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

Part 5: Pyrotechnic device and harness connector assembly — type 3 (only two-way)

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National foreword

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

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Foreword

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

A list of all parts in the ISO 19072 series can be found on the ISO website.

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

Road vehicles integrate an increasing number of pyrotechnic devices contributing to occupant safety in vehicles (for example frontal and side airbag, safety belt pre-tensioner, etc.).

Building the complete system requires a supply of various components from several different equipment suppliers. There is a need for vehicle manufacturers to define a common specification to ensure that connectors designed and produced for the various equipment suppliers can be mated without any difficulty.

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; and

— connection between the harness connector and the electronic control module.

The connection between the pyrotechnic device and the harness connector is the only connection that can be standardised, and it forms the subject of this document. Due to the location of the safety device in the vehicle, the connector design could be right angle or straight.

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1 Scope

This document defines the general minimum specifications of a type 3 two-way connection interface, linking the pyrotechnic device and harness connector built into a road vehicle.

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 8092-2, *Road vehicles — Connections for on-board electrical wiring harnesses — Part 2: Definitions, test methods and general performance requirements*

ISO 19072-1, *Road vehicles — Connection interface for pyrotechnic devices, two-way and three-way connections — Part 1: Pocket interface definition*

ISO 19072-2, *Road vehicles — Connection interface for pyrotechnic devices, two-way and three-way connections — Part 2: Test methods and general performances requirements*

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 1 to entry: A male (female) connector is a *housing* (3.2) containing male (female) contacts and accessory items. A male connector may be permanently fixed to a wiring harness or to an appliance [an electronic control unit (ECU) for example]. A female connector is generally permanently fixed to a wiring harness.

3.2
housing
connector (3.1) without its contacts

3.3
initiator
part of the pyrotechnical device with two male contacts

3.4
pocket
squib holder (3.6) inner interface including male contacts