main enclosure, with (8) additional identical bolts in the side extension.

UUT Seismic Test Parameters									
Building Codes	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 2016	ICC-ES AC156	2.17	1	1.5	3.47	2.60	1.45	0.59	

UUT Seismic Test Results	
✓ The UUT maintained structural integrity and functionality as confirmed in post test inspection and active operation validation checks	



UUT Major Components		
Description	Manufacturer	Part No. / Identifier
Enclosure – NEMA Type 1, Carbon Steel Sheet	Square D	44W x 9.5D x 86H
Enclosure Side Extension	Square D	14W x 9.5D x 86H
Panelboard Interior, I-LINE, 1200A, 3-phase	Square D	HCRU548612U
Molded Case Circuit Breaker, R-frame, 600V 1200A	Square D	RJA36120
Molded Case Circuit Breaker, J-frame, 600V 250A	Square D	JLA36250U54X
Molded Case Circuit Breaker, H-frame, 600V 150A	Square D	HJA26150
Molded Case Circuit Breaker, L-frame, 600V 150A	Square D	LLA36600U54X
Molded Case Circuit Breaker, P-frame, 600V 800A	Square D	PJA36800
Molded Case Circuit Breaker, H-frame, 600V 150A	Square D	HLA36150U54X

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UUT Summary Panelboard I-Line

UUT Product Information			
Manufacturer	Product Category	Product Line Model	Identification Number
Square D by Schneider Electric	Panelboards – Low Voltage	Panelboards – QMB Series	012788399-005-01

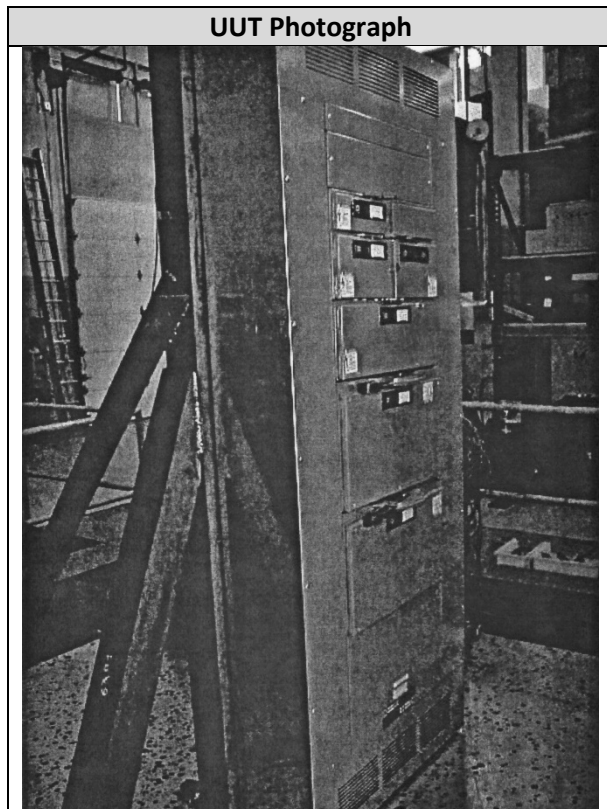
UUT Test Report Association				
Test Lab	Report No.	Report Date	Test Run No.	UUT Designation
Trentec, Inc.	0Q016.0	11/02/2000	6	0Q016-06-01-01

UUT Notes / Description
- The UUT is a low voltage, three phase 480Y/277 VAC 3P 4W 60 Hz 800A QMB panelboard with a bottom fed main fusible switch and distribution feeder switches packaged in a NEMA Type 1 enclosure. - NEMA Type 1 enclosure is constructed of carbon steel sheet with powder-coated finish. - UUT full of contents during testing.

UUT Properties (As Tested)								
Weight (lbs.)	Dimensions (in.)			Lowest Natural Frequency (Hz)			Shake-Table Attachment	
	Height	Width	Depth	F-B	S-S	V	Type	Anchorage
656	96	38	11.5	N/A	N/A	N/A	Rigid wall mounted	(6) 3/8-16 grade 2 bolts and flat washers at 260 in-lb torque.

UUT Seismic Test Parameters									
Building Codes	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 2016	ICC-ES AC156	2.00	1	1.5	3.20	2.40	1.34	0.53	

UUT Seismic Test Results
✓ The UUT maintained structural integrity and functionality as confirmed in post test inspection and active operation validation checks



UUT Major Components		
Description	Manufacturer	Part No. / Identifier
Enclosure – NEMA Type 1, Carbon Steel Sheet	Square D	96H x 38W x 11.5D
Panelboard Interior, QMB 800A, 3-phase, CU bus	Square D	012788399-005-01
Switch, Fusible, QMB, 600V 800A, 3P	Square D	QMB367W
Switch, Fusible, QMB, 600V 400A, 3P	Square D	QMB365W
Switch, Fusible, QMB, 600V 100-60A, 3P, Twin	Square D	QMB363T32W
Switch, Fusible, QMB, 600V 200A, 3P	Square D	QMB364W
Switch, Fusible, QMB, 600V 30A, 3P	Square D	QMB361HW

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