



CSA C22.2 No. 61010-2-033:20

Safety requirements for electrical equipment for measurement, control and laboratory use — Part 2-033: Particular requirements for hand-held multimeters for domestic and professional use, capable of measuring mains voltage
(IEC 61010-2-033:2019, MOD)

CSA C22.2 n° 61010-2-033:20

Exigences de sécurité pour appareils électriques de mesurage, de régulation et de laboratoire — Partie 2-033 : Exigences particulières pour les multimètres portatifs pour usage domestique et professionnel, capables de mesurer la tension réseau
(IEC 61010-2-033:2019, MOD)



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CSA C22.2 No. 61010-2-033:20

**Safety requirements for electrical equipment for
measurement, control and laboratory use —
Part 2-033: Particular requirements for hand-held
multimeters for domestic and professional use,
capable of measuring mains voltage
(IEC 61010-2-033:2019, MOD)**

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Safety requirements for electrical equipment for measurement, control and laboratory use — Part 2-033: Particular requirements for hand-held multimeters for domestic and professional use, capable of measuring mains voltage (IEC 61010-2-033:2019, MOD)

CSA Preface

This is the second edition of CSA C22.2 No. 61010-2-033, *Safety requirements for electrical equipment for measurement, control and laboratory use — Part 2-033: Particular requirements for hand-held multimeters for domestic and professional use, capable of measuring mains voltage*, which is an adoption, with Canadian deviations, of the identically titled IEC (International Electrotechnical Commission) Standard 61010-2-033 (second edition, 2019-06). It supersedes the previous edition published in 2014 as CAN/CSA-C22.2 No. 61010-2-033 (adopted IEC 61010-2-033:2012). It is one in a series of Standards issued by CSA Group under Part II of the *Canadian Electrical Code*.

For brevity, this Standard will be referred to as “CSA C22.2 No. 61010-2-033” throughout.

This Standard is intended to be used in conjunction with CAN/CSA-C22.2 No. 61010-1:12, *Safety requirements for electrical equipment for measurement, control, and laboratory use — Part 1: General requirements* (adopted IEC 61010-1:2010, with Canadian and US deviations); and Amendment 1:2018 to CAN/CSA-C22.2 No. 61010-1:12 (adopted IEC Amendment 1:2016, with Canadian and US deviations).

This Standard is considered suitable for use for conformity assessment within the stated scope of the Standard.

This Standard was reviewed for Canadian adoption by the CSA Subcommittee on Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use, under the jurisdiction of the CSA Technical Committee on Consumer and Commercial Products and the CSA Strategic Steering Committee on Requirements for Electrical Safety, and has been formally approved by the Technical Committee.

This Standard has been developed in compliance with Standards Council of Canada requirements for National Standards of Canada. It has been published as a National Standard of Canada by CSA Group.

Interpretations: The Strategic Steering Committee on Requirements for Electrical Safety has provided the following direction for the interpretations of standards under its jurisdiction: “The literal text shall be used in judging compliance of products with the safety requirements of this Standard. When the literal text cannot be applied to the product, such as for new materials or construction, and when a relevant CSA committee interpretation has not already been published, CSA Group’s procedures for interpretation shall be followed to determine the intended safety principle.”

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- a) Standard designation (number);
- b) relevant clause, table, and/or figure number;
- c) wording of the proposed change; and
- d) rationale for the change.

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SAFETY REQUIREMENTS FOR ELECTRICAL EQUIPMENT FOR MEASUREMENT, CONTROL, AND LABORATORY USE –

Part 2-033: Particular requirements for hand-held multimeters for domestic and professional use, capable of measuring MAINS voltage

1 Scope and object

This clause of Part 1 is applicable except as follows:

1.1.1 Equipment included in scope

Replace the existing text with the following:

This part of IEC 61010 specifies safety requirements for hand-held multimeters for domestic and professional use, capable of measuring MAINS.

Hand-held multimeters are multi-range multifunction measuring instruments intended to measure voltage and other electrical quantities such as resistance or current. Their primary purpose is to measure voltage on a live MAINS. They are suitable to be supported by one hand during NORMAL USE.

1.1.2 Equipment excluded from scope

Add the following new item to the list and the following paragraph:

- aa) IEC 61557-1 to IEC 61557-12, *Electrical safety in low voltage distribution systems up to 1 000 V a.c. and 1 500 V d.c. – Equipment for testing, measuring or monitoring of protective measures*

HAND-HELD EQUIPMENT such as oscilloscopes, wattmeters, process control multimeters not RATED for measuring voltage on a live MAINS, clamp multimeters and communications test sets are not within the scope of this document.

1.2.1 Aspects included in scope

Add the following two new paragraphs at the end of the subclause:

Requirements for protection against HAZARDS resulting from NORMAL USE and REASONABLY FORESEEABLE MISUSE of measuring circuits are given in Clause 101.

Requirements for reliance on the displayed value are given in Clause 102.

2 Normative references

This clause of Part 1 is applicable except as follows:

Replace "IEC 61010-031" with the following new reference:

IEC 61010-031:2015, *Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 031: Safety requirements for hand-held and hand-manipulated probe assemblies for electrical test and measurement*
IEC 61010-031:2015/AMD1:2018