

		OFFICE USE ONLY
APPLICATION FOR OSHPD SPECIAL SEISMIC CERTIFICATION PREAPPROVAL (OSP)	APPLICATION #:	OSP - 0136
OSHPD Special Seismic Certification Preapproval (OSP)		
Type: 🗌 New 🛛 Renewal		
Manufacturer Information		
Manufacturer: Hammond Power Solutions, Inc.		
Manufacturer's Technical Representative: <u>Watson Wong</u>		
Mailing Address: _ 595 Southgate Drive, Guelph, Ontario, Canada N1G	3W6	
Telephone: (519) 822-2441	@hammondpowe	rsolutions.com
Product Information	MD,	
Product Name: Transformer Product Families OSHPD	E.	
Product Type: Dry-Type Transformer OSP-0136	Cr.	
Product Model Number: Varies (See Attachment) (List all unique product identification numbers and/or part numbers) On y J Pila General Description: Product lines include a range of kVA ratings fr Transformers. Seismic enhancements made to the test units and mo observed during the tests shall be incorporated into the production units	nd om 0.025 kVA – 3, difications required	
Mounting Description: Varies (See Attachment)	<u> </u>	
Applicant Information	201	
Applicant Company Name:TRU Compliance, by Structural Integrity A	ssociates, Inc.	
Contact Person: Galen Reid		
Mailing Address: _5215 Hellyer Ave., Suite 210, San Jose, CA 95138		
Telephone: 844-878-0200 Email: greid@	<u>)structint.com</u>	
I hereby agree to reimburse the Office of Statewide Health I accordance with the California Administrative Code, 2016.	Planning and De	evelopment review fees in
Signature of Applicant:		Date: 2/20/2019
Title: Program Manager Company Name: TRU C	compliance, by Stru	uctural Integrity Associates, Inc.
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Needs"	MAMAAAA	OSHPD
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY OSH-FD-759 (REV 12/16/15)	. And h hele have	Page 1 of 3



California Licensed Structural Engineer Responsible for the Engineering and Test Report(s)												
Company Name:												
Name: Andrew M. Coughlin California License Number: S6082												
Mailing Address: _5215 Hellyer Ave., Suite 210, San Jose, CA 95138												
Telephone: 844-878-0200 Email: <u>acoughlin@structint.com</u>												
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												
Image: Constraint of the second se												
Testing Laboratory DATE: 04/13/2020												
Company Name: Structural and Earthquake Engineering and Simulation Laboratory (SEESL)												
Contact Name: Mark Pitman												
Mailing Address: 212 Ketter Hall, North Campus												
Telephone: (716) 645-4377 Email: mpitman@buffalo.edu												
Company Name: Environmental Testing Laboratory												
Contact Name: Jeremy Lange												
Mailing Address:11034 Indian Trail, Dallas, TX 75229												
Telephone: (972) 247-9657 Email: jeremy@etIdallas.com												
Company Name: Clark Testing												
Contact Name: Devon Lohr												
Mailing Address: 1801 Route 51												
Telephone: (412) 387-1026 Email: <u>dlohr@clarktesting.com</u>												

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

OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT FACILITIES DEVELOPMENT DIVISION

Seismic Pa	arameters
------------	-----------

Design in accordance with ASCE 7-10 Chapter 13: 🛛 Yes 🗌 No
Design Basis of Equipment or Components $(F_p/W_p) = 1.44 (z/h = 1); 0.90 (z/h = 0)$
S_{DS} (Design spectral response acceleration at short period, g) = 2.00 (z/h = 1); 2.00 (z/h = 0)
a_p (In-structure equipment or component amplification factor) = <u>1</u>
R _p (Equipment or component response modification factor) = <u>2.5</u>
Ω_0 (System overstrength factor) = 2
l _p (Importance factor) = 1.5
z/h (Height factor ratio) = <u>1 (S_{DS} = 2.00); 0 (S_{DS} = 2.00)</u>
Equipment or Component Natural Frequencies (Hz) = <u>See Attachment</u>
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) =
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) =
Ω₀ (System overstrength factor) = By Timothy J Piland
C₄ (Deflection amplification factor) =
I_p (Importance factor) = 1.5 DATE: 04/13/2020
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
A BUILDING
List of Attachments Supporting Special Seismic Certification
🛛 Test Report(s) 🗌 Drawings 🗌 Calculations 🖾 Manufacturer's Catalog
Other(s) (Please Specify): <u>Attachment</u>
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2025
Signatura: April 12, 2020
Signature: Date: April 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):
"Access to Safe, Quality Healthcare Environments that Meet California's Diverse and Dynamic Need
STATE OF CALIFORNIA – HEALTH AND HUMAN SERVICES AGENCY
OSH-FD-759 (REV 12/16/15) Page 3 of 3

Page 3 of 38

TRU PROJECT NO. 1800840



TABLE 1

Manufacturer: Hammond Power Solutions, Inc.

Model Line: Type E Transformers

Certified Product Construction Summary:

NEMA 1 ventilated carbon steel enclosure.

Certified Options Summary:

1 Phase. General purpose enclosed transformer (FusionTM). Octogonal wound core (OWC) copper windings.

Transformer brand name options: Hammond Power Solutions, Inc., Eaton, Square-D Company/Schneider Electric, Siemens Energy and Automation, GE. OSHPD OSP labels are applied by Hammond Power Solutions at the factory and designate units built under this approval.

Mounting Configuration:

Base mounted - rigid

FORCODECON

Building Code:	CBC 2019	Seismic C	Certificatio	on Limits:	S _{DS} =	2.0g z/h=1.0	<i>I</i> _P = <i>1.5</i>	
Model Line	R	Dir	nensions	(in)86	Weight	Notes	UUT	
Model Line	Model	Depth	Width	Height	(lb)	Notes	001	
	0.025 kVA	By ^{5.9} in	10 ² 7	l P3:3ar	3.0		1	
	0.05 <mark>kVA</mark>	6.1	2.9	3.5	3.4	0	Interp	
	0.10 <mark>kVA</mark>	6.3	3.1	3.6	3.9		Interp	
	0.15 k <mark>VA</mark>	6.9	04 _{3.1} 0/	3.6	5.2		Interp	
	0.25 kVA	6.6	3.9	4.3	7.7		Interp	
	0.35 kVA	7.2	3.9	4.3	9.4		Interp	
HPS Fusion [™]	0.50 kVA	7.2	4.6	4.6	13.0		Interp	
(FS Model: 1PH)	0.75 kVA	7.2	5.6	5.1	18.0		Interp	
	1.0 kVA	8.0	86.6LT	5.1	23.0		Interp	
	1.5 kVA	8.5	6.6	6.0	31.0		Inter	
	2.0 kVA	9.1	6.6	6.0	38.0		Inter	
	3.0 kVA	11.7	7.8	6.7	69.0		Inter	
	5.0 kVA	13.4	8.0	7.1	91.0		Inter	
	7.5 kVA	15.1	9.3	8.0	104.0		2	

TRU PROJECT NO. 1800840



TABLE 2.1

Manufacturer:Hammond Power Solutions, Inc.Model Line:Type F and K Transformers (VPI Construction)

Certified Product Construction Summary:

NEMA 3R ventilated carbon steel enclosure. PEM nuts not required below 45kVA.

Certified Options Summary:

NMF: 1 Phase. NMK: 3 Phase. MV1S: 1PH. MV3S: 3 Phase. Energy efficient general purpose (SentinelTM). General purpose medium voltage distribution (MilleniumTM). Vacuum Pressure Impregnated (VPI). Copper and aluminum windings. 600V Class - 34.5 kV Class. Transformer brand name options: Hammond Power Solutions, Inc., Eaton, Square-D Company/Schneider Electric, Siemens Energy and Automation, GE. OSHPD OSP labels are applied by Hammond Power Solutions at the factory and designate units built under this approval.

Mounting Configuration:

Base mounted - rigid

FORCODECON

Building Code:	CBC 2019	Seismic C	Certificati	on Limits:	S _{DS} =	2.0 g z/h=1.0 I _P =	= <i>1.5</i>
Madallina	A A	Dimensions (in) 6			Weight	TT Notes	T
Model Line	Mod <mark>el</mark>	Depth	Width	Height	(lb)	Notes	UUT
	15 k <mark>VA</mark>	B20.1	21.5	22.0	160	UUT: 3PH, Al windings	17
	15 kVA	20.2	19.4	21.5	185	UUT: 1PH, Al windings	5
	25 k <mark>VA</mark>	25.8	23.8	28.8	220		Interp.
	30 kVA	25.8	23.8	28.8	445		Interp.
	45 kVA	25.8	23.8	28.8	430	UUT20/23: 3PH, Al & Cu windings	20, 23
	50 kVA	25.0	26.0	38.0	370		Interp.
	75 kVA	29.5	32.0	41.0	830		Interp.
HPS Sentinel [™] (NMF	100 kVA	29.5	32.0	41.0	650		Interp.
& NMK)	112.5 kVA	29.5	32.0	41.0	1,100		Interp.
HPS Millenium [™]	150 kVA	34.0	39.5	51.5	1,500		Interp.
(MV1S & MV3S)	167 kVA	32.5	32.0	50.0	900		Interp.
	225 kVA	34.0	39.5	51.5	1,600		Interp.
	300 kVA	34.0	39.5	51.5	1,900		Interp.
	500 kVA	38.4	48.5	59.0	2,900		Interp.
	750 kVA	43.4	51.5	66.0	4,150		Interp.
	1,000 kVA	44.4	64.0	71.0	5,450		Interp.
	1,250 kVA	44.4	64.0	71.0	6,150		Interp.
	1,500 kVA	51.4	64.0	75.0	6,600	UUT: 3PH, Cu windings	6
	15 kVA	20.2	19.4	21.5	185		Interp.
							Interp.
*Type F and K	300 kVA	76.0	50.0	74.1	3,870	UUT: 3PH, AI & Cu windings	9
(Custom Voltage) —							Interp.
	3,750 kVA	125.0	72.0	111	16,595	UUT: 3PH, Al & Cu windings	10

TRU PROJECT NO. 1800840



TABLE 2.2

Manufacturer:Hammond Power Solutions, Inc.Model Line:Type F and K Transformers (VPI Construction)

Certified Product Construction Summary:

NEMA 3R ventilated carbon steel enclosure.

Certified Options Summary:

NMK: 3 Phase. Energy efficient general purpose (SentinelTM). Vacuum Pressure Impregnated (VPI). Copper and aluminum windings. 600V Class - 34.5 kV Class.

Transformer brand name options: Hammond Power Solutions, Inc., Eaton, Square-D Company/Schneider Electric, Siemens Energy and Automation, GE. OSHPD OSP labels are applied by Hammond Power Solutions at the factory and designate units built under this approval.



Mounting Configuration:

Wall mounted-rigid

Building Code:	CBC 2019	Seismic (Certificati	on Limits:	s _{DS} =	2.0 g z/h=1.0 Ip ²	= <i>1.5</i>
Madallina	Madel	Dir	nensions	(in)	Weight	Netza	
Model Line	Model	Depth	Width	Height		Notes	UUT
	15 kVA	21.5	20.1	22.0	160	UUT: 3PH, Al windings	19
HPS Sentinel [™] (NMK)	25 k <mark>VA</mark>	25.8	23.8	28.8	220		Interp.
	30 kVA	25.8	23.8	28.8	370		Interp.
	45 kVA	25.8	23.8	28.8	430	UUT: 3PH, Al & Cu windings	18
					~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~		
		00			OF!		
		VIA	Ditte	ING C	<u>D</u>		
			POIL	JIN			

## **TRU PROJECT NO. 1800840**



# TABLE 3

Manufacturer:Hammond Power Solutions, Inc.Model Line:Type CF and CK (Cast Resin Construction)

Certified Product Construction Summary:

NEMA 3R carbon steel enclosure.

#### Certified Options Summary:

3 Phase Cast Resin construction with inner and outer winding. Reactor (R) construction has an inner winding only. Inner and outer windings are Copper and/or Aluminum. Inside low voltage coil: Cast Resin or VPI construction. 5kV to 34.5kV Class. With or without coordinated bus and enclosure. Transformer brand name options: Hammond Power Solutions, Inc., Eaton, Square-D Company/Schneider Electric, Siemens Energy and Automation, GE. OSHPD OSP labels are applied by Hammond Power Solutions at the factory and designate units built under this approval.

#### Mounting Configuration:

Base mounted - rigid

# FORCODECON

Building Code:	CBC 2019	Seismic C	Certificatio	on Limits:	<b>s</b> _{DS} =	2.0g z/h=1.0	<i>I</i> _P = <i>1.5</i>
Model Line	Model	Dir	nensions	(in)86	Weight	Notes	UUT
Model Line	Model	Depth	Width	Height	(lb)	Notes	001
		By ⁵⁰ in	not ⁷⁶ V	74.1 _{ar}	<mark>3,</mark> 870	UUT: Al & Cu windings	9
	300 <mark>kVA</mark>	54	90	91.5	3,750	0	Interp.
		60	90	91.5	<mark>4,</mark> 150		Interp.
		54 ^E .	J4/70 J/	91.5	4,600		Interp.
	500 kVA	54	90	91.5	4,900		Interp.
		60	90	91.5	5,400		Interp.
		54	70	91.5	5,600		Interp.
	750 kVA	54/2	90	91.5	6,000		Interp.
		60	105_	91.5	6,600		Interp.
	1,000 kVA	60	90	91.5	6,700		Interp.
HPS EnduraCoil [™] Cast		60	90	91.5	7,200		Interp.
Transformer: CF, CK		60	105	91.5	7,900		Interp.
Cast Reactor: CFR,		60	90	91.5	9,400		Interp.
CFK	1,500 kVA	60	90	91.5	10,100		Interp.
		72	105	91.5	11,100		Interp.
		60	105	91.5	11,900		Interp.
	2,000 kVA	60	105	91.5	12,700		Interp.
		72	110	91.5	14,000		Interp.
		60	105	110	13,100		Interp.
	2,500 kVA	60	105	110	14,000		Interp.
		72	105	110	15,400		Interp.
		60	105	110	13,750		Interp.
	3,000 kVA	60	110	110	14,700		Interp.
		72	110	110	16,200		Interp.

Hammond Power Solutions, Inc.

## TRU PROJECT NO. 1800840



# TABLE 3

Model Line: Type CF and CK (Cast Resin Construction)

Certified Product Construction Summary:

NEMA 3R carbon steel enclosure.

#### Certified Options Summary:

Manufacturer:

3 Phase Cast Resin construction with inner and outer winding. Reactor (R) construction has an inner winding only. Inner and outer windings are Copper and/or Aluminum. Inside low voltage coil: Cast Resin or VPI construction. 5kV to 34.5kV Class. With or without coordinated bus and enclosure. Transformer brand name options: Hammond Power Solutions, Inc., Eaton, Square-D Company/Schneider Electric, Siemens Energy and Automation, GE. OSHPD OSP labels are applied by Hammond Power Solutions at the factory and designate units built under this approval.

#### Mounting Configuration:

Base mounted - rigid

# FORCODECOM

Building Code:	CBC 2019	Seismic C	Certificatio	on Limits:	<b>s</b> _{DS} =	2.0 g z/h=1.0 I	⊳= <i>1.5</i>
Model Line	Model	Dimensions (in)			Weight	Mater	
Model Line	Model	Depth	Width	Height	(lb)	Notes	UUT
		By ⁶⁰ in	110	110 _a	14,700		Interp.
HPS EnduraCoil [™] Cast	3,500 kVA	72	110	110	15,700	0	Interp.
Transformer: CF, CK		72	125	110	17,300		Interp.
Cast Reactor: CFR,	V V	60 ^E	1103/	110	14,400		Interp.
CFK	3,750 kVA	72	110	110	15,400		Interp.
	X	72	125	111	16,595	UUT: Al & Cu windings	10
	112.5 kVA	34	40	52	2,000		Extrap.
HPS EnduraCoil [™] Cast		N/A		UNIG C	0.		Extrap.
Transformer: CF, CK	300 kVA	64	50	71	3,500		Extrap.
Cast Reactor: CFR,							Extrap.
CFK	300 kVA	50	76	74.1	3,870	UUT: Al & Cu windings	9
(Custom Voltage)							Interp.
	3,750 kVA	72	125	111	16,595	UUT: Al & Cu windings	10

## TRU PROJECT NO. 1800840



**TABLE 4** 

#### Manufacturer: Hammond Power Solutions, Inc.

*Model Line:* Type PH and 3AH Transformers

Certified Product Construction Summary:

Non-enclosed. Copper winding. 1 Phase

#### Certified Options Summary:

Open style core and coil (SpantanTM) with Octogonal wound core (OWC) winding construction. Machine tool industrial control transformer (ImperatorTM) with enclosed OWC construction.

Transformer brand name options: Hammond Power Solutions, Inc., Eaton, Square-D Company/Schneider Electric, Siemens Energy and Automation, GE. OSHPD OSP labels are applied by Hammond Power Solutions at the factory and designate units built under this approval.

#### Mounting Configuration:

Base mounted - rigid

# FORCODECON

Building Code:	CBC 2019	Seismic C	Certificatio	on Limits:	<b>S</b> _{DS} =	2.0g z/h=1.0	<i>I</i> _P = <i>1.5</i>
Model Line	R	Dimensions (in)			Weight	Notos	υυτ
Model Line	Model	Depth	Width	Height	(lb)	Notes	001
	0.025 kVA	B 3.0 in	10 ^{4.4} V	1 P3i2ar	3.5		3
	0.05 <mark>k</mark> VA	3.0	4.1	3.3	3.5		Interp
	0.075 kVA	3.3	3.9	3.6	3.5		Interp
	0.1 kVA	3.3	4.2	3.6	4.5		Interp
	0.15 kVA	4.0	4.9	3.8	5.7		Interp
TM	0.25 kVA	4.5	5.4	3.8	7.5		Interp
HPS Spartan [™]	0.35 kVA	4.5	5.2	4.4	10		Interp
(SP Models)	0.5 kVA	4.8	5.9	4.3	14		Interp
HPS Imperator [™]	0.75 kVA	4.1	6.7	4.3	17		Interp
(PH Models)	1 kVA	5.3	6.8	4.9	24		Interp
	1.5 kVA	5.3	8.2	4.9	32		Interp
	2 kVA	6.4	5.9	5.3	35		Interp
	3 kVA	7.5	7.5	6.5	64		Interp
	5 kVA	8.3	8.8	7.1	97		Interp
	7.5 kVA	9.0	9.9	7.8	97		4

## **TRU PROJECT NO. 1800840**



**TABLE 5** 

Manufacturer:Hammond Power Solutions, Inc.Model Line:Type Q and QT Transformers

Certified Product Construction Summary:

NEMA 3R, NEMA 4 or NEMA 12 non-ventilated carbon steel enclosure. Copper winding.

#### Certified Options Summary:

1 and 3 Phase. Industrial encapsulated winding construction (TitanTM)

HPS Universal is identical in construction to Titan, but only available up to 5 kVA

Transformer brand name options: Hammond Power Solutions, Inc., Eaton, Square-D Company/Schneider Electric, Siemens Energy and Automation, GE. OSHPD OSP labels are applied by Hammond Power Solutions at the factory and designate units built under this approval

#### Mounting Configuration:

Base mounted - rigid

# FORCODECON

Building Code:	CBC 2019	Seismic C	Certificatio	on Limits:	<b>s</b> _{DS} =	2.0 g z/h=1.0	<i>I</i> _P = <i>1.5</i>
Model Line	Model	Dir	nensions	(in)86	Weight	Notes	UUT
Model Line	Model	Depth	Width	Height	(lb)	Notes	001
	0.05 <mark>kVA</mark>	BY ^{5.3} in	10 ^{-3.8}	J P ³ ar	6	UUT: 1PH, Cu windings	7
						0	Interp.
	0.5 k <mark>VA</mark>	4.8	1/4 2/	9.3	15		Interp.
	0.75 k <mark>VA</mark>	4.8	547 ₅ 137	9.3	18		Interp.
	1 kVA	5.5	5.9	10	22		Interp.
	1.5 kVA	5.5	5.9	10	25		Interp.
	2 kVA	6.5	12.4	11.3	49		Interp.
тм	3 kVA	6.5	12.4	11.3	68		Interp.
HPS Titan [™] ──	5 kVA	7.8	BYOLD	17.3	90		Interp.
HPS Universal [™]	6 kVA	6.9	15.2	15.1	146		Interp.
(Q models: 1PH) (P	7.5 kVA	7.8	10	17.3	115		Interp.
models: 3PH) —	9 kVA	10.3	16.6	16.6	211		Interp.
	10 kVA	9.3	12.3	20.9	165		Interp.
	15 kVA	10.4	19.3	16.6	270		Interp.
	30 kVA	13	20.3	23.4	555		Interp.
	45 kVA	13	22.3	28.4	765		Interp.
	75 kVA	16	31.3	29.9	1,600		Interp.
	112.5 kVA	26	38.5	39.1	2,100		Interp.
15	150 kVA	26	38.5	39.1	2,450	UUT: 3PH, Cu windings	8

## **TRU PROJECT NO. 1800840**



# **TABLE 6.1**

Manufacturer:Hammond Power Solutions, Inc.Model Line:Encapsulated Transformers

Certified Product Construction Summary:

NEMA 3R carbon steel enclosure. Copper or Aluminum windings.

#### Certified Options Summary:

3 Phase. Industrial encapsulated winding construction (TitanTM)

Transformer brand name options: Hammond Power Solutions, Inc., Eaton, Square-D Company/Schneider Electric, Siemens Energy and Automation, GE. OSHPD OSP labels are applied by Hammond Power Solutions at the factory and designate units built under this approval

#### Mounting Configuration:

Base mounted - rigid

# FORCODECON

Building Code:	CBC 2019	Seismic C	ertificati	on Limits:	<b>S</b> _{DS} =	2.0 g z/h=1.0 I _P =	1.5
	R	Dir	nensions	(in)86	Weight	Notes	וטט
Model Line	Model	Depth	Width	Height	(lb)	Notes	
	2 k <mark>VA</mark>	By8.8 in	12.3	13.2	75	UUT: 3PH, Cu windings	13
	3 k <mark>VA</mark>	8.8	12.3	13.2	85	0	Inter
	6 k <mark>VA</mark>	9.6	14.8	15.2	152		Inter
	9 kVA	11.6	17.5	14.4	225		Inter
тм	15 kVA	14.0	21.3	17.0	295	UUT: 3PH, Al & Cu windings	12
HPS Titan N [™]	30 kVA	17	23.8	21.8	470	UUT: 3PH, Cu windings	15
3 Phase –	45 kVA	18	25.1	21.8	735		Inter
	75 kVA	20/	31.3	25.6	1,445		Inter
	90 kVA	26	35.1	26.8	1,600	UUT: 3PH, Cu windings	21
	112.5 kVA	26	38.5	39.1	2,100		Inter
	150 kVA	27	43.0	36.0	3,520	UUT: 3PH, Al & Cu windings	16

## **TRU PROJECT NO. 1800840**



# **TABLE 6.2**

Manufacturer:Hammond Power Solutions, Inc.Model Line:Encapsulated Transformers

Certified Product Construction Summary:

NEMA 3R carbon steel enclosure. Copper or Aluminum windings.

#### Certified Options Summary:

3 Phase. Industrial encapsulated winding construction (TitanTM)

Transformer brand name options: Hammond Power Solutions, Inc., Eaton, Square-D Company/Schneider Electric, Siemens Energy and Automation, GE. OSHPD OSP labels are applied by Hammond Power Solutions at the factory and designate units built under this approval

#### Mounting Configuration:

Wall mounted - rigid

# FORCODECON

Building Code:	CBC 2019	19 Seismic Certification Limits:				<b>2.0 g z/h=1.0</b> I _P :	/ _P = <i>1.5</i>	
Madallina	R	Dir	Dimensions (in)			Notes		
Model Line	Model	Depth	Width	Height	(lb)	Notes	UUT	
	2 k <mark>VA</mark>	B 8.8 m	12.3	13.2	75	UUT: 3PH, Cu windings	11	
	3 k <mark>VA</mark>	8.8	12.3	13.2	85	0	Inter	
HPS Titan N [™]	6 kVA	6.9	15.2	15.1	<mark>1</mark> 52		Inter	
3 Phase	9 kV <mark>A</mark>	10.3	16.6	16.6	225		Inter	
	15 kVA	14.1	21.3	17.0	295	UUT: 3PH, Al & Cu windings	14	
	30 kVA	17	23.8	21.8	470	UUT: 3PH, Cu windings	22B	
		100			OF!			
		TV/A		ING C	0			
		1	BUIL	DING				
							_	

## **TRU PROJECT NO. 1800840**



Manufactu Model Line						
UUT	Unit Description	Report Number	Testing Laboratory	S _{DS}	z/h	I _P
1	Type E (Fusion) 0.025 kVA 1 Phase	EL: 9410	Clark Dynamic Test Laboratory, Inc.	2.0	1	1.5
2	Type E (Fusion) 7.5 kVA 1 Phase	EL: 9410	Clark Dynamic Test Laboratory, Inc.	2.0	1	1.5
3	Type PH & 3AH (Spartan) 0.025 kVA 1 Phase	EL: 9405	Clark Dynamic Test Laboratory, Inc.	2.0	1	1.5
4	Type PH & 3AH (Imperator) 7.5 kVA 1 Phase	FEL: 9405 DE C	Clark Dynamic Test	2.0	1	1.5
5	Type F & K (Sentinel) 15 kVA 1 Phase	EL: 9504	Clark Dynamic Test Laboratory, Inc.	2.0	1	1.5
6	Type F & K (Millenium) 1,500 kVA 3 Phase	EL: 9504-0136	Clark Dynamic Test Laboratory, Inc.	2.0	1	1.5
7	Type Q & QT (Tita <mark>n)</mark> 0.05 kVA 1 Phase	EL: 9411 By Timothy J Pil:	Clark Dy <mark>namic</mark> Test	2.0	1	1.5
8	Type Q & QT (Tit <mark>a</mark> n) 150 kVA 3 Phase	EL: 9411	Clark Dyn <mark>amic</mark> Test Laboratory, Inc.	2.0	1	1.5
9	Type F and K (Cast Resin) 300 kVA 3 Phase	13534, Rev.2	Environmental Testing Laboratory, Inc.	2.0	1	1.5
10	Type F and K (Cast Resin) 3,750 kVA 3 Phase	13534, Rev.2	Environmental Testing Laboratory, Inc.	2.0	1	1.5
11	Titan 2kVA DQT1 Wall Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
12	Titan 15kVA DQT4 Base Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
13	Titan 2kVA DQT1 Base Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
14	Titan 15kVA DQT4 Wall Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
15	Titan 30kVA DQT5 Base Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
16	Titan 150kVA DQT10 Base Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5

Notes:

## **TRU PROJECT NO. 1800840**



<i>Manufacturer.</i> Model Line:	<ul> <li>Hammond Power Solu</li> <li>Transformer Product</li> </ul>					
UUT	Unit Description	Report Number	Testing Laboratory	S _{DS}	z/h	I _P
17	Sentinel 15kVA DH1 Base Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
18	Sentinel 45kVA DH2 Wall Mounted	1800840-TR-001 R0	Laboratory (SEESL) Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
19	Sentinel 15kVA DH1 Wall Mounted	1800840-TR-001 R0	Laboratory (SEESL) Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
20	Sentinel 45kVA DH2 Base Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
21	Titan 90 kVA DQTXX Base Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
22B	Titan 30kVA DQT5 Wall Mounted	1800840-TR-001 R0 36	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
23	Sentinel 45kVA DH2 Base Mounted	1800840-TR-001 R0	Structural and Earthquake Engineering and Simulation Laboratory (SEESL)	2.0	1	1.5
	0					
	C	DATE: 04/13/2020	61			
	X		St. V			
		NIA BUILDING	COL			
lotes:						[

## **TRU PROJECT NO. 1800840**



Manufacturer:	Hammond	Power Solutions, In	с.							
Model Line:	Type E (Fus	sion)							JUT	
Model Number:	FS25MQMJ				Serial N	umber:	N/A			
	<i>uction Summary:</i> ed carbon steel end									
-	<b>mponent Summa</b> se. General purpos	<b>ry:</b> se enclosed transfor	mer. OWC	Copper w	indings.					
		WEDF	ORCO	DDE C	OMP					
			UUT Pro	operties		Z				
Weight		Dimension (in)					t Natural	-	cy (Hz)	
(lb)	Depth					Front-Back		Side-Side		tical
3	5.9	2.7	1	.3		7	28	3.0	>{	33
		UUT Highest	Passed Se	eismic Rur	n Informa	ation			1	
Buildi	ng Code	Test Criter	ria	S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
CBO	2019	ICC-ES AC156	(2015)/1(	3/2020	) 1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting	Details:		4 B UI 4 B UI 9 10:30	DING		9 3185.		5		

Unit is rigid base mounted to the seismic table using (4) #10-32 screws, washers and lock washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

### **TRU PROJECT NO. 1800840**



Manufacturer:	Hammond	d Power Solutions, Inc	с.							
Model Line:	Type Ε (Fι							ו נ	JUT	2
Model Number:	FS7500MQ	2MJ			Serial N	umber:	N/A			
<b>Product Constru</b> NEMA 1 Ventilated										
<i>Options/Subcom</i> 7.5 kVA. 1 Phase.	-	ary: e enclosed transforme		0.0.0	ndings.					
		ENED			MAD.					
			UUTP	roperties		Y2		<b>F</b>		
Weight (lb)	Depth	Dimension (in) Width	<u>n</u> se	eight 36	From	t-Back	t Natural	-Side		tical
97	8.0	9.3		15.1	7	8.7		-Side 3.0		33
51	0.0	UUT Highest						5.0		33
Buildin	g Code	Test Criter		S _{DS} (g)	z/h		A(g)	A _{RIG-H} (g)	A(g)	Ang v (g)
CBC	-	ICC-ES AC156 (		3/2.020	1.0	1.5	3.20	2.40	1.33	0.53
CDC	2019	ICC-ES AC150	zoteł	0/2020	1.0	1.5	5.20	2.40	1.55	0.55
				210 10 :28	CODE					
Unit maintained s	tructural integri	seismic table using (4 ty and remained func per operating condit	tional pe	er manufact	urer req		after shal			

OSP-0136

### **TRU PROJECT NO. 1800840**



Manufacturer:	Hammond	l Power Solutions, I	nc.							_
Model Line:		3AH (Spartan)							JUT	3
Model Number:	PH25MQM				Serial N	umber:	N/A	•		
Product Constru										
Non-enclosed.										
Options/Subcom	nonent Summa	2/1//								
	=	oil style. OWC copp	er winding	S.						
			ORC	ODF						
		ED	FORC		ON					
		NE								
				operties		Y1		_		
Weight (lb)	Depth	Dimension (in) Width		ight 36	Front		t Natural		1	tical
3.5	4.0	3.2		.4						33
5.5	1.0	UUT Highes								
Buildin	g Code	Test Crite		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	2010	ICC-ES AC156	3720151/1	8/2020	1.0	1.5	3.20	2.40	1.33	0.53
CDC	2015	ICC-ES ACISC	<u>Tiotat</u>   (				5.20	2.40	1.55	0.55
Test Mounting D	etails:	Y.		*		5				
	In n				CODE					
april alper	· · ·	RN	IA A		CON	Manager of Con-		Contraction of the	200	
			ABU	PINO			THE		15	
						BA	Citra I		-	
Contraction of the second	and the first	-	67.00				1			
	1 Ales	- 284		14.2				• (~)	87	
	ALL WE	the second second	34					<u>.</u>	-	
200	M							-F	5	
	V/IE		10-1	>			1			
and the second	-Marson	No.	-		70	UT 3				
131				C. San Jane			-			
		The main	10.07 2016							
	1 9	A I III A COMPANY			2					
-		seismic table using								
	-	ty and remained fur		r manufact	turer requ	uirement	after shal	ke table t	est.	
Contents were inc	luded in testing	per operating cond	itions.							

## **TRU PROJECT NO. 1800840**



Model Line:	nannin	d Power Solutions, I	nc.							-
ladal Number	Type PH 8	3AH (Imperator)							JUT	4
Model Number:	SP7500M	QMJ			Serial N	umber:	N/A	-		
Product Constructi Ion-enclosed.	ion Summary	<i>::</i>								
Options/Subcompo		•								
Phase. Open core	& coil style w	ith molded covers.	Enclosed O	WC copper	winding	s.				
			ORC	ODE C	01.					
		NED			MA					
W-1-1-1			UUT Pr	operties		71		<b>F</b>	(11)	
Weight (lb)	Dauth	Dimension (in) Width	IOSD	.0136	Event		t Natural			
104	Depth 9.0	9.9 7.8			Front-Back Sig			Side-Side		<b>tical</b> 33
104	5.0	UUT Highes								55
Building (	Code	Test Crite		S _{DS} (g)	z/h	I I P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g
CBC 202		ICC-ES AC150		3/2020	) 1.0	1.5	3.20 2.40 1.33			0.53
Test Mounting Deta	ails:			-		2				
					CODE	2				

OSP-0136

### **TRU PROJECT NO. 1800840**



Manufacturer:	Hammon	d Power Solutions,	Inc.							_
Model Line:	Type F & P	K (Sentinel)							JUT	<b>D</b>
Model Number:	NFP015LE	AH3			Serial N	umber:	N/A			
<i>Product Construc</i> NEMA 3R carbon s	-	<i>!:</i>								
<i>Options/Subcom</i> 15 kVA. 1 phase. E	-	General Purpose. V	acuum pre		egnated (		ninum wir	ndings.		
		L.	UUT Pr	operties		Z.				
Weight		Dimension (in)	) — — -			Lowes	t Natural	Frequen	cy (Hz)	
(lb)	Depth	Width	OSHe	right 36	Front	-Back	Side	-Side	Vert	tical
185	20.2	19.4				11.5 23.8		3.8		
		UUT Highes		eismic Rul	n Inform	ation	_			
Buildin	g Code	<b>Test Crit</b>	eria	S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g
CBC2	2019	ICC-ES AC15	6 (2015) / 1	3/2020	) 1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting De							- Ul	JT 5		
Unit maintained s	tructural integri	seismic table using ity and remained fu per operating cond	nctional pe			uirement	after shal	ke table to	est.	

OSP-0136

## **TRU PROJECT NO. 1800840**

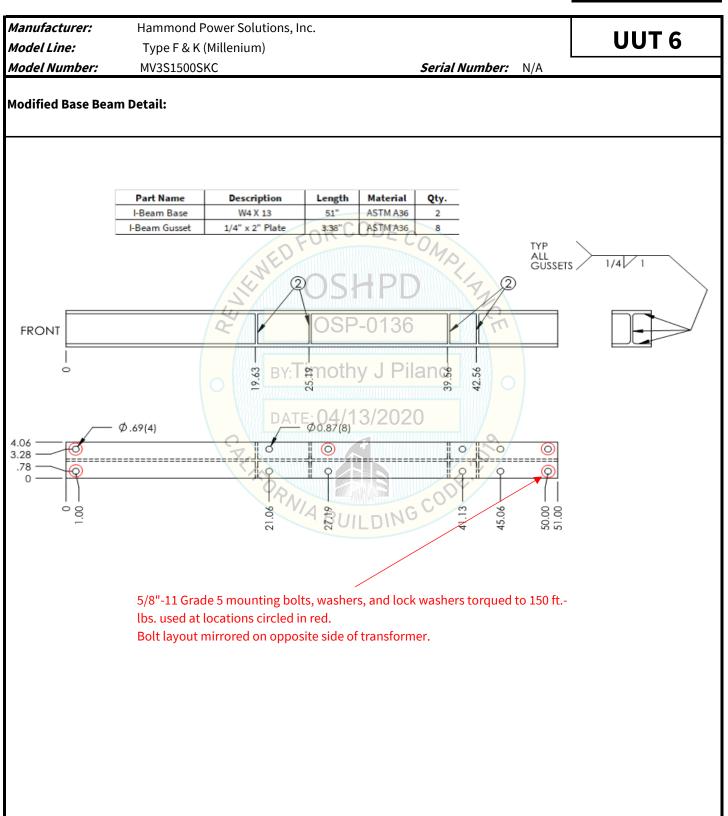


Manufacturer:		Power Solutions, In	с.						JUT	6
Model Line:		K (Millenium)								0
Model Number:	MV3S1500				Serial N	umber:	N/A			
<b>Product Constru</b>	-	<i>:</i> enclosure. Modified I-	boam bag	o framo						
NEMA 3R Ventilate	ed carbon steel e	enclosure. Modified i-	-beam bas	se frame.						
Options/Subcom	ponent Summa	ory:								
1,500 kVA. 3 phase	e. General purpo	ose medium voltage	distributio	on. Vacuun	n pressur	re impreg	nated (VP	l) copper	windings	5.
		F	ORC	ODE C	0.					
		NED			OMP,					
		4	UUT Pr	operties		7				
Weight		Dimension (in)				Lowes	t Natural	Frequen	cy (Hz)	
(lb)	Depth	Width         OSHeight         36           64.0         75.0			Front	-Back	Side	Side-Side		tical
6,600	51.4	64.0	13.8		15	15.4		3.3		
		UUT Highest		<del>,</del>						<u> </u>
Buildin	g Code	Test Criter	ria	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	(2015)/1	3/2020	1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting De	etails:	S		-		2	ļ			<u> </u>
_	-					24				
		200			50	1				
	and the second	CONTRACTOR	ABAIL	LANK6	93					
				AS	* ***	-				
			-	H.	1	1000	UU	тб		
	and Description				Z	-				
	A State									
			-		E.					
	1			4	20	1				
	and a	ALCONT DO	-	T	- all	the second second				
	T	all all a	195	- Sa	1	29				
			1	10.48	<b>秋田</b> 市	- CR				
		1		Test -	120	2				
Seismic modificat	ions required									
See next page for	•	etails.								
		ty and remained fund	ctional pe	r manufact	urer requ	uirement	after shal	ke table te	est.	

Contents were included in testing per operating conditions.

## **TRU PROJECT NO. 1800840**





### **TRU PROJECT NO. 1800840**



OSP-0136

### **TRU PROJECT NO. 1800840**



Manufacturer:	Hammon	d Power Solutions, Ind	с.							0
Model Line:	Type Q &	QT (Titan)						ļ	JUT	8
Model Number:	P150KBK	(F			Serial N	umber:	N/A			
Product Construc	tion Summary	/:								
NEMA 3R non-vent	ilated carbon s	teel enclosure.								
Options/Subcom	ponent Summ	arv:								
		psulated. Copper Wir	ndings.							
		F	ORCO	JDE C	2.					
		NED			MA					
			UUT Pro	operties		Z				
Weight		Dimension (in)				Lowes	st Natural	Frequen	cy (Hz)	
(lb)	Depth	Width	OSHei	ight 36	Front	-Back	Side	-Side	Ver	tical
2,450	39.1	38.5	26	5.0	19	9.8	21	1.6	>:	33
		UUT Highest	Passed Se	eismic Run	Informa	ntion				
Building	g Code	Test Criter	ia	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 2	019	ICC-ES AC156 (	2015)/1	8/2.020	1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting De	tails:	F				0				
and the second second	1				L.					
	- Dise	PAU PAU			-00	Fre	-	-	-	
The second second			ARI	DING						
and the state of t										

Unit is rigid base mounted to the seismic table using (4) 5/8" 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.

04/13/2020

### **TRU PROJECT NO. 1800840**



<i>Manufacturer: Model Line:</i>		d Power Solutions, In d K (Cast Resin Const						ι	JUT	9
Model Number:	300 kVA		uction		Serial N	umhari	N/A			
Product Constru		/:			Jenath		11/71			
NEMA 3R carbon										
Options/Subcon	-			- di (2)	<b>C</b>			. <u>.</u>		
		ure. Copper and alur pressure impregnate		-					pper and	
	55, (1) Vacuum ;	si cosure impregnate				annian	Windings	•		
		nF	ORCO	ODEC	01.					
		NED			MD/					
		L. L.	UUT Pr	operties		7				
Weight		Dimension (in)				Lowes	st Natural	Frequen	cy (Hz)	
(lb)	Depth	Width	OSHe	ight 36	Front	-Back	Side	-Side	Ver	tical
3,870	50.0	76.0		4.1	8.3		11.5		30.7	
		UUT Highest	musur	<u>,</u>	41154		1	<u> </u>		
Buildin	g Code	<b>O</b> Test Crite	ria	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC	2019	ICC-ES AC156	(2015)/1	3/2020	) 1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting D	atails.	0				12	/			
rest mounting D	clans.	P	八			20.				
					K					
		A AN	1	- IG	CON				1 mil	
			<b>B</b> ROU	DING						-
MAP D					BI	E	1	建加		9
and a state of the				X		-1-	_		12	2
		the second se							-	1 million (1997)
and the state	- Inter		100		1 au	10 A.	1000	<b>2</b>		-

Unit is rigid base mounted to the seismic table using (8) 5/8" Grade 8 bolts. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

OSP-0136

#### **TRU PROJECT NO. 1800840**



	Hammon	d Power Solutions, In	с.						^
Model Line:	Type F an	d K (Cast Resin Const	ruction)					<b>JUT 1</b>	.U
Model Number:	3750 kVA	١		Serial N	umber:	N/A			
<b>Product Construct</b> NEMA 3R carbon ste	-	/:							
<i>Options/Subcomp</i> 3 Phase. Coordinat		<b>ary:</b> ure. Copper and alun	ninum windings. (2	2) Cast res	in constru	iction coil	s with co	pper and	
		pressure impregnated	0.	•					
		NEDF	ORCODE	OMP					
			UUT Properties		Z				
Weight		Dimension (in)			Lowes	t Natural	Frequen	icy (Hz)	
(lb)	Depth	Width	OSHeight 36	Fron	t-Back	Side	-Side	Ver	tical
16,595	72.0	125.0	111.0		ł.0	4	.3	20	).7
			Passed Seismic Ri		ation		1		
Building	Code	<b>Test Criter</b>	ia S _{DS} (g)	z/h	I _P	А _{FLX-Н} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V}
CBC 20	019	ICC-ES AC156 (	2015)/13/2.02	1.0	1.5	3.20	2.40	1.33	0.5
Test Mounting Det	ails:	P			20				

Unit is rigid base mounted to the seismic table using (18) 3/4" Grade 8 bolts. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

### **TRU PROJECT NO. 1800840**



Manufacturer:	Hammond	d Power Solutions, In	с.							
Model Line:		ner Product Families						U	UT 1	Ll
Model Number:	HZ3A0003	KBKB-WW1			Serial N	umber:	AB00705	130		
Product Construc	tion Summary									
NEMA 3R carbon st	eel enclosure.									
Options/Subcom	oonent Summa	ary:								
Titan 2 kVA, coppe	r core									
			100	DC						
		NEDF	ORCO	DE C	OMP					
			UUT Pro	perties		71				
Weight		Dimension (in)		0126			t Natural		1	
(lb)	Depth	Width	1	ght 36	717	-Back		-Side		tical
75	8.8	12.3	13			/A	<u>  N</u>	/A	N	/A
	Codo	UUT Highest Test Criter		n			<b>A</b> (=)	<b>A</b> (-)	<b>A</b> (-)	
Building	, code	Test Criter	la	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g
CBC 2	019	ICC-ES AC156	(2015)/1	8/2020	) 1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting De	tails:	F.				6				<u></u>
						· ·				
		RAVE		N	CODY					
			BUT	PING						
UUT	11		A		1					
		THE PL	115		1					
		~		T-O-						
			1. J.	E	E I	rtill				
							14			
		Salar In	4.	+	-		-			
						100				
				2						
			10	P			8			
		A Contraction of the second	-X7A	)	- the	-63				
	-	sing four (4) 1/2" Grad								
	-	ty and remained fund		manufact	urer requ	uirement	after shal	ke table te	est.	
Contents were incl	uded in testing	per operating condit	tions.							

#### **TRU PROJECT NO. 1800840**



Manufacturer:	Hammond	d Power Solutions, Ir	ıc.							2
Model Line:	Transform	ner Product Families						U	L TU	.2
Model Number:	226942-03	SHPD			Serial Nı	ımber:	AB00708	494		
<i>Product Construe</i> NEMA 3R carbon s										
NEMA 3R Cardon S	leel enclosure.									
Options/Subcom		•								
Titan 15kVA, copp	er and aluminu									
		NEDF	ORC	ODEC	OMp;					
		A A A A A A A A A A A A A A A A A A A	UUT P	roperties		P1		_		
Weight	Davith	Dimension (in)		.0126			t Natural	-		
( <b>lb</b> ) 295	<b>Depth</b> 14.0	<b>Width</b> 21.3		<b>eight 30</b>	Front	444.0		-Side		tical 3.3
295	14.0	UUT Highest			777	11/14/10	22	.25	>3	3.3
Buildin	T Code	Test Crite		<del>,</del>	z/h		A (g)	A (g)	A (g)	A (a
	_			S _{DS} (g)					A _{FLX-V} (g)	
CBC2	2019	ICC-ES AC156	(2015)/1	3/2020	) 1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting De	etails:	E.	1			0				
			ABUI							
	tructural integri	rith four (4) 1/2" Grad	ictional pe				Zafter shak	ke table to	est.	

### **TRU PROJECT NO. 1800840**



Model Line:		l Power Solutions, In	с.						UT 1	2
		er Product Families							110	.၁
Model Number:		KBKB-WW1			Serial Nu	umber:	AB00705	130		
Product Constru		:								
NEMA 3R carbon s	teel enclosure.									
Options/Subcom	nonent Summa									
Titan 2 kVA, coppe										
		E	ORCOL	DEC						
		IEDP	ORCOL		MS,					
		- Line	UUT Prope	1111111111		7				
Weight		Dimension (in)				Lowes	t Natural	Frequen	cy (Hz)	
(lb)	Depth	Width	OSHeigh	<b>f</b> 36	Front	-Back	Side	Side	Ver	tical
75	8.8	12.3	13.2		>3	3.3	33.	.00	23	.38
		UUT Highest	uncury c	nic Run	Informa	ntion				
Buildin	g Code	<b>Test Crite</b>	ria S	_{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC	2019	ICC-ES AC156	(2015)/13/2	2020	1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting De	etails:	121				2				
0						2				
						-				
		14V.	ARING							
						/ -	No.			
		a second a second	200	10	- 1					
				F		100	4			
				A	1 des	A.	MINUP.			

UUT13 was base mounted-rigid with (3) 3/8" Grade 5 bolts and (3) 3/8" washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

#### **TRU PROJECT NO. 1800840**



Model Line:	Hammon	d Power Solutions, Ir	nc.							л
	Transforn	ner Product Families						U	UT 1	.4
Model Number:	226942-0	SHPD			Serial Nu	umber:	AB00708	493		
<b>Product Constru</b> NEMA 3R carbon		/:								
Options/Subcon	nponent Summ	ary:								
Fitan 15kVA, copp	per and aluminu	m core								
		WEDF	ORC	ODE C	OMPL					
			UUT PI	roperties		71		_		
Weight (lb)	Danth	Dimension (in) Width	IOSP	.0136	Frant	-Back	t Natural	Frequen -Side		tical
295	<b>Depth</b> 14.1	21.3		eight 36	- Front N	1447		-Side /A		/A
295	14.1	UUT Highest			11	XXXXVV		/A		/A
Buildir	ng Code	Test Crite		S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (§
CBC	2019	ICC-ES AC156	(2015)/1	3/2020	) 1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting D	etails:	2		4		2				
	A A		ABU			B				

Contents were included in testing per operating conditions.

### **TRU PROJECT NO. 1800840**



Manufacturer:	Hammond	d Power Solutions, I	nc.					.		5
Model Line:	Transform	ner Product Families	5						UT 1	.ว
Model Number:	225745-W	W8			Serial N	umber:	CB09065	533		
Product Constru	-	<i>:</i>								
NEMA 1 carbon st	eel enclosure.									
Options/Subcom	-	ary:								
Titan 30kVA, copp	er core									
			FORCO	DDEC						
		WED			OMP					
			UUT Pr	operties		71		_	<i>(</i> )	
Weight (lb)	Donth	Dimension (in) Width	IOSR	ight 36	Exart	-Back	t Natural	Frequen -Side	T	tical
470	<b>Depth</b> 17.0	23.8	_	1.8	777	.04		.45		.11
10	11.0	UUT Highes							15	
Buildin	g Code	Test Crite		S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (§
CBC	2019	ICC-ES AC156	(2015)/1	8/2020	) 1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting D	etails:			*		2		ļ		
						2				
		ORN			COPT	1				
	-	· · ·	ABUI	DING	V	36				
anite the second se		~ ~								
					ę		6			
- []]	Addition of the				9			- In		
		-			1.		1			
HTTH .	° 1				a free a			and and		
			•				15	and the second		
.Att						PA				
4411		•								
					11					
UUT15 was base r	nounted-rigid w	rith four (4) 1/2" Grad	de 5 bolts a	nd four (4)	1/2" was	shers.				
Jnit maintained s	tructural integri	ity and remained fur	nctional per				after shal	ke table t	est.	
Contents were inc	luded in testing	per operating cond	itions.							

OSP-0136

#### **TRU PROJECT NO. 1800840**



Manufacturer:	Hammon	d Power Solutions, Ir	ıc.						r
Model Line:	Transform	ner Product Families					U	UT 1	.6
Model Number:	226943-W	W2		Serial Num	ber: A	AA00710	195		
Product Constru	=	/:							
NEMA 3R carbon	steel enclosure.								
Ontions/Cuberry									
<i>Options/Subcon</i> Titan 150kVA, alu		ary:							
100000, 000									
			OD CODE -						
		DE	ORCODEC	ON.					
		NED							
			UUT Properties	T.	1				
Weight		Dimension (in)					Frequen		
(lb)	Depth	<b>Width</b>	OSHeight 36	Front-Ba		Side			tical
3520	27.0	43.0	36.0	11.37		9.9	93	9.	79
Desilalia		Test Crite	Passed Seismic Run			<b>a</b> (-)	A (-)	A (-)	<b>A</b> (a
Buildir	ng Code		ria 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	(2015)/13/2020	1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting D	etails:	2			2/				
0		1×		2					
		, 00		DY					
			ADING	0	7.11				
				-					
	ALL AND		-						
		Service and			4.				
						linan			
					-	~			
	and the second s			Col 7-3	17	State of the state			
	the state of the s								
		- in		-					
	and the second s		V.						
			X						
	-								

UUT16 was base mounted-rigid with (7) 1/2" Grade 5 bolts with flat washers and (1) 3/8" Grade 5 bolt with flat washer. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

#### **TRU PROJECT NO. 1800840**



Model Number:       XG3N0015LE       Serial Number:       CB0009164         Product Construction Summary:       NEMA 3R carbon steel enclosure.       Image: Serial Number:       Image: Seria Number:       Image: Serial Numbe	487
NEMA 3R carbon steel enclosure.	
Options/Subcomponent Summary:         Sentinel 15kVA, copper and aluminum core         UUT Properties         UUT Properties         Weight       Dimension (in)       Lowest Natural Fr         (lb)       Depth       Width       Stde-Si	
Sentinel 15kVA, copper and aluminum core UUT Properties Weight (lb) Depth Width OSHeight 36 Front-Back Side-Si	
Sentinel 15kVA, copper and aluminum core UUT Properties Weight (lb) Depth Width OS Height 3 Front-Back Side-Si	
Sentinel 15kVA, copper and aluminum core UUT Properties Weight (lb) Depth Width OS Height 3 Front-Back Side-Si	
UUT Properties         Weight (lb)       Dimension (in)       Lowest Natural Fr         (lb)       Depth       Width       O Height 30       Front-Back       Side-Si	
UUT Properties         Weight (lb)       Dimension (in)       Lowest Natural Fr         (lb)       Depth       Width       O Height 30       Front-Back       Side-Si	
UUT Properties         Weight (lb)       Dimension (in)       Lowest Natural Fr         (lb)       Depth       Width       O Height 30       Front-Back       Side-Si	
UUT Properties           Weight (lb)         Dimension (in)         Lowest Natural Fr           OS Height         Side-Si	
(lb) Depth Q Width OSHeight 36 Front-Back Side-Si	
	requency (Hz)
	ide Vertical
	4 26.91
UUT Highest Passed Seismic Run Information	
Building Code Test Criteria S _{DS} (g) z/h I _P A _{FLX-H} (g) A	A _{RIG-H} (g) A _{FLX-V} (g) A _{RIG-V} (g
CBC 2019 ICC-ES AC156 (2015) / 1 8/2020 1.0 1.5 3.20	2.40 1.33 0.53
Test Mounting Details:	Į Į
ABUILDINGCOL	
	A CONTRACTOR

UUT17 was base mounted-rigid with four (4) 1/2" Grade 5 bolts and four (4) 1/2" washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

#### **TRU PROJECT NO. 1800840**



Manufacturer:	Hammond	d Power Solutions, In	IC.							0
Model Line:	Transform	ner Product Families						U	UT 1	.8
Model Number:	45-OSHPD	O-CUAL			Serial Nu	umber:	CB00924	392		
<b>Product Construc</b> NEMA 3R carbon s		<i>"</i>								
<i>Options/Subcom</i> Sentinel 45kVA, co		-								
		NEDF	ORCO		OMPL					
Waight		Dimension (in)	UUT Pro	operties		Y L	t Natural	<b>F</b> wa <b>a</b> u a a	ev (11=)	
Weight (lb)	Depth	Width	OSPA	<b>ght</b> 36	Front	-Back		-Side		tical
430	25.8	23.8	28		N			/A		/A
		UUT Highest						1		/
Building	g Code	Test Crite	ria	S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC 2	2019	ICC-ES AC156	(2015)/1	8/2020	1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting De		X IROR		18	POF.	2				

UUT18 was wall mounted-rigid with four (4) 1/2" Grade 5 bolts and four (4) 1/2" washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

#### **TRU PROJECT NO. 1800840**



Model Line:	⊓ammono	d Power Solutions, Inc	•							
	Transform	ner Product Families						U	UT 1	.9
Model Number:	XG3N0015	ile			Serial Ni	umber:	CB00916	491		
<b>Product Construc</b> NEMA 3R carbon st	-	<i>":</i>								
<i>Options/Subcom</i> Sentinel 15kVA, co		=								
		NEDF	ORCO	DEC	OMP					
				operties		Z				
Weight		Dimension (in)				Lowes	t Natural	Frequen	cy (Hz)	
(lb)	Depth	<b>Width</b>	OSHei	ght 36	Front	-Back	Side	-Side	Ver	tical
160	21.5	20.1		2	N,	<u> </u>	N,	/A	N	/A
		UUT Highest F						1	r	. <u> </u>
Building	g Code	Test Criteri	а	S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	А _{rig-н} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC 2	019	ICC-ES AC156 (2	2015)/1(	8/2020	1.0	1.5	3.20	2.40	1.33	0.53
	tails:	N N		700000000		~				

UUT19 was wall mounted-rigid with four (4) 1/2" Grade 5 bolts and four (4) 1/2" washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

#### **TRU PROJECT NO. 1800840**



	Hammon	d Power Solutions, In	с.						•
Model Line:	Transform	ner Product Families					U	UT 2	.0
Model Number:	45-OSHPI	D-CUAL		Serial Nu	mber:	CB00924	391		
Product Constru	iction Summary	/:							
NEMA 3R carbon	steel enclosure.								
Options/Subcon	nponent Summ	ary:							
45kVA Sentinel, c	-	-							
			005-						
		IEDF	ORCODEC	OMD,					
		L. K.	UUT Properties		Z				
Weight		Dimension (in)				Natural			
(lb)	Depth	<b>Width</b>	OSHeight 36	Front-		Side			tical
430	25.8	23.8	28.8	10.3	(444)	9.	16	13	.80
			Passed Seismic Rui	~					
Buildir	ng Code	<b>Test Criter</b>	ria S _{DS} (g)	z/h	I _P	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC	2019	ICC-ES AC156	2015)/13/2020	) 1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting D	etails:	S			2				
-		Y KAN		· · · · ·	$\mathcal{V}$				
			THE R. LEWIS CO., LANSING MICH.						
	1 Million			The states	2				
			A BUILDING	(Der	Nº 1				
		S Provent	A SUILDING	- Cer					
			BUILDING	- Per					
			BUILDING	Ren Providence					
			SUILDING	AN AN					
			SUIL DI 10	· ·					
			BUILDING	S. A.					
			BUILDING	S. M.					
			BUILDING	A A A					
			SUILDING	A A A					

UUT20 was base mounted-rigid with four (4) 1/2" Grade 5 bolts and four (4) 1/2" washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

#### **TRU PROJECT NO. 1800840**



	Hammon	d Power Solutions, I	nc.							
Model Line:	Transform	ner Product Families	S					U	<b>UT</b> 2	<b>'L</b>
Model Number:	225712-W	W4			Serial Nu	umber:	C000906	540		
<b>Product Construc</b> NEMA 3R carbon si	-	/:								
<b>Options/Subcomj</b> 90kVA Titan, coppo			FORC	ODE C	04					
		I ENED		operties	Mp.	T.				
Weight		Dimension (in)				Lowes	t Natural	Frequen	cy (Hz)	
(lb)	Depth	Width	OSHe	ight 36	Front	-Back	Side	-Side	Ver	tical
1600	26.0	35.1		6.8	11.	X / / / / /	11	.43	11	.51
		UUT Highes		eismic Run	Informa	ation		-		
Building	g Code	<b>O</b> Test Crite	eria	S _{DS} (g)	z/h	I _P O	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (
CBC 2	2019	ICC-ES AC156	6 (2015) / 1	3/2020	) 1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting De	curror		ar ar			N				

### **TRU PROJECT NO. 1800840**



Model Line:	Manufacturer: Hammond Power Solutions, Inc.								IT ?	C
	Transformer Product Families								<b>UT 2</b> 2	ZB
Model Number:	225745-WW8				Serial Number: CB0906533					
Product Construct NEMA 1 carbon stee	-	:								
<i>Options/Subcomp</i> Fitan 30kVA, coppe		nry:								
		WEDF	ORCO		OMPL					
			UUT Pro	perties		Z1			<i>(</i>	
Weight	Dimension (in) Depth Width OSHeight 36						Natural Frequen		cy (Hz) Vertical	
(lb) Depth			OSHeight 36 21.8		Front-Back		Side-Side		N/A	
470	17	23.8 UUT Highest				X ( ( A ( )	N N	/A	IN	/A
Building	Code	Test Criter		S _{DS} (g)	z/h	I _P O	Aruvu (g)	A _{RIG-H} (g)	Arry (g)	Anc v (
CBC 2019		ICC-ES AC156 (2015) / 1 3		3/2020	1.0	1.5	3.20	2.40	1.33	0.53
Test Mounting De	tails:	FIE	A		664	102			T	

UUT22B was wall mounted-rigid with four (4) 1/2" Grade 5 bolts and four (4) 1/2" washers. Standard 16ga. wall mount flanges were welded to the unit. Flanges on production models will be continuous and integral rather than welded. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test. Contents were included in testing per operating conditions.

## **TRU PROJECT NO. 1800840**



Manufacturer:		Hammond Power Solutions, Inc.								23	
Model Line:		Transformer Product Families					<b>CR</b> 00000				
Model Number:		45-OSHPD-CUAL				umber:	CB00924	391			
Product Constru	-			moved pric	r to tost						
NEMA 3R Carbon	steel enclosure.	Fasteners from all P	'EM nuts rer	noved prio	r to test.						
Options/Subcon	nnonent Summ:	a <i>rı</i> /•									
45kVA Sentinel, c		ar y.									
			OP CO								
		0	FORCO		OMP,						
		NE			MZ						
				operties		Z					
Weight		Dimension (in)			Lowest Natural Frequency (Hz)						
(lb)	Depth	Width	_	OSHeight 36		Front-Back		Side-Side		Vertical	
430 25.8			23.8 28.8 UUT Highest Passed Seismic Ru		9.43		8.63		13.64		
Puildir	a Codo	Test Crite		<u>, , , , , , , , , , , , , , , , , , , </u>	z/h		<b>A</b> (7)	A (a)	<b>A</b> (a)	A (a	
Building Code CBC 2019				S _{DS} (g)	2/11	I _P	A _{FLX-H} (8)	A _{RIG-H} (g)	AFLX-V (B)		
		ICC-ES AC156 (2015) / 1 3/2.02(			1.0	1.5	3.20	2.40	1.33	0.53	
Test Mounting D	etails:	2				27	4				
		The second				PL	1				
		A.			- of	1					
		RN	A BUI	i C	COM	-	/				
			BUI	DING		100	in .				
							and the second				
	-		A	1							
				TRU							
			5	20							
	1	1	H		19						
	m	Sand and									
		9			-						
		A DE LA STREAM AND			6			/			
					0			/			

Note that UUT23 was previously tested as UUT 20. All pem nuts were removed from UUT 20 to create the new test unit. UUT23 was base mounted-rigid with four (4) 1/2" Grade 5 bolts and four (4) 1/2" washers. Unit maintained structural integrity and remained functional per manufacturer requirement after shake table test.

Contents were included in testing per operating conditions.