
**Električne naprave za zaznavanje vnetljivega plina v gospodinjstvih - 2. del:
Električne naprave za neprekinjeno delovanje v inštalacijah, vgrajenih v vozilih za
rekreacijo, in na sorodnih področjih - Dodatne preskusne metode in zahteve za
delovanje**

Electrical apparatus for the detection of combustible gases in domestic premises - Part 2:
Electrical apparatus for continuous operation in a fixed installation in recreational
vehicles and similar premises - Additional test methods and performance requirements

Elektrische Geräte für die Detektion von brennbaren Gasen in Wohnhäusern - Teil 2:
Ortsfeste elektrische Geräte zum kontinuierlichen Betrieb in Freizeitfahrzeugen oder
ähnlichen Umgebungen - Ergänzende Prüfverfahren und Anforderungen an das
Betriebsverhalten

Matériels électriques pour la détection des gaz combustibles dans les locaux à usage
domestique - Partie 2: Matériels électriques en fonctionnement continu et en installation
fixe dans les véhicules de loisir et locaux similaires - Méthodes d'essai supplé

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Electrical apparatus for the detection of combustible gases in domestic premises - Part 2: Electrical apparatus for continuous operation in a fixed installation in recreational vehicles and similar premises - Additional test methods and performance requirements

Matériels électriques pour la détection des gaz combustibles dans les locaux à usage domestique - Partie 2: Matériels électriques en fonctionnement continu et en installation fixe dans les véhicules de loisir et locaux similaires - Méthodes d'essai supplé

Elektrische Geräte für die Detektion von brennbaren Gasen in Wohnhäusern - Teil 2: Ortsfeste elektrische Geräte zum kontinuierlichen Betrieb in Freizeitfahrzeugen oder ähnlichen Umgebungen - Ergänzende Prüfverfahren und Anforderungen an das Betriebsverhalten

This draft European Standard is submitted to CENELEC members for enquiry.
Deadline for CENELEC: 2018-12-07.

It has been drawn up by CLC/TC 216.

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.

This draft European Standard was established by CENELEC in three official versions (English, French, German).
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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 foreword

This document (prEN 50194-2:2018) has been prepared by CLC/TC 216 "Gas detectors".

This document is currently submitted to the Enquiry.

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)

This document will supersede EN 50194-2:2006.

This Part 2 is intended to be used in conjunction with EN 50194-1:2009.

This European Standard supplements or modifies the corresponding clauses of EN 50194; where it states "addition", "modification" or "replacement" the relevant text of EN 50194 is to be adapted accordingly.

Subclauses, tables and notes that are numbered starting from 101 are additional to those in Part 1.

SIST EN 50194-2:2019

<https://standards.iteh.ai/catalog/standards/sist/351be153-7f35-4976-9449-9afe121eee4a/sist-en-50194-2-2019>

72 1 Scope

73 *This Clause of EN 50194-1 is replaced by:*

74 This document specifies test methods and performance requirements for electrical apparatus for the detection of
75 combustible gases designed for continuous operation in a fixed installation in recreational vehicles and similar
76 premises.

77 NOTE 1 For caravan holiday homes EN 50194-1 applies.

78 This document specifies apparatus designed to operate in the event of an escape of liquefied petroleum gas (LPG)
79 and/or petrol (gasoline) vapour and to provide a visual and audible alarm and an executive action in the form of an
80 output signal that can actuate directly or indirectly a shut-off device and/or other ancillary device (Type A of EN
81 50194-1).

82 The document excludes apparatus for the detection of toxic gases such as carbon monoxide (see EN 50291).

83 Apparatus complying with this document is not considered suitable for industrial or commercial installations for
84 which EN 60079-29-1 apply.

85 NOTE 2 Apparatus tested in accordance with EN 60079-29-1 will not necessarily comply with this standard.

86 2 Normative references

87 The following documents are referred to in the text in such a way that some or all of their content constitutes
88 requirements of this document. For dated references, only the edition cited applies. For undated references, the
89 latest edition of the referenced document (including any amendments) applies.

90 EN 437:2003, *Test gases – Test pressures – Appliance categories*

91 EN 13878:2003, *Leisure accommodation vehicles – Terms and definitions*

92 EN 50194-1:2009, *Electrical apparatus for the detection of combustible gases in domestic premises – Test*
93 *methods and performance requirements*

94 EN 60079-1, *Explosive atmospheres - Part 1: Equipment protection by flameproof enclosures “d”*

95 EN 50270:2015, *Electromagnetic compatibility – Electrical apparatus for the detection and measurement of*
96 *combustible gases, toxic gases or oxygen*

97 EN 60068-2-6, *Environmental testing – Part 2-6: Tests – Test Fc: Vibration (sinusoidal) (IEC 60068-2-6)*

98 EN 60068-2-7, *Environmental testing – Part 2-7: Tests – Test Ga: Acceleration, steady state (IEC 60068-2-7)*

99 EN 60068-2-27, *Environmental testing - Part 2-27: Tests - Test Ea and guidance: Shock (IEC 60068-2-27)*

100 EN 60068-2-52, *Environmental testing - Part 2-52: Tests - Test Kb: Salt mist, cyclic (sodium chloride solution) (IEC*
101 *60068-2-52)*

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

103 EN 60721-3-6:1993, *Classification of environmental conditions - Part 3: Classification of groups of environmental*
104 *parameters and their severities - Section 6: Ship environment (IEC 60721-3-6:1987 + A1:1991)*

105 EN 60945:2002, *Maritime navigation and radiocommunication equipment and systems - General requirements -*
106 *Methods of testing and required test results (IEC 60945:2002)*

107 ISO 7637-2:2011, *Road vehicles - Electrical disturbances from conduction and coupling - Part 2: Electrical transient*
108 *conduction along supply lines only*

109 3 Terms and definitions

110 For the purposes of this document, the terms and definitions of EN 50194-1:2009 and the following apply.

111 ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- 112 • IEC Electropedia: available at <http://www.electropedia.org/>
- 113 • ISO Online browsing platform: available at <http://www.iso.org/obp>

114 3.21

115 recreational vehicle

116 recreational vehicles considered by this standard include recreational craft, caravans and motor caravans

117 Note 1 to entry: Other motorised vehicles like trucks are known to have residential accommodation. They are not recreational vehicles but
118 are considered as similar premises in respect of this standard.

119 3.22

120 caravan holiday home

121 transportable leisure accommodation vehicle that does not meet requirements for construction and use of road
122 vehicles, that retains means for mobility and that is for temporary or seasonal occupation

123 [SOURCE: EN 13878]

124 3.23

125 recreational craft

126 boat of a minimum length of 2,5 m and a maximum length of 24 m as specified in Directive 94/25/EC, which is
127 intended for sports or leisure purposes

128 Note 1 to entry: For the purposes of this standard the word 'boat' should be taken with the meaning 'recreational craft'.

129 3.24

130 remote sensor

131 sensor assembly that is mounted in a separate location from the control unit

132 Note 1 to entry: This definition should be read in conjunction with Definition 3.12 of EN 50194-1.

133 3.25

134 control unit

135 unit that may contain the power supply, signal processing, alarm circuits and indicators

136 3.26

137 vehicle supply powered apparatus

138 apparatus designed to be powered by the vehicle's electrical supply

139 3.27

140 caravan

141 trailer leisure accommodation vehicle that meets requirements for construction and use of road vehicles

142 [SOURCE: EN 13878]

143 3.28

144 motor caravan

145 self-propelled leisure accommodation vehicle that meets requirements for construction and use of road vehicles

146 It contains at least:

- 147 – seats and table,
- 148 – sleeping accommodation which may be converted from the seats,
- 149 – cooking facilities, and
- 150 – storage facilities

151 [SOURCE: EN 13878]

152 4 General requirements

153 4.1 General

154 *This subclause of EN 50194-1 is applicable with the following additions:*

155 This standard also includes apparatus for detecting petrol vapour in applications such as the bilges of boats, where
156 petrol is used as fuel. It is not applicable for the detection of vapour of diesel fuel.

157 NOTE 101 Due to the low vapour pressure leaks of diesel fuel do not cause the risk of an explosion at ambient temperatures.

158 The requirements for flammable gas detection as defined in EN 50194-1 apply equally to petrol vapour detectors.

159 In this standard, there are requirements that cover all apparatus. Additional application specific requirements apply
160 to certain groups of recreational vehicles, such as boats. An apparatus which complies with the requirements for
161 recreational craft will automatically comply with the requirements for motor caravans and caravans. An apparatus
162 which complies with the requirements for motor caravans will automatically comply with the requirements for
163 caravans. The apparatus are designed for continuous operation.

164 NOTE 102 When the vehicle is not in use the apparatus may be switched off in order to save the vehicles power supply or the internal
165 batteries.

166 The apparatus may consist of one or more sensor(s) and a control unit. Sensors (integrated into the apparatus or
167 remote) shall be designed to detect LPG and/or petrol vapour.

168 NOTE 103 Sensors or apparatus designed according EN 50194-1 may be used as apparatus or as component of it, if the additional
169 requirements of this standard are complied with.

170 The apparatus shall reliably detect the presence of combustible gas in recreational vehicles under the stated
171 application conditions, shall produce an alarm and shall be able to initiate executive actions whenever the level
172 exceeds the alarm set point.

173 The apparatus, electrical assemblies and components shall comply with EN 50194-1, where applicable, with the
174 construction requirements of 4.2 to 4.6 and the test and performance requirements of Clause 5.

175 4.2 Construction

176 *This subclause of EN 50194-1 is applicable with the following additions:*

177 Each sensor shall be constructed of materials that will not corrode in the environment where it is designed for, e.g.
178 in the presence of a salt-laden atmosphere as exists in a marine environment, or be affected by the gases and
179 vapours that may be expected to be present in a bilge of a recreational craft.

180 Adequate means shall be provided to mount the remote sensor(s), pointing vertically downwards, securely to the
181 vehicle's substructure.

182 The control unit shall be constructed of materials that are suitable for use in the intended application e.g. in the
183 cabin or below deck area of a recreational craft.

184 4.3 Indicators and alarms

185 *This subclause of EN 50194-1 is applicable with the following additions:*

186 4.3.3 Addition:

187 If more than one sensor is connected to a control unit, the control unit shall indicate the alarm condition of the
188 different sensors individually.

189 4.4 Fault signals

190 *This subclause of EN 50194-1 is replaced by:*

191 The apparatus shall provide a visual and audible fault signal in the event of interruption of communication between
192 control unit and the remote sensor(s).

193 The audible fault signal shall be clearly identified and different from a gas alarm.

194 **4.5 Output signal**195 *This subclause of EN 50194-1 is replaced by:*196 The output signal of the apparatus shall operate under the same conditions as the visual and audible alarm. For
197 triggering an output signal, there shall be no built-in delay.198 **4.6 Labelling and instructions**199 *This subclause of EN 50194-1 is applicable with the following additions:*200 The manufacturer shall declare for which of the following application(s) and for which gas(es) the device
201 is approved:

- 202 – domestic premises;
- 203 – caravans;
- 204 – motor caravans;
- 205 – boats;
- 206 – gas(es) to be measured.

207 This shall be noted on a label on the device or fixed at the device and shall be pointed out more detailed in the
208 manual.209 If one instruction manual is used for different types of devices it shall be explicitly noted which type is related to
210 which of the above mentioned application and to which gas.211 **4.6.1 Labelling**212 *This subclause of EN 50194-1 is applicable with the following additions:*

213 The following is applicable to recreational craft only:

214 j) The classification of the environmental condition as defined in EN 60721-3-6:

- 215 — remote sensor(s): 6K3/6B1/6S1/6M3,
- 216 — control unit: 6K2/6B1//6S1/6M3.

217 **4.6.2 Cautions**218 *This subclause of EN 50194-1 is applicable.*219 **4.6.3 Instruction booklet**220 *This subclause of EN 50194-1 is applicable with the following additions:*

- 221 p) power consumption;
- 222 q) the correct operating voltage, fuse-rating, if any, and method of connection to the vehicle's power system;
- 223 r) a list of materials that may be expected to be found in recreational vehicles that may produce vapours or
224 gases, e.g. oils, cleaning fluids, polishes, paints, greases, cooking operations, etc. which may affect the
225 reliability of the apparatus in the short or long term;
- 226 s) recommendation that the gas installation should comply with the requirements of 5.5 of Annex 1 of Directive
227 2013/53/EU (EN ISO 10239:2014) (applicable for recreational craft only);
- 228 t) the expected lifetime for the control unit and sensors except for sensors to be installed in the bilge of boats
229 (4.6.101 applies);
- 230 u) a note stating the working temperature and humidity range for control unit and remote sensors;
- 231 v) the gas volume ratios at which the alarm threshold has to be triggered, specified for LPG and/or petrol vapour.

232 **4.6.4 Packaging**233 *This subclause of EN 50194-1 is applicable.*234 *Addition:*235 **4.6.101 Restrictions (applicable for recreational craft only)**236 For remote sensors to be installed in the bilge of boats the manufacturer shall provide means for performing a
237 functional test to verify correct operation of the remote sensor in the field.

238 The manufacturer shall provide additional information to explain the conditions that apply to sensors placed in the