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Irish Standard
I.S. EN 60255-149:2013

Measuring relays and protection equipment -- Part 149: Functional requirements for thermal electrical relays (IEC 60255-149:2013 (EQV))

I.S. EN 60255-149:2013

Incorporating amendments/corrigenda issued since publication:

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**Measuring relays and protection equipment -
Part 149: Functional requirements for thermal electrical relays
(IEC 60255-149:2013)**

Relais de mesure et dispositifs de
protection -
Partie 149: Exigences fonctionnelles pour
les relais électriques thermiques
(CEI 60255-149:2013)

Messrelais und Schutzeinrichtungen -
Teil 149: Funktionsanforderungen an den
thermischen Überlastschutz
(IEC 60255-149:2013)

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 95/313/FDIS, future edition 1 of IEC 60255-149, prepared by IEC/TC 95 "Measuring relays and protection equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60255-149:2013.

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) 2014-06-03
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2016-09-03

This document supersedes EN 60255-8:1998.

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Endorsement notice

The text of the International Standard IEC 60255-149:2013 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 60034-11	NOTE Harmonized as EN 60034-11.
IEC 60947-4-1	NOTE Harmonized as EN 60947-4-1.
IEC 60947-4-2	NOTE Harmonized as EN 60947-4-2.
IEC 61850-9-2	NOTE Harmonized as EN 61850-9-2.

Annex ZA

(normative)

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

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. 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	Series	International Electrotechnical Vocabulary (IEV)	-	-
IEC 60085	2007	Electrical insulation - Thermal evaluation and designation	EN 60085	2008
IEC 60255-1	-	Measuring relays and protection equipment - Part 1: Common requirements	EN 60255-1	-
IEC 61850-7-4	-	Communication networks and systems for power utility automation - Part 7-4: Basic communication structure - Compatible logical node classes and data object classes	EN 61850-7-4	-

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CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 Terms and definitions	7
4 Specification of the function.....	8
4.1 General	8
4.2 Input energizing quantities/energizing quantities	9
4.3 Binary input signals	9
4.4 Functional logic	10
4.4.1 Equivalent heating current	10
4.4.2 Basic (setting) and operating current values for thermal protection	10
4.4.3 Thermal level calculation	11
4.4.4 Time-current limit characteristic equations and curves	12
4.4.5 Thermal level alarm threshold	14
4.5 Binary output signals	15
4.5.1 General	15
4.5.2 Operate (trip) output signal	15
4.5.3 Alarm signal	15
4.5.4 Other binary output signals	15
4.6 Additional influencing factors on thermal protection	16
4.6.1 General	16
4.6.2 Influence of ambient temperature on thermal protection	16
4.6.3 Thermal reset facilities	16
4.7 Behaviour of thermal protective device during auxiliary power supply failure	17
5 Performance specification	17
5.1 Accuracy related to the characteristic quantity	17
5.2 Accuracy related to the operate time	17
5.3 Performance during frequency variations	18
6 Functional test methodology	18
6.1 General	18
6.2 Determination of steady-state errors related to the operating current value	19
6.3 Determination of steady-state errors related to the characteristic quantity and the operate time	19
6.3.1 Accuracy determination of the cold curve	19
6.3.2 Accuracy determination of the hot curves	20
6.4 Performance with specific cooling thermal time constant	21
6.5 Performance with harmonics	22
6.6 Performance during frequency variations	22
6.7 Performance during different ambient temperatures	23
7 Documentation requirements	24
7.1 Type test report	24
7.2 Other user documentation	24
Annex A (informative) Simple first-order thermal model of electrical equipment.....	26
Annex B (informative) Thermal electrical relays which use temperature as setting parameters	41
Bibliography.....	46

Figure 1 – Simplified thermal protection function block diagram	9
Figure 2 – Typical examples of characteristic curves for cold state of a first-order thermal system with no previous load before overload occurs	13
Figure 3 – Typical examples of characteristic curves for hot states of a first-order thermal system for different values of previous load before overload occurs	14
Figure A.1 – An electrical equipment to be thermally protected represented as a simple first-order thermal system	26
Figure A.2 – Equivalence between a first-order thermal system and an electric parallel RC circuit.....	30
Figure A.3 – Analogue thermal circuit representation of a simple first-order thermal system	31
Figure A.4 – Analogue thermal circuit representation of a simple first-order thermal system – motor starting condition.....	31
Figure A.5 – Analogue thermal circuit representation of a simple first-order thermal system – motor stopped condition	31
Figure A.6 – Dynamic step response of a simple first-order thermal system algorithm to a current below pickup	33
Figure A.7 – Dynamic step response of a first-order thermal system (cold initial state)	34
Figure A.8 – Dynamic step response of a first-order thermal system (hot initial state)	34
Figure A.9 – Dynamic step response of a first-order thermal system to a load current followed by an overload current (initial state: cold).....	35
Figure A.10 – Dynamic step response of a first-order thermal system to a load current followed by an overload current (initial state: hot)	35
Table 1 – Limiting error as multiples of assigned error	18
Table 2 – Test points of the cold curve	20
Table 3 – Test points of the hot curve	21
Table 4 – Test points of the cold curve with harmonics	22
Table 5 – Test points of the cold curve during frequency variations	22
Table A.1 – Thermal and electrical models.....	30
Table A.2 – Thermal insulation classes and maximum temperatures, according to IEC 60085.....	40
Table A.3 – Example of correction factor values (F_a) for class F equipment according to the ambient temperature (T_a).....	40

INTERNATIONAL ELECTROTECHNICAL COMMISSION

MEASURING RELAYS AND PROTECTION EQUIPMENT –**Part 149: Functional requirements for thermal electrical relays**

FOREWORD

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International Standard IEC 60255-149 has been prepared by IEC technical committee 95: Measuring relays and protection equipment.

This first edition cancels and replaces IEC 60255-8, published in 1990.

The text of this standard is based on the following documents:

FDIS	Report on voting
95/313/FDIS	95/317/RVD

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

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

A list of all parts of IEC 60255 series, under the general title *Measuring relays and protection equipment*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "<http://webstore.iec.ch>" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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MEASURING RELAYS AND PROTECTION EQUIPMENT –

Part 149: Functional requirements for thermal electrical relays

1 Scope

This part of the IEC 60255 series specifies minimum requirements for thermal protection relays. This standard includes specification of the protection function, measurement characteristics and test methodologies.

The object of this standard is to establish a common and reproducible reference for evaluating dependent time relays which protect equipment from thermal damage by measuring a.c. current flowing through the equipment. Complementary input energizing quantities such as ambient, coolant, top oil and winding temperature may be applicable for the thermal protection specification set forth in this standard. This standard covers protection relays based on a thermal model with memory function.

The test methodologies for verifying performance characteristics of the thermal protection function and accuracy are also included in this Standard.

This standard does not intend to cover the thermal overload protection trip classes indicated in IEC 60947-4-1 and IEC 60947-4-2, related to electromechanical and electronic protection devices for low voltage motor-starters.

The thermal protection functions covered by this standard are as follows:

Protection function	IEC 61850-7-4	IEEE C37.2
Thermal overload protection	PTTR	49
Rotor thermal overload protection	PROL	49R
Stator thermal overload protection	PSOL	49S

General requirements for measuring relays and protection equipment are specified in IEC 60255-1.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

IEC 60050 (all parts), *International Electrotechnical Vocabulary* (available at <http://www.electropedia.org>)

IEC 60085, *Electrical insulation – Thermal evaluation and designation*

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

IEC 61850-7-4, *Communication networks and systems for power utility automation – Part 7-4: Basic communication structure – Compatible logical node classes and data classes*

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