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BSI Standards Publication

Connectors for electrical and electronic equipment — Product requirements

Part 2-010: Circular connectors — Detail specification for push-pull connectors with locking mechanism, based on mating interfaces according to IEC 61076-2-101, IEC 61076-2-109, IEC 61076-2-111 and IEC 61076-2-113

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National foreword

This Published Document is the UK implementation of IEC PAS 61076-2-010:2020.

The UK participation in its preparation was entrusted to Technical Committee EPL/48, Electromechanical components and mechanical structures for electronic equipment.

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

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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IEC PAS 61076-2-010 has been processed by subcommittee 48B: Electrical connectors, of IEC technical committee 48: Electrical connectors and mechanical structures for electrical and electronic equipment.

The text of this PAS is based on the following document:

This PAS was approved for publication by the P-members of the committee concerned as indicated in the following document

Draft PAS	Report on voting
48B/2796/DPAS	48B/2817/RVDPAS

Following publication of this PAS, which is a pre-standard publication, the technical committee or subcommittee concerned may transform it into an International Standard.

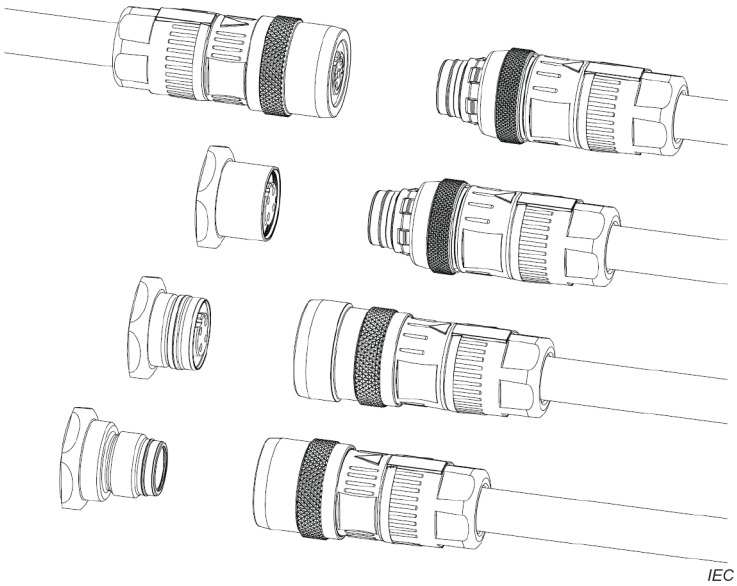
An International Standard is under preparation by IEC SC48B, to be published as IEC 61076-2-010 (if approved). This PAS will be withdrawn upon publication of the International Standard.

A list of all parts in the IEC 61076 series, published under the general title *Connectors for electrical and electronic equipment – Product requirements*, can be found on the IEC website.

Future standards in this series will carry the new general title as cited above. Titles of existing standards in this series will be updated at the time of the next edition.

This PAS shall remain valid for an initial maximum period of 2 years starting from the publication date. The validity may be extended for a single period up to a maximum of 2 years, at the end of which it shall be published as another type of normative document, or shall be withdrawn.

INTRODUCTION

<table>
<tr><td>IEC SC 48B – Electrical connectors
Specification available from:
IEC General secretariat
or from the addresses shown on the inside cover.</td><td>IEC PAS 61076-2-010 Ed. 1</td></tr>
<tr><td>ELECTRONIC COMPONENTS
DETAIL SPECIFICATION in accordance with IEC 61076-1</td><td></td></tr>
<tr><td rowspan="2"> 
IEC</td><td>Circular M12 connectors with push-pull locking for power, signal and data transmission
Fixed connectors with male and female contacts, mateable with M12 screw or push-pull plugs
Free cable connectors with male or female contacts with push-pull or screw locking
Rewireable – Non-rewireable</td></tr>
<tr><td>Fixed connectors, with front, rear or single hole mounting
Straight and right-angled free cable connectors</td></tr>
</table>

CONNECTORS FOR ELECTRICAL AND ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 2-010: Circular connectors – Detail specification for push-pull connectors with locking mechanism, based on mating interfaces according to IEC 61076-2-101, IEC 61076-2-109, IEC 61076-2-111 and IEC 61076-2-113

1 Scope

This part of IEC 61076 specifies circular connectors with a push-pull locking mechanism of a size derived from and thus being compatible with M12 screw-locking connectors (free connectors with screw-locking according to IEC 61076-2-101, IEC 61076-2-109, IEC 61076-2-111 or IEC 61076-2-113 are compatible to push-pull fixed interfaces according to this document) and with mating interfaces according to IEC 61076-2-101, IEC 61076-2-109, IEC 61076-2-111 or IEC 61076-2-113.

NOTE 1 M12 is the dimension of the thread of the screw-locking mechanism of circular connectors with M12 screw-locking.

This document covers both

1) power connectors with current ratings up to 16 A and voltage ratings up to 630 V, typically used for power supply and power applications in industrial premises, and
2) connectors for data and signal transmission with frequencies up to 500 MHz.

These connectors consist of both, fixed and free connectors, either rewireable or non-rewireable, with M12 push-pull locking as explained above. Male connectors have round contacts from Ø0,6 mm up to Ø1,5 mm. In addition, the push-pull mechanisms consist of two different push-pull designs:

a) An outer push-pull for male and female fixed connector, where the locking groove is placed onto the outer cylindric surface of the housing. The outer push-pull for female fixed connectors is made for two different types of male connectors. It has locking means for both types on its outer surface.

   NOTE 2 For design and dimensions, see 5.3.1 and 5.3.2.

b) An inner push-pull for female fixed connectors, where the locking means are placed onto the inner cylindric surface of the housing.

   NOTE 3 For design and dimensions. see 5.3.3.

The different codings provided by IEC 61076-2 and mentioned within this document, prevent the mating of accordingly coded male or female connectors to any other similarly sized interfaces, covered by other standards and the cross-mating between the different codings provided by IEC 61076-2.

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.