



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

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

OFFICE USE ONLY

APPLICATION #: **OSP – 0206 – 10**

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: **GE DIGITAL ENERGY**

Manufacturer's Technical Representative: Mark Townsend

Mailing Address: 2501 Pecan Street, Bonham, TX 75418

Telephone: (972) 841-1698 Email: Mark.Townsend@ge.com

Product Information

Product Name: **SG & LP33 UPS**

Product Type: Uninterruptible Power Supply

Product Model Number: See Attachment 1

(List all unique product identification numbers and/or part numbers)

General Description: The SG Series UPS are a three-phase uninterruptible power supply systems, intended to provide critical power protection for a wide range of applications.

Mounting Description: Rigid base mounted

Applicant Information

Applicant Company Name: **EASE LLC**

Contact Person: JONATHAN ROBERSON, S.E.

Mailing Address: 5877 Pine Ave. Suite 210, Chino Hills, CA 91709

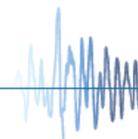
Telephone: (406) 541-EASE (3273) Email: j.roberson@easeco.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2013.

Signature of Applicant:  Date: 1/24/13

Title: Principal Engineer Company Name: EASE LLC

"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: EASE LLC

Name: Jonathan Roberson, S.E. California License Number: S4197

Mailing Address: 5877 Pine Ave. Suite 210, Chino Hills, CA 91709

Telephone: (909) 606-7622 Email: j.roberson@easeco.com

Supports and Attachments Preapproval

- Supports and attachments are preapproved under OPM- _____
(Separate application for OSHPD Preapproval of Manufacturer's Certification (OPM) of Supports and attachments is required)
- Supports and attachments are not preapproved

Certification Method

- Testing in accordance with: ICC-ES AC156
- Other (Please Specify): _____

Testing Laboratory

Company Name: Environmental Testing Laboratory, Inc.

Contact Name: Brady Richard

Mailing Address: 11034 Indian Trail, Dallas, TX 75229-3513

Telephone: (972) 247-9657 Email: brady@etldallas.com





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Seismic Parameters

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

Design Basis of Equipment or Components (F_p/W_p) = 1.39

S_{DS} (Design spectral response acceleration at short period, g) = 1.93

a_p (In-structure equipment or component amplification factor) = 1

R_p (Equipment or component response modification factor) = 2½

Ω_0 (System overstrength factor) = 2½

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1

Equipment or Component Natural Frequencies (Hz) = See Attachment 2

Overall dimensions and weight (or range thereof) = See Attachment 1

Equipment or Components @ grade designed in accordance with ASCE 7-10 Chapter 15: Yes No

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

S_{DS} (Design spectral response acceleration at short period, g) = _____

S_{D1} (Design spectral response acceleration at 1 second period, g) = _____

R (Response modification coefficient) = _____

Ω_0 (System overstrength factor) = _____

C_d (Deflection amplification factor) = _____

I_p (Importance factor) = 1.5

Height to Center of Gravity above base = _____

Equipment or Component Natural Frequencies (Hz) = _____

Overall dimensions and weight (or range thereof) = _____

Tank(s) designed in accordance with ASME BPVC, 2010: Yes No

List of Attachments Supporting Special Seismic Certification

Test Report(s) Drawings Calculations Manufacturer's Catalog

Other(s) (Please Specify): Attachments 1 & 2

OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2019

Signature:  Date: July 9, 2013

Print Name: Timothy J. Piland Title: SSE

Special Seismic Certification Valid Up to : S_{DS} (g) = 1.93 z/h = 1

Condition of Approval (if applicable): _____



ATTACHMENT 1:

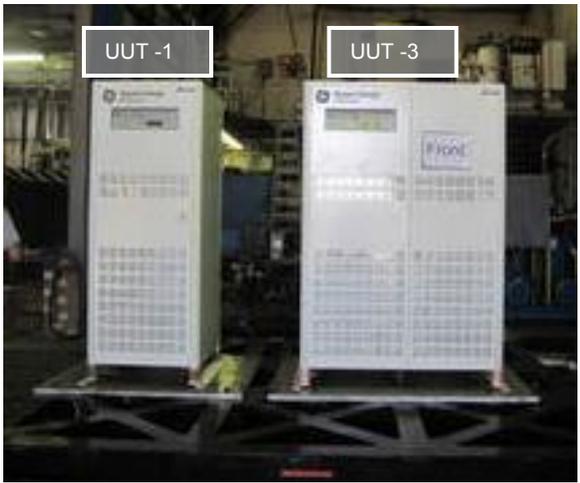
TABLE 1: SEISMIC CERTIFIED COMPONENTS

MANUFACTURER	GE DIGITAL ENERGY						
PRODUCT LINE	SG- UPS						
COMPONENTS	PART NO.	DIMENSIONS (IN.)			MAX. WT. (LB.)	MOUNT	BASIS
		W	D	H			
10 kVA UPS	UPS001SG444AN50-OSHPD UPS001SG444AY50-OSHPD UPS001SG443AN50-OSHPD UPS001SG443AY50-OSHPD	27	32	71	735	Floor	INT
10 kVA UPS w/ 14 minute Internal Batteries	UPS01SG444AN50-OSHPD UPS01SG444AY50-OSHPD UPS01SG443AN50-OSHPD UPS01SG443AY50-OSHPD	27	32	71	1,139	Floor	INT
20 kVA UPS	UPS002SG444AN50-OSHPD UPS002SG444AY50-OSHPD UPS002SG443AN50-OSHPD UPS002SG443AY50-OSHPD	27	32	71	765	Floor	INT
20 kVA UPS w/ 5 minute Internal Batteries & w/o 5 th filter	S1875PK	27	32	71	1,169	Floor	INT
20 kVA UPS w/ 5 minute Internal Batteries	UPS02SG444AN50-OSHPD UPS02SG444AY50-OSHPD UPS02SG443AN50-OSHPD UPS02SG443AY50-OSHPD	27	32	71	1,169	Floor	UUT-1
30 kVA UPS	UPS003SG444AN50-OSHPD UPS003SG444AY50-OSHPD UPS003SG443AN50-OSHPD UPS003SG443AY50-OSHPD	27	32	71	970	Floor	INT
40 kVA UPS	UPS004SG444AN50-OSHPD UPS004SG444AY50-OSHPD UPS004SG443AN50-OSHPD UPS004SG443AY50-OSHPD	27	32	71	1,147	Floor	INT
50 kVA UPS	UPS005SG444AN50-OSHPD UPS005SG444AY50-OSHPD UPS005SG443AN50-OSHPD UPS005SG443AY50-OSHPD	32	32	71	1,257	Floor	INT
80 kVA UPS	UPS008SG444AN50-OSHPD UPS008SG444AY50-OSHPD UPS008SG443AN50-OSHPD UPS008SG443AY50-OSHPD	32	32	71	1,489	Floor	INT
100kVA/80kW UPS	UPS010SG444AN50-OSHPD UPS010SG444AY50-OSHPD UPS010SG443AN50-OSHPD UPS010SG443AY50-OSHPD	47	32	71	1,993	Floor	UUT-2
120 kVA UPS	UPS012SG444AN50-OSHPD UPS012SG444AY50-OSHPD UPS012SG443AN50-OSHPD UPS012SG443AY50-OSHPD	47	32	71	2,006	Floor	INT
150 kVA UPS	UPS015SG444AN50-OSHPD UPS015SG444AY50-OSHPD UPS015SG443AN50-OSHPD UPS015SG443AY50-OSHPD	47	32	71	2,211	Floor	UUT-3
225 kVA UPS w/ or w/o EMI	UP1022SG444AN54-OSHPD UP1022SG444AY54-OSHPD	65	32	71	3,452	Floor	INT
300 kVA UPS w/ or w/o EMI	UP1030SG444AN54-OSHPD UP1030SG444AY54-OSHPD	65	32	71	3,452	Floor	INT
300 kVA UPS w/ EMI	UP1030SG444AY54-OSHPD	65	32	71	3,452	Floor	UUT-A3
400kVA/360kW UPS	UP1040SG444AN54-OSHPD	81	33.4	76.7	5,226	Floor	INT
500 kVA UPS	UP1050SG444AN54-OSHPD	81	33.4	76.7	5,226	Floor	INT
750kVA/675kW UPS 6 Pulse	UP1075SG444A654-OSHPD	146.4	35.4	76.8	9,977	Floor	UUT-4
FEATURES	Painted, carbon steel cabinet construction. 480/277V In/Out 3-phase; 60 Hz; All models include 5 th Filter unless otherwise noted. RPA Inductor present on all 225kVA to 750kVA models.						
MOUNT	Floor (Rigid Base): free-standing, base-mounted condition with the component rigidly attached to a supporting structure and no lateral support above the base. Seismic qualification of 20kVA to 150kVA models requires the use of the GE Digital Energy Seismic Bracket Kit						
NOTES	1. BASIS: <ul style="list-style-type: none"> • UUT#: Indicates that a test specimen matching these characteristics was tested as part of this testing program. • INT (Interpolate or extrapolate): indicates a model that was not specifically tested, and by which seismic qualification was established through evaluation of testing of other, similar models in the product line. 						

TABLE 2: SEISMIC CERTIFIED COMPONENTS

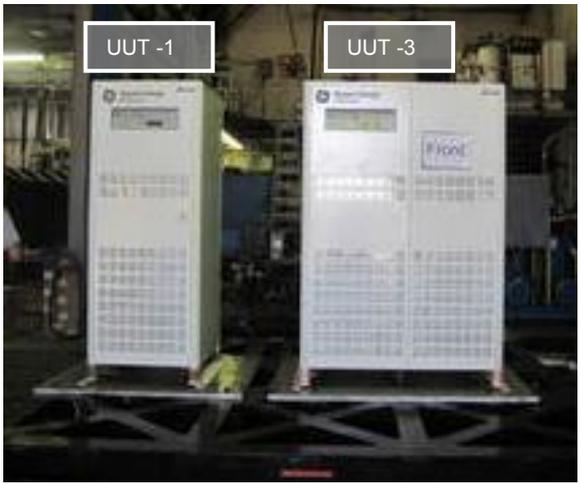
MANUFACTURER	GE DIGITAL ENERGY						
PRODUCT LINE	LP33- UPS						
COMPONENTS	PART NO.	DIMENSIONS (IN.)			MAX. WT. (LB.)	MOUNT	BASIS
		W	D	H			
30kVA/24kW UPS (sidecar empty) ^[2]	UPS303LP2241100-OSHPD UPS303LP2241200-OSHPD	41	30	72	772	Floor	INT
40kVA/32kW UPS (sidecar empty) ^[2]	UPS304LP2241200-OSHPD	41	30	72	913	Floor	UUT-A1
50kVA/45kW UPS	UPS304LP2241100-OSHPD	29	30	72	913	Floor	INT
60kVA/54kW kVA UPS	UPS305LP2241100-OSHPD UPS305LP2241200-OSHPD	29	30	72	913	Floor	UUT-A2
FEATURES	Painted, carbon steel cabinet construction. 208/120V In/Out; 3-phase; 60 Hz						
MOUNT	Floor (Rigid Base): free-standing, base-mounted condition with the component rigidly attached to a supporting structure and no lateral support above the base. Seismic qualification requires the use of the GE Digital Energy Seismic Bracket Kit						
NOTES	<ol style="list-style-type: none"> BASIS: <ul style="list-style-type: none"> UUT#: Indicates that a test specimen matching these characteristics was tested as part of this testing program. INT (Interpolate or extrapolate): indicates a model that was not specifically tested, and by which seismic qualification was established through evaluation of testing of other, similar models in the product line. Certified for use with external battery cabinets only (i.e. no internal batteries). 						

ATTACHMENT 2: TEST SPECIMEN SUMMARY

UUT- 1 SG- 20 kVA UPS w/ Internal Batteries									
MANUFACTURER: GE									
IDENTIFICATION: Model: SG									
Serial No.: P0020-1511-B2420									
DESCRIPTION: Painted, carbon steel cabinet construction. 480V; 3-phase; 60 Hz									
MOUNTING: Rigid Base (Floor) mounted using (4) – ½” hex head bolts w/ doubled washers through GE Seismic Bracket Kit to Aluminum Plate									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	X-Axis		Y-Axis	Z-Axis			
27	32	71	1,160		5.8	7.6	18.8		
SHAKE TABLE TEST PARAMETERS									
CODE	TEST CRITERIA	S _{DS}	z/h	I _P	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2013	ICC-ES AC156-10	1.93	1.0	1.5	3.09	2.32	1.29	0.52	
Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test									

UUT-2 SG- 100 kVA UPS									
MANUFACTURER: GE									
IDENTIFICATION: Model: SG									
Serial No.: P0150-4710-B133P									
DESCRIPTION: Painted, carbon steel cabinet construction. 480V; 3-phase; 60 Hz									
MOUNTING: Rigid Base (Floor) mounted using (4) – ½” hex head bolts w/ doubled washers through GE Seismic Bracket Kit to Aluminum Plate									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height	X-Axis		Y-Axis	Z-Axis			
47	32	71	1,993		9.3	7.7	>50		
SHAKE TABLE TEST PARAMETERS									
CODE	TEST CRITERIA	S _{DS}	z/h	I _P	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2013	ICC-ES AC156-10	1.93	1.0	1.5	3.09	2.32	1.29	0.52	
Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test									

ATTACHMENT 2: TEST SPECIMEN SUMMARY

UUT- 3 SG- 150 kVA UPS									
MANUFACTURER: GE									
IDENTIFICATION: Model: SG									
Serial No.: Not Recorded									
DESCRIPTION: Painted, carbon steel cabinet construction. 480V; 3-phase; 60 Hz									
MOUNTING: Rigid Base (Floor) mounted using (4) – ½” hex head bolts w/ doubled washers through GE Seismic Bracket Kit to Aluminum Plate									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height			X-Axis	Y-Axis	Z-Axis		
47	32	71		2,211	8.8	7.6	34.8		
SHAKE TABLE TEST PARAMETERS									
CODE	TEST CRITERIA	S _{DS}	z/h	I _P	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2013	ICC-ES AC156-10	1.93	1.0	1.5	3.09	2.32	1.29	0.52	
Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test									

UUT-4 SG- 750 kVA UPS									
MANUFACTURER: GE									
IDENTIFICATION: Model: SG UL S2 750									
Serial No.: P2750-2410-R384A									
DESCRIPTION: Painted, carbon steel cabinet construction. 480V; 3-phase; 60 Hz Options: 6 Pulse; 5TH Filter; RPA Inductor									
MOUNTING: Rigid Base (Floor) mounted using (22) – ½” hex head bolts w/ washers to HSS interface frame.									
PROPERTIES:									
DIMENSIONS (in.)				Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height			X-Axis	Y-Axis	Z-Axis		
146.4	35.4	76.8		9,977	6.9	6.1	6.2		
SHAKE TABLE TEST PARAMETERS									
CODE	TEST CRITERIA	S _{DS}	z/h	I _P	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}	
CBC 2013	ICC-ES AC156-10	1.93	1.0	1.5	3.09	2.32	1.29	0.52	
Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test									

ATTACHMENT 2: TEST SPECIMEN SUMMARY

UUT- A1		LP- 40 KVA UPS						
MANUFACTURER:		GE						
IDENTIFICATION:		Model No.: LP						
		Serial No.: Q1040-0512-B229A						
DESCRIPTION:		Painted, carbon steel cabinet construction. 208/120V In/Out; 3-phase; 60 Hz						
MOUNTING:		Rigid Base (Floor) mounted using (4) – ½" hex head bolts through GE Seismic Bracket Kit to a 48" x 1.25" x 60.5" Aluminum Plate						
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		X-Axis	Y-Axis	Z-Axis		
41	28.75	71.5	912.5	10.4	11.0	30.7		
SHAKE TABLE TEST PARAMETERS								
CODE	TEST CRITERIA	S _{DS}	z/h	I _P	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2013	ICC-ES AC156-10	1.93	1.0	1.5	3.09	2.32	1.29	0.52
Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test								



UUT-A2		LP- 60 KVA UPS						
MANUFACTURER:		GE						
IDENTIFICATION:		Model No.: LP33						
		Serial No.: Q1060-2612-B298B						
DESCRIPTION:		Painted, carbon steel cabinet construction. 208/120V In/Out; 3-phase; 60 Hz						
MOUNTING:		Rigid Base (Floor) mounted using (4) – ½" hex head bolts through GE Seismic Bracket Kit to a 48" x 1" x 48" Aluminum Plate						
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		X-Axis	Y-Axis	Z-Axis		
28.75	28.625	71.375	912.5	8.0	10.3	9.9		
SHAKE TABLE TEST PARAMETERS								
CODE	TEST CRITERIA	S _{DS}	z/h	I _P	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2013	ICC-ES AC156-10	1.93	1.0	1.5	3.09	2.32	1.29	0.52
Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test								



ATTACHMENT 2: TEST SPECIMEN SUMMARY

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UUT- A3		SG- 300 KVA UPS						
MANUFACTURER:		GE						
IDENTIFICATION:		Model No.: SG						
		Serial No.: P2300-2712-B750B						
DESCRIPTION:		Painted, carbon steel cabinet construction. 3-phase; 60 Hz Included Options: 5th Harmonic Filter; RPA Inductor						
MOUNTING:		Rigid Base (Floor) mounted using (6) – 3/8" hex head bolts to a 48" x 1.5' x 48" Aluminum Plate						
								
PROPERTIES:								
DIMENSIONS (in.)			Weight (lb.)	LOWEST RESONANT FREQUENCY (Hz.)				
Width	Depth	Height		X-Axis	Y-Axis	Z-Axis		
65	31.5	71	3451.7	6.8	6.3	>50		
SHAKE TABLE TEST PARAMETERS								
CODE	TEST CRITERIA	S _{DS}	z/h	I _P	A _{FLX-H}	A _{RIG-H}	A _{FLX-V}	A _{RIG-V}
CBC 2013	ICC-ES AC156-10	1.93	1.0	1.5	3.09	2.32	1.29	0.52
Unit maintained structural integrity and functionality, after the ICC-ES AC 156 test								