
**Energijski izkoristek velikih transformatorjev ($U_m > 36$ kV ali $S_r \geq 40$ MVA) -
Dopolnilo A2**

Energy performance of large power transformers ($U_m > 36$ kV or $S_r \geq 40$ MVA)

Energiekennwerte von Großleistungstransformatoren ($U_m > 36$ kV oder $S_r \geq 40$ MVA)

Performance énergétique des transformateurs de grande puissance ($U_m > 36$ kV ou $S_r = 40$ MVA)

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Ta slovenski standard je istoveten z: EN 50629:2015/A2:2018

SIST EN 50629:2015/A2:2018
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ICS:

27.015	Energijska učinkovitost. Ohranjanje energije na splošno	Energy efficiency. Energy conservation in general
29.180	Transformatorji. Dušilke	Transformers. Reactors

SIST EN 50629:2015/A2:2018

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European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
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European foreword

This document (EN 50629:2015/A2:2018) has been prepared by CLC/TC 14 "Power transformers".

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2017-11-13
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2020-11-13

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This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports requirements of Commission Regulation (EU).

For the relationship with Commission Regulation (EU) see informative Annex ZZ, which is an integral part of EN 50629:2015.

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EN 50629:2015/A2:2018**1 Modification to Clause 3, Terms and definitions**

Replace definition 3.7 with the following new terms:

**"3.7
declared values**

**3.7.1
declared value of loss**

loss measured by the manufacturer and written in the test report and on the rating plate

Note 1 to entry: This definition applies both to no load loss and to load loss.

Note 2 to entry: Declared values and guaranteed values according to EN 60076-1 are two different concepts. Guaranteed values are related to contract, whereas declared values are related to compliance verifications with COMMISSION REGULATION (EU) No 548/2014.

**3.7.2
declared value of electrical power required by the cooling system for no load operation**

electrical power required by fan and liquid pump motors for no load operation as derived from the test certificates.

Note 1 to entry: The electrical power required by the cooling system for no load operation is not measured all the times, because this is a type test according to EN 60076-1.

**3.7.3
declared value of PEI**

PEI calculated from the declared values of no load loss, load loss and power required by the cooling system for no load operation according to the definitions 3.6 and 3.7 and to the formula in 4.3."

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2 Modification to 5.1, Standardised values of Minimum PEI

Before Note 1, add the following new paragraph:

"In case all windings have the same powers ($x=y=z$) the manufacturer shall prove the compliance to PEI requirement in at least one load combination."

3 Modification to 5.5.2, Verification procedure for market surveillance

Before the sentence "This procedure is detailed in Annex F.", add the following new paragraph:

"In case the value determined by the marked surveillance authority exceeds the declared value by more than 5%, a second and more accurate measurement shall be taken.

For the second measurement, the measurement uncertainty applicable to the market surveillance authority shall be:

- The expanded uncertainty, as defined in EN 60076-19 and referring to a coverage factor $k = 3$ (i.e. to a confidence level of about 99,9 % assuming a normal distribution).
- The measurement uncertainty defined in this way, expressed, as a relative value shall not exceed 5%.

The above requires that the standard deviation shall be less than or equal to 1,667% (5%/3) for the measurement uncertainties due to the devices and process in order that the market surveillance authority are capable making a valid measurement."