



NSAI
Standards

Irish Standard
I.S. EN 62637-1:2011

Battery charging interface for small handheld multimedia devices - Part 1: 2 mm barrel interface (IEC 62637-1:2011 (EQV))

I.S. EN 62637-1:2011

Incorporating amendments/corrigenda issued since publication:

The National Standards Authority of Ireland (NSAI) produces the following categories of formal documents:

I.S. xxx: Irish Standard – national specification based on the consensus of an expert panel and subject to public consultation.

S.R. xxx: Standard Recommendation - recommendation based on the consensus of an expert panel and subject to public consultation.

SWiFT xxx: A rapidly developed recommendatory document based on the consensus of the participants of an NSAI workshop.

<i>This document replaces:</i>	<i>This document is based on:</i> EN 62637-1:2011	<i>Published:</i> 6 May, 2011
This document was published under the authority of the NSAI and comes into effect on: 18 May, 2011		ICS number: ICS 33.160.99; 07.100
NSAI 1 Swift Square, Northwood, Santry Dublin 9	T +353 1 807 3800 F +353 1 807 3838 E standards@nsai.ie W NSAI.ie	Sales: T +353 1 857 6730 F +353 1 857 6729 W standards.ie
Údarás um Chaighdeáin Náisiúnta na hÉireann		

English version

**Battery charging interface for small handheld multimedia devices - Part 1:
2 mm barrel interface
(IEC 62637-1:2011)**

Interface de charge de batterie pour petits
appareils multimédia portables – Partie 1:
Spécification de l'interface cylindrique
2 mm
(CEI 62637-1:2011)

Batterie-Ladeschnittstelle für kleine
tragbare Multimedia-Geräte -
Teil 1: 2-mm-Zylinder-Schnittstellen-
Spezifikation
(IEC 62637-1:2011)

This European Standard was approved by CENELEC on 2011-05-04. 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, Bulgaria, Croatia, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 100/1673/CDV, future edition 1 of IEC 62637-1, prepared by technical area 1, Terminals for audio, video and data services and contents, of IEC TC 100, Audio, video and multimedia systems and equipment, was submitted to the IEC-CENELEC parallel vote and was approved by CENELEC as EN 62637-1 on 2011-05-04.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) 2012-02-04
- latest date by which the national standards conflicting with the EN have to be withdrawn (dow) 2014-05-04

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 62637-1:2011 was approved by CENELEC as a European Standard without any modification.

In the official version, for Bibliography, the following note has to be added for the standard indicated:

IEC 61076-2-102:2002 NOTE Harmonized as EN 61076-2-102:2002 (not modified).

Annex ZA
(normative)

**Normative references to international publications
with their corresponding European publications**

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 62637-2	-	Battery charging interface for small handheld multimedia devices - Part 2: 2mm barrel type interface conformance testing	EN 62637-2	-

This page is intentionally left BLANK.

CONTENTS

FOREWORD.....	4
1 Scope.....	6
2 Normative references	6
3 Abbreviations and symbols	7
4 Specifications for 2 mm barrel interface.....	7
4.1 General	7
4.2 Temperature.....	8
4.3 Voltage.....	8
5 Electrical specification for 2 mm barrel type chargers	8
5.1 Charger output capacitance.....	8
5.2 Maximum transient voltage and current values	8
5.3 Maximum output ripple voltage	9
5.4 High-frequency voltage components at the charger output	10
5.5 Feel current of AC chargers	11
5.6 Charging voltage/current window.....	11
5.7 Current linearity for chargers	12
6 Accessories connected between the 2 mm barrel charger and the mobile device.....	13
6.1 Accessory interfaces	13
6.2 Electrical specifications for accessories	14
6.3 Booting up the mobile device when connected to an accessory	14
6.4 Charger identification	14
7 Charger identification method for the 2 mm barrel interface	15
8 Connectors for the 2 mm barrel interface.....	15
8.1 Connectors.....	15
8.2 Charging voltage polarity.....	15
Annex A (normative) Artificial load	17
Annex B (normative) Coupling/decoupling network	18
Annex C (informative) Additional information on connectors for 2 mm barrel interface	19
Bibliography.....	21
Figure 1 – Scope of the charging interface standard	6
Figure 2 – Maximum permitted charger output capacitance.....	8
Figure 3 – Maximum duration of charging current overshoot and maximum voltage undershoot	9
Figure 4 – Maximum peak-to-peak ripple voltage	10
Figure 5 – Maximum high-frequency output voltage components.....	11
Figure 6 – Charging current/voltage window for 2 mm barrel type chargers.....	12
Figure 7 – Current linearity specification example	13
Figure 8 – Accessory/device interface.....	14
Figure 9 – Charger identification voltages	15
Figure 10 – General view of the 2 mm barrel charging plug.....	16
Figure A.1 – Artificial load.....	17
Figure B.1 – Coupling/decoupling network	18

I.S. EN 62637-1:2011

62637-1 © IEC:2011(E)

– 3 –

Figure C.1 – 2 mm barrel charging plug – Details.....	19
Figure C.2 – 2 mm barrel charging receptacle – Details	19
Figure C.3 – Bending durability.....	20
Table 1 – Limits for maximum voltage and settling time	9
Table 2 – Maximum ripple voltage in different frequency ranges	10
Table 3 – Maximum conducted interference	10
Table 4 – Electrical specification for accessory contacts	14

INTERNATIONAL ELECTROTECHNICAL COMMISSION

**BATTERY CHARGING INTERFACE FOR SMALL HANDHELD
MULTIMEDIA DEVICES –****Part 1: 2 mm barrel interface**

FOREWORD

- 1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of 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, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). 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. 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 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 IEC National Committees.
- 3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
- 4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
- 5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
- 6) All users should ensure that they have the latest edition of this publication.
- 7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
- 8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
- 9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

International Standard IEC 62637-1 has been prepared by technical area 1: Terminals for audio, video and data services and content, of IEC technical committee 100: Audio, video and multimedia systems and equipment.

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

CDV	Report on voting
100/1673/CDV	100/1749/RVC

Full information on the voting for the approval of this standard 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.

A list of all parts of the IEC 62637 series, under the general title *Battery charging interface for small handheld multimedia devices*, 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.

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

BATTERY CHARGING INTERFACE FOR SMALL HANDHELD MULTIMEDIA DEVICES –

Part 1: 2 mm barrel interface

1 Scope

This part of IEC 62637 defines a charging interface between small handheld multimedia devices and power-supply accessories, specifically chargers. Devices, which could be based on this standard may vary over time, but have to comply with the limited power available¹.

The interface is a 2 mm barrel type charging interface. This standard does not include the whole charger nor does it include the internal functions of the device. Chargers and devices shall follow the applicable EMC and safety standards. The scope of this part of IEC 62637 is illustrated in Figure 1.

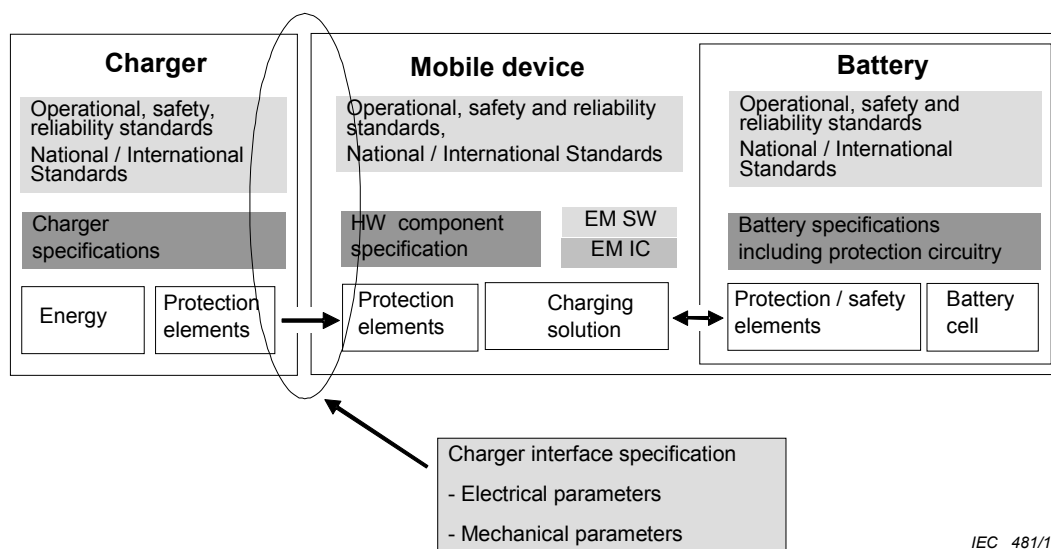


Figure 1 – Scope of the charging interface standard

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 62637-2, *Battery charging interface for small handheld multimedia devices – Part 2: 2 mm barrel type interface conformance testing*

¹ Devices like mobile phones, MP-3 players, portable radio receivers, small handheld TV receivers, GPS-navigators, gaming devices, digital cameras may use this interface if the delivered power is adequate.

This is a free preview. Purchase the entire publication at the link below:

[Product Page](#)

-
- [Looking for additional Standards? Visit Intertek Inform Infostore](#)
 - [Learn about LexConnect, All Jurisdictions, Standards referenced in Australian legislation](#)
-