

# INTERNATIONAL STANDARD

## 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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## 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](http://www.iec.ch/members_experts/refdocs). The main document types developed by IEC are described in greater detail at [www.iec.ch/standardsdev/publications](http://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.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- IEC Electropedia: available at <http://www.electropedia.org/>
- ISO Online browsing platform: available at <https://www.iso.org/obp>

#### 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]