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Interested committees:

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Part 4: Sectional specification for type L32-4 and L32-5 circular connectors

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	



46F/663/CD

COMMITTEE DRAFT (CD)

PROJECT NUMBER: IEC 63138-4 ED1	
DATE OF CIRCULATION: 2024-01-26	CLOSING DATE FOR COMMENTS: 2024-04-19
SUPERSEDES DOCUMENTS: 46F/661/RR	

IEC SC 46F : RF AND MICROWAVE PASSIVE COMPONENTS	
SECRETARIAT: United States of America	SECRETARY: Mr John Morelli
OF INTEREST TO THE FOLLOWING COMMITTEES:	PROPOSED HORIZONTAL STANDARD: ☐ Other TC/SCs are requested to indicate their interest, if any, in this CD to the secretary.
FUNCTIONS CONCERNED: ☐ EMC ☐ ENVIRONMENT ☐ QUALITY ASSURANCE ☐ SAFETY	

This document is still under study and subject to change. It should not be used for reference purposes.

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Recipients of this document are invited to submit, with their comments, notification of any local regulations or technical reasons that may exist and should be considered should this proposal proceed, recognizing that failure to address such requirements could result in the need for new or existing "In Some Countries" clauses. (SEE [AC/22/2007](#) OR [NEW GUIDANCE DOC](#)).

TITLE: Multi-channel radio frequency connectors - Part 4: Sectional specification for type L32-4 and L32-5 circular connectors
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NOTE FROM TC/SC OFFICERS: This is the CD for 63138-4 to replace 61169-59 based on 46F/660/RM, Decision 9.
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INTERNATIONAL ELECTROTECHNICAL COMMISSION

Multi-CHANNEL RADIO-FREQUENCY CONNECTORS–**Part 4: Sectional specification for type L32-4 and L32-5 circular connectors**

FOREWORD

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IEC 63138-4 has been prepared by subcommittee 46F: RF and microwave passive components, of IEC technical committee 46: Cables, wires, waveguides, RF connectors, RF and microwave passive components and accessories. It is an International Standard.

This edition cancels and replaces IEC 61169-59:2017. This edition constitutes a technical revision.

This edition includes the following significant technical changes with respect to the previous edition:

- a) Use IEC 63138-1:2019 as its generic specification instead of using IEC 61169-1:2013;
- b) All the sub-clauses and test methods are in line with IEC 63138-1:2019;
- c) Dimension "g" in Table 3, Table 4, Table 7 and Table 8 have been changes from "0,00 min to 0,8 max" to "1,60 min to 2,1 max".

The text of this International Standard is based on the following documents:

Draft	Report on voting
46F/XX/FDIS	46F/XX/RVD

Full information on the voting for its approval can be found in the report on voting indicated in the above table.

The language used for the development of this International Standard is English [change language if necessary].

This document was drafted in accordance with ISO/IEC Directives, Part 2, and developed in accordance with ISO/IEC Directives, Part 1 and ISO/IEC Directives, IEC Supplement, available at www.iec.ch/members_experts/refdocs. The main document types developed by IEC are described in greater detail at www.iec.ch/standardsdev/publications.

A list of all parts in the IEC 63138 series, published under the general title *Multi radio frequency channel connector*, can be found on the IEC website.

The committee has decided that the contents of this document will remain unchanged until the stability date indicated on the IEC website under webstore.iec.ch in the data related to the specific document. At this date, the document will be

- reconfirmed,
- withdrawn,
- replaced by a revised edition, or
- amended.

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MULTI-CHANNEL RADIO-FREQUENCY CONNECTORS –

Part 4: Sectional specification for type L32-4 and L32-5 circular connectors

1 Scope

This part of IEC 63138, which is a sectional specification (SS), provides information and rules for the preparation of detail specifications (DS) for type L32-4 and L32-5 threaded multi-coaxial radio frequency connector with anti mismatching mechanism, 50Ω nominal impedance. The operating frequency of each channel is up to 4GHz. These connectors have been widely used in mobile communication system like TD-SCDMA and TD-LTE, and can also be used in some similar equipment.

It also prescribes mating face dimensions for general connectors-grade 2, gauging information and tests selected from IEC 63138-1, applicable to all detail specifications relating to type L32-4 and L32-5 multi-coaxial connectors.

This sectional specification provides information and rules for the preparation of detail specifications for type L32-4 and L32-5 multi-coaxial connectors together with the proforma blank detail specification.

This specification indicates the recommended performance characteristics to be considered when writing a detail specification and it covers test schedules and inspection requirements for assessment levels M and H.

NOTE Metric dimension are original dimensions.

All undimensioned pictorial configurations are for reference purpose only.

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.

IEC 63138-1:2019, *Multi-channel radio-frequency connectors – Part 1: Generic specification – General requirements and test methods*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in IEC 63138-1 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>

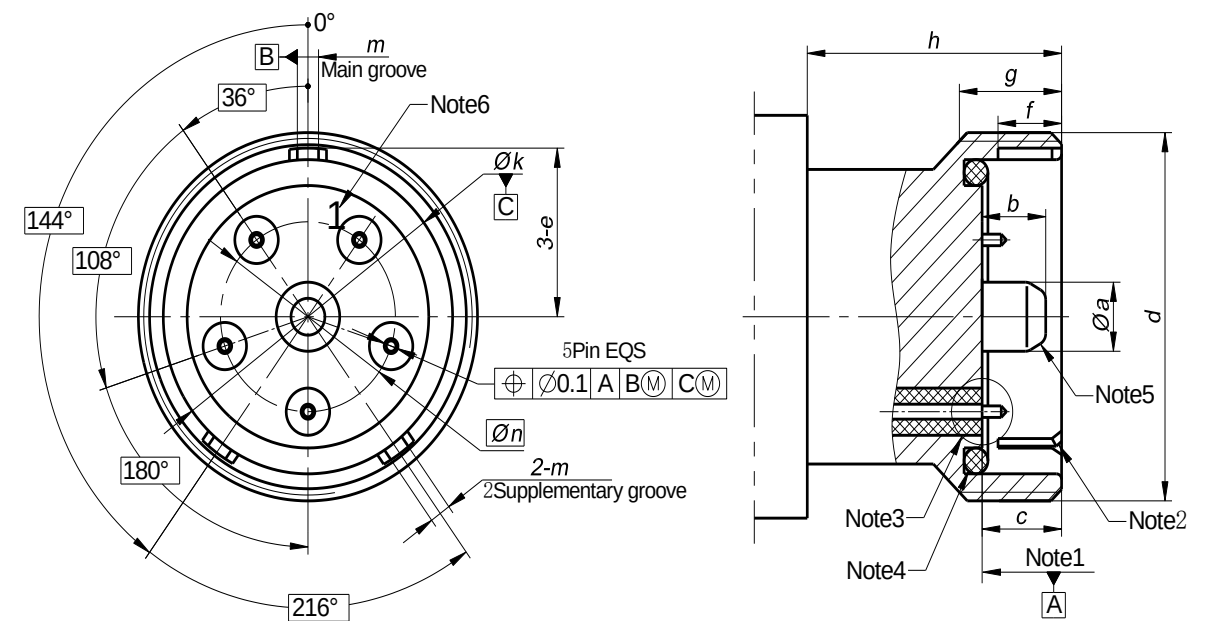
4 Mating face and gauge information

4.1 Mating face dimensions

4.1.1 Connector with pin contact

4.1.1.1 L32-5 connector with 5 pin contacts

The mating face of L32-5 connector with 5 pin contacts is shown as figure 1 and its dimensions are shown as table 1.



- NOTE 1 Mechanical and electrical reference plane.
- NOTE 2 Chamfer of the three supplementary grooves is optional.
- NOTE 3 The mating face of RF channel with pin contact is shown in Figure a) in 4.1.3 and its dimensions are shown in Table.
- NOTE 4 The shape of seal ring is optional.
- NOTE 5 Anti-mismatching pin.
- NOTE 6 The initial position number of the RF channel with pin contact and the other positions numbered clockwise.

Figure 1 – L32-5 connector with 5 pin contacts

Table 1 – Dimensions of L32-5 socket connector

Ref.	Dimensions mm	
	Min.	Max.
<i>a</i>	6,0	6,1
<i>b</i>	6,0	6,2
<i>c</i>	7,5	7,6
<i>d</i>	M32X1,5-6g	
<i>e</i>	14,4	14,5
<i>f</i>	6,0	--
<i>g</i>	9,5	9,7
<i>h</i>	24,0	--
<i>k</i>	27, 0	27,1
<i>m</i>	2,1	2,2
<i>n</i>	16,5	

4.1.1.2 L32-4 connector with 4 pin contacts

The mating face of L32-4 connector with 4 pin contacts is shown as figure 2 and its dimensions are shown as table 2.