IEC 60079-13

Edition 1.0 2010-10

INTERNATIONAL STANDARD

NORME INTERNATIONALE

Explosive atmospheres –
Part 13: Equipment protection by pressurized room “p”

Atmosphères explosives –
Partie 13: Protection du matériel par salle à surpression interne « p »

IEC 60079-13:2010

IEC Central Office
3, rue de Varembé
CH-1211 Geneva 20
Switzerland
Email: inmail@iec.ch
Web: www.iec.ch

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Email: csc@iec.ch
Tél.: +41 22 919 02 11
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FOREWORD

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International Standard IEC 60079-13 has been prepared by IEC technical committee 31: Equipment for explosive atmospheres.

This first edition of this part of IEC 60079 cancels and replaces the original technical report issued in 1982. It constitutes a technical revision and now has the status of an International Standard.

The significant technical changes with respect to the previous edition are listed below:

– Addition of types of protection px, py, pz and pv based upon whether external area is classified as Zone 1, Zone 2 or non-hazardous and whether internal electrical equipment is ignition capable or not.
– Addition of requirements related to Group III dusts.
– Addition of equipment protection levels (EPL).
– Expansion of requirements for various types of doors to prevent the entrance of a flammable atmosphere.
– Allowance for air intake located in a Zone 2 under specific conditions.

– Addition of negligible release conditions and negligible release containment system, as well as conditions and containment for limited release and unlimited release.

This part of IEC 60079 is to be read in conjunction with IEC 60079-0.

The text of this part of IEC 60079 is based on the following documents:

FDIS	Report on voting
31/878/FDIS	31/891/RVD

Full information on the voting for the approval of this part of IEC 60079 can be found in the report on voting indicated in the above table.

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

The list of all parts of IEC 60079 series, under the general title *Explosive atmospheres*, can be found on the IEC website.

The committee has decided that the contents of this publication will remain unchanged until the stability date indicated on the IEC web site under "http://webstore.iec.ch" in the data related to the specific publication. At this date, the publication will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

EXPLOSIVE ATMOSPHERES –

Part 13: Equipment protection by pressurized room “p”

1 Scope

This part of IEC 60079 gives requirements for the design, construction, assessment and testing and marking of rooms protected by pressurization in:

- a room located in an explosive gas atmosphere or explosive dust atmosphere hazardous area that does not include an internal source of a flammable substance;
- a room located in an explosive gas atmosphere or explosive dust atmosphere hazardous area that includes an internal source of a flammable substance;
- a room located in a non-hazardous area that includes an internal source of a flammable substance.

NOTE If ventilation is used and pressurization is not used, then this part of IEC 60079 does not apply. The situation is covered by the requirements of IEC 60079-10-1.

A room may be a single room, multiple rooms, a complete building or a room contained within a building and includes inlet and outlet ducts. This part of IEC 60079 also includes requirements for associated equipment, safety devices and controls necessary to ensure that pressurization is established and maintained.

This part of IEC 60079 covers rooms or buildings that are constructed or assembled on site, which may be either on land or off-shore, designed to facilitate the entry of personnel and primarily intended for installation by an end-user and verification on site. The room may be located in an explosive gas atmosphere or a explosive dust atmosphere requiring equipment protection levels (EPL) Gb, Db, Gc or Dc.

This part of IEC 60079 does not specify the methods that may be required to ensure adequate air quality for personnel with regard to toxicity and temperature within the room.

NOTE 1 Whilst the scope of this part of IEC 60079 does not address toxicity it is vital that proper consideration is given to this aspect to ensure the safety of personnel. National regulations and requirements should be observed in this regard.

NOTE 2 There is a related standard IEC60079-2 (Equipment protection by pressurized enclosure) covering the different conditions encountered when using the pressurization technique.

NOTE 3 Maintenance needs are contained in Annex B until they are included IEC 60079-17.

NOTE 4 For the purposes of this part of IEC 60079, the terms "lower flammable limit (LFL)" and "lower explosive limit (LEL)" are deemed to be synonymous, and likewise the terms "upper flammable limit (UFL)" and "upper explosive limit (UEL)" are deemed to be synonymous. For ease of reference, the two abbreviations LFL and UFL may be used hereinafter to denote these two sets of terms. It should be recognized that particular authorities having jurisdiction may have overriding requirements that dictate the use of one of these sets of terms and not the other.

This part of IEC 60079 supplements and modifies the general requirements of IEC 60079-0, except as indicated in Table 1. Where a requirement of this standard conflicts with a requirement of IEC 60079-0, the requirement of this standard takes precedence.