

# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

**Radio-frequency connectors –  
Part 63: Sectional specification – RF coaxial connectors with inner diameter of  
outer conductor 6,5 mm (0,256 in) with bayonet lock – Characteristic  
impedance 75  $\Omega$  (type BNC75)**

**Connecteurs pour fréquences radioélectriques –  
Partie 63: Spécification intermédiaire – Connecteurs coaxiaux pour fréquences  
radioélectriques avec diamètre intérieur du conducteur extérieur de 6,5 mm  
(0,256 in) à verrouillage à baïonnette – Impédance caractéristique 75  $\Omega$   
(type BNC75)**



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# INTERNATIONAL STANDARD

## NORME INTERNATIONALE

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### Radio-frequency connectors –

**Part 63: Sectional specification – RF coaxial connectors with inner diameter of outer conductor 6,5 mm (0,256 in) with bayonet lock – Characteristic impedance 75  $\Omega$  (type BNC75)**

### Connecteurs pour fréquences radioélectriques –

**Partie 63: Spécification intermédiaire – Connecteurs coaxiaux pour fréquences radioélectriques avec diamètre intérieur du conducteur extérieur de 6,5 mm (0,256 in) à verrouillage à baïonnette – Impédance caractéristique 75  $\Omega$  (type BNC75)**

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## INTERNATIONAL ELECTROTECHNICAL COMMISSION

## RADIO-FREQUENCY CONNECTORS –

**Part 63: Sectional specification – RF coaxial connectors with inner diameter of outer conductor 6,5 mm (0,256 in) with bayonet lock – Characteristic impedance 75  $\Omega$  (type BNC75)**

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International Standard IEC 61169-63 has been prepared by subcommittee 46F: RF and microwave passive components, of IEC technical committee 46: Cables wires, waveguides, RF connectors, RF microwave passive components and accessories.

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

|              |                  |
|--------------|------------------|
| FDIS         | Report on voting |
| 46F/501/FDIS | 46F/506/RVD      |

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

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

A list of all parts of the IEC 61169 series, published under the general title *Radio frequency connectors*, 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 "<http://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.

## RADIO-FREQUENCY CONNECTORS –

### **Part 63: Sectional specification – RF coaxial connectors with inner diameter of outer conductor 6,5 mm (0,256 in) with bayonet lock – Characteristic impedance 75 $\Omega$ (type BNC75)**

#### **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 RF coaxial connectors which can preferably be used with RF cables 60096 IEC 50-3 of IEC 60096-2. These connector patterns are for low power, quick connect/disconnect applications using a bayonet type coupling mechanism and are commonly known as type "BNC" with characteristic impedance 75  $\Omega$ .

It describes the interface dimensions for general purpose connectors, dimensional details for standard test connectors together with gauging information and the mandatory tests selected from IEC 61169-1, applicable to all DS relating to type BNC connectors with characteristic impedance 75  $\Omega$ .

This document indicates the recommended performance characteristics to be considered when writing a DS and covers test schedules and inspection requirements.

NOTE The original dimensions are in inches. All undimensioned pictorial configurations are for reference purposes 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 60068-1, *Environmental testing – Part 1: General and guidance*

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

#### **3 Terms and definitions**

No terms and definitions are listed in this document.

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 IEC type designation

Connectors of this standard shall be designated by:

- the reference to this standard, 61169-63 IEC;
- a letter corresponding to the climatic category (see 8.2).

Example:

61169-8-IEC-1A denotes a free pin connector belonging to climatic category 40/85/21 to be used with an RF coaxial cable 60096 IEC 50-3-1/3/4.

NOTE The type designation used in this standard is provisional. A final type designation is under consideration.

## 5 Interface dimensions – General purpose connectors

### 5.1 Pin connector

The mating face of the connector with pin-centre contact is shown in Figure 1 and its dimensions are shown in Table 1. Figure 2, Figure 3, Figure 4 and Figure 5 show details of bayonet lock, two types of coupling grooves and centre pin.

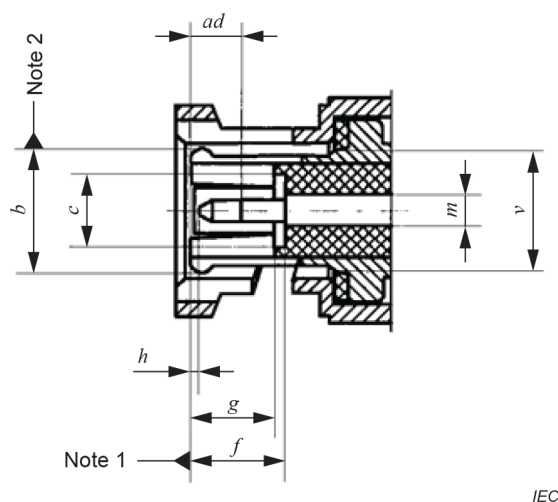


Figure 1 – Connector with pin-centre contact

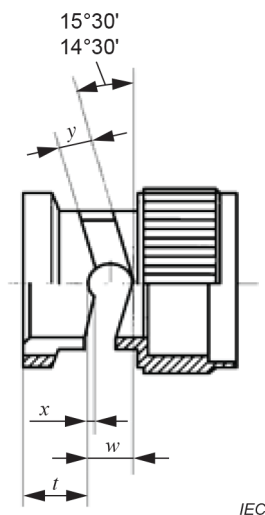


Figure 2 – Details of bayonet lock

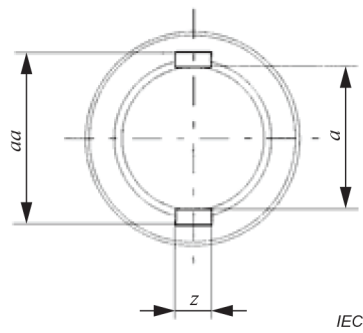


**Figure 3 – Details of alternative coupling grooves**

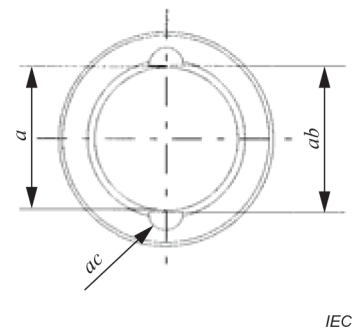


**Figure 4 – Details of alternative coupling grooves**

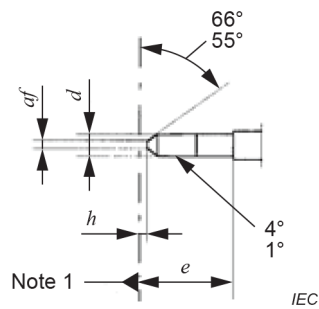


**Figure 5 – Details of pin-centre contact**

**Table 1 – Dimensions for connector with pin-centre contact**

| Ref.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | mm    |       | in    |       | Remarks                                                                                                          |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|-------|-------|------------------------------------------------------------------------------------------------------------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Min.  | Max.  | Min.  | Max.  |                                                                                                                  |
| <i>a</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 9,78  | 9,91  | 0,385 | 0,390 | 6/diameter                                                                                                       |
| <i>b</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | –     | –     | –     | –     | 2/6/diameter                                                                                                     |
| <i>c</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4,83  | –     | 0,190 | –     | 3/6/diameter                                                                                                     |
| <i>d</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 1,32  | 1,37  | 0,052 | 0,054 | 3/diameter                                                                                                       |
| <i>e</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5,33  | –     | 0,210 | –     |                                                                                                                  |
| <i>f</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 5,28  | 5,79  | 0,208 | 0,228 | 4                                                                                                                |
| <i>g</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4,30  | 5,30  | 0,169 | 0,209 | 3                                                                                                                |
| <i>h</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0,08  | 1,02  | 0,003 | 0,040 |                                                                                                                  |
| <i>m</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2,10  | 2,14  | 0,083 | 0,084 | diameter,<br>chosen to meet 75 $\Omega$ impedance, and<br>impedance value shall be specified by<br>manufacturer. |
| <i>t</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 4,47  | 4,67  | 0,18  | 0,184 |                                                                                                                  |
| <i>v</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | –     | 8,18  | –     | 0,322 | 6/diameter                                                                                                       |
| <i>w</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 3,15  | –     | 0,124 | –     |                                                                                                                  |
| <i>x</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 0,46  | 0,56  | 0,018 | 0,022 |                                                                                                                  |
| <i>y</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2,31  | 2,46  | 0,091 | 0,097 |                                                                                                                  |
| <i>z</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               | 2,31  | 2,46  | 0,091 | 0,097 | 5                                                                                                                |
| <i>aa</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 11,76 | 12,01 | 0,463 | 0,473 | 5                                                                                                                |
| <i>ab</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 10,01 | 10,16 | 0,394 | 0,400 | 5                                                                                                                |
| <i>ac</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | 1,14  | 1,24  | 0,045 | 0,049 | 5/rad                                                                                                            |
| <i>ad</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | –     | 3,86  | –     | 0,152 |                                                                                                                  |
| <i>af</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              | –     | 0,64  | –     | 0,025 | diameter                                                                                                         |
| <sup>1</sup> Mechanical and electrical reference plane.<br><sup>2</sup> Slotted and flared to meet electrical and mechanical requirements.<br><sup>3</sup> Reference <i>c</i> and reference <i>g</i> are applicable only when the dielectric support is counterbored.<br><sup>4</sup> Reference <i>f</i> also specifies the end of the dielectric support that is not counterbored.<br><sup>5</sup> It is permitted to use either Figure 3 or Figure 4.<br><sup>6</sup> Diameters on mm of <i>c</i> shall be on or be capable of taking a common axis. |       |       |       |       |                                                                                                                  |

## 5.2 Socket connector

The mating face of the connector with socket-centre contact is shown in Figure 6 and its dimensions are shown in Table 2. Figure 7 shows details of the socket-centre contact.

For the specification of airline type connector reference shall be made to Table 7.

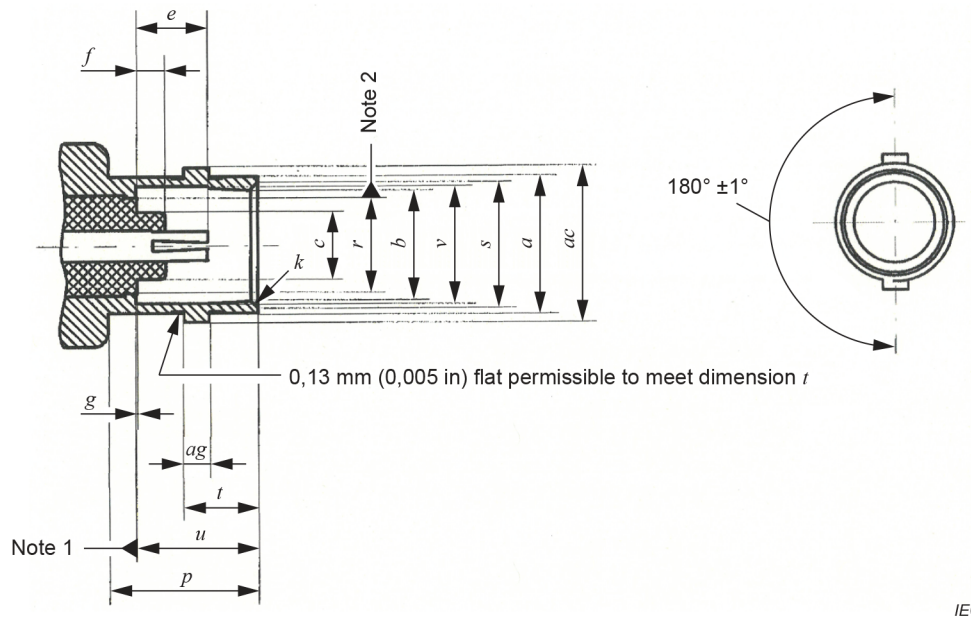


Figure 6 – Connector with socket-centre contact

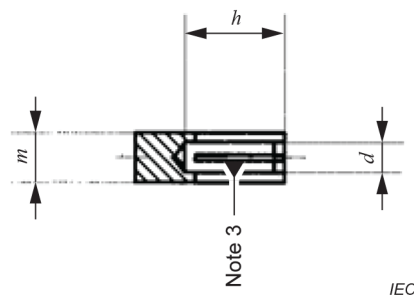


Figure 7 – Details of socket-centre contact

Table 2 – Dimensions for connector with socket-centre contact

| Reference | mm    |      | in    |       | Remarks                                                                                                                  |
|-----------|-------|------|-------|-------|--------------------------------------------------------------------------------------------------------------------------|
|           | Min.  | Max. | Min.  | Max.  |                                                                                                                          |
| $a$       | 9,60  | 9,70 | 0,378 | 0,382 | 5/diameter                                                                                                               |
| $b$       | 8,10  | 8,15 | 0,319 | 0,321 | 5/diameter                                                                                                               |
| $c$       | –     | 4,72 | –     | 0,186 | 5/diameter                                                                                                               |
| $d$       | –     | –    | –     | –     | 3/5/diameter                                                                                                             |
| $e$       | 4,72  | 5,23 | 0,186 | 0,206 |                                                                                                                          |
| $f$       | –     | 2,31 | –     | 0,091 |                                                                                                                          |
| $g$       | –     | 0,15 | –     | 0,006 | 8                                                                                                                        |
| $h$       | 4,95  | –    | 0,195 | –     |                                                                                                                          |
| $k$       | –     | –    | –     | –     | 4                                                                                                                        |
| $m$       | 2,10  | 2,14 | 0,083 | 0,084 | diameter,<br>chosen to meet<br>75 $\Omega$ impedance,<br>and impedance<br>value shall be<br>specified by<br>manufacture. |
| $p$       | 10,52 | –    | 0,414 | –     |                                                                                                                          |
| $r$       | –     | 6,50 | –     | 0,256 | 2/diameter                                                                                                               |

| Reference | mm    |       | in    |       | Remarks    |
|-----------|-------|-------|-------|-------|------------|
|           | Min.  | Max.  | Min.  | Max.  |            |
| <i>s</i>  | 8,79  | 9,04  | 0,346 | 0,356 | diameter   |
| <i>t</i>  | 5,18  | 5,28  | 0,204 | 0,208 |            |
| <i>u</i>  | 8,31  | 8,51  | 0,327 | 0,335 |            |
| <i>v</i>  | 8,31  | 8,46  | 0,327 | 0,333 | 5/diameter |
| <i>ac</i> | 10,97 | 11,07 | 0,432 | 0,436 | 5          |
| <i>ag</i> | 1,91  | 2,06  | 0,075 | 0,081 | diameter   |

<sup>1</sup> Mechanical and electrical reference plane.  
<sup>2</sup> Applies only when dielectric extends beyond reference plane.  
<sup>3</sup> Slotted and closed to meet electrical and mechanical requirements.  
<sup>4</sup> Chamfer or radius.  
<sup>5</sup> Diameters on mm of *c* shall be on or capable of taking up common axis.

## 6 Mechanical gauges and standard test connectors

### 6.1 Mechanical gauges

#### 6.1.1 Connectors with pin-centre contact

##### 6.1.1.1 Gauge for outer contact of pin connector

The gauge for the outer connector of the pin connector is shown in Figure 8 and its dimensions are shown in Table 3.

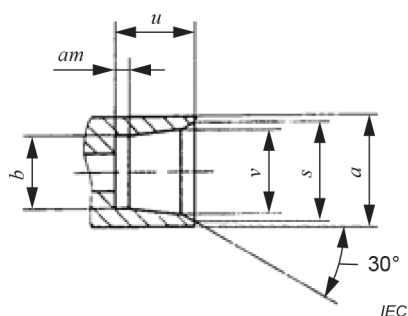


Figure 8 – Gauge for outer contact of pin connector

**Table 3 – Dimensions for gauges for outer contact of pin connector**

| Gauge A (for sizing purposes)                                                      |           |      |            |       | Gauge B (for measurement of gauge retention force for outer conductor) |      |            |       |
|------------------------------------------------------------------------------------|-----------|------|------------|-------|------------------------------------------------------------------------|------|------------|-------|
|                                                                                    |           |      |            |       | Mass (weight) of gauge: 225 g ± 5 g                                    |      |            |       |
| Reference                                                                          | mm        |      | inch       |       | mm                                                                     |      | inch       |       |
|                                                                                    | Min.      | Max. | Min.       | Max.  | Min.                                                                   | Max. | Min.       | Max.  |
| <i>a</i> Φ                                                                         | 9,63      | 9,68 | 0,379      | 0,381 | 9,63                                                                   | 9,68 | 0,379      | 0,381 |
| <i>b</i> Φ                                                                         | 8,08      | 8,10 | 0,318      | 0,319 | 8,15                                                                   | 8,18 | 0,321      | 0,322 |
| <i>u</i>                                                                           | 8,41      | 8,46 | 0,331      | 0,333 | 8,36                                                                   | 8,41 | 0,329      | 0,331 |
| <i>v</i> Φ                                                                         | 8,31      | 8,36 | 0,327      | 0,329 | 8,41                                                                   | 8,46 | 0,331      | 0,333 |
| <i>s</i> Φ                                                                         | 8,79 nom. |      | 0,346 nom. |       | 8,79 nom.                                                              |      | 0,346 nom. |       |
| <i>am</i>                                                                          | 4 nom.    |      | 0,157 nom. |       | 4 nom.                                                                 |      | 0,157 nom. |       |
| Material: steel, polished; surface roughness: <i>Ra</i> = 0,4 μm (16 μin) maximum. |           |      |            |       |                                                                        |      |            |       |

### 6.1.1.2 Test sequence

Gauge A shall be placed over the outer electrical contact of the connector once. This is a sizing operation and should be carried out when the insulator is removed from the connector.

After this the gauge B shall be placed over the outer contact in a vertical position. The gauge shall be retained.

This test can also be carried out on connectors when the insulator is not removed.

### 6.1.2 Connectors with socket-centre contact

#### 6.1.2.1 Gauge pin for socket-centre contact

The gauge pin for the socket-centre connector is shown in Figure 9 and its dimensions are shown in Table 4.

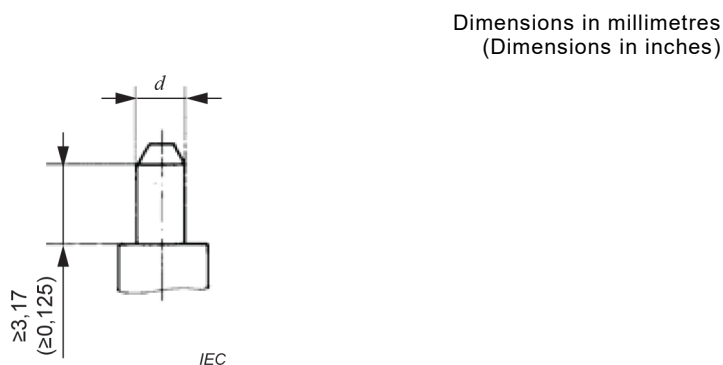
**Figure 9 – Gauge pin for socket-centre contact**

**Table 4 – Dimensions for gauge pin for socket-centre contact**

| Gauge C (for sizing purposes)                                               |       |       |         |         | Gauge D (for measurement of gauge retention force for inner conductor) |       |        |         |
|-----------------------------------------------------------------------------|-------|-------|---------|---------|------------------------------------------------------------------------|-------|--------|---------|
|                                                                             |       |       |         |         | Mass (weight) of gauge: 57 g ± 1 g                                     |       |        |         |
| Reference                                                                   | mm    |       | inch    |         | mm                                                                     |       | inch   |         |
|                                                                             | Min.  | Max.  | Min.    | Max.    | Min.                                                                   | Max.  | Min.   | Max.    |
| $d \ \Phi$                                                                  | 1,372 | 1,377 | 0,054 0 | 0,054 2 | 1,308                                                                  | 1,321 | 0,0515 | 0,052 0 |
| Material: steel, polished; surface roughness: Ra = 0,4 µm (16 µin) maximum. |       |       |         |         |                                                                        |       |        |         |

### 6.1.2.2 Test sequence

A test pin gauge C shall be inserted into the centre contact a minimum distance of 3,17 mm (0,125 in) once. This is a sizing operation and should be carried out when the insulator is removed from the connector.

After this the gauge D shall be inserted in the vertical position. The gauge shall be retained.

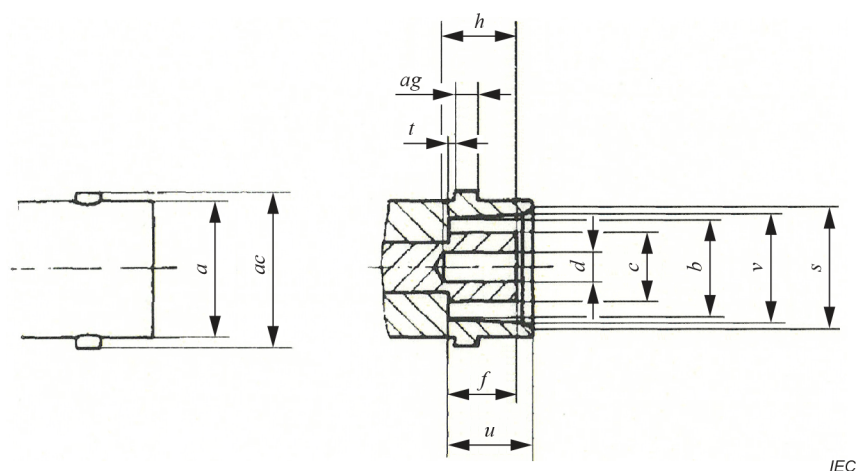
This test can also be carried out on connectors when the insulator is not removed.

### 6.1.3 Gauge for outer contacts, coupling mechanism and mating face dimensions

A steel standard mating part shall be constructed as shown in Figure 10 for the connector and shall have a 0,4 µm (16 µin) maximum finish. The longitudinal force required to engage or disengage a pin connector shall not exceed 20 N.

The torque required to engage or disengage the bayonet lock of the pin connector shall not exceed 0,25 Nm.

The gauge for outer contacts is shown in Figure 10 and its dimensions are shown in Table 5.



IEC

**Figure 10 – Dimensions of gauge for performance test**

**Table 5 – Dimensions of gauge for performance test**

| Reference | mm     |        | in    |       | Remarks  |
|-----------|--------|--------|-------|-------|----------|
|           | Min.   | Max.   | Min.  | Max.  |          |
| <i>a</i>  | 9,627  | 9,677  | 0,379 | 0,381 | diameter |
| <i>b</i>  | 8,10   | 8,128  | 0,319 | 0,320 | diameter |
| <i>c</i>  | 4,67   | 4,72   | 0,184 | 0,186 | diameter |
| <i>d</i>  | 1,42   | –      | 0,056 | –     | diameter |
| <i>f</i>  | 5,21   | 5,28   | 0,205 | 0,208 |          |
| <i>h</i>  | 4,95   | –      | 0,195 | –     |          |
| <i>s</i>  | 8,79   | 8,865  | 0,346 | 0,349 | diameter |
| <i>t</i>  | 2,870  | 3,142  | 0,113 | 0,124 |          |
| <i>u</i>  | 8,41   | 8,46   | 0,331 | 0,333 |          |
| <i>v</i>  | 8,30   | 8,382  | 0,327 | 0,330 | diameter |
| <i>ac</i> | 11,024 | 11,074 | 0,434 | 0,436 | diameter |
| <i>ag</i> | 1,98   | 2,03   | 0,078 | 0,080 | diameter |

## 6.2 Standard test connectors

### 6.2.1 General

Standard test connectors are mainly used as part of the adaptor to the measuring equipment to carry out reflection coefficient measurement according to 9.2.1 of IEC 61169-1:2013.

### 6.2.2 Standard test connector with pin contact

The standard test connector with pin contact is shown in Figure 11 and Figure 12. Its dimensions are shown in Table 6.

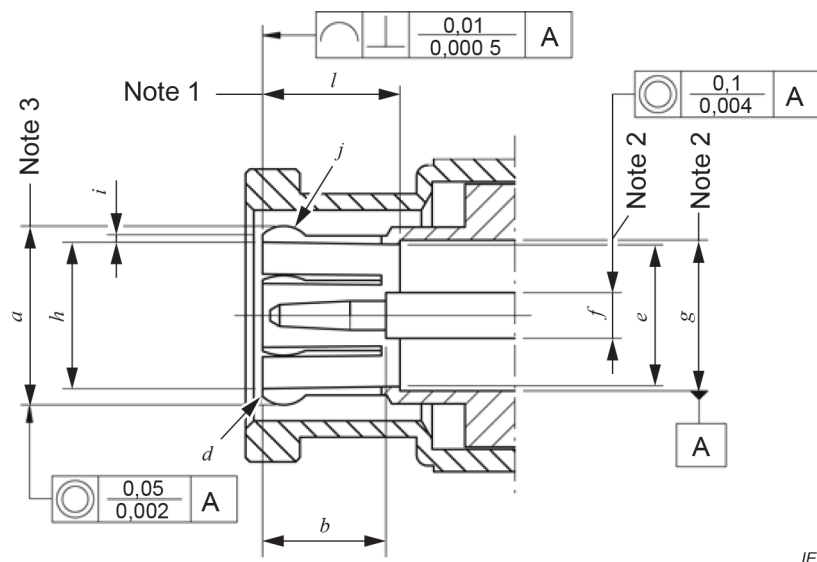


**Figure 11 – Dimensions of connector**

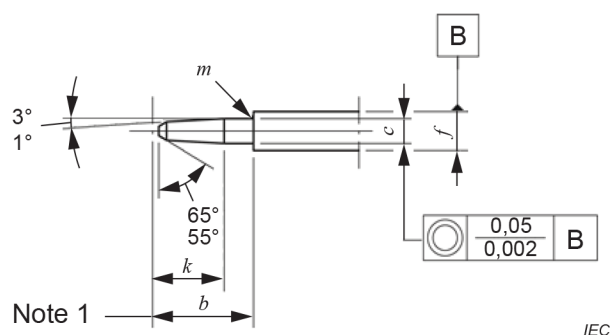


Figure 12 – Dimensions of centre contact

Table 6 – Dimensions of centre contact

| Reference                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         | mm   |      | in      |         | Remarks      |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------|------|---------|---------|--------------|
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Min. | Max. | Min.    | Max.    |              |
| <i>a</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 8,10 | 8,15 | 0,319   | 0,321   | 3/diameter D |
| <i>b</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5,31 | 5,38 | 0,209   | 0,212   | diameter     |
| <i>c</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1,35 | 1,37 | 0,053   | 0,054 1 | rad          |
| <i>d</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0,13 | 0,20 | 0,005   | 0,008   | diameter     |
| <i>e</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6,60 | 6,65 | 0,260   | 0,262   | 2/diameter   |
| <i>f</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 1,99 | 2,03 | 0,078   | 0,080   | 2/diameter   |
| <i>g</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6,99 | 7,01 | 0,275 2 | 0,276 0 | diameter     |
| <i>h</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 6,72 | 6,74 | 0,264 5 | 0,265 5 | flat         |
| <i>i</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 0,30 | –    | 0,012   | –       | rad          |
| <i>j</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | –    | 0,89 | –       | 0,035   |              |
| <i>k</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 3,66 | 3,98 | 0,144   | 0,157   |              |
| <i>l</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | 5,31 | 5,36 | 0,209   | 0,211   | rad          |
| <i>m</i>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | –    | 0,13 | –       | 0,005   |              |
| For dimensions of bayonet lock system, see 5.1, Figure 2, Figure 3 and Figure 4.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |      |      |         |         |              |
| <sup>1</sup> Mechanical and electric reference plane. Right-angled to the axis 0,01 mm (0,000 5 in).<br><sup>2</sup> The diameter chosen shall meet the characteristic impedance of $(75 \pm 0,2) \Omega$ .<br><sup>3</sup> Dimensions before slotting: six slots spaced $60^\circ \pm 1^\circ$ apart,<br>0,36 mm to 0,41 mm (0,014 in to 0,016 in) wide,<br>5,84 mm to 6,10 mm (0,230 in to 0,240 in) deep,<br>After slotting and flaring, the ID of the outer contact shall be 6,718 mm to 6,744 mm (0,264 5 in to 0,265 5 in)<br>when the OD of the outer contact is inserted into a ring gauge with an ID of 8,125 mm to 8,131 mm (0,319 9 in to 0,320 1 in). |      |      |         |         |              |

### 6.2.3 Standard test connector with socket contact

The standard test connector with socket contact is shown in Figure 13 and Figure 14. Its dimensions are shown in Table 7.

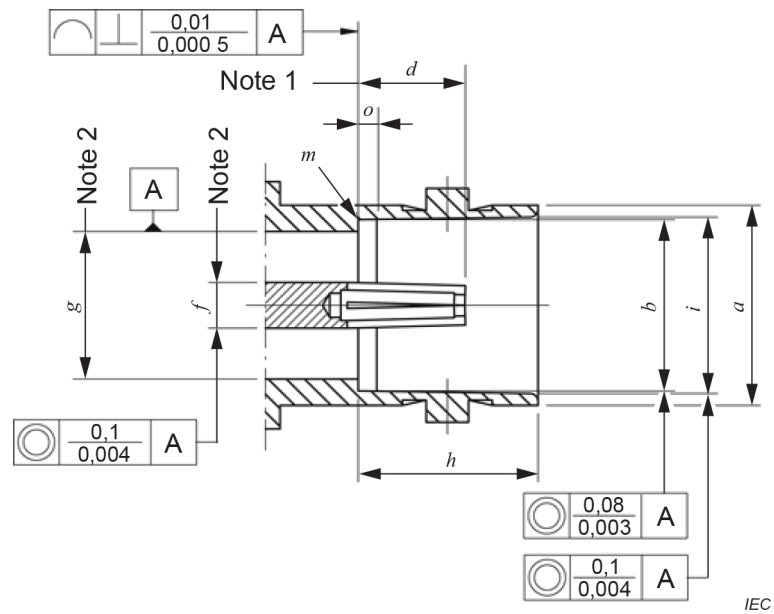


Figure 13 – Dimensions of connector

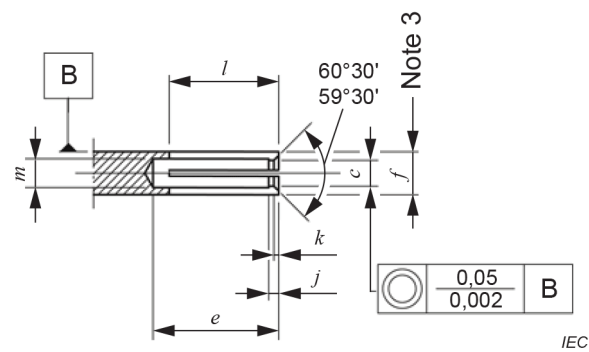


Figure 14 – Dimensions of centre contact

**Table 7 – Dimensions for standard test connector**

| Reference                                                                                                                                                                                                                                                                                                                                                                                          | mm    |       | In      |         | Remarks    |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------|-------|---------|---------|------------|
|                                                                                                                                                                                                                                                                                                                                                                                                    | Min.  | Max.  | Min.    | Max.    |            |
| <i>a</i>                                                                                                                                                                                                                                                                                                                                                                                           | 9,60  | 9,68  | 0,378   | 0,381   | diameter   |
| <i>b</i>                                                                                                                                                                                                                                                                                                                                                                                           | 8,10  | 8,15  | 0,319   | 0,321   | diameter   |
| <i>c</i>                                                                                                                                                                                                                                                                                                                                                                                           | 1,356 | 1,361 | 0,053 4 | 0,053 6 | 3/diameter |
| <i>d</i>                                                                                                                                                                                                                                                                                                                                                                                           | 5,21  | 5,28  | 0,205   | 0,208   |            |
| <i>e</i>                                                                                                                                                                                                                                                                                                                                                                                           | 5,21  | –     | 0,205   | –       |            |
| <i>f</i>                                                                                                                                                                                                                                                                                                                                                                                           | 1,99  | 2,03  | 0,078   | 0,080   | 2/diameter |
| <i>g</i>                                                                                                                                                                                                                                                                                                                                                                                           | 6,99  | 7,01  | 0,275 2 | 0,276 0 | 2/diameter |
| <i>h</i>                                                                                                                                                                                                                                                                                                                                                                                           | 8,36  | 8,46  | 0,329   | 0,333   |            |
| <i>i</i>                                                                                                                                                                                                                                                                                                                                                                                           | 8,31  | 8,46  | 0,327   | 0,333   | diameter   |
| <i>j</i>                                                                                                                                                                                                                                                                                                                                                                                           | 0,38  | 0,89  | 0,015   | 0,035   |            |
| <i>k</i>                                                                                                                                                                                                                                                                                                                                                                                           | 0,05  | 0,2   | 0,002   | 0,008   |            |
| <i>l</i>                                                                                                                                                                                                                                                                                                                                                                                           | 4,62  | 4,88  | 0,182   | 0,192   |            |
| <i>m</i>                                                                                                                                                                                                                                                                                                                                                                                           | –     | 0,1   | –       | 0,004   | rad        |
| <i>n</i>                                                                                                                                                                                                                                                                                                                                                                                           | 1,52  | 1,63  | 0,060   | 0,064   | diameter   |
| <i>o</i>                                                                                                                                                                                                                                                                                                                                                                                           | 0,51  | 1,02  | 0,020   | 0,040   |            |
|                                                                                                                                                                                                                                                                                                                                                                                                    |       |       |         |         |            |
| For dimensions not given in this table, see 5.2                                                                                                                                                                                                                                                                                                                                                    |       |       |         |         |            |
| <sup>1</sup> Mechanical and electric reference plane.<br><sup>2</sup> The diameter chosen shall meet the characteristic impedance of $(75 \pm 0,2) \Omega$ .<br><sup>3</sup> Four slots 0,18 mm to 0,23 mm (0,007 in to 0,009 in) wide; between 90° 30' and 80° 30' apart; diameter “j” with 1,356 mm (0,0534 in) min.; 1,361 mm (0,053 6 in) max.; pin gauge inserted after slotting and closing. |       |       |         |         |            |

## 7 Outline dimensions

Under consideration.

## 8 Quality assessment procedures

### 8.1 General

Subclause 8.2 provides recommended ratings, performance and test conditions to be considered when writing a detail specification (DS). They also provide an appropriate schedule of tests with minimum levels of conformance inspection.

### 8.2 Ratings and characteristics

This document specifies pin and socket connectors with bayonet lock with a nominal inner diameter of the outer conductor of 6,5 mm (0,256 in). Cable mounting connectors will function within specification requirements with 3 mm cables up to a frequency of at least 18 GHz, and may be used at higher frequencies if a reflection coefficient greater than 0,1 can be tolerated for straight connectors and 0,13 for right angle styles.

The connectors have a maximum working voltage of 500 V at sea level (125 V at 44 mbar/ 20 000 m altitude). Connection to the cable may be made either by crimping or soldering, depending upon design.

The connector shall be categorised as described in Table 8, and rating and characteristics are given in Table 9.