

© Copyright SEK. Reproduction in any form without permission is prohibited.

Alkolås – Fordringar och provning – Del 3: Vägledning för myndigheter, beslutsfattare, inköpare och användare

Alcohol interlocks –

Test methods and performance requirements –

Part 3: Guidance for authorities, decision makers, purchasers and users

Som svensk standard gäller europastandarden EN 50436-3:2016. Den svenska standarden innehåller den officiella engelska språkversionen av EN 50436-3:2016.

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

English Version

**Alcohol interlocks - Test methods and performance
requirements - Part 3: Guidance for authorities, decision
makers, purchasers and users**

thylotests antidémarrage - Méthodes d'essais et
exigences de performance - Partie 3 : Document
d'orientation pour les autorités, les décideurs, les
acheteurs et les utilisateurs

Alkohol-Interlocks - Prüfverfahren und Anforderungen an
das Betriebsverhalten - Teil 3: Leitfaden für Behörden,
Entscheider, Käufer und Nutzer

This European Standard was approved by CENELEC on 2016-10-31. 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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.



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

Contents

Page

European foreword.....	5
Introduction.....	6
1 Scope.....	7
2 Normative references.....	7
3 Terms and definitions	8
4 Application of alcohol interlocks as a road safety measure	10
4.1 General.....	10
4.2 Primary preventive application.....	10
4.3 Secondary preventive application.....	11
5 Application of alcohol interlocks for automatic access control.....	11
6 Introduction of alcohol interlocks for commercial and professional use	12
6.1 Alcohol interlocks, a way to ensure quality	12
6.2 International Standard ISO 39001.....	12
6.3 Systematic procedures to introduce alcohol interlocks	12
6.4 Dialogue with unions or other representatives	13
6.5 Dealing with alcohol problems	14
7 Alcohol interlocks in drink driving offender programmes	14
7.1 Overview	14
7.2 Participation rate.....	15
8 Criteria for selection	15
8.1 Approvals and performance testing	15
8.1.1 EMC legislation.....	15
8.1.2 Performance standards	16
8.2 Breath alcohol measurement techniques.....	17
8.2.1 General	17
8.2.2 Electrochemical sensors	17
8.2.3 Semiconductor sensors	18
8.2.4 Optical sensors	18
8.3 Quality demands and choice of products	18
8.4 Parameter settings.....	20
8.4.1 Alcohol concentration limit	20
8.4.2 Other parameters	20
8.5 Circumvention, manipulation and tampering	21
8.6 Data memory, download and analysis.....	22

9	Installation in vehicles	22
9.1	General.....	22
9.2	Instructions for installation.....	22
9.3	Criteria for placement.....	23
10	Use	24
10.1	Education and information for the user.....	24
10.2	Instructions for use	25
10.3	Environmental conditions.....	26
10.4	Override function	26
10.4.1	Override function for emergency situations	26
10.4.2	Override function for technical service	26
10.5	Retest function.....	26
10.6	Change driver function.....	27
10.7	Effects of mouth alcohol and environmental contamination	27
10.8	Interfering substances	28
11	Maintenance.....	28
11.1	Training	28
11.2	Periodic inspection, functional tests and calibration	28
11.3	Instructions for service	28
12	Removal	29
13	Conclusion.....	29
	Annex A (informative) Questions and answers.....	30
A.1	What is an alcohol interlock ?.....	30
A.2	Where are alcohol interlocks used ?.....	30
A.3	Is it difficult to install an alcohol interlock ?	30
A.4	Is it possible to install an alcohol interlock in motorcycles ?	30
A.5	Can an alcohol interlock be circumvented ?.....	30
A.6	Can a sober person blow into the alcohol interlock to allow an impaired person to drive ?.....	30
A.7	Do alcohol interlocks detect tampering or attempts to bypass them ?.....	31
A.8	Can any person use a car with an alcohol interlock ?	31
A.9	Is it necessary to deliver a breath test after a short stop ?	31
A.10	What is a retest ?.....	31
A.11	Is it dangerous to deliver a retest during driving ?	31
A.12	Should an alcohol interlock be calibrated regularly ?.....	31
A.13	What happens if the alcohol interlock is defective ? Can the motor then be started ?	31
A.14	What happens if the alcohol interlock becomes defective while the motor is running ?	32
A.15	Can a sober person have a positive test result ?	32
A.16	How long does it take until residual mouth alcohol disappears ?	32

A.17 What happens if a person has taken medicines containing alcohol ?	33
A.18 How effective are alcohol interlocks in preventing (repeat) drink driving ?	33
A.19 Can alcohol dependent drivers benefit from alcohol interlocks ?	33
A.20 Are there further beneficial effects apart from road safety ?	33
Annex B (informative) Items to be considered when selecting an alcohol interlock	34
Annex C (informative) Description of basic parameter settings.....	35
Annex D (informative) Basic steps of a drink-driving-offender programme	39
Bibliography	44
Tables	
Table C.1 – Summary of typical parameter settings of alcohol interlocks	35
Table D.1 – Summary of typical steps of drink-driving-offender programme	39

European foreword

This document (EN 50436-3:2016) has been prepared by CLC/BTTF 116-2 "Alcohol interlocks".

The following dates are fixed:

- latest date by which this document (dop) [2017-10-31]
has to be implemented
at national level by publication of an identical
national standard or by endorsement
- latest date by which the national standards (dow) [2019-10-31]
conflicting with this document
have to be withdrawn

This document supersedes CLC/TR 50436-3:2010.

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

EN 50436-3:2016 includes the following significant technical changes with respect to CLC/TR 50436-3:2010:

- Clause 3: definitions are added for primary prevention and secondary prevention.
- Clause 4: this clause has been revised including primary prevention and secondary prevention.
- Clause 5: the former content for automatic access control is now in a separate clause.
- Subclause 6.2: the chapter on International Standard ISO 39001 is added.
- Clause 7: the chapter on alcohol interlocks in drink driving offender programmes is added.
- Subclause 8.1: the text is updated with respect to the current legislation.
- Informative Annex C with a description of basic parameter settings is added.
- Informative Annex D with a description of basic steps of a drink driving offender programme is added.

Introduction

According to the European Transport Safety Council (ETSC), in about a quarter of the fatal accidents that occur in traffic on European roads, alcohol impairment has been a contributory factor. Drink-driving is found in all social classes and professional categories, often without their families, friends, colleagues or supervisors knowing about it. In those cases where there actually is an awareness, it is often difficult to know how to act or confront the problem. A strategy has been drawn up within the European Commission to decrease alcohol related injuries as well as to support countries that are working in different ways to tackle the problem of drink-driving.

One strategy to decrease alcohol-related accidents is to implement the use of alcohol interlocks. The main purpose of alcohol interlocks is to prevent persons with breath alcohol concentrations exceeding a set limit value from driving a vehicle.

The use of alcohol interlocks in the vehicles of drink-driving offenders was started in the USA in 1985 and followed a few years later in Canada. From the end of the 1990s, the use of alcohol interlocks has spread worldwide, especially in Australia and several European countries. In Sweden, offender programmes started in 1999, followed closely by the use of alcohol interlocks for quality assurance of transportation. Further examples for the implementation of alcohol interlocks saving human lives every year in Europe are Finland, France and the Netherlands. A continuously updated overview is published by ETSC (www.etsc.eu).

There are several areas in which alcohol interlocks may be used:

- installed in a vehicle as a general preventive measure for the promotion of traffic safety; or
- in vehicles as ordered by a court or an administrative authority as part of a drink-driving offender programme; or
- for persons subject to a medical or rehabilitation programme; or
- as a safety measure for the access to machinery or certain restricted areas.

This guidance for authorities, governments, political decision makers, transport companies, purchasers, unions and users contains numerous recommendations for those interested in the use of alcohol interlocks. However, it is not mandatory and it does not contain any requirements.

This European Standard is part of a series of European Standards which mainly describe test methods and requirements for alcohol interlocks. It is assumed that the recommendations given in this document are used for alcohol interlocks fulfilling the requirements of one or more of the performance standards of this series.

1 Scope

An alcohol interlock is a system comprising a breath alcohol measuring instrument and an immobiliser which may be easily installed in motor vehicles as passenger cars, coaches, taxis, hazardous goods transporters, lorries, trams, trains, motorcycles, boats, or snow mobiles. Before the vehicle motor can be started or the vehicle can be moved, a breath sample needs to be provided to the alcohol interlock, normally through a mouthpiece. Once the breath alcohol measurement has been performed, the alcohol interlock will prevent drivers from starting the motor if they have an alcohol concentration above a predetermined limit value. This limit may be set at the legal limit of a respective country or lower.

Alcohol interlocks that meet the relevant European Standards detect, for example, if the sample is delivered by a human being. They are also capable of preventing and detecting tampering with the instrument.

Additional parts of the system may include identity checking or recording mechanisms.

The purpose of this European Standard is to give practical guidance for selection, installation, use and maintenance of alcohol interlocks. It is directed to all those who have an interest in alcohol interlocks as well as companies selling and installing alcohol interlocks, purchasers and users for commercial, professional or private use. The European Standard gives information about the alcohol interlock and how it is to be used.

This European Standard describes alcohol interlocks for use in vehicles as a general preventive measure in traffic safety as well as for use in drink driving offender programmes. However, information provided may also be useful for alcohol interlocks in other applications.

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 50436-1:2014, *Alcohol interlocks - Test methods and performance requirements - Part 1: Instruments for drink-driving-offender programs*

EN 50436-2:2014, *Alcohol interlocks - Test methods and performance requirements - Part 2: Instruments having a mouthpiece and measuring breath alcohol for general preventive use*

EN 50436-6:2015, *Alcohol interlocks - Test methods and performance requirements - Part 6: Data security*

NOTE The technology of alcohol interlocks is rapidly evolving, and further innovations can be expected, which could be considered in future amendments or new parts of these European Standards.

ISO 39001:2012, *Road traffic safety (RTS) management systems - Requirements with guidance for use*