

Radio-frequency connectors —

Part 37: Sectional specification for STWX8 R.F connectors

The European Standard EN 61169-37:2007 has the status of a
British Standard

ICS 33.120.30

National foreword

This British Standard was published by BSI. It is the UK implementation of EN 61169-37:2007. It is identical with IEC 61169-37:2007.

The UK participation in its preparation was entrusted by Technical Committee EPL/46, Cables, wires and waveguides, radio frequency connectors and accessories for communication and signalling, to Subcommittee EPL/46/2, Radio frequency connectors and waveguides.

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

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

Compliance with a British Standard cannot confer immunity from legal obligations.

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 May 2007

© BSI 2007

ISBN 978 0 580 50820 2

Amendments issued since publication

Amd. No.	Date	Comments

**Radio-frequency connectors -
Part 37: Sectional specification
for STWX8 R.F connectors
(IEC 61169-37:2007)**

Connecteurs pour fréquences
radioélectriques -
Partie 37: Spécification intermédiaire
relative aux connecteurs
pour fréquences radioélectriques
de type STWX8
(CEI 61169-37:2007)

Hochfrequenz-Steckverbinder -
Teil 37: Rahmenspezifikationen -
STWX8-Hochfrequenzsteckverbinder
(IEC 61169-37:2007)

This European Standard was approved by CENELEC on 2007-03-01. CENELEC members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration.

Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CENELEC member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CENELEC member into its own language and notified to the Central Secretariat has the same status as the official versions.

CENELEC members are the national electrotechnical committees of Austria, Belgium, Bulgaria, Cyprus, the Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, the Netherlands, Norway, Poland, Portugal, Romania, Slovakia, Slovenia, Spain, Sweden, Switzerland and the United Kingdom.

CENELEC

European Committee for Electrotechnical Standardization
Comité Européen de Normalisation Electrotechnique
Europäisches Komitee für Elektrotechnische Normung

Central Secretariat: rue de Stassart 35, B - 1050 Brussels

Foreword

The text of document 46F/44/CDV, future edition 1 of IEC 61169-37, prepared by SC 46F, R.F. and microwave passive components, of IEC TC 46, Cables, wires, waveguides, R.F. connectors, R.F. and microwave passive components and accessories, was submitted to the IEC-CENELEC parallel Unique Acceptance Procedure and was approved by CENELEC as EN 61169-37 on 2007-03-01.

The following dates were fixed:

- latest date by which the EN has to be implemented
at national level by publication of an identical
national standard or by endorsement (dop) 2007-12-01
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2010-03-01

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61169-37:2007 was approved by CENELEC as a European Standard without any modification.

CONTENTS

1	Scope.....	4
2	Normative references.	4
3	Mating face and gauge information.....	4
3.1	Dimensions - General connectors – Grade 2 (Figure 1)	4
3.2	Gauges for general purpose connectors - Grade 2	6
3.3	Dimensions – standard test connectors – Grade 0.....	9
4	Quality assessment procedure.....	12
4.1	General.....	12
4.2	Rating and characteristics (see Clause 6 of IEC 61169-1 (QC 220000))	12
4.3	Test schedule and inspection requirements - Acceptance tests	15
4.4	Procedures.....	18
5	Instructions for preparation of detail specifications.	18
5.1	General.....	18
5.2	Identification of the detail specification	18
5.3	Identification of the component.....	18
5.4	Performance.....	19
5.5	Marking, ordering information and related matters	19
5.6	Selection of tests, tests conditions and severities.....	19
5.7	Blank detail specification pro-forma for type STWX 8 connectors	19
	Annex ZA (normative) Normative references to international publications with their corresponding European publications	25
	Figure 1 – Mating face of STWX8 connectors (for dimensions and notes, see Table 1)	5
	Figure 2 – Gauge pins for contact of socket connectors (for dimensions, see Table 2).....	7
	Figure 3 – Gauge for outer of socket connectors (for dimensions, see Table 3)	8
	Figure 4 – Female contact (for dimensions and notes, see Table 4..)	9
	Figure 5 – Male contact (for dimensions and notes, see Table 5).....	11
	Table 1 – Mating face dimensions	6
	Table 2 – Gauges Dimensions	7
	Table 3 – Gauge dimension..s	9
	Table 4 – Female contact dimensions	10
	Table 5 – Male contact dimensions	11
	Table 6 – Rating and characteristics	13
	Table 7 – Acceptance tests.....	15
	Table 8 – Periodic tests	16

RADIO-FREQUENCY CONNECTORS –

Part 37: Sectional specification – STWX8 R.F. connectors

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 STWX8 R.F. coaxial connectors with push-pull self-lock coupling.

The connectors are normally used with flexible and semi-rigid R.F. cables for middle power applications in conjunction with 50 Ω cables in an operating frequency range up to 4 GHz.

It describes the interface dimensions for general purpose grade 2 connectors, dimensional details for standard test connectors, grade 0, together with gauging information and the mandatory tests selected from QC 220000 (IEC 61169-1), applicable to all DS relating to type STWX8 connectors.

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

2 Normative references

The following referenced documents are indispensable for the application 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 60096 (all parts), *Radio-frequency cables*

IEC 61169-1:1992, *Radio-frequency connectors – Part 1: Generic specification – General requirements and measuring methods*

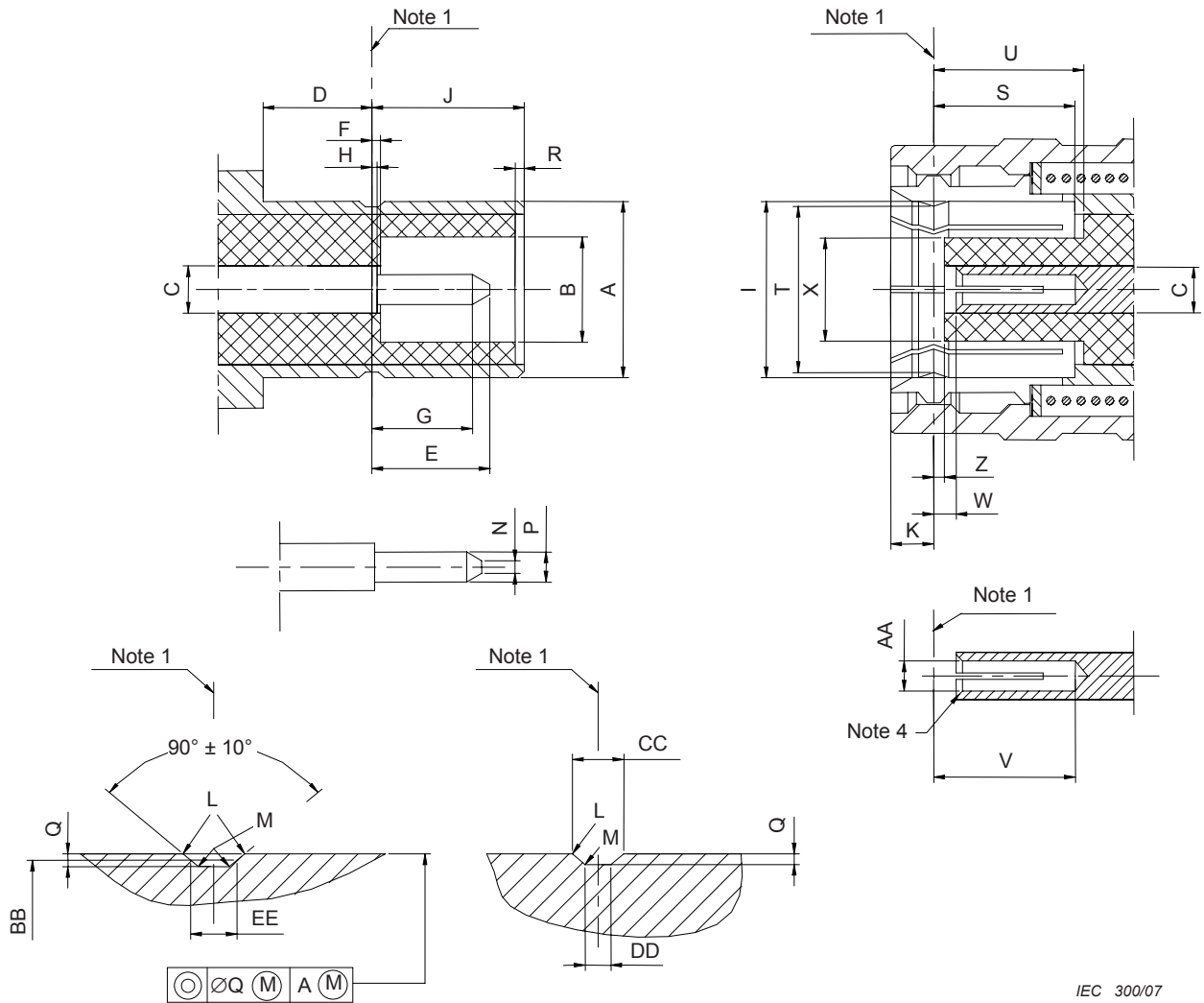
Amendment 1 (1996)

Amendment 2 (1997)

3 Mating face and gauge information

3.1 Dimensions - General connectors – Grade 2 (Figure 1)

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



IEC 300/07

Figure 1 – Mating face of STWX8 connectors
(for dimensions and notes, see Table 1)

Table 1 – Mating face dimensions

Reference	mm		Notes
	min.	max.	
A	8,12	8,20	Diameter
B	4,83,	-----	Diameter
C	2,06	2,21	Diameter
D	4,0	-----	
E	5,33	5,84	
F	-----	0,18	
G	4,5	-----	
H	-----	0,18	
I	8,22	8,28	Diameter
J	6,90	7,00	
K	-----	2,20	
L	0,05	0,15	Radius
M	-----	0,13	Radius
N	-----	0,64	Diameter
P	1,32	1,37	Diameter
Q	0,19	0,25	
R	0,00	0,30	
S	7,05	-----	
T	-----	-----	Diameter (see Note 2)
U	7,05	-----	
V	6,00	-----	
W	0,18	-----	
X	-----	4,72-	Diameter
Z	0,18	-----	
AA	-----	-----	Diameter (see Note 3)
BB	7,92	8,02	Diameter
CC	1,22	1,42	
DD	0,72	0,92	
EE	1,10		Nominal
NOTE 1 Reference plane: mechanical and electrical.			
NOTE 2 To meet electrical and mechanical requirements.			
NOTE 3 Bore diameter closed to meet electrical and mechanical requirements when mated with a 1,32/1,37 diameter.			

3.2 Gauges for general purpose connectors - Grade 2

All dimensions are in mm. All undimensioned pictorial configurations are for reference purposes only.

3.2.1 Gauges for socket contact

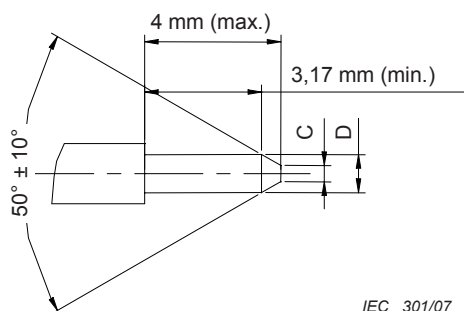


Figure 2 – Gauge pins for contact of socket connectors
(for dimensions, see Table 2)

Table 2 – Gauges Dimensions

Reference	Gauge A- Maximum material for sizing purposes		Gauge B – Minimum material for measurement of gauge retention force Mass of gauge: (80 ± 1) g	
	mm		mm	
	min.	max.	min.	max.
D	1,370	1,375	1,315	1,320
C	0	0,64	-----	-----
Material: steel, polished. Surface roughness: Ra=0,4 µm maximum.				

Test procedure

According to 9.3.4 of IEC 61169-1, the gauge A shall be inserted three times into the socket center contact. This is a sizing operation.

After this, the gauge B shall be inserted into socket centre contact. The contact shall support the mass of the gauge in a vertical downward attitude.

NOTE The minimum diameter of gauge A corresponds to the maximum diameter of a male contact.