(PREVIEW)

Indian Standard

DEGREES OF PROTECTION PROVIDED BY ENCLOSURES (IP CODE)

1 Scope and object

This standard Applies to the classification of degrees of protection provided by enclosures for electrical equipment with a rated voltage not exceeding 72,5 kV.

The object of this standard is to give:

a) Definitions for degrees of protection provided by enclosures of electrical equipment as regards:

1) protection of persons against access to hazardous parts inside the enclosure;
2) protection of the equipment inside the enclosure against ingress of solid foreign objects;
3) protection of the equipment inside the enclosure against harmful effects due to the ingress of water.

b) *Designations* for these degrees of protection.
c) Requirements for each designation.
d) Tests to be performed to verify that the enclosure meets the requirements of this standard.

It will remain the responsibility of individual technical committees to decide on the extent and manner in which, the classification is used in their standards and to define "enclosure" as it applies to their equipment. However, it is recommended that for a given classification the tests do not differ from those specified in this standard. If necessary, complementary requirements may be included in the relevant product standard. A guide for the details to be specified in relevant product standards is given in annex B.

For a particular type of equipment, a technical committee may specify different requirements provided that at least the same level of safety is ensured.

This standard deals only with enclosures that are in all other respects suitable for their intended use as specified in the relevant product standard and which from the point of view of materials and workmanship ensure that the claimed degrees of protection are maintained under the normal conditions of use.

This standard is also applicable to empty enclosures provided that the general test requirements are met and that the selected degree of protection is suitable for the type of equipment to be protected.

Measures to protect both the enclosure and the equipment inside the enclosure against external influences or conditions such as

- mechanical impacts
- corrosion ,
- corrosive solvents (for example, cutting liquids)
- fungus
- vermin
- solar radiation
- icing

- moisture (for example, produced by. condensation)
- explosive atmospheres

and the protection against contact with hazardous moving parts external to the enclosure (such as fans), are matters for .the relevant product standard to be protected.

Barriers external to the enclosure and not attached to it and obstacles which have been provided solely for the safety of personnel are not considered as a part of the enclosure and are not dealt with in this standard.

2 Normative references

The following normative documents contain provisions which, through reference in this text, constitute provisions of this International Standard. For dated references, subsequent amendments to, or revisions of, any of these publications do not apply. However, parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the normative documents indicated below. For undated references, the latest edition of the normative document referred to applies Members of IEC and ISO maintain registers of currently valid International Standards.

IEC 60050-195: 1998, *International Electrotechnical Vocabulary (IEV) - Part* 195: *Earthing and protection against electric shock*

IEC 60050(826):1982, *International Electrotecnnical Vocabulary (IEV) - Chapter* 826: *Electrical installations of buildings*

IEC 60068-1 :1988, *Environmental testing - Part* 1: *General and quidance*

IEC 60068-2-68: 1994, *Environmental testing - Part* 2: *Tests - Test L: Dust and sand*

IEC 60071 -2:1996, *Insulation co-ordination - Part* 2: *Application guide*