



# SLOVENSKI STANDARD

## SIST EN 60076-6:2008

01-oktober-2008

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SIST EN 60289:1997

SIST EN 60289:1997/A11:2004

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Power transformers - Part 6: Reactors (IEC 60076-6:2007)

Leistungstransformatoren - Teil 6: Drosselspulen (IEC 60076-6:2007)

Transformateurs de puissance - Partie 6: Bobines d'inductance (CEI 60076-6:2007)

Ta slovenski standard je istoveten z: **EN 60076-6:2008**

### ICS:

29.180

Transformatorji. Dušilke

Transformers. Reactors

**SIST EN 60076-6:2008**

**en,fr**

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EUROPEAN STANDARD  
NORME EUROPÉENNE  
EUROPÄISCHE NORM

**EN 60076-6**

July 2008

ICS 29.180

Supersedes EN 60289:1994 + A11:2002

English version

**Power transformers -  
Part 6: Reactors  
(IEC 60076-6:2007)**

Transformateurs de puissance -  
Partie 6: Bobines d'inductance  
(CEI 60076-6:2007)

Leistungstransformatoren -  
Teil 6: Drosselspulen  
(IEC 60076-6:2007)

This European Standard was approved by CENELEC on 2008-06-01. 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 14/538/CDV, future edition 1 of IEC 60076-6, prepared by IEC TC 14, Power transformers, was submitted to the IEC-CENELEC Parallel Unique Acceptance Procedure and was approved by CENELEC as EN 60076-6 on 2008-06-01.

This European Standard supersedes EN 60289:1994 + A11:2002.

EN 60076-6:2008 includes the following significant technical changes with respect to EN 60289:1994:

- wide extension of the “Definitions”, “Rating” and “Tests” clauses,
- more consequent distinction between definition and rating,
- “Tests” subclauses take into account the latest revisions of relevant EN 60076 standards,
- dielectric testing of reactors is now in line with dielectric testing of transformer according to EN 60076-3:2001,
- consequent distinction between oil-immersed and dry-type reactor,
- document offers an easier handling and is a more stand-alone document than EN 60289,
- introduction of the discharge reactor as part of Clause 9,
- introduction of the turn-to-turn overvoltage test for dry-type reactors (Annex E),
- important background information given by newly introduced informative annexes,
  - Annex A (informative) – Information on shunt reactor switching and on special applications
  - Annex B (informative) – Magnetic characteristic of reactors
  - Annex C (informative) – Mutual reactance, coupling factor and equivalent reactances of three-phase reactors
  - Annex D (informative) – Temperature correction of losses for liquid-immersed gapped-core and magnetically shielded air-core reactors
  - Annex F (informative) – Short-circuit testing
  - Annex G (informative) – Resistors – Characteristics, specification and tests.

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) 2009-03-01
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2011-06-01

Annex ZA has been added by CENELEC.

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### Endorsement notice

The text of the International Standard IEC 60076-6:2007 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following notes have to be added for the standards indicated:

|               |  |
|---------------|--|
| IEC 60143     | NOTE Harmonized in EN 60143 series (not modified).   |
| IEC 60168     | NOTE Harmonized as EN 60168:1994 (not modified) + A1:1997 (not modified) + A2:2000 (not modified). |
| IEC 60273     | NOTE Harmonized as HD 578 S1:1992 (not modified).  |
| IEC 60529     | NOTE Harmonized as EN 60529:1991 (not modified).   |
| IEC 60871-1   | NOTE Harmonized as EN 60871-1:2005 (not modified).   |
| IEC 61378-1   | NOTE Harmonized as EN 61378-1:1998 (not modified).   |
| IEC 61378-2   | NOTE Harmonized as EN 61378-2:2001 (not modified).   |
| IEC 62271-110 | NOTE Harmonized as EN 62271-110:2005 (not modified).   |

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## Annex ZA (normative)

### Normative references to international publications with their corresponding European publications

The following referenced documents are indispensable for the application 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.

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 60060-1<br>+ corr. March    | 1989<br>1990    | High-voltage test techniques -<br>Part 1: General definitions and test<br>requirements   | HD 588.1 S1                        | 1991                         |
| IEC 60076-1 (mod)<br>A1         | 1993<br>1999    | Power transformers -<br>Part 1: General  | EN 60076-1<br>A1<br>+ A11<br>+ A12 | 1997<br>2000<br>1997<br>2002 |
| IEC 60076-2 (mod)               | 1993            | Power transformers -<br>Part 2: Temperature rise   | EN 60076-2                         | 1997                         |
| IEC 60076-3<br>+ corr. December | 2000<br>2000    | Power transformers -<br>Part 3: Insulation levels, dielectric tests and<br>external clearances in air                                    | EN 60076-3                         | 2001                         |
| IEC 60076-4                     | 2002            | Power transformers -<br>Part 4: Guide to the lightning impulse and<br>switching impulse testing - Power<br>transformers and reactors     | EN 60076-4                         | 2002                         |
| IEC 60076-5                     | 2006            | Power transformers -<br>Part 5: Ability to withstand short circuit   | EN 60076-5                         | 2006                         |
| IEC 60076-7                     | 2005            | Power transformers -<br>Part 7: Loading guide for oil-immersed power<br>transformers   | -                                  | -                            |
| IEC 60076-8                     | 1997            | Power transformers -<br>Part 8: Application guide  | -                                  | -                            |
| IEC 60076-10                    | 2001            | Power transformers -<br>Part 10: Determination of sound levels   | EN 60076-10                        | 2001                         |
| IEC 60076-11                    | 2004            | Power transformers -<br>Part 11: Dry-type transformers   | EN 60076-11                        | 2004                         |
| IEC 60137                       | - <sup>1)</sup> | Insulated bushings for alternating voltages<br>above 1 000 V   | EN 60137                           | 2003 <sup>2)</sup>           |
| IEC 60270                       | - <sup>1)</sup> | High-voltage test techniques - Partial<br>discharge measurements   | EN 60270                           | 2001 <sup>2)</sup>           |
| IEC 60721-2-6                   | - <sup>1)</sup> | Classification of environmental conditions -<br>Part 2: Environmental conditions appearing in<br>nature - Earthquake vibration and shock | HD 478.2.6 S1                      | 1993 <sup>2)</sup>           |
| IEC/TR 60815                    | - <sup>1)</sup> | Guide for the selection of insulators in<br>respect of polluted conditions   | -                                  | -                            |

<sup>1)</sup> Undated reference.

<sup>2)</sup> Valid edition at date of issue.

| <u>Publication</u> | <u>Year</u> | <u>Title</u>  | <u>EN/HD</u> | <u>Year</u> |
|--------------------|-------------|---|--------------|-------------|
| IEC 60905          | 1987        | Loading guide for dry-type power transformers   | -            | -           |
| IEC/TR3 60943      | 1998        | Guidance concerning the permissible temperature rise for parts of electrical equipment, in particular for terminals | -            | -           |

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IEC 60076-6

Edition 1.0 2007-12

# INTERNATIONAL STANDARD

# NORME INTERNATIONALE

**Power transformers –  
Part 6: Reactors**

**STANDARD PREVIEW**  
**(standards.iteh.ai)**

**Transformateurs de puissance –  
Partie 6: Bobines d'inductance**

**SIST EN 60076-6:2008**

<https://standards.iteh.ai/catalog/standards/sist/5470dcac-ddcd-405f-a172-e10d7b528c96/sist-en-60076-6-2008>

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PRICE CODE  
CODE PRIX

**XF**

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