



**SLOVENSKI STANDARD**  
**SIST EN IEC 60076-22-2:2019**

**01-november-2019**

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**Hladilna oprema za močnostne transformatorje in dušilke – 22-2. del: Odstranljivi radiatorji**

Power transformer and reactor cooling equipment - Part 22-2: Removable radiators

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**Ta slovenski standard je istoveten z: EN IEC 60076-22-2:2019**

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29.180

Transformatorji. Dušilke

Transformers. Reactors

**SIST EN IEC 60076-22-2:2019**

**en**

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EUROPEAN STANDARD

**EN 60076-22-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2019

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English Version

**Power transformer and reactor cooling equipment - Part 22-2:  
Removable radiators  
(IEC 60076-22-2:2019)**

Transformateurs de puissance - Partie 22-2: Accessoires  
pour transformateurs de puissance et bobines d'inductance  
- Radiateurs détachables  
(IEC 60076-22-2:2019)

Leistungstransformatoren und Drosselspulen  
Kühlungseinrichtung - Teil 22-2: Abnehmbare Kühler  
(IEC 60076-22-2:2019)

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

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

**EN 60076-22-2:2019 (E)****European foreword**

The text of document 14/895/CDV, future edition 1 of IEC 60076-22-2, prepared by IEC/TC 14 "Power transformers" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60076-22-2:2019.

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) 2019-12-28
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2022-06-28

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In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 60076-6                      NOTE                      Harmonized as EN 60076-6

## Annex ZA (normative)

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

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.

NOTE 1 Where an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: [www.cenelec.eu](http://www.cenelec.eu).

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60076-1	-	Power transformers - Part 1: General	EN 60076-1	-
IEC 60076-7	-	Power transformers -- Part 7: Loading guide for oil-immersed power transformers	-	-
IEC 60296	-	Fluids for electrotechnical applications - Unused mineral insulating oils for transformers and switchgear	EN 60296	-
ISO 4406	-	Hydraulic fluid power - Fluids - Method for coding the level of contamination by solid particles	-	-
ISO 12944 series	-	Paints and varnishes - Corrosion protection of steel structures by protective paint systems - Part 1: General introduction	EN ISO 12944 series	series

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IEC 60076-22-2

Edition 1.0 2019-01

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Power transformers –**  
**Part 22-2: Power transformer and reactor fittings – Removable radiators**

**Transformateurs de puissance –**  
**Partie 22-2: Accessoires pour transformateurs de puissance et bobines**  
**d'inductance – Radiateurs détachables**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## POWER TRANSFORMERS –

Part 22-2: Power transformer and reactor fittings –  
Removable radiators

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International Standard IEC 60076-22-2 has been prepared by IEC technical committee 14: Power transformers.

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

CDV	Report on voting
14/895/CDV	14/917A/RVC

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

This document has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts in the IEC 60076 series, published under the general title *Power transformers*, 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 "<http://webstore.iec.ch>" in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
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## INTRODUCTION

Under the part title “Power transformer and reactor fittings” this part of IEC 60076-22 covers the removable radiators used in the cooling circuits of power transformers and reactors.

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## POWER TRANSFORMERS –

### Part 22-2: Power transformer and reactor fittings – Removable radiators

#### 1 Scope

This part of IEC 60076 applies to radiators mounted on liquid immersed power transformers according to IEC 60076-1 and reactors according to IEC 60076-6 with and without conservator for indoor or outdoor installation. It outlines the service conditions and the mechanical and electrical requirements that are common to this equipment.

It also outlines the operation requirements specific to this equipment as well as the preferred dimensions relevant for interchangeability and the type and routine tests to be performed.

#### 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.

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IEC 60076-1, *Power transformers – Part 1: General*

[SIST EN IEC 60076-22-2:2019](https://standards.iteh.ai/catalog/standards/sist/en-iec-60076-22-2-2019)

IEC 60076-7, *Power transformers – Part 7: Loading guide for oil-immersed power transformers*

<https://standards.iteh.ai/catalog/standards/sist/en-iec-60076-22-2-2019>

68820a778746/sist-en-iec-60076-22-2-2019

IEC 60296, *Fluids for electrotechnical applications – Unused mineral insulating oils for transformers and switchgear*

ISO 4406, *Hydraulic fluid power – Fluids – Method for coding the level of contamination by solid particles*

ISO 12944 (all parts), *Paints and varnishes – Corrosion protection of steel structures by protective paint systems*

#### 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>

##### 3.1

##### **removable radiator**

component through which the transformer insulating liquid circulates and is cooled

Note 1 to entry: The component is removable from the transformer for shipment and maintenance purposes.