



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

**APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)**

OFFICE USE ONLY

APPLICATION #: OSP-0053

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: Square D by Schneider Electric

Manufacturer's Technical Representative: Scott Littler

Mailing Address: 330 Weakley Lane, Smyrna, TN 37167

Telephone: (615) 267-9407

Email: Scott.Littler@se.com

Product Information

Product Name: Switchgear/Switchboards

Product Type: Switchgear - Medium Voltage

Product Model Number: HVL/cc (2.4V to 38kV) Metal-Enclosed Load Interrupting Switchgear systems with bus Ampacity ratings from 600A to 1200A (see Certified Product Listing tables).

General Description: Distribution and Auxiliary/Meter bay Metal-Enclosed Load Interrupting Switchgear sections

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: None

Applicant Information

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

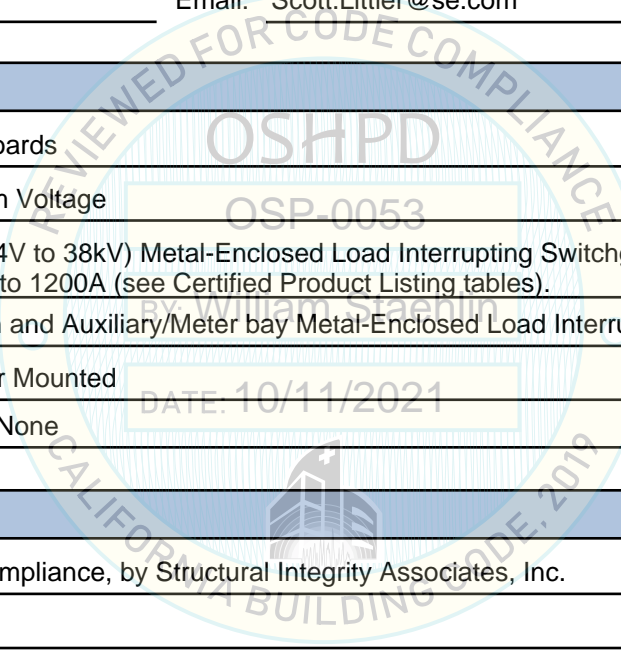
Contact Person: Galen Reid

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

Telephone: (541) 604-7225

Email: greid@structint.com

Title: Manager, TRU Compliance





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

Company Name: STRUCTURAL INTEGRITY ASSOCIATES, INC.
Name: Andrew Coughlin California License Number: S6082
Mailing Address: 5215 Hellyer Ave, Suite 101, San Jose, CA 95138-1025
Telephone: (415) 635-8461 Email: acoughlin@structint.com

Certification Method

GR-63-Core ICC-ES AC156 IEEE 344 IEEE 693 NEBS 3
 Other (Please Specify): _____

Testing Laboratory

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: starley@etldallas.com

Company Name: UNIVERSITY OF CALIFORNIA, BERKELEY (PEER)
Contact Person: Amarnath Kasalanati
Mailing Address: 1301 S. 46th Street, Bldg 420, Richmond CA 94804-1729
Telephone: (510) 642-6475 Email: Amarnath1@berkeley.edu

Company Name: UNIVERSITY OF BUFFALO (SEESL)
Contact Person: Mark Pitman
Mailing Address: 212 Ketter Hall, Buffalo NY 14260
Telephone: (716) 645-4377 Email: mpitman@buffalo.edu

Company Name: WYLE LABORATORIES
Contact Person: Greg Mason
Mailing Address: 7800 Highway 20 West, Huntsville AL 35806
Telephone: (256) 837-4411 Email: greg.mason@nts.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.34 (SDS = 1.78); 0.93 (SDS = 2.07)

SDS (Design spectral response acceleration at short period, g) = 1.78 (z/h = 1); 2.07 (z/h = 0)

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6.0

Ω_0 (System overstrength factor) = 2.5

I_p (Importance factor) = 1.5

z/h (Height ratio factor) = 1 and 0

Natural frequencies (Hz) = See Attachment

Overall dimensions and weight = See Attachment

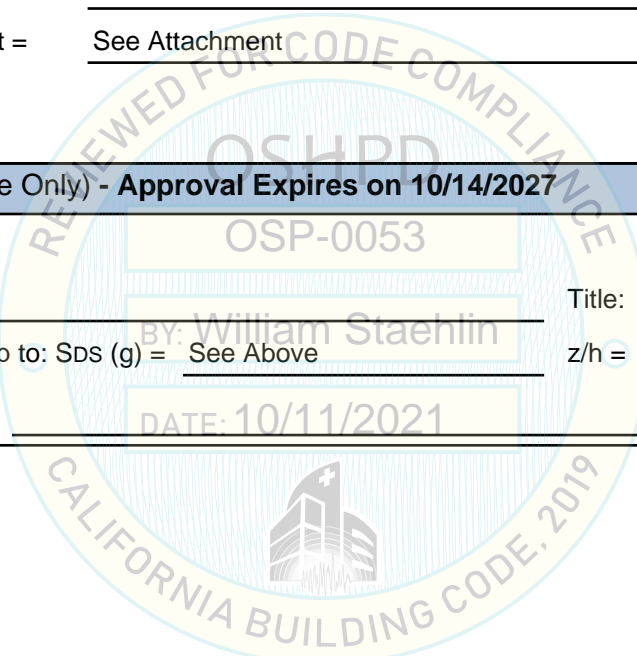
OSHPD Approval (For Office Use Only) - Approval Expires on 10/14/2027

Date: 10/11/2021

Name: William Staehlin Title: Senior Structural Engineer

Special Seismic Certification Valid Up to: SDS (g) = See Above z/h = See Above

Condition of Approval (if applicable): DATE: 10/11/2021



SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	TABLE 1a
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems	

Certified Product Construction Summary:
NEMA Type 1 and 3R enclosures constructed of carbon steel. Copper bus.

Certified Options Summary:
Voltage rating from 2.4 kV to 38 kV. Bus Ampacity ratings from 600A to 1200A.
See tables 2 - 5 for a complete listing of optional components.

Mounting Configuration:
Base Mounted - Rigid (Standalone)
Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

Building Code: CBC 2019 **Seismic Certification Limits:** $S_{DS} = 1.78g \quad z/h=1.0$ $I_P = 1.5$
 $S_{DS} = 2.07g \quad z/h=0.0$

Model Line	Model	Dimensions (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Load Interrupting MV Switchgear - Distribution and Auxiliary/Meter Bay	14.75W	37.25	14.75	90	609		Extrap.
		47.25	14.75	90	609		9
	20W	37.25	20	90	750		Interp.
		47.25	20	99.75	900		Interp.
	29.5W	37.25	29.5	90	1100		Interp.
		47.25	29.5	99.75	1388.5		10
		59.12	29.5	108	1150		Interp.
	39.37W	69.25	29.5	118.45	1200		Interp.
		59.12	39.37	108	1685		8

Note: External mounting clips limited to section weight of 1388 lbs. or less

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX



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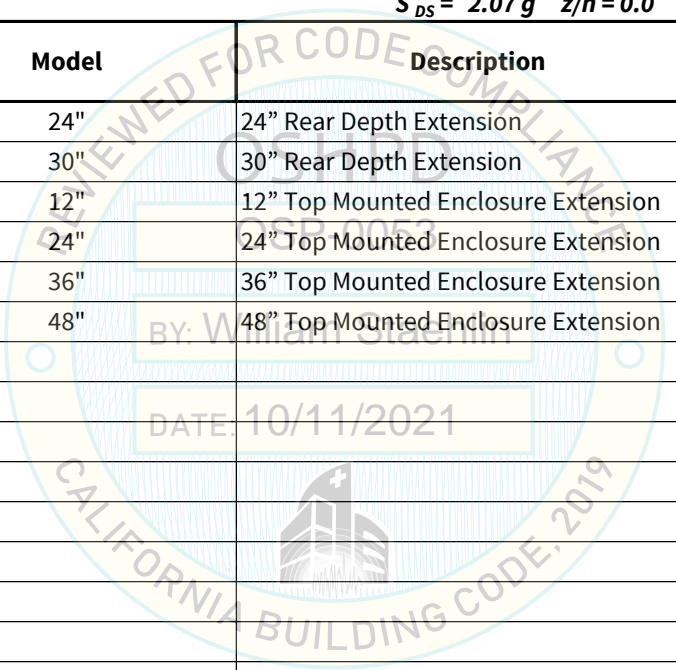
Manufacturer: Square D by Schneider Electric						TABLE 1b	
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems							
Certified Product Construction Summary: NEMA Type 1 and 3R enclosures constructed of carbon steel. Copper bus.							
Certified Options Summary: Voltage rating from 2.4 kV to 38 kV. Bus Ampacity ratings from 600A to 1200A. See tables 2 - 5 for a complete listing of optional components.							
Mounting Configuration: Base Mounted - Rigid (Bayed together) Note: Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.							
Building Code: CBC 2019		Seismic Certification Limits:			$S_{DS} = 1.78 g \quad z/h=1.0$ $S_{DS} = 2.07 g \quad z/h=0.0$		$I_p = 1.5$
Model Line	Model	Dimensions (in)			Weight (lb)	Notes	UUT
		Depth	Width	Height			
Load Interrupting MV Switchgear - Distribution and Auxiliary/Meter Bay	11W	37.25	11	90	210		Extrap.
		47.25	11	99.75	440		Extrap.
	14W	60	14	90	310		Extrap.
		37.25	14.75	90	609	Both sections 609 lbs.	6a,6b ¹
	14.75W	47.25	14.75	99.75	545	Depopulated Transition Section	3a ¹
		47.25	14.75	99.75	700		Interp.
	17.75W	37.25	17.75	90	210		Interp.
	20W	37.25	20	90	750		Interp.
		47.25	20	99.75	900		Interp.
	24W	56.12	24	108	510		Interp.
		56.12	24	118.45	710		Interp.
	29.5W	37.25	29.5	90	1100		Interp.
		47.25	29.5	99.75	1325		3b ¹
		59.12	29.5	108	1150		Interp.
		69.25	29.5	118.45	1200		Interp.
39.37W	59.12	39.37	108	1685		Interp.	
Note: 1) The total weight of the ganged units is on the UUT summary							

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX



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Manufacturer: Square D by Schneider Electric		Table Description: Enclosure Extensions			
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems					
Building Code: CBC 2019		Seismic Certification Limits:		$I_p = 1.5$	
		$S_{DS} = 1.78 g \quad z/h = 1.0$ $S_{DS} = 2.07 g \quad z/h = 0.0$			
Component Type	Manufacturer	Model	Description	Notes	UUT
Rear Extension	Square D	24"	24" Rear Depth Extension		Extrap.
		30"	30" Rear Depth Extension		7
Top Extension	Square D	12"	12" Top Mounted Enclosure Extension		Interp.
		24"	24" Top Mounted Enclosure Extension		Interp.
		36"	36" Top Mounted Enclosure Extension		Interp.
		48"	48" Top Mounted Enclosure Extension		7



SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1801111-CR-001-R0



Manufacturer: Square D by Schneider Electric Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems		Table Description: Voltage Transformers			TABLE 3	
Building Code: CBC 2019		Seismic Certification Limits:			$S_{DS} = 1.78 g \quad z/h = 1.0$ $S_{DS} = 2.07 g \quad z/h = 0.0$	
					$I_p = 1.5$	
Component Type	Manufacturer	Model	Description	Notes	UUT	
Voltage Transformers	ITI/GE	PTG3160242FGC1	2400V/120V; Cu windings; 34 lbs.		1	
		PT*	3000V/120V; Cu windings; 34 lbs.		Interp.	
		PT*	4200V/120V; Cu windings; 34 lbs.		Interp.	
		PT*	7200V/120V; Cu windings; 85 lbs.		Interp.	
		PT*	8400V/120V; Cu windings; 85 lbs.		Interp.	
		PT*	12000V/120V; Cu windings; 85 lbs.		Interp.	
		PTG52SD02293FFG	12470V/120V; Cu windings; 85 lbs.		5	
		PT*	13200V/120V; Cu windings; 125 lbs.		Interp.	
		PT*	13800V/120V; Cu windings; 125 lbs.		Interp.	
		PT*	16500V/120V; Cu windings; 125 lbs.		Interp.	
		PT*	20780V/120V; Cu windings; 125 lbs.		Interp.	
		PT*	22860V/120V; Cu windings; 125 lbs.		Interp.	
		PT*	23000V/120V; Cu windings; 125 lbs.		Interp.	
		PT*	24940V/120V; Cu windings; 125 lbs.		Interp.	
		PT*	26400V/120V; Cu windings; 125 lbs.		Interp.	
				PT61125SD03591	27000V/120V; Cu windings; 125 lbs.	

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1801111-CR-001-R0



Manufacturer: Square D by Schneider Electric	Table Description: Control Power Transformers	TABLE 4
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems		

Building Code: CBC 2019	Seismic Certification Limits:	$S_{DS} = 1.78 g$ $z/h = 1.0$	$I_p = 1.5$
		$S_{DS} = 2.07 g$ $z/h = 0.0$	

Component Type	Manufacturer	Model	Description	Notes	UUT
Control Power Transformers	ITI/GE	CPTS3605242A	5 kVA/2400V/240V/120V; Cu Windings; 165 lbs.		2
		CPTS36054161A	5 kVA/4160V/240V/120V; Cu Windings; 165 lbs.		Interp.
		CPTS3605482A	5 kVA/4800V/240V/120V; Cu Windings; 165 lbs.		Interp.
		CPTS5955722A	5 kVA/7200V/240V/120V; Cu Windings; 165 lbs.		Interp.
		CPTS5955123A	5 kVA/12000V/240V/120V; Cu Windings; 165 lbs.		Interp.
		CPTS59551242A	5 kVA/12470V/240V/120V; Cu Windings; 165 lbs.		Interp.
		CPTS59551322A	5 kVA/13200V/240V/120V; Cu Windings; 165 lbs.		Interp.
		CPTS36010242A	10 kVA/2400V/240V/120V; Cu Windings; 250 lbs.		Interp.
		CPTS360104161A	10 kVA/4160V/240V/120V; Cu Windings; 250 lbs.		Interp.
		CPTS36010482A	10 kVA/4800V/240V/120V; Cu Windings; 250 lbs.		Interp.
		CPTS59510722A	10 kVA/7200V/240V/120V; Cu Windings; 250 lbs.		Interp.
		CPTS59510123A	10 kVA/12000V/240V/120V; Cu Windings; 250 lbs.		Interp.
		CPTS595101242A	10 kVA/12470V/240V/120V; Cu Windings; 250 lbs.		Interp.
		CPTS595101322A	10 kVA/13200V/240V/120V; Cu Windings; 250 lbs.		Interp.
		CPTS36015242A	15 kVA/2400V/240V/120V; Cu Windings; 290 lbs.		Interp.
		CPTS360154161A	15 kVA/4160V/240V/120V; Cu Windings; 290 lbs.		Interp.
		CPTS36015482A	15 kVA/4800V/240V/120V; Cu Windings; 290 lbs.		Interp.
		CPTS59515722A	15 kVA/7200V/240V/120V; Cu Windings; 290 lbs.		Interp.
		CPTS59515123A	15 kVA/12000V/240V/120V; Cu Windings; 290 lbs.		Interp.
		CPTS595151242A	15 kVA/12470V/240V/120V; Cu Windings; 290 lbs.		5
		CPTS595151322A	15 kVA/13200V/240V/120V; Cu Windings; 290 lbs.		Interp.
		CPT36025242A	25 kVA/2400V/240V/120V; Cu Windings; 411 lbs.		Interp.
		CPT360254161A	25 kVA/4160V/240V/120V; Cu Windings; 411 lbs.		2
CPT36025482A	25 kVA/4800V/240V/120V; Cu Windings; 411 lbs.		Interp.		

SPECIAL SEISMIC CERTIFICATION CERTIFIED SUBCOMPONENT MATRIX

1801111-CR-001-R0



Manufacturer: Square D by Schneider Electric	Table Description: Electrical Components	TABLE 5
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems		

Building Code: CBC 2019	Seismic Certification Limits:	$S_{DS} = 1.78 g$ $z/h = 1.0$	$I_p = 1.5$
		$S_{DS} = 2.07 g$ $z/h = 0.0$	

Component Type	Manufacturer	Model	Description	Notes	UUT
Load Interrupter Switch (OTM or SEM)	Schneider Electric	44046-754-66 / 44046-753-66	5kV/600A; 35 lbs.	UUT: OTM and SEM	6
		44*	5 - 17.5kV/600 - 1200A; 35 lbs.		Interp.
		44044-241-51	17.5kV/1200A; 35 lbs.	UUT: OTM	3
		44*	25.8 - 38kV/600A; 35 lbs.		Interp.
		44044-242-51	27kV/600A; 35 lbs.	UUT: SEM	8
Motor Operator	Schneider Electric	44046-123-54	Load interrupter switch motor operator		8
Surge Arresters (Distribution, Intermediate or Station Class)	General Electric	9L20FXX003XHS	3kV; 2.9 lbs.		1
		9L*	6-12kV; 3.3 - 4.3 lbs.		Interp.
		9L20FXX015XHS	15kV; 5.6 lbs.		5
		9L*	18-21kV; 5.6 - 6.2 lbs.		Interp.
		9L20FXX024XHS	24kV; 8.3 lbs.		2
High Frequency Transient Surge Suppressors	Simotech	M*	3.3-7.2kV; 35.3 lbs		Extrap.
		M3-4.16kV	4.16kV; 35.3 lbs.		4
		M*	11-13.8kV; 41.9 lbs.		Interp.
		M3-12.5kV	12.5kV; 41.9 lbs.		4

Notes:
1. Switch type is either OTM (over-throw mechanism) or SEM (stored energy mechanism). Both switch types can be manually or motor operated.

UNIT UNDER TEST (UUT) SUMMARY SHEET



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems

UUT	Unit Description	Report Number	Testing Laboratory	S _{DS}	z/h	I _p
1	1-15 kV, NEMA 3R, Non Walk-in MasterClad Switchgear	SEESL-2014-11 Rev 4 (UUT1)	SEESL	1.92	1	1.5
				2.11	0	
2	27-38 kV, NEMA 3R, Non Walk-in MasterClad Switchgear	SEESL-2014-11 Rev 4 (UUT2)	SEESL	1.88	1	1.5
				2.10	0	
3	2.4-17.5 kV, NEMA 3R, HVL/cc Load Current Interrupter Switchgear	SEESL-2014-11 Rev 4 (UUT3)	SEESL	1.88	1	1.5
				2.10	0	
4	1-15 kV, NEMA 1, HVL Load Interrupter Switchgear	SEESL-2014-11 Rev 4 (UUT4)	SEESL	1.88	1	1.5
				2.10	0	
5	5-15 kV, NEMA 3R, Non Walk-in MasterClad / HVL Switchgear	PEER-STI/2014-04R Rev01 (UUT1)	PEER	1.88	1	1.5
				2.70	0	
6	2.4-17.5 kV NEMA Type 1 HVL/cc Load Current Interrupter Switchgear	50246-1 (UUT-1, Config 1)	Wyle (NTS Huntsville)	2.06	1	1.5
				2.38	0	
7	2.4-17.5 kV, NEMA 1, HVL/cc Load Current Interrupter Switchgear	58835R11 (UUT1)	Wyle (NTS Huntsville)	1.78	1	1.5
				3.30	0	
8	27-38 kV, NEMA 1, HVL/cc Load Current Interrupter Switchgear	71369R13 (UUT1)	Wyle (NTS Huntsville)	1.98	1	1.5
				2.07	0	
9	2.4-17.5 kV NEMA Type 1 HVL/cc Load Current Interrupter Switchgear, Single Section	50246-1 (UUT-1, Config 4)	Wyle (NTS Huntsville)	2.46	1	1.5
				2.46	0	
10	15kv, Nema 3R, HVL/cc Load Current Interrupter Switchgear	15602 (UUT3)	ETL	2.00	1	1.5
				2.50	0	

Notes:

UNIT UNDER TEST (UUT) SUMMARY SHEET



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 1
Model Line: MasterClad	
Model Number: FO# 34089617-006 Serial Number: N/A	

Product Construction Summary:
NEMA Type 3R outdoor, non walk-in enclosure constructed of carbon steel.

Options/Subcomponent Summary:
1200 Copper Main Bus, SEL-300G Relay, SEL-849 Relay, GE 239 Relay, S7750A0C0B6C1A0A Power Meter, S42 Relay, PTG3160242FGC1 Voltage Transformer, PTG42SD03823FFB Voltage Transformer, VR-05025-12 Circuit Breaker, 9L20FXX003XHS Surge Arrester

<i>UUT Properties</i>						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
4240	109	36	109	13.9	7.5	22.0

<i>UUT Highest Passed Seismic Run Information</i>								
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 (2010)	1.92 2.11	1.0 0.0	1.5	3.07	2.3	1.41	0.57

Test Mounting Details:



Rigid base mounted using four (4) 1/2" Grade 8 bolts with Belleville conical spring washers torqued to 107 ft.-lbs. 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



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 2
Model Line: MasterClad	
Model Number: FO# 34089617-001	
Serial Number: N/A	

Product Construction Summary:
NEMA Type 3R outdoor, non walk-in enclosure constructed of carbon steel.

Options/Subcomponent Summary:
2000 Copper Main Bus, 7805D Relay, GE C60 Relay, 870 Power Meter, VR-27040-20 Circuit Breaker, 9L20FXX024XHS Surge Arrester, CPTS3605242A Control Power Transformer, CPT360254161A Control Power Transformer, 9F60DNJ007 Fuse, JDL26250C Circuit Breaker, PT611255D03591 Voltage Transformer

<i>UUT Properties</i>						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
9690	127	72	109	10.3	5.1	16.0

<i>UUT Highest Passed Seismic Run Information</i>								
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 (2010)	1.88	1.0	1.5	3.01	2.26	1.41	0.57
		2.10	0.0					

Test Mounting Details:



Rigid base mounted using six (6) 1/2" Grade 8 bolts with Belleville conical spring washers torqued to 107 ft.-lbs.
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



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 3
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems	
Model Number: FO# 34206074-001 Serial Number: N/A	

Product Construction Summary:
NEMA Type 3R outdoor, non walk-in enclosure constructed of carbon steel. UUT3 is comprised of a 14.75" wide x 47.25" deep HVL/cc Transition Section (UUT-3a) connected to a 29.5" wide x 47.25" deep HVL/cc Distribution Section (UUT-3b)

Options/Subcomponent Summary:
1200 Copper Main Bus, 175GDMSJD10E Fuse, 175GXMSJD100E Fuse, 55GFMSJD450E Fuse, 44044-241-51 Switch

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1870	47.25	44.25	99.75	15.2	10.3	>33.3

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 (2010)	1.88	1.0	1.5	3.01	2.26	1.41	0.57	
		2.10	0.0						

Test Mounting Details:

MOUNTING BRACKET DETAIL

Rigid base mounted using (4) 7 ga. external mounting brackets with (1) 1/2" Grade 5 bolt each, with Belleville conical spring washer and nut torqued to 75 ft.-lbs.
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



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 4
Model Line: HVL	
Model Number: FO# 34206074-002	
Serial Number: N/A	

Product Construction Summary:
NEMA Type 1, enclosure constructed of carbon steel.

Options/Subcomponent Summary:
2000 Copper Main Bus, 44036-340-50 Switch, 44040-803-50 Switch, M3-12.5kV Surge Suppressor, M3-4.16kV Surge Suppressor, 155GXQSJD200E Fuse, 423D815A47 Fuse, 9L20FXX018XHS Surge Arrester, T87 Relay, 44038-650-50 Motor Operator

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
2975	54.5	76	90	15.5	8.9	>33.3

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 (2010)	1.88	1.0	1.5	3.01	2.26	1.41	0.57
		2.10	0.0					

Test Mounting Details:



Rigid base mounted using six (6) 3/8" Grade 8 bolts with Belleville conical spring washers torqued to 44 ft.-lbs.
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



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 5
Model Line: MasterClad/HVL	
Model Number: FO# 17-30209756-002	
Serial Number: N/A	

Product Construction Summary:
NEMA Type 3R outdoor, non walk-in enclosure constructed of carbon steel. Combination HVL (side 5b)/MasterClad (side 5a)

Options/Subcomponent Summary:
2000 Copper Main Bus, VR-15050-20 Circuit Breaker, 9L20FXX015XHS Surge Arrester, CPTS595151242A Control Power Transformer, PTG52SD02293FFG Voltage Transformer, S24 Relay, S7330A0B0B0E0A0 Power Meter, 44039-398-52 Switch

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
7700	109	84	109	7.0	5.1	17.8

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 (2010)	1.88	1.0	1.5	3.01	2.26	1.81	0.73
		2.70	0.0					

Test Mounting Details:



Rigid base mounted using six (6) 0.12" by 12" long tie down filet welds, (3) in front and (3) in back.
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



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 6
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems	
Model Number: FO# 17440675-007 Serial Number: N/A	

Product Construction Summary:
NEMA Type 1, enclosure constructed of carbon steel.

Options/Subcomponent Summary:
1200 Copper Main Bus, 55GDMSJ100E Fuse, 55GDMSJD50E Fuse, 44046-754-66 SEM Switch, 44046-753-66 OTM Switch.

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1218	37.25	29.5	90	11.5	5.3	17.0

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 (2010)	2.06	1.0	1.5	3.3	2.74	1.59	0.64
		2.38	0.0					

Test Mounting Details:

Rigid base mounted using eight (8) 3/8-16 grade 5 bolts and Belleville conical spring washers at 35 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



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 7
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems	
Model Number: FO# 17-30373199-001 Serial Number: N/A	

Product Construction Summary:
NEMA Type 1, enclosure constructed of carbon steel.

Options/Subcomponent Summary:
600 Copper Main Bus, 14.75" x 30" x 90" Rear Extension, 14.75" x 67.25" x 48" Top Extensions, 175GFMSJD65E Fuse, 44044-241-51 Switch

UUT Properties

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1555	67.25	29.5	142	15.0	4.0	14.5

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 (2010)	1.78	1.0	1.5	2.85	2.14	2.21	0.89
		3.30	0.0					

Test Mounting Details:



Rigid base mounted using ten (10) 3/8" Grade 5 bolts and Belleville conical spring washers torqued to 35 ft.-lbs. 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



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 8
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems	
Model Number: FO# 17-32879443-235 Serial Number: N/A	

Product Construction Summary:
NEMA Type 1, enclosure constructed of carbon steel.

Options/Subcomponent Summary:
600 Copper Main Bus, 258GXQSD65E Fuse, 9L20FXX027XHS Surge Arrester, 44044-242-51 Switch, 44046-123-54 Motor Operator Assembly

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1685	59.12	39.37	108	10.5	6.1	>33.3

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 (2010)	1.98	1.0	1.5	3.17	2.38	1.39	0.56
		2.07	0.0					

Test Mounting Details:



Rigid base mounted using six (6) 3/8" Grade 5 bolts and Belleville conical spring washers torqued to 35 ft.-lbs.
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



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 9
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems	
Model Number: FO# 17-32879443-235 Serial Number: N/A	

Product Construction Summary:
NEMA Type 1, enclosure constructed of carbon steel.

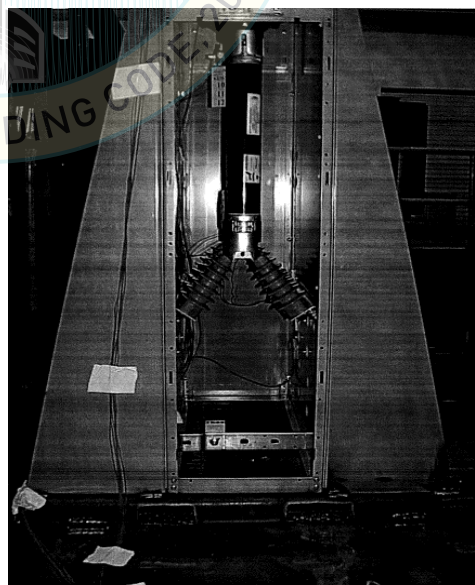
Options/Subcomponent Summary:
1200A Copper Main Bus, SEM Switch (5kV, 600A)

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width ¹	Height	Front-Back	Side-Side	Vertical
609	47.25	14.75	90	11.5	10.0	33.0

¹Width including the outriggers is 59 in.

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 (2010)	2.46	1.0	1.5	3.94	2.95	1.64	0.66
		2.46	0.0					

Test Mounting Details:



Rigid base mounted using four (4) 3/8" Grade 5 bolts and Belleville conical spring washers torqued to 35 ft.-lbs. Outriggers mounted to UUT at each corner (see next page for details).

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

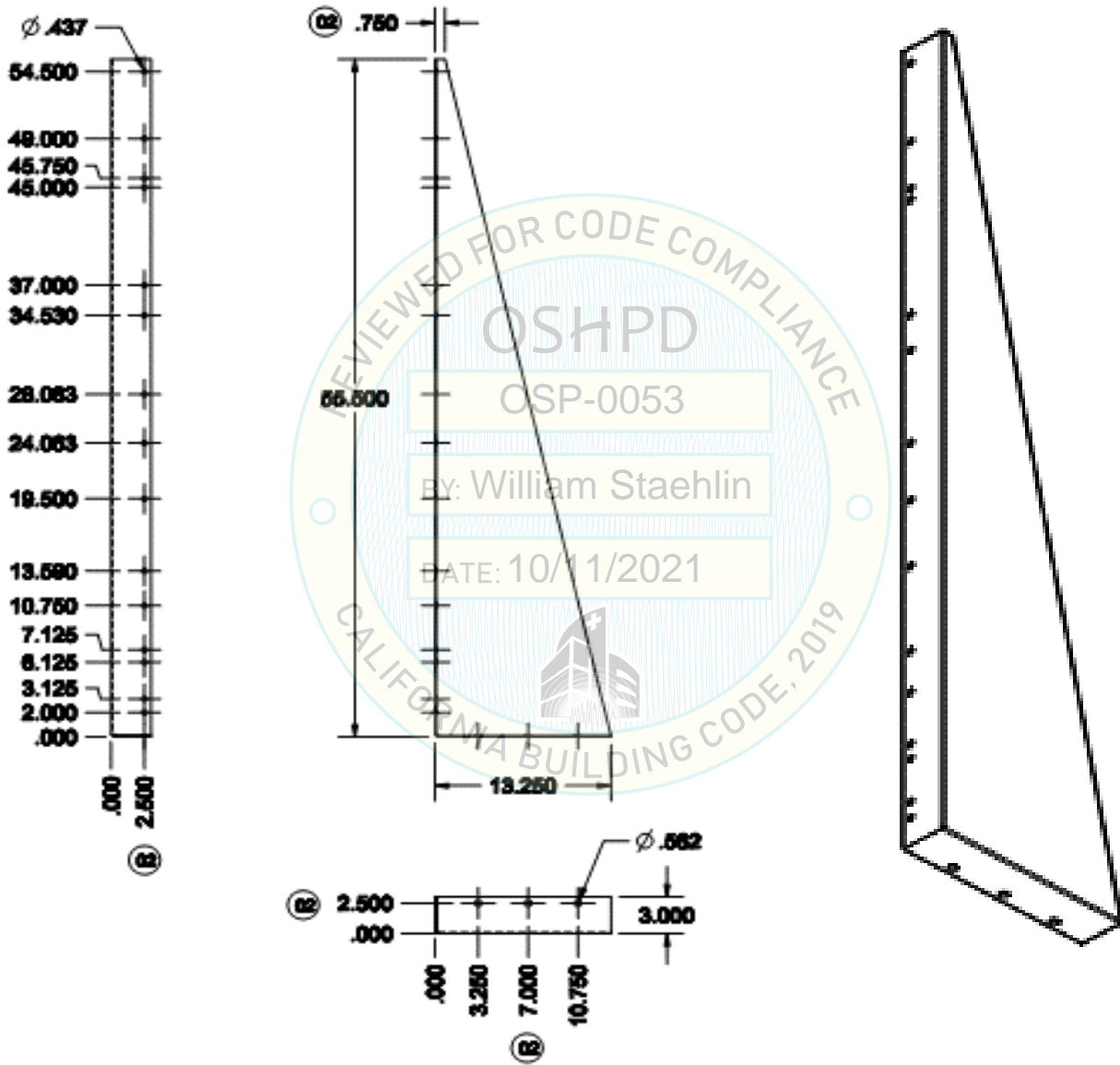


1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems
Model Number: FO# 17-32879443-235 **Serial Number:** N/A

UUT 9

Support fabrication drawings:



- NOTES:**
- 1.) MATERIAL: 11 GA STEEL PER E26802
 - 2.) FINISH: PAINT PER E27131-CI
 - 3.) BEND RADIUS: PER 80030-D6-002

UNIT UNDER TEST (UUT) SUMMARY SHEET



1801111-CR-001-R0

Manufacturer: Square D by Schneider Electric	UUT 10
Model Line: HVL/cc Metal Enclosed Load Interrupting Switchgear Systems	
Model Number: 42191916-003 Serial Number: N/A	

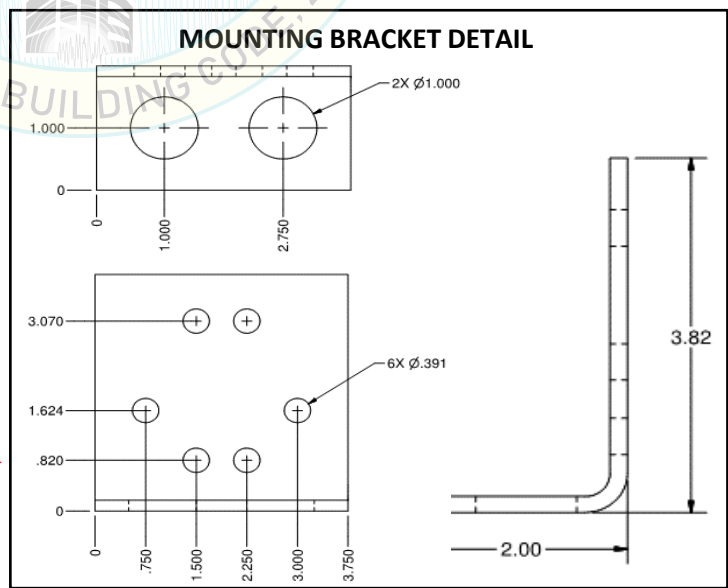
Product Construction Summary:
NEMA Type 3R, non walk-in enclosure constructed of carbon steel.

Options/Subcomponent Summary:
9L11XPM015S 15kV Surge Arrester, 44044-241-51 OTM Switch Mechanism

UUT Properties						
Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
1388.5	47.25	29.5	99.75	25.96	6.17	>33

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 (2010)	2.0	1.0	1.5	3.2	2.4	1.67	0.67	
		2.5	0.0	1.5					

Test Mounting Details:



Rigid base mounted using (4) 7 ga. external mounting brackets with (1) 1/2" diameter Grade 5 bolt each, torqued to 65 ft-lbs. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.