



SLOVENSKI STANDARD
SIST EN 12966-2:2005

01-julij-2005

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Road vertical signs - Variable message traffic signs - Part 2: Initial type testing

Vertikale Verkehrszeichen - Wechselverkehrszeichen - Teil 2: Erstprüfung

Signaux de signalisation routière verticale - Panneaux a messages variables - Partie 2:
Essai de type initial

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Ta slovenski standard je istoveten z: EN 12966-2:2005

ICS:

93.080.30	Cestna oprema in pomožne naprave	Road equipment and installations
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en

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ICS 93.080.30

English version

Road vertical signs - Variable message traffic signs - Part 2: Initial type testing

Signaux de signalisation routière verticale - Panneaux à
messages variables - Partie 2: Essai de type initial

Vertikale Verkehrszeichen - Wechselverkehrszeichen - Teil
2: Erstprüfung

This European Standard was approved by CEN on 15 March 2005.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

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COMITÉ EUROPÉEN DE NORMALISATION
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Foreword

This document (EN 12966-2:2005) has been prepared by Technical Committee CEN/TC 226 "Road equipment", the secretariat of which is held by AFNOR.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by October 2005, and conflicting national standards shall be withdrawn at the latest by October 2005.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s).

This document consists of the following Parts under the general title:

Road vertical signs

- Part 1 : *Variable message traffic signs – Part 1: Product standard*
- Part 2 : **(this part) Variable message traffic signs – Part 2: Initial type testing**
- Part 3 : *Variable message traffic signs – Part 3: Factory production control*

It derives from performance requirements and test methods published in CEN, CENELEC, CIE and ISO documents together with standards of the CEN member organisations.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Slovakia, Slovenia, Spain, Sweden, Switzerland and United Kingdom.

1 Scope

This document specifies the requirements for Initial Type Testing (ITT) and is designed to be read in conjunction with Part 1.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 12767, *Passive safety of support structures for road equipment — Requirements and test methods*

EN 12899-1:2001, *Fixed, vertical road traffic signs — Part 1: Fixed signs*

EN 12966-1:2005, *Road vertical signs — Variable message traffic signs — Part 1: Product standard*

EN 50293, *Electromagnetic compatibility — Road traffic signal systems — Product standard*

EN ISO 9000:2000, *Quality management systems — Fundamentals and vocabulary (ISO 9000:2000)*

HD 638 S1, *Road traffic signal systems*

HD 60364-4-443, *Electrical installation of buildings — Part 4-44: Protection for safety – Protection against voltage disturbances and electromagnetic disturbances – Clause 443: Protection against overvoltages of atmospheric origin or due to switching (IEC 60364-4-44:2001/A1:2003, modified)*

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3 Terms, definitions, symbols and abbreviations

For the purposes of this document, the terms and definitions given in EN ISO 9000:2000, EN 12966-1:2005 and EN 12899-1:2001 and the following apply.

- 3.1 initial type testing**
complete set of tests and other procedures determining the performance of the test module
- 3.2 manufacturer**
producer with legal responsibility for placing the product on the market
- 3.3 supplier**
producer of components (e.g. sign faces, fixing devices, optical devices, luminous sources, etc) for the product
- 3.4 test module**
test module is a sample that is representative of the finished product (see EN 12966-1:2005, 9.1)

4 System requirements

4.1 General

The manufacturer shall demonstrate that characteristics which claim to be pre-tested comply with the requirements of this document.

During the Initial Type Testing sequence, if one test fails the manufacturer shall identify the cause of test failure and the proposed modification to the test module after which the failure within the sequence shall be retested.

The technical description, including drawings, shall be as specified in Annex A .

Static calculations shall include all fixings and attachments.

The conformity of VMS test module to the requirements of this standard and with the stated values (including classes) shall be demonstrated by initial type testing.

NOTE 1 Factory production control by the manufacturer, including product assessment is covered by EN 12966-3.

For the purposes of testing, the VMS may be grouped into families, where it is considered that the selected property/properties is/are common to all VMS within that family.

Initial type testing shall be performed to show conformity with this standard on first use of this document for VMS being put onto the market and:

- at the beginning of the production of a new or modified VMS design, the raw material or supplier of the components,
- at the beginning of a new or modified method of production.

In case of type testing on VMS for which initial type testing in accordance with this standard was already performed, type testing may be reduced:

- if it has been established that the performance characteristics compared with the already tested VMS have not been affected, or
- in accordance with the rules for grouping and/or direct or extended application of test results.

Where components are used whose characteristics have already been determined by the component manufacturer on the basis of conformity with other technical specifications and will not be adversely affected by the assembly process, these characteristics need not be reassessed (see EN 12966-3) provided that the components' performance or method of assessment remain the same.

NOTE 2 Products CE marked in accordance with appropriate harmonised European specifications may be presumed to have the performances stated with the CE marking, although this does not replace the responsibility of the component manufacturer to ensure that the product as a whole is correctly designed (where the manufacturer himself undertakes the design) and its components have the necessary performance values to meet the design.

4.2 Characteristics

All characteristics in Clauses 7 and 8 of EN 12966-1:2005 shall be subject to initial type testing, with the following exception:

- release of dangerous substances may be assessed indirectly by controlling the content of the substance concerned.

4.3 Use of historical data

Tests previously performed on the same test module in accordance with the provisions of this standard (same characteristic(s), test method, sampling procedure, system of attestation of conformity, etc.) may be taken into account.

4.4 'Deemed to satisfy' provisions and use of reference tabulated data

In those cases where conformity with this standard is based on 'deemed to satisfy' provisions or tabulated values, type testing shall be limited to the verification of whether the test module meets the requirements to use those values, classes or levels, unless better values, classes or levels are being claimed.

4.5 Treatment of calculated values and design

In those cases where conformity with this standard is based on calculations, type testing will be limited to the verification of the calculations made and that the resulting products correspond to the descriptions/assumptions made in the design and/or calculations.

In some cases, the manufacturer may produce products in accordance with a design and/or calculations provided by a third party. In this case, verification will not be of the design or calculations themselves, but only on the fact that the products conform to with the assumptions of the design and/or calculations.

4.6 Technical documentation

Technical documentation, the characteristics of the VMS and test results shall be kept for 10 years or the period of warranty, whichever is the greater.

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5 Variable Message Signs

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5.1 Test module

The test module is as defined in 9.1 of EN 12966-1:2005. In the case of verification by calculation, of some characteristics (e.g. deflection), the manufacturer shall also provide relevant drawings, calculations and the technical specifications. This module shall be retained for at least ten years.

5.2 Identification

Each module submitted to ITT shall bear a label with at least the information specified in Table 1.

Table 1 - Identification label

Manufacturer / Site of manufacturer
Manufacturing date
Relevant classes according to EN 12966-1
ID-number
Related technical documentation

The related technical documentation shall illustrate the product for which the test module is a replacement, and its characteristics. Each test module submitted to ITT shall be supplied with at least the information as detailed in Annex A (normative).

5.3 Specific requirements

The specific requirements shall be in compliance with EN 12966-1.

The characteristics of the test module shall be tested as specified below:

- either in column 1 of Table 2 to the requirements of column 2 in Table 2
- or in column 1 of Table 3 to the requirements of column 2 in Table 3

If required, calculations shall be verified.

The manufacturer shall declare the class or classes to be verified.

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