



LOVAG TEST INSTRUCTION EN 60529

LOVAG

TEST INSTRUCTION EN 60529 SPECIFICATION FOR DEGREES OF PROTECTION PROVIDED BY ENCLOSURES (IP CODE)

This test instruction is based on the following standards:

General Rules:

Standard IEC 60529:2001 Consolidated Edition 2.1 (IEC 60529:1989 and Amendment 1:1999 and Corrigendum 1:2003)
Standard EN 60529: 1991 and Amendment-1:2000

It complies with this standard in all respects, and provides additional information ensuring a suitable degree of repeatability of tests between the different test stations.

Valid from: **18th October 2006**

S.Manganaro
Chairman of LOVAG Technical Committee

2.1 Edition
September 2006
Page 1 of 3
Author: ACAE

LOVAG TEST INSTRUCTION EN 60529

PREAMBLE

This test instruction is based on EN 60529, Specification for Degrees of protection provided by Enclosures and provides additional information and guidance to ensure a suitable degree of repeatability between the different test stations. For convenience in the use of this test instruction the paragraphs are numbered according to the clauses in the EN Standard.

1. Scope

This standard applies to enclosures for electrical equipment up to 72,5kV and also applies to empty enclosures for same. This test instruction only applies to enclosures for low voltage electrical equipment up to 1000 V a.c. or 1500 V d.c. falling within the scope of LOVAG

2. Object

d) Measures to protect both the enclosure and the equipment inside the enclosure against external influences or conditions and the protection against contact with hazardous moving parts external to the enclosure are specified in the relevant product standard and relevant test instructions.

11.3 Application of test requirements and interpretation of test results

The requirements of this standard and the relevant product standard shall apply.

12. Tests for protection against access to hazardous parts indicated by the first characteristic numeral

12.3.1 For low-voltage equipment (rated voltages not exceeding 1000 V a.c. and 1500 V d.c.)

Dielectric tests and measurement of clearance distances may be required in accordance with the requirements of the product standard if the maximum working voltage of the equipment is higher than the rated operational voltage.

12.3.2 For high-voltage equipment (rated voltages exceeding 1000 V a.c. and 1500 V d.c.)
This clause is not applicable.

13. Tests for protection against solid foreign objects indicated by the first characteristic numeral

13.5.2 Acceptance conditions for the first characteristic numeral 5

Refer to standard

LOVAG TEST INSTRUCTION EN 60529

Ingress of talcum powder into the enclosure is verified as follows.

Ingress of talcum powder is verified by using a watch glass installed at the centre of the bottom of the enclosure in order to pick up the talcum powder entering the protected space during the test.

After the test, talcum powder shall not form a deposit of more than 1gr/m^2

14. Tests for protection against water indicated by the second characteristic numeral.

14.2.1 Test for second characteristic numeral 1 with the drip box

When the equipment submitted for test is larger than the base of the drip box or a representative sample meeting this requirement cannot be supplied. LOVAG considers that the conditions for verifying compliance to IPX1 and IPX2 cannot be achieved. However, in accordance with the standard, if the conditions can be met by testing the sample in 'sections', it is permissible to inspect the sample and wipe the sample dry between tests when they are, of necessity, repeated on other area of the sample.

14.2.2 Test for second characteristic numeral 2 with the drip box

Refer to standard and 14.2.1

To prevent undue stress to the equipment under tests, the slots, openings etc. in the equipment under test shall not be aligned with the rows of holes of the drip box.

14.2.3 The standard allows tests to be conducted either with an oscillating tube or spray nozzle.

The Test Report shall describe what test equipment was used.

14.3 Acceptance conditions

The equipment shall be inspected for the ingress of water in accordance with the requirements of this standard and the relevant product standard