SVENSK STANDARD SS-EN IEC 60051-6

Fastställd	Utgåva	Sida	Ansvarig kommitté
2018-05-16	2	1 (1+16)	SEK TK 85

Elektriska mätinstrument – Direktvisande analoga elektriska mätinstrument och tillbehör – Del 6: Särskilda fordringar på ohmmetrar (impedansmetrar) och konduktansmetrar

Direct acting indicating analogue electrical measuring instruments and their accessories – Part 6: Special requirements for ohmmeters (impedance meters) and conductance meters

Som svensk standard gäller europastandarden EN IEC 60051-6:2018. Den svenska standarden innehåller den officiella engelska språkversionen av EN IEC 60051-6:2018.

Nationellt förord

Europastandarden EN IEC 60051-6:2018

består av:

– **europastandardens ikraftsättningsdokument,** utarbetat inom CENELEC
– **IEC 60051-6, Fifth edition, 2017 - Direct acting indicating analogue electrical measuring instruments and their accessories - Part 6: Special requirements for ohmmeters (impedance meters) and conductance meters**

utarbetad inom International Electrotechnical Commission, IEC.

EN från CENELEC som är identiska med motsvarande IEC-standarder och som görs tillgängliga för nationalkommittéerna efter den 1 januari 2018 får en beteckning som inleds med EN IEC istället för som tidigare bara EN.

Standarden ska användas tillsammans med SS-EN 60051-1, utgåva 2, 2017.

Tidigare fastställd svensk standard SS-EN 60051-6, utgåva 1, 1999, gäller ej fr o m 2021-01-19.

ICS 17.220.20

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1284, 164 29 KISTA
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Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

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Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

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Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

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EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN IEC 60051-6

March 2018

ICS 17.220.20

Supersedes EN 60051-6:1989

English Version

Direct acting indicating analogue electrical measuring instruments and their accessories - Part 6: Special requirements for ohmmeters (impedance meters) and conductance meters (IEC 60051-6:2017)

Appareils mesureurs électriques indicateurs analogiques à action directe et leurs accessoires - Partie 6: Exigences particulières pour les ohmmètres (les impédancemètres) et les conductancemètres
(IEC 60051-6:2017)

Direkt wirkende anzeigende elektrische Meßgeräte und ihr Zubehör - Meßgeräte mit Skalenanzeige - Teil 6: Spezielle Anforderungen für Widerstands- (Scheinwiderstands-) und Leitfähigkeits-Meßgeräte
(IEC 60051-6:2017)

This European Standard was approved by CENELEC on 2018-01-19. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

Ref. No. EN IEC 60051-6:2018 E

SEK Svensk Elstandard

European foreword

The text of document 85/559/CDV, future edition 5 of IEC 60051-6, prepared by IEC/TC 85 "Measuring equipment for electrical and electromagnetic quantities" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 60051-6:2018.

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)	2018-10-19
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2021-01-19

This document supersedes EN 60051-6:1989.

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

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

For the relationship with EU Directives see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 60051-6:2017 was approved by CENELEC as a European Standard without any modification.

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

IEC 60051-9[1]	NOTE	Harmonized as EN 60051-9[2].

[1] To be published. Stage at the time of publication: IEC CDV 60051-9:2018.
[2] To be published. Stage at the time of publication: prEN 60051-9:2018.

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.

Publication	Year	Title	EN/HD	Year
IEC 60051-1	2016	Direct acting indicating analogue electrical measuring instruments and their accessories – Part1: Definitions and general requirements common to all parts	EN 60051-1	2017

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

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DIRECT ACTING INDICATING ANALOGUE ELECTRICAL MEASURING INSTRUMENTS AND THEIR ACCESSORIES –

Part 6: Special requirements for ohmmeters (impedance meters) and conductance meters

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
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International Standard IEC 60051-6 has been prepared by IEC technical committee 85: Measuring equipment for electrical and electromagnetic quantities.

This fifth edition cancels and replaces the fourth edition published in 1984. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

a) updating of content in line with new editions of IEC 60051-1 and IEC 60051-9;
b) addition of Annex A to specify the nonconformity classification of test items.

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

CDV	Report on voting
85/559/CDV	85/582A/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 International Standard is to be used in conjunction with IEC 60051-1:2016.

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

A list of all parts in the IEC 60051 series, published under the general title *Direct acting indicating analogue electrical measuring instruments and their accessories*, 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
- amended.

INTRODUCTION

IEC 60051 is published in separate parts according to the following structure and under the general title *Direct acting indicating analogue electrical measuring instruments and their accessories*.

Part 1: Definitions and general requirements common to all parts

Part 2: Special requirements for ammeters and voltmeters

Part 3: Special requirements for wattmeters and varmeters

Part 4: Special requirements for frequency meters

Part 5: Special requirements for phase meters, power factor meters and synchroscopes

Part 6: Special requirements for ohmmeters (impedance meters) and conductance meters

Part 7: Special requirements for multi-function instruments

Part 8: Special requirements for accessories

Part 9: Recommended test methods

IEC 60051-6 is not complete in itself and is read in conjunction with IEC 60051-1.

All of these parts are arranged in the same format and a standard relationship between subject and clause number is maintained throughout these parts. This arrangement will assist the reader of IEC 60051 to distinguish information relating to the different types of instruments.

DIRECT ACTING INDICATING ANALOGUE ELECTRICAL MEASURING INSTRUMENTS AND THEIR ACCESSORIES –

Part 6: Special requirements for ohmmeters (impedance meters) and conductance meters

1 Scope

This part of IEC 60051 applies to direct acting indicating analogue electrical measuring ohmmeters (impedance meters) and conductance meters.

This document also applies to some non-interchangeable accessories of ohmmeters (impedance meters) and conductance meters.

This document also applies to a direct acting indicating electrical measuring instrument whose scale marks do not correspond directly to its electrical input quantity, provided that the relationship between them is known.

This document also applies to electronic devices of ohmmeters (impedance meters) and conductance meters in their measuring and/or auxiliary circuits.

This document does not apply to insulation ohmmeters, grounding ohmmeters and external commercial power ohmmeters (impedance meters) and conductance meters.

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.

IEC 60051-1:2016, *Direct acting indicating analogue electrical measuring instruments and their accessories – Part1: Definitions and general requirements common to all parts*