

**BUREAU OF INDIAN STANDARDS**  
**DRAFT FOR COMMENTS ONLY**

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*Draft Indian Standard*

**Electrical Safety in Low Voltage Distribution Systems up to 1 000 V AC and 1 500 V DC –  
Equipment for Testing, Measuring or Monitoring of Protective Measures – Part 9:  
Equipment for Insulation Fault Location in IT Systems**

(ICS 25.040.40)

Measuring Equipment for Basic Electrical  
Quantities Sectional Committee, ETD 12

Last date for Comments - 20/04/2024

NATIONAL FOREWORD

(Formal clauses will be added later)

This draft Indian Standard which is identical with IEC 61557-9:2023 ‘Electrical safety in low voltage distribution systems up to 1 000 V A.C. and 1 500 V D.C. – Equipment for testing, measuring or monitoring of protective measures – Part 9: Equipment for insulation fault location in IT systems’ issued by the International Electro technical Commission (IEC) is proposed to be adopted by the Bureau of Indian Standards on the recommendation of the Measuring Equipment for Basic Electrical Quantities Sectional Committee and approval of the Electro technical Division Council.

The text of the IEC Standard has been approved as suitable for publication as an Indian Standard without deviations. Certain 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 adopted standard, reference appears to the following International Standards for which Indian Standards also exist. The corresponding Indian Standards, and documents under print which are to be substituted in their places, 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 60068-2-1:2007, Environmental testing – Part 2-1: Tests – Test A: Cold	IS/IEC 60068-2-1 : 2007 Environmental Testing Part 2 Tests Section 1 Test A: Cold	Identical
IEC 60068-2-2:2007, Environmental testing – Part 2-2: Tests – Test B: Dry heat	IS/IEC 60068-2-2 : 2007 Environmental Testing Part 2: Tests - Test B Section 2: Dry Heat	Identical

IEC 60068-2-6, Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal)	IS/IEC 60068-2-6 : 2007 Environmental Testing Part 2 Tests Section 6 Test Fc: Vibration sinusoidal	Identical with IEC 60068-2-6 : 2007
IEC 60068-2-27: 2008, Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock	IS 9000 (Part 7/Sec 1): 2018 Basic environmental testing procedures for electronic and electrical items: Part 7 impact test: Sec 1 shock (Test Ea) ( <i>Second Revision</i> )	Identical with IEC 60068-2-27: 2008
IEC 60364-7-710:2021, Low-voltage electrical installations – Part 7-710: Requirements for special installations or locations – Medical locations	IS 17512 : 2021 Requirements for Electrical Installations in Medical Locations	Technically Equivalent
IEC 60529, Degree of protection provided by enclosures (IP Code)	IS/IEC 60529 : 2001 Degrees of protection provided by enclosures (IP Code)	Identical with IEC 60529 : 2001
IEC 60721-3-1:2018, Classification of environmental conditions – Part 3-1: Classification of groups of environmental parameters and their severities – Storage	IS/IEC 60721-3-1 : 2018 Classification of Environmental Conditions Part 3 Classification of groups of environmental parameters and their severities Section 1 Storage	Identical
IEC 60721-3-2:2018, Classification of environmental conditions – Part 3-2: Classification of groups of environmental parameters and their severities – Transportation and handling	IS/IEC 60721-3-2 : 2018 Classification of Environmental Conditions Part 3 Classification of groups of environmental parameters and their severities Section 1 Transportation and Handling	Identical
IEC 60721-3-3:2019, Classification of environmental conditions – Part 3-3: Classification of groups of environmental parameters and their severities – Stationary use at weather protected locations	IS/IEC 60721-3-3 : 2019 Classification of Environmental Conditions Part 3 Classification of groups of environmental parameters and their severities Section 3 Stationary use at weather protected locations	Identical
IEC 60947-5-1:2016, Low-voltage switchgear and controlgear – Part 5-1: Control circuit devices and switching elements – Electromechanical control circuit devices	IS/IEC 60947-5-1 : 2009, Low - Voltage switchgear and controlgear: Part 5 control circuit devices and switching elements: Sec 1 electromechanical control circuit devices ( <i>First Revision</i> )	Identical
IEC 61010-1:2010, Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 1: General requirements IEC 61010-1:2010/AMD1:2016	IS/IEC 61010-1 : 2010 Safety requirements for electrical equipment for measurement, control, and laboratory use Part 1 General requirements	Identical

IEC 61140, Protection against electric shock – Common aspects for installation and equipment	IS 9409 : 2023, Protection Against Electric Shock - Common Aspects for Installation and Equipment ( <i>First Revision</i> )	Identical with IEC 61140 : 2016
IEC 61326-1:2020, Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements	IS 17784 (Part 1) : 2023, Electrical Equipment for Measurement, Control and Laboratory Use — EMC Requirements Part 1 General Requirements	Identical with IEC 61326-1:2020
IEC 61557-1:2019, Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 1: General requirements	IS/IEC 61557-1 : 2019 Electrical safety in low voltage distribution systems up to 1000 V AC and 1500 V DC - equipment for testing measuring or monitoring of protective measures: part 1 general requirements	Identical
IEC 61810-2:2017, Electromechanical elementary relays – Part 2: Reliability	IS 17064 (Part 2) : 2019 Electromechanical elementary relays: Part 2 reliability	Identical

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>
IEC 60947-5-4:2002 IEC 60947-5-4:2002/AMD1:2019	Low-voltage switchgear and controlgear – Part 5-4: Control circuit devices and switching elements – Method of assessing the performance of low-energy contacts – Special tests
IEC 61010-2-030,	Safety requirements for electrical equipment for measurement, control, and laboratory use –Part 2-030: Particular requirements for testing and measuring circuits
IEC 61010-031,	Safety requirements for electrical equipment for measurement, control and laboratory use – Part 031: Safety requirements for hand-held probe assemblies for measurement and test
IEC 61010-2-032,	Safety requirements for electrical equipment for measurement, control, and laboratory use – Part 2-032: Particular requirements for hand-held and hand-manipulated current sensors for electrical test and measurement
IEC 61326-2-2,	Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 2-2: Particular requirements – Test configurations, operational conditions and performance criteria for portable test, measuring and monitoring equipment used in low voltage distribution systems
IEC 61326-2-4,	Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 2-4: Particular requirements – Test configurations, operational conditions and performance criteria for insulation monitoring devices according to IEC 61557-8 and for equipment for insulation fault location according to IEC 61557-9

IEC 61557-8:2014	Electrical safety in low voltage distribution systems up to 1 000 V AC and 1 500 V DC – Equipment for testing, measuring or monitoring of protective measures – Part 8: Insulation monitoring devices for IT systems
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Only 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 International Standard.

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, shall be rounded off in accordance with IS 2: 2022 ‘Rules for rounding off 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 IEC 61557-9: 2023 or kindly contact:

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