IEC PAS 61076-2-114

Edition 1.0 2016-05

PUBLICLY AVAILABLE SPECIFICATION

PRE-STANDARD

Connectors for electronic equipment – Product requirements – Part 2-114: Circular connectors – Detail specification for data and power connectors with M8 screw-locking

INTERNATIONAL ELECTROTECHNICAL COMMISSION

ICS 31.220.10

ISBN 978-2-8322-3365-8

CONTENTS

INTERNATIONAL ELECTROTECHNICAL COMMISSION

_____

CONNECTORS FOR ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 2-114: Circular connectors – Detail specification for data and power connectors with M8 screw-locking

FOREWORD

1) The International Electrotechnical Commission (IEC) is a worldwide organization for standardization comprising all national electrotechnical committees (IEC National Committees). The object of IEC is to promote international co-operation on all questions concerning standardization in the electrical and electronic fields. To this end and in addition to other activities, IEC publishes International Standards, Technical Specifications, Technical Reports, Publicly Available Specifications (PAS) and Guides (hereafter referred to as "IEC Publication(s)"). Their preparation is entrusted to technical committees; any IEC National Committee interested in the subject dealt with may participate in this preparatory work. International, governmental and non-governmental organizations liaising with the IEC also participate in this preparation. IEC collaborates closely with the International Organization for Standardization (ISO) in accordance with conditions determined by agreement between the two organizations.
2) The formal decisions or agreements of IEC on technical matters express, as nearly as possible, an international consensus of opinion on the relevant subjects since each technical committee has representation from all interested IEC National Committees.
3) IEC Publications have the form of recommendations for international use and are accepted by IEC National Committees in that sense. While all reasonable efforts are made to ensure that the technical content of IEC Publications is accurate, IEC cannot be held responsible for the way in which they are used or for any misinterpretation by any end user.
4) In order to promote international uniformity, IEC National Committees undertake to apply IEC Publications transparently to the maximum extent possible in their national and regional publications. Any divergence between any IEC Publication and the corresponding national or regional publication shall be clearly indicated in the latter.
5) IEC itself does not provide any attestation of conformity. Independent certification bodies provide conformity assessment services and, in some areas, access to IEC marks of conformity. IEC is not responsible for any services carried out by independent certification bodies.
6) All users should ensure that they have the latest edition of this publication.
7) No liability shall attach to IEC or its directors, employees, servants or agents including individual experts and members of its technical committees and IEC National Committees for any personal injury, property damage or other damage of any nature whatsoever, whether direct or indirect, or for costs (including legal fees) and expenses arising out of the publication, use of, or reliance upon, this IEC Publication or any other IEC Publications.
8) Attention is drawn to the Normative references cited in this publication. Use of the referenced publications is indispensable for the correct application of this publication.
9) Attention is drawn to the possibility that some of the elements of this IEC Publication may be the subject of patent rights. IEC shall not be held responsible for identifying any or all such patent rights.

A PAS is a technical specification not fulfilling the requirements for a standard, but made available to the public.

IEC PAS 61076-2-114 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/2459/PAS	48B/2476/RVC

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

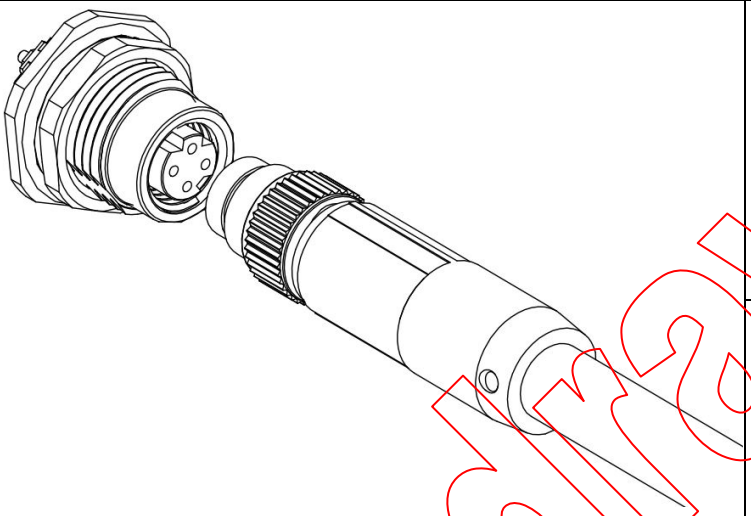
This PAS shall remain valid for an initial maximum period of 3 years starting from the publication date. The validity may be extended for a single period up to a maximum of 3 years, at the end of which it shall be published as another type of normative document, or shall be withdrawn.

A bilingual version of this publication may be issued at a later date.

INTRODUCTION

<table>
<tr><td>IEC SC 48B – Connectors

Specification available from:
IEC General secretariat
or from the addresses shown on the inside cover.</td><td>IEC 61076-2-114</td></tr>
<tr><td>ELECTRONIC COMPONENTS

DETAIL SPECIFICATION in accordance with IEC 61076-1</td><td></td></tr>
<tr><td rowspan="2">  </td><td>Circular connectors
M8 for data and power applications with screw-locking and 4 ways

Male and female connectors
Male and female contacts

Rewireable – Non-rewireable</td></tr>
<tr><td>Free cable connectors
Straight and right angle connectors

Fixed connectors
Flange mounting
Single hole mounting</td></tr>
</table>

CONNECTORS FOR ELECTRONIC EQUIPMENT – PRODUCT REQUIREMENTS –

Part 2-114: Circular connectors – Detail specification for data and power connectors with M8 screw-locking

1 Scope

This part of IEC 61076 describes circular connectors with M8 screw-locking typically used for data transmissions in industrial applications. These connectors consist of fixed and free connectors either rewireable or non-rewireable, with M8 screw-locking. Male connectors have round contacts ∅0,8 mm.

The coding provided by this PAS prevents the mating of accordingly coded male or female connectors to any other similarly sized interfaces covered by other standards.

NOTE M8 is the dimension of the thread of the screw-locking mechanism of these circular connectors.

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.

IEC 60050-581, *International Electrotechnical Vocabulary – Part 581: Electromechanical components for electronic equipment*

IEC 60068-1, *Environmental testing – Part 1: General and guidance*

IEC 60068-2-60, *Environmental testing – Part 2-60: Tests – Test Ke: Flowing mixed gas corrosion test*

IEC 60352 (all parts), *Solderless connectors*

IEC 60512 (all parts), *Connectors for electronic equipment – Tests and measurements*

IEC 60512-1-100, *Connectors for electronic equipment – Tests and measurements – Part 1-100: General – Applicable publications*

IEC 60512-29-100, *Connectors for electronic equipment – Tests and measurements – Part 29-100: Signal integrity tests up to 500 MHz on M12 style connectors – Tests 29a to 29g*

IEC 60529:1989, *Degrees of protection provided by enclosures (IP code)*

IEC 60603-7:2008, *Connectors for electronic equipment – Part 7: Detail specification for 8-way, unshielded, free and fixed connectors*

IEC 60603-7-1, *Connectors for electronic equipment – Part 7-1: Detail specification for 8-way, shielded, free and fixed connectors*

IEC 60664-1, *Insulation coordination for equipment within low-voltage systems – Part 1: Principles, requirements and tests*

IEC 60998-2-1, *Connecting devices for low-voltage circuits for household and similar purposes – Part 2-1: Particular requirements for connecting devices as separate entities with screw-type clamping units*

IEC 60999 (all parts), *Connecting devices – Electrical copper conductors – Safety requirements for screw-type and screwless-type clamping units*

IEC 61076-1:2006, *Connectors for electronic equipment – Product requirements – Part 1: Generic specification*

IEC 62197-1, *Connectors for electronic equipment – Quality assessment requirements – Part 1: Generic specification*

IEC 62430, *Environmentally conscious design for electrical and electronic products*

IEC GUIDE 109, *Environmental aspects – Inclusion in electrotechnical product standards*

ISO 1302, *Geometrical product specifications (GPS) – Indication of surface texture in technical product documentation*