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Alkoholne zapore - Preskusne metode in zahtevane lastnosti - 7. del: Navodilo za namestitvev

Alcohol interlocks - Test methods and performance requirements - Part 7: Installation document

Alkohol-Interlocks - Prüfverfahren und Anforderungen an das Betriebsverhalten - Teil 7: Einbaudokument

Éthylotests antidémarrage - Méthodes d'essais et exigences de performance - Partie 7: Document d'installation

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Alcohol interlocks - Test methods and performance requirements - Part 7: Installation document

Éthylotests antidémarrage - Méthodes d'essais et
exigences de performance - Partie 7: Document
d'installation

Alkohol-Interlocks - Prüfverfahren und Anforderungen an
das Betriebsverhalten - Teil 7: Einbaudokument

This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2016-01-15.

It has been drawn up by CLC/BTTF 116-2.

If this draft becomes a European Standard, 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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

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1	Contents	Page
2	European foreword	3
3	Introduction	4
4	1 Scope	5
5	2 Normative references	5
6	3 Terms and definitions	6
7	4 Installation of an alcohol interlock	7
8	5 Time behaviour	8
9	6 Layout and contents of the installation document	9
10	6.1 General	9
11	6.2 General layout	9
12	6.3 Header	9
13	6.4 Footer	10
14	6.4.1 General	10
15	6.4.2 Document identification number	10
16	6.5 Connection schematics	10
17	6.6 Safety risks at installation and items to be considered	11
18	6.7 Assembly instruction	11
19	6.8 Modification of vehicle operation	11
20	6.9 Position of alcohol interlock handset	11
21	Annex A (informative) Time behaviour	12
22	Annex B (normative) General layout of the installation document	13
23	Annex C (normative) Connection schematics	14
24	Annex D (informative) Assembly instruction	17
25	Bibliography	19
26		
27	Figures	
28	Figure 1 — Traditional installation schematics for an alcohol interlock	8
29	Figure A.1 — Time behaviour diagram	12
30	Figure D.1 — Location of ground installation point	17
31	Figure D.2 — Taking apart to reach an installation point by minimizing damages	17
32	Figure D.3 — Location of the connector and of the pins in the connector	18
33		
34	Tables	
35	Table B.1	13
36	Table C.1	14
37		

38 European foreword

39 This document (prEN 50436-7:2015) has been prepared by CLC/BTTF 116-2 "Alcohol Interlocks".

40 This document is currently submitted to the enquiry.

41 The following dates are proposed:

- latest date by which the existence of this document has to be announced at national level (doa) dor + 6 months
- latest date by which this document has to be implemented at national level by publication of an identical national standard or by endorsement (dop) dor + 12 months
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) dor + 36 months (to be confirmed or modified when voting)

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SIST EN 50436-7:2017

<https://standards.iteh.ai/catalog/standards/sist/f2fa9fa9-3aa4-4488-95f5-291ab8093745/sist-en-50436-7-2017>

42 Introduction

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

47 There are several ways in which alcohol interlocks may be used:

- 48 – installed in a vehicle as a general preventive measure for the promotion of traffic safety, on a voluntary
49 basis or required legally in certain vehicles (e.g. vehicles for children transport), or
- 50 – in vehicles as ordered by a court or an administrative authority as part of a drink-driving offender
51 programme, or
- 52 – for persons subject to a medical or rehabilitation programme.

53 Alcohol interlocks are often intended for aftermarket installation. For this purpose, they are connected to the
54 electric and control circuits of the vehicle.

55 This installation of an alcohol interlock should not interfere with the proper performance of the vehicle, should
56 not impair the safety and security of the vehicle, and should be as straightforward as possible. Additionally,
57 the installation costs should be low in relation to the total cost of the alcohol interlock.

58 Therefore, it is desirable to have a standardized installation document to give the necessary details to the
59 technicians installing an alcohol interlock into a certain vehicle model, even if the responsibility for the safe
60 installation will remain on the alcohol interlock installer.

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<https://standards.iteh.ai/catalog/standards/sist/f2fa9fa9-3aa4-4488-95f5-291ab8093745/sist-en-50436-7-2017>

61 **1 Scope**

62 This European Standard defines the content and the layout of an installation document providing necessary
63 and useful information about the aftermarket installation of an alcohol interlock into a vehicle. It details the
64 type of the vehicle, connection schematics, accessibility instructions and recommendations to avoid safety
65 risks.

66 The contents and layout ensures that the information document be easy to use by installers in different
67 countries and may be available in paper or electronic format.

68 This European Standard is applicable to alcohol interlocks for drink-driving-offender programs (as in
69 EN 50436-1) as well as to alcohol interlocks for general preventive use (as in EN 50436-2).

70 This European Standard is mostly intended for vehicle manufacturers and manufacturers of alcohol interlocks.

71 This European Standard does not apply to

- 72 – the process of handling the installation documents,
- 73 – the installation process,
- 74 – information related to education and training for installers,
- 75 – general performance requirements for alcohol interlocks (see EN 50436-1 and EN 50436-2),
- 76 – the installation of the alcohol interlock during the production of the vehicle.

77 **2 Normative references**

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

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

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

85 EN ISO 216, *Writing paper and certain classes of printed matter – Trimmed sizes – A and B series, and*
86 *indication of machine direction (ISO 216)*

87

88 3 Terms and definitions

89 For the purposes of this document, the following terms and definitions apply.

90 3.1

91 alcohol interlock

92 device which is normally in the blocking state when installed to prevent the starting of a vehicle engine, and
93 which can be brought into the not-blocking state only after the presentation and analysis of a breath sample
94 with an alcohol concentration below a limit value

95 Note 1 to entry: It normally consists of a handset and a control unit electrically connected to the vehicle.

96 Note 2 to entry: In this European Standard, the expression "starting of the vehicle engine" includes provision of an
97 output signal from the alcohol interlock to the vehicle to enable the starting, operation or movement of the vehicle.

98 [SOURCE: EN 50436-1:2014, 3.1, modified — 'vehicle motor' is replaced by 'vehicule engine']

99 3.2

100 breath alcohol concentration

101 mass concentration of ethanol, expressed in mg/l (milligram ethanol per litre breath air), in a breath sample
102 delivered into an alcohol interlock

103 [SOURCE: EN 50436-1:2014, 3.2]

104 3.3

105 breath sample

106 breath air sample taken under forced expiration

107 [SOURCE: EN 50436-1:2014, 3.3]

108 3.4

109 accepted breath sample

110 breath sample fulfilling set requirements for volume, flow, exhalation time and other human breath sample
111 characteristics

112 Note 1 to entry The acceptance of a breath sample is independent from the alcohol concentration.

113 [SOURCE: EN 50436-1:2014, 3.4]

114 3.5

115 breath test

116 test providing a breath sample to an alcohol interlock

117 [SOURCE: EN 50436-1:2014, 3.5]

118 3.6

119 blocking state

120 state in which the alcohol interlock inhibits the starting of the vehicle motor

121 [SOURCE: EN 50436-1:2014, 3.7]

122 3.7

123 not-blocking state

124 state in which the vehicle motor can be started

125 [SOURCE: EN 50436-1:2014, 3.8]

126 **3.8**
127 **breath alcohol concentration limit**
128 set value of the breath alcohol concentration at or above which the vehicle motor will be prevented from being
129 started

130 [SOURCE: EN 50436-1:2014, 3.9]

131 **3.9**
132 **supply voltage**
133 voltage obtained from the electric power source of the vehicle for operation of the alcohol interlock

134 [SOURCE: EN 50436-1:2014, 3.19]

135 **3.10**
136 **manufacturer**
137 person or organisation responsible for the design, construction and/or production of the vehicle or the alcohol
138 interlock

139 [SOURCE: EN 50436-1:2014, 3.23, modified — 'the vehicle or' has been added]

140 **3.11**
141 **aftermarket installation**
142 any installation of an alcohol interlock in a vehicle after the original production of a vehicle

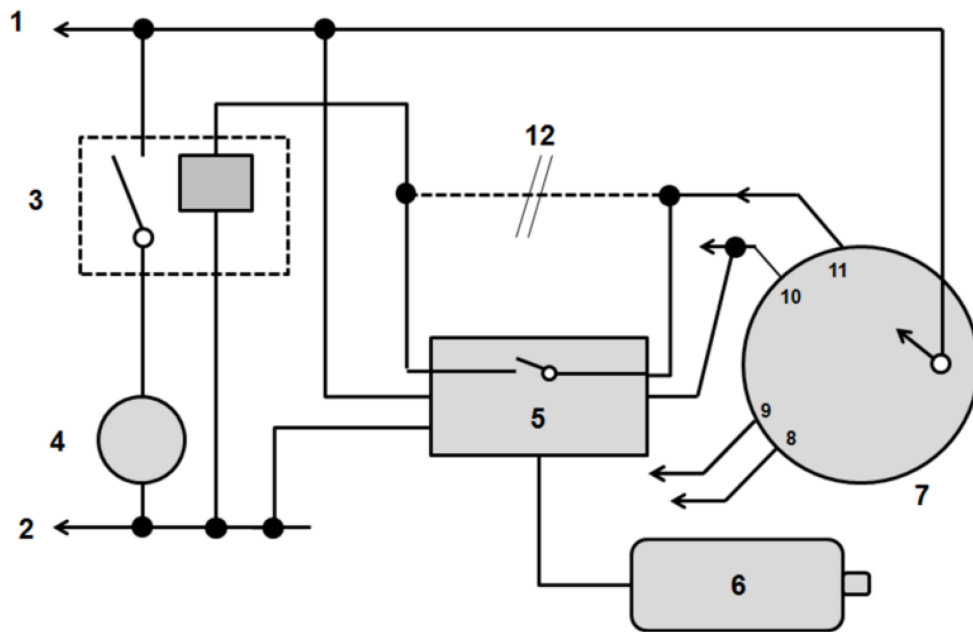
143 [SOURCE: EN 50436-1:2014, 3.24]

144 **4 Installation of an alcohol interlock**

145 This clause describes the basic ("traditional") principle for the installation of an alcohol interlock.

146 The alcohol interlock requires connection to the vehicle: supply voltage, ground, ignition line, interruption of
147 the starter wire and detection of engine run.

148 The voltage supply between the vehicle's ignition switch (position "Starter relay") and the starter system is
149 interrupted (Figure 1). The alcohol interlock is fitted with its output relay into the interrupted circuit. The starter
150 circuit is enabled through the closure of the relay in the alcohol interlock.



151

152 **Key**

- 1 battery feed (+30)
 2 ground (-30)
 3 starter relay
 4 starter motor
 5 alcohol interlock control unit
 6 alcohol interlock handset
 7 ignition switch
 8 off
 9 accessories
 10 ignition / vehicle ready
 11 starter relay
 12 interruption

153

Figure 1 — Traditional installation schematics for an alcohol interlock

154 The alcohol interlock is normally in the blocking state (output relay open). The closure of this relay may only
 155 occur when an accepted breath sample with an alcohol concentration below the pre-set limit has been
 156 delivered.

157 This installation procedure ensures that an alcohol interlock may only intervene in the engine starting process
 158 but may never influence a running engine or a moving vehicle. This is an important condition for the
 159 operational safety of an alcohol interlock equipped vehicle.

160 The expression “starting of the vehicle motor/engine” includes provision of an output signal from the alcohol
 161 interlock to the vehicle to enable the starting, operation or movement of the vehicle.

162 **5 Time behaviour**

163 When using a vehicle with an alcohol interlock a certain time behaviour of user activities as well as vehicle
 164 and alcohol interlock reactions takes place. A typical example is shown in Annex A.

165 **6 Layout and contents of the installation document**

166 **6.1 General**

167 The installation document provides necessary and useful information about the aftermarket installation of an
168 alcohol interlock into a vehicle. It details the type of the vehicle, connection schematics, accessibility
169 instructions and recommendations to avoid safety risks.

170 The installation document should be prepared by vehicle manufacturers and should be provided to alcohol
171 interlock manufacturers and their installers.

172 The installation document may be created as one document covering all vehicle variants. However it is
173 recognized that there may be instances where the position of the connections may differ from one vehicle
174 variant to another, and that in these instances it will be necessary to create additional installation documents
175 to cover these differences.

176 The installation document shall be written in English language. Additional version(s) of the installation
177 document may be written in other language(s).

178 **6.2 General layout**

179 The general layout of the installation document is mandatory and shall be designed according to Annex B.
180 This includes the following:

- 181 – header (see 6.3),
- 182 – footer (see 6.4),
- 183 – connection schematics (see 6.5),
- 184 – safety risks at installation and items to be considered (see 6.6),
- 185 – assembly instruction (see 6.7),
- 186 – modification of vehicle operation, (see 6.8),
- 187 – position of alcohol interlock handset, (see 6.9).

188 The installation document normally consists of several pages. The header and the footer shall be repeated on
189 all pages.

190 The installation document shall be able to be printed easily on an ISO A4 format paper (according to
191 EN ISO 216).

192 **6.3 Header**

193 The header consists of four parts.

- 194 1) The first part of the header shall contain the logo(s) of the vehicle brand.
- 195 2) The second part of the header shall contain the name of the vehicle manufacturer.
- 196 3) The third part of the header shall contain information for uniquely identifying a specific vehicle model, for
197 example:
 - 198 – name of the vehicle model,
 - 199 – body type(s) covered by the installation document,