SVENSK STANDARD

SS-EN 50436-1, utg 3:2024

Fastställd	Sida	Ansvarig kommitté
2024-05-22	1 (39)	SEK TK BTTF 116-2

Alkolås –
Fordringar och provningar –
Del 1: Instrument med munstycke som mäter alkohol i utandningsprov för villkorsprogram och för allmänt förebyggande syfte

Alcohol interlocks –
Test methods and performance requirements –
Part 1: Instruments having a mouthpiece and measuring breath alcohol for drink-driving-offender programs and general preventive use

Som svensk standard gäller europastandarden EN 50436-1:2023. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50436-1:2023.

Nationellt förord

Denna standard ersätter de tidigare fastställda svensk standarderna SS-EN 50436-1, utg 2:2014 och SS-EN 50436-2, utg 2:2014 med eventuella tillägg, ändringar och rättelser, vilka gäller ej fr o m 2026-06-19.

ICS 43.040.10; 71.040.40

Denna standard är fastställd av SEK Svensk Elstandard,
som också kan lämna upplysningar om **sakinnehållet** i standarden.
Postadress: Box 1284, 164 29 KISTA
Telefon: 08 - 444 14 00.
E-post: sek@elstandard.se. Internet: www.elstandard.se

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a mätning, säkerhet och provning och för utförande, skötsel och dokumentation av elprodukter och elanläggningar.

Genom att utforma sådana standarder blir säkerhetsfordringar tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard
Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 50436-1

July 2023

ICS 43.040.10; 71.040.40

Supersedes EN 50436-2:2014; EN 50436-1:2014; EN 50436-2:2014/A1:2015; EN 50436-1:2014/AC:2016-03

English Version

Alcohol interlocks - Test methods and performance requirements - Part 1: Instruments having a mouthpiece and measuring breath alcohol for drink-driving-offender programs and general preventive use

Ethylotests antidémarrage - Méthodes d'essais et exigences de performance - Partie 1: Appareils équipés d'un embout qui mesurent le taux d'alcoolémie dans l'air expiré, pour programmes de lutte contre la conduite en état d'ivresse et à usage préventif général

Alkohol-Interlocks - Prüfverfahren und Anforderungen an das Betriebsverhalten - Teil 1: Geräte mit Mundstück zur Messung des Atemalkohols für Programme mit Trunkenheitsfahrern und für den allgemein-präventiven Einsatz

This European Standard was approved by CENELEC on 2023-06-19. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Türkiye and the United Kingdom.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN 50436-1:2023 E

SEK Svensk Elstandard SS-EN 50436-1, utg 3:2024

Contents

Page

European foreword

This document (EN 50436-1:2023) has been prepared by CLC/BTTF 116-2 “Alcohol Interlocks”.

The following dates are fixed:

- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) 2024-06-19
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2026-06-19

This document supersedes EN 50436-1:2014 and EN 50436-2:2014 and all of their amendments and corrigenda (if any).

EN 50436-1:2023 includes the following significant technical changes with respect to EN 50436-1:2014 and EN 50436-2:2014:

— EN 50436-2 was integrated into EN 50436-1 and all essential requirements incorporated into EN 50436-1;

— Clause 1, Scope, was updated to consider the requirements from Part 2;

— Clause 3, Terms and definitions, definitions were added for immobiliser, alcohol interlock, digital interface, low-power-consumption state and handset. Some existing definitions were updated;

— Clause 4, General requirements, was updated to reflect current communication requirements;

— Clause 6.6, Low-power-consumption state, the current in low-power-consumption state of the alcohol interlock was changed from 5 mA to 1 mA at 12 V and at 24 V;

— Clause 6.7, Electrical disturbances, was updated;

— Clause 6.7.2, Supply lines, test levels were adjusted;

— Clause 6.9, Electromagnetic compatibility, both notes were integrated into one note with reference to the EMC and RED Directives;

— Clause 7, Calibration curve, the tolerance was changed from ± 0,02 mg/l or ± 15 % of the nominal value to ± 0,02 mg/l or ± 10 % of the nominal value;

— Clause 8.4, Drop test, a description for the handset was added;

— Clause 9, Environmental test, the procedure for the test was revised and tolerances added where necessary;

— Clause 10, Breath sample, was revised to add tolerances to the test gas flow;

— Clause 11.1, Test gases, carbon dioxide was added;

— Clause 12.6, Filter, the complete clause was updated to distinguish between tube filter and disc filter;

— Clause 12.6.1, Tube Filter, the charcoal was specífied to a mixture of pieces with diameters of 5 mm to 8 mm;

— Clause 12.7, Condensation, the clause was updated;

— Clause 12.8, Water, the clause was updated;

— Clause 12.10, Removal of handset, two additional tests were added;

— Clause 15.1, Instructions for installation, a note with the reference to EN 50436-7 was added;

— Clause 17, Labelling and marking, further requirements were added.

Introduction

The purpose of alcohol interlocks is to enhance traffic safety by preventing persons with alcohol concentrations exceeding a set limit value from driving a motor vehicle. The EN 50436 series specifies test methods and essential performance requirements for alcohol interlocks and gives guidance for decision makers, purchasers and users.

The content and requirements of this part of EN 50436 are based on the experience and necessities of using alcohol interlocks to prevent drink driving in several countries over several decades.

Therefore, alcohol interlocks to be used in all general preventive programmes and those for drink driving offenders and legally regulated programmes monitored or controlled in a comparable way should comply with this document.

Part 3 of this series of standards gives information on how to implement the usage of alcohol interlocks.

The purpose of the EN 50436 series is to specify essential performance requirements and to provide the respective test methods for available technologies. The technology of alcohol interlocks continues to evolve, and further innovations can be expected. These could be considered in new parts or revisions of this document.

1 Scope

This document specifies test methods and performance requirements for alcohol interlocks having a mouthpiece. It covers alcohol interlocks to be used in all general preventive programmes and those for drink driving offenders and legally regulated programmes monitored or controlled in a comparable way.

This document can also be used for alcohol interlocks intended for other applications.

This document is directed at test laboratories and manufacturers of alcohol interlocks. It defines requirements and test procedures for type testing.

Several parameters (such as alcohol concentration or breath volume) are specified in this document for the purpose of type testing according to this document only.

NOTE It can be necessary due to national regulations or depending on user requests to set the values of the prescribed parameters differently when the alcohol interlocks are in use.

This document also applies to alcohol interlocks integrated into control systems of the vehicle as well as to accessory devices connected to the alcohol interlock.

This document does not apply to

— instruments measuring the alcohol concentration in the ambient air in the vehicle,

— alcohol interlocks not having a mouthpiece,

— methods of installation and connections to the vehicle.

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 50436-4, *Alcohol interlocks — Test methods and performance requirements — Part 4: Connection and digital interface between the alcohol interlock and the vehicle*

EN 60068-2-78, *Environmental testing — Part 2-78: Tests — Test Cab: Damp heat, steady state* (IEC 60068-2-78)

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

ISO 7637-2, *Road vehicles — Electrical disturbances from conduction and coupling — Part 2: Electrical transient conduction along supply lines only*

ISO 7637-3, *Road vehicles — Electrical disturbances from conduction and coupling — Part 3: Electrical transient transmission by capacitive and inductive coupling via lines other than supply lines*

ISO 10605, *Road vehicles — Test methods for electrical disturbances from electrostatic discharge*

ISO 16750-1, *Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 1: General*

ISO 16750-2:2012, *Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 2: Electrical loads*

ISO 16750-3:2012, *Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 3: Mechanical loads*

ISO 16750-4:2010, *Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 4: Climatic loads*