

**BUREAU OF INDIAN STANDARDS**

**DRAFT FOR COMMENTS ONLY**

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*Draft Indian Standard*

**Explosive atmospheres– Part 11: Equipment protection by intrinsic safety  
"i"**

**(Second Revision of IS/IEC 60079-11: 2011)**

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Electrical Apparatus for Explosive Atmosphere  
Sectional Committee, ETD 22

Last date of receipt of  
comments: **01 Mar 2024**

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**NATIONAL FOREWORD**

This Indian Standard which is identical with IEC 60079-11 “Explosive atmospheres– Part 11: Equipment protection by intrinsic safety "i" issued by the International Electrotechnical Commission (IEC) will be adopted by the Bureau of Indian Standards on the recommendation of the Electrical Apparatus for Explosive Atmosphere Sectional Committee.

This revision has been undertaken to align with the latest version of IEC 60079-11:2023 (Ed. 7.0).

The text of IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain terminologies and conventions are, however, not identical to those used in Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
- b) Comma (,) has been used as a decimal marker, while in Indian Standards the current practice is to use a point (.) as the decimal marker.

In this standard, reference appears to International Standards for which Indian Standards also exists. The corresponding Indian Standards, which are to be substituted, are listed below along with their degree of equivalence for the editions indicated:

<i>International Standard</i>	<i>Corresponding Indian Standard</i>	<i>Degree of Equivalence</i>
IEC 60079-0:2017, Explosive atmospheres – Part 0: Equipment – General requirements	IS/IEC 60079-0 : 2017, Explosive Atmospheres Part 0 Equipment — General Requirements (Third Revision)	Identical

IEC 60079-7, Explosive atmospheres – Part 7: Equipment protection by increased safety "e"	IS/IEC 60079 : PART 7: 2017 ( <i>Second Revision</i> )	Identical
IEC 60079-25, Explosive atmospheres – Part 25: Intrinsically safe electrical systems	IS/IEC 60079-25 : 2020 ( <i>Second Revision</i> )	Identical
IEC 60085, Electrical insulation – Thermal evaluation and designation	IS 1271 : 2012 Electrical insulation - Thermal evaluation and designation ( <i>Second Revision</i> )	Identical with IEC IEC 60085 : 2007
IEC 60112, Method for the determination of the proof and the comparative tracking indices of solid insulating materials	IS 2824 : 2007 Method for the determination of the proof and the comparative tracking indices of solid insulating materials ( <i>Second Revision</i> )	Identical with IEC 60112 : 2003
IEC 60127 (all parts), Miniature fuses	IS/IEC 60127 (parts)	Identical with IEC 60127
IEC 60317-0-1, Specifications for particular types of winding wires – Part 0-1: General requirements – Enamelled round copper wire	IS 13730 (Part 0/Sec 1): 2018 Specifications for particular types of winding wires: Part 0 general requirements: Sec 1 enamelled round copper wire ( <i>Second Revision</i> )	Identical with IEC 60317-0-1 : 2013
IEC 60529, Degrees of protection provided by enclosures (IP Code)	IS/IEC 60529: 2001, Degrees of protection provided by enclosures (IP Code)	Identical
IEC 60664-1, Insulation coordination for equipment within low-voltage supply systems – Part 1: Principles, requirements and tests	IS 15382 (Part 1): 2022 Insulation coordination for equipment within low - Voltage systems: Part 1 principles, requirements and tests	Identical with IEC 60664-1 : 2020

IEC 60664-3, Insulation coordination for equipment within low-voltage systems – Part 3: Use of coating, potting or moulding for protection against pollution	IS 15382 (Part 3) : 2019 Insulation coordination for equipment within low-voltage systems : Part 3 use of coating potting or moulding for protection against pollution	Identical with IEC 60664-3 : 2016
IEC 60691, Thermal-links – Requirements and application guide	IS/IEC 60691 : 2018 Thermal Links- Requirements and Application Guide (First Revision)	Identical
IEC 60851-5, Winding wires – Test methods – Part 5: Electrical properties	IS 13778 (Part 5) : 2012 Winding wires - Test methods: Part 5 electrical properties (First Revision)	Identical with IEC 60851-5 : 2008
IEC 61010-1, Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements	IS/IEC 61010-1 : 2010 Safety requirements for electrical equipment for measurement, control, and laboratory use Part 1 General requirements	Identical
IEC 61810-1, Electromechanical elementary relays – Part 1: General and safety requirements	IS 17064 (Part 1) : 2018 Electromechanical elementary relays: Part 1 general and safety requirements	Identical with IEC 61810-1 : 2015
IEC 62133-2, Secondary cells and batteries containing alkaline or other non-acid electrolytes – Safety requirements for portable sealed secondary cells, and for batteries made from them, for use in portable applications – Part 2: Lithium systems	IS 16046 (Part 2) : 2018 Secondary Cells and Batteries Containing Alkaline or Other Non-Acid Electrolytes “ Safety Requirements for Portable Sealed Secondary Cells and for Batteries Made from Them for Use in Portable Applications Part 2 Lithium Systems ( Second Revision )	Identical with IEC 62133-2 : 2017

The technical committee has reviewed the provisions of the following international standards referred in this adopted standard and decided that they are acceptable for use in conjunction with this standard.

<i>International Standard</i>	<i>Title</i>
<i>IEC 60747-5-5</i>	<i>Semiconductor devices – Part 5-5: Optoelectronic devices – Photocouplers</i>
<i>IEC 60747-17</i>	<i>Semiconductor devices – Part 17: Magnetic and capacitive</i>

	<i>coupler for basic and reinforced insulation</i>
<i>IEC 61158-2</i>	<i>Industrial communication networks – Fieldbus specifications – Part 2: Physical layer specification and service definition</i>
<i>ANSI/UL 248 series</i>	<i>Low-Voltage Fuses</i>
<i>ANSI/UL 746E</i>	<i>Polymeric Materials – Industrial Laminates, Filament Wound Tubing, Vulcanized Fibre, and Materials Used In Printed Wiring Boards</i>
<i>UL 810A</i>	<i>Standard for Electrochemical Capacitors</i>
<i>DIN VDE V 0884-11</i>	<i>Semiconductor devices – Part 11: Magnetic and capacitive coupler for basic and reinforced isolation</i>

Only the English language text has been retained while adopting it in this Indian Standard, and as such, the page numbers given here are not the same as in the IEC Publication.

For the purpose of deciding whether a particular requirement of this standard is complied with the final value, observed or calculated expressing the result of a test or analysis shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding of numerical values (Second Revision)’. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

Note: The technical content of the document is not available on website. For details, please refer the corresponding of IEC 60079-11:2023 (Ed. 7.0) or kindly contact:

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