



BSI Standards Publication

Road vehicles — Spark-plugs and their cylinder head housings — Basic characteristics and dimensions

National foreword

This British Standard is the UK implementation of ISO 28741:2023. It supersedes BS ISO 28741:2013, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AUE/32, Electrical and electronic components and general system aspects (Road vehicles).

A list of organizations represented on this committee can be obtained on request to its committee manager.

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**Road vehicles — Spark-plugs and
their cylinder head housings — Basic
characteristics and dimensions**

*Véhicules routiers — Bougies d'allumage et leur logement dans la
culasse — Caractéristiques élémentaires et dimensions*



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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 32, *Electrical and electronic components and general system aspects*.

This third edition cancels and replaces the second edition (ISO 28741:2013), which has been technically revised.

The main changes are as follows:

- subclause [4.3](#): new subclause for additional terminal options;
- implementation of M18 spark plugs.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The purpose of this document is to provide a compact and concise specification on spark plugs and their cylinder head housings, which has replaced the large number of existing individual International Standards on each type of spark plug.

It is intended to specify the main properties, the design requirements, and the dimensions of most of the existing types of spark plugs and their cylinder head housings. In this way, the user can work with one comprehensive International Standard valid for most types of spark plugs, instead of a number of International Standards, each of which is specified for one type only.

The testing of spark plugs is covered in ISO 11565.

Road vehicles — Spark-plugs and their cylinder head housings — Basic characteristics and dimensions

1 Scope

This document specifies the main properties and dimensions of spark plugs, including the terminals and the dimensions of their cylinder head housings, for use with any spark-ignited engines. The usage of spark plugs is not restricted to road vehicles only.

This document does not cover screened and waterproof spark plugs (see ISO 3412, ISO 3895 and ISO 3896).

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.

ISO 68-1, *ISO general purpose screw threads — Basic profile — Part 1: Metric screw threads*

ISO 261, *ISO general purpose metric screw threads — General plan*

ISO 965-1, *ISO general purpose metric screw threads — Tolerances — Part 1: Principles and basic data*

ISO 965-3, *ISO general purpose metric screw threads — Tolerances — Part 3: Limit deviations for screw threads*

ISO 6518-1, *Road vehicles — Ignition systems — Part 1: Vocabulary*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 6518-1 and the following apply.

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

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

3.1

installed height

distance from the contact point of the cylinder head to the top of the spark-plug terminal, including the compressed gasket thickness with the spark plug installed at the specified installation torque

Note 1 to entry: For *conical seating* (3.5) the contact point is defined from the gauge point of the seat.

3.2

spark plug thread size

nominal size of the spark-plug thread used to interface between the spark plug and the cylinder head thread

Note 1 to entry: These are standard metric threads according to the ISO 965series, with the exception of the M14 × 1,25 thread.