

Road vehicles — Connection interface for pyrotechnic devices, two-way and three-way connections —

Part 2: Test methods and general performance requirements

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National foreword

This British Standard is the UK implementation of ISO 19072-2:2007.

The UK participation in its preparation was entrusted to Technical Committee AUE/16, Electrical and electronic equipment.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

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Part 2: Test methods and general performance requirements

*Véhicules routiers — Interface de raccordement pour dispositifs
pyrotechniques, deux voies et trois voies —*

Partie 2: Méthodes d'essai et exigences des performances générales



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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.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 19072-2 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 3, *Electrical and electronic equipment*.

ISO 19072 consists of the following parts, under the general title *Road vehicles — Connection interface for pyrotechnic devices, two-way and three-way connections*:

- *Part 1: Pocket interface definition*
- *Part 2: Test methods and general performance requirements*

Introduction

Road vehicles integrate an increasing number of pyrotechnic devices contributing to occupant safety in vehicles, e.g. frontal and side air bag, safety belt pretensioner.

To build the complete system providing the function requires a supply of various components from several different equipment makers. Vehicle manufacturers need to define a common specification to ensure that connectors designed and produced for the various equipment makers meet the same performances criteria and requirements.

In the current design of this vehicle equipment, three areas of connection have been identified:

- connection between the pyrotechnic device (e.g. initiator) and the harness connector;
- connection between the tab holder and the clip holder of the harness connector;
- connection between the harness connector and the electronic control module.

This part of ISO 19072 deals with the connection between the pyrotechnic device and the harness connector, which is the only connection that can be standardized. Due to the location of the safety device in the vehicle, the connector design could be right angle or straight.

Annex A defines a sealed option for the pyrotechnic device/initiator harness connector assembly.

Annex B defines a two-way (without ground) variant of the pyrotechnic device/initiator harness connector assembly.

Annex C defines a variant without retainer of the pyrotechnic device/initiator harness connector assembly.

Road vehicles — Connection interface for pyrotechnic devices, two-way and three-way connections —

Part 2: Test methods and general performance requirements

1 Scope

This part of ISO 19072 defines the performance criteria and requirements of a three-way connection interface, including ground connection, linking the pyrotechnic device and harness connector built into a road vehicle.

Performance criteria and requirements are also defined for a sealed variant of the pyrotechnic device/initiator harness connector assembly, and for a two-way (without ground) variant of the pyrotechnic device/initiator harness connector assembly.

2 Normative references

The following referenced documents are indispensable for the application 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 8092-2, *Road vehicles — Connections for on-board electrical wiring harnesses — Part 2: Definitions, test methods and general performance requirements*

ISO 20653, *Road vehicles — Degrees of protection (IP-Code) — Protection of electrical equipment against foreign objects, water and access*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8092-2 and the following apply.

3.1

connector

assembly used to connect several conductors together or a single conductor to an appliance

NOTE A male (female) connector is a housing containing male (female) contacts and accessory items. A male connector can be permanently fixed to a wiring harness or to an appliance, e.g. an electronic control unit (ECU). A female connector is generally permanently fixed to a wiring harness.

3.2

housing

connector without its contacts

3.3

locking device

mechanical system preventing unmating of a connector, which can be released through a deliberate action