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## Mätande reläer och skyddsutrustningar – Del 151: Funktionsfordringar på över- och underströmsskydd

*Measuring relays and protection equipment –  
Part 151: Functional requirements for over/under current protection*

Som svensk standard gäller europastandarden EN 60255-151:2009. Den svenska standarden innehåller den officiella engelska språkversionen av EN 60255-151:2009.

### Nationellt förord

Europastandarden EN 60255-151:2009

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 60255-151, First edition, 2009 - Measuring relays and protection equipment - Part 151: Functional requirements for over/under current protection**

utarbetad inom International Electrotechnical Commission, IEC.

Tidigare fastställd svensk standard SS-EN 60255-3, utgåva 1, 1998, gäller ej fr o m 2012-09-01.

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Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

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

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

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English version

**Measuring relays and protection equipment -  
Part 151: Functional requirements  
for over/under current protection  
(IEC 60255-151:2009)**

Relais de mesure  
et dispositifs de protection -  
Partie 151: Exigences fonctionnelles  
pour les protections à maximum  
et minimum de courant  
(CEI 60255-151:2009)

Messrelais und Schutzrichtungen -  
Teil 151: Funktionsanforderungen  
für Über-/Unterstromschutz  
(IEC 60255-151:2009)

This European Standard was approved by CENELEC on 2009-09-01. 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: Avenue Marnix 17, B - 1000 Brussels**

## Foreword

The text of document 95/255/FDIS, future edition 1 of IEC 60255-151, prepared by IEC TC 95, Measuring relays and protection equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60255-151 on 2009-09-01.

This European Standard supersedes EN 60255-3:1998 + corrigendum January 1998.

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) 2010-06-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2012-09-01

Annex ZA has been added by CENELEC.

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## Endorsement notice

The text of the International Standard IEC 60255-151:2009 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 60044	NOTE	Harmonized in EN 60044 series (partially modified).
IEC 60255-8	NOTE	Harmonized as EN 60255-8:1998 (modified).
IEC 61850	NOTE	Harmonized in EN 61850 series (not modified).
IEC 61850-7-4	NOTE	Harmonized as EN 61850-7-4:2003 (not modified).

**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 60050-447	200X <sup>1)</sup>	International Electrotechnical Vocabulary - Part 447: Measuring relays	-	-
IEC 60255-1	- <sup>2)</sup>	Measuring relays and protection equipment - Part 1: Common requirements	EN 60255-1	200X <sup>3)</sup>

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<sup>1)</sup> To be published.

<sup>2)</sup> Undated reference.

<sup>3)</sup> To be ratified.

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# MEASURING RELAYS AND PROTECTION EQUIPMENT –

## Part 151: Functional requirements for over/under current protection

### 1 Scope and object

This part of IEC 60255 specifies minimum requirements for over/under current relays. This standard includes a specification of the protection function, measurement characteristics and time delay characteristics.

This part of IEC 60255 defines the influencing factors that affect the accuracy under steady state conditions and performance characteristics during dynamic conditions. The test methodologies for verifying performance characteristics and accuracy are also included in this standard.

The over/under current functions covered by this standard are the following:

	IEEE/ANSI C37.2 Function Numbers	IEC 61850-7-4 Logical nodes
Instantaneous phase overcurrent protection	50	PIOC
Time delayed phase overcurrent protection	51	PTOC
Instantaneous earth fault protection	50N/50G	PIOC
Time delayed earth fault protection	51N/51G	PTOC
Negative sequence overcurrent or current unbalance protection	46	PTOC
Phase undercurrent protection	37	PTUC
Voltage-dependent overcurrent protection	51V	PVOC

This standard excludes thermal electrical relays as specified in IEC 60255-8. General requirements for measuring relays and protection equipment are specified in IEC 60255-1.

### 2 Normative references

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.

IEC 60050-447, *International Electrotechnical Vocabulary – Part 447: Measuring relays*

IEC 60255-1, *Measuring relays and protection equipment – Part 1: Common requirements*

