

**SLOVENSKI STANDARD  
SIST EN 61779-2:2000****01-december-2000****Nadomešča:  
SIST EN 50055:2000**

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**Električne naprave za odkrivanje in merjenje vnetljivih plinov - 2. del: Zahteve za delovanje naprav skupine I z merilnim območjem do 5 % volumskega deleža metana v zraku (IEC 61779-2:1998; spremenjen)**

Electrical apparatus for the detection and measurement of flammable gases -- Part 2: Performance requirements for group I apparatus indicating a volume fraction up to 5 % methane in air

**iTeh STANDARD PREVIEW****(standards.iteh.ai)**

Elektrische Geräte für die Detektion und Messung brennbarer Gase -- Teil 2: Anforderungen an das Betriebsverhalten von Geräten der Gruppe I mit einem Meßbereich bis zu 5 % Volumenanteil Methan in Luft

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Appareils électriques de détection et de mesure des gaz combustibles -- Partie 2: Règles de performances des appareils du groupe I pouvant indiquer une fraction volumique jusqu'à 5 % de méthane dans l'air

**Ta slovenski standard je istoveten z: EN 61779-2:2000****ICS:**

13.320	Alarmni in opozorilni sistemi	Alarm and warning systems
29.260.20	Električni aparati za eksplozivna ozračja	Electrical apparatus for explosive atmospheres

**SIST EN 61779-2:2000****en**

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EUROPEAN STANDARD

**EN 61779-2**

NORME EUROPÉENNE

EUROPÄISCHE NORM

June 2000

ICS 17.060;29.240.20

Supersedes EN 50055:1998

English version

**Electrical apparatus for the detection and measurement of flammable gases****Part 2: Performance requirements for group I apparatus indicating a volume fraction up to 5 % methane in air  
(IEC 61779-2:1998, modified)**

Appareils électriques de détection et de mesure des gaz combustibles  
Partie 2: Règles de performances des appareils du groupe I pouvant indiquer une fraction volumique jusqu'à 5 % de méthane dans l'air  
(CEI 61779-2:1998, modifiée)

Elektrische Geräte für die Detektion und Messung brennbarer Gase  
Teil 2: Anforderungen an das Betriebsverhalten von Geräten der Gruppe I mit einem Meßbereich bis zu 5 % Volumenanteil Methan in Luft  
(IEC 61779-2:1998, modifiziert)

This European Standard was approved by CENELEC on 2000-01-01. 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.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

**CENELEC**

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

**Central Secretariat: rue de Stassart 35, B - 1050 Brussels**

## FOREWORD

The text of IEC 61779-2:1998 was considered by the CENELEC Sub-Committee SC 31-9, Electrical apparatus for the detection and measurement of combustible gases to be used in industrial and commercial potentially explosive atmospheres, and it was agreed that the standard could be harmonised as a European Standard with common modifications.

The resulting draft was submitted to the Unique Acceptance Procedure and was approved by CENELEC as EN 61779-2 on 2000-01-01.

This European Standard supersedes EN 50055:1998.

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) 2001-01-01
- latest date by which the national standards conflicting  
with the EN have to be withdrawn (dow) 2003-06-30

This part 2 of EN 61779 is to be used in conjunction with EN 61779-1.

This European Standard has been prepared under a mandate given to CENELEC by the European Commission and covers essential requirements of EC Directive 94/9/EC.

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### Endorsement notice

The text of the International Standard IEC 61779-2:1998 was approved by CENELEC as a European Standard with agreed common modifications as given below.

#### COMMON MODIFICATIONS

#### 1 Scope

1.1 **Delete** the note.

#### 4 Performance requirements

4.21 **Replace** the subclause by :

##### **4.21 Electromagnetic compatibility**

The apparatus shall fulfil the requirements specified in EN 50270.

4.25 **Delete**.

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# INTERNATIONAL STANDARD

# IEC 61779-2

First edition  
1998-04

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## Electrical apparatus for the detection and measurement of flammable gases –

### Part 2: Performance requirements for group I apparatus indicating a volume fraction up to 5 % methane in air

*Appareils électriques de détection et de mesure  
des gaz combustibles –*

*Partie 2:  
Règles de performances des appareils du groupe I pouvant  
indiquer une fraction volumique jusqu'à 5 %  
de méthane dans l'air*

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Commission Electrotechnique Internationale  
International Electrotechnical Commission  
Международная Электротехническая Комиссия

PRICE CODE

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

**ELECTRICAL APPARATUS FOR THE DETECTION  
AND MEASUREMENT OF FLAMMABLE GASES –**
**Part 2: Performance requirements for group 1 apparatus  
indicating a volume fraction up to 5 % methane in air**

## FOREWORD

- 1) The IEC (International Electrotechnical Commission) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of the IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, the IEC publishes International Standards. Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. The IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
- 2) The formal decisions or agreements of the IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested National Committees.
- 3) The documents produced have the form of recommendations for international use and are published in the form of standards, technical reports or guides and they are accepted by the National Committees in that sense.
- 4) In order to promote international unification, IEC National Committees undertake to apply IEC International Standards transparently to the maximum extent possible in their national and regional standards. Any divergence between the IEC Standard and the corresponding national or regional standard shall be clearly indicated in the latter.
- 5) The IEC provides no marking procedure to indicate its approval and cannot be rendered responsible for any equipment declared to be in conformity with one of its standards.
- 6) Attention is drawn to the possibility that some of the elements of this International Standard may be the subject of patent rights. The IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 61779-2 has been prepared by subcommittee 31L: Electrical apparatus for the detection of flammable gases, of IEC technical committee 31: Electrical apparatus for explosive atmospheres.

This standard should be read in conjunction with IEC 61779-1.

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The text of this standard is based on the following documents:

SIST EN 61779-2:2000	
FDIS	Report on voting
31L/48/FDIS	31L/53/RVD

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

A bilingual version of this standard may be issued at a later date.



## ELECTRICAL APPARATUS FOR THE DETECTION AND MEASUREMENT OF FLAMMABLE GASES –

### Part 2: Performance requirements for group 1 apparatus indicating a volume fraction up to 5 % methane in air

#### 1 Scope

1.1 This part of IEC 61779 specifies requirements for group I (as defined in part 1) portable, transportable and fixed apparatus for the detection and measurement of methane concentrations in mine air. The apparatus, or parts thereof, are intended for use in mines susceptible to firedamp. The requirements and test methods applicable to the apparatus covered by this standard are specified in part 1.

NOTE — The use of group I apparatus may not be permitted without the additional and prior approval of the relevant authority in mines under its jurisdiction, see note 1 of 1.1.1 of part 1.

1.2 This standard is restricted to apparatus intended for the detection and measurement of volume ratios of methane in air from a volume fraction of 0 % up to, but not exceeding, a volume fraction of 5 %.

#### 2 Definitions

For the purpose of this part of IEC 61779, the definitions given in part 1 apply.

#### 3 General requirements

The apparatus shall comply with the general requirements specified in part 1 and with the performance requirements specified in clause 4 of this standard.

Compliance shall be determined in accordance with the appropriate test requirements and methods, including initial calibration, specified in part 1.

It shall be verified that the contents of the manufacturer's instruction manual are in accordance with the requirements specified in part 1.

#### 4 Performance requirements

##### 4.1 General

The normal conditions for tests are specified in 4.3 of part 1. Compliance shall be determined in accordance with the test methods specified in 4.4 of part 1.

##### 4.2 Unpowered storage

After being submitted to the conditions specified in 4.4.2 of part 1, the apparatus shall meet the requirements specified in 4.3 to clause 5 of this standard.

##### 4.3 Calibration curve (not applicable to alarm-only apparatus)

After initial adjustment with the standard test gas, each individual indication in the three sets of indications (after correction using the manufacturer's calibration curve, if necessary) obtained for each of the four gas volume ratios distributed over the measuring range shall not differ from these volume ratios by more than a volume fraction of  $\pm 0,1$  % methane or  $\pm 5$  % of the indication, whichever is the greater.

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