

© Copyright SEK. Reproduction in any form without permission is prohibited.

Anslutningsdon för högfrekvens – Del 41: Gruppspecifikation för koaxialdon typ CQA med snabbblåsning

Radio-frequency connectors –

Part 41: Sectional specification for CQA series quick lock R.F. coaxial connectors

Som svensk standard gäller europastandarden EN 61169-41:2011. Den svenska standarden innehåller den officiella engelska språkversionen av EN 61169-41:2011.

Nationellt förord

Europastandarden EN 61169-41:2011

består av:

- **europastandardens ikraftsättningsdokument**, utarbetat inom CENELEC
- **IEC 61169-41, First edition, 2011 - Radio-frequency connectors - Part 41: Sectional specification for CQA series quick lock R.F. coaxial connectors**

utarbetad inom International Electrotechnical Commission, IEC.

Standarder underlättar utvecklingen och höjer elsäkerheten

Det finns många fördelar med att ha gemensamma tekniska regler för bl a säkerhet, prestanda, dokumentation, utförande och skötsel av elprodukter, elanläggningar och metoder. Genom att utforma sådana standarder blir säkerhetskraven tydliga och utvecklingskostnaderna rimliga samtidigt som marknadens acceptans för produkten eller tjänsten ökar.

Många standarder inom elområdet beskriver tekniska lösningar och metoder som åstadkommer den elsäkerhet som föreskrivs av svenska myndigheter och av EU.

SEK är Sveriges röst i standardiseringsarbetet inom elområdet

SEK Svensk Elstandard svarar för standardiseringen inom elområdet i Sverige och samordnar svensk medverkan i internationell och europeisk standardisering. SEK är en ideell organisation med frivilligt deltagande från svenska myndigheter, företag och organisationer som vill medverka till och påverka utformningen av tekniska regler inom elektrotekniken.

SEK samordnar svenska intressenters medverkan i SEKs tekniska kommittéer och stödjer svenska experters medverkan i internationella och europeiska projekt.

Stora delar av arbetet sker internationellt

Utformningen av standarder sker i allt väsentligt i internationellt och europeiskt samarbete. SEK är svensk nationalkommitté av International Electrotechnical Commission (IEC) och Comité Européen de Normalisation Electrotechnique (CENELEC).

Standardiseringsarbetet inom SEK är organiserat i referensgrupper bestående av ett antal tekniska kommittéer som speglar hur arbetet inom IEC och CENELEC är organiserat.

Arbetet i de tekniska kommittéerna är öppet för alla svenska organisationer, företag, institutioner, myndigheter och statliga verk. Den årliga avgiften för deltagandet och intäkter från försäljning finansierar SEKs standardiseringsverksamhet och medlemsavgift till IEC och CENELEC.

Var med och påverka!

Den som deltar i SEKs tekniska kommittéarbete har möjlighet att påverka framtida standarder och får tidig tillgång till information och dokumentation om utvecklingen inom sitt teknikområde. Arbetet och kontakterna med kollegor, kunder och konkurrenter kan gynnsamt påverka enskilda företags affärsutveckling och bidrar till deltagarnas egen kompetensutveckling.

Du som vill dra nytta av dessa möjligheter är välkommen att kontakta SEKs kansli för mer information.

SEK Svensk Elstandard

Box 1284
164 29 Kista
Tel 08-444 14 00
www.elstandard.se

**Radio-frequency connectors -
Part 41: Sectional specification for CQA series quick lock R.F. coaxial
connectors
(IEC 61169-41:2011)**

Connecteurs pour fréquences
radioélectriques -
Partie 41: Spécification intermédiaire pour
connecteurs coaxiaux R.F. à verrouillage
rapide, série CQA
(CEI 61169-41:2011)

Hochfrequenz-Steckverbinder -
Teil 41: Rahmenspezifikation für koaxiale
HF-Steckverbinder der CQA-Serie mit
Schnellverriegelung
(IEC 61169-41:2011)

This European Standard was approved by CENELEC on 2011-03-30. 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, Croatia, 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

Management Centre: Avenue Marnix 17, B - 1000 Brussels

Foreword

The text of document 46F/140/CDV, future edition 1 of IEC 61169-41, 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 vote and was approved by CENELEC as EN 61169-41 on 2011-03-30.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN and CENELEC shall not be held responsible for identifying any or all such patent rights.

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) 2011-12-30
- latest date by which the national standards conflicting
with the EN have to be withdrawn (dow) 2014-03-30

Annex ZA has been added by CENELEC.

Endorsement notice

The text of the International Standard IEC 61169-41:2011 was approved by CENELEC as a European Standard without any modification.

Annex ZA (normative)

Normative references to international publications with their corresponding European publications

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.

NOTE When an international publication has been modified by common modifications, indicated by (mod), the relevant EN/HD applies.

<u>Publication</u>	<u>Year</u>	<u>Title</u>	<u>EN/HD</u>	<u>Year</u>
IEC 61169-1	1992	Radio-frequency connectors -	EN 61169-1	1994
+ A1	1996	Part 1: Generic specification - General	+ A1	1996
+ A2	1997	requirements and measuring methods	+ A2	1997

CONTENTS

INTRODUCTION.....	6
1 Scope.....	7
2 Normative references	7
3 Mating face and gauge information	8
3.1 Dimensions – General connectors – Grade 2.....	8
3.1.1 Connector with pin-centre contact.....	8
3.1.2 Connector with socket-centre contact	10
3.2 Gauges	12
3.2.1 Gauge pins for socket-centre contact.....	12
3.2.2 Test procedure	12
3.2.3 Gauge pins for outer contact of connector with pin- centre	13
3.2.4 Test procedure	14
3.3 Dimensions – Standard test connectors – Grade 0	14
3.3.1 Connector with pin-centre contact.....	14
3.3.2 Connector with socket-centre contact	16
4 Quality assessment procedure.....	17
4.1 General.....	17
4.2 Rating and characteristics (see Clause 6 of IEC 61169-1)	17
4.3 Test schedule and inspection requirements – Acceptance tests	21
4.3.1 Acceptance tests	21
4.3.2 Periodic tests	22
4.4 Procedures.....	24
4.4.1 Quality conformance inspection	24
4.4.2 Qualification approval and its maintenance.....	24
5 Instructions for preparation of detail specifications	24
5.1 General.....	24
5.2 Identification of the component.....	24
5.3 Performance.....	25
5.4 Marking, ordering information and related matters	25
5.5 Selection of tests, test conditions and severities.....	25
5.6 Blank detail specification pro-forma for type CQA connector.....	26
Annex A (normative) Adjunct for SMA intermateability	31
Figure 1 – Connector with pin-centre contact (for dimensions and notes, see Table 1).....	8
Figure 2 – Connector with socket-centre contact (for dimensions and notes, see Table 2)	10
Figure 3 – Gauge pins for socket-centre contact (for dimensions and notes, see Table 3)	12
Figure 4 – Gauge pins for outer contact (for dimensions and notes, see Table 4).....	13
Figure 5 – Connector with pin-centre contact (for dimensions and notes, see Table 5).....	14
Figure 6 – Connector with socket-centre contact (for dimensions and notes, see Table 6)	16
Figure A.1 – Adjunct (for dimensions and notes, see Table A.1)	31

Table 1 – Dimensions of connector with pin-centre contact	9
Table 2 – Dimensions of connector with socket-centre contact.....	11
Table 3 – Dimensions of gauge pins for socket-centre contact	12
Table 4 – Gauge pins for outer contact	13
Table 5 – Dimensions of connector with pin-centre contact	15
Table 6 – Dimensions of connector with socket-centre contact.....	17
Table 7 – Rating and characteristics	18
Table 8 – Acceptance tests	21
Table 9 – Periodic tests	22
Table A.1 – Dimensions of adjunct.....	32

INTRODUCTION

The International Electrotechnical Commission (IEC) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent concerning

- “high frequency self-lock connector” given in patent No. ZL 200610104844.6;
- “lock setup of a high frequency self-lock connector” given in patent No. ZL 200620136072.X.

IEC takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured the IEC that he/she is willing to negotiate licences free of charge with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with IEC. Information may be obtained from:

Xi'an forstar S&T CO., LTD.

No.71 JinYE Road Hi-tech Zone Xi'an R.P China.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. IEC shall not be held responsible for identifying any or all such patent rights.

ISO (www.iso.org/patents) and IEC (<http://patents.iec.ch>) maintain on-line data bases of patents relevant to their standards. Users are encouraged to consult the data bases for the most up to date information concerning patents.

RADIO-FREQUENCY CONNECTORS –

Part 41: Sectional specification for CQA series quick lock R.F. coaxial connectors

1 Scope

CQA series quick lock connectors with characteristic impedance 50 Ω are used in microwave, telecommunication, wireless and other fields, connecting with RF cables or micro-strips. The operating frequency limit is up to 18 GHz.

This sectional specification provides information and rules for preparation of detail specification of CQA series quick lock R.F. coaxial connectors together with the pro-forma blank detail specification.

It also prescribes mating face dimensions for general connectors - grade 2, dimensional detail of standard test connectors - grade 0, gauging information and tests selected from IEC 61169-1 applicable to all detail specifications relating to CQA series RF connectors.

This specification indicates 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.

CQA series connector with pin-centre contact can mate with SMA series connector with socket-centre contact, when mating with SMA series connector, an adjunct is required; the adjunct should meet the requirement of Annex A.

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

Amendment 1 (1996)

Amendment 2 (1997)

¹ There exists a consolidated edition 1.2 (1998) that comprises IEC 61169-1:1992, its Amendment 1:1996 and its Amendment 2:1997.