

Electrical safety in low voltage distribution systems up to 1 kV a.c. and 1,5 kV d.c. — Equipment for testing, measuring or monitoring of protective measures —

Part 9: Equipment for insulation fault location in IT systems

The European Standard EN 61557-9:1999 has the status of a British Standard

ICS 17.220.20

National foreword

This British Standard is the official English language version of EN 61557-9:1999. It is identical with IEC 61557-9:1999.

The UK participation in its preparation was entrusted to Technical Committee PEL/85, which has the responsibility to:

- aid enquirers to understand the text;
- present to the responsible international/European committee any enquiries on the interpretation, or proposals for change, and keep the UK interests informed;
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Cross-references

Attention is drawn to the fact that CEN and CENELEC Standards normally include an annex which lists normative references to international publications with their corresponding European publications. The British Standards which implement these international or European publications may be found in the BSI Standards Catalogue under the section entitled “International Standards Correspondence Index”, or by using the “Find” facility of the BSI Standards Electronic Catalogue.

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Summary of pages

This document comprises a front cover, an inside front cover, the EN title page, pages 2 to 14, an inside back cover and a back cover.

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English version

**Electrical safety in low voltage distribution systems
up to 1 kV a.c. and 1,5 kV d.c.
Equipment for testing, measuring or monitoring of protective measures
Part 9: Equipment for insulation fault location in IT systems
(IEC 61557-9:1999)**

Sécurité électrique dans les réseaux de
distribution basse tension de 1 kV c.a.
et 1,5 kV c.c.
Dispositifs de contrôle, de mesure ou de
surveillance de mesures de protection
Partie 9: Dispositifs de location de
défauts d'isolement pour réseaux IT
(CEI 61557-9:1999)

Elektrische Sicherheit in
Niederspannungsnetzen bis AC 1 kV
und DC 1,5 kV
Geräte zum Prüfen, Messen oder
Überwachen von Schutzmaßnahmen
Teil 9: Einrichtungen zur
Isolationsfehlersuche in IT-Systemen
(IEC 61557-9:1999)

This European Standard was approved by CENELEC on 1999-10-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

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.

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CENELEC

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

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Foreword

The text of document 85/203/FDIS, future edition 1 of IEC 61557-9, 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 61557-9 on 1999-10-01.

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) 2000-07-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2002-10-01

This standard is to be used in conjunction with EN 61557-1:1997.

Annexes designated "normative" are part of the body of the standard.
In this standard, annex ZA is normative.
Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61557-9:1999 was approved by CENELEC as a European Standard without any modification.

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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 9: Equipment for insulation fault location in IT systems

1 Scope

This part of IEC 61557 specifies the requirements for insulation fault location systems which localize insulation faults in any part of the system in unearthed IT a.c. systems and unearthed IT a.c. systems with galvanically connected d.c. circuits having nominal voltages up to 1 000 V a.c., as well as in unearthed IT d.c. systems with voltages up to 1 500 V d.c., independent of the measuring principle. This part is to be used in conjunction with IEC 61557-1.

NOTE 1 – IT systems are described in IEC 60364-4-41 amongst other literature. Additional data for a selection of devices in other standards should be noted.

NOTE 2 – Further information on insulation fault location can be found in the following standards: IEC 60364-4-41, subclause 413.1.5.4, and IEC 60364-5-53, subclause 531.3.

NOTE 3 – An insulation fault location system usually consists of several functional modules (see figure 1). All or some of the functional modules may be combined in one device. The functional modules and a short description of their function are mentioned below:

- insulation monitoring device according to IEC 61557-8;
- control device, portable or permanently installed: the control device specifies the sequence of the test procedure and contains logical operations for insulation fault location and for fault alarm;
- test device, portable or permanently installed: the test device contains the test current generator;
- coupling unit, portable or permanently installed: the coupling unit in combination with the test device constitutes the connection to the system to be monitored;
- residual current transformer or current clamp: these are used for the detection of the test current and are connected to an evaluator;
- evaluator, portable or permanently installed: the residual current transformers are connected to the evaluator to detect the test current.

NOTE 4 – Note 3 gives an example of the functional modules in insulation fault location systems. The combination of modules may vary depending on the version (portable or permanently installed).

NOTE 5 – Insulation fault location systems with an independent test current source may also be used for insulation fault location in de-energized systems.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this part of IEC 61557. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this part of IEC 61557 are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies. Members of IEC and ISO maintain registers of currently valid International Standards.