



BSI Standards Publication

Gas detectors - Electrical apparatus for the detection of carbon monoxide in domestic premises

Part 1: Test methods and performance requirements

National foreword

This British Standard is the UK implementation of EN 50291-1:2018. It supersedes BS EN 50291-1:2010+A1:2012, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EXL/31/1, Gas detectors.

A list of organizations represented on this committee can be obtained on request to its secretary.

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Gas detectors - Electrical apparatus for the detection of carbon monoxide in domestic premises - Part 1: Test methods and performance requirements

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Gaswarngeräte - Elektrische Geräte für die Detektion von Kohlenmonoxid in Wohnhäusern - Teil 1: Prüfverfahren und Anforderungen an das Betriebsverhalten

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European foreword

This document (EN 50291-1:2018) has been prepared by Technical Committee CLC/TC 216 “Gas detectors”, the secretariat of which is held by BSI.

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) 2019-02-26
- latest date by which the national standards conflicting with this document have to be withdrawn (dow) 2021-02-26

This document supersedes EN 50291-1:2010.

The main technical changes compared to the previous edition EN 50291-1:2010 are:

- End of Life indicator has been made mandatory and must include an audible and visible warning;
- Guidance has been added for assessing battery capacity and expected life;
- Requirements for mains powered alarms with back-up supply have been added;
- The number of potential interference gases has been increased;
- Tests have been added for an optional alarm silence facility;
- Requirements for the audible alarm and associated red visual signal have been clarified; low battery, fault and End-of-life audible and visual warnings are given in an informative annex;
- An informative annex has been added for apparatus displaying low (Warning) CO levels;
- Requirements have been added for apparatus using radio links;
- The sound output alarm requirement has been increased in line with the EN 14604 smoke alarm requirements.

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.

1 Scope

This European Standard specifies general requirements for the construction, testing and performance of electrically operated carbon monoxide gas detection apparatus, designed for continuous operation in domestic premises. The objective is to detect defective fossil fuel or solid fuel appliances so that they can be repaired or replaced. The function of the standard is not to monitor low levels of CO for health purposes. (Annex F gives recommendations for units displaying low (warning) CO concentrations). The apparatus may be mains-powered or battery-powered. Such apparatus is intended to warn of an acute level of CO, enabling the occupant to react before being exposed to significant risk.

Additional requirements for apparatus to be used in recreational vehicles and similar premises are specified in EN 50291-2.

NOTE 1 For caravan holiday homes EN 50291-1 applies.

This European Standard specifies two types of apparatus, these are:

- type A – to provide a visual and audible alarm and an executive action in the form of a transmittable output signal that can be used to actuate directly or indirectly a ventilation or other ancillary device;
- type B – to provide a visual and audible alarm only.

NOTE 2 Both type A and type B apparatus can be interconnected.

This European Standard excludes apparatus for:

- the detection of combustible gases, other than carbon monoxide itself (see EN 50194-1);
- the detection of CO in industrial installations (see EN 45544-1, EN 45544-2 and EN 45544-3) or commercial premises;
- CO measurement for smoke and fire detection;
- CO measurement in car parks and tunnels.

NOTE 3 See EN 50545-1.

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 50270, *Electromagnetic compatibility — Electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen*

EN 50271:2010, *Electrical apparatus for the detection and measurement of combustible gases, toxic gases or oxygen — Requirements and tests for apparatus using software and/or digital technologies*

EN 50292, *Electrical apparatus for the detection of carbon monoxide in domestic premises, caravans and boats — Guide on the selection, installation, use and maintenance*

EN 60335-1:2012, *Household and similar electrical appliances — Safety — Part 1: General requirements (IEC 60335-1:2010, modified)*