

Power sources for a wireless communication device -
Part 1: General requirements of power modules

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 62952-1:2016 sisaldab Euroopa standardi EN 62952-1:2016 ingliskeelset teksti.	This Estonian standard EVS-EN 62952-1:2016 consists of the English text of the European standard EN 62952-1:2016.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 02.12.2016.	Date of Availability of the European standard is 02.12.2016.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 29.220.10, 33.040.40

Standardite reprodutseerimise ja levitamise õigus kuulub Eesti Standardikeskusele

Andmete paljundamine, taastekitamine, kopeerimine, salvestamine elektroonsesse süsteemi või edastamine ükskõik millises vormis või millisel teel ilma Eesti Standardikeskuse kirjaliku loata on keelatud.

Kui Teil on küsimusi standardite autorikaitse kohta, võtke palun ühendust Eesti Standardikeskusega:
Koduleht www.evs.ee; telefon 605 5050; e-post info@evs.ee

The right to reproduce and distribute standards belongs to the Estonian Centre for Standardisation

No part of this publication may be reproduced or utilized in any form or by any means, electronic or mechanical, including photocopying, without a written permission from the Estonian Centre for Standardisation.

If you have any questions about copyright, please contact Estonian Centre for Standardisation:

Homepage www.evs.ee; phone +372 605 5050; e-mail info@evs.ee

ICS 29.220.10; 33.040.40

English Version

**Power sources for a wireless communication device - Part 1:
General requirements of power modules
(IEC 62952-1:2016)**

Sources d'énergie pour un appareil de communication sans
fil - Partie 1: Exigences générales relatives aux modules
d'alimentation
(IEC 62952-1:2016)

Energiequellen für ein Funkkommunikationsgerät - Teil 1:
Allgemeine Anforderungen an Energiemodule
(IEC 62952-1:2016)

This European Standard was approved by CENELEC on 2016-11-09. 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.



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

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

European foreword

The text of document 65B/1053/FDIS, future edition 1 of IEC 62952-1, prepared by SC 65B "Measurement and control devices" of IEC/TC 65 "Industrial process measurement, control and automation" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN 62952-1:2016.

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) 2017-08-09
- latest date by which the national standards conflicting with the document have to be withdrawn (dow) 2019-11-09

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.

Endorsement notice

The text of the International Standard IEC 62952-1:2016 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 60086-2

NOTE Harmonized as EN 60086-2.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

NOTE 1 When an International Publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

NOTE 2 Up-to-date information on the latest versions of the European Standards listed in this annex is available here: www.cenelec.eu.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 60079-0 (mod)	2011	Explosive atmospheres -- Part 0: Equipment - General requirements	EN 60079-0	2012
-	-		+ A11	2013
IEC 60079-11	2011	Explosive atmospheres -- Part 11: Equipment protection by intrinsic safety "i"	EN 60079-11	2012
IEC 60086-1	-	Primary batteries - Part 1: General	EN 60086-1	-
IEC 60654-3	-	Operating conditions for industrial-process measurement and control equipment -- Part 3: Mechanical influences	EN 60654-3	-
IEC 60721-3-4	1995	Classification of environmental conditions - Part 3: Classification of groups of environmental parameters and their severities -- Section 4: Stationary use at non-weatherprotected locations	EN 60721-3-4	1995
IEC 61326	series	Electrical equipment for measurement, control and laboratory use - EMC requirements	-	series
IEC 62952-2	2016	Power sources for a wireless communication device - Part 2: profile for power modules with batteries	-	-
IEC 62952-3	-	Power sources for a wireless communication device - Part 3: Energy harvesting specification	-	-

CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references.....	6
3 Terms, definitions, abbreviated terms, acronyms and conventions	7
3.1 Terms and definitions	7
3.2 Abbreviated terms and acronyms.....	7
3.3 Convention for capitalizations.....	8
4 General requirements	8
4.1 General.....	8
4.2 Compliance.....	9
4.3 Design	10
4.4 Logistics	10
4.4.1 Storage and marking.....	10
4.4.2 Maintenance	10
4.4.3 Transportation in a plant	10
4.4.4 Disposal	10
4.5 Protection for explosive atmospheres	10
4.5.1 General	10
4.5.2 Transportation and replacement.....	10
4.5.3 Battery requirements.....	11
4.5.4 Temperature	11
4.5.5 Air pressure	11
4.6 Harsh environment.....	11
4.6.1 General	11
4.6.2 Vibration and shock	11
4.6.3 Humidity	11
4.6.4 Temperature	12
4.6.5 Corrosive environment	12
4.6.6 Air pressure	12
4.7 Interchangeability.....	12
4.7.1 General	12
4.7.2 Electrical interface	12
4.7.3 Mechanical interface	13
4.8 Electrical parameters	13
Bibliography	14
Figure 1 – Various power sources applicable for a wireless communication device.....	8
Table 1 – Example of an implementation conformance statement.....	9

INTRODUCTION

Industrial wireless communication network devices like a pressure transmitter or a valve positioner are mostly using non-copper-cable power sources. These devices are using a power module for their power source that can contain a battery and / or an energy harvesting element. In order to increase usability, power source of wireless sensors and actuators require a standardized interface and harmonized requirements.

This part of IEC 62952 specifies interface and specification of power source of wireless devices and does not specify the mechanical interface within a wireless communication device and the power source. Additionally, energy harvesting is a key technology for power source of wireless devices. This document also specifies interface and specification of energy harvesting devices.

This document addresses the general requirements of power sources for wireless communication devices.