BS ISO 8820-4:2016

BSI Standards Publication

Road vehicles — Fuse-links

Part 4: Fuse-links with female contacts (type A) and bolt-in contacts (type B) and their test fixtures

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National foreword

This British Standard is the UK implementation of ISO 8820-4:2016. It supersedes BS ISO 8820-4:2010 which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee AUE/16, Data Communication (Road Vehicles).

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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Road vehicles — Fuse-links —

Part 4: Fuse-links with female contacts (type A) and bolt-in contacts (type B) and their test fixtures

Véhicules routiers — Liaisons fusibles —

Partie 4: Liaisons fusibles avec contacts femelles (type A) et contacts boulonnés (type B) et leurs montages d'essai

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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 documents 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).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on 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 the following URL: www.iso.org/iso/foreword.html.

The committee responsible for this document is 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 8820-4:2010), which has been technically revised.

A list of all parts in the ISO 8820 series can be found on the ISO website.

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INTERNATIONAL STANDARD ISO 8820-4:2016(E)

Road vehicles — Fuse-links —

Part 4: Fuse-links with female contacts (type A) and bolt-in contacts (type B) and their test fixtures

1 Scope

This document specifies fuse-links with female contacts (type A) and bolt-in contacts (type B) for use in road vehicles. It establishes, for these fuse-link types, the rated current, test procedures, performance requirements and dimensions.

This document is applicable to fuse-links with a rated voltage of 32 V or 58 V, a current rating ≤140 A and a breaking capacity of 1 000 A intended for road vehicles.

This document is intended to be used in conjunction with ISO 8820-1 and with ISO 8820-2. The numbering of its clauses corresponds to that of ISO 8820-1 whose requirements are applicable, except where modified by requirements particular to this document.

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 8820-1, *Road vehicles — Fuse-links — Part 1: Definitions and general test requirements*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in ISO 8820-1 apply.

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

— IEC Electropedia: available at http://www.electropedia.org/

— ISO Online browsing platform: available at http://www.iso.org/obp

4 Marking, labelling and colour coding

See ISO 8820-1 and Table 1.

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Table 1 — Fuse-link colour coding

Fuse rating A	Colour
15	Grey
20	Light blue
25	White
30	Pink
35	Dark green
40	Green
50	Red
60	Yellow
70	Brown
80	Black
100	Blue
120	White
140	Red-brown

5 Tests and requirements

5.1 General

In addition to carrying out the test procedures in accordance with ISO 8820-1, the following criteria shall be observed.

Tests shall be performed following the test sequences in Table 2.

The test fixtures for electrical tests (see Annex A) shall be designed in accordance with Figure 1. The connection resistance shall be for type A ≤1,0 mΩ and for type B ≤0,35 mΩ to ensure the proper functioning of the test fixture.

Fuse-links in accordance with this document shall provide for visible evidence of an open fuse element.

For measuring the contact resistance of type A, the body of the fuse-link may require modification or resistance of the fuse element should be subtracted from the one of whole fuse (see Figure 1, points labelled “1”).

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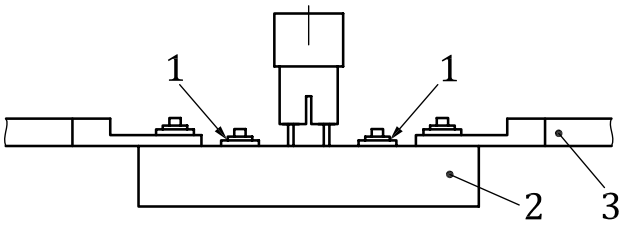
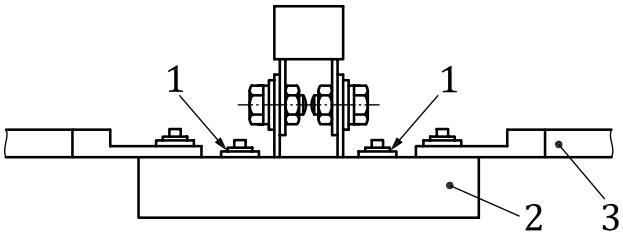
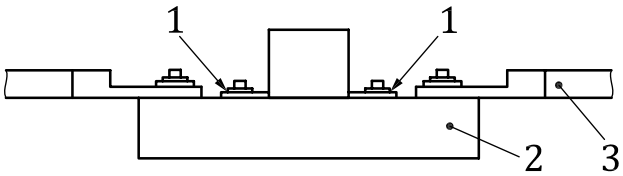
Dimensions in millimetres



a) Test fixture for types A1, A1S, A2, A3 and A4



b) Test fixture for type B1



c) Test fixture for type B2

Key

1 measuring points for the voltage drop (see 7.1, 7.2 and 7.3)

2 test fixture

3 cable size according to Table 3

Figure 1 — Test schematic

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