

STANDARD INFORMATION

Standard: UL 6703

Standard ID: Connectors for Use in Photovoltaic Systems [UL 6703:2014 Ed.1+R:25Jun2024]

Previous Standard ID: Connectors for Use in Photovoltaic Systems [UL 6703:2014 Ed.1+R:10Jun2021]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **June 25, 2026**

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 Reports not updated to this version by the effective date above will be withdrawn.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:

- Addition of Assembly Procedures for Field Assembled Connector Test Samples
- Addition of a Cyclic Pull Test
- Revision to Test Condition for Low Temperature Impact test for PV Connectors

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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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
		<i>Additions to existing requirements are <u>underlined</u> and deletions are shown lined-out below.</i>
9	Info	PV Connector Tests
9.1	Info	General
9.1.2	Info	Preparation of specimens
		<i>New clause added;</i>
9.1.2.7		For field assembled connectors, the test samples shall include at least four sets representing the maximum and minimum sizes of intended wires, assembled at the upper and lower temperature ratings.
		<i>New clause added;</i>
9.1.2.8		The metal connection (such as crimping) between conductor and connector pin/socket is to be fully assembled (tightened to the specification) at a temperature of $23 \pm 5^{\circ}\text{C}$ ($73.4 \pm 9^{\circ}\text{F}$). Polymeric material sealing and strain relief (such as a gland) is to be assembled and tightened by hand at a temperature of $23 \pm 5^{\circ}\text{C}$ ($73.4 \pm 9^{\circ}\text{F}$), then the steps in 9.1.2.9 shall be applied.
		NOTE: This purpose of this requirement is to evaluate the assembly temperature effect on polymeric materials used in connectors for sealing and strain relief, such as a gland.
		<i>New clause added;</i>
9.1.2.9		One set of samples, as defined in 9.1.2.7, with maximum wire size and one set with minimum wire size shall be placed into an environmental chamber at the upper rated temperature, and the other two sets shall be placed into an environmental chamber at the lower rated temperature. Samples shall be conditioned for a minimum of 3 hours. In less than 2 minutes following removal from the chamber, polymer material sealing and strain relief shall be tightened to the required torque in accordance with Assembly Instructions, Section 12.
9.1.3	Info	Impact Test
		<i>New clause added;</i>
9.1.3.2		If the Assembly Instructions, Section 12, specifies temperature ranges or temperature limitations for which the connector product is to be assembled and used in, the Low Temperature Impact Test required by Table 9.1 shall be conducted at the specified lowest temperature $\pm 2.0^{\circ}\text{C}$ ($\pm 3.6^{\circ}\text{F}$), or $0 \pm 2.0^{\circ}\text{C}$ ($32.0 \pm 3.6^{\circ}\text{F}$), whichever is lower.



CLAUSE	VERDICT	COMMENT
		<i>New clause added;</i>
9.1.3.3		If the temperature range or limitations are not specified in the Assembly Instructions, Section 12, the Low Temperature Impact Test required by Table 9.1 shall be conducted at the minus 35.0 ±2.0°C (minus 31.0 ±3.6°F).
		<i>New section added;</i>
		Cyclic pull test
9.4		The test procedure includes the following: See standard for details.
12	Info	Assembly Instructions
12.2	Info	Required content
		The instructions shall include the following in addition to any other information required by this standard:
12.2.1		d) The following technical information: <u>10) For a single-use connector, a procedure and warning for safely making the connections or removing the connections, such as to change a module from the string, shall be provided because it may involve touching live parts.</u> <u>11) If the connector product has been designated and tested to work in a limited temperature range, the specific lower temperature limit for assembly and operation shall be stated.</u>
12.3	Info	Assembly procedure
		A detailed procedure that must be followed for proper assembly of a PV connector to a conductor as follows:
12.3.1		<u>f) Any additional steps or precautions required for field assembly of connectors, for those connectors which comply with Preparation of Specimens, 9.1.2.</u>