

Spatial wireless power transfer based on multiple magnetic resonances - Part 2: Reference model

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English Version

Spatial wireless power transfer based on multiple magnetic resonances - Part 2: Reference model (IEC 63245-2:2022)

Transfert d'énergie sans fil dans l'espace reposant sur des résonances magnétiques multiples - Partie 2: Modèle de référence
(IEC 63245-2:2022)

Räumliche drahtlose Energieübertragung basierend auf mehrfachen magnetischen Resonanzen - Teil 2: Referenzmodell
(IEC 63245-2:2022)

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The text of document 100/3839/FDIS, future edition 1 of IEC 63245-2, prepared by technical area 15 "Wireless Power Transfer" of IEC/TC 100 "Audio, video and multimedia systems and equipment" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 63245-2:2023.

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IEC 62827-3:2016 NOTE Approved as EN 62827-3:2017 (not modified)

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NORME INTERNATIONALE



**Spatial wireless power transfer based on multiple magnetic resonances –
Part 2: Reference model**

**Transfert d'énergie sans fil dans l'espace reposant sur des résonances
magnétiques multiples –
Partie 2: Modèle de référence**



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CONTENTS

FOREWORD.....	3
INTRODUCTION.....	5
1 Scope.....	6
2 Normative references	6
3 Terms, definitions, and abbreviated terms	6
3.1 Terms and definitions.....	6
3.2 Abbreviated terms.....	7
4 Overview of spatial wireless power transfer based on multiple magnetic resonances.....	7
5 Reference model	8
5.1 Overview.....	8
5.2 Components of an SWPT-MMR system.....	9
5.2.1 Power source	9
5.2.2 Capacitor.....	9
5.2.3 Inverter.....	10
5.2.4 Transmitter coils.....	12
5.2.5 Communication module.....	14
Bibliography.....	15
Figure 1 – Conceptual image of SWPT-MMR [IEC 63245-1].....	8
Figure 2 – The reference model of an SWPT-MMR system	8
Figure 3 – Example configuration of an SWPT-MMR system with power sources	9
Figure 4 – Configuration on an SWPT-MMR system with transmitter coils connected to capacitors.....	10
Figure 5 – Configuration of an SWPT-MMR system with an inverter controlling a phase of magnetic field formed on transmitter coils connected in parallel.....	11
Figure 6 – Configuration of an SWPT-MMR system with an inverter controlling a phase of magnetic field formed on transmitter coils connected in series	11
Figure 7 – An example of an SWPT-MMR system with two transmitter coils.....	12
Figure 8 – An example of an SWPT-MMR system with two pairs of transmitter coils	13
Table 1 – Power source-related requirements defined in IEC 63245-1	9
Table 2 – Capacitor-related requirements defined in IEC 63245-1.....	10
Table 3 – Inverter-related requirements defined in IEC 63245-1.....	12
Table 4 – Transmitter coil-related requirements defined in IEC 63245-1.....	13
Table 5 – Communication module-related requirements defined in IEC 63245-1	14

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SPATIAL WIRELESS POWER TRANSFER BASED ON MULTIPLE MAGNETIC RESONANCES –

Part 2: Reference model

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The text of this International Standard is based on the following documents:

Draft	Report on voting
100/3839/FDIS	100/3864/RVD

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

The language used for the development of this International Standard is English.

A list of all parts in the IEC 63245 series, published under the general title *Spatial wireless power transfer based on multiple magnetic resonances*, can be found on the IEC website.

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

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INTRODUCTION

The IEC 63245 series (Spatial wireless power transfer based on multiple magnetic resonances, SWPT-MMR) provides requirements and a reference model for implementing spatial wireless power transfer systems. The IEC 63245 series consists of the following parts:

- Part 1: Requirements, and
- Part 2: Reference model

IEC 63245-1 describes requirements of SWPT-MMR.

IEC 63245-2 (this document) describes the reference model of SWPT-MMR.

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SPATIAL WIRELESS POWER TRANSFER BASED ON MULTIPLE MAGNETIC RESONANCES –

Part 2: Reference model

1 Scope

This document specifies a reference model for spatial wireless power transfer based on multiple magnetic resonances (SWPT-MMR), which is a type of non-radiative wireless power transfer (WPT). The document contains an overview of SWPT-MMR and a reference model.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 63245-1:2021, *Spatial wireless power transfer based on multiple magnetic resonances – Part 1: Requirements*

3 Terms, definitions, and abbreviated terms

For the purposes of this document, the following terms and definitions apply.

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3.1 Terms and definitions

3.1.1

null point

point or area in the charging zone where the magnetic field cancels out almost entirely or is below a certain specified minimum

[SOURCE: IEC 63245-1:2021, 3.1.1]

3.1.2

quiet zone

magnetic field having an equalized energy density corresponding to each of the magnetic fields formed on the transmitter coils

[SOURCE: IEC 63245-1:2021, 3.1.2]