



SLOVENSKI STANDARD
SIST EN 14846:2009
01-januar-2009

GHj Vbc`c_cj ^Y!`?`f Uj b]W]b`nUdU]!`9`Y_fca Y Ubg_Y``f Uj b]W]b`nUdcfBY
d`cý Y!`NUA hYj Y]b`dfYg_i gbY`a YrcXY

Building hardware - Locks and latches - Electromechanically operated locks and striking plates - Requirements and test methods

Baubeschläge - Schlösser - Elektromechanische Schlösser und Schließbleche - Anforderungen und Prüfverfahren

Quincaillerie pour le bâtiment - Serrures et becs de cane - Serrures et gâches électromécaniques - Exigences et méthodes d'essai

<https://standards.iteh.ai/catalog/standards/sist/7b002213-7bfd-47f9-8127-8fb7386a2033/sist-en-14846-2009>

Ta slovenski standard je istoveten z: EN 14846:2008

ICS:

91.190 Stavbna oprema Building accessories

SIST EN 14846:2009 **en,fr,de**

iTeh STANDARD PREVIEW
(standards.iteh.ai)

SIST EN 14846:2009

<https://standards.iteh.ai/catalog/standards/sist/7b002213-7bfd-47f9-8127-8fb7386a2033/sist-en-14846-2009>

EUROPEAN STANDARD

EN 14846

NORME EUROPÉENNE

EUROPÄISCHE NORM

August 2008

ICS 91.190

English Version

Building hardware - Locks and latches - Electromechanically operated locks and striking plates - Requirements and test methods

Quincaillerie pour le bâtiment - Serrures et becs de cane -
Serrures et gâches électromécaniques - Exigences et
méthodes d'essai

Baubeschläge - Schlösser - Elektromechanische Schlösser
und Schließbleche - Anforderungen und Prüfverfahren

This European Standard was approved by CEN on 18 July 2008.

CEN members are bound to comply with the CEN/GENELEC 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.

<https://standards.iteh.ai/catalog/standards/sist/76002213-7bfd-47f9-8127-8fb7386a2033/sist-en-14846-2009>



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

Management Centre: rue de Stassart, 36 B-1050 Brussels

Contents

Page

Foreword.....	4
1 Scope.....	5
2 Normative references	5
3 Terms, definitions and symbols	6
4 Classification.....	6
4.1 General.....	6
4.2 Classification.....	7
4.3 Category of use (first digit).....	7
4.4 Durability and load on latchbolt (second digit)	7
4.5 Door mass and closing force (third digit).....	8
4.6 Suitability for use on fire/smoke doors (fourth digit).....	9
4.7 Safety (fifth digit).....	9
4.8 Corrosion, temperature and humidity (sixth digit).....	9
4.9 Security (seventh digit)	10
4.10 Security - electrical function (eighth digit).....	10
4.11 Security - electrical manipulation (ninth digit).....	11
5 Requirements	12
5.1 General.....	12
5.2 Category of use.....	12
5.3 Durability.....	13
5.4 Door mass and closing force.....	14
5.5 Suitability for use on fire/smoke doors.....	14
5.6 Safety.....	14
5.7 Corrosion, temperature and humidity requirements.....	14
5.8 Security requirements	15
5.9 Security – Electrical function – Status indication	15
5.10 Security – Electrical manipulation	15
5.11 Requirements for product information	16
6 Test methods.....	17
6.1 Test procedure	17
6.2 Category of use tests.....	18
6.3 Durability tests	19
6.4 Door mass and closing force.....	20
6.5 Fire/smoke resistance tests.....	20
6.6 Safety.....	20
6.7 Corrosion, temperature and humidity tests	21
6.8 Security tests.....	22
6.9 Security – Electrical function tests – Status indication	22
6.10 Security – Electrical manipulation tests	22
7 Marking	23
8 Evaluation of conformity.....	23
8.1 Initial type test.....	23
8.2 Sampling, testing and conformity criteria.....	24
8.3 Factory production control	25
8.4 Periodic testing	31
8.5 Annual testing	31
Annex A (normative) Fire/smoke test requirements.....	32
Annex B (normative) Test sampling and sequencing	33
Annex C (normative) Installation and fixing instructions	35

Annex ZA (normative) Clauses of this European Standard addressing the provisions of the EU Construction Products Directive (89/106/EEC)	37
Bibliography	43

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[SIST EN 14846:2009](https://standards.iteh.ai/catalog/standards/sist/7b002213-7bfd-47f9-8127-8fb7386a2033/sist-en-14846-2009)

<https://standards.iteh.ai/catalog/standards/sist/7b002213-7bfd-47f9-8127-8fb7386a2033/sist-en-14846-2009>

EN 14846:2008 (E)**Foreword**

This document (EN 14846:2008) has been prepared by Technical Committee CEN/TC 33 "Doors, windows, shutters, building hardware and curtain walling", 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 February 2009, and conflicting national standards shall be withdrawn at the latest by May 2010.

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

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).

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

This European Standard has been prepared under mandate M/101 "Doors, windows, shutters, gates and related building hardware" (amended) given to CEN by the European Commission and the European Free Trade Association.

No existing European Standard is superseded.

This European Standard is one of a series of European Standards dedicated to building hardware products.

<https://standards.iteh.ai/catalog/standards/sist/7b002213-7bfd-47f9-8127-8fb7386a2033/sist-en-14846-2009>

Complementing this European Standard is a European Standard for mechanically operated locks, latches and locking plates (EN 12209) and a draft European Standard for mechanically operated multi-point locks (prEN 15685).

Electromechanical operated locks and striking plates used in fire/smoke door assemblies require additional attributes in order to comply with the Essential Requirements CPD 89/106/EEC "Safety in case of fire" either independently or as a part of a complete assembly. Additional requirements are specified in Annex A and Annex ZA.

The performance tests incorporated in this European Standard are considered to be replicable and as such will provide a consistent and objective assessment of the performance of these products throughout CEN member states.

Electromechanically operated locks and strikes plates to this standard are designed to be installed on doors in buildings (fixed installation). Such doors are not covered by the Waste Electrical and Electronic Equipment (WEEE) Directive 2002/96/EC or Restriction of the Use of Certain Hazardous Substances in EEE (RoHS) Directive 2002/95/EC.

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 the United Kingdom.

1 Scope

This European Standard specifies requirements and test methods for strength, security, durability and function of electrical and electronic components for all types of electromechanically operated locks and striking plates used on doors, window doors and entrance doors in buildings.

Requirements relating to the purely mechanical feature of products included in this European Standard (e.g. resistance to drilling/side load) are covered by EN 12209.

This European Standard covers electromechanically operated locks and striking plates which are either manufactured and placed on the market in their entirety by one producer or assembled from sub-assemblies produced by more than one producer and designed to be used in combination.

This document is not applicable to electrically powered hold-open devices (EN 1155), electrically controlled panic exit systems (prEN 13633) or electrically controlled emergency exit systems (prEN 13637). It does not apply to purely magnetic locks, mechatronic or mechanical cylinders (EN 1303), handles (EN 1906), locks for windows, padlocks (EN 12320), locks for safes (EN 1300), furniture locks or prison locks, nor does it apply to cover operating and identification devices (such as mechanical cylinders, intelligent cards, digit codes, magnetic cards).

This European Standard does not, for the time being, apply to electromagnetic door locks but these devices will be considered for inclusion in the first revision of this European Standard.

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.

- <https://standards.iteh.ai/catalog/standards/sist/7b002213-7bfd-47f9-8127-362201521406009>
- EN 1634-1, *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware — Part 1: Fire resistance test for doors and shutter assemblies and openable windows*
- EN 1634-3, *Fire resistance and smoke control tests for door and shutter assemblies, openable windows and elements of building hardware - Part 3: Smoke control test for door and shutter assemblies*
- EN 1670:2007, *Building hardware — Corrosion resistance — Requirements and test methods*
- EN 12209:2003, *Building hardware — Locks and latches — Mechanically operated locks, latches and locking plates — Requirements and test methods*
- EN 60068-2-1:2007, *Environmental testing — Part 2-1: Tests — Tests A: Cold (IEC 60068-2-1:2007)*
- EN 60068-2-2:2007, *Environmental testing — Part 2-2: Tests — Test B: Dry heat (IEC 60068-2-2:2007)*
- EN 60068-2-30, *Environmental testing — Part 2-30: Tests — Test Db: Damp heat, cyclic (12 + 12 hour cycle) (IEC 60068-2-30:2005)*
- EN 61000-4-2:1995, *Electromagnetic compatibility (EMC) — Part 4: Testing and measurement techniques — Section 2: Electrostatic discharge immunity test — Basic EMC publication (IEC 61000-4-2:1995)*
- EN 61000-4-3:2006, *Electromagnetic compatibility (EMC) — Part 4-3: Testing and measurement techniques — Radiated, radio-frequency, electromagnetic field immunity test (IEC 61000-4-3:2006)*

EN 14846:2008 (E)

EN 61000-4-4:2004, *Electromagnetic compatibility (EMC) — Part 4-4: Testing and measurement techniques — Electrical fast transient/burst immunity test (IEC 61000-4-4:2004)*

EN 61000-4-5:2006, *Electromagnetic compatibility (EMC) — Part 4-5: Testing and measurement techniques — Surge immunity test (IEC 61000-4-5:2005)*

EN 61000-4-11, *Electromagnetic compatibility (EMC) — Part 4-11: Testing and measurement techniques — Voltage dips, short interruptions and voltage variations immunity tests (IEC 61000-4-11:2004)*

EN 61000-4-29, *Electromagnetic Compatibility (EMC) — Part 4-29: Testing and measurement techniques; Voltage dips, short interruptions and voltage variations on d.c. input power port immunity tests (IEC 61000-4-29:2000)*

EN ISO 9001:2000, *Quality management systems — Requirements (ISO 9001:2000)*

3 Terms, definitions and symbols

For the purposes of this document, the symbols and units given in EN 12209:2003 and the following terms and definitions apply.

3.1**electromechanical lock(s)**

device using electrically operated means to effect or enable locking and/or unlocking

3.2**electromechanical strike(s)**

locking plate using electrically operated means to effect or enable locking and/or unlocking

3.3**electric door magnet**

device which uses only the magnetic attraction to effect or enable locking and/or unlocking

3.4**rated supply voltage**

nominal voltage for which the device is intended

3.5**deadbolt**

bolt of any kind that can be deadlocked

4 Classification**4.1 General**

4.1.1 Mechanically operated locks and latches shall be classified according to the nine character classification system described in 4.3 to 4.11.

4.1.2 All locks regardless of classification shall meet the requirements of 5.1.1 and 5.1.2.

4.2 Classification for electromechanically operated locks and striking plates

Electric locks and electric strikes shall be classified according to the following nine digit coding system described in 4.3 to 4.11.

Table 1 — Classification

1	2	3	4	5	6	7	8	9
Category of use	Durability and load on latchbolt	Door mass and closing force	Suitability for use on fire/smoke doors	Safety	Corrosion resistance, temperature and humidity	Security and drill resistance	Security electrical function	Security electrical manipulation

4.3 Category of use (first digit)

Three grades are identified in accordance with requirements stated in 5.2.1 to 5.2.4.

- grade 1 for use by people with a high incentive to exercise care and with a small chance of misuse, e.g. residential doors.
- grade 2 for use by people with some incentive to exercise care but where there is some chance of misuse, e.g. office doors.
- grade 3: for use by the public where there is little incentive to exercise care and where there is a high chance of misuse, e.g. doors in public buildings.

4.4 Durability and load on latchbolt (second digit)

Twelve grades of durability and load on mechanically or electrically operated latchbolt are identified.

- grade A 50 000 test cycles no load on latchbolt;
- grade B 100 000 test cycles no load on latchbolt;
- grade C 200 000 test cycles no load on latchbolt;
- grade F 50 000 test cycles 10 N load on latchbolt;
- grade G 100 000 test cycles 10 N load on latchbolt;
- grade H 200 000 test cycles 10 N load on latchbolt;
- grade L 100 000 test cycles 25 N load on latchbolt;
- grade M 200 000 test cycles 25 N load on latchbolt;
- grade R 100 000 test cycles 50 N load on latchbolt;
- grade S 200 000 test cycles 50 N load on latchbolt;
- grade W 100 000 test cycles 120 N load on latchbolt;
- grade X 200 000 test cycles 120 N load on latchbolt;

EN 14846:2008 (E)

— grade Y 200 000 test cycles 250 N load on latchbolt.

NOTE 1 The above information relates to latch action only. Corresponding durability requirements based on the number of cycles apply to the dead bolt as shown in Table 6.

NOTE 2 If the lock does not have any latchbolt, the grade should be chosen from Table 6.

4.5 Door mass and closing force (third digit)

Nine grades of door mass and closing force are identified.

Table 2 — Durability on latchbolt

Grade	Door mass	Closing force
Grade 1	up to 100 kg door mass	50 N maximum closing force
Grade 2	up to 200 kg door mass	50 N maximum closing force
Grade 3	above 200 kg door mass or as specified by the manufacturer	50 N maximum closing force
Grade 4	up to 100 kg door mass	25 N maximum closing force
Grade 5	up to 200 kg door mass	25 N maximum closing force
Grade 6	above 200 kg door mass or as specified by the manufacturer	25 N maximum closing force
Grade 7	up to 100 kg door mass	15 N maximum closing force
Grade 8	up to 200 kg door mass	15 N maximum closing force
Grade 9	above 200 kg door mass or as specified by the manufacturer	15 N maximum closing force

4.6 Suitability for use on fire/smoke doors (fourth digit)

Table 3 — Suitability for use on fire/smoke doors

Not intended for use on smoke/fire door assemblies	0
Suitable for use on smoke door assemblies	A
Suitable for use on smoke/fire door assemblies:	
- with a classification time of: 15 min	B
- with a minimum classification time of: 30 min	C
- with a minimum classification time of: 60 min	D
- with a minimum classification time of: 90 min	E
- with a classification time of: 120 min or greater	F

Additional fire/smoke test requirements shall be according to Annex A.

4.7 Safety (fifth digit)

No safety requirement.

NOTE See prEN 13633, prEN 13637, EN 179 and EN 1125 for electric locks, electric strikes and electromagnetic devices that are part of exit devices for use on emergency or panic exit doors.

4.8 Corrosion resistance, temperature and humidity (sixth digit)

Fifteen grades of corrosion resistance, humidity and temperature are identified.

Environmental requirements:

EN 14846:2008 (E)

Table 4 — Corrosion resistance, temperature and humidity

Grade	Corrosion resistance	Temperature	Humidity
0	No defined resistance	No defined resistance	No defined resistance
A	No defined resistance	No defined resistance	Level 1
B	No defined resistance	No defined resistance	Level 2
C	Low resistance	+5 °C to +55 °C	Level 1
D	Moderate resistance	+5 °C to +55 °C	Level 1
E	High resistance	+5 °C to +55 °C	Level 1
F	Very high resistance	+5 °C to +55 °C	Level 1
G	Moderate resistance	-10 °C to +55 °C	Level 1
H	High resistance	-10 °C to +55 °C	Level 1
J	Very high resistance	-10 °C to +55 °C	Level 1
K	Moderate resistance	-25 °C to +70 °C	Level 2
L	High resistance	-25 °C to +70 °C	Level 2
M	Very high resistance	-25 °C to +70 °C	Level 2
N	No defined resistance	-25 °C to +70 °C	Level 1
P	No defined resistance	-25 °C to +70 °C	Level 2

4.9 Security (seventh digit)

EN 12209:2003, 4.2.7 shall apply.

Grade 0 may be used for locks with no security.

4.10 Security - electrical function (eighth digit)

Two grades are identified:

- grade 0 no requirement;
- grade 1 status indication according to 5.9.

4.11 Security - electrical manipulation (ninth digit)

Four grades are identified:

- grade 0 no requirement;
- grade 1 see Table 7;
- grade 2 see Table 7;
- grade 3 see Table 7.

EXAMPLE A classification could look as follows:

1	2	3	4	5	6	7	8	9
2	H	5	B	0	E	5	1	3

This example indicates an electromechanically operated lock and striking plates:

- 1) Grade 2 = for use in an application where people have an incentive to exercise care.
- 2) Grade H = able to withstand a durability of 200 000 cycles with a 10 N load on the latchbolt.
- 3) Grade 5 = for use on a door with a mass of up to 200 kg and a maximum closing force of 25 N.
- 4) Grade B = suitable for smoke/fire doors of 15 min classification time.
- 5) Grade 0 = with no safety requirement.
- 6) Grade E = with high corrosion resistance in temperatures ranging from +5 °C to +55 °C and humidity resistance level 1.
- 7) Grade 5 = with high security and drill resistance.
- 8) Grade 1 = with grade 1 of electrical security function (with status indication).
- 9) Grade 3 = with grade 3 of electrical manipulation security.