

**Alcohol interlocks - Test methods and performance requirements -- Part 1: Instruments for drink-driving-offender programs**

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## EESTI STANDARDI EESSÕNA

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English version

**Alcohol interlocks -  
Test methods and performance requirements -  
Part 1: Instruments for drink-driving-offender programs**

Ethylotests anti-démarrage -  
Méthodes d'essais et exigences de  
performance -  
Partie 1: Appareils pour programmes de  
lutte contre la conduite en état d'ivresse

Alkohol-Interlocks -  
Prüfverfahren und Anforderungen an das  
Betriebsverhalten -  
Teil 1: Geräte für Programme mit  
Trunkenheitsfahrern

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

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

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## Foreword

This document (EN 50436-1:2014) 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) 2014-10-21
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2016-10-21

This document supersedes EN 50436-1:2005.

EN 50436-1:2014 includes the following significant technical changes with respect to EN 50436-1:2005:

- Clause 3: definitions are added for mouthpiece, data memory, supply voltage, calibration interval, service reminder, recall, manufacturer and aftermarket installation.
- Clause 4: requirements for communication integrity, wireless communication and basic functionality are added.
- Sub-clauses 5.1 and 5.3.2: accessory devices are included.
- Sub-clause 5.5: the requirement in test type 3 is modified.
- Clause 6: tests with 24 V power supply are added.
- Sub-clause 6.8: the chapter electrical discharge is added.
- Clause 7: the requirement for the calibration curve is increased.
- Clause 8: the references to basic standards are updated.
- Clause 9: the chapter for environmental tests is revised, the references to basic standards are updated, and tests for 24 V power supply are added.
- Clause 10: the chapter for breath sample with volume, flow, exhalation time and response time is revised.
- Clause 12: manipulation and circumvention is completely revised.
- Normative Annex A with requirements for the description of events is added.
- Informative Annex B with performance testing is added.

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

## 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. 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 drink driving offender programmes in different countries over several decades. Therefore, alcohol interlocks used in programmes for drink driving offenders should comply with this European Standard.

Alcohol interlocks for general preventive use are the subject of EN 50436-2. General preventive use, which concerns a much larger number of drivers and vehicles, applies to both professional and private drivers of motor vehicles.

The purpose of 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 European Standard.



## 1 Scope

This European Standard specifies test methods and performance requirements for breath alcohol controlled alcohol interlocks. It covers alcohol interlocks intended to be used in programmes for drink driving offenders as well as in programmes monitored or controlled in a comparable way.

This European Standard 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 European Standard for the purpose of type testing according to this standard only. However, it may 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 European Standard also applies to alcohol interlocks integrated into other control systems of the vehicle as well as to accessory devices connected to the alcohol interlock.

This European Standard does not apply to

- alcohol interlocks intended for general preventive use (see EN 50436-2),
- 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, 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 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 by 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 16750-2:2010, *Road vehicles – Environmental conditions and testing for electrical and electronic equipment – Part 2: Electrical loads*

ISO 16750-3:2007, *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*