

August 06, 2021



To whom it may concern:

The Enphase Energy microinverter model number IQ-8D has been evaluated by UL LLC and is certified for compliance to the requirements for PV Rapid Shut Down Equipment (PVRSE) as defined in UL 1741 and also the PV Hazard Control Equipment requirements defined in UL 3741.

The subject PV arrays consist of Enphase IQ8D microinverters, and Photovoltaic modules Listed to UL 1703 or UL 61730 (the UL 61730 Listed modules are classified as providing Class II or Class III protection from electric shock⁴). The completed PV Hazard Control arrays address the National Electrical Code article 690.12 (Rapid Shut Down) requirements for both outside and inside the array boundary when installed in accordance with the respective manufacturer's instructions

Specifically:

Controlled conductors outside the array boundary shall comply with NEC [690.12\(B\)\(1\)](#):

The Enphase IQ8D microinverter is Listed as PVRSE under UL 1741 and the ac output conductors will be reduced to 30Vdc in less than 30 seconds

Inside the array boundary, a PV array is required to comply with one of the three options in 2017 or 2020 NEC [690.12\(B\)\(2\)](#):

The Enphase IQ8D is Listed as PV Hazard Control Equipment under UL 3741. In accordance with the UL certification, when this inverter is combined with two of the previously noted PV modules Listed to UL 1703 or UL 61730, and installed according to the manufacturer's instructions, the resulting array constitutes a Listed PV hazard control system that complies with NEC 690.12 (B)(2)(1).

Notes:

- 1) The maximum dc input voltage rating, (119 Vdc) of the IQ8D is lower than the PV Hazard Control Limit established in UL 3741. The Enphase IQ8D has been evaluated and certified per UL1741 and UL3741 so when installed per the instructions to a pair of matching, Listed PV modules, connected in series, the resulting assembly constitutes a Listed PV Hazard Control System (Listed array). Additionally, the combined open circuit voltage, as calculated in accordance with NEC 690.7, is required to be less than or equal to the maximum dc input voltage rating of the IQ8D.
- 2) This letter only describes compliance with the Rapid Shut Down Requirements contained in NEC 690.12. Compliance with the requirements of NEC 690 Part V., Grounding and Bonding, must be determined separately. Common methods for compliance include use of a UL 2703 Listed grounding system or installation of a separate equipment ground installed in accordance with the manufacturer's instructions supplied with the PV modules and supporting structure.
- 3) This letter does not imply any determination by UL LLC, concerning the of the structural suitability of any PV array support structure used in the array.
- 4) For more information about Class II and Class III electric shock ratings see UL61730 and or IEC 61140.

Timothy P. Zgonena

Timothy Zgonena
Principal Engineer

John W. Carr

John Carr
Sr Staff Engineer