



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY
APPLICATION #: OSP - 0443

OSHPD Special Seismic Certification Preapproval (OSP)

Type: [ ] New [X] Renewal

Manufacturer Information

Manufacturer: Rypos, Inc.

Manufacturer's Technical Representative: Gerry Maynard

Mailing Address: 40 Kenwood Circle, Franklin, MA 02038

Telephone: (508) 429-4552 Email: gmaynard@rypos.com

Product Information

Product Name: ISLN Transformers

Product Type: Transformer

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

General Description: Copper winding transformers inside 12 GA. painted carbon steel enclosure.

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

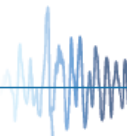
Telephone: 844-878-0200 Email: greid@structint.com

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: [Handwritten Signature] Date: 11/6/2019

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

\*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: 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: 844-878-0200 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): \_\_\_\_\_

BY: Mohammad Aliaari

DATE: 11/02/2020

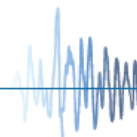
**Testing Laboratory**

Company Name: National Technical Systems - Boxborough

Contact Name: Don Bennet

Mailing Address: 1146 Massachusetts Ave., Boxborough, MA 01719

Telephone: (562) 659-0865 Email: don.bennet@nts.com





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Seismic Parameters

Design in accordance with ASCE 7-10 Chapter 13: [X] Yes [ ] No

Design Basis of Equipment or Components (Fp/Wp) = 1.44 (SDS=2.00g, z/h=1.0), 1.44 (SDS=3.20g, z/h=0.0)

SDS (Design spectral response acceleration at short period, g) = 2.00g (z/h=1.0), 3.20g (z/h=0.0)

ap (In-structure equipment or component amplification factor) = 1.0

Rp (Equipment or component response modification factor) = 2.5

Omega\_0 (System overstrength factor) = 2.0

Ip (Importance factor) = 1.5

z/h (Height factor ratio) = 1.0 (SDS=2.00g), 0.0 (SDS=3.20g)

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 [X] No

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

SDS (Design spectral response acceleration at short period, g) =

SD1 (Design spectral response acceleration at 1 second period, g) =

R (Response modification coefficient) =

Omega\_0 (System overstrength factor) = by: Mohammad Aliaari

Cd (Deflection amplification factor) =

Ip (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 [X] No

List of Attachments Supporting Special Seismic Certification

[X] Test Report(s) [ ] Drawings [ ] Calculations [ ] Manufacturer's Catalog

[X] Other(s) (Please Specify): Product Matrices

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

Signature: M. Aliaari

Date: November 02, 2020

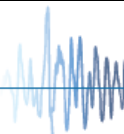
Print Name: Mohammad Aliaari

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 SUBCOMPONENT MATRIX

1901111-CR-001 R0



<b>Manufacturer:</b> Rypos, Inc. <b>Model Line:</b> ISLN Transformers		<b>Table Description:</b> Electrical Components			<b>TABLE 2</b>	
<b>Building Code:</b> CBC 2019		<b>Seismic Certification Limits:</b>			$S_{DS} = 2.0g \quad z/h = 1.0$ $S_{DS} = 3.2g \quad z/h = 0.0$	
					$I_p = 1.5$	
Component Type	Manufacturer	Model	Description	Notes	UUT	
Transformer	TTI	23758	4.125kVA, In: 208VAC, Out: 72/12VDC		Extrap.	
		23757	4.125kVA, In: 480VAC, Out: 72/12VDC		1	
		23753	6 kVA, In: 480 VAC, Out: 100/72VDC		Interp.	
		23759	8kVA, In: 208VAC, Out: 140/72/12VDC		Interp.	
		23761	8kVA, In: 480VAC, Out: 140/72/12VDC		Interp.	
		23763	8kVA, In: 510VAC, Out: 135/72/12VDC		Interp.	
		23760	12.5kVA, In: 208VAC, Out: 200/72/12VDC		Interp.	
		23762	12.5kVA, In: 480VAC, Out: 200/72/12VDC		2	
Fuse	Bussmann	LP-CC-8	8A, UL class CC		1,2	
Fuse Holder	Bussmann	H25030-1C	Single pole, UL class RK250		1,2	
AC/DC Converter	CUI Inc.	VSK-S20-12U-T	12V, 20W		1,2	
Fan	Orion Fans	OA109AP-11-1TB	120x38, 115V, 110CFM	(2) Installed	1,2	
Heat Sink	Wakefield	394-2AB	101x139mm, 1.51 C/W, 0.6 C/W@500LFM		1,2	
Resistor	Panasonic	ERG-3SJ203	20K, 3W, Axial lead	(2) installed	1,2	
Rectifier	Vishay	VS-160MT80KPBF	Bridge rectifier MOD 3PH, 160A, 800V		1,2	
	IXYS	VUO25-08N08	FWB rectifier, single phase		1,2	
Terminal Block	Marathon	985 GP 04	4 pole		1,2	
		986 GP 05	5 pole		1,2	
	TE Connectivity	1546306-2	2 pole		1,2	
Lamp	Jameco Valuepro	2181378	7mm, 12V, incandescent green		1,2	





# UNIT UNDER TEST (UUT) SUMMARY SHEET

**RYPOS**



**1901111-CR-001 R0**

<b>Manufacturer:</b> Rypos, Inc.	<b>UUT 1</b>
<b>Model Line:</b> ISLN Transformers	
<b>Model Number:</b> 175-0031-00-01 <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
12 GA. Carbon steel enclosure. Copper windings.

**Options/Subcomponent Summary:**  
Transformer: TTI - 23757; 4.125kVA, Input - 480 VAC, Output - 72/12 VDC.  
See Table 2 for a list of subcomponents.

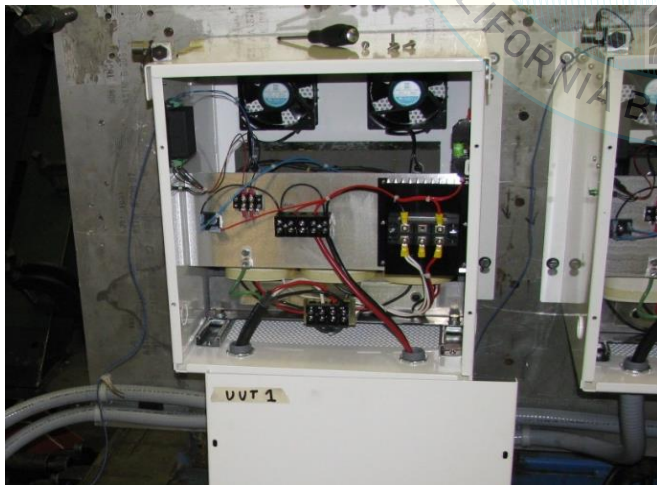
**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
188	15.0	19.2	18.9	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>P</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2019	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85
		3.2	0.0	1.5				

**Test Mounting Details:**



Rigid wall mounted with (4) 3/8" grade 5 bolts. 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

**RYPOS**



**1901111-CR-001 R0**

<b>Manufacturer:</b> Rypos, Inc.	<b>UUT 2</b>
<b>Model Line:</b> ISLN Transformers	
<b>Model Number:</b> 175-0031-00-06 <b>Serial Number:</b> N/A	

**Product Construction Summary:**  
12 GA. Carbon steel enclosure. Copper windings.

**Options/Subcomponent Summary:**  
Transformer: TTI - 23762; 12.5 kVA, Input - 480 VAC, Output - 200/72/12 VDC.  
See Table 2 for a list of subcomponents.

**UUT Properties**

Weight (lb)	Dimension (in)			Lowest Natural Frequency (Hz)		
	Depth	Width	Height	Front-Back	Side-Side	Vertical
256	15.0	19.2	18.9	N/A	N/A	N/A

**UUT Highest Passed Seismic Run Information**

Building Code	Test Criteria	S <sub>DS</sub> (g)	z/h	I <sub>p</sub>	A <sub>FLX-H</sub> (g)	A <sub>RIG-H</sub> (g)	A <sub>FLX-V</sub> (g)	A <sub>RIG-V</sub> (g)
CBC 2019	ICC-ES AC156	2.0	1.0	1.5	3.20	2.40	2.13	0.85
		3.2	0.0	1.5				

**Test Mounting Details:**



Rigid wall mounted with (4) 3/8" grade 5 bolts. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.