BS EN 45544-4:2016

BSI Standards Publication

Workplace atmospheres — Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours

Part 4: Guide for selection, installation, use and maintenance

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National foreword

This British Standard is the UK implementation of EN 45544-4:2016. It supersedes BS EN 45544-4:2000 which is withdrawn.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.

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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Workplace atmospheres - Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours - Part 4: Guide for selection, installation, use and maintenance

Atmosphères des lieux de travail - Appareillage électrique utilisé pour la détection directe des vapeurs et gaz toxiques et le mesurage direct de leur concentration - Partie 4: Guide de sélection, d'installation, d'utilisation et d'entretien

Arbeitsplatzatmosphäre - Elektrische Geräte für die direkte Detektion und direkte Konzentrationsmessung toxischer Gase und Dämpfe - Teil 4: Leitfaden für Auswahl, Installation, Einsatz und Wartung

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

CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels

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European foreword

This document (EN 45544-4:2016) has been prepared by CEN/CENELEC Joint Working Group "Continuous Measuring Instruments" (JWG CMI).

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This document supersedes EN 45544-4:1999.

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Introduction

National laws and regulations based on European Directives require the assessment of the potential exposure of a worker to chemical agents in workplace atmospheres.

EN 45544, Workplace atmospheres – Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours, consists of the following parts:

— *Part 1: General requirements and test methods;*

— *Part 2: Performance requirements for apparatus used for exposure measurement;*

— *Part 3: Performance requirements for apparatus used for general gas detection;*

— *Part 4: Guide for selection, installation, use and maintenance.*

1 Scope

This European Standard gives guidance on the selection, installation, use and maintenance of electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours in workplace atmospheres. The primary purpose of such apparatus is to measure the concentration of a toxic gas or vapour in order to provide an exposure measurement and/or detection and warning of its presence.

This European Standard is applicable to apparatus whose primary purpose is to provide an indication, alarm and/or other output function to give a warning of the presence of a toxic gas or vapour in the atmosphere and in some cases to initiate automatic or manual protective actions. It is applicable to apparatus in which the sensor automatically generates an electrical signal when gas is present.

This European Standard is not applicable, but may provide useful information, for apparatus

— used for the measurement of oxygen,

— used only in laboratories for analysis or measurement,

— used only for process measurement purposes,

— used in car parks or tunnels (fixed apparatus only),

— used in the domestic environment,

— used in environmental air pollution monitoring,

— used for the measurement of combustible gases and vapours related to the risk of explosion.

It also does not apply to open-path (line of sight) area monitors.

For apparatus used for sensing the presence of multiple gases, this European Standard applies only to the detection of toxic gas or vapour.

2 Normative references

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

EN 482:2012+A1:2015, *Workplace exposure – General requirements for the performance of procedures for the measurement of chemical agents*

EN 45544-1:2015, *Workplace atmospheres - Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours - Part 1: General requirements and test methods*

EN 45544-2:2015, *Workplace atmospheres - Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours - Part 2: Performance requirements for apparatus used for exposure measurement*

EN 45544-3:2015, *Workplace atmospheres - Electrical apparatus used for the direct detection and direct concentration measurement of toxic gases and vapours - Part 3: Performance requirements for apparatus used for general gas detection*