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INTERNATIONAL SPECIAL COMMITTEE ON RADIO INTERFERENCE

Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Requirements for radio beam wireless power transfer (RB-WPT) equipment

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INDUSTRIAL, SCIENTIFIC AND MEDICAL EQUIPMENT – RADIO-FREQUENCY DISTURBANCE CHARACTERISTICS – REQUIREMENTS FOR RADIO BEAM WIRELESS POWER TRANSFER (RB-WPT) EQUIPMENT

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CISPR 38 has been prepared by CISPR subcommittee B: Interference relating to industrial, scientific and medical radio-frequency apparatus, to other (heavy) industrial equipment, to overhead power lines, to high voltage equipment and to electric traction. It is a Publicly Available Specification.

The text of this Publicly Available Specification is based on the following documents:

Draft	Report on voting
CIS/B/853/DPAS	CIS/B/861/RVDPAS

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 Publicly Available Specification is English.

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/publications.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn, or
- revised.

NOTE In accordance with ISO/IEC Directives, Part 1, IEC PASs are automatically withdrawn after 4 years.

INTRODUCTION

This document provides an introduction of information related to radio beam wireless power transfer (RB-WPT) equipment. Originally, RB-WPT should have been treated in CISPR 11. However, at the CISPR B meeting in San Francisco in Nov 2022, it was decided to go for a PAS first (see decision 4 in CIS/B/811/DL) which is started in this document.

This document

- specifies a definition of RB-WPT, and
- provides guidance on test set-up and measurement procedures.

With respect to general aspects of measurement equipment, measurement procedures and applicable disturbance limits, the contents of CISPR 11 apply.

INDUSTRIAL, SCIENTIFIC AND MEDICAL EQUIPMENT – RADIO-FREQUENCY DISTURBANCE CHARACTERISTICS – REQUIREMENTS FOR RADIO BEAM WIRELESS POWER TRANSFER (RB-WPT) EQUIPMENT

1 Scope

This document applies to radio beam wireless power transfer (RB-WPT) as industrial, scientific, and medical equipment operating in the frequency range of 0 Hz to 400 GHz and designed to operate up to a distance of 10 m.

This document covers emission requirements related to radio-frequency disturbances in the frequency range of 150 kHz to 18 GHz.

Radio beam wireless power transfer devices are in the scope of this document only if they are not classified as radio apparatus.

NOTE 1 Wireless power transfer devices that use a modulated signal to transmit both power and information are classified as radio apparatus in most countries. While radio beam wireless power transfer devices are included in the scope of this document, these can be classified as radio apparatus in some countries, even if the transmitted signal is continuous wave, with no modulation. The user is advised to verify the applicable national radio regulations before applying this document for these types of devices, especially regarding to limits applicable within the ISM bands wherein this document allows unrestricted radiation.

NOTE 2 Radio beam wireless power transfer devices can generate significant electromagnetic energy. While this document does not include requirements for radio-frequency (RF) exposure, the user is warned to take appropriate measures to ensure testing personnel and other bystanders are not subjected to harmful levels of RF exposure from the product under test.

This PAS adopts the requirements from CISPR 11 and provides important clarifications on the application of CISPR 11 for RB-WPT.

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.

CISPR 11:2024, *Industrial, scientific and medical equipment – Radio-frequency disturbance characteristics – Limits and methods of measurement*

CISPR 16-2-1:2014, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-1: Methods of measurement of disturbances and immunity – Conducted disturbance measurements*
CISPR 16-2-1:2014/AMD1:2017

CISPR 16-2-3:2016, *Specification for radio disturbance and immunity measuring apparatus and methods – Part 2-3: Methods of measurement of disturbances and immunity – Radiated disturbance measurements*
CISPR 16-2-3:2016/AMD1:2019
CISPR 16-2-3:2016/AMD2:2023