IEC 60079-28

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INTERNATIONAL STANDARD

NORME INTERNATIONALE

Explosive atmospheres -
Part 28: Protection of equipment and transmission systems using optical radiation

Atmosphères explosives -
Partie 28: Protection du matériel et des systèmes de transmission utilisant le rayonnement optique

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IEC Secretariat
3, rue de Varembé
CH-1211 Geneva 20
Switzerland

Tel.: +41 22 919 02 11
info@iec.ch
www.iec.ch

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

Explosive atmospheres - Part 28: Protection of equipment and transmission systems using optical radiation

FOREWORD

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IEC 60079-28 has been prepared by IEC technical committee 31 Equipment for explosive atmospheres. It is an International Standard.

This International Standard is to be used in conjunction with IEC 60079-0.

Users of this document are advised that interpretation sheets clarifying the interpretation of this document can be published. Interpretation sheets are available from the IEC webstore and can be found in the "history" tab of the page for each document.

This third edition cancels and replaces the second edition published in 2015. This edition constitutes a technical revision.

The significance of the changes between the current edition of IEC 60079-28 (Edition 3) and IEC 60079-28 (Edition 2) is as listed below:

Significance of changes with respect to IEC 60079-28:2015

		Type		
Significant Changes	**Clause**	**Minor and editorial changes**	**Extension**	**Major technical changes**
Ignition test is removed	Clause 6; Annex A (of Ed.2)			C1
Clarification of the applicability of IEC 60079-28 for laser equipment, optical fibre equipment and any optical system that converts light into convergent beams with focal points within the hazardous area only.	1	X		
Change title from "Radiation inside enclosures" to "Radiation entering or leaving enclosures" and text reworded	4.3.3	X		
The structure of this document was modified; new clause "Type verifications and tests" added	5	X		
New subclause "Optical detector"	5.1		X	
The possibility to do calculations for the assessment of optical power is clarified	5.2		X	
Additional examples for the marking are added.	6		X	
Annex C removed	Annex C (of Ed.2)	X		

NOTE 1 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. More guidance can be found by referring to the Redline Version of the standard.

Explanation of the types of significant changes:

a) Definitions

1) 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.

2) 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.

3) 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 2 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 changes

C1 The alternative option of an ignition test is removed because questions have been raised regarding the repeatability of the verification test across test labs. Additionally, it was identified that an application of a safety factor is not sufficiently defined and not possible to apply for real test samples.

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

Draft	Report on voting
31/1887/FDIS	31/1933/RVD

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.

The language used for the development of this International Standard is English.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/publications.

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 webstore.iec.ch in the data related to the specific document. At this date, the document will be

– reconfirmed,
– withdrawn, or
– revised.