**IS 2026 (Part 10):2024**

***भारतीय मानक Indian Standard***

**IEC 60076-10: 2016**

**पावर ट्रांसफार्मर**

**भाग 10 ध्वनि स्तर का निर्धारण**

(*पहला* पुनरीक्षण)

Power Transformers

Part 10 Determination of Sound Levels

(*First Revision*)

ICS 29.180

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BUREAU OF INDIAN STANDARDS

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**November 2024 Price Group X**

Transformer Sectional Committee, ETD16

NATIONAL FOREWORD

This Indian Standard (Part 10) (First Revision) which is identical with IEC 60076-10: 2016 “Power transformers-Part 10: Determination of sound levels” issued by the International Electrotechnical Commission (IEC) was adopted by the Bureau of Indian Standards on the recommendation of the ETD 16-Transformer Sectional Committee.

This standard was first published in 2009. This revision has been undertaken to align with the latest version of IEC 60076-10: 2016.

This standard is published in various parts. Other parts in this series are:

|  |  |
| --- | --- |
| Part 1 | General |
| Part 2 | Temperature - Rise |
| Part 3 | Insulation levels, dielectric tests and external clearances in air |
| Part 4 | terminal markings, tappings and connections |
| Part 5 | Ability to with stand short circuit |
| Part 6 | Reactors |
| Part 7 | Loading guide for oil - Immersed power transformers |
| Part 8 | Application guide |
| Part 10 | Determination of sound levels |
| Part 10 Sec 1 | Determination of Sound Levels Section 1 Application guide |
| Part 11 | Dry-Type Transformers |
| Part 12 | Loading guide for dry - Type power transformers |
| Part 14 | Liquid - Immersed power transformers using high - Temperature insulation materials |
| Part 15 | Gas - Filled power transformers |
| Part 16 | Transformers for wind turbine applications |
| Part 18 | Measurement of frequency response |
| Part 19 | Rules for the Determination of Uncertainties in the Measurement of the Losses on Power Transformers and Reactors |
| Part 21 | Standard requirements, terminology and test code for step - Voltage regulators |

The text of IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

1. Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
2. Comma (,) has been used as a decimal marker, while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this standard, reference appears to International Standards for which Indian Standards also exists. The corresponding Indian Standards, which are to be substituted, are listed below along with their degree of equivalence for the editions indicated:

|  |  |  |
| --- | --- | --- |
| *International Standard* | *Corresponding Indian Standard* | *Degree of Equivalence* |
| IEC 60076-8:1997, Power transformers– Part8 Application guide | IS 2026 (Part 8): 2009, Power transformers Part 8 application guide | Identical |
| IEC 61672-1: 2013, Electroacoustics - Sound level meters –Part 1: Specifications | IS 15575 (Part 1) 2016/ IEC 61672-1: 2013 Electroacoustics-Sound level meters Part 1 Specifications  (*first revision*) | Identical |
| IEC 61672-2: 2013, Electro acoustics– Sound level meters–Part 2: Pattern Evaluation tests | IS 15575 (Part 2):2023/ IEC 61672-2: 2013 + AMD 1: 2017 Electro acoustics- Sound level meters Part 2 Pattern evaluation tests (*second revision*) | Identical |

The technical committee has reviewed the provisions of the following international standards referred in this adopted standard and decided that they are acceptable for use in conjunction with this standard.

|  |  |
| --- | --- |
| *International Standard* | *Title* |
| *IEC 60076-1:2011* | *Power Transformers-Part 1: General* |
| *IEC 61043:1993* | *Electro acoustics–Instruments for the measurement of sound intensity – Measurements with pairs of pressure sensing*  *microphones.* |
| *ISO3382-2:2008* | *Acoustics–Measurement of room acoustic par ammeters–Part2:*  *Reverberation time in ordinary rooms.* |
| *ISO3746:2010* | *Acoustics – Determination of sound power levels and sound energy levels of noises sources causing sound pressure–Survey*  *Method using an enveloping measurement surface over a reflecting plane.* |
| *ISO9614-1:1993* | *Acoustics –Determination of sound power levels of noise sources using sound intensity–Part1: Measurement at discrete points.* |
| *ISO 9614-2:1996* | *Acoustics– Determination of sound power levels of noise sources using sound intensity – Part 2: Measurement by scanning.* |

Only the English language text has been retained while adopting it in this Indian Standard, and as such, the page numbers given here are not the same as in the IEC Publication.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated expressing the result to a test, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding of numerical values (*second revision*)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.