



SLOVENSKI STANDARD SIST EN 61557-10:2002

01-november-2002

9`Y_f] bUj Ufbcghj `b]n_cbUdYrcgh] `fUnXY]b] `g]ghYa] `nU]na Yb] bY`bUdYrcgh] Xc`%_J`]b`Ybcga YfbY`bUdYrcgh]`Xc`%`_J`E`CdfYa UnUdfYg_i yUb`Yza Yf`Yb`YU] bUXncfcj Ub`Y`nUy]]b] `i_fYdcj `E`%\$`XY.`?ca V]b]fUbUa Yf]`bUcdfYa UnU dfYg_i yUb`Yza Yf`Yb`YU]`bUXncfcj Ub`Y`nUy]]b] `i_fYdcj `f`97`*`%`)`+!`%\$.&\$\$\$Ł

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 -- Part 10: Combined measuring equipment for testing, measuring or monitoring of protective measures

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Elektrische Sicherheit in Niederspannungsnetzen bis AC 1000 V und DC 1500 V - Geräte zum Prüfen, Messen oder Überwachen von Schutzmaßnahmen -- Teil 10: Kombinierte Messgeräte zum Prüfen, Messen oder Überwachen von Schutzmaßnahmen
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Sécurité électrique dans les réseaux de distribution basse tension jusqu'à 1 000 V c.a. et 1 500 V d.c. - Dispositifs de contrôle, de mesure ou de surveillance des mesures de protection -- Partie 10: Appareils combinés de contrôle, de mesure ou de surveillance de mesures de protection

Ta slovenski standard je istoveten z: EN 61557-10:2001

ICS:

17.220.20	T`^ b}b`Á `dã}ã` {`æ}^`ç`ã`^ ã`ã`	Measurement of electrical and magnetic quantities
29.240.01	U{` ^0b`Á`á` ^}[`•`Á` ã`ã`d`ã`&`Á `dã}^`Á` ^`*`ã` }ã`][`z][`	Power transmission and distribution networks in general

SIST EN 61557-10:2002 en

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EUROPEAN STANDARD

EN 61557-10

NORME EUROPÉENNE

EUROPÄISCHE NORM

April 2001

ICS 17.220.20;29.080.01;29.240.01

English version

**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
Part 10: Combined measuring equipment for testing, measuring
or monitoring of protective measures
(IEC 61557-10:2000)**

Sécurité électrique dans les réseaux
de distribution basse tension jusqu'à
1 000 V c.a. et 1 500 V d.c. -

Dispositifs de contrôle, de mesure ou de
surveillance des mesures de protection
Partie 10: Appareils combinés de contrôle,
de mesure ou de surveillance de mesures
de protection

(CEI 61557-10:2000)

Elektrische Sicherheit in
Niederspannungsnetzen bis AC 1000 V
und DC 1500 V -

Geräte zum Prüfen, Messen oder
Überwachen von Schutzmaßnahmen
Teil 10: Kombinierte Messgeräte zum
Prüfen, Messen oder Überwachen von
Schutzmaßnahmen

(IEC 61557-10:2000)

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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 85/213/FDIS, future edition 1 of IEC 61557-10, prepared by IEC TC 85, Measuring equipment for electrical and electromagnetic quantities, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61557-10 on 2001-03-01.

This part 10 is to be used in conjunction with EN 61557-1.

The following dates were fixed:

- latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2001-12-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2004-03-01

Endorsement notice

The text of the International Standard IEC 61557-10:2000 was approved by CENELEC as a European Standard without any modification.

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**NORME
INTERNATIONALE
INTERNATIONAL
STANDARD**

**CEI
IEC**

61557-10

Première édition
First edition
2000-12

**Sécurité électrique dans les réseaux de
distribution basse tension jusqu'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
ou de surveillance de mesures de protection**

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**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 –**

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

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Commission Electrotechnique Internationale
International Electrotechnical Commission
Международная Электротехническая Комиссия

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**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 –**

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

FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical specifications, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61557-10 has been prepared by IEC technical committee 85: Measuring equipment for electrical and electromagnetic quantities.

The text of this standard is based on the following documents:

FDIS	Report on voting
85/213/FDIS	85/215/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 3.

This part of IEC 61557 shall be used in conjunction with part 1.

The committee has decided that the contents of this publication will remain unchanged until 2006. At this date, the publication will be

- reconfirmed;
- withdrawn;
- replaced by a revised edition, or
- amended.

**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 –**

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

1 Scope

This part of IEC 61557 specifies the requirements for combined measuring equipment which combines into one piece of apparatus, several measuring functions or methods of testing, measuring or monitoring, some or all of which are covered in parts 2 to 7.

2 Normative references

Clause 2 of parts 1 to 7 of IEC 61557 applies.

3 Definitions

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For the purposes of this part of IEC 61557, the definitions given in parts 1 to 7 of IEC 61557 and the following definitions apply.

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3.1

combined measuring equipment

equipment which combines, into one piece of apparatus, several measuring functions or methods of testing, measuring or monitoring, some or all of which are in accordance with other parts of IEC 61557.

3.2

extraneous overvoltage

voltage applied to the terminals of the combined measuring equipment to test the overvoltage withstand capability

4 Requirements

The requirements specified in the respective parts of the IEC 61557 series and the following requirements shall apply:

4.1 A user shall not be subjected to danger when the highest extraneous overvoltage according to the respective parts of this standard (see table 1) is accidentally applied to each combination of all test/measurement terminals in every possible combination of functions and ranges of a combined measuring equipment, even though some of these functions are not themselves covered by parts 2 to 7.

All other terminals shall be clearly identifiable. Any terminal which can be confused with a test/measurement terminal shall be indicated as such.

Table 1 – Extraneous overvoltage withstand capability

Part of IEC 61557	2	3	4	5	6	7
Extraneous overvoltage and duration time	$1,2 \times U_N$ 10 s	$1,2 \times U_0$ continuous and $1,1 \times$ phase to phase voltage 1 min	$1,2 \times U_0$ continuous	$1,2 \times U_0$ continuous	$1,2 \times U_0$ continuous and $1,1 \times$ phase to phase voltage 1 min	$1,2 \times U_0$ continuous

The duration time shall be the longest possible indicated in the respective parts of IEC 61557.

NOTE U_0 is the voltage against earth (see 3.1.3a of IEC 61557-1).

U_N is the nominal output voltage (see 3.2.1 of IEC 61557-1, and 3.1 of IEC 61557-2).

4.1.1 If parts of the combined measuring equipment are defective after the extraneous overvoltage is applied, the defect shall be clearly indicated. Indications and displayed values shall not lead to unsafe interpretations.

4.1.2 When the extraneous overvoltage is applied, protective devices may be activated. The activation of protective devices in equipment for measuring or testing insulation resistance according to IEC 61557-2 shall be indicated, if the operation of the equipment is impaired.

4.2 When the combined measuring equipment bears one of the following markings, the applied extraneous overvoltage can be reduced to a voltage of $1,1 \times$ phase to phase voltage:

a)

SIST EN 61557-10:2002
 DO NOT USE IN DISTRIBUTION SYSTEMS WITH
 VOLTAGES HIGHER THAN $1,1 \times U_0$

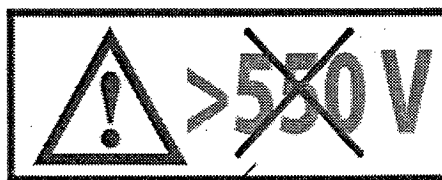
The marking shall be written in the corresponding country language.

The value of the voltage shown on the marking shall be $1,1 \times$ maximum phase to phase voltage.

or

b)

Example of pictogram
for a 500 V AC system



Pictogram and outline contrasting to the background

The value of the voltage shown on the marking shall be $1,1 \times$ maximum phase to phase voltage.