STANDARDS UPDATE NOTICE (SUN)
ISSUED: June 4, 2025

STANDARD INFORMATION

If the project requires any changes to the Certification Data Report outside of Section 1, then this SUN applies.

Standard: CSA C222. No. 61010-2-034
Standard ID: Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-034: Particular Requirements for Measurement Equipment for Insulation Resistance and Test Equipment for Electric Strength [CAN/CSA C22.2#61010-2-034:2024 Ed.2]
Previous Standard ID: Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-034: Particular Requirements for Measurement Equipment for Insulation Resistance and Test Equipment for Electric Strength [CAN/CSA C22.2#61010-2-034:2018 Ed.1]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **July 31, 2026**

IMPACT, OVERVIEW, AND ACTION REQUIRED

Impact Statement: No action is required for currently certified products. If modifications to the product after the effective date require an evaluation and/or testing, then the product must undergo re-evaluation to the new requirements.

Overview of Changes:

- Revised requirements for many tests
- Addition of minimum ratings for voltage of measuring terminals are required
- New ratings for documentation have been added
- New instructions for operation have been added
- Revised requirements for distances of measuring circuit terminals
- Protection of measuring circuits against the spread of fire and arc flash has been added
- Added against hazard occurring from reading a voltage value
- Method for determination of ut for circuits which reduce transient overvoltage

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

Note: If the listing references a Canadian standard, per the Canadian Electrical Code (CSA C22.2#0) Section titled Language of markings, Caution and Warning Markings shall be in English and French.

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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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 underlined and deletions are shown ~~lined out~~ below.

The following changes have been identified in the foreword of the standard:
In 1.2.1, requirements for protection against hazards which could occur from reading a voltage have been added to the scope;
Clause 2, all normative references have been dated; new normative references have been added;
In 4.3.2.5, requirements for power supply have been modified;
In 4.3.2.6, requirements for inputs/outputs have been modified;
In 5.1.5.101.2, minimum ratings for voltage of measuring terminals are required;
In 5.4.2, new ratings for documentation have been added;
In 5.4.4, new instructions for operation have been added;
In 5.101.1, hazard indicators shall be functional in normal condition and in single fault condition;
In 6.6.101.1, insulating material of group I may be allowed for determination of creepage distances of measuring circuit terminals;
In 6.6.101.2, Clearances and creepage distances above 1 000 V a.c. and 1 500 V d.c. for measuring circuit terminals in unmated position have been defined;
In 6.6.101.3, requirements for measuring circuit terminals in partially mated position have been specified;
In 6.6.101.4, requirements for measuring circuit terminals in mated position have been specified;
Subclause 6.102 replaces 6.9.103 and has been rephrased;
New Subclause 9.101 to consider the protection of measuring circuits against the spread of fire and arc flash has been added. Table 102 has been replaced by Table K.101;
In 9.101.2, relocation of 101.3 of previous edition;
n 9.101.3, relocation of 101.4 of previous edition, extension to measurement category II and reference to IEC 61000-4-5 for tests;
In 9.101.4, requirements for measuring circuit terminals in mated position have been specified;
In 9.101.5, relocation of K.103 of previous edition with numerous technical changes;
In 14.101, relocation of 14.102. 14.101 of previous edition has been removed;
In 101.3, relocation of 101.5 of previous edition, and more requirements added against hazard occurring from reading a voltage value;
In K.2.1, another method for determination of clearances of secondary circuits is proposed;
In K.3.2, new Table K.15 and Table K.16 for clearance calculation;

CLAUSE	VERDICT	COMMENT
In K.3.101, relocation of 6.9.104 of previous edition;		
In K.101.4.1, new Table K.103 and Table K.104 replace Table K.102, Table K.103 and Table K.104;		
In K.101.4, the subclause has been reviewed. Tables and tests for solid insulation have been modified. Table K.105 replaces Table K.9;		
Table K.101, replacement of Table K.106;		
Clause K.4, redraft of the clause to propose a method for determination of Ut for circuits which reduce transient overvoltage;		
Annex EE: addition of a new informative annex for determination of clearances for Table 101.		

The following changes have been identified as having the most impact on current products:

4		***New section added;*** **Tests** See standard for details.
5	Info	**Marking, documentation and HAZARD indicator**
5.1.5	Info	**TERMINALS, connections and operating devices**
5.1.5.101	Info	**Measuring circuit TERMINALS**
5.1.5.101.2		**Measuring circuit TERMINALS RATED for MEASUREMENT CATEGORIES** The relevant MEASUREMENT CATEGORY shall be marked for TERMINALS of measuring circuits RATED for MEASUREMENT CATEGORIES. The MEASUREMENT CATEGORY markings shall be "CAT II", "CAT III" or "CAT IV" as applicable. The RATED voltage of the TERMINALS of a measuring circuit intended for MAINS voltage measurements shall be equal to or higher than their RATED a.c. r.m.s. line-to-neutral or d.c. voltage. Marking those TERMINALS with more than one type of MEASUREMENT CATEGORY and its RATED voltage is permissible. Conformity is checked by inspection.

CLAUSE	VERDICT	COMMENT
5.4.2		***New clause added;*** **Equipment RATINGS** Add the following three new items to the list: aa) the output voltage or voltage range, frequency and current RATING; bb) for insulation resistance measurement equipment, the RATED line or unit capacitance as required by 6.102; cc) for insulation resistance measurement equipment intended for use in power station or substation, the RATED induced current (see 9.101.5).
5.4.4		***New clause added;*** **Equipment** Add the following three new items to the list: aa) instructions for a daily or routine check to ensure the correct functionality of the equipment before use when one HAZARD indicator has been considered to be sufficient (see 5.101.1); bb) when performing an a.c. voltage test, instructions to warn the OPERATOR that a hazardous residual voltage can be present after the interruption of the test if the capacitance value of the line or unit under test exceeds the maximum RATED line or unit capacitance value (see 6.102.3); cc) when an automatic operation to energise the equipment outputs is provided, a warning to keep distance from the unit under test.
5.101	Info	**HAZARD indicator**
5.101.1		**General** At least one of the following HAZARD indicators shall be provided and it shall be functional in NORMAL CONDITION and in SINGLE FAULT CONDITION of the indicator. One indicator is considered to be sufficient if the manufacturer's instructions or markings require a daily or routine check to ensure the correct functionality of the equipment before use. a) Indicator light Where an indicator light is provided, it shall illuminate or flash when there are HAZARDOUS LIVE voltages present on the output TERMINALS. It may start illuminating or flashing at any point when the output is activated. The indicator light shall be red in colour. If the indicator light flashes, the frequency shall be 50 cycles per minute to 300 cycles per minute. The duty cycle shall be at least 40 %. Conformity is checked by inspection and measurement.

CLAUSE	VERDICT	COMMENT
		b) Variable visible indicator Where a variable visible indicator with contrasting colours is provided, it shall operate when there are HAZARDOUS LIVE voltages present on the output TERMINALS. It may start operating at any point when the output is activated. The visible indicator shall have equally spaced areas of significantly contrasting either colours or patterns or both. Conformity is checked by inspection. c) Audible indicator Where an audible indicator is provided, it shall produce a sound with a minimum constant sound pressure level of 70 dBA and a frequency of the fundamental wave lower than 5 kHz to warn the OPERATOR or a bystander when there are HAZARDOUS LIVE voltages present on the output TERMINALS. It may start producing a sound at any point when the output is activated. Conformity is checked by measuring the maximum A-weighted sound pressure level at the OPERATOR'S position and at bystander positions. The following conditions apply. 1) During measurement, the equipment is fitted and operated as in NORMAL USE. 2) Sound level meters used in the measurement conform either to class 1 of IEC 61672-1:2013 and, when used, integrating sound level meters have been evaluated according to class 1 of IEC 61672-2:2013. 3) The distance between any wall or any other object and the surface of the equipment is not less than 3 m.
6	Info	**Protection against electric shock**
6.6	Info	**Connections to external circuits**
6.6.101		***New section added;*** **Measuring circuit TERMINALS** When determining the values of CREEPAGE DISTANCES for measuring circuit TERMINALS of HAND-HELD EQUIPMENT intended to be connected only to a hand-held probe assembly complying with IEC 61010-031:2022, the applicable values of CREEPAGE DISTANCES from material group I are allowed to be applied to all material groups. See standard for details.
6.102		***New section added;*** **Discharging residual voltages** Voltage tests are likely to charge capacitances of lines or units under test to HAZARDOUS LIVE energy level. No HAZARD shall occur when residual voltages are

CLAUSE	VERDICT	COMMENT
		present as a result of circuits holding a charge after the test has been interrupted in NORMAL USE. See standard for details.
9		***New section added;*** **Protection against the spread of fire and arc flash** The equipment shall provide protection against fire or arc flash resulting from NORMAL USE and REASONABLY FORESEEABLE MISUSE of measuring circuits, as specified in a) to d) below: See standard for details.
101	Info	**Measuring circuits**
101.3		***New section added;*** **Indicating devices** No HAZARD shall occur from reading a voltage value when the equipment is operated for measuring MAINS voltages and in the event of REASONABLY FORESEEABLE MISUSE. A displayed voltage value is considered to be unambiguous when the value is less than 10 % inaccurate, or if there is an indication when the value is out of range, or if there is a clear indication that the value is not correct. A display off is also considered to be unambiguous. See standard for details.
Annex K	Info	**Insulation requirements not covered by 6.7**
K.4		***New section added;*** **Attenuation of TRANSIENT OVERVOLTAGES levels** Equipment or parts of equipment may be used under conditions where TRANSIENT OVERVOLTAGES are reduced. Various technologies of components exist such as transformer, surge protective device (SPD), capacitance, resistance, and these can have different behaviour in terms of TRANSIENT OVERVOLTAGES attenuation. See standard for details.

CLAUSE	VERDICT	COMMENT
K.101		***Section k.101 has been re-written*** **Insulation requirements for measuring circuits RATED for MEASUREMENT CATEGORIES** Measuring circuits are subjected to WORKING VOLTAGES and transient stresses from the circuits to which they are connected during measurement or test. When the measuring circuit is used to measure MAINS, the transient stresses can be estimated by the location within the installation at which the measurement is performed. When the measuring circuit is used to measure any other electrical signal, the transient stresses shall be considered by the OPERATOR to ensure that they do not exceed the capabilities of the measuring equipment. See standard for details.