

STN	Výbušné atmosféry Časť 30-2: Elektrické odporové sprievodné ohrevy Návod na postup pri navrhovaní, inštalácii a údržbe	STN EN 60079-30-2 33 2320
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Explosive atmospheres - Part 30-2: Electrical resistance trace heating - Application guide for design, installation and maintenance

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/18

Obsahuje: EN 60079-30-2:2017, IEC/IEEE 60079-30-2:2015

Oznámením tejto normy sa od 03.04.2020 ruší
STN EN 60079-30-2 (33 2320) z februára 2008

125859

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2018
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

EN 60079-30-2

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 2017

ICS 29.260.20

Supersedes EN 60079-30-2:2007

English Version

Explosive atmospheres -
Part 30-2: Electrical resistance trace heating - Application guide
for design, installation and maintenance
(IEC/IEEE 60079-30-2:2015 , modified)

Atmosphères explosives - Partie 30-2: Traçage par
résistance électrique - Guide d'application pour la
conception, l'installation et la maintenance
(IEC/IEEE 60079-30-2:2015 , modifiée)

Explosionsgefährdeter Bereiche - Teil 30-2: Elektrische
Widerstands-Begleitheizungen - Anwendungsleitfaden für
Entwurf, Installation und Instandhaltung
(IEC/IEEE 60079-30-2:2015 , modifiziert)

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Europäisches Komitee für Elektrotechnische Normung

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

European foreword

This document (EN 60079-30-2:2017) consists of the text of IEC/IEEE 60079-30-2:2015 prepared by IEC/TC 31 "Equipment for explosive atmospheres" in collaboration with IEEE Standards Association (IEEE-SA), together with the common modifications prepared by CLC/TC 31 "Electrical apparatus for potentially explosive atmospheres".

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) 2018-04-03
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2020-04-03

This document supersedes EN 60079-30-2:2007

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Endorsement notice

The text of the International Standard IEC/IEEE 60079-30-2:2015 was approved by CENELEC as a European Standard with agreed common modifications.

COMMON MODIFICATIONS

NOTE The Division method of area classification of IEC/IEEE 60079-30-2:2015 is not applicable for a European Standard, because a correlation with the Equipment Categories according to the European Directive 2014/34/EU is not possible. Consequently requirements for Divisions 1 and 2 and references to NFPA 70 and CSA C22.1 are excluded from this standard.

1 Scope

Delete the following sentence in the first paragraph:

"This standard also provides guidance for explosive atmospheres incorporating the Division method of area classification that may be applied by some users of this standard."

Delete the note:

"NOTE Information on the Division method is given in NFPA 70 and CSA C22.1."

4.1 General

Delete the following part of the second sentence in the second paragraph:

"..., and/or the Division 1 and Division 2 explosive atmospheres, ...".

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 1 When 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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60050-426	-	International Electrotechnical Vocabulary - Part 426: Equipment for explosive atmospheres	-	-
IEC 60079-0	-	Explosive atmospheres - Part 0: Equipment - General requirements	EN 60079-0	-
IEC 60079-15	-	Explosive atmospheres - Part 15: Equipment protection by type of protection "n"	EN 60079-15	-
IEC/IEEE 60079-30-1	-	Explosive atmospheres - Part 30-1: Electrical resistance trace heating - General and testing requirements	EN 60079-30-1	-

Bibliography

Add the following notes for the standards indicated:

IEC 60079-14	NOTE	Harmonized as EN 60079-14.
IEC 60079-17	NOTE	Harmonized as EN 60079-17.
IEC 60079-7	NOTE	Harmonized as EN 60079-7.
IEC 60364-1	NOTE	Harmonized as HD 60364-1.



IEC/IEEE 60079-30-2

Edition 1.0 2015-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Explosive atmospheres –
Part 30-2: Electrical resistance trace heating – Application guide for design,
installation and maintenance**

**Atmosphères explosives –
Partie 30-2: Traçage par résistance électrique – Guide d'application pour la
conception, l'installation et la maintenance**



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IEC/IEEE 60079-30-2

Edition 1.0 2015-09

INTERNATIONAL STANDARD

NORME INTERNATIONALE



**Explosive atmospheres –
Part 30-2: Electrical resistance trace heating – Application guide for design,
installation and maintenance**

**Atmosphères explosives –
Partie 30-2: Traçage par résistance électrique – Guide d'application pour la
conception, l'installation et la maintenance**

INTERNATIONAL
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INTERNATIONALE

ICS 29.260.20

ISBN 978-2-8322-5200-0

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EXPLOSIVE ATMOSPHERES –**Part 30-2: Electrical resistance trace heating –
Application guide for design, installation and maintenance**

FOREWORD

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International Standard IEC/IEEE 60079-30-2 has been prepared by IEC technical committee 31: Equipment for explosive atmospheres, in cooperation with the Petroleum & Chemical Industry Committee of the IEEE Industrial Applications Society under the IEC/IEEE Dual Logo Agreement.

NOTE A list of IEEE participants can be found at the following URL:

http://standards.ieee.org/downloads/60079/60079-30-2-2015/60079-30-2-2015_wg-participants.pdf.

This first edition of IEC/IEEE 60079-30-2 cancels and replaces the first edition of IEC 60079-30-2 published in 2007 and constitutes a technical revision.

This edition includes the following significant changes, apart from a general review and updating of the first edition of IEC 60079-30-2, harmonization with IEEE Std 515, with respect to the previous edition:

- the relocation of trace heater product design methodology and requirements to IEC/IEEE 60079-30-1;
- the relocation and/or duplication of information on installation, maintenance, and repair to the MTs under SC31J for their addition into IEC 60079-14, IEC 60079-17, and IEC 60079-19;
- the inclusion of more detailed information on safety showers and eyewash units;
- the introduction of Annexes from IEEE Std 515.

The significance of changes between IEC 60079-30-2, Edition 1.0 (2007) and IEC/IEEE 60079-30-2, Edition 1.0 (2014) is as listed below:

Changes	Clause	Type		
		Minor and editorial changes	Extension	Major technical changes
Addition of clarification for the exclusion of areas coverage classifications of EPLs Ga and Da	1	X		
Addition of requirements for the Division method of area classification that may be applied by some users	1			C1
Relocation of heat loss design requirements to IEC/IEEE 60079-30-1	6.3	X		
Addition of safety shower and eyewash station design requirements	6.16			C2
Addition of Annex for an example of a design data record	Annex A	X		
Addition of Annex for a checklist of installation requirements	Annex B	X		
Addition of Annex for an example of a trace heater commissioning record	Annex C	X		
Addition of Annex for an example of a maintenance schedule and log record	Annex D	X		
Addition of Annex for pipe heat loss considerations	Annex E	X		
Addition of Annex for vessel heat loss considerations	Annex F	X		
Addition of Annex for heat up and cool down considerations	Annex G	X		
Addition of Annex for a method to determine the equivalent thickness of insulating cements	Annex H	X		

NOTE The technical changes referred to include the significance of technical changes in the revised IEC Standard, but they do not form an exhaustive list of all modifications from the previous version.

Explanations:**A) Definitions****Minor and editorial changes**

clarification
 decrease of technical requirements
 minor technical change
 editorial corrections

These are changes which modify requirements in an editorial or a minor technical way. They include changes of the wording to clarify technical requirements without any technical change, or a reduction in level of existing requirement.

Extension

addition of technical options

These are changes which add new or modify existing technical requirements, in a way that new options are given, but without increasing requirements for equipment that was fully compliant with the previous standard. Therefore, these will not have to be considered for products in conformity with the preceding edition.

Major technical changes

addition of technical requirements
 increase of technical requirements

These are changes to technical requirements (addition, increase of the level or removal) made in a way that a product in conformity with the preceding edition will not always be able to fulfil the requirements given in the later edition. These changes have to be considered for products in conformity with the preceding edition. For these changes additional information is provided in clause B) below.

NOTE These changes represent current technological knowledge. However, these changes should not normally have an influence on equipment already placed on the market.

B) Information about the background of 'Major Technical Changes'

C1 – The requirements for the Division method of area classification are applicable only for users of this standard intending qualification for these areas.

C2 – The design requirements for safety showers and eyewash units have been included for harmonization and for added safety.

This bilingual version (2017-12) corresponds to the monolingual English version, published in 2015-09.

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

FDIS	Report on voting
31/1190/FDIS	31/1199/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.

The French version of this standard has not been voted upon.

International standards are drafted in accordance with the ISO/IEC Directives, Part 2.

This standard is intended to be used in conjunction with IEC/IEEE 60079-30-1:2014, *Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements*.

A list of all parts of IEC 60079 series, under the general title *Explosive atmospheres*, can be found on the IEC website.

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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EXPLOSIVE ATMOSPHERES –

Part 30-2: Electrical resistance trace heating – Application guide for design, installation and maintenance

1 Scope

This part of IEC 60079 provides guidance for the application of electrical resistance trace heating systems in areas where explosive atmospheres may be present, with the exclusion of those classified as requiring EPL Ga/Da (traditional relationship to Zone 0 and Zone 20 respectively). This standard also provides guidance for explosive atmospheres incorporating the Division method of area classification that may be applied by some users of this standard.

NOTE Information on the Division method is given in NFPA 70 and CSA C22.1.

It provides recommendations for the design, installation, maintenance and repair of trace heating systems including associated control and monitoring equipment. It does not cover devices that operate by induction heating, skin effect heating or direct pipeline heating, nor those intended for stress relieving.

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 60050-426, *International Electrotechnical Vocabulary – Part 426: Equipment for explosive atmospheres*

IEC 60079-0, *Explosive atmospheres – Part 0: Equipment – General requirements*

IEC 60079-15, *Explosive atmospheres – Part 15: Equipment protection by type of protection “n”*

IEC/IEEE 60079-30-1, *Explosive atmospheres – Part 30-1: Electrical resistance trace heating – General and testing requirements*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN