

Carbon monoxide in dwellings and the combustion performance of gas-fired appliances —

Part 3: Guide for responding to measurements obtained from electronic portable combustion gas analysers

ICS 13.040.40; 97.100.20

Committees responsible for this British Standard

The preparation of this British Standard was entrusted to Technical Committee GSE/30, Gas installations (1st, 2nd and 3rd family gases), upon which the following bodies were represented:

Boiler and Radiator Manufacturers' Association Ltd
British Flue and Chimney Manufacturers Association
BSI Consumer Policy Committee
Catering Equipment Suppliers' Association
Centrica plc
Council for Registered Gas Installers
Department of Trade and Industry
Health and Safety Executive
Heating and Ventilating Contractors' Association
ICOM Energy Association
Institute of Domestic Heating and Environmental Engineers
Institution of Gas Engineers and Managers
LP Gas Association
Society of British Gas Industries
Co-opted members

The following bodies were also represented in the drafting of the standard:

Advantica Ltd
Association of Plumbing and Heating Contractors
Council of Gas Detection and Environmental Monitoring
Energywatch
National Grid Gas plc

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Foreword

This part of BS 7967 has been prepared under the direction of Technical Committee GSE/30.

BS 7967 consists of the following parts.

- *Part 1: Guide for identifying and managing sources of fumes, smells, spillage/leakage of combustion products and carbon monoxide detector activation.*
- *Part 2: Guide for using electronic portable combustion gas analysers in the measurement of carbon monoxide and the determination of combustion performance.*
- *Part 3: Guide for responding to measurements obtained from electronic portable combustion gas analysers.*
- *Part 4: Guide for using electronic portable combustion gas analysers as part of the process of servicing and maintenance of gas-fired appliances.*¹⁾

This part of BS 7967 is intended to be used in conjunction with BS 7967-1, BS 7967-2 and the *Gas Industry Unsafe Situations Procedure* [1].

Its purpose is to provide information on combustion performance characteristics of a range of gas appliance types and the levels where remedial action should be taken. It also provides advice on the actions to be taken when elevated concentrations of carbon monoxide (CO) are identified in dwellings.

Using the appropriate method(s) detailed in BS 7967-2, electronic portable combustion gas analysers can be used to:

- a) check the combustion performance of gas appliances;
- b) measure the concentrations of CO within the dwelling and detect the presence of carbon dioxide (CO₂) in dwellings (see Note 2 to Clause 1); and
- c) identify sources of the CO and CO₂ emissions.

This standard has been written for electronic portable combustion gas analysers that are not suitable for measuring ambient levels of CO₂. However, at the time of publication, analysers equipped with direct reading CO₂ sensors that may be used for measuring ambient levels of CO₂ are becoming available and these will be the subject of a future revision of this standard.

NOTE 1 Information on the effect of CO can be found in the Institute for Environment and Health's *IEH assessment on indoor air quality in the home (2): Carbon monoxide* [2].

NOTE 2 One of the main combustion products from gas appliances is CO₂, which is mainly regarded as an asphyxiant but is also a toxic substance which could be present in the air in sufficient quantity to prove harmful. For guidance on the occupational health considerations of CO₂, reference can be made to the HSE Guidance note on *Workplace exposure limits*, EH40 [3].

Attention is drawn to the following statutory regulations.

- The Gas Safety (Installation & Use) Regulations 1998 [4].
- Gas Safety (Installation and Use) Regulations (Northern Ireland) 2004 [5].
- Gas Safety (Application) Order (Isle of Man) 1996 [6].
- The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 [7].
- Gas Safety (Management) Regulations 1996 [8].
- Gas Safety (Management) Regulations (Northern Ireland) 1997 [9].

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Summary of pages

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¹⁾ In preparation.