APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY	
APPLICATION #:	OSP – 0058

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☐ New ☒ Renewal

Manufacturer Information

Manufacturer: Square D by Schneider Electric

Manufacturer's Technical Representative: Scott Littler, Principal Technical Expert

Mailing Address: 330 Weakley Lane, Smyrna, TN 37167

Telephone: 615-267-9407 Email: scott.littler@se.com

Product Information

Product Name: Modular Panelboard System (MPS)

Product Type: Integrated Power and Control Solutions (IPaCS)

Product Model Number: Varies (see attachment)
(List all unique product identification numbers and/or part numbers)

General Description: Wall mounted distribution and control panelboard sections (modular).

Mounting Description: Rigid – wall mounted

Applicant Information

Applicant Company Name: TRU Compliance, by Structural Integrity Associates, Inc

Contact Person: Galen Reid

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

Telephone: 844-TRU-0200 Email: greid@structint.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: 12/30/2019

Title: Program Manager Company Name: TRU Compliance, by Structural Integrity Associates, Inc

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

Company Name: TRU Compliance, by Structural Integrity Associates, Inc

Name: Andy Coughlin, SE California License Number: S6082

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

Telephone: 844-TRU-0200 Email: acoughlin@structint.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

Company Name: Applied Technical Services, Inc. (ATS)

Contact Name: David Common

Mailing Address: 1049 Triad Court, Marietta, GA 30062

Telephone: (678) 444-2908 Email: DavidC@atslab.com

Company Name: National Technical Systems - Huntsville

Contact Name: Greg Mason

Mailing Address: 7800 Highway 20 West, Huntsville, AL 35806

Telephone: (256) 837-4411 Email: greg.mason@nts.com

Company Name: Qual Tech NP by Curtiss-Wright

Contact Name: Jason VonNida

Mailing Address: 4600 Each Tech Drive, Cincinnati, OH 45245

Telephone: (513) 201-2139 Email: jvonnida@curtisswright.com

Seismic Parameters

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

Design Basis of Equipment or Components (F_p/W_p) = 1.43 (z/h=1.0), 0.88 (z/h=0.0)

S_{DS} (Design spectral response acceleration at short period, g) = 1.91 (z/h=1.0), 1.96 (z/h=0.0)

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) = 1 and 0

Equipment or Component Natural Frequencies (Hz) = (See Attachment)

Overall dimensions and weight (or range thereof) = (See Attachment)

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): Product Matrices

OSHPD Approval (For Office Use Only) – **Approval Expires on December 31, 2025**

Signature: _____ Date: April 6, 2021

Print Name: William Staehlin Title: Senior Structural Engineer

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

Condition of Approval (if applicable):

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX

1801106-CR-001 R0

Manufacturer:	Square D by Schneider Electric
Model Line:	Modular Panelboard System (MPS)

TABLE 1

Certified Product Construction Summary:

NEMA type 1 framed enclosure constructed of powder−coated carbon steel sheet.

Certified Options Summary:

MPS sections consist of a mix of pre-wired NQ, NF, and I−LINE panelboards . SPD is optional (see certified subcomponent tables).

Mounting Configuration:

Wall mounted - rigid

Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: CBC 2019 ***Seismic Certification Limits:*** S_{DS}= ***1.91 g z/h=1.0*** S_{DS}= ***1.96 g z/h=0.0*** I_P= ***1.5***

Model Line	Model	Dimensions (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Modular Panelboard System (MPS)	Distribution and Control Section	6.0	20	44	97	UUT:120V, 225A	1
		9.5	20	43	191	208-600V, up to 1200A	Interp.
		9.5	10	86	200		Interp.
		9.5	14	86	250		Interp.
		9.5	20	86	382		Interp.
		9.5	26	86	748		Interp.
		9.5	44	86	848		Interp.
		9.5	44	86	848	UUT:600V, 1200A	2, 6

SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUBCOMPONENT MATRIX

1801106-CR-001 R0

Manufacturer:	Square D by Schneider Electric	***Table Description:*** Circuit Breakers	**TABLE 2**
Model Line:	Modular Panelboard System (MPS)		

Building Code: CBC 2019 ***Seismic Certification Limits:*** S_{DS} = 1.91 g z/h = 1.0 I_P = 1.5; S_{DS} = 1.96 g z/h = 0.0

Component Type	Manufacturer	Model	Description	Notes	UUT
Molded Case Circuit Breakers (2 Pole and 3 Pole)	Square D	FA36100	600V, 100A, 6 lbs.		2
		B*	208-600V, 15-125A, 4 lbs.		Interp.
		F*	208-600V, 15-150A, 6 lbs.		Interp.
		H*	208-600V, 15-150A, 5 lbs.		Interp.
		Q*	120-240V, 70-250A, 5 lbs.		Interp.
		J*	208-600V, 150-250A, 5 lbs.		Interp.
		L*	208-600V, 250-600A, 14 lbs.		Interp.
		M*	208-600V, 300-800A, 29 lbs.		Interp.
		P*	208-600V, 250-1200A, 36 lbs.		Interp.
		PGA36120	600V, 1200A, 36 lbs.		2
		R*	208-600V, 1000-1200A, 52 lbs.		Interp.
		RJA36120	600V, 1200A, 52 lbs.		2,6
Miniature Circuit Breakers (2 Pole and 3 Pole)	Square D	QO*	120-240V, 15-20A, 1 lb.		Extrap.
		QOB130	120V, 30A, 1 lb.		1
		QO*	120-240V, 20-150A, 1 lb.		Interp.
		E*	120-480V, 15A, 2 lbs.		Interp.
		EDB14020	480V, 20A, 2 lbs.		3
		E*	120-480V, 20-125A, 4 lbs.		Interp.
		EDB34125	480V, 125A, 4 lbs.		3

* The sub−components listed here include part numbers which provided identify configuration, manufacturer, and materials. Tested sub−components and interpolated/extrapolated items have the same manufacturer and materials and have similar configuration and construction as the tested units.

SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUBCOMPONENT MATRIX

1801106-CR-001 R0

Manufacturer: Square D by Schneider Electric
Model Line: Modular Panelboard System (MPS)
Table Description: Panelboards

TABLE 3

Building Code: CBC 2019

Seismic Certification Limits: S_{DS} = 1.91 g z/h = 1.0; S_{DS} = 1.96 g z/h = 0.0; I_P = 1.5

Component Type	Manufacturer	Model	Description	Notes	UUT
Panelboards	Square D	NQ430L2	240V, 225A, 97 lbs.		1
		NQ*	240V, 100-800A, 300 lbs.		Interp.
		NF*	600V, 100-800A, 300 lbs.		Interp.
		NF442L8C	600V, 800A, 300 lbs.		4
		HCP50864	600V, 400A, I-Line Family, 540 lbs.		5
		HC*	600V, 400-1200A, I-Line Family, 540-826 lbs.		Interp.
		HCRU548612U	600V, 1200A, I-Line Family, 826 lbs.		2

* The sub−components listed here include part numbers which provided identify configuration, manufacturer, and materials. Tested sub−components and interpolated/extrapolated items have the same manufacturer and materials and have similar configuration and construction as the tested units.

SPECIAL SEISMIC CERTIFICATION
CERTIFIED SUBCOMPONENT MATRIX

1801106-CR-001 R0

Manufacturer: Square D by Schneider Electric
Model Line: Modular Panelboard System (MPS)
Table Description: Surge Protective Devices (SPD)

TABLE 4

Building Code: CBC 2019
Seismic Certification Limits: S_{DS} = 1.91 g z/h = 1.0; S_{DS} = 1.96 g z/h = 0.0; I_P = 1.5

Component Type	Manufacturer	Model	Description	Notes	UUT
SurgeLoc	Square D	SSP02BIA24PBQ1	208V/120V, 80kA-240kA		1

UNIT UNDER TEST (UUT) SUMMARY SHEET

1801106-CR-001 R0

Manufacturer: Square D by Schneider Electric

Model Line: Modular Panelboard System (MPS)

UUT	Unit Description	Report Number	Testing Laboratory	S_{DS}	z/h	I_P
1	Panelboard – NQ (UUT1 in test report))	D202932 Rev1	Applied Technical Services, Inc. (ATS)	1.91	1	1.5
				1.96	0	
2	Panelboard – I–Line (UUT 1 in test report)	51551–4	NTS - Huntsville (Formerly Wyle Labs)	2.11	1	1.5
				3.59	0	
3	Panelboard – NF (0Q016–02–01–01 in test report)	0Q016.0	Curtiss-Wright (Formerly Trentec, Inc.)	2.34	1	1.5
				2.70	0	
4	Panelboard – NF (2Q007–02–01–01 in test report)	2Q007.0	Curtiss-Wright (Formerly Trentec, Inc.)	2.33	1	1.5
				3.43	0	
5	Panelboard – I-Line (UUT2 in test report)	71437R13	NTS - Huntsville (Formerly Wyle Labs)	2.25	1	1.5
				2.55	0	
6	Panelboard – I-Line (UUT1 in test report)	58514R11-1	NTS - Huntsville (Formerly Wyle Labs)	2.17	1	1.5
				3.26	0	

Notes:

UNIT UNDER TEST (UUT) SUMMARY SHEET

1801106-CR-001 R0

UUT 1

Manufacturer: Square D by Schneider Electric
Model Line: Modular Panelboard System (MPS)
Model Number: Panelboard – NQ ***Serial Number:*** 12335800420030000

Product Construction Summary:
NEMA type 1 framed enclosure constructed of powder−coated carbon steel sheet.

Options/Subcomponent Summary:
Square D panelboard (NQ430L2), Square D molded case circuit breaker (JGP36250U31X), Square D miniature circuit breaker(QOB330), Square D miniature circuit breaker(QOB130), Square D SurgeLogic surge protection device (SSP02BIA24PBQ1).

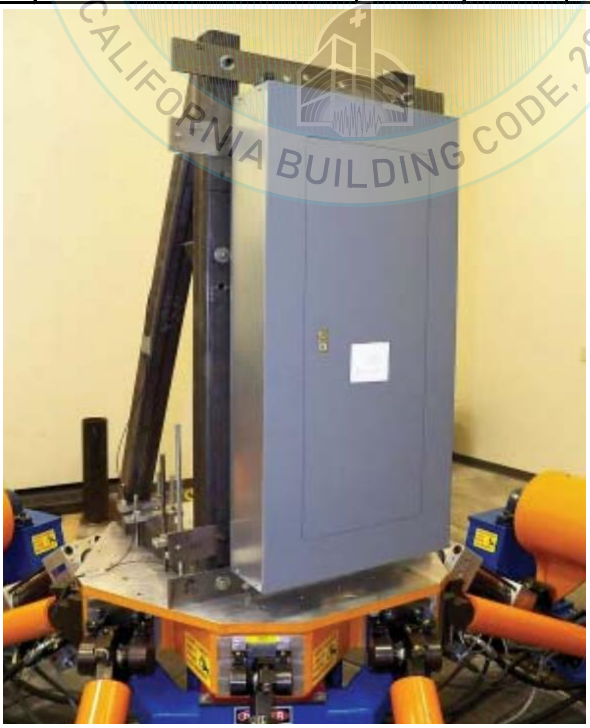
UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
97	6	20	44	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 2019	ICC-ES AC156 (2012)	1.91	1.0	1.5	3.06	2.29	1.31	0.52
		1.96	0.0					

Test Mounting Details:



(4) 3/8−16 grade 5 bolts and flat washers at 30 ft−lbs torque. 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

1801106-CR-001 R0

UUT 2

Manufacturer: Square D by Schneider Electric
Model Line: Modular Panelboard System (MPS)
Model Number: Panelboard – I–Line ***Serial Number:*** 12196293900010001

Product Construction Summary:
NEMA type 1 framed enclosure constructed of powder–coated carbon steel sheet.

Options/Subcomponent Summary:
Square D panelboard (HCRU548612U), Square D molded case circuit breaker (RGA36120CU31A), Square D molded case circuit breaker (PGA36120), Square D molded case circuit breaker (KCA36250), Square D molded case circuit breaker (FA36100).

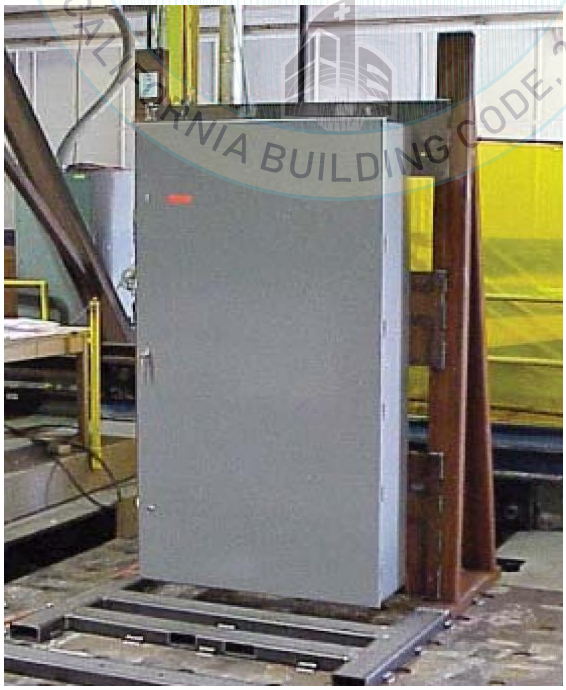
UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
826	9.5	44	86	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 2019	ICC-ES AC156 (2004)	2.11	1.0	1.5	3.59	2.53	2.39	0.96
		3.59	0.0					

Test Mounting Details:



(2) 3/8–16 grade 5 bolts and flat washers at 30 ft–lbs torque located at bottom and standard wall mount at top using (4) 3/8–16 grade 5 bolts at 30 ft–lb torque. 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

1801106-CR-001 R0

UUT 3

Manufacturer: Square D by Schneider Electric
Model Line: Modular Panelboard System (MPS)
Model Number: Panelboard – NF ***Serial Number:*** 012788399–002–01

Product Construction Summary:
NEMA type 1 framed enclosure constructed of powder–coated carbon steel sheet.

Options/Subcomponent Summary:
Square D panelboard (012788399–002), Square D molded case circuit breaker (LCL36600), Square D miniature circuit breaker(EDB34125), Square D miniature circuit breaker(EDB24100), Square D miniature circuit breaker(EDB14020).

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
243	8	26	80	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 2019	ICC-ES AC156 (2000)	2.34	1.0	1.5	3.74	2.81	1.80	0.72
		2.70	0.0					

Test Mounting Details:

(4) 5/16–18 grade 2 bolts and flat washers at 150 in–lb torque. 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

1801106-CR-001 R0

UUT 4

Manufacturer: Square D by Schneider Electric
Model Line: Modular Panelboard System (MPS)
Model Number: Panelboard – NF ***Serial Number:*** P000697–002–M2

Product Construction Summary:
NEMA type 1 framed enclosure constructed of powder–coated carbon steel sheet.

Options/Subcomponent Summary:
Square D panelboard - factory assembled only (NF442L8C), Square D miniature circuit breaker(EDB34100), Square D miniature circuit breaker(EDB14020), Square D molded case circuit breaker (LAL36400).

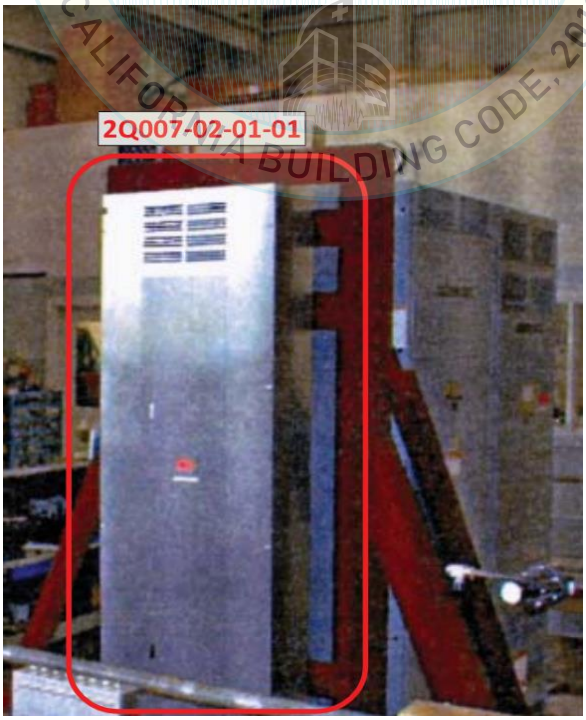
UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
300	8.75	26	92	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 2019	ICC-ES AC156 (2004)	2.33	1.0	1.5	3.73	2.80	2.29	0.92
		3.43	0.0					

Test Mounting Details:



(4) 3/8–16 grade 2 bolts and flat washers at 9 ft–lb torque. 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

1801106-CR-001 R0

UUT 5

Manufacturer: Square D by Schneider Electric
Model Line: Modular Panelboard System (MPS)
Model Number: Panelboard – I–Line ***Serial Number:*** 2013SEISMIC002

Product Construction Summary:
NEMA type 1 framed enclosure constructed of powder–coated carbon steel sheet.

Options/Subcomponent Summary:
Square D panelboard (HCP50864), Square D molded case circuit breaker (QDA221004), Square D molded case circuit breaker (QDA32200), Square D molded case circuit breaker (HDA36030), Square D molded case circuit breaker (JDA36200), Square D molded case circuit breaker (JDA36250U31X), Square D molded case circuit breaker (LA36400), Square D molded case circuit breaker (PGA36080CU31A), Square D molded case circuit breaker (PGA36100).

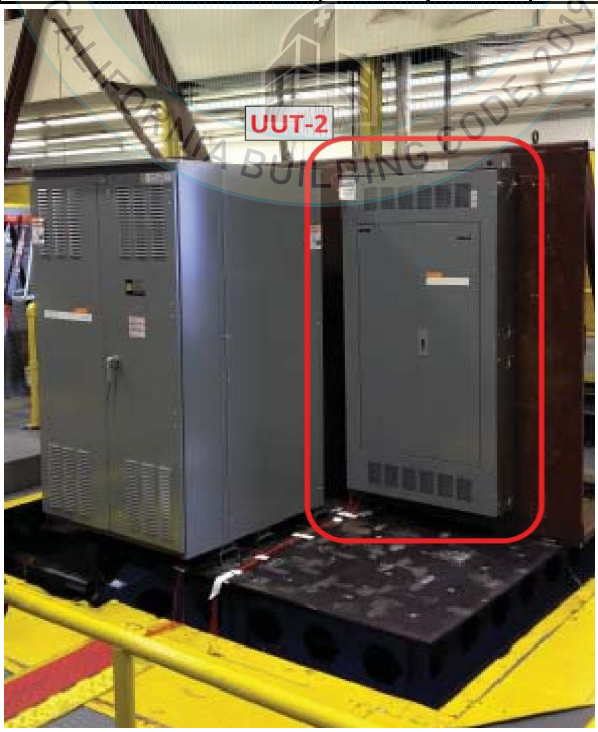
UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
540	9.5	42	86	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 2019	ICC-ES AC156 (2004)	2.25	1.0	1.5	3.60	2.70	1.70	0.68
		2.55	0.0					

Test Mounting Details:



(8) 3/8–16 grade 5 bolts and flat washers at 25 ft–lbs torque. 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

1801106-CR-001 R0

UUT 6

Manufacturer: Square D by Schneider Electric
Model Line: Modular Panelboard System (MPS)
Model Number: Panelboard – I–Line ***Serial Number:*** HCR548612U

Product Construction Summary:
NEMA Type 1 constructed of carbon steel sheet with a powder coated finish.

Options/Subcomponent Summary:
Side extension, I-line Interior (HCRU548612U), Square D molded case circuit breaker (RJA36120), Square D molded case circuit breaker (JLA36250U54X), Square D molded case circuit breaker (HJA26150), Square D molded case circuit breaker (LLA36600U54X), Square D molded case circuit breaker (PJA36800), Square D molded case circuit breaker (HLA36150U54X)

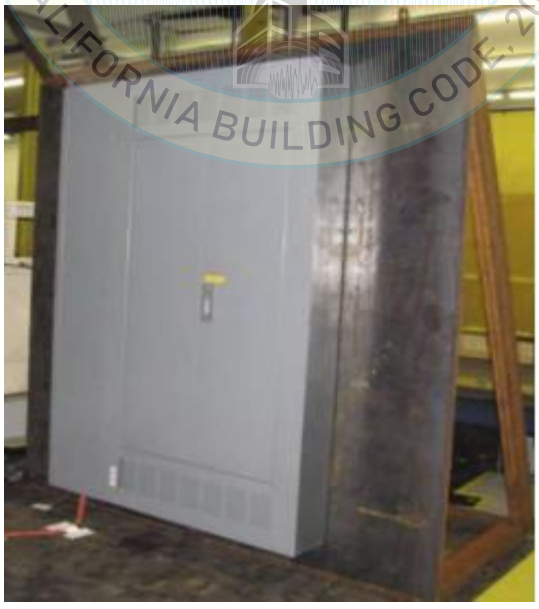
UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
848	9.5	44	86	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 2019	ICC-ES AC156 (2000)	2.17	1.0	1.5	3.47	2.6	2.17	0.87
		3.26	0.0					

Test Mounting Details:



Rigid wall mounted using (8) 3/8"-16 grade 5 bolts and flat washers in the main enclosure, and (8) 3/8"-16 grade 5 bolts and flat washers in the side extension, all torqued to 30 ft-lbs.
Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.
Contents were included in testing per operating conditions.