



OFFICE OF STATEWIDE HEALTH PLANNING AND DEVELOPMENT
FACILITIES DEVELOPMENT DIVISION

APPLICATION FOR OSHPD SPECIAL SEISMIC
CERTIFICATION PREAPPROVAL (OSP)

OFFICE USE ONLY

APPLICATION #: OSP – 0536 – 10

OSHPD Special Seismic Certification Preapproval (OSP)

Type: ☒ New ☐ Renewal

Manufacturer Information

Manufacturer: Go2Power, LLC

Manufacturer's Technical Representative: Guy Teipel

Mailing Address: 2575 Metropolitan Drive, Trevoze, PA 19053

Telephone: 800.967.5573

Email: gteipel@go2power.com

Product Information

Product Name: Pure Wave Mini, LiteMinder, LiteMinder Modular

Product Type: Lighting Inverter System

Product Model Number: Various (See Attachment)

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

General Description: Lighting Inverter System. Seismic enhancements made to the test units

and modifications required to address the anomalies observed during the tests shall be incorporated into the production units.

Mounting Description: Rigid Floor Mounted, Rigid Wall Mounted

Applicant Information

Applicant Company Name: SEESTudio, Inc.

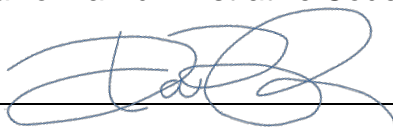
Contact Person: Dan Junker, SE

Mailing Address: 1281 9th Ave. San Diego, CA 92101, Suite 1101

Telephone: 619.606.5058

Email: djunker@seestudioinc.com

I hereby agree to reimburse the Office of Statewide Health Planning and Development review fees in accordance with the California Administrative Code, 2016.

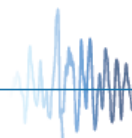
Signature of Applicant: 

Date: 08-23-17

Title: Principal Engineer

Company Name: SEESTudio, Inc.

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





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

Company Name: SEESstudio, Inc.

Name: Dan Junker, SE

California License Number: S6178

Mailing Address: 1281 9th Ave. san Diego, CA 92101, Suite 1101

Telephone: 619.606.5058

Email: djunker@seestudioinc.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: Timothy J. Piland

Testing Laboratory

DATE: 11/22/2017

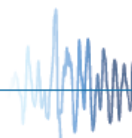
Company Name: Clark Dynamic Test Laboratory, Inc.

Contact Name: Robert Francis, General Manager

Mailing Address: 1801 Route 51 Jefferson Hills, PA 15025

Telephone: 412-387-1004

Email: rfrancis@clarktesting.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) = 1.44

S_{DS} (Design spectral response acceleration at short period, g) = 2.00

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) = 2.0

I_p (Importance factor) = 1.5

z/h (Height factor ratio) = 1

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

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

☒ Test Report(s) ☐ Drawings ☐ Calculations ☒ Manufacturer's Catalog

☒ Other(s) (Please Specify): SEES Certified Component Summary

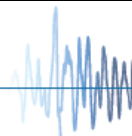
OSHPD Approval (For Office Use Only) – Approval Expires on December 31, 2022

Signature: Timothy J. Piland Date: November 22, 2017

Print Name: Timothy J. Piland Title: SSE

Special Seismic Certification Valid Up to : S_{DS} (g) = 2.00 z/h = 1

Condition of Approval (if applicable): _____



SPECIAL SEISMIC CERTIFICATION

CERTIFIED COMPONENTS

TABLE 1

MANUFACTURER: Go2Power, LLC

MODEL LINE: Various (See Below)

TABLE DESCRIPTION: Lighting Inverters

CONSTRUCTION SUMMARY:

14 Gauge cold rolled steel (CRS) construction for all cabinets 1KW and Higher. 16 Gauge CRS construction for all cabinets 125W-525W. All cabinets powder coated and internal brackets and sub-assembly components are constructed of Galvanized or Galvanneal CRS. Certified unit construction shall be identical to cabinet construction of UUT's.

CERTIFICATION PARAMETERS:
Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$
 $S_{Ds} = 2.0g$ at $z/h = 1.0$
OPTIONS SUMMARY:

Internal components as detailed in following Certified Sub-Component tables. All floor mounted units shall be single-height (stacked units not included).

MOUNTING SUMMARY:

Rigid floor mounted or rigid wall mounted per below table. Unit anchorage shall be designed on a project specific basis by SEOR. Installed mounting configuration must be of similar configuration and equivalent strength and stiffness to those tested.

NOTES:

| Model Line | Model | Wattage (W) | Max Dimensions (in) | | | Weight (lb) | Description | UUT |
|--------------------|------------------|-------------|---------------------|-------|--------|-------------|--------------------------|--------------|
| | | | Depth | Width | Height | | | |
| Pure Wave Mini | PW12 | 125 | 4.11 | 14.27 | 10.09 | 32 | Wall Mount | 1 |
| | PW25 | 250 | 8.60 | 17.12 | 11.09 | 63 | | 2 |
| LiteMinder | LM32 | 325 | 12.50 | 17.87 | 17.72 | 105 | | 3 |
| | LM52 | 525 | 12.50 | 17.87 | 17.72 | 133 | | 4 |
| LiteMinder Modular | LM1000-1P | 1,000 | 13.75 | 32.00 | 55.00 | 340 | Single Phase Floor Mount | Extrapolated |
| | LM1600-1P | 1,600 | 13.75 | 32.00 | 55.00 | 520 | | Extrapolated |
| | LM2200-1P | 2,200 | 13.75 | 32.00 | 55.00 | 600 | | Extrapolated |
| | LM2800-1P | 2,800 | 13.75 | 32.00 | 55.00 | 678 | | Extrapolated |
| | LM3000-1P | 3,000 | 13.75 | 32.00 | 55.00 | 696 | | Extrapolated |
| | LM4200-1P | 4,200 | 23.00 | 32.00 | 50.00 | 980 | | Extrapolated |
| | LM5200-1P | 5,200 | 23.00 | 32.00 | 50.00 | 1,140 | | Extrapolated |
| | LM6250-1P | 6,250 | 23.00 | 32.00 | 50.00 | 1,300 | | 5 |
| | LM8250-1P | 8,250 | 23.00 | 64.00 | 50.00 | 1,945 | Multi-Phase Floor Mount | Interpolated |
| | LM10500-1P | 10,500 | 23.00 | 64.00 | 50.00 | 2,265 | | Interpolated |
| | LM12500-1P | 12,500 | 23.00 | 64.00 | 50.00 | 2,585 | | 6 |
| | LM2200-1S/2P/3P | 2,200 | 13.00 | 48.00 | 38.00 | 650 | | Interpolated |
| | LM3000-1S/2P/3P | 3,000 | 13.00 | 48.00 | 38.00 | 811 | | Interpolated |
| | LM4200-1S/2P/3P | 4,200 | 23.00 | 64.00 | 50.00 | 1,460 | | Interpolated |
| | LM5200-1S/2P/3P | 5,200 | 23.00 | 64.00 | 50.00 | 1,625 | | Interpolated |
| | LM6250-1S/2P/3P | 6,250 | 23.00 | 64.00 | 50.00 | 1,785 | | Interpolated |
| | LM8250-1S/2P/3P | 8,250 | 23.00 | 64.00 | 50.00 | 2,097 | | Interpolated |
| | LM10500-1S/2P/3P | 10,500 | 23.00 | 64.00 | 50.00 | 2,415 | | Interpolated |
| | LM12500-1S/2P/3P | 12,500 | 23.00 | 64.00 | 50.00 | 2,726 | | Interpolated |
| | LM15750-1S/2P/3P | 15,750 | 23.00 | 96.00 | 50.00 | 3,473 | | Interpolated |
| | LM18750-1S/2P/3P | 18,750 | 23.00 | 96.00 | 50.00 | 3,945 | | 7 |



www.seestudioinc.com
P: 619.606.5058
E: designgroup@seestudioinc.com

CERTIFIED SUB-COMPONENTS

TABLE 2

TABLE DESCRIPTION: Subcomponents

| | | | |
|-----------------------|--|--|--|
| CONSTRUCTION SUMMARY: | | CERTIFICATION PARAMETERS: | |
| | | Building Code: CBC 2016 | |
| OPTIONS SUMMARY: | | Component Importance Factor: $I_p = 1.5$ | |
| | | $S_{DS} = 2.0g$ at $z/h = 1.0$ | |
| MOUNTING SUMMARY: | | NOTES: | |

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

[illegible]



TABLE 3

TABLE DESCRIPTION: Subcomponents

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

S E E T O M O R R O W B U I L T T O D A Y

Document No.: 2016-075-CCS-001.1

SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS
TABLE 4
MANUFACTURER: Go2Power, LLC

MODEL LINE: LiteMinder Modular

TABLE DESCRIPTION: Subcomponents

| CONSTRUCTION SUMMARY: | CERTIFICATION PARAMETERS: |
|-------------------------|---|
| | Building Code: CBC 2016 |
| OPTIONS SUMMARY: | Component Importance Factor: $I_p = 1.5$ |
| | $S_{Ds} = 2.0g$ at $z/h = 1.0$ |
| MOUNTING SUMMARY: | NOTES: |

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

| Sub-Component | Manufacturer | Model | Description | UUT |
|--------------------------------|--------------|-------------------|---------------------|--------------|
| Main Transformer | Yi-Huang | T110024 | (24 lbs.) | 7 |
| | | T110040 | (32 lbs.) | Interpolated |
| | | T110025 | (48 lbs.) | 7 |
| | | T110039 | (50 lbs.) | Interpolated |
| | | T110041 | (50 lbs.) | Interpolated |
| | | T110042 | (50 lbs.) | Interpolated |
| | | T110034 | (60 lbs.) | Interpolated |
| | | T110033 | (68 lbs.) | 5,7 |
| | | T110043 | (80 lbs.) | Interpolated |
| | | T110044 | (80 lbs.) | Interpolated |
| | | T110035 | (125 lbs.) | 6 |
| Transformer, Multi-Winding | Hui-Hi | T110022 | | 5,6,7 |
| Transformer, Auto 277/120 | Hui-Hi | T110038 | | 5,6 |
| Transformer Current Sense | Galaxy | T110021 | | 5,6,7 |
| Power Distribution Block | Erico | UDJ-160A | | 5,6,7 |
| Printed Circuit Board Assembly | Shore PCB | A250133 | | 5,6,7 |
| | | A250129 | | 7 |
| | | A250132 | | 7 |
| | | A250118 | | 5,6,7 |
| | | A250120 | | 5,6,7 |
| | | A250121 | | 5,6 |
| | | A250131 | | 7 |
| | | A250139 | | 5,6 |
| | | A250142 | | 5,6,7 |
| DP Contactor | Lovato | DPBF3200A12060 | 3 Pole, 120VAC coil | 5 |
| | | DPBF650012060 | | 6,7 |
| Capacitor, Film | CDE | SFA37T6K219B-F | 370VAC | 5 |
| | | SFA44T12.5K388B-F | | Interpolated |
| | | SFC37T30K291B-F | | 6 |

SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE 4

MANUFACTURER: Go2Power, LLC

MODEL LINE: LiteMinder Modular

TABLE DESCRIPTION: Subcomponents

| CONSTRUCTION SUMMARY: | CERTIFICATION PARAMETERS: |
|-------------------------|---|
| | Building Code: CBC 2016 |
| OPTIONS SUMMARY: | Component Importance Factor: $I_p = 1.5$ |
| | $S_{Ds} = 2.0g$ at $z/h = 1.0$ |
| MOUNTING SUMMARY: | NOTES: |

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

| Sub-Component | Manufacturer | Model | Description | UUT |
|--------------------------------|--------------------|------------------|-------------|--------------|
| Capacitor, Electrolytic | CDE | 520C103M200DC2HS | | 5,7 |
| | | 520C572T400DF2HS | | 6 |
| Capacitor, Film | CDE | SCD205K601 | 600VDC | 5,6,7 |
| Relay | Omron | G9EA-1-B | DC, 60A | 5,6,7 |
| Heatsink | AAVID | M990020 | | 5,6,7 |
| | | 782203B05500G | | 7 |
| SCR | Powerex | CD43-16-90C | | 5,6 |
| | | CD63-16-15C | | 7 |
| Fuse Block | Marathon | F60A1B | 60A | 5,6,7 |
| Fuse Block | Bussman/Littlefuse | NON60/NLN60 | 60A | 5,6,7 |
| Circuit Breaker Distribution | Eaton | FAZ | 10-63A | 5,6,7 |
| Circuit Breaker Distribution | ABB | S201UP-K | 10-63A | 5,6,7 |
| Trip Alarm Auxiliary Contact | ABB | S2C-H6R | | 5,6 |
| | Eaton | Z-NHK | | 5,6 |
| Circuit Breaker Main | Eaton | EGH | | 5,6,7 |
| Maintenance Bypass Switch MB4B | Kraus and Naimer | C80-US20030-600E | | 7 |
| | | C80-US20030-600E | | Interpolated |
| | | CA20-US9959-600E | | Interpolated |
| | | CA20-US20020-E | | 5 |
| Terminal Block | Weidumuller | WDU-16 | | 5,6,7 |
| Battery | Leoch | LPF12-100 | | 5,6,7 |
| | | LPF12-55 | | 7 |
| | | | | |
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SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

TABLE 5

MANUFACTURER: Go2Power, LLC

MODEL LINE: Pure Wave Mini, LiteMinder, LiteMinder Modular

TABLE DESCRIPTION: Circuit Breakers

| CONSTRUCTION SUMMARY: | CERTIFICATION PARAMETERS: |
|-------------------------|---|
| | Building Code: CBC 2016 |
| OPTIONS SUMMARY: | Component Importance Factor: $I_p = 1.5$ |
| | $S_{Ds} = 2.0g$ at $z/h = 1.0$ |
| MOUNTING SUMMARY: | NOTES: |

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

| Sub-Component | Manufacturer | Model | Amperage (Amp) | Description | UUT |
|-----------------|--------------|------------|----------------|--|--------------|
| Circuit Breaker | Eaton | EGS1020FFG | 20 | E 1 POLE BREAKER, 35 KA @ 277VAC, UL/IEC | Extrapolated |
| | | EGS1025FFG | 25 | | Extrapolated |
| | | EGS1030FFG | 30 | | Extrapolated |
| | | EGS1035FFG | 35 | | Extrapolated |
| | | EGS1040FFG | 40 | | Extrapolated |
| | | EGS1045FFG | 45 | | Extrapolated |
| | | EGS1050FFG | 50 | | Extrapolated |
| | | EGS1060FFG | 60 | | Extrapolated |
| | | EGS1070FFG | 70 | | Extrapolated |
| | | EGS1080FFG | 80 | | Extrapolated |
| | | EGS1090FFG | 90 | | Extrapolated |
| | | EGS1100FFG | 100 | | Extrapolated |
| | | EGS1125FFG | 125 | | 5 |
| | | EGS2020FFG | 20 | E 2 POLE BREAKER, 35 KA @ 480VAC, UL/IEC | Interpolated |
| | | EGS2025FFG | 25 | | Interpolated |
| | | EGS2030FFG | 30 | | Interpolated |
| | | EGS2035FFG | 35 | | Interpolated |
| | | EGS2040FFG | 40 | | Interpolated |
| | | EGS2045FFG | 45 | | Interpolated |
| | | EGS2050FFG | 50 | | Interpolated |
| | | EGS2060FFG | 60 | | Interpolated |
| | | EGS2070FFG | 70 | | Interpolated |
| | | EGS2080FFG | 80 | | Interpolated |
| | | EGS2090FFG | 90 | | Interpolated |
| | | EGS2100FFG | 100 | | Interpolated |
| | | EGS2125FFG | 125 | | 6 |
| | | EGS3020FFG | 20 | E 3 POLE BREAKER, 20 AMP, 35 KA @ 480VAC, UL/IEC | Interpolated |
| | | EGS3025FFG | 25 | | Interpolated |
| | | EGS3030FFG | 30 | | Interpolated |
| | | EGS3035FFG | 35 | | Interpolated |

SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

 TABLE **5**
MANUFACTURER: Go2Power, LLC

MODEL LINE: Pure Wave Mini, LiteMinder, LiteMinder Modular

TABLE DESCRIPTION: Circuit Breakers

CONSTRUCTION SUMMARY:
CERTIFICATION PARAMETERS:
Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$
 $S_{Ds} = 2.0g$ at $z/h = 1.0$
OPTIONS SUMMARY:
MOUNTING SUMMARY:
NOTES:

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

| Sub-Component | Manufacturer | Model | Amperage (Amp) | Description | UUT |
|----------------------|--------------|-----------------|----------------|---|--------------|
| Circuit Breaker | Eaton | EGS3040FFG | 40 | E 3 POLE BREAKER, 20 AMP, 35 KA @ 480VAC, UL/IEC | Interpolated |
| | | EGS3045FFG | 45 | | Interpolated |
| | | EGS3050FFG | 50 | | Interpolated |
| | | EGS3060FFG | 60 | | Interpolated |
| | | EGS3070FFG | 70 | | Interpolated |
| | | EGS3080FFG | 80 | | Interpolated |
| | | EGS3090FFG | 90 | | Interpolated |
| | | EGS3100FFG | 100 | | Interpolated |
| | | EGS3125FFG | 125 | | 7 |
| | Eaton | FAZ-D3/1-NA-SP | 3 | Din-Rail Mounted, Supplementary, D Curve, 1-Pole, Single Pkg, UL 489, Screw | Extrapolated |
| | | FAZ-D4/1-NA-SP | 4 | | Extrapolated |
| | | FAZ-D6/1-NA-SP | 6 | | Extrapolated |
| | | FAZ-D8/1-NA-SP | 8 | | Extrapolated |
| | | FAZ-D10/1-NA-SP | 10 | | Extrapolated |
| | | FAZ-D20/1-NA-SP | 20 | | Extrapolated |
| | | FAZ-D30/1-NA-SP | 30 | | Extrapolated |
| | | FAZ-D40/1-NA-SP | 40 | | Extrapolated |
| | | FAZ-D50/1-NA-SP | 50 | | Extrapolated |
| | | FAZ-D60/1-NA-SP | 60 | | 5 |
| | | FAZ-D20/2-NA-SP | 20 | Din-Rail Mounted, Supplementary, D Curve, 2-Pole, Single Pkg, UL 489, Screw | Interpolated |
| | | FAZ-D30/2-NA-SP | 30 | | Interpolated |
| | | FAZ-D40/2-NA-SP | 40 | | Interpolated |
| | | FAZ-D50/2-NA-SP | 50 | | Interpolated |
| | | FAZ-D60/2-NA-SP | 60 | | Interpolated |
| | | FAZ-D20/3-NA-SP | 20 | Din-Rail Mounted, Supplementary, D Curve, 3-Pole, Single Pkg, UL 489, Screw | Interpolated |
| | | FAZ-D30/3-NA-SP | 30 | | Interpolated |
| | | FAZ-D40/3-NA-SP | 40 | | Interpolated |
| | | FAZ-D50/3-NA-SP | 50 | | Interpolated |
| | | FAZ-D60/3-NA-SP | 60 | | 6 |
| Trip Alarm Indicator | Eaton | Z-NHK | | | 5,6 |

SPECIAL SEISMIC CERTIFICATION

CERTIFIED SUB-COMPONENTS

 TABLE **5**
MANUFACTURER: Go2Power, LLC

MODEL LINE: Pure Wave Mini, LiteMinder, LiteMinder Modular

TABLE DESCRIPTION: Circuit Breakers

| CONSTRUCTION SUMMARY: | CERTIFICATION PARAMETERS: |
|-------------------------|---|
| | Building Code: CBC 2016 |
| OPTIONS SUMMARY: | Component Importance Factor: $I_p = 1.5$ |
| | $S_{Ds} = 2.0g$ at $z/h = 1.0$ |
| MOUNTING SUMMARY: | NOTES: |

Mounted in component. Certified mounting shall be identical to mounting of sub-component in UUT's.

| Sub-Component | Manufacturer | Model | Amperage (Amp) | Description | UUT |
|----------------------|--------------|------------|----------------|--|--------------|
| Circuit Breakers | ABB | SU201M-K3 | 3 | Din-Rail Mounted, Supplementary, D Curve, 1-Pole, Single Pkg, UL 489, Screw Wall Mounted Units Only | Extrapolated |
| | | SU201M-K4 | 4 | | 3 |
| | | SU201M-K6 | 6 | | 3 |
| | | SU201M-K8 | 8 | | 4 |
| Circuit Breakers | ABB | SU201M-K10 | 10 | Din-Rail Mounted, Supplementary, D Curve, 1-Pole, Single Pkg, UL 489, Screw Floor Mounted Units Only | Extrapolated |
| | | SU201M-K20 | 20 | | 5,6 |
| | | SU201M-K30 | 30 | | Interpolated |
| | | SU201M-K40 | 40 | | Interpolated |
| | | SU201M-K50 | 50 | | Interpolated |
| | | SU201M-K60 | 60 | | 5 |
| | | SU202M-K20 | 20 | Din-Rail Mounted, Supplementary, D Curve, 2-Pole, Single Pkg, UL 489, Screw Floor Mounted Units Only | Interpolated |
| | | SU202M-K30 | 30 | | Interpolated |
| | | SU202M-K40 | 40 | | Interpolated |
| | | SU202M-K50 | 50 | | Interpolated |
| | | SU202M-K60 | 60 | | Interpolated |
| | | SU203M-K20 | 20 | Din-Rail Mounted, Supplementary, D Curve, 3-Pole, Single Pkg, UL 489, Screw Floor Mounted Units Only | Interpolated |
| | | SU203M-K30 | 30 | | Interpolated |
| | | SU203M-K40 | 40 | | Interpolated |
| | | SU203M-K50 | 50 | | Interpolated |
| | | SU203M-K60 | 60 | | 6 |
| Trip Alarm Indicator | ABB | S2C-H6RU | | Floor Mounted Units Only | 5,6 |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
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| | | | | | |

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **1**

MANUFACTURER: Go2Power, LLC

MODEL LINE: Pure Wave Mini

MODEL NUMBER: PW12

CONSTRUCTION SUMMARY:

16 Gauge CRS construction. All cabinets powder coated and internal brackets and sub-assembly components are constructed of Galvanized or Galvanneal CRS.

OPTIONS SUMMARY:

Weico A250112 Printed Circuit Board Assembly, Hui-Hui T110014 Main Transformer, CUI CEP-2242 Audible Alarm, Shore PCB A250116 Infra-Red PCB, Leoch LP12-14 Batteries

TEST PARAMETERS:

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

MOUNTING SUMMARY:

Wall mount. Unit mounted to wall mount fixture using four (4) grade 5 1/4"-20 bolts, washers, and lockwashers torqued to 8ft-lbs.

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

| Dimensions (in) | | | Weight (lb) | First Natural Frequency (Hz) | | |
|-----------------|-------|--------|-------------|------------------------------|-----|------|
| Depth | Width | Height | | F-B | S-S | Vert |
| 4.11 | 14.27 | 10.09 | 32 | N/A | N/A | N/A |

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

| S_{Ds} (g) | z/h | A_{FLX-H} (g) | A_{RIG-H} (g) | A_{FLX-V} (g) | A_{RIG-V} (g) |
|--------------|-------|-----------------|-----------------|-----------------|-----------------|
| 2.0 | 1.0 | 3.20 | 2.40 | 1.33 | 0.53 |

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **2**

MANUFACTURER: Go2Power, LLC

MODEL LINE: Pure Wave Mini

MODEL NUMBER: PW25

CONSTRUCTION SUMMARY:

16 Gauge CRS construction. All cabinets powder coated and internal brackets and sub-assembly components are constructed of Galvanized or Galvanneal CRS.

OPTIONS SUMMARY:

Weico A250114 Printed Circuit Board Assembly, Hui-Hui T110017 Main Transformer, CUI CEP-2242 Audible Alarm, Shore PCB A250116 Infra-Red PCB, Leoch LP12-14 Batteries

TEST PARAMETERS:

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

MOUNTING SUMMARY:

Wall mount. Unit mounted to wall mount fixture using four (4) grade 5 1/4"-20 bolts, washers, and lockwashers torqued to 8ft-lbs.

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

| Dimensions (in) | | | Weight (lb) | First Natural Frequency (Hz) | | |
|-----------------|-------|--------|-------------|------------------------------|-----|------|
| Depth | Width | Height | | F-B | S-S | Vert |
| 8.6 | 17.12 | 11.09 | 63 | N/A | N/A | N/A |

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

| S_{Ds} (g) | z/h | A_{FLX-H} (g) | A_{RIG-H} (g) | A_{FLX-V} (g) | A_{RIG-V} (g) |
|--------------|-------|-----------------|-----------------|-----------------|-----------------|
| 2.0 | 1.0 | 3.20 | 2.40 | 1.33 | 0.53 |

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **3**

MANUFACTURER: Go2Power, LLC

MODEL LINE: LiteMinder

MODEL NUMBER: LM32

CONSTRUCTION SUMMARY:

16 Gauge CRS construction. All cabinets powder coated and internal brackets and sub-assembly components are constructed of Galvanized or Galvanneal CRS.

OPTIONS SUMMARY:

Weico A250104 & A250105 Printed Circuit Board Assembly, Galaxy T110012 Main Transformer, Eaton FAZ Circuit Breaker Distribution, ABB S201UP-K Circuit Breaker Distribution, Cornell Dubillier SFA44T12.5K388B-F Capacitor, Weidumuller WDU-4 Terminal Block, Leoch LPL12-38 Batteries, Enersys G42EP & XE-60 Batteries

MOUNTING SUMMARY:

Wall mount. Unit mounted to wall mount fixture using two (2) grade 5 ¼"-20 bolts, washers, and lockwashers torqued to 8ft-lbs.

TEST PARAMETERS:

Building Code: CBC 2016

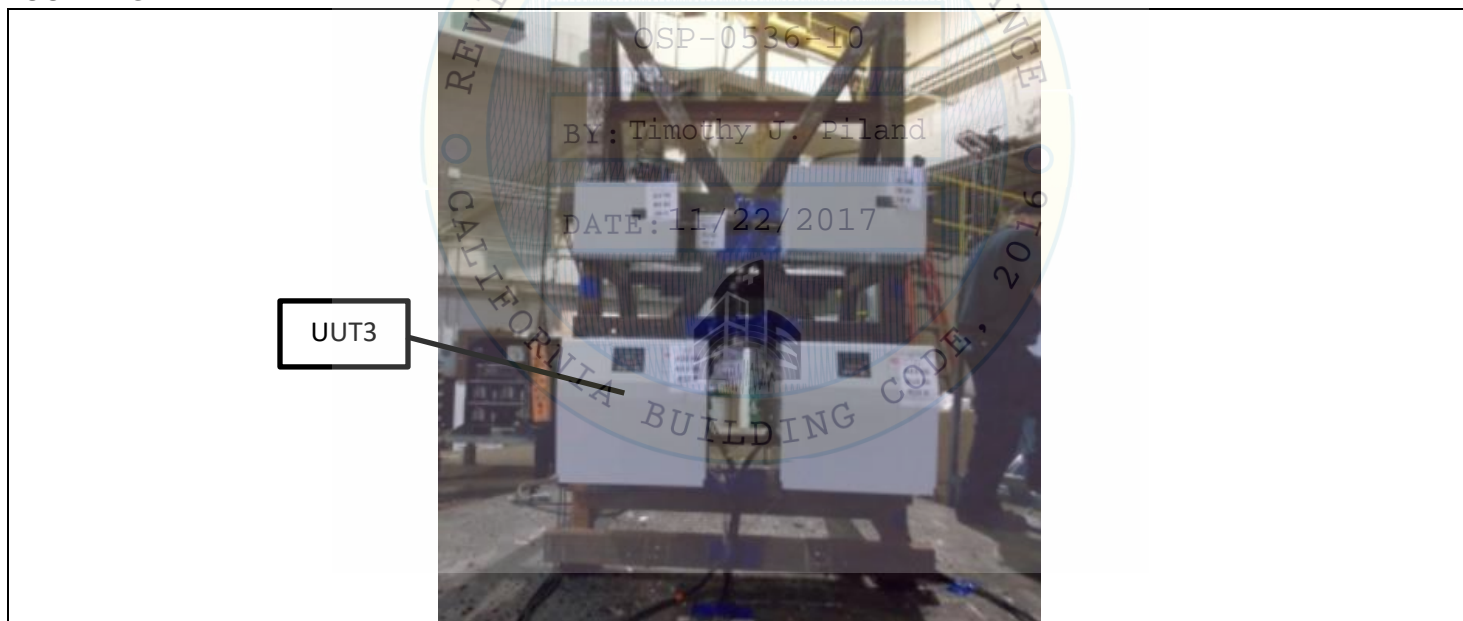
Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

| Dimensions (in) | | | Weight (lb) | First Natural Frequency (Hz) | | |
|-----------------|-------|--------|-------------|------------------------------|-----|------|
| Depth | Width | Height | | F-B | S-S | Vert |
| 12.50 | 17.87 | 17.72 | 105 | N/A | N/A | N/A |

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

| S_{Ds} (g) | z/h | A_{FLX-H} (g) | A_{RIG-H} (g) | A_{FLX-V} (g) | A_{RIG-V} (g) |
|--------------|-------|-----------------|-----------------|-----------------|-----------------|
| 2.0 | 1.0 | 3.20 | 2.40 | 1.33 | 0.53 |

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **4**

MANUFACTURER: Go2Power, LLC

MODEL LINE: LiteMinder

MODEL NUMBER: LM52

CONSTRUCTION SUMMARY:

16 Gauge CRS construction. All cabinets powder coated and internal brackets and sub-assembly components are constructed of Galvanized or Galvanneal CRS.

OPTIONS SUMMARY:

Weico A250104 & A250105 Printed Circuit Board Assembly, Galaxy T110011 Main Transformer, Eaton FAZ Circuit Breaker Distribution, ABB S201UP-K Circuit Breaker Distribution, Cornell Dubillier SFC37T30K291B-F Capacitor, Weidumuller WDU-4 Terminal Block, Leoch LPL12-55 Batteries, EnerSys 12HX-205 & 12HX-300 Batteries

MOUNTING SUMMARY:

Wall mount. Unit mounted to wall mount fixture using two (2) grade 5 ¼"-20 bolts, washers, and lockwashers torqued to 8ft-lbs.

TEST PARAMETERS:

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

| Dimensions (in) | | | Weight (lb) | First Natural Frequency (Hz) | | |
|-----------------|-------|--------|-------------|------------------------------|-----|------|
| Depth | Width | Height | | F-B | S-S | Vert |
| 12.50 | 17.87 | 17.72 | 133 | N/A | N/A | N/A |

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

| S_{Ds} (g) | z/h | A_{FLX-H} (g) | A_{RIG-H} (g) | A_{FLX-V} (g) | A_{RIG-V} (g) |
|--------------|-------|-----------------|-----------------|-----------------|-----------------|
| 2.0 | 1.0 | 3.20 | 2.40 | 1.33 | 0.53 |

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **5**

MANUFACTURER: Go2Power, LLC

MODEL LINE: LiteMinder

MODEL NUMBER: LM6250-1P

CONSTRUCTION SUMMARY:

14 Gauge CRS construction. All cabinets powder coated and internal brackets and sub-assembly components are constructed of Galvanized or Galvanneal CRS.

OPTIONS SUMMARY:

Yi-Huang T110033 Main Transformer, Hui-Hi T110022 & T110038 Transformer, Galaxy T110021 Transformer, Erico UDJ-160A Power Distribution Block, Shore PCB A250133 & A250118 & A250120 & A250121 & A250139 & A250142 Printed Circuit Board Assemblies, Lovato DPBF3200A12060 DP Contactor, CDE SFA37T6K219B-F & 520C103M200DC2HS & SCD205K601 Capacitors, Omron Omron Relay, AAVID M990020 Heatsink, Powerex CD43-16-90C SCR, Marathon F60A1B Fuse Block, Bussman/Littelfuse NON60/NLN60 Fuse Block, Eaton FAZ Circuit Breaker Distribution, ABB S201UP-K Circuit Breaker Distribution, ABB S2C-H6R Trip Alarm Auxiliary Contact, Eaton Z-NHK Trip Alarm Auxiliary Contact, Eaton EGH Circuit Breaker, Kraus and Naimer CA20-US20020-E Maintenance Bypass Switch MB4B, Weidumüller WDU-16 Terminal Block, Leoch LPF12-100 Batteries

MOUNTING SUMMARY:

Floor mount. Unit mounted to shake table platen using six (6) ½"-13 grade 5 hex head bolts, washers, and lockwashers torqued to 75ft-lbs.

OSP-0536-10

TEST PARAMETERS:

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

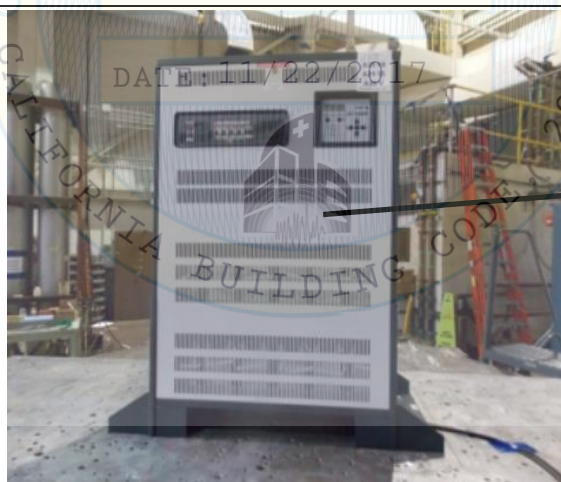
NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE

BY: Timothy J. Piland

DATE: 11/22/2017



UUT PROPERTIES

| Dimensions (in) | | | Weight (lb) | First Natural Frequency (Hz) | | |
|-----------------|-------|--------|-------------|------------------------------|-------|-------|
| Depth | Width | Height | | F-B | S-S | Vert |
| 23.00 | 32.00 | 50.00 | 1,300 | 13.36 | 16.79 | >33.3 |

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

| S_{Ds} (g) | z/h | A_{FLX-H} (g) | A_{RIG-H} (g) | A_{FLX-V} (g) | A_{RIG-V} (g) |
|--------------|-------|-----------------|-----------------|-----------------|-----------------|
| 2.0 | 1.0 | 3.20 | 2.40 | 1.33 | 0.53 |

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **6**

MANUFACTURER: Go2Power, LLC

MODEL LINE: LiteMinder

MODEL NUMBER: LM12500-1P

CONSTRUCTION SUMMARY:

14 Gauge CRS construction. All cabinets powder coated and internal brackets and sub-assembly components are constructed of Galvanized or Galvanneal CRS.

OPTIONS SUMMARY:

Yi-Huang T110035 Main Transformer, Hui-Hi T110022 & T110038 Transformer, Galaxy T110021 Transformer, Erico UDJ-160A Power Distribution Block, Shore PCB A250133 & A250118 & A250120 & A250121 & A250139 & A250142 Printed Circuit Board Assemblies, Lovato DPBF650012060 DP Contactor, CDE SFC37T30K291B-F & 520C572T400DF2HS & SCD205K601 Capacitors, Omron G9EA-1-B Relay, AAVID M990020 Heatsink, Powerex CD43-16-90C SCR, Marathon F60A1B Fuse Block, Bussman/Littelfuse NON60/NLN60 Fuse Block, Eaton FAZ Circuit Breaker Distribution, ABB S201UP-K Circuit Breaker Distribution, ABB S2C-H6R Trip Alarm Auxiliary Contact, Eaton Z-NHK Trip Alarm Auxiliary Contact, Eaton EGH Circuit Breaker, Weidumuller WDU-16 Terminal Block, Leoch LPF12-100 Batteries

MOUNTING SUMMARY:

Floor mount. Unit mounted to shake table platen using nine (9) ½"-13 grade 5 hex head bolts, washers, and lockwashers torqued to 75ft-lbs.

TEST PARAMETERS:

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

| Dimensions (in) | | | Weight (lb) | First Natural Frequency (Hz) | | |
|-----------------|-------|--------|-------------|------------------------------|-------|-------|
| Depth | Width | Height | | F-B | S-S | Vert |
| 23.00 | 64.00 | 50.00 | 2,585 | 10.96 | 15.91 | 12.42 |

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

| S_{Ds} (g) | z/h | A_{FLX-H} (g) | A_{RIG-H} (g) | A_{FLX-V} (g) | A_{RIG-V} (g) |
|--------------|-------|-----------------|-----------------|-----------------|-----------------|
| 2.0 | 1.0 | 3.20 | 2.40 | 1.33 | 0.53 |

SPECIAL SEISMIC CERTIFICATION

UNIT UNDER TEST (UUT) DESCRIPTION

UUT **7**

MANUFACTURER: Go2Power, LLC
MODEL LINE: LiteMinder
MODEL NUMBER: LM18750-2P/2S/3P

CONSTRUCTION SUMMARY:

14 Gauge CRS construction. All cabinets powder coated and internal brackets and sub-assembly components are constructed of Galvanized or Galvanneal CRS.

OPTIONS SUMMARY:

Yi-Huang T110033 & T110024 & T110025 Main Transformer, Hui-Hi T110022 Transformer, Galaxy T110021 Transformer, Erico UDJ-160A Power Distribution Block, Shore PCB A250133 & A250129 & A250132 & T110018 & T110020 & A250131 & A250142 Printed Circuit Board Assemblies, Lovato DPBF650012060 DP Contactor, CDE 520C103M200DC2HS & SCD205K601 Capacitors, Omron G9EA-1-B Relay, AAVID M990020 Heatsink, Powerex CD63-16-15C SCR, Marathon F60A1B Fuse Block, Bussman/Littelfuse NON60/NLN60 Fuse Block, Eaton FAZ Circuit Breaker Distribution, ABB S201UP-K Circuit Breaker Distribution, Eaton EGH Circuit Breaker, Kraus and Naimer C80-US20030-600E Maintenance Bypass Switch MB4B, Weidumuller WDU-16 Terminal Block, Leoch LPF12-100 & LPF12-55 Batteries

MOUNTING SUMMARY:

Floor mount. Unit mounted to shake table platen using ten (10) ½"-13 grade 5 hex head bolts, washers, and lockwashers torqued to 75ft-lbs.

TEST PARAMETERS:

Building Code: CBC 2016

Component Importance Factor: $I_p = 1.5$

Test Criteria: AC-156

NOTES:

Contents were included in testing per operating conditions.

UUT IMAGE



UUT PROPERTIES

| Dimensions (in) | | | Weight (lb) | First Natural Frequency (Hz) | | |
|-----------------|-------|--------|-------------|------------------------------|-------|-------|
| Depth | Width | Height | | F-B | S-S | Vert |
| 23.00 | 96.00 | 50.00 | 3,945 | 13.81 | 13.37 | >33.3 |

UNIT MAINTAINED STRUCTURAL INTEGRITY AND REMAINED OPERATIONAL

PER MANUFACTURER REQUIREMENT WHEN SUBJECTED TO THE FOLLOWING TEST PARAMETERS

| S_{Ds} (g) | z/h | A_{FLX-H} (g) | A_{RIG-H} (g) | A_{FLX-V} (g) | A_{RIG-V} (g) |
|--------------|-------|-----------------|-----------------|-----------------|-----------------|
| 2.0 | 1.0 | 3.20 | 2.40 | 1.33 | 0.53 |