PD CLC/TS 50612:2016

BSI Standards Publication

Portable electrical apparatus for the measurement of combustion flue gas parameters — Guide to their use in the process of commissioning, servicing and maintaining gas fired appliances

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National foreword

This Published Document is the UK implementation of CLC/TS 50612:2016. It supersedes PD CLC/TS 50612:2013 which is withdrawn.

The UK participation in its preparation was entrusted by Technical Committee EXL/31, Equipment for explosive atmospheres, to Subcommittee EXL/31/1, Gas detectors.

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

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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Compliance with a British Standard cannot confer immunity from legal obligations.

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English Version

Portable electrical apparatus for the measurement of combustion flue gas parameters - Guide to their use in the process of commissioning, servicing and maintaining gas fired appliances

Appareils électriques portatifs de mesure des paramètres des gaz de combustion - Guide d'utilisation lié à la procédure de mise en service, d'entretien et de maintenance des appareils à gaz

To be completed

This Technical Specification was approved by CENELEC on 2016-04-18.

CENELEC members are required to announce the existence of this TS in the same way as for an EN and to make the TS available promptly at national level in an appropriate form. It is permissible to keep conflicting national standards in force.

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

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European foreword

This document (CLC/TS 50612:2016) has been prepared by Technical Committee CLC/TC 216 “Gas detectors”.

This document supersedes CLC/TS 50612:2013.

CLC/TS 50612:2016 includes the following significant technical changes with respect to CLC/TS 50612:2013:

The Scope of the 2013 guidance was limited to the use of portable electrical apparatus for the measurement of combustion flue gas parameters of gas-fired central heating boilers. The Scope of the 2016 guidance has been expanded to cover their use with gas-fired central heating boilers, domestic gas-fired air heaters, independent gas-fired space heaters, gas cooking appliances and domestic gas-fired water heaters.

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

The following Technical Committees have collaborated in the development of this document:

- CEN/TC 109 “Central heating boilers using gaseous fuels",
- CEN/TC 62 “Independent gas-fired space heaters”,
- CEN/TC 49 “Gas cooking appliances”, and
- CEN/TC 48 “Domestic gas-fired water heaters”.

NOTE Commentary text is presented in *italic type*. It gives background information and does not constitute a normative element.

Introduction

This Technical Specification is intended as a guide for operatives who, in the course of their professional activities, are required to measure combustion parameters of gas-fired appliances in domestic premises using combustion flue gas analysers during any or all of the commissioning, servicing and maintenance of such appliances.

It is intended to complement the following through a generic approach:

a) the gas appliance commissioning, servicing and maintenance instructions, and/or

b) national or local regulations or standards.

NOTE 1 A Technical Specification is announced and made available at national level, but conflicting national standards can continue to exist.

NOTE 2 Existing national or local regulations or standards conflicting with the guidance in this Technical Specification have precedence over this guidance.

It is not intended that a combustion gas analysis be used as a substitute for commissioning, servicing and/or maintenance carried out in accordance with the gas appliance instructions. It is meant to be regarded and used as a diagnostic tool to help in the process of carrying out these activities to ensure the safe and efficient operation of the appliance installation.

In the preparation of this Technical Specification, it has been assumed that the execution of its provisions will be entrusted to competent operatives (see Clause 4) for whose use it has been produced.

1 Scope

This Technical Specification provides guidance on the selection, use and maintenance of portable electrical apparatus conforming to EN 50379-1 [4] and EN 50379-2 [5] or EN 50379-3 [6] to:

a) measure combustion flue gas parameters of appliances in domestic premises burning 1st, 2nd or 3rd family gases of the following description:

   1) Type A, Type B and Type C gas-fired appliances, except those appliances where the appliance instructions (or design, see 7.3.2.1), prohibit combustion sampling, and,

   2) all gas-fired appliances for which the appliance manufacturer has provided a purpose-designed combustion sampling point or specific sampling instructions,

b) use as a diagnostic instrument to assist an operative:

   1) in confirming satisfactory combustion at the time of commissioning, in accordance with appliance instructions or national or local regulations or standards;

   2) in confirming satisfactory combustion at the time of servicing in accordance with national or local regulations or standards or following servicing in accordance with appliance instructions;

   3) in confirming satisfactory combustion following maintenance, in accordance with appliance instructions or national or local regulations or standards.

NOTE 1 Type A, Type B and Type C classification of gas-fired appliances are defined in **3.1.2** and more fully in CEN/TR 1749 [2].

NOTE 2 Existing national or local regulations or standards conflicting with the guidance in this Technical Specification have precedence over this guidance.

NOTE 3 It is not the intention of this Technical Specification to suggest that portable electrical combustion flue gas analysers are to be used as a substitute for normal service and maintenance carried out in accordance with the gas appliance instructions. Clause 9 describes how analysers can be used in conjunction with the appliance instructions.

NOTE 4 EN 50379–1 [4] specifies general requirements for the construction, testing and performance of portable spot reading apparatus designed to check the combustion performance of appliances in domestic premises using commercially available fuels.

NOTE 5 EN 50379–2 [5] is for apparatus intended to be used for statutory measurements. In several European countries, legal requirements exist for the performance of heating appliances (see EN 50379–1:2012, informative Annex A [4]). Legal consequences resulting from performance measurements makes for strict requirements for the apparatus used (see EN 50379–1:2012, normative Annexes B and C [4]).

NOTE 6 EN 50379–3 [6] is for apparatus intended to be used for non-statutory applications, which allows for reduced performance requirements for the portable electrical apparatus.

NOTE 7 This Technical Specification deals with the determination of levels of combustion gases carbon monoxide (CO), carbon dioxide (CO_2) and/or oxygen (O_2) in combustion products from gas-fired appliances. Combustion products from gas-fired appliances will contain nitrogen oxides (NO_X), predominantly nitrogen monoxide (nitric oxide, NO) and nitrogen dioxide (NO_2). This Technical Specification does not deal with the measurement of combustion products such as NO_X and aldehydes.

2 Normative references

Not applicable.