



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

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

OFFICE USE ONLY

APPLICATION #: OSP-0602

OSHPD Special Seismic Certification Preapproval (OSP)

Type: New Renewal

Manufacturer Information

Manufacturer: ABB Industrial Solutions (Switzerland) SA

Manufacturer's Technical Representative: Christopher Belcastro

Mailing Address: 5900 Eastport Blvd., Bldg. V., Richmond, VA 23231-4453

Telephone: (804) 236-4064

Email: christopher.belcastr@us.abb.com

Product Information

Product Name: UPS and Batteries

Product Type: UPS

Product Model Number: TLE Series UL High Power

General Description: 3-Phase 480Vac UPS System with double conversion.

Mounting Description: Rigid, Floor Mounted

Tested Seismic Enhancements: Seismic enhancements made to the test units and/or modifications required to address anomalies during the tests shall be incorporated into the production units.

Applicant Information

Applicant Company Name: EASE

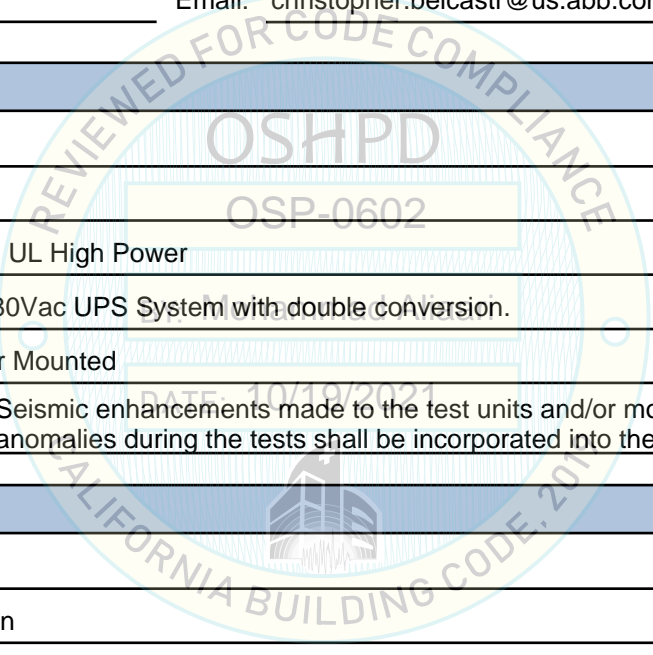
Contact Person: Jonathan Roberson

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

Telephone: (909) 606-7622

Email: j.roberson@easeco.com

Title: Principal Structural Engineer





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

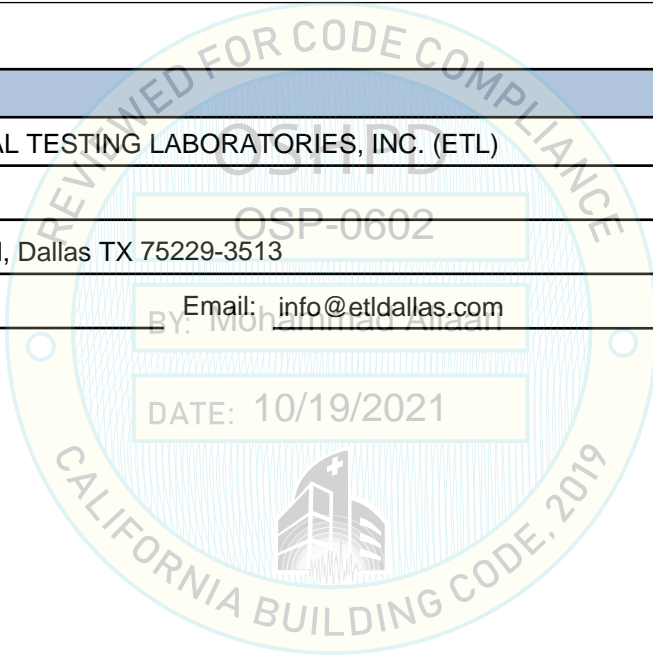
Company Name: EASE
Name: Jonathan Roberson California License Number: S4197
Mailing Address: 5877 Pine Ave., Suite 210, Chino Hills, CA 91709
Telephone: (951) 295-1892 Email: jon@EASECo.com

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: _____
Mailing Address: 11034 Indian Trail, Dallas TX 75229-3513
Telephone: (972) 247-9657 Email: info@etldallas.com





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Seismic Parameters

Design Basis of Equipment or Components (F_p/W_p) = 1.50 (SDS = 2.0 @ z/h = 1); 1.13 (SDS = 2.5 @ z/h = 0)

SDS (Design spectral response acceleration at short period, g) = See Attachment 1

a_p (Amplification factor) = 2.5

R_p (Response modification factor) = 6

Ω_0 (System overstrength factor) = 2.0

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

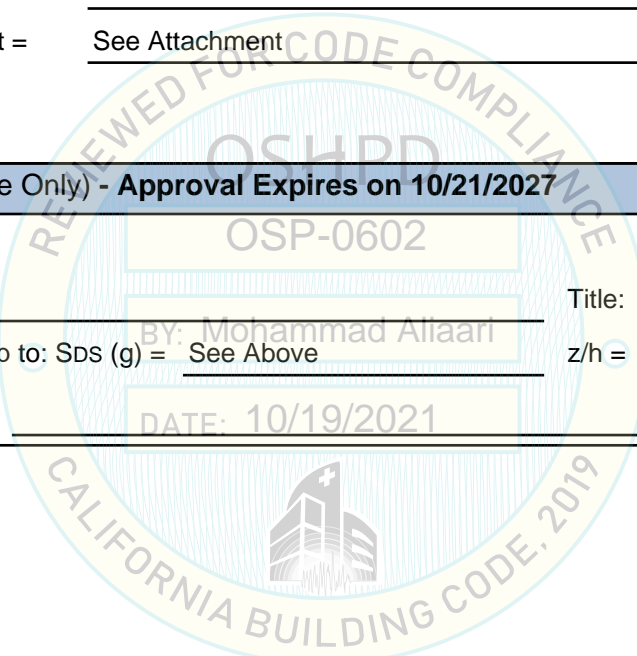
OSHPD Approval (For Office Use Only) - Approval Expires on 10/21/2027

Date: 10/19/2021

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): DATE: 10/19/2021



ATTACHMENT 1: SEISMIC CERTIFIED COMPONENTS


TABLE 1: 160 kVA to 500 kVA UPS


Manufacturer	ABB Industrial Solutions (Switzerland) SA					S _{DS} =2.0 @ z/h=1 S _{DS} =2.5 @ z/h=0	
Product Line	TLE SERIES UL S2B UNINTERRUPTIBLE POWER SYSTEMS 3-Phase 480VAC UPS with double conversion.						
COMPONENT	IDENTIFICATION NO.	DIMENSIONS (IN.)			APPROX. WT. (LB.)	MOUNTING	BASIS ^[1]
		W	D	H			
TLE Series UL S2B 160kVA	4NWP105706R0004	44.1	34.06	75	1506	Rigid Base	SAME
TLE Series UL S2B 200kVA	4NWP105706R0003	44.1	34.06	75	1506	Rigid Base	SAME
TLE Series UL S2B 225kVA	4NWP105706R0002	44.1	34.06	75	1506	Rigid Base	UUT4
TLE Series UL S2B 250kVA	4NWP105706R0001	44.1	34.06	75	1506	Rigid Base	SAME
TLE Series UL S2B 300kVA	4NWP105709R0004	63.78	34.06	75	2756	Rigid Base	SAME
TLE Series UL S2B 350kVA	4NWP105709R0003	63.78	34.06	75	2756	Rigid Base	SAME
TLE Series UL S2B 400kVA	4NWP105709R0002	63.78	34.06	75	2756	Rigid Base	SAME
TLE Series UL S2B 500kVA	4NWP105709R0001	63.78	34.06	75	2756	Rigid Base	UUT5
Mounting	RIGID BASE MOUNT: free-standing, base-mounted tower configuration with the component rigidly attached to a supporting structure and no lateral support above the base.						
Notes	<p>1. BASIS:</p> <ul style="list-style-type: none"> • UUT#: Indicates that a test specimen matching these characteristics was tested. • SAME: Product is identical to a model tested, except for possible variations in color, software or identification number. • INT (Interpolated or extrapolated): Configuration not specifically tested, which seismic qualification is established based on similarity to a test unit. 						

TABLE 2: 625 kVA to 1000 kVA UPS

Manufacturer	ABB Industrial Solutions (Switzerland) SA					S _{DS} =2.0 @ z/h=1	
Product Line	TLE SERIES UL S2B UNINTERRUPTIBLE POWER SYSTEMS 3-Phase 480VAC UPS with double conversion.						
COMPONENT	IDENTIFICATION NO.	DIMENSIONS (IN.)			APPROX. WT. (LB.)	MOUNTING	BASIS ^[1]
		W	D	H			
TLE Series UL S2B 500kVA	4NWP105709R0001	63.78	34.06	75	2756	Rigid Base	UUT5
TLE Series UL S2B 625kVA	4NWP105711R0002	118.12	34.06	75	4850	Rigid Base	INT
TLE Series UL S2B 750kVA	4NWP105711R0001	118.12	34.06	75	4850	Rigid Base	INT
TLE Series UL S2B 1000 kVA	4NWP105712R0001	143.50	34.06	75	5732	Rigid Base	UUT-8A
Mounting	RIGID BASE MOUNT: free-standing, base-mounted tower configuration with the component rigidly attached to a supporting structure and no lateral support above the base.						
Notes	<p>1. BASIS:</p> <ul style="list-style-type: none"> • UUT#: Indicates that a test specimen matching these characteristics was tested. • SAME: Product is identical to a model tested, except for possible variations in color, software or identification number. • INT (Interpolated or extrapolated): Configuration not specifically tested, which seismic qualification is established based on similarity to a test unit. 						


ATTACHMENT 2: TEST SPECIMEN SUMMARY

UUT- 4 TLE Series UL S2B 225kVA UPS						
Manufacturer: GE Consumer & Industrial SA						
Identification: As Labeled: UB3022TL444AA00						
As Configured: 4NWP105706R0002 *						
Description: Model: TLE Series UL / Output Power:225 kVA Voltage: 480VAC Input / 480VAC Output 3W+N+PE or 3W+PE Current: 285A Input / 271A Output Frequency: 60 Hz Input / 60 Hz Output The then-standard production unit was modified prior to test to include enhancements and modifications to address anomalies observed during testing. * NOTE: "As Configured" identification number was developed and released subsequent to testing and identifies a standard production unit that includes the seismic enhancements and modifications to address anomalies observed during testing incorporated into this test unit.						
Mounting: Rigid Base (Floor) Mounted w/ (6) – 1/2" diameter SAE J429 Grade 8 Bolts.						
DIMENSIONS (in.)				LOWEST RESONANT FREQUENCY (Hz.)		
Width	Depth	Height	Weight (lb.)	FRONT-AXIS	SIDE-AXIS	VERTICAL-AXIS
44.1	34.06	75	1502	5.61	23.82	23.22
ICC-ES AC156 SHAKE TABLE TEST PARAMETERS						CODE: 2019 CBC
S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.0	1	1.5	3.20	2.40	1.68	0.68
2.5	0					
Unit satisfied AC156 requirements for structural integrity and manufacturer requirements for functionality after AC156 test.						

UUT- 5 TLE Series UL S2B 500kVA UPS						
Manufacturer: GE Consumer & Industrial SA						
Identification: As Labeled: UB3050TL444AA00						
As Configured: 4NWP105709R0001 *						
Description: Model: TLE Series UL / Output Power:500 kVA Voltage: 480VAC Input / 480VAC Output 3W+N+PE or 3W+PE Current: 504A Input / 481A Output Frequency: 60 Hz Input / 60 Hz Output The then-standard production unit was modified prior to test to include enhancements and modifications to address anomalies observed during testing of UUT-2. * NOTE: "As Configured" identification number was developed and released subsequent to testing and identifies a standard production unit that includes the seismic enhancements and modifications to address anomalies incorporated into this test unit.						
Mounting: Rigid Base (Floor) Mounted w/ (8) – 1/2" diameter SAE J429 Grade 8 Bolts.						
DIMENSIONS (in.)				LOWEST RESONANT FREQUENCY (Hz.)		
Width	Depth	Height	Weight (lb.)	FRONT-AXIS	SIDE-AXIS	VERTICAL-AXIS
63.78	34.06	75	2756	8.38	6.03	25.5
ICC-ES AC156 SHAKE TABLE TEST PARAMETERS						CODE: 2019 CBC
S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.0	1	1.5	3.20	2.40	1.68	0.68
2.5	0					
Unit satisfied AC156 requirements for structural integrity and manufacturer requirements for functionality after AC156 test.						

ATTACHMENT 2: TEST SPECIMEN SUMMARY

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UUT- 8A TLE Series UL S2B 1000kVA UPS						
<i>Manufacturer:</i> GE Consumer & Industrial SA						
<i>Identification:</i> As Reported: UB3100TL444AA00 (As identified at test, not labeled) As Configured: 4NWP105712R0001*						
<i>Description:</i> Model: TLE Series UL / Output Power:1000 kVA Voltage: 480VAC Input / 480VAC Output 3W+N+PE or 3W+PE Current: 1260A Input / 1200A Output Frequency: 60 Hz Input / 60 Hz Output The then-standard production unit was modified prior to test to include enhancements in improve seismic performance. Additional modifications were installed during testing to address anomalies observed during testing. * <u>NOTE:</u> "As Configured" identification number was developed and released after testing and identifies a standard production unit that includes the seismic enhancements and modifications to address anomalies incorporated into this test unit						
<i>Mounting:</i> Rigid Base (Floor) Mounted w/ (16) – 1/2" diameter SAE J429 Grade 8 Bolts.						
DIMENSIONS (in.)				LOWEST RESONANT FREQUENCY (Hz.)		
Width	Depth	Height	Weight (lb.)	FRONT-AXIS	SIDE-AXIS	VERTICAL-AXIS
143.5	34.06	75	5732	4.03	4.24	11.06
ICC-ES AC156 SHAKE TABLE TEST PARAMETERS						CODE: 2019 CBC
S _{DS} (g)	z/h	I _p	A _{FLX-H} (g)	A _{RIG-H} (g)	A _{FLX-V} (g)	A _{RIG-V} (g)
2.0	1	1.5	3.20	2.40	1.34	0.54
Unit satisfied AC156 requirements for structural integrity and manufacturer requirements for functionality after AC156 test.						

DATE: 10/19/2021

