

ICS 43.040.10
CCS T 36



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 20718.1-2026

Replacing GB/T 20718-2006

**Road vehicles - Connectors for the electrical connection of towing and
towed vehicles (13-pole) - Part 1: 13-pole connectors for vehicles with
12 V nominal supply voltage not intended to cross water fords**

道路车辆 牵引车和挂车之间的电连接器（13芯） 第1部分：12V13芯非涉水型
(English Translation)

Issued on: July 2, 2026

Implemented on: February 1, 2027

Issued by: State Administration for Market Regulation

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 1 of GB/T 20718 "Electrical connectors between tractors and trailers of road vehicles (13 pins)".

GB/T 20718 has published the following parts.

---Part 1.12V 13-core non-water-resistant;

---Part 2.12V 13-core wading type.

This document supersedes GB/T 20718-2006 "Electrical Connectors Between Road Vehicle Tractors and Trailers - 12V 13-pin Type" and is compatible with...

Compared with GB/T 20718-2006, apart from structural adjustments and editorial changes, the main technical changes are as follows.

--- Replace normative reference GB/T 5053.3 with ISO 4091 (see Chapters 3 and 6, 2006 edition of Chapters 3 and 6).

(6 chapters).

This document is equivalent to ISO 11446-1:2012 "Road vehicles - Electrical connectors between tractor-trailers and trailers - Part 1.12V13".

The following minimal editorial changes have been made to this document.

---To harmonize with existing standards, the standard name has been changed to "Electrical Connectors (13-pin) Between Road Vehicles Tractors and Trailers - Part 1" Partial list. 12V 13-core non-water-resistant type;

---The incorrect dimension " $\phi 3.5$ " in the main figure of Figure 1 of ISO 11446-1:2012 has been corrected to " $\phi 3.5_{max}$ ". The original text has been modified.

mistake;

---In ISO 11446-1:2012, the K-development diagram in Figure 1 lacks corresponding labels in the main diagram. This document adds labels to the K-development diagram in Figure 1.

The footnote "j" was added;

---Note in Table 1 of ISO 11446-1:2012 has been deleted;

Figures 1, 2, 3 and 4 were drawn in accordance with relevant Chinese cartographic standards.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the Ministry of Industry and Information Technology of the People's Republic of China.

This document is under the jurisdiction of the National Automotive Standardization Technical Committee (SAC/TC114).

Introduction

The electrical connector (13-pin) between the tractor and trailer is an indispensable part of the road vehicle's electrical system, responsible for transmitting electrical energy.

The electrical connector (13-pin) between the tractor and trailer is crucial for signal and data transmission. Therefore, its quality and safety directly impact road safety.

Vehicle performance and safety. To ensure the quality of the electrical connector (13-pin) between the tractor and trailer, my country has basically established a set of standards.

The standard system for electrical connectors (13 pins) between road vehicle tractors and

trailers.

GB/T 20718 "Electrical connectors between tractors and trailers of road vehicles (13 pins)" is proposed to consist of two parts.

---Part 1.12V 13-pin Non-water-resistant Type. The purpose is to specify the 12V nominal voltage between the tractor and trailer for a 13-pin non-water-resistant type.

The dimensions, contact distribution, testing and performance requirements of water-type connectors, as well as the storage mechanism for the plug when it is separated from the socket.

Requirements for installing electrical outlets.

---Part 2.12V 13-pin wading type. The purpose is to specify the 12V nominal voltage for 13-pin wading types between the tractor and trailer.

The connector's dimensions, contact layout, testing and performance requirements, and the storage socket used to store the plug when the plug and socket are separated.

Seating requirements.

Electrical connector between road vehicle tractor and trailer (13-core) Part 1.12V 13-core non-waterproof

1 Scope

This document specifies the dimensions, application, testing, and requirements for a 13-pin non-waterproof connector with a nominal 12V voltage between the tractor and trailer.

The requirements also specify the storage socket requirements for storing plugs when the plug and socket are separated.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are listed below.

This document.

ISO 1103 Road vehicles - Coupling balls for caravans and light trailers Note. GB/T 25980-2010 Road vehicles - Connecting ball dimensions for recreational trailers and light trailers (ISO 1103:2007, IDT) ISO 4091 Definition, test methods and requirements for electrical connectors between tractor-trailers and trailers in road vehicles.

ments)

Note: GB/T 5053.3-2006 Definition, test methods and requirements for electrical connectors between tractor-trailers and trailers of road vehicles (ISO 4091:2003, IDT) Note. GB/T 5054 (all

parts) Multi-core connecting cables for road vehicles

3 Terms and Definitions

The terms and definitions defined in ISO 4091 apply to this document.

4.1 General Requirements

Details not specified in this document are to be determined by the manufacturer. When the plug and socket are engaged, the contacts should be movable and able to align with the reference position.

Alignment.

4.2 Plug

The dimensions of the plug are shown in Figure 1.