

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures –**

**Part 10: Combined measuring equipment for testing, measuring and monitoring of protective measures**

**Sécurité électrique dans les réseaux de distribution basse tension au plus égale à 1 000 V C.A. et 1 500 V C.C. – Dispositifs de contrôle, de mesure ou de surveillance de mesures de protection –**

**Partie 10: Appareils combinés de contrôle, de mesure et de surveillance de mesures de protection**



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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL SAFETY IN LOW VOLTAGE DISTRIBUTION SYSTEMS UP TO  
1 000 V AC AND 1 500 V DC – EQUIPMENT FOR TESTING, MEASURING OR  
MONITORING OF PROTECTIVE MEASURES –****Part 10: Combined measuring equipment for testing, measuring and  
monitoring of protective measures**

## FOREWORD

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IEC 61557-10 has been prepared by IEC technical committee TC85: Measuring equipment for electrical and electromagnetic quantities. It is an International Standard.

This third edition cancels and replaces the second edition published in 2013. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) The scope has been updated to include the combination of measuring functions covered by the IEC 61557 series with those not covered by the IEC 61557 series.
- b) Reasonably foreseeable misuse is now considered.

- c) An exemption has been added for terminals that can only be accessed by use of a tool.
- d) Table 1 has been updated for clarification.
- e) The voltage source used for the overload test takes into account the expected short-circuit currents for measurement categories in accordance with IEC 61010-2-030:2017.

The text of this International Standard is based on the following documents:

| Draft      | Report on voting |
|------------|------------------|
| 85/887/CDV | 85/914/RVC       |

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at [www.iec.ch/members\\_experts/refdocs](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/publications](http://www.iec.ch/publications).

This International Standard is to be used in conjunction with IEC 61557-1:2019.

A list of all parts of the IEC 61557 series, published under the general title *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under [webstore.iec.ch](http://webstore.iec.ch) in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

# **ELECTRICAL SAFETY IN LOW VOLTAGE DISTRIBUTION SYSTEMS UP TO 1 000 V AC AND 1 500 V DC – EQUIPMENT FOR TESTING, MEASURING OR MONITORING OF PROTECTIVE MEASURES –**

## **Part 10: Combined measuring equipment for testing, measuring and monitoring of protective measures**

### **1 Scope**

This part of IEC 61557 specifies the requirements for measuring equipment that combines several measuring functions or methods of testing, measuring or monitoring, that are in accordance with the respective parts of IEC 61557, into one piece of apparatus.

Measuring equipment which combines measuring functions or methods of testing, measuring or monitoring covered by the respective parts of IEC 61557 with those not covered by the respective parts of IEC 61557 is also within the scope of this document.

### **2 Normative references**

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 61557-1:2019, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 1: General requirements*

IEC 61557-2, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 2: Insulation resistance*

IEC 61557-3, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 3: Loop impedance*

IEC 61557-4, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 4: Resistance of earth connection and equipotential bonding*

IEC 61557-5, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 5: Resistance to earth*

IEC 61557-6, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 6: Effectiveness of residual current devices (RCD) in TT, TN and IT systems*

IEC 61557-7, *Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 7: Phase sequence*