STANDARDS UPDATE NOTICE (SUN)
ISSUED: December 9, 2025

STANDARD INFORMATION

Standard: UL Subject 2871
Standard ID: Outline Of Investigation for Electric Vehicle (EV) Service and Production Chargers [UL SUBJECT 2871:2025 Ed.2]
Previous Standard ID: Outline Of Investigation for Electric Vehicle (EV) Service and Production Chargers [UL SUBJECT 2871:2014 Ed.1]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **May 21, 2027**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: Per our accreditation, Intertek is required to review reports against the standard revisions to confirm compliance. Once compliance is confirmed, the standard reference in the report is updated to show continued compliance to the technical requirements of the standard. Reports not updated to this version by the effective date above will be withdrawn.

Overview of Changes:

- New requirements for supply connections
- New requirements for clearances and creepage distances
- New requirements for overcurrent protection
- New EV cable secureness test
- New marking requirements

Specific details of new/revised requirements are found in table below

Current Listings Not Active? – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records. We will do this at no charge as long as Intertek is notified in writing prior to the review of your reports.

STANDARD INFORMATION

CLAUSE	VERDICT	COMMENT
		Additions to existing requirements are <u>underlined</u> and deletions are shown ~~lined out~~ below.
13	Info	**Supply Connections**
13.1	Info	**Fixed units**
13.1.1	Info	**General**
13.1.1.3		A wiring terminal or lead shall be suitable for the connection of a conductor <u>of the anticipated size for the installation. The anticipated conductor shall be sized in accordance with 13.1.1.4 or 13.1.1.5 as applicable.</u>
13.1.1.4		***New clause added;*** For products rated less than 100 A and not evaluated for a specific temperature rating in accordance with 13.1.1.6, the anticipated wire size shall be based on the 60 °C column of Table 310-16 of the National Electrical Code (NEC), NFPA 70. The sizing of the conductor shall be based on a value no less than 125 % of the maximum rating and corrected for ambient temperature rating in accordance with Table 310.15(B)(1)(1) of the National Electrical Code (NEC), NFPA 70. The installation instructions shall include the applicable statement in 79.2(l).
13.1.1.5		***New clause added;*** For products rated less than 100 A and evaluated and marked for a specific temperature rating in accordance with 13.1.1.6, and for products rated more than 100 A, the anticipated wire size shall be based on the 75 °C column of Table 310.16 of the National Electrical Code (NEC), NFPA 70. The sizing of the conductor shall be based on a value no less than 125 % of the maximum rating and corrected for ambient temperature rating in accordance with Table 310-15(B)(1)(1) of the National Electrical Code (NEC), NFPA 70. The installation instructions shall include the applicable statement in 79.2(l) or 79.2(m) as applicable.
13.1.1.6		***New clause added;*** Products that are rated less than 100A, but are marked for a specific temperature rating of 75 °C or 90 °C, are allowed to utilize the ampacities in the 75 °C column of Table 310-16 provided all of the following are met: a) The installation instructions instruct the installer to verify that the circuit breaker is rated for 75 °C, or that the circuit breaker must be replaced with one rated 75 °C; b) The installation instructions that the wire temperature rating shall be indicated as 75 °C or 90 °C wet rated wire. As an alternative, a specific wire type that carries the correct rating can be indicated; and c) The terminal in the product that will connect to the field wiring must be suitable for the correct wire size and shall be suitable for the temperature being marked.

CLAUSE	VERDICT	COMMENT
13.4	Info	**Cord-connected units**
13.4.2	Info	**Cords and plugs**
13.4.2.1		The power supply cord shall be of the junior hard service, hard service, or extra hard service type that is suitable for the application and shall be in accordance with UL 817. The length of the cord used for the alternating current input circuit as measured from the face of the attachment plug to the point where the cord emerges from the unit shall be not less than 6 feet (1.8 meter) or more than 15 feet (4.6 meter).
15	Info	**External Connections and Wiring**
15.1		The output of a unit shall consist of a nondetachable cable assembly with a connection means to the vehicle or the battery. Nondetachable cables shall be provided with strain relief in accordance with 13.5. The cable shall comply with UL 2263 and shall be of any type, suitable insulated for the voltages involved and the conductors shall be suitably sized for the ampacity involved.
23	Info	**Alternate Spacings – Clearances and Creepage Distances**
23.6		***New clause added;*** For equipment rated for use at altitudes above 6,562 feet (2,000 meters), the requirements in 23.7 – 23.9 shall apply.
23.7		***New clause added;*** For equipment rated for use at altitudes above 6,562 feet (2000 meters), the clearance values shall be adjusted using the values in IEC 60664-1, Altitude Correction Factors for Clearance Correction, Table A.2, derived from UL 840.
23.8		***New clause added;*** If the clearance values do not meet the values in 23.7, or if affected components used within the equipment have not been evaluated for higher altitudes, the impulse test can be performed to show compliance. The impulse test values are derived from Table F.6, Test Voltages for Verifying Clearances Only at Different Altitudes, of IEC 60664-1. The test value shall be equal to the impulse test voltage at sea level corrected by correction factor from 23.7.
23.9		***New clause added;*** For any product that does not comply with the clearance values in 23.7 or the impulse test in 23.8, those products shall be shown to comply with the values for clearance at a maximum of 6,562 feet (2000 meters) which are covered by the non-adjusted values as shown in UL 840.

CLAUSE	VERDICT	COMMENT
28		***New section added;*** **Overcurrent Protection** Supplementary overcurrent devices are not required unless specifically stated as such in other parts of this Outline or to reduce the risk of electric shock, fire, or injury to persons. See standard for details.
54	Info	**Abnormal Tests**
54.4	Info	**Short circuit test**
54.4.2		With reference to 54.4.1, fuses and other protective devices provided as part of the unit are to remain in the circuit. The unit is connected to a source of supply adjusted to its highest test voltage – see Table 47.1. With the unit operating at maximum output current, the output connections are shorted. The test is to be continued until the internal protection opens, constant temperatures are attained, or the transformer winding opens. When an automatically reset protector is provided, the test is to be continued for 7 hours. When a manually reset protector is provided the test is to be continued until the protector operates for 50 cycles. If the test is terminated by an electronic protection circuit within the charger, the charger shall shutdown safely. The electronic protection circuit shall comply with Section 37, Electronic Protection Circuits.
56	Info	**Strain Relief Tests**
56.4		***New section added;*** **EV Cable Secureness Test** EV cables shall be subjected to the test outlined in 56.4.2 – 56.4.4. See standard for details.
69	Info	**Impact – Guards Over Moving Parts Test**
69.3		When the part under test is made of polymeric material, the impact test is to be first conducted on a sample or samples in the as-received condition. The test is then to be repeated on a different sample or samples that have been conditioned in a cold chamber at the lowest operating temperature or minus 30 °C ±2 °C (minus 22 ±4 °F), whichever is lower, for 24 hours. The impact test shall be performed immediately after removing the sample from the cold chamber. Gloves shall be worn when handling the conditioned sample to minimize heat transfer. While being conditioned, a part is to be supported in the same manner in which it is supported on the unit.

CLAUSE	VERDICT	COMMENT
	Info	**MARKING**
77	Info	**Details**
77.7	Info	**Content**
77.2.7		***New clause added;*** Wiring terminals shall be marked to indicate the proper connections for the unit, or a wiring diagram coded to the terminal marking shall be securely attached to the equipment.
77.2.8		***New clause added;*** Equipment field-wiring terminals shall be marked: a) “Use Copper Conductors Only” when the terminal is intended only for connections to copper wire; b) “Use Aluminum Conductors Only” or “Use Aluminum or Copper-Clad Aluminum Conductors Only” when the terminal is intended only for connection to aluminum wire; or c) “Use Copper or Aluminum Conductors” or “Use Copper, Copper-Clad Aluminum, or Aluminum Conductors” when the terminal is intended for connection to either copper or aluminum wire.
77.2.9		***New clause added;*** In accordance with 17.15, a pressure wire connector intended for connection of an equipment-grounding conductor shall be identified by: a) Being marked “G,” “GR,” “GND,” “Ground,” “Grounding,” or similar marking; b) A marking on a wiring diagram attached to the unit; or c) The symbol illustrated in Figure 77.3 on or adjacent to the connector or on a wiring diagram provided on the unit. See 77.2.10.