

STN	Uzamykanie reagujúce na alkohol Skúšobné metódy a požiadavky na funkčné vlastnosti Časť 1: Prístroje s náustkom na meranie alkoholu v dychu pre programy na zníženie počtu vodičov jazdiacich pod vplyvom alkoholu a na všeobecné preventívne použitie	STN EN 50436-1 30 4010
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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

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. 09/23

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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

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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.

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European Committee for Electrotechnical Standardization
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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 $\pm 0,02$ mg/l or ± 15 % of the nominal value to $\pm 0,02$ 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;

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- Clause 12.6.1, Tube Filter, the charcoal was specified 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.

EN 50436-1:2023 (E)**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*

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