CITY OF LOS ANGELES
CALIFORNIA

DEPARTMENT OF
BUILDING AND SAFETY
201 NORTH FIGUEROA STREET
LOS ANGELES, CA 90012

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December 19, 2011

Enphase Energy, Inc.
201 1st Street
Petaluma, Ca 94952

RESEARCH REPORT NO.: 930486

Date: December 19, 2011
Expires: December 19, 2012

Attn: France Antelme

GENERAL APPROVAL - New - Microinverter model M215 series (see below) with output rating of 208 VAC, 1.1 Amp and 240 VAC 0.9 Amp, 60 Hz., 0.95 power factor, 215 W and input rating of 22V-36V DC, 10 Amps maximum - Manufactured by Enphase Energy, Inc.- For Commercial or Residential Installation, installed as part of the Photovoltaic (PV) system in Non-Hazardous locations.

CONDITIONS OF APPROVAL

The installation of the micro-inverter is approved when the following conditions are met:

1. Only the following M215 model designations are approved under this research report: M215-60-2LL-S2x, M215-60-2LL-S2x-NA, M215-60-SIE-S2x, M215-60-SIE-S2x-NA, M215-60-2LL-S2x-ZC, M215-60-2LL-S2x-ZC-NA.

2. An electrical permit is required prior to installation or relocation of this equipment in the City of Los Angeles.

3. The microinverter shall be plainly and permanently marked on a contrasting background where readily visible with the following:

   A. Manufacturer's name,
   B. Model designation,
   C. Serial Number ,
   D. Complete electrical ratings in alternating and direct current (AC and DC) (Volt, Amperes/Watts),
   E. Maximum branch circuit protection: 20A
   F. "Caution - Risk of shock. No user serviceable parts inside. Refer servicing to qualified service personnel",
   G. To be connected to a dedicated branch circuit
   H. Maximum and minimum operating ambient temperatures,
   I. Current CSA listing information.
   J. "DC Grounding Electrode Terminal" next to the grounding clamp.

4. The microinverter shall be installed and maintained by "Qualified Personnel" as defined in the Los Angeles Electrical Code and in strict compliance with manufacturer's instructions.

5. The microinverter shall be provided with a DC grounding electrode fitting to connect to the DC grounding electrode conductor.

6. The DC grounding electrode fitting shall be of approved stainless steel 300 series material, consisting of a clamp, No.10 machine screw, self clinching nut screw and custom ground washer. When assembled, the ground screw shall be torqued to 45 in-lb. Only No. 6 AWG bare CU wire shall be used as the DC grounding electrode conductor under the DC grounding electrode terminal. This 6 AWG bare CU shall be installed in accordance with provisions of section 250.64 of the 2011 Los Angeles Electrical Code.

7. All interconnecting cabling system associated with the microinverter shall be listed by a Recognized Testing Agency.

8. The hardware used to mount the microinverter to the racking system shall be of a corrosion resistant type.

9. The available symmetrical fault current at the micro-inverter shall not exceed 10,000 amperes.

10. The DC equipment ground shall be connected to the DC grounding electrode conductor by a listed non-reversible ground fitting.

11. The mounting screw of the inverter shall not be used with grounding WEEBs or any other grounding means. This screw shall only be used for mounting the inverter to the supporting means.

12. The Engage Cable system shall contain the following equipment ground conductors sizes; 12 AWG in the trunk cable and 18 AWG in the microinverter supply cable (drop cable). Connections between the trunk cable and drop cable shall be terminated with connectors listed or identified for its use.

13. The AC cable connector shall be of polarized nonstandard configuration, locking type with a grounding member, where all live parts are guarded against inadvertent contact by a person. The connector shall be rated for interrupting normal current without hazard to the operator. The grounding member shall be the first to make and the last to break contact with the mating connector.

14. Only the AC cable harness models ET, followed by 10 or 17, followed by 208 or 240, followed by 30, 40 or "BULK" may be followed by 01, manufactured by Phoenix Contact shall be used with the microinverter. The wiring harness and associated connectors shall be designed such that AC system phase sequence is maintained at all times when M215 microinverters are installed in a three phase configuration. No Missing codes or duplicates are allowed.

15. The accumulative length of AC cable harness shall not exceed 26 feet for single phase or 80 feet for three phase connection configuration.

16. The installation of the equipment shall comply with the applicable provisions of the Los Angeles City Codes (Building, Electrical, Mechanical, Plumbing and Fire Codes).

17. The complete test plans and results as conducted by the listing recognized testing agency shall be provided for reviews as part of annual renewal approval process.

18. A component, when replaced, shall be of the identical original manufactured part that was approved by the Los Angeles City Electrical Testing Laboratory.

19. The manufacturer shall supply an Enphase Installation and Operation Manual - M215 Microinverter, Enphase Quick Install Guide - M215 Microinverter along with a copy of this approval letter with every box of 10 microinverters to be installed in the City of Los Angeles.

20. The microinverter shall be installed according to the provisions of this approval and the manufacture installation instructions. When the manufacturer installation instructions conflict with this approval letter, the conditions specified in this approval letter shall prevail.

21. The microinverter is only evaluated for fire, shock and personal hazard. Its performance or efficiency has not been investigated.

22. This approval shall be void if the product is modified without prior authorization from the Los Angeles City Electrical Testing Laboratory.

DISCUSSION

The product covered under this Research Report is a grounded single phase, non-linear, 208 or 240 volts, utility-interactive, Enphase Micro-inverter model M215 for use with Photovoltaic (PV) modules not exceeding 45 VDC output. This microinverter is intended to connect to a single PV module using individual single pin connectors. It can be installed as a single phase or in a three phase configuration when the appropriate cable harness is used. The inverter positive DC line is connected to it's metal enclosure through the built in ground fault circuit detection and interrupter and the grounding electrode termination fitting. The AC neutral is not bonded to the DC grounded positive conductor or the inverter metal enclosure. The inverter metal inclosure is connected to the AC ground through the approved cable connector and the equipment grounding conductor within the AC cable.

The PV modules, racking system, and associated hardware are not part of this approval.

The Enphase Microinverter M215 consists of aluminum metal enclosure, built-in ground fault circuit detector and interrupter, a positive and negative DC cables and connectors, an AC cable and connector, and a stainless steel DC grounding electrode conductor fitting.

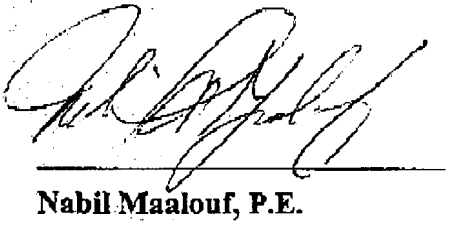
When this system is installed in accordance with the provisions of this General Approval, it should meet the minimum safety standards of the Los Angeles City Electrical Code.

For this General Approval to be valid on any installation in the City of Los Angeles, an engineer or inspector of the Department of Building and Safety must make a determination that all conditions of the General Approval required to provide equivalency have been met.

This General Approval is in accordance with Section 93.0303 of the Electrical Code pertaining to "New Materials and Methods of Construction" and does not waive the requirements of the City of Los Angeles Building Code.

This General Approval is neither a product endorsement nor a certification of accuracy or function of the approved item.

Recommended for Approval By:



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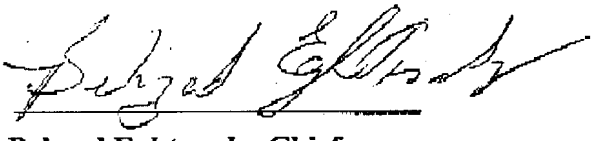

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