

**Elektromagnetiline ühilduvus.  
Teeliikluse signaalisüsteemid .  
Tootestandard**

Electromagnetic compatibility - Road traffic signal  
systems - Product standard

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

Käesolev Eesti standard EVS-EN 50293:2002 sisaldab Euroopa standardi EN 50293:2000 ingliskeelset teksti.	This Estonian standard EVS-EN 50293:2002 consists of the English text of the European standard EN 50293:2000.
Käesolev dokument on jõustatud 07.08.2002 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.	This document is endorsed on 07.08.2002 with the notification being published in the official publication of the Estonian national standardisation organisation.
Standard on kättesaadav Eesti standardiorganisatsioonist.	The standard is available from Estonian standardisation organisation.

<b>Käsitlusala:</b> This product standard for EMC requirements applies to road traffic signal systems. The range of products included within the scope of this standard are road traffic signal systems and devices including for example signal heads, signalling devices and traffic signs, controller and housing, supports, interconnections, links, traffic detectors, monitoring equipment, electrical supply.	<b>Scope:</b> This product standard for EMC requirements applies to road traffic signal systems. The range of products included within the scope of this standard are road traffic signal systems and devices including for example signal heads, signalling devices and traffic signs, controller and housing, supports, interconnections, links, traffic detectors, monitoring equipment, electrical supply.
---	---

**ICS** 33.100.01, 93.080.30

**Võtmesõnad:** detector circuits, electrical safety, safety, signal dev, signal lights, signal systems, signal transmitters, signalling system, specification (approval), specifications, testing, traffic lights, traffic signals, traffic signs, transportation, transportation safety

EUROPEAN STANDARD

**EN 50293**

NORME EUROPÉENNE

EUROPÄISCHE NORM

December 2000

ICS 33.100; 93.080.30

English version

**Electromagnetic compatibility -  
Road traffic signal systems -  
Product standard**

Compatibilité électromagnétique -  
Systèmes de signaux de circulation  
routière -  
Norme de produit

Elektromagnetische Verträglichkeit -  
Strassenverkehrs-Signalanlagen -  
Produktnorm

This European Standard was approved by CENELEC on 2000-04-01. CENELEC 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 CENELEC 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 CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

European Committee for Electrotechnical Standardization  
Comité Européen de Normalisation Electrotechnique  
Europäisches Komitee für Elektrotechnische Normung

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## Foreword

This European Standard has been prepared by the CENELEC BTF 69-3 (TC 214 WG1), Road traffic signal systems.

The text of the draft was submitted to the formal vote and was approved by CENELEC as EN 50293 on 2000-04-01.

The following dates were fixed:

- latest date by which the EN has to be implemented  
at national level by publication of an identical  
national standard or by endorsement (dop) 2001-06-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2003-04-01

## Contents

<b>1</b>	<b>General.....</b>	<b>4</b>
1.1	Scope.....	4
1.2	Normative references .....	4
1.3	Definitions .....	5
1.4	Common Test conditions .....	5
1.5	Test configuration .....	6
1.6	Performance criteria .....	6
<b>2</b>	<b>Emission.....</b>	<b>7</b>
2.1	Objective.....	7
2.2	Conditions during testing.....	7
2.3	Applicability .....	7
2.4	Emission limits.....	7
<b>3</b>	<b>Immunity .....</b>	<b>9</b>
3.1	Objective .....	9
3.2	Conditions during testing.....	9
3.3	Applicability .....	9
3.4	Immunity test requirements.....	9

## 1 General

### 1.1 Scope

This product standard for EMC requirements applies to road traffic signal systems. The range of products included within the scope of this standard are road traffic signal systems and devices including for example signal heads, signalling devices and traffic signs, controller and housing, supports, interconnections, links, traffic detectors, monitoring equipment, electrical supply. Road traffic signal systems operating in conjunction with other systems e.g. public lighting, railway systems shall also comply with the respective standard and shall not reduce the safety of all the equipment. Central Office equipment is excluded from this standard. Items with a radio-communication function shall also refer to the European ETSI standards.

### 1.2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

When the international publication has been modified by CENELEC common modifications, indicated by (mod), the relevant EN/HD applies.

HD 638	Road traffic signal systems
EN 12368	Signal Heads
EN 12675	Traffic Signal Controllers
EN 55014 series	Electromagnetic compatibility (EMC) - Requirements for household appliances, electrical tools and similar electrical apparatus (CISPR 14 series)
EN 55022	Information technology equipment Radio disturbance characteristics Limits and methods of measurement (CISPR 22, mod)
EN 61000-3-2	Electromagnetic compatibility (EMC) Part 3-2: Limits - Limits for harmonic current emissions (equipment input current $\leq 16$ A per phase) (IEC 61000-3-2, mod)  NOTE The requirements of this standard shall apply when it comes into force (see CENELEC report R210-007)
EN 61000-3-3	Part 3-3: Limits - Limitation of voltage fluctuations and flicker in low-voltage supply systems for equipment with rated current up to and including 16 A (IEC 61000-3-3)  NOTE The requirements of this standard shall apply when it comes into force (see CENELEC report R210-007)
EN 61000-4-2	Part 4-2: Testing and measuring techniques - Electrostatic discharge immunity test (IEC 61000-4-2)
EN 61000-4-3	Part 4-3: Testing and measuring techniques - Radiated, radio frequency electromagnetic field immunity test (IEC 61000-4-3, mod)
EN 61000-4-4	Part 4-4: Testing and measuring techniques - Electrical fast transient/burst immunity test (IEC 61000-4-4)
EN 61000-4-5	Part 4-5: Testing and measuring techniques - Surge immunity test (IEC 61000-4-5)
EN 61000-4-6	Part 4-6: Testing and measuring techniques - Immunity to conducted disturbances, induced by radio-frequency fields (IEC 61000-4-6)
EN 61000-4-8	Part 4-8: Testing and measuring techniques - Power frequency magnetic field immunity test (IEC 61000-4-8)
EN 61000-4-11	Part 4-11: Testing and measuring techniques - Voltage dips, short interruptions and voltage variations immunity tests (IEC 61000-4-11)