BS EN 60079-18:2015+A1:2017
Incorporating corrigendum August 2018

BSI Standards Publication

Explosive atmospheres

Part 18: Equipment protection by encapsulation “m”

National foreword

This British Standard is the UK implementation of EN 60079-18:2015+A1:2017, incorporating corrigendum July 2018. It is identical to IEC 60079-18:2014, incorporating amendment 1:2017. It supersedes BS EN 60079-18:2015, which is withdrawn.

The start and finish of text introduced or altered by amendment is indicated in the text by tags. Tags indicating changes to IEC text carry the number of the IEC amendment. For example, text altered by IEC amendment A1 is indicated by ⟦A1⟩ ⟨A1⟩.

The start and finish of text introduced or altered by corrigendum is indicated in the text by tags. Text altered by IEC corrigendum July 2018 is indicated in the text by ⟦AC1⟩ ⟨AC1⟩.

BSI, as a member of CENELEC, is obliged to publish EN 60079-18 as a British Standard. However, attention is drawn to the fact that the UK committee voted against its approval as a European Standard.

This was due to an internal inconsistency in clause 7.2.

Clause 7.2.1 states that faults are not taken into account for “mc”, whereas the last sentence of 7.2.4.2 specifies absolute requirements for “mc” to avoid faults, making the requirements for some “mc” circuits more arduous than the same circuit for “ma” or “mb”.

As this is not new text for this edition, it is assumed that in many cases this has been resolved by the manufacturer and certifier reading 7.2.1 and then assuming, for “mc” equipment, that there is no need to read further into 7.2, therefore ignoring 7.2.4.2.

As it is not possible to satisfy both 7.2.1 and 7.2.4.2 at the same time, it is the opinion of the UK committee that 7.2.4.2 is not intended to be observed for “mc” equipment, and they have requested that IEC issue a formal corrigendum to that effect.

It is believed that the “mc” column of Table 1 was erroneously copied from 60079-15 and the purpose changed. In 60079-15, the table referred to segregation under 0.4 mm of compound in an IP54 enclosure for Ex nA equipment. That is to say that a 0.4 mm layer of encapsulant was considered to be better than conformal coating in terms of environmental protection. It was not related to the ability of the encapsulation to withstand an internal fault. The table was not applied to Ex n encapsulation and therefore should not have been applied to Ex mc.

The UK participation in its preparation was entrusted to Technical Committee EXL/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.

Published by BSI Standards Limited 2018

ISBN 978 0 539 01972 8

ICS 29.260.20

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

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 30 June 2015.

Amendments/corrigenda issued since publication

Date	Text affected
31 January 2018	Implementation of IEC amendment 1:2017 with CENELEC endorsement A1:2017
31 August 2018	Implementation of IEC corrigendum July 2018

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 60079-18:2015 +A1

ICS 29.260.20

English Version

Explosive atmospheres – Part 18: Equipment protection by encapsulation “m” (IEC 60079-18:2014)

Atmosphères explosives – Partie 18: Protection du matériel par encapsulage “m” (IEC 60079-18:2014)

Explosionsgefährdete Bereiche – Teil 18: Geräteschutz durch Vergusskapselung “m” (IEC 60079-18:2014)

This European Standard was approved by CENELEC on 2015-01-15. 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 CEN-CENELEC Management Centre 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 CEN-CENELEC Management Centre has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

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

Ref. No. EN 60079-18:2015+A1:2017: E

European foreword

The text of document 31/1152/FDIS, future edition 4 of IEC 60079-18, prepared by IEC/TC 31 "Explosive atmospheres" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 60079-18:2015.

The following dates are fixed:

• latest date by which the document has to be implemented at national level by publication of an identical national standard or by endorsement	(dop)	2015-10-24
• latest date by which the national standards conflicting with the document have to be withdrawn	(dow)	2018-01-16

This document supersedes EN 60079-18:2009.

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.

This document has been prepared under a mandate given to CENELEC by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive.

For the relationship with EU Directive see informative Annex ZZ, which is an integral part of this document.

Endorsement notice

The text of the International Standard IEC 60079-18:2014 was approved by CENELEC as a European Standard without any modification.

IEC 60079-1 NOTE Harmonized as EN 60079-1.

IEC 60079-2 NOTE Harmonized as EN 60079-5.

IEC 60079-5 NOTE Harmonized as EN 60079-5.

IEC 60079-6 NOTE Harmonized as EN 60079-6.

IEC 60079-10-1 NOTE Harmonized as EN 60079-10-1.

IEC 60079-10-2 NOTE Harmonized as EN 60079-10-2.

IEC 60079-14 NOTE Harmonized as EN 60079-14.

IEC 60079-28 NOTE Harmonized as EN 60079-28.

IEC 60086-1 NOTE Harmonized as EN 60086-1.

IEC 60622 NOTE Harmonized as EN 60622.

IEC 60604-1 NOTE Harmonized as EN 60604-1.

IEC 60747-5-5 NOTE Harmonized as EN 60747-5-5.

IEC 61951-1 NOTE Harmonized as EN 61951-1.

IEC 61951-2 NOTE Harmonized as EN 61951-2.

ISO 13849-1 NOTE Harmonized as EN ISO 13849-1.