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Vehicle parking control equipment - Requirements and test methods for a parking terminal

EESTI STANDARDI EESSÕNA

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EUROPEAN STANDARD

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English Version

Vehicle parking control equipment - Requirements and test methods for a parking terminal

Équipement de contrôle du stationnement des véhicules - Exigences et méthodes d'essai pour un terminal de stationnement

Einrichtungen zur Parküberwachung von Fahrzeugen - Anforderungen und Prüfverfahren für Parkautomaten

This European Standard was approved by CEN on 3 May 2020.

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-CENELEC Management Centre or to any CEN member.

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Contents	Page
European foreword.....	4
Introduction	5
1 Scope.....	6
2 Normative references.....	6
3 Terms and definitions	7
4 Functional requirements.....	9
4.1 Modes of operation.....	9
4.1.1 General.....	9
4.1.2 Pay and Display mode (with ticket)	9
4.1.3 Pay and Go mode (without ticket)	10
4.1.4 Pay on departure.....	11
4.2 User interface	13
4.2.1 Screen.....	13
4.2.2 Ticket and receipt attributes	13
4.2.3 Transaction confirmation function	14
4.2.4 Transaction cancellation function	14
4.2.5 Tariff selection	14
4.2.6 Physical keyboard.....	14
4.2.7 Screen standby mode.....	15
4.2.8 Parking terminal visibility.....	15
4.2.9 Out of service and out of order.....	15
4.2.10 Languages	15
4.2.11 Displayed information during the transaction	15
4.2.12 Parking time calculation.....	16
4.2.13 Labels, legends and button colours	16
4.3 Connectivity of the parking terminal.....	17
4.3.1 General.....	17
4.3.2 Category A - Not connected parking terminal.....	17
4.3.3 Category B - Connected parking terminal	17
4.4 Payment means.....	18
4.4.1 General.....	18
4.4.2 Various payment means	18
4.4.3 Confirmation and acceptance of payment.....	19
4.4.4 Collection systems	20
4.5 Embedded software.....	20
4.5.1 Software configuration	20
4.5.2 Software updates.....	21
4.6 Management at the terminal.....	21
4.6.1 Display of warnings (impending out of order situation).....	21
4.6.2 Ease of maintenance	21
4.6.3 Secured access to maintenance actions	21
4.6.4 Storage of operating and management data	21
4.6.5 Verification of revenue held.....	21
4.7 Remote management and reporting	22
4.7.1 General.....	22
4.7.2 Online status and events monitoring.....	22
4.7.3 Data for statistics.....	22
4.7.4 Remote configuration.....	23

4.8	Manuals	23
5	Technical requirements	24
5.1	Safety	24
5.1.1	Electrical safety	24
5.1.2	Ingress Protection (dust, water, and foreign objects).....	24
5.2	Operating capacity	24
5.2.1	Ticket stock.....	24
5.2.2	Capacity of the escrow for coins and tokens.....	24
5.2.3	Capacity of the cashbox for coins and tokens.....	24
5.2.4	Storage relating to transactions by electronic means of payment	24
5.2.5	Energy autonomy.....	24
5.3	Resistance to environmental conditions.....	25
5.3.1	Terminal storage temperature resistance	25
5.3.2	Terminal operation temperature and humidity resistance.....	25
5.3.3	Terminal water flooding resistance.....	25
5.4	Accessibility for end-user	25
5.5	Protection against theft or burglary	26
5.6	Data security requirements for a parking terminal	26
5.7	Internal clock.....	27
6	Test of the functional and technical requirements	27
6.1	Tests conditions	27
6.2	Test methods.....	27
	Annex A (normative) Energy autonomy test procedure.....	28
A.1	Calculation of daily consumption	28
A.2	Calculation of annual energy available.....	29
A.2.1	Solar powered terminal	29
A.2.2	Terminal powered by a combination of solar energy and a non-rechargeable battery	30
A.3	Autonomy during 'no energy' days	30
A.4	Energy autonomy of a terminal	31
	Annex B (normative) Security test procedure.....	32
B.1	Resistance classes.....	32
B.2	Test method.....	32
B.2.1	General	32
B.2.3	Choice of tools	33
B.2.4	Resistance Time measurement.....	33
B.2.5	Access to cash safe compartments.....	33
B.3	Specification of tool sets.....	34
B.4	Specification of hydraulic tool	35
	Annex C (normative) Test methods.....	36
	Bibliography	64

European foreword

This document (EN 12414:2020) 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 January 2021, and conflicting national standards shall be withdrawn at the latest by January 2021.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 12414:1999.

The significant technical changes incorporated in this revision are:

- new requirements depending on the different modes of operation (Pay and Display, Pay and Go, Pay on Departure) which justify the change in the title and the scope of this standard where "pay and display ticket machine" has been replaced by "parking terminal";
- test method described for each of the requirements in annex, which justify the change in the title and scope where "test methods" has been added;
- accessibility requirements taking into account new EN 301549:2018;
- requirement for user interface taking into account new technologies (display, keyboards, touch screen...);
- requirements and definition of categories of terminals depending on the level of connectivity with a centralised system (centralised system requirement being out of the scope of this standard);
- requirements for minimum information to be exchanged with the centralised system for connected terminals;
- requirements for payment means taking into account banknotes and new electronic means of payment;
- energy autonomy requirement for terminal powered by mains supply or solar energy or combination of solar energy and non-rechargeable battery, with detailed test procedure in annex;
- protection against theft or burglary with detailed test procedure in annex and introduction of security classes P0 to P4, with a minimum of P0 required;
- update of operation and management requirements;
- update of normative references.

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

Introduction

This document is a revision of the EN 12414 issued in 1999. This is not a harmonized standard. This document has been written for those called upon to manufacture, operate, maintain and use a parking terminal with the aim of providing requirements and test methods, especially for parking terminals in addition to the applicable European Directives.

This document takes the different modes of operation of parking terminal into account:

- pay and display mode;
- pay and go mode;
- pay on departure mode;

and the different configurations of:

- user interface;
- means of payment;
- power supply;
- connectivity;
- protection against theft or burglary;

in order to provide measurable minimum requirements and associated test methods to standardize and qualify:

- ease of use;
- ease of operation;
- accessibility;
- security;
- energy autonomy;
- resistance to environment;
- protection against theft or burglary.

A terminal conformity to this document is understood as a conformity to all minimum requirements applicable to the mode and configuration of the said terminal. This standard is for the terminal only, it does not cover the centralised system. Regarding protection against theft or burglary, conformity to the minimum requirement is reached with class P0, but in addition, classes P1-P4 have been defined to allow terminal suppliers to verify the effectiveness of additional measures to increase the protection against theft or burglary above P0.

1 Scope

This document specifies the technical and functional requirements including test methods for parking terminals. It applies to unattended terminals used to obtain the right to park for visual and/or electronic control of multiple road vehicles, with payment where applicable.

This document only covers parking terminals.

For parking terminals connected to centralised system, this document covers the minimum information to be exchanged with a centralised system. It does not define a standard protocol between parking terminals and centralised systems. It does not define the centralised system.

This document does not cover pay-on-foot terminals.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 1332-3:2008, *Identification card systems - Man-machine interface - Part 3: Keypads*

EN 60068-2-1, *Environmental testing - Part 2-1: Tests - Test A: Cold*

EN 60068-2-2, *Environmental testing - Part 2-2: Tests - Test B: Dry heat*

EN 60068-2-30, *Environmental testing - Part 2-30: Tests - Test Db: Damp heat, cyclic (12 h + 12 h cycle)*

EN 60068-2-61, *Environmental testing - Part 2: Test methods - Test Z/ABDM: Climatic sequence*

EN 60529, *Degrees of protection provided by enclosures (IP Code)*

EN 60904-1, *Photovoltaic devices - Part 1: Measurement of photovoltaic current-voltage characteristics*

EN 61009-1, *Residual current operated circuit-breakers with integral overcurrent protection for household and similar uses (RCBOs) - Part 1: General rules*

EN 62262, *Degrees of protection provided by enclosures for electrical equipment against external mechanical impacts (IK code)*

EN 301549:2018, *Accessibility requirements suitable for public procurement of ICT products and services in Europe*

EN ISO 9241-305:2008, *Ergonomics of human-system interaction - Part 305: Optical laboratory test methods for electronic visual displays (ISO 9241-305:2008)*

EN ISO/IEC 17025, *General requirements for the competence of testing and calibration laboratories (ISO/IEC 17025)*

EN ISO/IEC 17065, *Conformity assessment — Requirements for bodies certifying products, processes and services (ISO/IEC 17065)*