

SLOVENSKI STANDARD

SIST-TS CLC IEC/TS 60079-47:2021

01-december-2021

Eksplzivne atmosfere - 47. del: Zaščita opreme z lastnovarnim dvožičnim konceptom Ethernet (2-WISE)

Explosive atmospheres - Part 47: Equipment protection by 2-wire intrinsically safe Ethernet concept (2-WISE)

Explosionsgefährdete Bereiche - Teil 47: Geräteschutz durch eigensicheres 2-Draht-Ethernet-Konzept (2-WISE)

Atmosphères explosives - Partie 47: Protection du matériel par le concept Ethernet de sécurité intrinsèque à 2 fils (2-WISE)

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Ta slovenski standard je istoveten z: CLC IEC/TS 60079-47:2021

ICS:

29.260.20

Električni aparati za
eksplozivna ozračja

Electrical apparatus for
explosive atmospheres

SIST-TS CLC IEC/TS 60079-47:2021

en,fr,de

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TECHNICAL SPECIFICATION
SPÉCIFICATION TECHNIQUE
TECHNISCHE SPEZIFIKATION

CLC IEC/TS 60079-47

July 2021

ICS 29.260.20

English Version

**Explosive atmospheres - Part 47: Equipment protection by 2-wire intrinsically safe Ethernet concept (2-WISE)
(IEC/TS 60079-47:2021)**

Atmosphères explosives - Partie 47: Protection du matériel
par le concept Ethernet de sécurité intrinsèque à 2 fils (2-
WISE)
(IEC/TS 60079-47:2021)

Explosionsgefährdete Bereiche - Teil 47: Geräteschutz
durch eigensicheres 2-Draht-Ethernet-Konzept (2-WISE)
(IEC/TS 60079-47:2021)

This Technical Specification was approved by CENELEC on 2021-07-05.

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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

European foreword

This document (CLC IEC/TS 60079-47:2021) consists of the text of IEC/TS 60079-47:2021 prepared by IEC/TC 31 "Equipment for explosive atmospheres".

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.

Any feedback and questions on this document should be directed to the users' national committee. A complete listing of these bodies can be found on the CENELEC website.

Endorsement notice

The text of the International Technical Specification IEC/TS 60079-47:2021 was approved by CENELEC as a European Technical Specification without any modification.

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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.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60079-0	-	Explosive atmospheres - Part 0: Equipment - General requirements	EN IEC 60079-0	-
IEC 60079-11	-	Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"	EN 60079-11	-
IEC 60079-14	-	Explosive atmospheres - Part 14: Electrical installations design, selection and erection	EN 60079-14	-
IEC 60079-25	-	Explosive atmospheres - Part 25: Intrinsically safe electrical systems	EN 60079-25	-

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IEC TS 60079-47

Edition 1.0 2021-02

TECHNICAL SPECIFICATION

**Explosive atmospheres –
Part 47: Equipment protection by 2-wire intrinsically safe Ethernet concept
(2-WISE)**

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INTERNATIONAL
ELECTROTECHNICAL
COMMISSION

ICS 29.260.20

ISBN 978-2-8322-9317-1

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

EXPLOSIVE ATMOSPHERES –

**Part 47: Equipment protection by 2-wire intrinsically
safe Ethernet concept (2-WISE)**

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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- the required support cannot be obtained for the publication of an International Standard, despite repeated efforts, or
- the subject is still under technical development or where, for any other reason, there is the future but no immediate possibility of an agreement on an International Standard.

Technical specifications are subject to review within three years of publication to decide whether they can be transformed into International Standards.

IEC TS 60079-47, which is a technical specification, has been prepared by subcommittee 31G: Intrinsically safe apparatus, of IEC technical committee 31: Equipment for explosive atmospheres.

The text of this technical specification is based on the following documents:

Enquiry draft	Report on voting
31G/323/DTS	31G/334/RVC

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

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

A list of all parts in the IEC 60079 series, published under the general title *Explosive atmospheres*, 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.

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EXPLOSIVE ATMOSPHERES –

Part 47: Equipment protection by 2-wire intrinsically safe Ethernet concept (2-WISE)

1 Scope

This part of IEC 60079, which is a technical specification, specifies requirements for the construction, marking and documenting of apparatus, systems and installations for use with the 2-Wire Intrinsically Safe Ethernet concept (2-WISE), such as the physical layer specification for 2-Wire Ethernet 10BASE-T1L as defined in IEEE 802.3cg.

2-WISE is a concept for an advanced physical layer (APL), designed to simplify the examination process for intrinsic safety parameters of components and cabling within APL segments. This is achieved by defining universal intrinsic safety parameter limits for APL ports, according to the specific hazardous area requirements and listing a concise set of rules for the segment setup.

The requirements for construction and installation of 2-WISE devices and systems are included in IEC 60079-11, IEC 60079-14, and IEC 60079-25, except as modified by this document. Parts of a 2-WISE device can be protected by any Type of Protection listed in IEC 60079-0 appropriate to the EPL for the intended hazardous area. In these circumstances, the requirements of this technical specification apply only to intrinsically safe circuits of the apparatus.

Where a requirement of this document conflicts with a requirement of IEC 60079-0, IEC 60079-11, IEC 60079-14 or IEC 60079-25, the requirements of this document take precedence.

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

IEC 60079-11, *Explosive atmospheres - Part 11: Equipment protection by intrinsic safety "i"*

IEC 60079-14, *Explosive atmospheres - Part 14: Electrical installations design, selection and erection*

IEC 60079-25, *Explosive atmospheres - Part 25: Intrinsically safe electrical systems*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 60079-0, IEC 60079-11, IEC 60079-14, IEC 60079-25 and the following apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <http://www.iso.org/obp>