

The 2020 National Electrical Code (NEC) introduced more stringent requirements for rapid shutdown in photovoltaic (PV) systems. These requirements aim to protect emergency responders from shock hazards when working on solar installations.

The following case studies are provided by SunModo to show examples of installation configurations that comply with NEC 690.12(B), compliance is not limited to these examples.

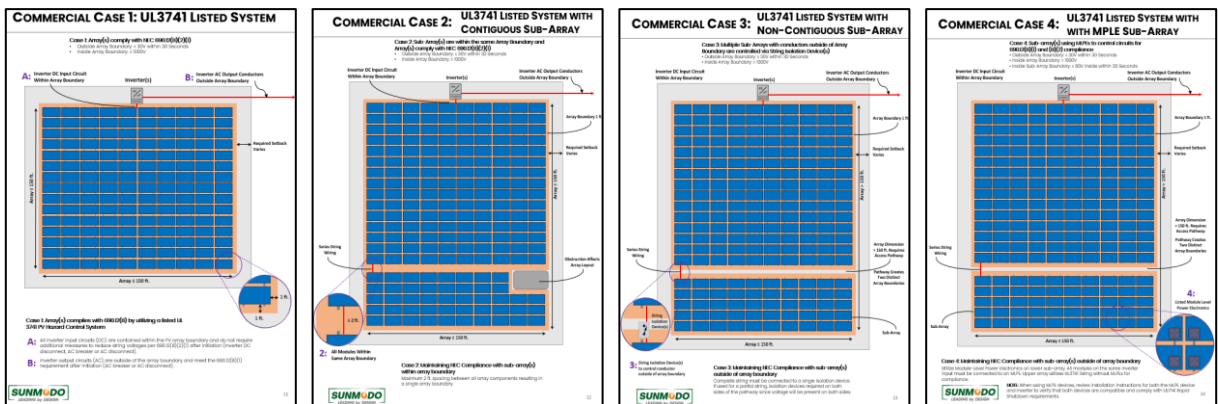
Case 1: UL 3741 Listed System – Array(s) complies with 690.12(B) by utilizing a listed UL 3741 PV Hazard Control System

Case 2: UL 3741 Listed System with Contiguous Sub-Array – Maintaining NEC Compliance with sub-array(s) within array boundary

Case 3: UL 3741 Listed System with Non-Contiguous Sub-Array – Maintaining NEC Compliance with sub-array(s) outside of array boundary

Case 4: UL 3741 Listed System with MLPE Sub-Array – Maintaining NEC Compliance with sub-array(s) outside of array boundary when utilizing Module-Level Power Electronics on lower sub-array.

## ACHIEVING NEC 690.12(B) COMPLIANCE:



The simplest installation method to comply with NEC690.12(B) is to utilize the SunModo Racking UL 3741 system with a contiguous array with one or more collocated inverters, as all inverter DC input circuits are within the 1ft array boundary (Case 1). Installations where sub-arrays are required and cannot be included within the 1ft array boundary can comply by using a single or combining one or more of the three options below (Cases 2-4). Case studies and NEC guidance have not been verified by Intertek.