

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE



**Radio-frequency connectors –  
Part 51: Sectional specification for RF coaxial connectors with inner diameter of  
outer conductors 13,5 mm with bayonet lock – Characteristic impedance 50  $\Omega$   
(type QLI)**

[IEC 61169-51:2015](https://standards.iteh.ai/catalog/standards/sist/9ab0cb35-9f74-4b18-829b-b0c1d1e1e1e1/iec-61169-51-2015)

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**Connecteurs pour fréquences radioélectriques –  
Partie 51: Spécification intermédiaire relative aux connecteurs coaxiaux pour  
fréquences radioélectriques avec diamètre intérieur des conducteurs extérieurs  
de 13,5 mm à verrouillage à baïonnette – Impédance caractéristique 50  $\Omega$   
(type QLI)**



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# INTERNATIONAL STANDARD

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**Radio-frequency connectors –  
Part 51: Sectional specification for RF coaxial connectors with inner diameter of  
outer conductors 13,5 mm with bayonet lock – Characteristic impedance 50 Ω  
(type QLI)**

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INTERNATIONAL ELECTROTECHNICAL COMMISSION

**RADIO-FREQUENCY CONNECTORS –**

**Part 51: Sectional specification for  
RF coaxial connectors with inner diameter  
of outer conductors 13,5 mm with bayonet lock –  
Characteristic impedance 50 Ω (type QLI)**

FOREWORD

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The text of this standard is based on the following documents:

FDIS	Report on voting
46F/295/FDIS	46F/310/RVD

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

This publication has been drafted in accordance with the ISO/IEC Directives, Part 2.

A list of all parts of the IEC 61169 series, under the general title: *Radio-frequency connectors*, can be found on the IEC website.

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- withdrawn,
- replaced by a revised edition, or
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## INTRODUCTION

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## RADIO-FREQUENCY CONNECTORS –

### Part 51: Sectional specification for RF coaxial connectors with inner diameter of outer conductors 13,5 mm with bayonet lock – Characteristic impedance 50 $\Omega$ (type QLI)

#### 1 Scope

This part of IEC 61169, which is a sectional specification (SS), provides information and rules for the preparation of detail specifications (DS) for type QLI R.F. coaxial connectors with quick lock.

The connectors are normally used with 50  $\Omega$  corrugated cable and flexible cables for middle power applications in an operating range up to 6 GHz.

It describes the interface dimensions for general purpose connectors with gauging information and the mandatory tests selected from IEC 61169-1 applicable to all detail specifications relative to type QLI connectors.

This specification indicates the recommended performance characteristics to be considered when writing a DS and covers all tests schedules and inspection requirements.

NOTE Metric dimension are original dimensions.

All un-dimensioned pictorial configurations are for reference purpose only.

#### 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 60529, *Degrees of protection provided by enclosures (IP Code)*

IEC 61169-1:2013, *Radio-frequency connectors – Part 1: Generic specification – General requirements and measuring methods*

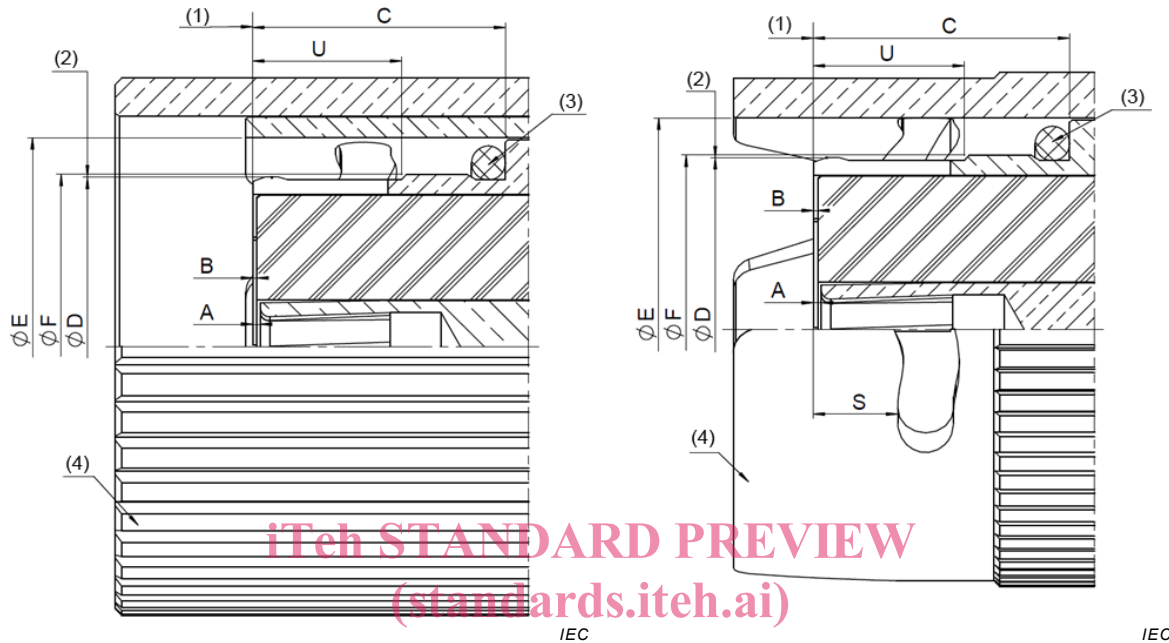
IEC 62037 (all parts), *Passive RF and microwave devices, intermodulation level measurement*

ISO 21207, *Corrosion tests in artificial atmospheres – Accelerated corrosion tests involving alternate exposure to corrosion-promoting gases, neutral salt-spray and drying*

### 3 Mating face and gauge information

#### 3.1 Dimensions – General connectors

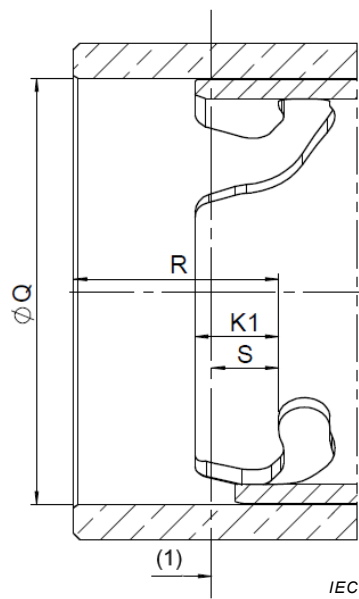
##### 3.1.1 Connector with socket-centre contact



a) Option 1 – connector for outdoor use IEC 61169-51:2015 b) Option 2 – connector for indoor use

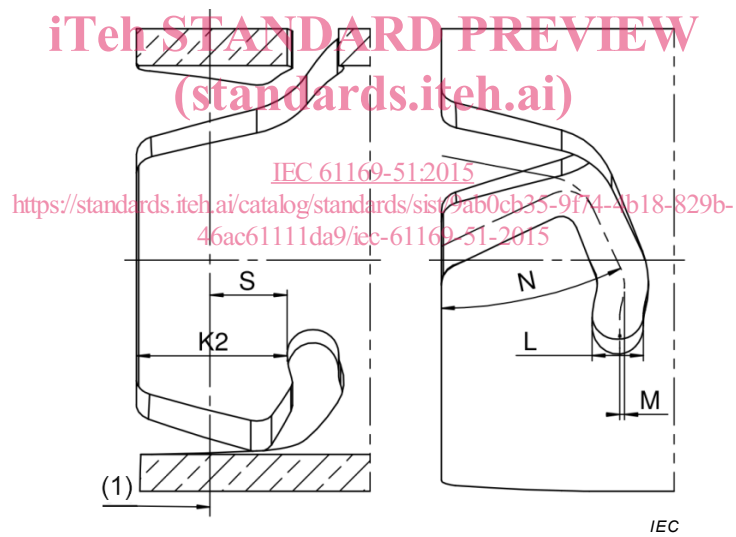
- (1) Reference plane <https://standards.iteh.ai/catalog/standards/sist/9ab0cb35-9f74-4b18-829b-46ac61111da9/iec-61169-51-2015>
- (2) Slotted and flared to meet mechanical and electrical requirements
- (3) Sealing O-ring to meet required electrical and environmental performance
- (4) The nut is permitted to use either option 1 or option 2 depending on outdoor or indoor use.

**Figure 1 – Connector with socket-centre contact with 2 options (for dimensions and key, see Table 1)**



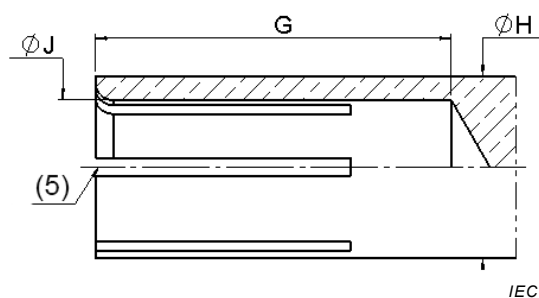
(1) Reference plane

**Figure 2 – Detail of bayonet lock groove, option 1 (for dimensions and key, see Table 1)**



(1) Reference plane

**Figure 3 – Detail of bayonet lock groove, option 2 (for dimensions and key, see Table 1)**



(5) Slotted and closed to meet socket gauge test

**Figure 4 – Female centre contact (for dimensions and key, see Table 1**

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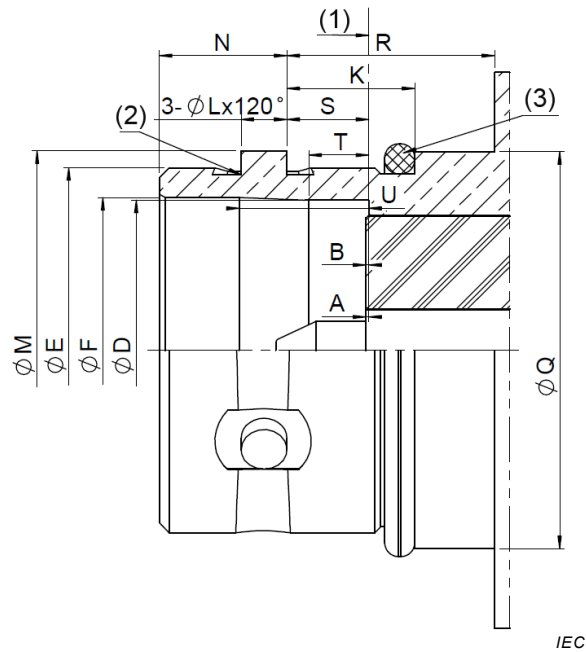
**Table 1 – Dimensions of connector with socket-centre contact**

Ref.	mm		Additional notes
	Min.	Max.	
A	0,22	0,38	
B	0,1	0,3	
C	–	–	
D	–	–	
E	18,48	18,58	
F	15,2	15,28	
G	6	–	
H	4,1 nom.		
J	–	–	
K1	3,9	5,2	
K2	5,1	5,5	
L	2,45	2,6	
M	0,20	0,28	
N	20	35	Degree
Q	20,4	20,5	
R	7,60	8,5	
S	3,59	3,77	
U	6,5	6,8	

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3.1.2 Connector with pin-centre contact



(1) Reference plane

(2) A concave depression between studs is permissible.

(3) The O-ring is optional.

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Figure 5 – Connector with pin-centre contact (for dimensions and key, see Table 2)

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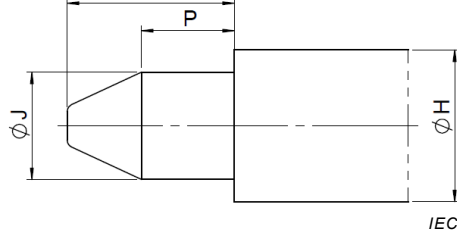


Figure 6 – Details of pin-centre contact (for dimensions, see Table 2)

**Table 2 – Dimensions of connector with pin-centre contact**

Ref.	mm		Additional notes
	Min.	Max.	
A	0,07	0,23	
B	0,05	0,25	
D	15,02	15,08	
E	18,28	18,40	
F	15,30	15,40	
G	4,30	4,70	
H	4,1 nom.		
J	2,87	2,93	
K	7,00	7,30	
L	2,25	2,35	
M	20,10	20,25	
N	6,35	6,45	
P	2,40	2,60	
Q	20,00	20,20	
R	12,00	–	
S	4,05	4,15	
T	1,95	–	
U	6,30	6,50	

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