

Mineral oil-filled electrical equipment — Application of dissolved gas analysis (DGA) to factory tests on electrical equipment

ICS 29.040.10; 29.180

National foreword

This British Standard is the UK implementation of EN 61181:2007+A1:2012. It is identical to IEC 61181:2007 incorporating amendment 1:2012. It supersedes BS EN 61181:2007 which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment 1 is indicated by **[A1]** **[A1]**.

The UK participation in its preparation was entrusted to Technical Committee GEL/10, Fluids for electrotechnical applications.

A list of organizations represented on this committee can be obtained on request to its secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2007

© The British Standards Institution 2012. Published by BSI Standards Limited 2012

ISBN 978 0 580 75422 7

Amendments/corrigenda issued since publication

Date	Comments
30 June 2012	Implementation of IEC amendment 1:2012 with CENELEC endorsement A1:2012: Annex ZA updated, Annex ZB inserted.

**Mineral oil-filled electrical equipment -
Application of dissolved gas analysis (DGA)
to factory tests on electrical equipment
(IEC 61181:2007)**

Matériels électriques
imprégnés d'huile minérale -
Application de l'analyse des gaz dissous
(AGD) lors d'essais en usine
de matériels électriques
(CEI 61181:2007)

Getränkte Isolierstoffe -
Verwendung der Gasanalyse
für gelöste Gase (DGA)
als Werksprüfung
für elektrische Betriebsmittel
(IEC 61181:2007)

This European Standard was approved by CENELEC on 2007-03-01. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the 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 10/675/FDIS, future edition 2 of IEC 61181, prepared by IEC TC 10, Fluids for electrotechnical applications, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 61181 on 2007-03-01.

This European Standard supersedes EN 61181:1993.

EN 61181:2007 includes the following significant technical changes with respect to EN 61181:1993:

- the specific procedures used during factory tests (sampling location, sampling frequency, gas extraction and chromatographic analysis in the laboratory) are described in more detail;
- information is provided in Annex A concerning the residual gas contents recommended before thermal tests on power transformers, typical gas values observed during the tests and cases where gas formation during the tests was followed by problems in the transformers;
- typical values observed during chopped lightning-impulse tests on instrument transformers are indicated in Annex B.

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) | 2007-12-01 |
| – latest date by which the national standards conflicting
with the EN have to be withdrawn | (dow) | 2010-03-01 |

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61181:2007 was approved by CENELEC as a European Standard without any modification.

Foreword to amendment A1

The text of document 10/881/FDIS future edition 1 of IEC 61181:2007/A1, prepared by IEC/TC 10 "Fluids for electrotechnical applications" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 61181:2007/A1:2012.

The following dates are fixed:

- latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2012-12-29
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2015-03-29

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CENELEC [and/or CEN] shall not be held responsible for identifying any or all such patent rights.

Endorsement notice

The text of the International Standard IEC 61181:2007/A1:2012 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60475	2011	Method of sampling insulating liquids	EN 60475	2011
IEC 60567	2011	Oil-filled electrical equipment - Sampling of gases and analysis of free and dissolved gases - Guidance	EN 60567	2011