**IS/IEC 61557-9: 2023**

***भारतीय मानक***

***Indian Standards***

1 000 वोल्ट ए.सी. और 1 500 वोल्ट डी.सी. तक कम वोल्टेज वितरण प्रणालियों में विद्युत सुरक्षा-

सुरक्षात्मक उपायों के परीक्षण, माप या निगरानी के लिए उपकरण विद्युत आपूर्ति प्रणालियों में विद्युत गुणवत्ता मापन-

भाग 9 आईटी सिस्टम में इन्सुलेशन दोष स्थान के लिए उपकरण

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

ICS 25.040.40

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भारतीय मानक ब्यूरो

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**August 2024 Price Group**

 Measuring Equipment for Basic Electrical Quantities Sectional Committee, ETD 12

NATIONAL FOREWORD

This Indian Standard (Part 9) 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) was 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:

1. Wherever the words ‘International Standard’ appear referring to this standard, they should be read as ‘Indian Standard’.
2. 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:

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| *International Standard* | *Corresponding Indian Standard* | *Degree of Equivalence* |
| 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 |
| IEC 60068-2-27: 2008, Environmental testing – Part 2-27: Tests – Test Ea and guidance: Shock | IS 9000 (Part 7/Sec 1) : 2018/ IEC 60068-2-27: 2008 Basic environmental testing procedures for electronic and electrical items: Part 7 impact test: Sec 1 shock (Test Ea) (*Second Revision*) | Identical |
| 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 | Modified/Technically Equivalent |
| IEC 60529, Degree of protection provided by enclosures (IP Code) | IS/IEC 60529 : 2001Degrees of protection provided by enclosures (IP Code) | Identical |
| 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 : 2018Classification 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 : 2018Classification 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 : 2019Classification 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 : 2016, Low-Voltage Switchgear and Controlgear Part 5 Control Circuit Devices and Switching Elements Section 1 Electromechanical Control Circuit Devices ( *Second Revision* ) | 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 17724 (Part 1) : 2023Safety Requirements for Electrical Equipment for Measurement, Control, and Laboratory Use Part 1 General Requirements  | Modified/Technically Equivalent |
| IEC 61140, Protection against electric shock – Common aspects for installation and equipment | IS 9409 : 2023/ IEC 61140 : 2016, Protection Against Electric Shock - Common Aspects for Installation and Equipment (*First Revision*) | Identical |
| IEC 61326-1:2020, Electrical equipment for measurement, control and laboratory use – EMC requirements – Part 1: General requirements | IS 17784 (Part 1) : 2023 / IEC 61326-1:2020, Electrical Equipment for Measurement, Control and Laboratory Use — EMC Requirements Part 1 General Requirements | Identical  |
| 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 : 2019Electrical 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/ IEC 61810-2 : 2017Electromechanical 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:

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| *International Standard* | *Title* |
| IEC 60947-5-4:2002IEC 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 |

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.