

Measurement procedures of magnetic field levels generated by electronic and electrical equipment in the automotive environment with respect to human exposure - Part 1: Low-frequency magnetic fields

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

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English Version

Measurement procedures of magnetic field levels generated by
electronic and electrical equipment in the automotive
environment with respect to human exposure - Part 1: Low-
frequency magnetic fields
(IEC 62764-1:2022)

Procédures de mesure de l'exposition humaine aux niveaux
de champs magnétiques générés par les accessoires
électroniques et électriques dans l'environnement
automobile - Partie 1: Champs magnétiques à basse
fréquence
(IEC 62764-1:2022)

Verfahren für die Messung von magnetischen Feldern, die
von elektrischen und elektronischen Geräten und
Einrichtungen in der Straßenfahrzeugumgebung erzeugt
werden, in Bezug auf die Exposition von Personen - Teil 1:
Niederfrequente magnetische Felder
(IEC 62764-1:2022)

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Comité Européen de Normalisation Electrotechnique
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European foreword

The text of document 106/575/FDIS, future edition 1 of IEC 62764-1, prepared by IEC/TC 106 "Methods for the assessment of electric, magnetic and electromagnetic fields associated with human exposure" was submitted to the IEC-CENELEC parallel vote and approved by CENELEC as EN IEC 62764-1:2022.

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ISO/IEC 17025 NOTE Harmonized as EN ISO/IEC 17025

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INTERNATIONAL STANDARD

NORME INTERNATIONALE



Measurement procedures of magnetic field levels generated by electronic and electrical equipment in the automotive environment with respect to human exposure –

Part 1: Low-frequency magnetic fields

Procédures de mesure de l'exposition humaine aux niveaux de champs magnétiques générés par les accessoires électroniques et électriques dans l'environnement automobile –

Partie 1: Champs magnétiques à basse fréquence



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INTERNATIONAL STANDARD

NORME INTERNATIONALE



Measurement procedures of magnetic field levels generated by electronic and electrical equipment in the automotive environment with respect to human exposure –

Part 1: Low-frequency magnetic fields

Procédures de mesure de l'exposition humaine aux niveaux de champs magnétiques générés par les accessoires électroniques et électriques dans l'environnement automobile –

Partie 1: Champs magnétiques à basse fréquence

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**MEASUREMENT PROCEDURES OF MAGNETIC FIELD LEVELS
GENERATED BY ELECTRONIC AND ELECTRICAL EQUIPMENT IN THE
AUTOMOTIVE ENVIRONMENT WITH RESPECT TO HUMAN EXPOSURE –****Part 1: Low-frequency magnetic fields****FOREWORD**

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106/575/FDIS	106/579/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.

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

This document specifies a methodology for determining the exposure to multiple magnetic field sources for passenger cars and light commercial vehicles including standardized operating conditions and measurement volumes and/or surfaces.

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MEASUREMENT PROCEDURES OF MAGNETIC FIELD LEVELS GENERATED BY ELECTRONIC AND ELECTRICAL EQUIPMENT IN THE AUTOMOTIVE ENVIRONMENT WITH RESPECT TO HUMAN EXPOSURE –

Part 1: Low-frequency magnetic fields

1 Scope

This part of IEC 62764 applies to the assessment of human exposure to low-frequency magnetic fields generated by automotive vehicles. For plug-in vehicles, this includes the electric vehicle supply equipment (EVSE) and associated cables provided by the car manufacturer. This excludes the charging station.

This document specifies the measurement procedure for the evaluation of magnetic field exposures generated by electronic and electrical equipment (excluding intentionally transmitting radio frequency antennas) in selected automotive environments, for passenger cars and commercial vehicles of categories M1 and N1 as defined in ECE/TRANS/WP.29/78/Rev.3 [1]¹, with respect to human exposure. It provides standardized operating conditions and defines recommended measurements to assess compliance with the applicable exposure requirements.

This document covers the frequency range 1 Hz to 100 kHz and is applicable to any type of engine and/or internal energy source.

This document does not include procedures for assessment of human exposure to electromagnetic fields generated by wireless power transfer (WPT) equipment operating in automotive environments. Exposure assessment procedures for WPT equipment are covered by IEC PAS 63184 [2]. Magnetic field transients shorter than 200 ms occurring when electrical functions are activated are not considered in this document.

Abnormal operation of the vehicle or its equipment is not taken into consideration.

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 61786-1, *Measurement of DC magnetic, AC magnetic and AC electric fields from 1 Hz to 100 kHz with regard to exposure of human beings – Part 1: Requirements for measuring instruments*

IEC 62311:2019, *Assessment of electronic and electrical equipment related to human exposure restrictions for electromagnetic fields (0 Hz to 300 GHz)*

¹ Numbers in square brackets refer to the Bibliography.