



SLOVENSKI STANDARD
SIST EN 12414:2002

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Nadzorna oprema za parkirišča - Parkomati (parkirni avtomat) - Tehnične in funkcionalne zahteve

Vehicle parking control equipment - Pay and display ticket machine - Technical and functional requirements

Geräte zur Parküberwachung von Fahrzeugen - Parkscheinautomaten - Technische und funktionelle Anforderungen

Équipement de contrôle du stationnement des véhicules - Horodateurs - Exigences techniques et fonctionnelles

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39.040.99 Drugi merilniki časa Other time-measuring instruments

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EUROPEAN STANDARD

EN 12414

NORME EUROPÉENNE

EUROPÄISCHE NORM

September 1999

ICS 39.040.99

English version

Vehicle parking control equipment - Pay and display ticket machine - Technical and functional requirements

Équipement de contrôle du stationnement des véhicules -
Horodateurs - Exigences techniques et fonctionnelles

Geräte zur Parküberwachung von Fahrzeugen -
Parkscheinautomaten - Technische und funktionelle
Anforderungen

This European Standard was approved by CEN on 8 August 1999.

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, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

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Foreword

This European Standard 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 March 2000, and conflicting national standards shall be withdrawn at the latest by March 2000.

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

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Introduction

This standard has been defined with the aim of providing a product which offers all necessary and adequate guarantees:

- ease of use;
- security and safety;
- integration into the environment;

for those people called upon to use them : users - enforcement agents - operators and maintenance agents.

Pay and display ticket machines are either independent, associated to a local system or integrated into a centralised system.

Pay and display ticket machines are powered by an energy source:

- either by connection to an external source with or without buffer battery;
- or independently, with no connection to an external source.

1 Scope

This standard specifies the technical and functional requirements for pay and display ticket machines.

It applies to prepayment pay and display machines, operated by coins, tokens or electronic means, solely intended for simultaneous parking control of an unlimited number of road vehicles on or off-street and installed under public or private ownership.

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.

EN 55022	Limits and methods of measurement of radio disturbance characteristics of information technology equipment (CISPR 22:1993)
EN 60068-2-1	Environmental testing - Part 2 : Tests - Tests A : Cold (IEC 60068-2-1:1990)
EN 60068-2-2	Basic environmental testing procedures - Part 2 : Tests - Tests B : Dry heat (IEC 60068-2-2:1974 + IEC 68-2-2A:1976)
EN 60529	Degrees of protection provided by enclosures (IP code) (IEC 60529:1989)

- EN 60742 Isolating transformers and safety isolating transformers - Requirements (IEC 60742:1983 + A1:1992, modified)
- EN 60898 Circuit-breakers for overcurrent protection for household and similar installations (IEC 60898:1987 + corrigendum may 1988 + A2:1989 + A3:1990 + corrigendum august 1990)
- EN 60950 Safety of information technology equipment, including electrical business equipment (IEC 60950:1991, modified)
- IEC 60068-2-30 Environmental testing - Part 2 : Tests - Test Db and guidance : Damp heat, cyclic (12 + 12 hour cycles)
- EN 61000-4-2 Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 2: Electrostatic discharge immunity test - Basic EMC publication (IEC 61000-4-2:1995)
- EN 61000-4-3 Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 3: Radiated, radio-frequency, electromagnetic field immunity test (IEC 61000-4-3:1995, modified)
- EN 61000-4-4 Electromagnetic compatibility (EMC) - Part 4: Testing and measurement techniques - Section 4: Electrical fast transient/burst immunity test - Basic EMV publication (IEC 61000-4-4:1995)

3 Definitions

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For the purposes of this standard, the following definitions apply:

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- 3.1 pay and display ticket machine:** Machine for prepayment of vehicle parking which, according to the amount paid, issues a proof of transaction (ticket) to the user and determines the authorized parking period.
- 3.2 cancellation of a transaction:** Operation used to interrupt the current transaction and leading to the return of the means of payment.
- 3.3 cash:** Any currently valid coins issued by an official banking system with a set monetary value.
- 3.4 cash-box:** Receptacle for permanent storage of coins and tokens, until collection.
- 3.5 confirmation of transaction:** Operation resulting in the issuing of a ticket.
- 3.6 electronic means of payment:** Any device containing an identifier guaranteeing its authenticity and capable of performing an electronic transaction.
- 3.7 escrow:** A unit to accumulate and hold the combined total of cash , before confirmation or cancellation of the transaction.
- 3.8 maximum parking period:** The longest period of time specified on an information medium which can be utilized as a parking period by the user category.
- 3.9 operational accuracy:** Deviation of authorized parking duration compared to the duration displayed.

3.10 parking period: Period from the time a parking ticket is issued to expiry of the parking time as specified on the ticket.

3.11 return cup: Receptacle capable of holding the amount of returned physical means of payment following the cancellation of a transaction.

3.12 tariff: Price corresponding to a given parking duration for a given user category and at a given time period.

3.13 ticket: A document issued for an authorized parking period in respect of the corresponding parking site.

3.14 ticket of revenue: A document issued at the end of the operation of collection of physical payment.

3.15 token: Medium of transaction, with no official value recognized by the banking system, but able to serve as payment for a transaction.

3.16 user and/or operator machine interface: Instructions and controls adequate to ensure the correct operation of the machine.

3.17 validation of means of payment: Operation corresponding to the recognition of the means of payment (cash and/or tokens and/or electronic means of payment).

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4 Functional requirements

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4.1 Display of an out of order or not in use situation

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When a machine is out of order or not in use this shall be shown to the user on the machine's interface(s) by means of an unambiguous visual sign indicating "out of order" or "not in use" in the form :

- either of a text with the comment "Out of order" or "Not in use" ;
- or by a red-coloured lamp or mask confirming the status.

In such situation, the machine shall not accept any means of payment.

4.2 Display of an impending out of order situation

When an event is impending or an incident is liable to cause a machine failure after a given time period, this information, intended for the operator, shall be shown to authorized personnel.

4.3 Verification of electronic means of payment balance

The pay and display ticket machine shall be capable of verifying and displaying the data on an electronic means of payment without altering the value on this electronic means of payment.

4.4 Display of current time

A machine in normal working order while in use shall allow the user and the operator to consult the current time visually on the utilization face.

4.5 Display of permanent utilisation information

The machine shall include on the utilization face for the attention both of the user and the operator the following permanent utilisation information :

- tariff information ;
- instructions for use of the operating mechanisms necessary for any transaction and its cancellation if required, and the symbolisation of the corresponding means of payment (cash and/or token and/or electronic means of payment).

4.6 Choice of tariff

If the operator requires it, the machine shall include the capability to select tariffs activated by the user, which indicates, by display and before any transaction, the specific user category (e.g. resident tariff).

NOTE : This selection can be made manually or automatically or both.

4.7 Validation and acceptance of means of payment

The machine shall be able to recognize valid means of payment and it shall be capable of rejecting any means of payment whose characteristics have not been recognized as valid. During the period between confirmation of the transaction and the ticket leaving the printer any cash or token inserted shall be returned directly to the user or insertion shall be impossible.

During the period between confirmation of the transaction and the ticket leaving the printer, any charge against an electronic means of payment shall be impossible.

4.8 Display of the transaction

4.8.1 Amount

The machine shall display the value of incrementing payments until the transaction is completed.

4.8.2 Parking time

The machine shall display the parking time either by direct selection or as payment meets each charge step.

The display shall show parking expiry time and parking expiry date.