STANDARDS UPDATE NOTICE (SUN)
ISSUED: January 28, 2026

STANDARD INFORMATION

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

Standard: UL 61010-2-030 / CSA C22.2 No. 61010-2-030
Standard ID:
Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use – Part 2-030: Particular Requirements for Testing and Measurement Circuits [UL 61010-2-030:2025 Ed.3]
Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-030: Particular Requirements for Equipment Having Testing or Measuring Circuits [CSA C22.2#61010-2-030:2025 Ed.3]
Previous Standard ID:
Safety Requirements for Electrical Equipment for Measurement, Control and Laboratory Use – Part 2-030: Particular Requirements for Testing and Measurement Circuits [UL 61010-2-030:2018 Ed.2+R:24May2023]
Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use - Part 2-030: Particular Requirements for Equipment Having Testing or Measuring Circuits [CSA C22.2#61010-2-030:2018 Ed.2]

EFFECTIVE DATE OF NEW/REVISED REQUIREMENTS

Effective Date: **January 31, 2027**

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:

- Requirements for protection against hazards which could occur from reading a voltage
- Requirements for power supply have been modified
- Requirements for inputs/outputs have been modified
- Surge protective devices have been added
- Minimum ratings for voltage of measuring terminals are required
- Requirements for measuring circuit terminals have been added

Further changes and 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 – Please immediately identify any current Listing Reports or products that are no longer active and should be removed from our records.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.
1	Info	**Scope and object**
1.2.1		***New clause added;*** **Aspects included in scope** Replace item c) of the second paragraph with the following new item c): c) spread of fire or arc flash from the equipment (see Clause 9); Replace the third paragraph with the following two new paragraphs: Requirements for protection against HAZARDS arising from NORMAL USE, REASONABLY FORESEEABLE MISUSE and ergonomic factors are specified in Clause 16 and Clause 101. Annex BB provides guidance to equipment manufacturers on HAZARDS that should be considered for equipment intended for performing tests and measurements on hazardous conductors, including MAINS conductors and telecommunication network conductors.
4		***New section added;*** **Tests** IEC 61010-1:2010, Clause 4 and IEC 61010-1:2010/AMD1:2016, Clause 4 apply except as follows:
4.3.2.5		**Power supply** The following requirements apply: a) the voltage of the power supply connected to the MAINS shall be between 90 % and 110 % of any RATED supply voltage for which the equipment can be set or, if the equipment is RATED for a greater fluctuation, at any supply voltage within the fluctuation range; b) the MAINS frequency shall be any RATED frequency; c) equipment for both a.c. and d.c. shall be connected to an a.c. or d.c. supply; d) equipment powered from MAINS by single-phase a.c. shall be connected both with normal and reverse polarity;

CLAUSE	VERDICT	COMMENT
		e) if the means of connection permit reversal, battery-operated and d.c. equipment shall be connected with both reverse and normal polarity.
4.3.2.6		**Input and output voltages or currents** Input and output voltages or currents, including floating voltages but excluding the supply voltage connected to the MAINS, shall be set to any voltage or current within their RATED range, in normal and reverse polarity if possible.
4.4.2.101		**Surge protective devices** Surge protective devices used in MAINS CIRCUITS or in circuits measuring MAINS shall be short-circuited and open-circuited.
5	Info	**Marking and documentation**
5.1.5	Info	**TERMINALS, connections and operating devices**
5.1.5.101	Info	**Measuring circuit TERMINALS**
5.1.5.101.1		**General** Some measuring circuit TERMINALS for the equipment within the scope of this document also serve as output TERMINALS. Except as permitted in 5.1.5.101.4: a) the value of the nominal a.c. r.m.s. line-to-neutral or d.c. voltage of MAINS being measured shall be marked for measuring circuit TERMINALS RATED for MEASUREMENT CATEGORIES, or the value of the RATED voltage to earth for other measuring circuit TERMINALS, and NOTE CLEARANCES and solid insulation for MEASUREMENT CATEGORIES are specified for a nominal a.c. r.m.s. line-to-neutral or d.c. voltage of MAINS being measured. Neutral is considered to be earthed (see Annex I).
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
6	Info	**Protection against electric shock**
6.6		***New section added;*** **Connections to external circuits** 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 or to a current sensor complying with IEC 61010-2-032:2023, the applicable values of CREEPAGE DISTANCES from material group I are allowed to be applied to all material groups. See standard for details.
6.8.1		***New clause added;*** **General** Replace the second and third paragraphs with the following three new paragraphs: Test equipment for the voltage tests is specified in IEC 61180:2016. For testing CLEARANCES of unmated TERMINALS (see 6.6.101.2 2) a) ii)), the reference point for application of the test voltage is determined using the test finger applied to the external parts of the TERMINAL in the least favourable position with the closest approach. Alternatively, a test probe with a tip in the shape of the test finger can be used for application of the test voltage. For other testing, ACCESSIBLE insulating parts of the ENCLOSURE are covered with metal foil everywhere except around unmated TERMINALS. For test voltages up to 10 kV a.c. peak or 10 kV d.c., the distance from foil to TERMINAL is not more than 20 mm. For higher voltages it is the minimum to prevent flashover. For guidance on these minimum distances, see Table 9.
6.8.3.1		***New clause added;*** **The a.c. voltage test** Replace the first sentence with the following sentence: The voltage tester shall be capable of maintaining the test voltage throughout the test within ±3 % of the specified value.
6.8.3.2		***New clause added;*** **The d.c. voltage test** Add a new sentence at the beginning of the first paragraph:

CLAUSE	VERDICT	COMMENT
		The voltage tester shall have a regulated output capable of maintaining the test voltage throughout the test within ±3 % of the specified value.
9	Info	**Protection against the spread of fire and arc flash**
9.101	Info	**Protection of measuring circuits**
9.101.2	Info	**Protection against mismatches of inputs and ranges**
9.101.2.1DV		***New clause added;*** c) in cases where protective devices or components described in a) or b) cannot be used for technical or operating reasons, or the MEASURING CIRCUIT is not RATED for MEASUREMENT CATEGORIES II, III, IV, the equipment may be tested to meet 9.101.2.3ADV. NOTE An example of such cases is an input impedance selection switch in oscilloscope. Conformity is checked by inspection, evaluation of the design of the equipment, and as specified in 9.101.2.2, 9.101.2.3 and 9.101.2.3ADV, as applicable.
9.101.2.3DV		***New clause added;*** **Other protection** When the conditions defined in 9.101.2.1DV c) apply and the protections specified in 9.101.2.2 or 9.101.2.3 cannot be used, the equipment shall not cause a HAZARD resulting from the application of the maximum RATED voltage. Conformity is checked by the following test, performed three times on the same sample of equipment. A voltage equal to the highest RATED voltage for any TERMINAL is applied between the TERMINALS of the MEASURING CIRCUIT for 1 minute. The source of the test voltage shall deliver a current of at least the possible a.c. or d.c. short-circuit current as applicable. If the function or range controls have any effect on the electrical characteristics of the input circuit, the test is repeated with the function or range controls in every combination of positions, including during the change of function or range. During and after the test, no electric shock or spread of fire shall result. Where arc flash can occur, no HAZARD shall arise, nor shall there be any evidence of fire, arcing, explosion, or damage to the insulation which provides protection against electric shock.

CLAUSE	VERDICT	COMMENT
9.101.3		**Protection against MAINS overvoltages** The MAINS voltage used for the test is the maximum RATED line-to-neutral voltage of the MAINS being measured. For measuring circuits RATED for MAINS voltages above 400 V a.c. r.m.s. line-to-neutral or 400 V d.c., the test may be performed with an available MAINS voltage source that has a voltage of at least 400 V a.c. r.m.s or 400 V d.c. The MAINS voltage source does not, in this case, need to match the measuring circuit RATING. For measuring circuits RATED for MAINS in d.c., an a.c. source can be used. When an a.c. source is used, the impulses are synchronized with the MAINS voltage phase, timed to occur at the peak of the MAINS voltage, and to be of the same polarity as the cycle, with a phase tolerance of ±10° (see IEC 61000-4-5:2014, 6.2).
14	Info	**Components and subassemblies**
14.101		***New clause added;*** **Probe assemblies and accessories** Probe assemblies and accessories within the scope of IEC 61010-031:2022 and current sensors within the scope of IEC 61010-2-032:2023 shall meet the requirements thereof. Conformity is checked by inspection of the documentation or by carrying out all the relevant tests of IEC 61010-031:2022 or IEC 61010-2-032:2023, as applicable.
101		***New section added;*** **Measuring circuits** The equipment shall provide protection against HAZARDS resulting from NORMAL USE and REASONABLY FORESEEABLE MISUSE of measuring circuits, as specified in a) to d) below: See standard for details.
Annex K	Info	**Insulation requirements not covered by 6.7**
K.2	Info	**Insulation in secondary circuits**
K.3.1		***New clause added;*** **General** The maximum TRANSIENT OVERVOLTAGE level of earthed secondary circuit is assumed to be one level lower from the series of impulse voltages of Table K.101 for the considered nominal a.c. r.m.s. line-to-neutral or d.c. voltage of the primary MAINS CIRCUIT with the same OVERVOLTAGE CATEGORY or MEASUREMENT CATEGORY.

CLAUSE	VERDICT	COMMENT
		EXAMPLE If the nominal voltage a.c. r.m.s. line-to-neutral voltage of MAINS being measured is 2 000 V in MEASUREMENT CATEGORY III, the applicable impulse voltage is 15 000 V and the lower level is 10 000 V. CLEARANCES for secondary circuits are determined: 1) for earthed secondary circuits, by the method in K.2.2 or in K.3.2 using the lower TRANSIENT OVERVOLTAGE value of one level, or 2) for all secondary circuits, by the method in K.3.2 using the Ut value defined in Clause K.4.
K.3	Info	**Insulation in circuits not addressed in 6.7, Clause K.1, Clause K.2 or Clause K.101, and for measuring circuits where MEASUREMENT CATEGORIES do not apply**
K.3.1		**General** The circuits covered by this Clause K.3 have one or more of the following characteristics in a) to g): a) the circuit is a measuring circuit where MEASUREMENT CATEGORIES do not apply; b) the maximum possible TRANSIENT OVERVOLTAGE is above the level from the series of impulse voltages of Table K.101, assumed for the MAINS CIRCUIT; c) the maximum possible TRANSIENT OVERVOLTAGE is limited by the supply source or within the equipment to a known level below the level assumed for the MAINS CIRCUIT; d) the TRANSIENT OVERVOLTAGE value where attenuation occurred is determined by the method of Clause K.4;
K.3.2		***New clause added;*** **CLEARANCE calculation** Replace the existing conformity statement, Table K.15, Table K.16 and Note 2 with the following new conformity statement, Table K.15, Table K.16 and Note 2 (including Example 1 and Example 2). Conformity is checked by inspection and measurement, or by the a.c. voltage test of 6.8.3.1 with a duration of at least 5 s, or by the d.c. voltage test of 6.8.3.2 for measuring circuits stressed only by d.c. with a duration of at least 5 s, or by the impulse voltage test of 6.8.3.3, using the applicable test voltage of Table K.16 for the required CLEARANCE. Correction factors of Table 10 are applicable to the values of test voltages.

CLAUSE	VERDICT	COMMENT
		New clause added; **Attenuation of TRANSIENT OVERVOLTAGE levels**
K.4		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.
K.101	Info	**Insulation requirements for measuring circuits RATED for MEASUREMENT CATEGORIES**
K.101.1		**General** 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. MEASUREMENT CATEGORIES take into account OVERVOLTAGE CATEGORIES, short-circuit current levels, the location where the test or measurement is to be made and some forms of energy limitation or transient protection included in the building installation. When the measuring circuit is used to connect to MAINS, there is a RISK of arc blast. MEASUREMENT CATEGORIES in accordance with Annex AA define the amount of energy available, which may contribute to arc flash (see also BB.2.3).
K.101.4	Info	**Solid insulation**
K.101.4.1		**General** Solid insulation shall withstand the electrical and mechanical stresses that may occur in NORMAL USE, in all RATED environmental conditions (see 1.4), during the intended life of the equipment. Conformity is checked by both of the following tests: a) the impulse voltage test of 6.8.3.3 using the applicable test voltage of Table K.103 or, as an alternative, the a.c. voltage test of 6.8.3.1 using the applicable test voltage of Table K.104 with a duration of at least 5 s; b) for measuring circuits stressed by a.c. or a.c. plus d.c. voltage, the a.c. voltage test of 6.8.3.1 or for measuring circuits stressed only by pure d.c. voltage, the d.c.

CLAUSE	VERDICT	COMMENT
		voltage test of 6.8.3.2, using the test voltage determined by K.101.4.2 with a duration of at least 1 min. NOTE Test a) checks the effects of TRANSIENT OVERVOLTAGES, while test b) checks the effects of long-term stress of solid insulation.
K.101.4.2		***New clause added;*** **Long-term stress test voltage value calculation** Test voltage values for testing the long-term stress of solid insulation are determined as follows. See standard for details.