INTERNATIONAL STANDARD

ISO 19689

First edition
2016-10-01

Motorcycles and mopeds — Communication between vehicle and external equipment for diagnostics — Diagnostic connector and related electrical circuits, specification and use

Motos et vélomoteurs — Communication entre véhicule et équipement externe pour les diagnostics — Raccord de disgnostic et circuits électriques relatifs, spécifications et utilisation

Reference number
ISO 19689:2016(E)

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Foreword

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The committee responsible for this document is ISO/TC 22, *Road vehicles*, Subcommittee SC 38, *Motorcycles and mopeds*.

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Introduction

This International Standard specifies on-board diagnostic connector for motorcycles and mopeds.

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Motorcycles and mopeds — Communication between vehicle and external equipment for diagnostics — Diagnostic connector and related electrical circuits, specification and use

1 Scope

This International Standard specifies a minimum set of requirements for a diagnostic connector used in communication between motorcycles and mopeds, and external equipment for diagnostics. Its aim is to promote the use of a common diagnostic connector throughout the motorcycle industry. The diagnostic connection consists of two mating connectors, the vehicle connector and the external test equipment connector. Applicable to all types of motorcycles and mopeds, the connector specified is sealed with positive locking feature and is intended for short-term diagnostic connection only.

This International Standard specifies functional requirements for

a) the vehicle connector, separated into the four principal areas of
   - connector location,
   - connector design,
   - connector contact allocation, and
   - electrical requirements for connector and related electrical circuits, and

b) the external test equipment connector, separated into the three principal areas of
   - connector design,
   - connector contact allocation, and
   - electrical requirements for connector and related electrical circuits.

The dimensional requirements of the vehicle connector are given as a minimum specification, to allow design freedom.

2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 8092-2:2005, *Road vehicles — Connections for on-board electrical wiring harnesses — Part 2: Definitions, test methods and general performance requirements*

ISO 16750-2, *Road vehicles — Environmental conditions and testing for electrical and electronic equipment — Part 2: Electrical loads*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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3.1
connection
two mated connectors or contacts

[SOURCE: ISO 15031-3:2004, 3.1]

3.2
connector
assembly of contact and housing which terminates conductors for the purpose of providing connection and disconnection to a suitable mating connector

[SOURCE: ISO 15031-3:2004, 3.2]

3.3
contact
conductive element in a connector (including means for cable attachment) which mates with a corresponding element to provide an electrical path

[SOURCE: ISO 15031-3:2004, 3.3]

3.4
female contact
electrical contact (including means for cable attachment) intended to make electrical engagement on its inner surface and to accept entry of a male contact, thus forming an electrical connection

EXAMPLE Receptacle, sleeve.

[SOURCE: ISO 15031-3:2004, 3.4]

3.5
male contact
electrical contact (including means for cable attachment) intended to make electrical engagement on its outer surface and to enter a female contact, thus forming an electrical connection

EXAMPLE Tab, pin, blade.

[SOURCE: ISO 15031-3:2004, 3.5]

4 Vehicle connector location

4.1 General

It should be recognized that country or regional governments could mandate a connector location which supersedes these provisions.

4.2 Recommended location

The vehicle connector shall be located in easily access. The preferred location is under the seating position.

4.3 Vehicle operation

Attachment of any external test equipment to the vehicle connector shall not preclude normal physical and electrical operation of the vehicle.

See ISO 15031-3:2004, 4.5.

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