

## STANDARD INFORMATION

**Standard Number:** CSA C22.2 No. 160  
**Standard Name:** Voltage and Polarity Testers  
**Standard Edition and Issue Date:** 3<sup>rd</sup> Edition Dated September 1, 2015  
**Date of Revision:** September 1, 2015  
**Date of Previous Revision of Standard:** 2<sup>nd</sup> Edition Dated October 1985 (Reaffirmed 2012)

## EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

**Effective Date:** **February 28, 2019**

## IMPACT, OVERVIEW, AND ACTION REQUIRED

**Impact Statement:** A review of all Listing Reports is necessary to determine which products comply with new/revised requirements and which products will require re-evaluation. **NOTE:** Effective immediately, this revised standard will be exclusively used for evaluation of new products unless the Applicant requests in writing that current requirements be used along with their understanding that their listings will be withdrawn on Effective Date noted above, unless the product is found to comply with new/revised requirements.

### Overview of Changes:

- New materials require a minimum comparative tracking index (CTI) of 175V;
- Flame rating of V2 or HB + 100 Relative thermal index (RTI);
- Corrosion protection for non-current carrying parts

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

**If the applicable requirements noted in the table are not described in your report(s), these requirements will need to be confirmed as met and added to your report(s) such as markings, instructions, test results, etc. (as required).**

### Client Action Required:

**Information** – To assist our Engineer with review of your Listing Reports, please submit technical information in response to the new/revised paragraphs noted in the attached or explain why these new/revised requirements do not apply to your product (s).

***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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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 <del>lined-out</del> below.</i>
5	Info	<b>Construction</b>
5.1	Info	<b>General</b>
		<b><i>New clause added;</i></b>
5.1.6		Polarity and voltage testers intended to be plugged into a receptacle shall comply with the dimensional and material requirements of CSA C22.2 No. 42.
		<b><i>New clause added;</i></b>
5.1.7		Direct plug in testers shall have configurations in accordance with CSA C22.2 No.42 or CAN/CSA-C22.2 No.60320-1.
5.3	Info	<b>Electrical insulation</b>
		<b><i>New clause added;</i></b>
5.3.2		Insulating material in contact with current-carrying members shall be suitable for the particular application and may include certain ceramic, thermoset, thermoplastic, and elastomeric materials.
		<b><i>New clause added;</i></b>
5.3.3		Insulating materials in contact with current-carrying members of female contact devices intended for permanent installation shall have a minimum comparative tracking index (CTI) of 175 V when tested in accordance with CAN/CSA-C22.2 No. 0.17.
		<b><i>New clause added;</i></b>
5.3.4		Insulating materials in contact with current-carrying members of devices intended for permanent installation shall have a flammability classification of V-2 or better in accordance with the vertical burning test requirements of CAN/CSA-C22.2 No. 0.17 in a thickness of 1.6 mm or in the minimum thickness in contact with that current-carrying member. Materials less than 1.6 mm in thickness may be used in contact with current-carrying members, provided that their flammability rating with 1.6 mm thickness is V-2 or better.



---

***New clause added;***

- 5.3.5 As an alternative to the requirement in Clause 5.3.4, a thermosetting material, such as phenolic, melamine, or urea, may be used as an insulating material in contact with current-carrying members of devices intended for permanent installation, provided the material has the following characteristics:
- a) a flammability classification of HB or better in accordance with the horizontal burning test requirements of CAN/CSA-C22.2 No. 0.17; and
  - b) a relative thermal index, mechanical, without impact, in accordance with CAN/CSA-C22.2 No. 0.17, of a minimum of 100 °C.
- 

***New clause added;***

- 5.3.6 Insulating materials in contact with current-carrying members of devices not intended for permanent installation shall have a flammability classification of HB or better in accordance with the horizontal burning test requirements of CAN/CSA-C22.2 No. 0.17.
- 

***New clause added;***

- 5.3.7 In evaluating insulating materials that have not been accepted previously in a particular application, consideration shall be given to the following attributes, in comparison with materials that have been accepted in the application:
- a) relative thermal index, mechanical, without impact;
  - b) hot wire ignition; and
  - c) high current arc ignition.
- 

***New clause added;***

- 5.3.8 A polymeric material used for electrical insulation or enclosure of live parts shall have a temperature index, mechanical, without impact, as follows:
- a) 80 — for material in contact with or supporting live parts;
  - b) 80 — for material used for enclosures of permanently wired devices; and
  - c) 60 — for material in contact with (or supporting live parts) or used for enclosures of cord-connected or direct plug-in devices.
- 

***New clause added;***

- 5.3.9 Compliance with Clause 5.3.8 shall be determined in accordance with CAN/CSA-C22.2 No.0.17.
- 

5.4 Info **Corrosion protection**

---

***New clause added;***

- 5.4.1 Non-current carrying parts of iron or steel (other than stainless steel), including mounting screws, shall be protected against corrosion in accordance with CAN/CSA-C22.2 No.0.
-



5.6	Info	<b>Leads</b>
5.6.1		Lead conductors shall be made of copper. <u>Leads shall comply with CSA C22.2 No 127 type TEW or equivalent type AWM.</u>
7	Info	<b>Tests</b>
7.9	Info	<b>Flame test for nonmetallic enclosures</b>
		<del>The enclosure shall be subjected to Test D—Horizontal Burning Flame Test—19 mm Yellow Flame, as specified in CSA Standard C22.2 No. 0.6.</del>
7.9.1		<u>The enclosure shall</u> a) <u>comply with Test D3, Flame Test D — Horizontal burning flame test of CAN/CSA-C22.2 No.0.17, Annex D;</u> b) <u>comply with Clause 9.3 of CAN/CSA-C22.2 No.0.17; or</u> c) <u>be V-2 rated material according to CAN/CSA-C22.2 0.17.</u>
<b>CUSTOMERS PLEASE NOTE:</b> This Table and column “Verdict” can be used in determining how your current or future production is or will be in compliance with new/revised requirements.		