

STN	Železnice. Indikátory brzd.	STN EN 15220 28 4012
------------	------------------------------------	--

Railway applications - Brake indicators

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 01/17

Obsahuje: EN 15220:2016

Oznámením tejto normy sa ruší
STN EN 15220-1+A1 (28 4012) z novembra 2011

123909

Úrad pre normalizáciu, metrológiu a skúšobníctvo SR, 2017
Podľa zákona č. 264/1999 Z. z. v znení neskorších predpisov sa môžu slovenské technické normy
rozmnžovať a rozširovať iba so súhlasom Úradu pre normalizáciu, metrológiu a skúšobníctvo SR.

EUROPEAN STANDARD
NORME EUROPÉENNE
EUROPÄISCHE NORM

EN 15220

August 2016

ICS 45.060.01

Supersedes EN 15220-1:2008+A1:2011

English Version

Railway applications - Brake indicators

Applications ferroviaires - Indicateurs de freins

Bahnanwendungen - Bremsanzeigevorrichtungen

This European Standard was approved by CEN on 12 June 2016.

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.

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-CENELEC Management Centre has the same status as the official versions.

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



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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

Contents

Page

European foreword.....	4
1 Scope	5
2 Normative references	5
3 Terms and definitions	5
4 Symbols and abbreviations	7
5 Requirements	8
5.1 Design and manufacturing.....	8
5.2 Operating conditions	8
5.2.1 General conditions.....	8
5.2.2 Specific requirements for pneumatic brake indicators	9
5.2.3 Specific requirements for electrical brake indicators.....	9
5.3 Functional characteristics	10
5.3.1 Application/release status (pneumatic brake indicator)	10
5.3.2 Lubrication (pneumatic brake indicator)	10
5.3.3 Leakage (pneumatic brake indicator)	10
5.3.4 Electrical characteristics	10
5.4 Design requirements	10
5.4.1 External appearance	10
5.4.2 Fire/smoke behaviour	10
5.4.3 Connections.....	10
5.4.4 Electric contacts and operating voltage (pneumatic brake indicator).....	10
5.4.5 Space envelope (pneumatic brake indicator).....	11
5.4.6 Indicator window	11
5.4.7 Brake indicator weight	11
6 Type test methods.....	11
6.1 Sampling for type test.....	11
6.2 Test requirements	11
6.3 Test procedure for pneumatic indicators	11
6.3.1 Principle	11
6.3.2 Check of physical and geometrical characteristics	12
6.3.3 Hydraulic test (water pressure) at given pressure.....	12
6.3.4 Protection against ingress of dust and water	13
6.3.5 Insulation test (pneumatic brake indicators with switches only)	13
6.3.6 Dielectric strength (pneumatic brake indicators with switches only).....	14
6.3.7 Tightness test.....	14
6.3.8 Application/release status control.....	16
6.3.9 Vibration test.....	18
6.3.10 Resistance to shock test.....	18
6.3.11 Endurance at ambient temperature test	18
6.3.12 Corrosion test	19
6.3.13 Fire/smoke behaviour	19
6.3.14 Examination	20
6.4 Test procedure for electrical indicators.....	20
6.4.1 General.....	20
6.4.2 Dust test for electrical brake indicators	20

6.4.3	Water test for electrical brake indicators	20
6.4.4	Vibration and shock test	20
6.4.5	Fire/smoke behaviour	21
7	In Service assessment	21
7.1	General	21
7.2	Service trial	21
7.3	Sample	21
7.4	Previous tests (before start of the service trial)	21
7.5	Intermediate test	21
7.6	Final tests.....	21
8	Routine tests.....	21
9	Designation	22
10	Marking	22
Annex A (informative) Brake indicator and parking brake indicator pneumatically operated overall dimensions		23
Annex ZA (informative) Relationship between this European Standard and the Essential Requirements of EU Directive 2008/57/EC		28

European foreword

This document (EN 15220:2016) has been prepared by Technical Committee CEN/TC 256 “Railway applications”, the secretariat of which is held by DIN.

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 2017, and conflicting national standards shall be withdrawn at the latest by February 2017.

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 15220-1:2008+A1:2011.

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 2008/57/EC.

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

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

1 Scope

This European Standard specifies the requirements for the design, dimensions, performance and testing of single double and multiple brake indicators. It applies to pneumatically and electrically operating brake indicators visible from the outside of the vehicle.

NOTE Brake indicators are for giving information about release and application of the brake.

This European Standard applies to brake indicators on railway vehicles used on the main national networks, urban networks, underground railways, trams and private networks (regional railways, company railways etc.).

This document does not apply to brake indicator for magnetic track brake or eddy current brake.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 14478, *Railway applications - Braking - Generic vocabulary*

EN 45545-2, *Railway applications — Fire protection on railway vehicles — Part 2: Requirements for fire behaviour of materials and components*

EN 50121-3-2, *Railway applications - Electromagnetic compatibility - Part 3-2: Rolling stock – Apparatus*

EN 50125-1, *Railway applications — Environmental conditions for equipment — Part 1: Equipment on board rolling stock*

EN 50155, *Railway applications - Electronic equipment used on rolling stock*

EN 60529:1991 + A1:2000 + A2:2013 *Degrees of protection provided by enclosures (IP Code)* (IEC 60529:1989 + A1:1999 + A2:2013)

EN 60721-3-5:1997, *Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities - Section 5: Ground vehicle installations* (IEC 60721-3-5:1997)

EN 61373:2010, *Railway applications - Rolling stock equipment - Shock and vibration tests* (IEC 61373:2010)

EN ISO 228-2, *Pipe threads where pressure-tight joints are not made on the threads - Part 2: Verification by means of limit gauges* (ISO 228-2)

EN ISO 9227, *Corrosion tests in artificial atmospheres - Salt spray tests* (ISO 9227)

ISO 5208, *Industrial valves — Pressure testing of metallic valves*

ISO 8573-1:2010, *Compressed air — Part 1: Contaminants and purity classes*

koniec náhľadu – text ďalej pokračuje v platenej verzii STN