PV HAZARD CONTROL SYSTEM | GENERIC PV ARRAY

UL 3741 REPORT DATE 01-12-24 Tesla Inverter Based PVHCS, Consisting of Tesla Inverters, Tesla MCI and other
PV RAPID SHUTDOWN ARRAY listed components to create the system

WARNING: To reduce the risk of injury, read all instructions.

PV HAZARD CONTROL EQUIPMENT AND COMPONENTS

Function	Manufacturer	Model No.	Firmware Versions and Checksums	Certification Standard
Inverter, Powerwall+, or Powerwall 3	Tesla	7.6 kW: 1538000[1] 3.8 kW: 1534000[1] 7.6 kW: 1850000[1] 11.5 kW: 1707000[1]	V4, 6558D2BD V4, FF7BE4E1 V4, 6558D2BD V1, 0x3282A18C	UL 1741, UL 1998, PVRSS/PVRSE
Mid Circuit Interrupter (MCI)	Tesla	MCI-1, MCI-2	N/A	UL 1741 PVRSE
PV Modules	The PVHC PV modules must be listed by a NRTL to UL 1703 and/or UL 61730-1 and UL 61730-2 (excluding Class 0 and Class I).			
PV Mounting System	The PV mounting system must comply with one of the following: • Listed by NRTL to UL 2703 and rated for use with the specific PV modules noted above. • The non-certified combinations of mounting and PV modules shall be evaluated for loading, mounting and grounding per the NEC and other applicable installation codes.			
PV Connectors	The following PV connectors may be used to connect to the Tesla MCIs: • Staubli type PV-KST4/6II-UR or type PV-KST4-EVO2 (male), • Staubli type PV-KBT4/6II-UR or PV-KBT4-EVO2 (female), • Staubli Branch Socket PV-AZB4 and Branch Plug PV-AZS4, • Connectors evaluated by an NRTL for intermatability with the connectors above.			
PVHCS Initiator: (PV Inverter)	Dedicated PV system AC circuit breaker or AC disconnect switch, labeled per NEC 690.12 requirements.			N/A
PVHCS Initiator: (Powerwall+, Powerwall 3)	Emergency stop device (NISD)- Listed "Emergency Stop Button" or "Emergency Stop Device" or "Emergency Stop Unit".			UL 508 or UL 60947 Parts 1, 5-1 and 5-5.
PVHCS Initiator: (Powerwall 3)	On/Off Enable switch located on Powerwall 3, when labeled as Rapid Shutdown initiator per NEC 690.12 requirements			UL 1741

[1] Applies to variations of this part number with suffix of two numbers and one letter.
Note: PVHCS installation requirements may reduce the effective equipment and component ratings below the individual equipment and component PVRSE ratings in order to achieve PVHCS shock hazard reduction requirements.

PVHCS INSTALLATION REQUIREMENTS

Max System Voltage	600 VDC
PVHCS Maximum Circuit Voltage (Array Internal Voltage After Actuation)	165 VDC (cold weather open circuit)

OTHER INSTALLATION INSTRUCTIONS

1. An MCI must be connected to one end of each series string or mounting plane sub-array string.

2. MCIs shall be installed between series connected module combinations such that the PVHC Maximum Circuit Voltage after actuation is no greater than 165V under any circumstances. The installation location coldest anticipated operating ambient temperature shall be used to calculate the PV maximum voltage in accordance with NEC 690.7.

3. Verification that the MCIs are installed in accordance with 1) and 2) shall be documented for inspection, by voltage measurement logs and/or as-built string layout diagrams.

4. For PV Inverter: The PVHCS initiator (AC breaker or switch) shall be sized and installed in accordance with NEC requirements. The specific part shall be identified on the as-built system drawings.

5. For Powerwall+ and Powerwall 3: The PVHCS emergency stop initiator shall have the following minimum ratings: Outdoor (Type 3R or higher), 12V, 1A, and shall be installed in accordance with NEC requirements. The specific part shall be identified on the as-built system drawings. Refer to the Powerwall installation manual for further details.