



**SLOVENSKI STANDARD**  
**SIST EN 12899-5:2008**  
**01-marec-2008**

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Fixed, vertical road traffic signs - Part 5: Initial type testing

Ortsfeste, vertikale Straßenverkehrszeichen - Teil 5: Erstprüfung

Signaux fixes de signalisation routière verticale - Partie 5 : Essai de type initial

**iTeh STANDARD PREVIEW**

**Ta slovenski standard je istoveten z: EN 12899-5:2007**

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English Version

## Fixed, vertical road traffic signs - Part 5: Initial type testing

Signaux fixes de signalisation routière verticale - Partie 5 :  
Essai de type initial

Ortsfeste, vertikale Straßenverkehrszeichen - Teil 5:  
Erstprüfung

This European Standard was approved by CEN on 4 February 2007.

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 CEN Management Centre 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 CEN Management Centre has the same status as the official versions.

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

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EUROPÄISCHES KOMITEE FÜR NORMUNG

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## Foreword

This document (EN 12899-5:2007) has been prepared by the 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of an identical text or by endorsement, at the latest by May 2008, and conflicting national standards shall be withdrawn at the latest by August 2012.

No existing European Standard is superseded.

This European Standard consists of the following parts under the general title:

*Fixed, vertical road traffic signs —*

Part 1: *Fixed signs*

Part 2: *Transilluminated traffic bollards (TTB)*

Part 3: *Delineator posts and retroreflectors*

Part 4: *Factory production control*

**Part 5: (this part) *Initial type testing***

It is based on performance requirements and test methods published in CEN, CENELEC, CIE (International Commission on Illumination) and ISO documents together with standards of the CEN member organizations.

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

## 1 Scope

This Part 5 of EN 12899 describes the requirements for initial type testing (ITT), of Parts 1, 2 and 3 of EN 12899.

## 2 Normative references

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

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

EN 12899-1:2007, *Fixed vertical road traffic signs — Part 1: Fixed signs*

EN 12899-2:2007, *Fixed vertical road traffic signs — Part 2: Transilluminated traffic bollards (TTB)*

EN 12899-3:2007, *Fixed vertical road traffic signs — Part 3: Delineator posts and retroreflectors*

EN ISO 9000:2005, *Quality management systems — Fundamentals and vocabulary (ISO 9000:2005)*

## 3 Terms, definitions, symbols and abbreviations

For the purposes of this document, the terms and definitions given in EN ISO 9000:2005, EN 12899-1:2007, EN 12899-2:2007, EN 12899-3:2007 and the following apply.

### 3.1

#### **initial type testing**

complete set of tests or other procedures, determining the performance of samples of products representative of the product type

### 3.2

#### **test product**

product in original size and design, or part of it, prepared by the manufacturer and submitted to the initial type testing (ITT) procedure

### 3.3

#### **sample**

construction representing parts of the product or its constituents in original materials prepared by the manufacturer and submitted to the ITT procedure

### 3.4

#### **reference sample**

sample as defined in 3.3 to be retained in order to be able to repeat the ITT procedure in case of disagreements

### 3.5

#### **manufacturer**

person or organization with legal responsibility for placing the product on the market

### 3.6

#### **supplier**

producer of raw materials and components (e.g. sign faces, fixing devices etc.) of the product

**3.7****product families**

products that are related in such a way that testing one of the products' characteristics is representative of that characteristic for all products within that product family.

NOTE 1 Products can be in different product families for different characteristics.

**EXAMPLE 1**

Example of a product family for physical characteristics:

- the loaded area of the product is equal or smaller;
- the distance between the foundation and the resultant of the load is equal or smaller;
- number, design, construction and location of supports is equal or more favourable;
- fixing systems are equal or stronger and stiffer than the product tested or calculated.

**EXAMPLE 2**

Example of a product family for visual characteristics:

- signs using the same sign face material

NOTE 2 Defining product families allows verification to be reduced.

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**4 Requirements and test methods****4.1 General**

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**4.1.1 Introduction**

An initial type test is the complete set of tests or other procedures, determining the performance of samples of products representative of the product type.

Initial type testing shall be performed to show conformity to this standard on first use of this standard for complete sign assemblies (including supports), signs (sign plate including sign faces), sign plates (without sign faces) and for other major components (retroreflective sheeting, supports and luminaires), transilluminated traffic bollards, delineator posts and retroreflectors being placed on the market and:

- at the beginning of the production of a new or modified product;
- at the beginning of a new or modified method of production.

In case of initial type testing on these products for which testing in accordance with this standard has already been performed, testing may be reduced:

- if it has been established that the performance characteristics compared with the already tested products have not been affected; or
- where kit components are used whose characteristics have already been determined on the basis of conformity to this or other technical specifications;
- in accordance with the rules for product families and/or direct or extended applications of test results.

These characteristics need not be reassessed (but see EN 12899-4) provided that the components performance or method of assessment remain the same and provided that these manufacturers or suppliers have FPC systems providing the same level of confidence as this standard.

NOTE This may be relevant for retroreflective sheetings, sign faces, supports, clamps, etc.

The manufacturer shall assess the effect of any modification to the product that has been the subject of an ITT on the performance of the product. If the performance of any of the product characteristics is likely to have been reduced by the modification, those characteristics shall be the subject of a new ITT.

The products from which the test product, sample or reference sample is prepared shall be in accordance with the technical documentation and shall be prepared in accordance with normal production methods.

All characteristics in 4.2 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.

#### **4.1.2 Use of historical data**

Tests previously performed on the same fixed vertical signs, transilluminated traffic bollards, delineator posts and retroreflectors in accordance with the provisions of this standard (same characteristics, test method, sampling procedure, system of attestation of conformity, etc.) may be taken into account.

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

#### **4.1.3 Treatment of calculated values and design**

In those cases where conformity to this standard is based on calculations, type testing will be limited to the verification of the calculations made and that the resulting products/kits correspond to the descriptions/assumptions made in the design and/or calculations. For example, where calculations of the resistance to horizontal load are based on an assumed material grade and fixings and fastenings, verification will, in addition to checking the calculation themselves, check that the products are of the correct grade and that the fixings and fastenings are correct. 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 of the fact that the products conform to the assumptions of the design and/or calculations.

NOTE This could occur in respect of a client-designed product.

#### **4.1.4 Sampling**

Initial type testing shall be performed on samples representative of the product/components supplied for ITT. Sample sizes shall be suitable for the testing equipment to be employed.

#### **4.1.5 Testing and conformity criteria**

The number of products/components to be tested (or assessed) shall be in accordance with 4.2, 4.3 and 4.4.

#### **4.1.6 Records**

The results of all type tests shall be recorded and held by the manufacturer for at least 5 years from the date on which the product was placed upon the market, the period specified in the FPC or the period of warranty, whichever is the greater.



## 4.2 Fixed signs and components

**4.2.1** The manufacturer shall select the test products and/or samples to be tested and provide the appropriate number of test products and/or samples from those listed in Tables 1 and 2. In case of testing by calculation, the manufacturer shall provide, instead of test products, relevant drawings, calculations and the technical specifications.

### 4.2.2 Test products and/or samples for fixed signs and components

**Table 1 — Applicable clauses and number of test products for ITT**

Essential requirements	Characteristics	Applicable clauses of EN 12899-1:2007	Number and kind of test product for products listed
Design	Piercing of sign face material	7.1.5	1 sign plate
	Sign plate edges	7.1.6	1 sign plate
Resistance to horizontal loads	Deflection of sign plate <sup>a</sup>	5.4.1, 5.4.2	2 for each design of fixing device and the sign plate to be tested. <sup>a</sup>
	Deflection of supports	5.4.1, 5.4.2	2 supports with the largest sign plate for the declared product family <sup>a</sup>
Performance under vehicular impact	Passive safety (if required)	6.3	EN 12767
Visual characteristics			
Transilluminated signs	Daylight chromaticity and luminance factor Mean luminance, luminance contrast uniformity of luminance	7.3.1.3 7.3.1.4, 7.3.1.5  7.3.1.6.	1 complete transilluminated sign with electrical equipment
Externally illuminated signs	Mean illuminance, uniformity of illuminance	7.4.1.2  7.4.1.3	1 sign plate and luminaires unless verification is done by calculation
Durability			
	Corrosion resistance	7.1.7	1 post and sign plate <sup>b</sup>
<sup>a</sup>	If tested by physical test and not calculated by static calculation.		
<sup>b</sup>	Not applicable to all means of surface protection.		