BRITISH STANDARD

BS EN
60079-2:2007

Explosive atmospheres —

Part 2: Equipment protection by pressurized enclosure “p”

The European Standard EN 60079-2:2007 has the status of a British Standard

ICS 29.260.20

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BSI
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National foreword

This British Standard is the UK implementation of EN 60079-2:2007. It is identical to IEC 60079-2:2007. It supersedes BS EN 60079-2:2004 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GEL/31, Equipment for explosive atmospheres.

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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Explosive atmospheres - Part 2: Equipment protection by pressurized enclosure "p"

(IEC 60079-2:2007)

Atmosphères explosives -
Partie 2: Protection du matériel
par enveloppe à surpression interne "p"
(CEI 60079-2:2007)

Explosionsfähige Atmosphäre -
Teil 2: Geräteschutz
durch Überdruckkapselung "p"
(IEC 60079-2:2007)

This European Standard was approved by CENELEC on 2007-11-01. 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.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

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CENELEC

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

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Foreword

The text of document 31/668/FDIS, future edition 5 of IEC 60079-2, prepared by IEC TC 31, Equipment for explosive atmospheres, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 60079-2 on 2007-11-01.

This European Standard supersedes EN 60079-2:2004 + corrigendum April 2006.

The significant changes with respect to EN 60079-2:2004 are listed below:

– introduction of the “Equipment protection level concept” – See Annex H;
– 3.13 eliminate reference to “room” in the definition of pressurization;
– 5.3.3 restrict to type px;
– 5.3.3 add warning for type pz and type py for any cover removable without the use of a tool;
– 7.6 move wording “For type px” to beginning of subclause to clarify 7.6 only applies to type px;
– 7.7 c) clarify that the instruction label should specify purge time and pressure/flow;
– 18.7 collect marking requirements throughout the document in the “Marking” clause.

This European Standard is to be read in conjunction with EN 60079-0:2006.

The following dates were fixed:

– latest date by which the EN has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2008-08-01
– latest date by which the national standards conflicting with the EN have to be withdrawn	(dow)	2010-11-01

This European Standard was prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association and supports the essential requirements of Directive 94/9/EC. See Annex ZZ.

Annexes ZA and ZZ have been added by CENELEC.

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Endorsement notice

The text of the International Standard IEC 60079-2:2007 was approved by CENELEC as a European Standard without any modification.

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INTRODUCTION

This part of IEC 60079 gives requirements for the design, construction, testing and marking of electrical apparatus for use in potentially explosive atmospheres in which

a) a protective gas maintained at a pressure above that of the external atmosphere is used to guard against the formation of an explosive gas atmosphere within enclosures which do not contain an internal source of release of flammable gas or vapour and, where necessary;

b) a protective gas is provided in sufficient quantity to ensure that the resultant mixture concentration around the electrical parts is maintained at a value outside the explosive limit appropriate to the particular conditions of use. The protective gas is supplied to an enclosure containing one or more internal sources of release in order to guard against the formation of an explosive gas atmosphere.

This standard includes requirements for the apparatus and its associated equipment including the inlet and exhaust ducts, and also for the auxiliary control apparatus necessary to ensure that pressurization and/or dilution is established and maintained.

EXPLOSIVE ATMOSPHERES –

Part 2: Equipment protection by pressurized enclosure "p"

1 Scope

This part of IEC 60079 contains the specific requirements for the construction and testing of electrical apparatus with pressurized enclosures, of type of protection “p”, intended for use in explosive gas atmospheres. It specifies requirements for pressurized enclosures containing a limited release of a flammable substance.

This standard supplements and modifies the general requirements of IEC 60079-0. Where a requirement of this standard conflicts with a requirement of IEC 60079-0, the requirements of this standard takes precedence.

This standard does not contain the requirements for:

- pressurized enclosures where the containment system may release
  a) air with an oxygen content greater than normal, or
  b) oxygen in combination with inert gas in a proportion greater than 21 %;
- pressurized rooms or analyser houses; see IEC 60079-13 and IEC 60079-16.

NOTE 1 Due to the safety factors incorporated in the type of protection, the uncertainty of measurement inherent in good quality, regularly calibrated measurement equipment is considered to have no significant detrimental effect and need not be taken into account when making the measurements necessary to verify compliance of the equipment with the requirements of this standard.

NOTE 2 When the user acts in the role of the manufacturer, it is typically the user’s responsibility to ensure that all relevant parts of this standard are applied to the manufacturing and testing of the equipment.

NOTE 3 Types of protection “px” and “py”provide Equipment Protection Levels (EPL) Mb or Gb. Type of protection “pz” provides Equipment Protection Level (EPL) Gc. For further information, see Annex H.

2 Normative references

The following referenced documents are indispensable for the application 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.

IEC 60034-5, *Rotating electrical machines – Part 5: Degrees of protection provided by the integral design of rotating electrical machines (IP code)– Classification*

IEC 60050(151), *International Electrotechnical Vocabulary – Chapter 151: Electrical and magnetic devices*

IEC 60050(426), *International Electrotechnical Vocabulary – Chapter 426: Electrical apparatus for explosive atmospheres*

IEC 60079-0:2004, *Electrical apparatus for explosive gas atmospheres – Part 0: General requirements*