APPLICATION FOR OSHPD SPECIAL SEISMIC	OFFICE USE ONLY					
CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #: OSP - 0637					
OSHPD Special Seismic Certification Preapproval (OSP)						
Type: New Renewal						
Manufacturer Information						
Manufacturer: Square D by Schneider Electric						
Manufacturer's Technical Representative: Scott Littler, Principal Tech	inical Expert					
Mailing Address: 330 Weakley Lane, Smyrna, TN 37167						
Telephone: 615-267-9407 Email: scott.li	ttler@se.com					
Product Information	MA					
Product Name: EXN OSAPD	Ty.					
Product Type: Dry-Type Transformers (15kVA to 150kVA) 637	A CANADA					
Product Model Number: Varies (see attachment) (List all unique product identification numbers and/or part numbers)	nd					
General Description: Aluminum and Copper wound transformers from	om 15kVA to 150kVA					
DATE: 07/13/2020						
Mounting Description: Base Mounted and Wall Mounted - Rigid	20					
	2					
Applicant Information	ODE.					
Applicant Company Name: TRU Compliance, by Structural Integrity A	ssociates, Inc					
Contact Person: Galen Reid						
Mailing Address: 233 SW Wilson Ave, Suite 101, Bend, OR 97702						
Telephone: 844-TRU-0200 Email: greid@	<u>structint.com</u>					
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: <u>12/26/2019</u>					
Title: Program Manager Company Name: TRU C	Compliance, by Structural Integrity Associates, Inc					

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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: Other (Please Specify): BY: Timothy J Piland
Testing Laboratory DATE: 07/13/2020
Company Name: Structural and Earthquake Engineering and Simulation Laboratory (SEESL) Contact Name: Mark Pitman Mailing Address: 212 Ketter Hall, North Campus, Buffalo, NY 14260
Telephone: 716-645-4377 Email: mpitman@buffalo.edu





OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Seismic Parameters
Design in accordance with ASCE 7-10 Chapter 13: ⊠ Yes ☐ No
Design Basis of Equipment or Components $(F_p/W_p) = 1.01 (z/h = 1), 0.90 (z/h = 0)$
S _{DS} (Design spectral response acceleration at short period, g) = 1.40 (z/h = 1), 2.00 (z/h = 0)
a _p (In-structure equipment or component amplification factor) = 1.0
R _p (Equipment or component response modification factor) =2.5
Ω_0 (System overstrength factor) =2
I _P (Importance factor) = 1.5
z/h (Height factor ratio) = 1; 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) = By:Timothy J Piland
C _d (Deflection amplification factor) =
I_P (Importance factor) = 1.5 DATE: $07/13/2020$
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
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025
1/1/00
Signature: Date: July 13, 2020
Print Name: Timothy J. Piland Title: SSE
Special Seismic Certification Valid Up to: $S_{DS}(g) = \underline{See \ Above}$ $z/h = \underline{See \ Above}$
Condition of Approval (if applicable):

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SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX



 $S_{DS} = 1.4 g z/h = 1.0$

1900782-CR-001 R0

Manufacturer:	Schneider Electric	TABLE 1
Model Line:	FXN	IADLE I

Certified Product Construction Summary:

Carbon steel enclosures.

Certified Options Summary:

Aluminum or Copper Windings.

Mounting Configuration:

/aries

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

Building Code: CBC 2019 Seismic Certification L		on Limits:	S _{DS} =	2.0 g z/h=0.0	/ P=	1.5		
Model Line	Enclosure	Dimensions (in)			Weight	Power Rating	Type	UUT
	Eliciosure	Depth	Width	Height	(lb)	(kVA)	Type	001
	17 <mark>M</mark>	B21.0in	21.5/	24.0	195	15	2, 3R	Extrap.
EVN	18 <mark>M</mark>	24.6	25.5	28.3	345	30 or 15	2, 3R	Extrap.
EXN 3-Phase	19 <mark>M</mark>	26.0	25,5	29,3	416	45 or 30	2, 3R	Extrap.
Aluminum Wound	20M	27.4	30.0	33.5	570	75 or 45	2, 3R	Extrap
Adminiani Wodina	21M	28.4	31.3	37.5	949	112.5 or 75	2, 3R	Extrap
	22M	32.6	33.7	40.6	1190	150 or 112.5	2, 3R	5,9
	17M	21.0	21.5	24.0	237	15	2, 3R	Extrap
EVN	18M	24.6	25.5	28.3	407	30 or 15	2, 3R	Extrap
EXN — 3-Phase —	19M	26.0	25.5	29.3	475	45 or 30	2, 3R	4
Copper Wound	20M	27.4	30.0	33.5	690	75 or 45	2, 3R	Interp.
copper Wound	21M	28.4	31.3	37.5	1146	112.5 or 75	2, 3R	Interp.
	22M	32.6	33.7	40.6	1395	150 or 112.5	2, 3R	2,8

SPECIAL SEISMIC CERTIFICATION CERTIFIED COMPONENT MATRIX



 $S_{DS} = 1.4 g z/h = 1.0$

1900782-CR-001 R0

Manufacturer:	Schneider Electric	TABLE 2
Model Line:	FXN	IADLEZ

Certified Product Construction Summary:

Carbon steel enclosures.

Certified Options Summary:

Aluminum or Copper Windings.

Mounting Configuration:

Wall mounted - rigid (using manufacturer provided wall brackets)

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

1.5	/ _P =	1.4 g z/h=1.0 2.0 g z/h=0.0		Seismic Certification Limits:		CBC 2019	Building Code:	
	T	Power Rating	Weight	Dimensions (in)		F &	Modelline	
UUT	Type	(kVA)	(lb)	Height	Width	Depth	Enclosure	Model Line
Extrap.	2, 3R	15	195	24.0	21.5/	R21.0	17 <mark>M</mark>	EVAL
Extrap.	2, 3R	30 or 15	345	28.3	25.5	24.6	18 <mark>M</mark>	EXN - 3-Phase -
Extrap.	2, 3R	45 or 30	416	29,3	25,5	26.0	19 <mark>M</mark>	Aluminum Wound
11	2, 3R	75 or 45	570	33.5	30.0	27.4	20M	Adminiant Wound
Extrap.	2, 3R	15	237	24.0	21.5	21.0	17M	E)(A)
Extrap.	2, 3R	30 or 15	407	28.3	25.5	24.6	18M	EXN -
Extrap.	2, 3R	45 or 30	475	29.3	25.5	26.0	19M	3-Phase Copper Wound –
10	2, 3R	75 or 45	690	33.5	30.0	27.4	20M	Copper Wound
					TOILL			



1900782-CR-001 R0

Manufacturer:	Schneider Electric					
Model Line:	EXN					
UUT	Unit Description	Report Number	Testing Laboratory	S _{DS}	z/h	I _P
2	150 kVA Copper 22M Enclosure	1900466-TR-001 R0	SEESL	1.4 2.0	1.0 0.0	1.5
4	45 kVA Copper 19M Enclosure	1900466-TR-001 R0	SEESL	1.65 2.5	1.0 0.0	1.5
5	150 kVA Aluminum 22M Enclosure	1900466-TR-001 R0	SEESL	1.4 2.0	1.0 0.0	1.5
8	150 kVA Copper 22M Enclosure	1900466-TR-001 R0	SEESL	1.4 2.0	1.0 0.0	1.5
9	150 kVA Aluminum 22M Enclosure	1900466-TR-001 R0	SEESL	1.4 2.0	1.0 0.0	1.5
10	75 kVA Copper 20M Enclosure	1900466-TR-001 R0 3 7	SEESL	1.65 2.5	1.0 0.0	1.5
11	75 kVA Aluminum 20M Enclosure	1900466-TR-001 R0	and	1.65 2.5	1.0 0.0	1.5
	CAL	DATE: 07/13/2020	CODE 100			
		PNIA BUILDING				
Notes:			1	1		1



UUT 2

1900782-CR-001 R0

Manufacturer: Schneider Electric

Model Line: EXN

Model Number: EXN150T3HBCU Serial Number: N/A

Product Construction Summary:

150 kVA, 22M, NEMA Type 2 carbon steel enclosure, copper windings

Options/Subcomponent Summary:

U	JU	T PI	rop	erti	ies

Weight Dimension (in)				Lowest	Natural Frequen	cy (Hz)
(lb)	Depth	/ Width	OSHeight37	Front-Back	Side-Side	Vertical
1395	32.6	33.7	40.6	2.5	7.0	10.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2019	ICC-ES AC156 (2015) / 1 (3/2/42(1.0	1.5	2.24	1.68	1.33	0.53

Test Mounting Details:



UUT was rigid base mounted using (4) 7/16"-14 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.

844-TRU-0200 | info@trucompliance.com



UUT 4

1900782-CR-001 R0

Manufacturer: Schneider Electric

Model Line: EXN

Model Number: EXN45T3HBCU Serial Number: N/A

Product Construction Summary:

45kVA, 19M, NEMA Type 2 carbon steel enclosure, copper windings

Options/Subcomponent Summary:

UUT Properties	
n (in)	Lowest I

weight		Dimension (in)		Lowest	Natural Frequen	cy (Hz)
(lb)	Depth	Width	OSHeigh637	Front-Back	Side-Side	Vertical
475	26	25.5	29.3	3.0	10.8	10.3

UUT Highest Passed Seismic Run Information

Building Code	Test Criteria	S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2019	ICC ES ACIECTORES / 1	1,65	1.0	1.5	2.64	1.00	1.67	0.67
	ICC-ES AC156 (2015)	2.5	0.0	1.5	2.64	1.98	1.67	0.67

Test Mounting Details:



UUT was rigid base mounted using (4) 7/16"-14 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.



UUT5

1900782-CR-001 R0

Manufacturer: Schneider Electric

Model Line: EXN

Model Number: EXN150T3HB Serial Number: N/A

Product Construction Summary:

150 kVA, 22M, NEMA Type 2 carbon steel enclosure, aluminum windings

Options/Subcomponent Summary:

UUT	Prop	perties	MM *

Weight		Dimension (in)	Lowest Natural Frequency (Hz)				
(lb)	Depth Width SHe		OSHeight37	Front-Back	Side-Side	Vertical		
1190	32.6	33.7	40.6	2.3	6.6	7.5		

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 AC1EC (201EX / 1	2/4/20	1.0	1.5	2.24	1.00	1 22	0.53
	ICC-ES AC156 (2015)	2.0	0.0	1.5	2.24	1.68	1.55	0.53

Test Mounting Details:



UUT was rigid base mounted using (4) 7/16"-14 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.

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UUT8

1900782-CR-001 R0

Manufacturer: Schneider Electric

Model Line: EXN

Model Number: EXN150T3HBCU Serial Number: N/A

Product Construction Summary:

150 kVA, 22M, NEMA Type 2 carbon steel enclosure, copper windings

Options/Subcomponent Summary:

			UUT Pr	roperties		7					
Weight	Dimension (in)				Lowest Natural Frequency (Hz)						
(lb) Depth		Width	OSHe	Front	t-Back	Side	-Side	Vertical			
1395	32.6	33.7	4	0.6	//////2	2.6	9	.3	11.0		
		UUT Highe.	st Passed S	eismic Rur	ı Informa	ation					
Buildi	Building Code		Test Criteria		z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	

WED FOR CODE COMPS,

Building Code	Test Criteria	S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBC 2019	ICC ES ACTECTORES / 1	2/4/40	1.0	1.5	2.24	1.68	1.33	0.53
	ICC-ES AC156 (2015) / 1	2.0	0.0					

Test Mounting Details:



UUT was rigid base mounted using (4) 1/2" Grade 5 bolts and washers in manufacturer provided external mounting brackets. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.



UUT9

1900782-CR-001 R0

Manufacturer: Schneider Electric

Model Line: EXN

Model Number: EXN150T3HB Serial Number: N/A

Product Construction Summary:

150 kVA, 22M, NEMA Type 2 carbon steel enclosure, aluminum windings

Options/Subcomponent Summary:

			UUT Properties			
Weight		Dimension (in		Lowest	Natural Frequen	ncy (Hz)
(lb)	Depth	Width	OSHeight37	Front-Back	Side-Side	Vertical
1190	32.6	33.7	40.6	2.3	6.9	11.9

JED FOR CODE COMS,

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 TS AC1EC/201EX / 1	1440	1.0	1 5	2.24	1.00	1 22	0.53
	ICC-ES AC156 (2015)	2.0	0.0	1.5	2.24	1.68	1.33	0.53

Test Mounting Details:



UUT was rigid base mounted using (4) 1/2" Grade 5 bolts and washers in manufacturer provided external mounting brackets. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.



UUT 10

1900782-CR-001 R0

Manufacturer: Schneider Electric

Model Line: EXN

Model Number: EXN75T3HBCU Serial Number: N/A

Product Construction Summary:

75 kVA, 20M NEMA Type 2 carbon steel enclosure, copper windings

Options/Subcomponent Summary:

					INTERNATION CONTRACTOR						
			UUT Pro	operties		7					
Weight		Dimension (in)			Lowest Natural Frequency (Hz)						
(lb) Depth		/ Width	OSHeight37		Front-Back		Side-Side		Vertical		
690	27.4	30	33	3.5	.5 N/A		N	/A	N/A		
		UUT Highes	t Passed Se	eismic Run	Inform	ation					
Buildi	ing Code	Test Crite	eria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)	
CD	C 2019	ICC ES AC1EO	±20€ / 1 °	1,65	1.0	1.5	2.64	1.00			
CBC	2019	ICC-ES AC156 (2015)		2.5	0.0	1.5	2.64 1.98		1.67	0.67	

Test Mounting Details:



UUT was rigid wall mounted on manufacturer provided wall brackets using (4) 3/8" Grade 5 bolts and washers securing wall brackets to wall fixture and (4) 3/8" Grade 5 bolts and washers securing unit to wall brackets.

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

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UUT 11

1900782-CR-001 R0

Manufacturer: Schneider Electric

Model Line: EXN

Model Number: EXN75T3HB Serial Number: N/A

Product Construction Summary:

75 kVA, 20M NEMA Type 2 carbon steel enclosure, aluminum windings

Options/Subcomponent Summary:

			UUT Pr	operties		7					
Weight		Dimension (in)		Lowest Natural Frequency (Hz)						
(lb)	Depth	Width	OSHeigh 637		Front-Back		Side-Side		Vertical		
570	27.4	30 33.5		3.5	N/A		N	/A	N/A		
		UUT Highes	st Passed Se	eismic Rui	n Inform	ation					
Buildi	ng Code	Test Crit	eria	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		166 ES ASTESTAGES / 1 °		1,65	1.0	1.5	2.64	1.00		0.67	
CBC	2013	ICC-ES AC156 (2015)		2.5	0.0	1.5	2.64 1.98		1.67	0.67	

Test Mounting Details:



UUT was rigid wall mounted on manufacturer provided wall brackets using (4) 3/8" Grade 5 bolts and washers securing wall brackets to wall fixture and (4) 3/8" Grade 5 bolts and washers securing unit to wall brackets.

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