

Rosenberger®



***Test, Measurement &
Calibration Products***

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Company Profile

Rosenberger, founded in 1958, is one of the leading manufacturers of high-frequency coaxial connectors worldwide. Our products play a key role in many high-tech industries, e.g. telecommunication, automotive electronics, test & measurement applications, medical electronics, data systems, etc.

The product range includes high-frequency coaxial connectors, automotive connectors, RF-test & measurement products and wireless terminal components for wireless applications, mainly in consumer electronics or mobile phone terminals. In addition, fiber optic products as well as cable assemblies are also available.

Our headquarters - with research & development, production and administrative departments - are located in Fridolfing, in the south-eastern part of Bavaria, Germany. Approximately 2,500 employees in our headquarters, manufacturing plants and sales offices in Europe, Asia as well as in North and South America take care of development, production and sales of our products.

Rosenberger is certified according to ISO/TS 16949:2002, ISO 9001 and ISO 14001.

Microwave cables

You can find microwave cables in catalog UTIFLEX®, available from:
Rosenberger Micro-Coax
2b Mercury House
Calleva Park, Aldermaston
GB - Berkshire RG7 4QW

www.rmcoax.com
sales@rmcoax.com

Additional Rosenberger catalogs

- Catalog 1: High Frequency Coaxial Connectors and Accessories
- Reverse Polarity Connectors
- FMC: Series FMC
- SnapN: Series SnapN
- QN: Series QN
- Automotive: Catalog
- WTC: Wireless Terminal Components

Unternehmensprofil

Rosenberger, gegründet 1958, zählt zu den weltweit führenden Herstellern von Hochfrequenz-Koaxial-Steckverbindern und spielt eine Schlüsselrolle in vielen High-Tech-Branchen, z. B. in der Telekommunikation, der Automobil-Elektronik, in der Datentechnik, in der industriellen Messtechnik oder in der Medizinelektronik.

Das Produktspektrum umfasst Hochfrequenz-Koaxialsteckverbinder, Steckverbinder für die Automobil-Elektronik, HF-Messtechnik-Produkte sowie Mobilfunk-Komponenten für Wireless-Anwendungen. Hinzu kommen Fiber-Optik-Produkte und der Bereich Kabel-Konfektionierung.

Unser Stammwerk - mit Forschung & Entwicklung, Produktion und Zentralstellen - befindet sich in Fridolfing (Oberbayern) im bayerischen Voralpenland. Weltweit sorgen mehr als 2500 Mitarbeiter in unserem Stammwerk, den Fertigungs- und Montage-Standorten sowie unseren Vertriebsniederlassungen in Europa, Asien sowie Nord- und Südamerika für Entwicklung, Fertigung und Verkauf unserer Produkte.

Rosenberger ist zertifiziert nach ISO/TS 16949:2002, ISO 9001 und ISO 14001.

Mikrowellenkabel

Mikrowellenkabel finden Sie im Katalog UTIFLEX®, erhältlich bei:
Rosenberger Micro-Coax
2b Mercury House
Calleva Park, Aldermaston
GB - Berkshire RG7 4QW

www.rmcoax.com
sales@rmcoax.com

Weitere Rosenberger-Kataloge

- *Hochfrequenz-Koaxial-Steckverbinder und Zubehör*
- *Reverse Polarity-Steckverbinder*
- *FMC: Steckverbinder-Serie FMC*
- *SnapN: Steckverbinder-Serie SnapN*
- *QN: Steckverbinder-Serie QN*
- *Automotive: Katalog*
- *WTC: Wireless Terminal Components*

Catalog Test, Measurement & Calibration Products

The catalog Test, Measurement & Calibration Products - the former Catalog 2 - contains all Rosenberger RPC- (Precision) connector series, calibration and verification kits, test cables and interchangeable port connector system components as well as test devices and accessories for high precision test and measurement applications.

Significant changes:**Calibration and verification kits:**

New compilation of all kits in separate product section

Test cables and interchangeable port connector system:

New compilation in separate product section

Test devices:

Including T- calibration adaptors and test accessories, e.g. gauges or tools

Attention!

The drawings of articles in catalog are not full scaled.

Definition of Plug and Jack

The Rosenberger plug/male and jack/female designations are defined by the connector's inner contact design.

This definition may derivate from other manufacturers' definitions.

Katalog HF- Messtechnik- und Kalibrier- Produkte

Der Katalog HF- Messtechnik- und Kalibrier- Produkte - früher Katalog 2 - enthält die Rosenberger-RPC- (Präzisions)Steckverbinderserien, Kalibrier- und Verifizier-Kits, Testkabel und Wechselport- Steckersystem- sowie Test- Komponenten und Zubehör für Präzisionsanwendungen in der industriellen Messtechnik.

Wesentliche Änderungen:**Kalibrier- und Verifizier- Kits:**

Neuzusammenstellung aller Kits in einem eigenen Kapitel

Testkabel und Wechselport- Steckersystem:

Neuzusammenstellung in einem eigenen Kapitel

Test- Komponenten:

Neuaufnahme von T- Kalibrier- Adaptern und Zubehör- Komponenten wie Werkzeugen oder Messuhren

Achtung!

Die Abbildungen der Artikel im Katalog sind nicht maßstäblich.

Definition Stecker/Kuppler

Rosenberger definiert die Stecker/male - Kuppler/female- Bezeichnung nach der Form des Innenleiters.

Diese Definition kann von der Definition anderer Hersteller abweichen.

Quality

The quality of our products and services is an essential part of our corporate strategy. Rosenberger's quality philosophy is not just to optimize components and products, but to continuously improve and optimize all processes to ensure customer satisfaction: from product development, planning, purchasing, production, sales, logistics and service to environmental policy - all in all, to offer maximum benefit to our customers all over the world.

Furthermore, our quality responsibility includes being proactive in protecting our environment and natural resources. We endeavour to avoid or minimize environmental pollution - even beyond the requirements of legal regulations whenever possible.

Rosenberger is certified according to ISO/TS 16949:2002, ISO 9001 and ISO 14001.

European Environmental Directives

Connectors and cable assemblies manufactured by Rosenberger correspond to the following European Directives:

- 2002/95/EG – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (**RoHS**)
- 2002/96/EG – Waste Electrical and Electronic Equipment (**WEEE**)
- 2003/11/EG and 2000/53/EC – End of Life Vehicle (**ELV**)
- IEC 61760- 1 - max. soldering temperature +260°C for 10 sec. for PCB connectors

The objective of the above mentioned European Directives is to avoid or to limit the use of the following hazardous substances:

- Lead
- Mercury
- Cadmium
- Chrome VI
- PBB (Polybrominated Biphenyls)
- PBDE (Polybrominated Diphenyl Ethers)

Qualität

Die hohe Qualität unserer Produkte und Serviceleistungen ist ein grundlegender Bestandteil unserer Unternehmensstrategie. Die Rosenberger-Qualitätsphilosophie beinhaltet nicht nur die Optimierung aller einzelnen Produkte, sondern auch die kontinuierliche und abteilungsübergreifende Verbesserung und Optimierung aller Unternehmensprozesse: von der Produktentwicklung über Planung, Einkauf, Produktion, Vertrieb, Logistik bis hin zur Umweltpolitik – mit dem Ziel, allen unseren Kunden weltweit größtmögliche Kundenzufriedenheit zu bieten.

Darüber hinaus umfasst unsere Verantwortung für Qualität auch stets umweltbewusstes Handeln und Schutz der natürlichen Ressourcen. Unser Ziel ist es, eine Verschmutzung der Umwelt zu vermeiden beziehungsweise auf ein Minimum zu beschränken – möglichst deutlich unterhalb der gesetzlich erlaubten Grenzwerte.

Rosenberger ist zertifiziert nach ISO/TS 16949. Viele weitere Zertifikate, z.B. das Umwelt-Zertifikat ISO 14001, zeugen von konsequent angewandtem Qualitätsmanagement.

EU- Umweltschutzrichtlinien

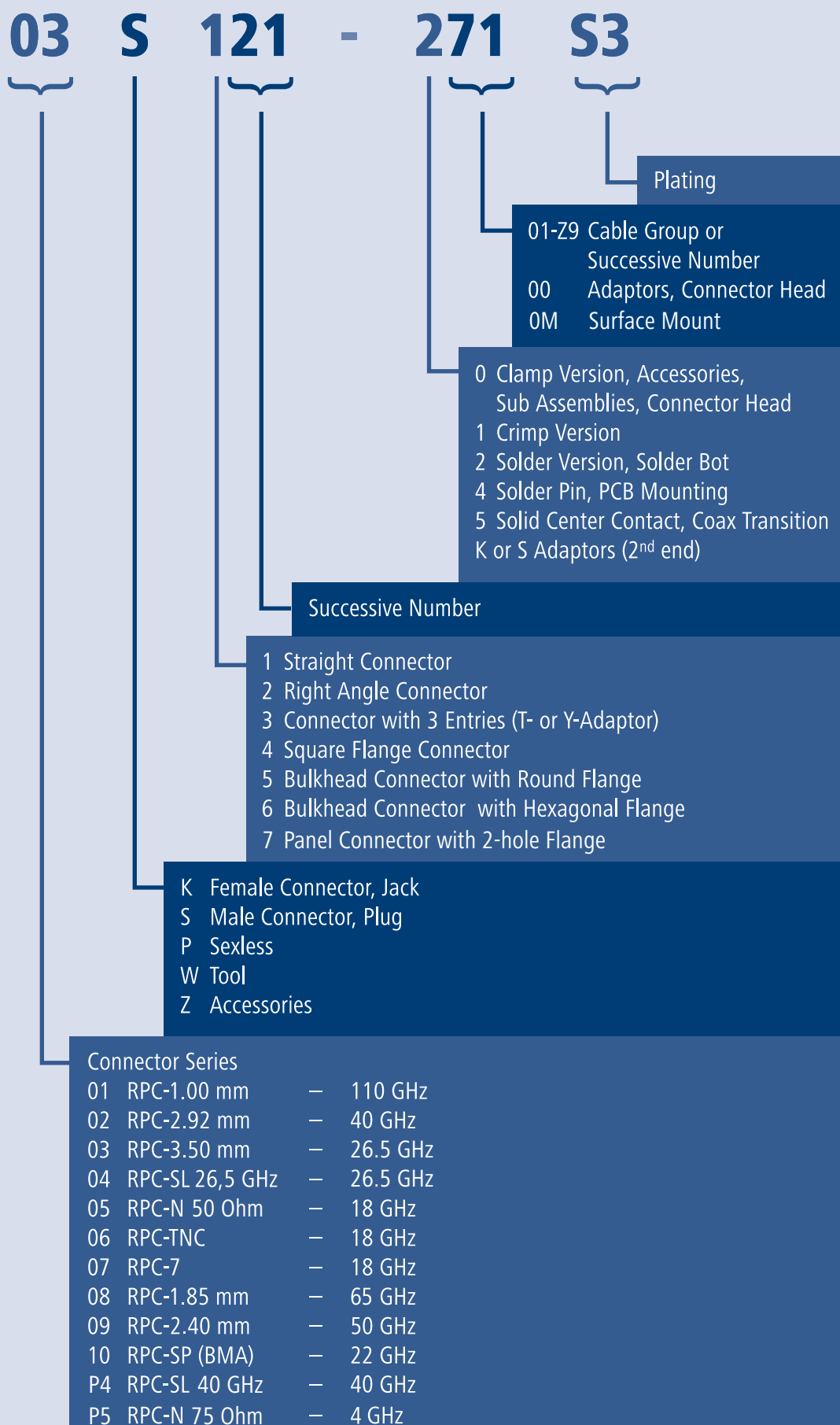
Die von Rosenberger gelieferten Steckverbinder und Kabel-Assemblies sind mit folgenden EU- Richtlinien konform:

- 2002/95/EG – Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment (**RoHS**)
- 2002/96/EG – Waste Electrical and Electronic Equipment (**WEEE**)
- 2003/11/EG und 2000/53/EC – End of Life Vehicle (**ELV**)
- IEC 61760- 1 - max. soldering temperature +260°C for 10 sec. for PCB connectors

In den aufgeführten EU- Richtlinien ist die Vermeidung bzw. die Einhaltung der gesetzlichen Grenzwerte bei Einsatz folgender Stoffe geregelt:

- Blei
- Quecksilber
- Cadmium
- Chrom VI
- PBB (Polybromierte Biphenyle)
- PBDE (Polybromierte Diphenylether)





Cable Groups

Kabelgruppen

Cable Group	Impedance	Cable Type
01	50 Ω	RG 178, RG 196
02	50 Ω	RG 316/U, RG 174 A/U, RG 188, G 022 32
02	75 Ω	RG 179, RG 187, L910/22
03	50 Ω	RG 316/U- d, K 02252 D, 5YCC6Y 0,54/1,5
03	75 Ω	RG 179- d, L 910/19
06	50 Ω	RG 58, RG 141
07	50 Ω	RG 142, RG 223, RG 400
08	50 Ω	RG 142, RG 223, RG 400
09	75 Ω	RG 59, G 04233- 2, URM 104, Video 0,6/3,7
10	93 Ω	RG 62
11	93 Ω	RG 71
12	75 Ω	RG 212, RG 222
13	75 Ω	Belden 9248, 2YCY 0,80/4,8
14	75 Ω	RG 6
15	50 Ω	RG 213
16	50 Ω	RG 225, RG 393
17	50 Ω	RG 214
18	75 Ω	RG 11
20	75 Ω	RG 216/U
21	50 Ω	RG 217
22	50 Ω	RG 218
26	75 Ω	Video 1,0- 6,6
28	75 Ω	BT 2003, G 04233
29	75 Ω	G 03233d, 2 S PTT 6012
40	75 Ω	RG 180, RG 195, 2YCY 0,4/2,5
41	75 Ω	2YCCY 0,4/2,5; 2YC(ms)CY 0,4/2,5
42	75 Ω	2YCY 0,7/4,4
43	75 Ω	2YCCY 0,7/4,4
44	75 Ω	2YCCY 1,0/6,5
50	75 Ω	BT 2001
70	50 Ω	UT 47
71	50 Ω	UT 85, RG 405/U, RTK- FS 085
72	50 Ω	UT 141, RG 402/U, RTK- FS 141
73	50 Ω	UT 250, RG 401/U, RTK- FS 250
C01	50 Ω	Flexline 1- 4"R
C02	50 Ω	Flexline 3/8"S
C03	50 Ω	Flexline 1/2"R
C05	50 Ω	Flexline 7/8"R
C06	50 Ω	Flexline 1 1/4"R
C07	50 Ω	Flexline 1 5/8"R
C08	50 Ω	Flexline 1/2"S
C09	50 Ω	Flexline 1/4"S
C15	50 Ω	Flexline 7/8"S
M4	50 Ω	RTK 031, RTK 032
N8	50 Ω	LMR 200
N9	50 Ω	LMR 400, TZC 50032

Cable Group	Impedance	Cable Type
P7	75 Ω	Flex 3
S3	75 Ω	R1- T 2.0 LIXI 75K
S4	75 Ω	ST 212
T6	75 Ω	Tella TM 13
T7	75 Ω	Flex 5/75
U1	50 Ω	RTK 106, RTK 107
U5	50 Ω	RTK 092
U7	50 Ω	RTK 161, RTK 161- P, RTK 162, RTK 162- P
U8	50 Ω	RTK 125
V2	75 Ω	735 A, 02Y(Si)CY 0,45/2,0
V4	75 Ω	02XSC(ms)C6Y0.45/2.0; 02Y12Y(ms)C6X0.45/2.0
V6	75 Ω	BT 3002, TZC 75024, TZC 75025
W7	50 Ω	UT 70, UT 70 LL, AA 50070
W9	50 Ω	UT 118
Y4	50 Ω	RTK 043, HF50 1,4/3,7 C
Y8	50 Ω	RTK 057, TZC 50025

Plating Code

The used platings of outer and center contacts of Rosenberger connectors can be identified by each part number.

Example:

03 S 121- 271 S3

Plating outer contact: stainless steel (S)

Plating center contact: gold (3)

Oberflächenschlüssel

Die verwendeten Oberflächen bei Innen- und Außenleiter der Rosenberger-Steckverbinder sind durch die beiden letzten Stellen der jeweiligen Artikel-Bestellnummer definiert.

Beispiel:

03 S 121- 271 S3

Oberfläche Außenleiter: Stainless steel (S)

Oberfläche Innenleiter: Gold (3)

Standard plating codes of Rosenberger connectors

Outer Contact

Code	Plating	Symbol	Layer thickness	Magnetic properties
A	Nickel	Ni	3.00 μm	
B	Silver	Ag	3.00 μm	Non magnetic
E	Gold	Au	0.80 μm	
F	Gold	Au	0.10 μm	
H	Gold	Au	1.27 μm	
L	AuroDur	Au	0.15 μm	Non magnetic
N	White bronze (e.g. Optalloy®) Flash white bronze over silver (e.g. Optargen®)			Non magnetic
S	Stainless Steel			
T	Tin/Lead	Sn	6.00- 8.00 μm	Non magnetic

Center Contact

Code	Plating	Symbol	Layer thickness	Magnetic properties
1	Silver	Ag	3.00 μm	Non magnetic
3	Gold	Au	1.27 μm	
4	Gold	Au	0.80 μm	
5	AuroDur	Au	0.15 μm	Non magnetic

Die Rosenberger Standard- Oberflächen

Außenleiter

Innenleiter

Belting and Packing

A lot of Rosenberger PCB connectors are supplied in rolled packaging (tape & reel) for automatic component placement. Different types of blister tapes are available.

The dimensions of tape & reel packaging can be provided on request from your Rosenberger partner. Please refer to specific VG-number (column packing, product section).

Belting and packaging correspond to IEC 60286- 3/EIA- 481.

Gurtung und Verpackung

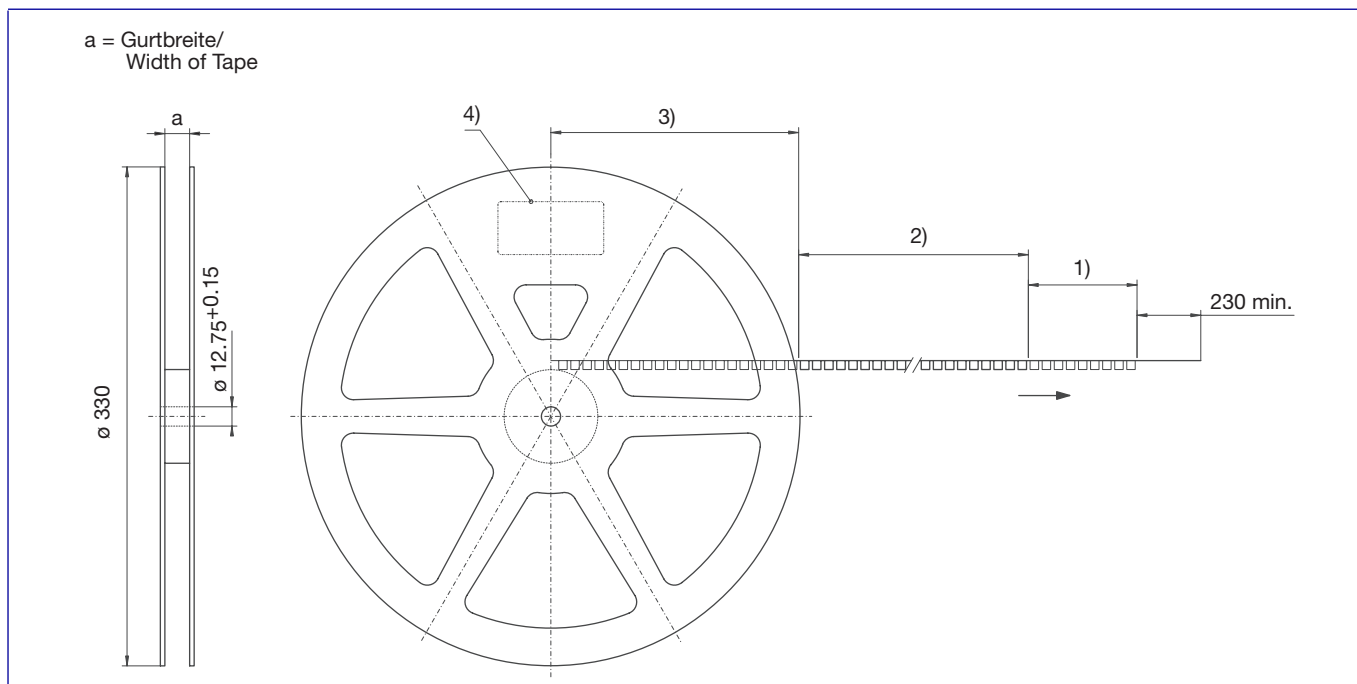
Viele Leiterplatten- Steckverbinder von Rosenberger werden für automatische Bestückung in Rollenverpackungen (Tape & Reel) ausgeliefert. Als Verpackung werden verschiedene Blistergurt- Typen verwendet.

Die genauen Abmessungen der jeweiligen Tape & Reel- Verpackungen erhalten Sie unter Angabe der VG- Nummer (Spalte Packing im Produktteil) von Ihrem Ansprechpartner.

Gurtung und Verpackung entsprechen IEC 60286- 3/EIA- 481.

Tape & Reel Packing

Rollenverpackung



Legend Text

- 1) Blister tape, without connectors
- 2) Blister tape, with connectors
- 3) Blister tape, without connectors
- 4) Barcode: number of connectors, connector types, date, lot number

Legendentext

- 1) Leeres Gurtstück
- 2) Gurtstück mit Steckverbindern
- 3) Leeres Gurtstück
- 4) Barcode: Anzahl Steckverbinder, Artikel- Nummer, Datum, Los- Nummer

Physical Formulae

Physikalische Formeln

Physical Constants

Physikalische Konstanten

$$\mu_0 = 4\pi \cdot 10^{-7} \text{ Vs/Am} = 12.566370614 \cdot 10^{-7} \text{ H/m}$$

$$\epsilon_0 = 8.854187817 \cdot 10^{-12} \text{ As/Vm}$$

$$c_0 = \frac{1}{\sqrt{\epsilon_0 \cdot \mu_0}} = 2.99792458 \cdot 10^8 \text{ m/s} \approx 3 \cdot 10^8 \text{ m/s}$$

$$Z_f = \sqrt{\frac{\mu_0}{\epsilon_0}} = 376.730313461 \Omega \approx 120 \pi \Omega$$

$$\pi = 3.141592653590 \dots$$

$$e = 2.718281828459 \dots$$

Microwave Equations

Mikrowellen- Gleichungen

$$Z_{coax} = \frac{1}{2\pi} \cdot \sqrt{\frac{\mu_0 \cdot \mu_r}{\epsilon_0 \cdot \epsilon_r}} \cdot \ln \frac{D}{d} \approx \frac{60}{\sqrt{\epsilon_r}} \cdot \ln \frac{D}{d}$$

$$\Gamma = \frac{Z_L - Z_0}{Z_L + Z_0}$$

$$T = \exp(-\gamma l)$$

$$RL = -20 \cdot \log_{10} |\Gamma|$$

$$IL = -20 \cdot \log_{10} |T|$$

$$ML = -10 \cdot \log_{10} (1 - |\Gamma|^2)$$

$$VSWR = \frac{1 + |\Gamma|}{1 - |\Gamma|}$$

Legend

Legende

	Description	Beschreibung
μ_0	Magnetic constant	Magnetische Feldkonstante
ϵ_0	Electric constant	Elektrische Feldkonstante
c_0	Speed of light in vacuum	Lichtgeschwindigkeit
Z_f	Wave impedance in vacuum	Feldwellenwiderstand
Z_0	Characteristic line impedance	Wellenwiderstand der Leitung
Z_L	Load impedance	Wellenwiderstand des Abschlusses
Z_{coax}	Characteristic impedance coaxial line	Wellenwiderstand Koaxialleitung
D	Outer conductor diameter	Durchmesser Außenleiter
d	Center conductor diameter	Durchmesser Innenleiter
G	Reflection coefficient	Reflexionskoeffizient
T	Transmission coefficient	Transmissionskoeffizient
γ	Propagation constant	Ausbreitungskonstante
RL	Return loss	Reflexionsdämpfung
IL	Insertion loss	Einfügedämpfung
ML	Mismatch loss	Dämpfung durch Fehlanpassung
$VSWR$	Standing wave ratio	Stehwellenverhältnis

Measurement Chart

Messtabelle

VSWR	Reflection Coefficient	Return Loss = Ref.	X Below Ref.	Ref. + X	Ref. - X	Peak to Peak Ripple	Maximum Phase Uncertainty ±	Mismatch Loss
		in dB	in dB	in dB	in dB	in dB	in Degrees	in dB
17,3910	0,8913	1	1	-5,535	19,271	24,806	63,031	6,8683
8,7242	0,7943	2	2	-5,078	13,737	18,815	52,592	4,3292
5,8480	0,7079	3	3	-4,649	10,691	15,340	45,068	3,0206
4,4194	0,6310	4	4	-4,249	8,658	12,907	39,121	2,2048
3,5698	0,5623	5	5	-3,876	7,177	11,053	34,218	1,6509
3,0095	0,5012	6	6	-3,529	6,041	9,570	30,079	1,2563
2,6146	0,4467	7	7	-3,207	5,141	8,348	26,531	0,9665
2,3229	0,3981	8	8	-2,911	4,410	7,320	23,460	0,7494
2,0999	0,3548	9	9	-2,638	3,806	6,444	20,782	0,5844
1,9250	0,3162	10	10	-2,387	3,302	5,688	18,435	0,4576
1,7849	0,2818	11	11	-2,157	2,876	5,032	16,370	0,3594
1,6709	0,2512	12	12	-1,946	2,513	4,459	14,548	0,2830
1,5769	0,2239	13	13	-1,755	2,201	3,956	12,937	0,2233
1,4985	0,1995	14	14	-1,580	1,933	3,513	11,509	0,1764
1,4326	0,1778	15	15	-1,422	1,701	3,122	10,243	0,1396
1,3767	0,1585	16	16	-1,278	1,499	2,777	9,119	0,1105
1,3290	0,1413	17	17	-1,148	1,323	2,470	8,120	0,0875
1,2880	0,1259	18	18	-1,030	1,169	2,199	7,232	0,0694
1,2528	0,1122	19	19	-0,924	1,034	1,957	6,442	0,0550
1,2222	0,1000	20	20	-0,828	0,915	1,743	5,739	0,0436
1,1957	0,0891	21	21	-0,742	0,811	1,552	5,113	0,0346
1,1726	0,0794	22	22	-0,664	0,719	1,383	4,556	0,0275
1,1524	0,0708	23	23	-0,594	0,638	1,232	4,060	0,0218
1,1347	0,0631	24	24	-0,531	0,566	1,098	3,618	0,0173
1,1192	0,0562	25	25	-0,475	0,503	0,978	3,224	0,0138
1,1055	0,0501	26	26	-0,425	0,447	0,871	2,873	0,0109
1,0935	0,0447	27	27	-0,380	0,397	0,776	2,560	0,0087
1,0829	0,0398	28	28	-0,339	0,353	0,692	2,282	0,0069
1,0736	0,0355	29	29	-0,303	0,314	0,617	2,033	0,0055
1,0653	0,0316	30	30	-0,270	0,279	0,550	1,812	0,0043
1,0580	0,0282	31	31	-0,241	0,248	0,490	1,615	0,0035
1,0515	0,0251	32	32	-0,215	0,221	0,436	1,439	0,0027
1,0458	0,0224	33	33	-0,192	0,197	0,389	1,283	0,0022
1,0407	0,0200	34	34	-0,172	0,175	0,347	1,143	0,0017
1,0362	0,0178	35	35	-0,153	0,156	0,309	1,019	0,0014
1,0322	0,0158	36	36	-0,137	0,139	0,275	0,908	0,0011
1,0287	0,0141	37	37	-0,122	0,124	0,245	0,809	0,0009
1,0255	0,0126	38	38	-0,109	0,110	0,219	0,721	0,0007
1,0227	0,0112	39	39	-0,097	0,098	0,195	0,643	0,0005
1,0202	0,0100	40	40	-0,086	0,087	0,174	0,573	0,0004
1,0180	0,0089	41	41	-0,077	0,078	0,155	0,511	0,0003
1,0160	0,0079	42	42	-0,069	0,069	0,138	0,455	0,0003
1,0143	0,0071	43	43	-0,061	0,062	0,123	0,406	0,0002
1,0127	0,0063	44	44	-0,055	0,055	0,110	0,362	0,0002
1,0113	0,0056	45	45	-0,049	0,049	0,098	0,322	0,0001
1,0101	0,0050	46	46	-0,043	0,044	0,087	0,287	0,0001
1,0090	0,0045	47	47	-0,039	0,039	0,078	0,256	0,0001
1,0080	0,0040	48	48	-0,035	0,035	0,069	0,228	0,0001
1,0071	0,0035	49	49	-0,031	0,031	0,062	0,203	0,0001
1,0063	0,0032	50	50	-0,027	0,028	0,055	0,181	0,0000
1,0036	0,0018	55	55	-0,015	0,015	0,031	0,102	0,0000
1,0020	0,0010	60	60	-0,009	0,009	0,017	0,057	0,0000
1,0006	0,0003	70	70	-0,003	0,003	0,005	0,018	0,0000
1,0002	0,0001	80	80	-0,001	0,001	0,002	0,006	0,0000

SERIES

Series
RPC-N



RPC- N, 50 Ω

Rosenberger RPC- N connectors are 50 Ω connectors with an outer diameter of 7 mm. They have been designed with excellent data over the full frequency range up to 18 GHz. An additional precision version RPC- N 75 Ω is designed for applications up to 4 GHz.

Rosenberger RPC- N connectors conform to the following specifications:

- Radio- frequency connectors, specified in IEC 60169- 16
- MIL- STD 348 A/402
- CECC 22 210

Rosenberger RPC- N connectors are mechanically compatible with all 50 Ω N type connectors according to MIL- STD 348 A/304. RPC- N and RPC- 7 connector heads using the same bead type are interchangeable. Coupling between RPC- N series 50 Ω and 75 Ω is not possible.

RPC- N connectors have been designed for semi- rigid cables, high performance flexible microwave cable assemblies and microwave components. There are adaptors for RPC- N male and/or female and to other relevant coaxial connector series available. Also, accessories for precision microwave measurement units, e. g. components of calibration kits and beadless air- lines have been designed.

RPC- N, 50 Ω

Rosenberger Steckverbinder vom Typ RPC- N sind 50- Ω - Präzisionsauführungen mit 7- mm- Außenleiter und hervorragenden Eigenschaften über den Frequenzbereich bis 18 GHz. Zusätzlich existiert mit RPC- N 75 Ω eine Präzisionsausführung mit dem Wellenwiderstand 75 Ω für Einsatzfälle im Frequenzbereich bis 4 GHz.

Rosenberger RPC- N- Steckverbinder erfüllen die Normen:

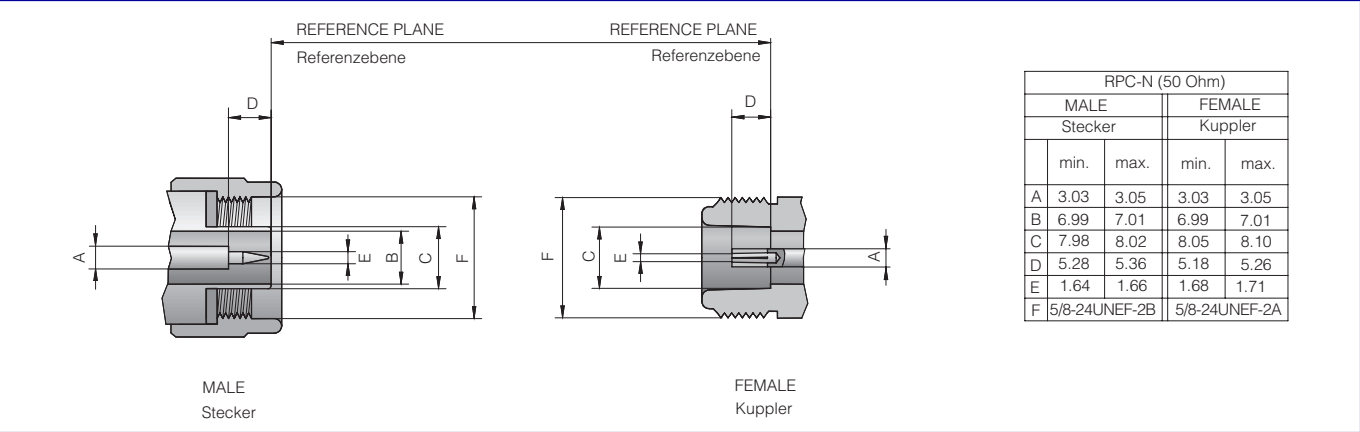
- HF- Steckverbinder nach IEC 60169- 16
- MIL- STD 348 A/402
- CECC 22 210

Rosenberger RPC- N - Steckverbinder können mit allen entsprechenden Ausführungen des Typs N 50 Ω nach MIL- STD 348 A/304 gekoppelt werden. Kopplungen mit den Ausführungen 75 Ω nach IEC 60169- 16 sind nicht möglich. Durch gleiche Anschlussmaße auf der Montageseite sind die Steckverbinderköpfe der Typen RPC- N und RPC- 7 leicht austauschbar.

RPC- N - Steckverbinder wurden für halbstarre oder hochwertige flexible Mikrowellenkabel sowie für Mikrowellen- Gehäuseanwendungen entwickelt. Es existieren Zwischen- Steckverbindungen für die Serie RPC- N und Adapter auf andere Präzisions- Steckverbinder series mit einem Wellenwiderstand von 50 Ω sowie Messzubehör für präzise Messungen im Mikrowellenbereich (z. B. Kalibrier- Kit- Elemente) und stützenfreie Präzisions- Luftleitungen.

Interface Dimensions

Anschlussmaße



Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Interface according to	IEC 60169- 16; CECC 22 210; MIL- STD 348A/402	Interface gemäß

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 18 GHz	Frequenzbereich
Return loss (connector head)	≥ 30 dB, DC to 18 GHz	Rückflußdämpfung (Steckerkopf)
Insertion loss (connector head)	≤ 0.03 dB x √f[GHz]	Dämpfung (Steckerkopf)
Insulation resistance	≥ 5 GΩ	Isolationswiderstand
Center contact resistance	≤ 1.0 mΩ	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 1.0 mΩ	Übergangswiderstand Außenleiter
Test voltage	2500 V rms	Prüfspannung
Working voltage	1000 V rms	Betriebsspannung
RF- leakage	≥ 90 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 500	Steckzyklen
Center contact captivation	≥ 28 N	Innenleiter Haltekraft
Coupling torque recommended	0.70 Nm to 1.10 Nm	Anzugsdrehmoment empfohlen
Coupling test torque	1.70 Nm	Prüfdrehmoment

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	IEC 61169- 1, Subclause 9.4.4	Temperaturzyklen
Corrosion resistance	IEC 61169- 1, Subclause 9.4.6	Korrosionsbeständigkeit
Vibration	IEC 61169- 1, Subclause 9.3.3	Vibration
Shock	IEC 61169- 1, Subclause 9.3.14	Schock
Moisture resistance	IEC 61169- 1, Subclause 9.4.3	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, passivated	Außenleiter
Dielectric	PPE	Dielektrikum

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

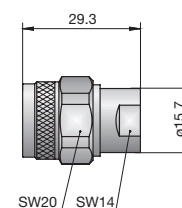
Connector Heads

Steckverbinderköpfe

Straight Plug

Stecker gerade

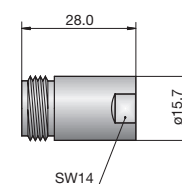
Ordering Number	Version	Remarks	Return Loss
05 S 121- 000 S3	straight	with bead	≥ 30 dB @ DC to 18 GHz



Straight Jack

Kuppler gerade

Ordering Number	Version	Remarks	Return Loss
05 K 121- 000 S3	straight	with bead	≥ 30 dB @ DC to 18 GHz



Cable Connectors Semi- Rigid Cable

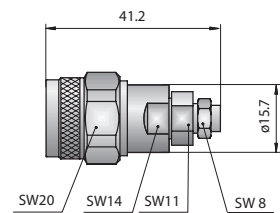
Straight Plug, solder

Kabel- Steckverbinder, Semi- Rigid- Kabel

Stecker gerade, löt

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction
05 S 121- 271 S3	≥ 25 dB @ DC to 18 GHz	71	02 A3
05 S 121- 272 S3	≥ 25 dB @ DC to 18 GHz	72	02 A3
05 S 121- 273 S3	≥ 25 dB @ DC to 18 GHz	73	03 A

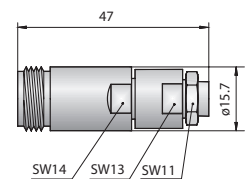


Straight Jack, solder

Kuppler gerade, löt

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction
05 K 121- 271 S3	≥ 25 dB @ DC to 18 GHz	71	02 A3
05 K 121- 272 S3	≥ 25 dB @ DC to 18 GHz	72	03 A
05 K 121- 273 S3	≥ 25 dB @ DC to 18 GHz	73	03 A

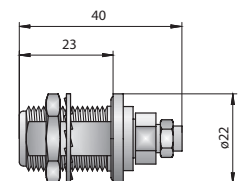


Panel Jack, round flange

Gehäusekuppler löt, Rundflansch

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout
05 K 521- 271 S3	≥ 25 dB @ DC to 18 GHz	71	02 A3	B 13
05 K 521- 272 S3	≥ 25 dB @ DC to 18 GHz	72	03 A	B 13
05 K 521- 273 S3	≥ 25 dB @ DC to 18 GHz	73	03 A	B 13



Adaptors

Adapter

Adaptor (In Series)

Adapter (In- Serie)

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
05 S 121- S00 S3	straight	RPC- N 50 Ω male - male	≥ 26 dB @ DC to 18 GHz		
05 S 121- S20 S3	straight	RPC- N 50 Ω male - male, calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 18 GHz		
05 S 121- K00 S3	straight	RPC- N 50 Ω male - female	≥ 26 dB @ DC to 18 GHz		
05 S 121- K20 S3	straight	RPC- N 50 Ω male - female, calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 18 GHz		
05 K 121- K00 S3	straight	RPC- N 50 Ω female - female	≥ 26 dB @ DC to 18 GHz		
05 K 121- K20 S3	straight	RPC- N 50 Ω female - female, calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 18 GHz		
05 K 521- K00 S3	straight	RPC- N 50 Ω female - female, round flange	≥ 26 dB @ DC to 18 GHz	B 13	

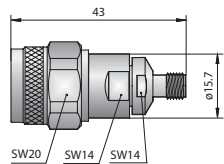
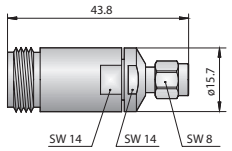
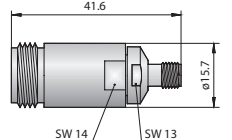
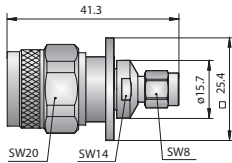
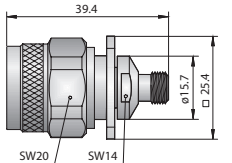
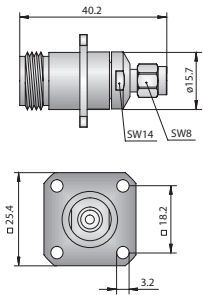
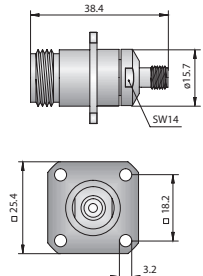
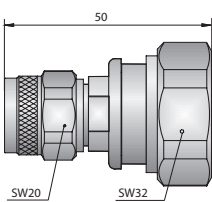
Adaptor (Inter Series)

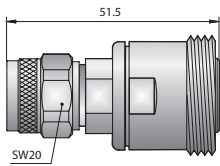
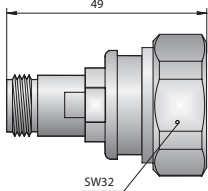
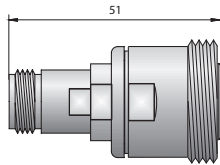
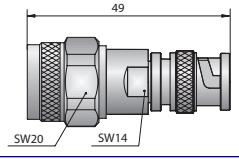
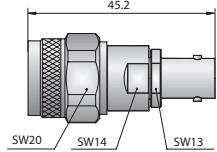
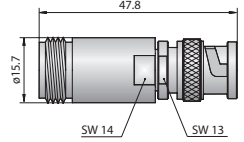
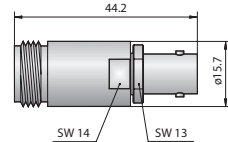
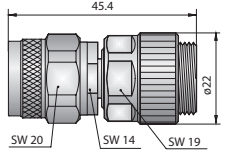
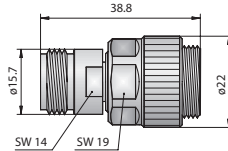
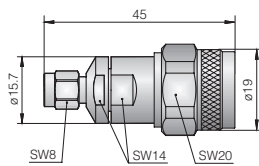
Adapter (serienübergreifend)

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
05 S 106- S00 S3	straight	RPC- N 50 Ω male - RPC- TNC male	≥ 20 dB @ DC to 18 GHz		
05 S 106- S20 S3	straight	RPC- N 50 Ω male - RPC- TNC male, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz		
05 S 106- K00 S3	straight	RPC- N 50 Ω male - RPC- TNC female	≥ 20 dB @ DC to 18 GHz		
05 K 106- S00 S3	straight	RPC- N 50 Ω female - RPC- TNC male	≥ 20 dB @ DC to 18 GHz		
05 K 106- K00 S3	straight	RPC- N 50 Ω female - RPC- TNC female	≥ 20 dB @ DC to 18 GHz		
05 K 106- K20 S3	straight	RPC- N 50 Ω female - RPC- TNC female, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz		
05 S 132- S00 S3	straight	RPC- N 50 Ω male - SMA male	≥ 23 dB @ DC to 18 GHz		

Adaptors

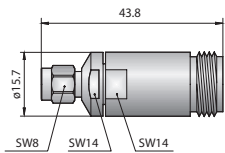
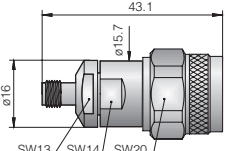
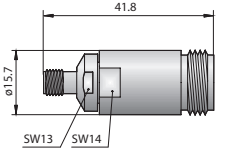
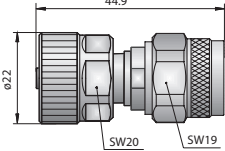
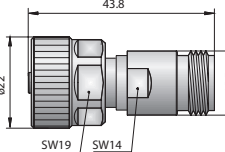
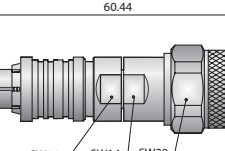
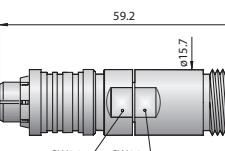
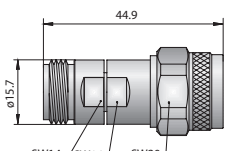
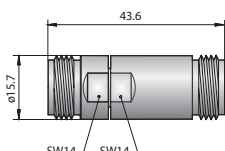
Series RPC- N, 50 Ω

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
05 S 132- K00 S3	straight	RPC- N 50 Ω male - SMA female	≥ 23 dB @ DC to 18 GHz		
05 K 132- S00 S3	straight	RPC- N 50 Ω female - SMA male	≥ 23 dB @ DC to 18 GHz		
05 K 132- K00 S3	straight	RPC- N 50 Ω female - SMA female	≥ 23 dB @ DC to 18 GHz		
05 S 432- S00 S3	straight	RPC- N 50 Ω male - SMA male, 4-hole flange	≥ 23 dB @ DC to 18 GHz	B 12	
05 S 432- K00 S3	straight	RPC- N 50 Ω male - SMA female, 4-hole flange	≥ 23 dB @ DC to 18 GHz	B 12	
05 K 432- S00 S3	straight	RPC- N 50 Ω female - SMA male, 4-hole flange	≥ 23 dB @ DC to 18 GHz	B 12	
05 K 432- K00 S3	straight	RPC- N 50 Ω female - SMA female, 4-hole flange	≥ 23 dB @ DC to 18 GHz	B 12	
05 S 160- S50 D3	straight	RPC- N 50 Ω male - 7-16 male, calibration adaptor	≥ 36.6 dB @ DC to 8 GHz		

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
05 S 160- K50 D3	straight	RPC- N 50 Ω male - 7- 16 female, calibration adaptor	≥ 36.6 dB @ DC to 8 GHz		
05 K 160- S50 D3	straight	RPC- N 50 Ω female - 7- 16 male, calibration adaptor	≥ 36.6 dB @ DC to 8 GHz		
05 K 160- K50 D3	straight	RPC- N 50 Ω female - 7- 16 female, calibration adaptor	≥ 36.6 dB @ DC to 8 GHz		
05 S 151- S00 S3	straight	RPC- N 50 Ω male - BNC 50 Ω male	≥ 22 dB @ DC to 4 GHz		
05 S 151- S20 S3	straight	RPC- N 50 Ω male - BNC 50 Ω male, calibration adaptor	≥ 36 dB @ DC to 2 GHz ≥ 30 dB @ 2 GHz to 4 GHz		
05 S 151- K00 S3	straight	RPC- N 50 Ω male - BNC 50 Ω female	≥ 22 dB @ DC to 4 GHz		
05 K 151- S00 S3	straight	RPC- N 50 Ω female - BNC 50 Ω male	≥ 22 dB @ DC to 4 GHz		
05 K 151- K00 S3	straight	RPC- N 50 Ω female - BNC 50 Ω female	≥ 22 dB @ DC to 4 GHz		
05 K 151- K20 S3	straight	RPC- N 50 Ω female - BNC 50 Ω female, calibration adaptor	≥ 36 dB @ DC to 2 GHz ≥ 30 dB @ 2 GHz to 4 GHz		
05 S 107- P00 S3	straight	RPC- N 50 Ω male - RPC- 7	≥ 28 dB @ DC to 18 GHz		
05 K 107- P00 S3	straight	RPC- N 50 Ω female - RPC- 7	≥ 28 dB @ DC to 18 GHz		
03 S 105- S00 S3	straight	RPC- 3.50 male - RPC- N 50 Ω male	≥ 26 dB @ DC to 18 GHz		

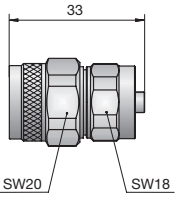
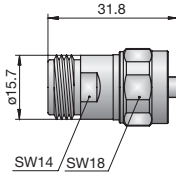
Adaptors

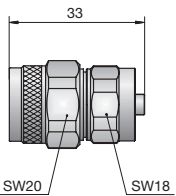
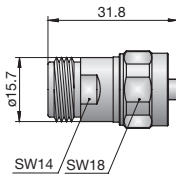
Series RPC- N, 50 Ω

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout
03 S 105- K00 S3	straight	RPC- 3.50 male - RPC- N 50 Ω female	≥ 26 dB @ DC to 18 GHz	
03 K 105- S00 S3	straight	RPC- 3.50 female - RPC- N 50 Ω male	≥ 26 dB @ DC to 18 GHz	
03 K 105- K00 S3	straight	RPC- 3.50 female - RPC- N 50 Ω female	≥ 26 dB @ DC to 18 GHz	
03 KR 105- S00 S3	straight	RPC- 3.50 female, ruggedized - RPC- N 50 Ω male	≥ 26 dB @ DC to 18 GHz	
03 KR 105- K00 S3	straight	RPC- 3.50 female, ruggedized - RPC- N 50 Ω female	≥ 26 dB @ DC to 18 GHz	
53 QS 105- S00 S3	straight	SnapN male - RPC- N 50 Ω male	≥ 26 dB @ DC to 11 GHz	
53 QS 105- K00 S3	straight	SnapN male - RPC- N 50 Ω female	≥ 26 dB @ DC to 11 GHz	
53 QK 105- S00 S3	straight	SnapN female - RPC- N 50 Ω male	≥ 28 dB @ DC to 11 GHz ≥ 26 dB @ 11 GHz to 18 GHz	
53 QK 105- K00 S3	straight	SnapN female - RPC- N 50 Ω female	≥ 28 dB @ DC to 11 GHz ≥ 26 dB @ 11 GHz to 18 GHz	

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
02 KR 105- K00 S3	straight	RPC- 2.92 female, ruggedized - RPC- N 50 Ω female	≥ 26 dB @ DC to 18 GHz		
02 KR 105- S00 S3	straight	RPC- 2.92 female, ruggedized - RPC- N 50 Ω male	≥ 26 dB @ DC to 18 GHz		

Interchangeable Port Connector System Wechselfort Steckersystem

RPC- N 50 Ω - RPC- SL 26.5 GHz				RPC- N 50 Ω - RPC- SL 26.5 GHz	
Ordering Number	Version	Remarks	Return Loss		
05 S 104- S00 S3	straight	RPC- N 50 Ω male - RPC- SL 26.5 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz		
05 K 104- S00 S3	straight	RPC- N 50 Ω female - RPC- SL 26.5 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz		

RPC- N 50 Ω - RPC- SL 40 GHz				RPC- N 50 Ω - RPC- SL 40 GHz	
Ordering Number	Version	Remarks	Return Loss		
05 S 1P4- S00 S3	straight	RPC- N 50 Ω male - RPC- SL 40 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz		
05 K 1P4- S00 S3	straight	RPC- N 50 Ω female - RPC- SL 40 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz		

see also chapter interchangeable port connector system siehe auch Kapitel Wechselfort Steckersystem

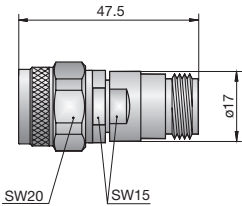
DC- Block

DC- Block

DC- Block RPC- N 50 Ω male - female

DC- Block RPC- N 50 Ω male - female

Ordering Number	Version	Return Loss	Insertion Loss
05 DS 121- K00 S3	straight	≥ 25 dB @ 3 MHz to 18 GHz	< 1 dB @ 3 MHz to 18 GHz



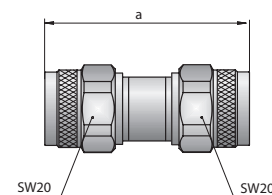
Attenuators

Dämpfungsglieder

RPC- N 50 Ω, male - male

RPC- N 50 Ω Stecker - Stecker

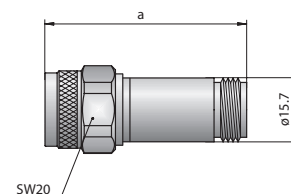
Ordering Number	Remarks	Return Loss	Attenuation	Tolerance	Power Handling
05 AS 102-S03 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	3 dB	±0.3 dB @ 8 GHz ±0.5 dB @ 12.4 GHz ±0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-S06 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	6 dB	±0.3 dB @ 8 GHz ±0.5 dB @ 12.4 GHz ±0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-S10 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	10 dB	±0.3 dB @ 8 GHz ±0.6 dB @ 12.4 GHz ±0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-S20 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	20 dB	±0.3 dB @ 4 GHz ±0.5 dB @ 8 GHz ±0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-S30 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	30 dB	±0.8 dB @ 4 GHz ±1.0 dB @ 12.4 GHz ±1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-S40 S3	a = 59.2 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	40 dB	±0.8 dB @ 4 GHz ±1.0 dB @ 12.4 GHz ±1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C



RPC- N 50 Ω, male - female

RPC- N 50 Ω Stecker - Kuppler

Ordering Number	Remarks	Return Loss	Attenuation	Tolerance	Power Handling
05 AS 102-K03 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	3 dB	±0.3 dB @ 8 GHz ±0.5 dB @ 12.4 GHz ±0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-K06 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	6 dB	±0.3 dB @ 8 GHz ±0.5 dB @ 12.4 GHz ±0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-K10 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	10 dB	±0.3 dB @ 8 GHz ±0.6 dB @ 12.4 GHz ±0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-K20 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	20 dB	±0.3 dB @ 4 GHz ±0.5 dB @ 8 GHz ±0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-K30 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	30 dB	±0.8 dB @ 4 GHz ±1.0 dB @ 12.4 GHz ±1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 102-K40 S3	a = 57.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	40 dB	±0.8 dB @ 4 GHz ±1.0 dB @ 12.4 GHz ±1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
05 AS 122-K20 S3	a = 49.5 mm	≥ 32 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	20 dB	±0.3 dB @ 4 GHz ±0.5 dB @ 18 GHz	0.5 W
05 AS 122-K40 S3	a = 57.5 mm	≥ 32 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	40 dB	±0.3 dB @ 4 GHz ±0.5 dB @ 18 GHz	0.5 W

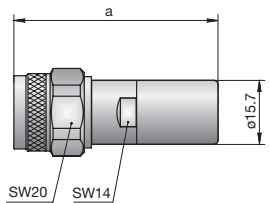
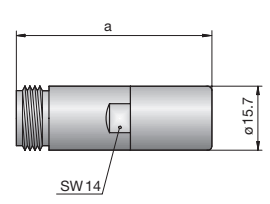


Test Devices

Testzubehör

Open - Short - Load

Open - Short - Load

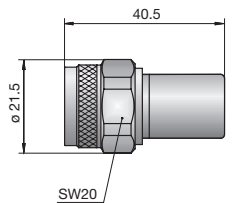
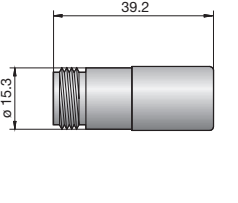
Ordering Number	Version	Remarks	Return Loss	Power Handling	
05 S 12L- 000 S3	straight	RPC- N 50 Ω open circuit, male, a = 50.2 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 GHz to 18 GHz		
05 S 12S- 000 S3	straight	RPC- N 50 Ω short circuit, male, a = 50.2 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 GHz to 18 GHz		
05 S 150- C10 S3	straight	RPC- N 50 Ω broadband load calibration kit, male, a = 40.5 mm	≥ 45 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 18 GHz	0.5 W	
05 S 150- 010 S3	straight	RPC- N 50 Ω broadband load standard, male, a = 49.2 mm	≥ 28 dB @ DC to 18 GHz	0.5 W	
05 K 12L- 000 S3	straight	RPC- N 50 Ω open circuit, female, a = 58.1 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 GHz to 18 GHz		
05 K 12S- 000 S3	straight	RPC- N 50 Ω short circuit, female, a = 58.1 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 GHz to 18 GHz		
05 K 150- C10 S3	straight	RPC- N 50 Ω broadband load calibration kit, female, a = 39.2 mm	≥ 45 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 18 GHz	0.5 W	
05 K 150- 010 S3	straight	RPC- N 50 Ω broadband load standard, female, a = 48 mm	≥ 28 dB @ DC to 18 GHz	0.5 W	

complete calibration kits also available

auch komplette Kalibrierkits erhältlich

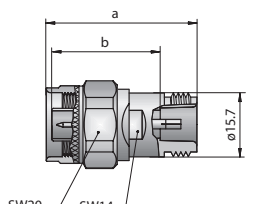
Mismatches

Fehlanschlüsse

Ordering Number	Remarks	VSWR	Power Handling	
05 S 150- 055 S3	RPC- N 50 Ω male, Impedance 55 Ω	1.1 ± 0.04 @ DC to 12.4 GHz, 1.1 ± 0.06 @ 12.4 GHz to 18 GHz	1 W	
05 S 150- 060 S3	RPC- N 50 Ω male, Impedance 60 Ω	1.2 ± 0.04 @ DC to 8 GHz 1.2 ± 0.05 @ 8 GHz to 12.4 GHz 1.2 ± 0.07 @ 12.4 GHz to 18 GHz	1 W	
05 S 150- 075 S3	RPC- N 50 Ω male, Impedance 75 Ω	1.5 ± 0.05 @ DC to 8 GHz 1.5 ± 0.07 @ 8 GHz to 12.4 GHz 1.5 ± 0.09 @ 12.4 GHz to 18 GHz	1 W	
05 K 150- 055 S3	RPC- N 50 Ω female, Impedance 55 Ω	1.1 ± 0.04 @ DC to 12.4 GHz, 1.1 ± 0.06 @ 12.4 GHz to 18 GHz	1 W	
05 K 150- 060 S3	RPC- N 50 Ω female, Impedance 60 Ω	1.2 ± 0.04 @ DC to 8 GHz 1.2 ± 0.05 @ 8 GHz to 12.4 GHz 1.2 ± 0.07 @ 12.4 GHz to 18 GHz	1 W	
05 K 150- 075 S3	RPC- N 50 Ω female, Impedance 75 Ω	1.5 ± 0.05 @ DC to 8 GHz 1.5 ± 0.07 @ 8 GHz to 12.4 GHz 1.5 ± 0.09 @ 12.4 GHz to 18 GHz	1 W	

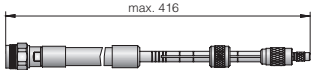
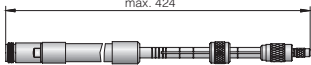
Airlines

Luftleitungen

Ordering Number	Remarks	Return Loss	Frequency	
05 S 101- K026	50 Ω ; a = 36.8 mm, b = 26.4 mm	≥ 40 dB @ 0.3 GHz to 4 GHz ≥ 35 dB @ 4 GHz to 18 GHz	0.3 GHz to 18 GHz	
05 S 101- K033	50 Ω ; a = 43.7 mm, b = 33.3 mm	≥ 40 dB @ 0.3 GHz to 4 GHz ≥ 35 dB @ 4 GHz to 18 GHz	0.3 GHz to 18 GHz	
05 S 101- K061	50 Ω ; a = 71.8 mm, b = 61.8 mm	≥ 40 dB @ 0.3 GHz to 4 GHz ≥ 35 dB @ 4 GHz to 18 GHz	0.3 GHz to 18 GHz	
05 S 101- K100	50 Ω ; a = 110.8 mm, b = 100 mm	≥ 40 dB @ 0.3 GHz to 4 GHz ≥ 35 dB @ 4 GHz to 18 GHz	0.3 GHz to 18 GHz	
05 S 102- K100	50 Ω with 25 Ω section; a = 110.8 mm, b = 100 mm		0.3 GHz to 18 GHz	

Sliding Load

Gleitlast

Ordering Number	Remarks	Return Loss	
05 S 150- G300	RPC- N 50 Ω male	≥ 35 dB @ 2 GHz to 18 GHz	
05 K 150- G300	RPC- N 50 Ω female	≥ 35 dB @ 2 GHz to 18 GHz	

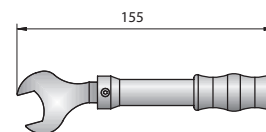
Tools

Werkzeuge

Torque Wrench

Drehmomentschlüssel

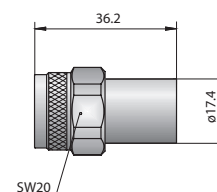
Ordering Number	Remarks
53 W009-000	flat 20 mm - 1,1 Nm torque for RPC- N 50 Ω m, RPC- N 75 Ω m



Gauge Block male

Kalibrierblock - Stecker

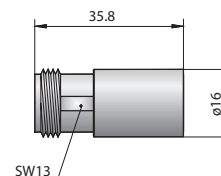
Ordering Number	Remarks
05 W00Z-002	for RPC- N 50 Ω , useable only with gauge 05 W00S-000 RPC- N 75 Ω , useable only with gauge P5 W00S-000



Gauge Block female

Kalibrierblock - Kuppler

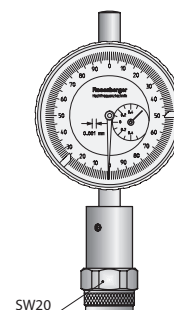
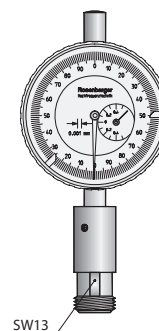
Ordering Number	Remarks
05 W00Z-001	for RPC- N 50 Ω , RPC- N 75 Ω , useable only with gauge 05 W00K-000



Gauge

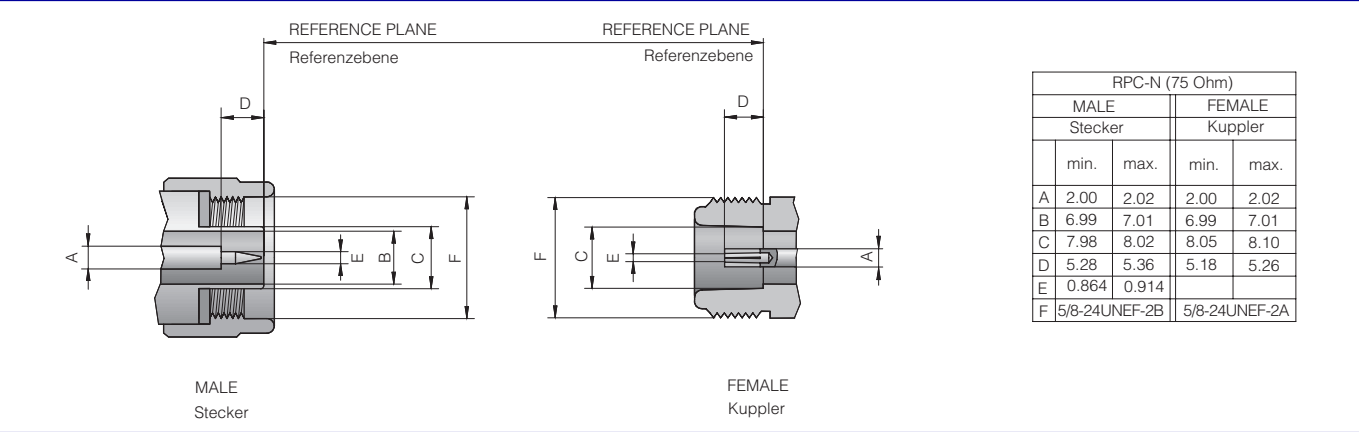
Messuhr

Ordering Number	Remarks
05 W00S-000	compatible to male connectors for RPC- N 50 Ω , useable only with gauge block 05 W00Z-002
05 W00K-000	compatible to female connectors for RPC- N 50 Ω , RPC- N 75 Ω , useable only with gauge block 05 W00Z-001



Interface Dimensions

Anschlussmaße



Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Interface according to	IEC 60169- 16; CECC 22 210; MIL- STD 348A/402	Interface gemäß

Electrical data		Elektrische Daten
Impedance	75 Ω	Wellenwiderstand
Frequency range	DC to 4 GHz	Frequenzbereich
Return loss (connector head)	≥ 36 dB, DC to 4 GHz	Rückflußdämpfung (Steckerkopf)
Insertion loss (connector head)	≤ 0.03 dB x $\sqrt{f}$ [GHz]	Dämpfung (Steckerkopf)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 1.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 1.0 m Ω	Übergangswiderstand Außenleiter
Test voltage	2500 V rms	Prüfspannung
Working voltage	1000 V rms	Betriebsspannung
RF- leakage	≥ 90 dB up to 1 GHz	Schirmdämpfung

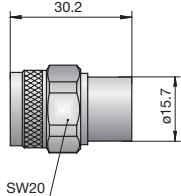
Mechanical data		Mechanische Daten
Mating cycles	≥ 500	Steckzyklen
Center contact captivation	≥ 28 N	Innenleiter Haltekraft
Coupling torque recommended	0.70 Nm to 1.10 Nm	Anzugsdrehmoment empfohlen
Coupling test torque	1.70 Nm	Prüfdrehmoment

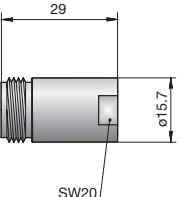
Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	IEC 61169- 1, Subclause 9.4.4	Temperaturzyklen
Corrosion resistance	IEC 61169- 1, Subclause 9.4.6	Korrosionsbeständigkeit
Vibration	IEC 61169- 1, Subclause 9.3.3	Vibration
Shock	IEC 61169- 1, Subclause 9.3.14	Schock
Moisture resistance	IEC 61169- 1, Subclause 9.4.3	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, passivated	Außenleiter
Dielectric	PEI	Dielektrikum

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Connector Heads			Steckverbinderköpfe
Straight Plug			Stecker gerade
Ordering Number	Remarks	Return Loss	
P5 S 121-000 CS	with bead	≥ 36 dB @ DC to 4 GHz	

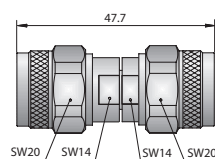
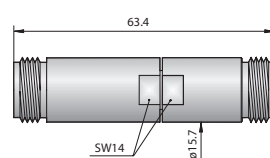
Straight Jack			Kuppler gerade
Ordering Number	Remarks	Return Loss	
P5 K 121-000 CS	with bead	≥ 36 dB @ DC to 4 GHz	

Adaptors

Adapter

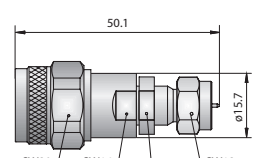
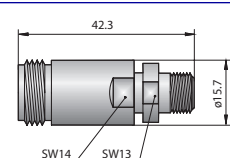
Adaptor (In Series)

Adapter (In- Serie)

Ordering Number	Version	Remarks	Return Loss	
P5 S 121- S20 CS	straight	RPC- N 75 Ω male - male, calibration adaptor	≥ 38 dB @ DC to 2 GHz ≥ 34 dB @ 2 GHz to 4 GHz	
P5 K 121- K20 CS	straight	RPC- N 75 Ω female - female, calibration adaptor	≥ 38 dB @ DC to 2 GHz ≥ 34 dB @ 2 GHz to 4 GHz	

Adaptor (Inter Series)

Adapter (serienübergreifend)

Ordering Number	Version	Remarks	Return Loss	
P5 S 174- S20 CS	straight	RPC- N 75 Ω male - F male, calibration adaptor	≥ 32 dB @ DC to 3 GHz ≥ 28 dB @ 3 GHz to 4 GHz	
P5 K 174- K20 CS	straight	RPC- N 75 Ω female - F female, calibration adaptor	≥ 32 dB @ DC to 3 GHz ≥ 28 dB @ 3 GHz to 4 GHz	

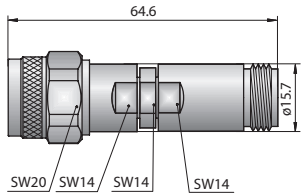
DC- Block

DC- Block

DC- Block RPC- N 75 Ω male - female

DC- Block RPC- N 75 Ω male - female

Ordering Number	Version	Return Loss	Insertion Loss
P5 DS 121- K01 CS	straight	≥ 25 dB @ 4 MHz to 1 GHz ≥ 21 dB @ 1 GHz to 4 GHz	< 1 dB @ 4 MHz to 4 GHz

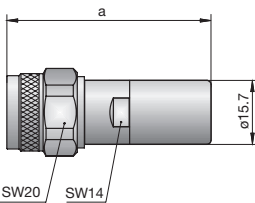
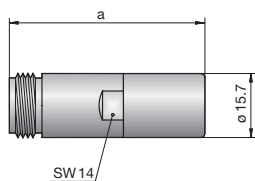


Test Devices

Testzubehör

Open - Short - Load

Open - Short - Load

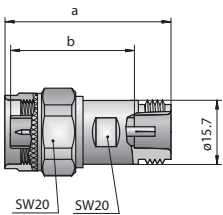
Ordering Number	Version	Remarks	Return Loss	Power Handling	
P5 S 12L- 000 S3	straight	RPC- N 75 Ω open circuit, male, a = 50.2 mm	≤ 0.07 dB @ DC to 2 GHz ≤ 0.10 dB @ 2 GHz to 4 GHz		
P5 S 12S- 000 S3	straight	RPC- N 75 Ω short circuit, male, a = 50.2 mm	≤ 0.07 dB @ DC to 2 GHz ≤ 0.10 dB @ 2 GHz to 4 GHz		
P5 S 150- C10 S3	straight	RPC- N 75 Ω broadband load, calibration kit, male a = 50.2 mm	≥ 40 dB @ DC to 2 GHz ≥ 36 dB @ 2 GHz to 4 GHz	0.5 W	
P5 K 12L- 000 S3	straight	RPC- N 75 Ω open circuit, female, a = 58.1 mm	≤ 0.07 dB @ DC to 2 GHz ≤ 0.10 dB @ 2 GHz to 4 GHz		
P5 K 12S- 000 S3	straight	RPC- N 75 Ω short circuit, female, a = 58.1 mm	≤ 0.07 dB @ DC to 2 GHz ≤ 0.10 dB @ 2 GHz to 4 GHz		
P5 K 150- C10 S3	straight	RPC- N 75 Ω broadband load, calibration kit, female, a = 49 mm	≥ 40 dB @ DC to 2 GHz ≥ 36 dB @ 2 GHz to 4 GHz	0.5 W	

complete calibration kits also available

auch komplette Kalibrierkits erhältlich

Airlines

Luftleitungen

Ordering Number	Remarks	Return Loss	Frequency	
P5 S 101- K031	75 Ω ; a = 41.6 mm, b = 31.2 mm	≥ 42 dB @ 0.1 GHz to 2 GHz ≥ 40 dB @ 2 GHz to 4 GHz	0.1 GHz to 4 GHz	
P5 S 101- K150	75 Ω ; a = 160.8 mm, b = 150 mm	≥ 42 dB @ 0.1 GHz to 2 GHz ≥ 40 dB @ 2 GHz to 4 GHz	0.1 GHz to 4 GHz	

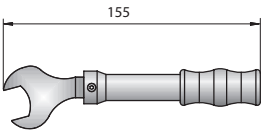
Tools

Werkzeuge

Torque Wrench

Drehmomentschlüssel

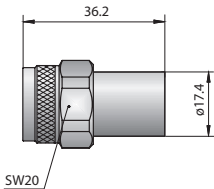
Ordering Number	Remarks
53 W009- 000	flat 20 mm - 1,1 Nm torque for RPC- N 50 Ohm, RPC- N 75 Ohm



Gauge Block male

Kalibrierblock - Stecker

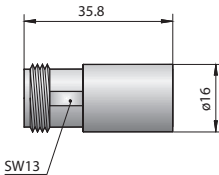
Ordering Number	Remarks
05 W00Z- 002	for RPC- N 50 Ω, useable only with gauge 05 W00S- 000 RPC- N 75 Ω, useable only with gauge P5 W00S- 000



Gauge Block female

Kalibrierblock - Kuppler

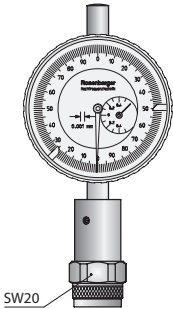
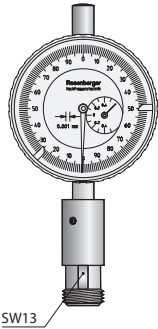
Ordering Number	Remarks
05 W00Z- 001	for RPC- N 50 Ω, RPC- N 75 Ω, useable only with gauge 05 W00K- 000



Gauge

Messuhr

Ordering Number	Remarks
P5 W00S- 000	compatible to male connectors for RPC- N 75 Ω, useable only with gauge block 05 W00Z- 002
05 W00K- 000	compatible to female connectors for RPC- N 50 Ω, RPC- N 75 Ω, useable only with gauge block 05 W00Z- 001



SERIES

Series
RPC-TNC



RPC- TNC

Rosenberger RPC- TNC connectors are 50 Ω precision TNC connectors, designed for a frequency range up to 18 GHz, with threaded coupling. The result of the threaded coupling is a higher protection level. Dimensions are based on BNC connector series interface.

Rosenberger RPC- TNC connectors are conform to the following specification:

- Radio- frequency connectors, specified in IEC 60169- 26, grade 0

Rosenberger RPC- TNC connectors are mechanically compatible (mateable) with all standard TNC connectors conforming to MIL- C - 39012 e.g. with the Rosenberger 50 Ω (series 56) and 75 Ω (series 76) TNC series.

RPC- TNC connectors have been designed for semi rigid cables and high performance flexible microwave cable assemblies and microwave components. Also available are adaptors to other relevant coaxial connector series and accessories for precision microwave measurement, e.g. components for calibration kits.

RPC- TNC

Rosenberger RPC- TNC- Steckverbinder sind 50- Ω - Präzisionsausführungen vom Typ TNC, entwickelt für messtechnische Anwendungen bis 18 GHz, mit Schraubverbindung für zuverlässiges Schließen bzw. Öffnen. Durch die gewählte Festhaltungsart wird ein höherer Schutzgrad erzielt. Die Abmessungen entsprechen dem Interface der Serie BNC.

Rosenberger RPC- TNC- Steckverbinder erfüllen die Norm:

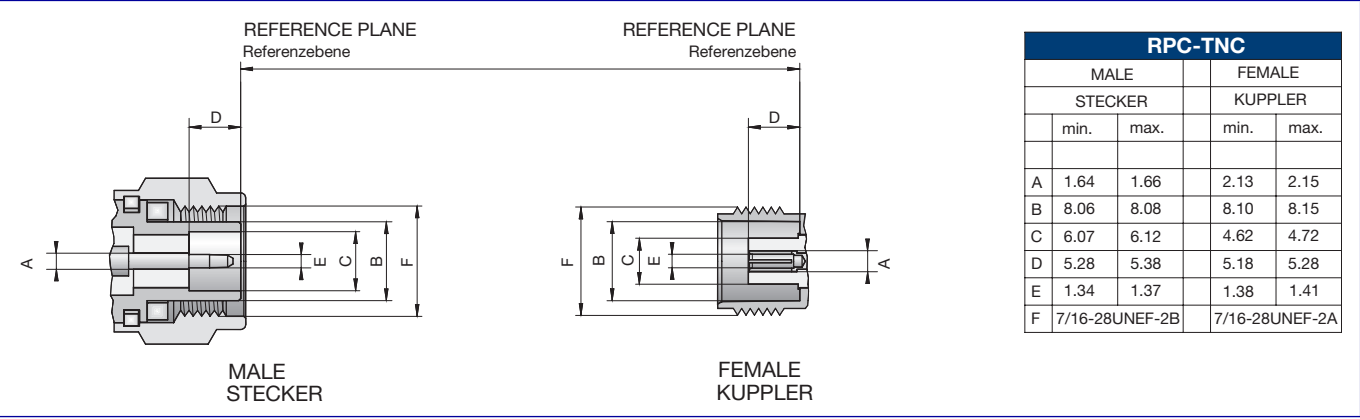
- *HF- Steckverbinder nach IEC 60169- 26, Grade 0*

Rosenberger RPC- TNC- Steckverbinder können mit allen entsprechenden Ausführungen des Typs TNC nach MIL- C - 39012 gekoppelt werden, so z.B. mit den Rosenberger- Standard- Typen TNC 50 Ω (Serie 56) und TNC 75 Ω (Serie 76).

RPC- TNC- Steckverbinder wurden für halbstarre oder flexible Mikrowellenkabel sowie für Mikrowellen- Gehäuseanwendungen entwickelt. Es existieren Übergangssteckverbinder zu allen relevanten koaxialen Steckverbinder- Serien sowie Messzubehör für präzise Messungen im Mikrowellenbereich, z.B. Kalibrier Kit- Elemente.

Interface Dimensions

Anschlussmaße



Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Interface according to	IEC 60169- 26	Interface gemäß

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 18 GHz	Frequenzbereich
Return loss (connector head)	≥ 23 dB, DC to 18 GHz	Rückflußdämpfung (Steckerkopf)
Insertion loss (connector head)	≤ 0.05 dB $\times \sqrt{f}$ [GHz]	Dämpfung (Steckerkopf)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 1.5 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 1.0 m Ω	Übergangswiderstand Außenleiter
Test voltage	1500 V rms	Prüfspannung
Working voltage	500 V rms	Betriebsspannung
RF- leakage	≥ 90 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 500	Steckzyklen
Center contact captivation	≥ 27 N	Innenleiter Haltekraft
Coupling torque recommended	0.46 Nm to 0.69 Nm	Anzugsdrehmoment empfohlen
Coupling test torque	1.70 Nm	Prüfdrehmoment

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	MIL- STD 202, Method 107, Condition B	Temperaturzyklen
Corrosion resistance	MIL- STD 202, Method 101, Condition B	Korrosionsbeständigkeit
Vibration	MIL- STD 202, Method 204, Condition D	Vibration
Shock	MIL- STD 202, Method 213, Condition I	Schock
Moisture resistance	MIL- STD 202, Method 106	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, passivated	Außenleiter
Dielectric 1	PTFE	Dielektrum 1
Dielectric 2	PPE	Dielektrum 2
Gasket	Neoprene E50	Dichtung

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

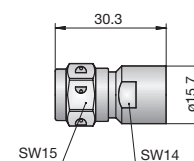
Connector Heads

Steckverbinderköpfe

Straight Plug

Stecker gerade

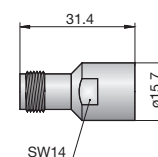
Ordering Number	Remarks	Return Loss
06 S 121- 000 S3	with bead	≥ 23 dB @ DC to 18 GHz
06 S 121- 002 S3	with bead, coupling nut without wire- lock	≥ 23 dB @ DC to 18 GHz



Straight Jack

Kuppler gerade

Ordering Number	Remarks	Return Loss
06 K 121- 000 S3	with bead	≥ 23 dB @ DC to 18 GHz



Adaptors

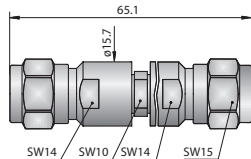
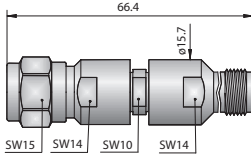
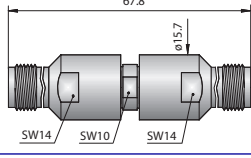
Series RPC- TNC

Adaptors

Adapter

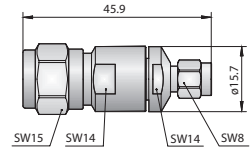
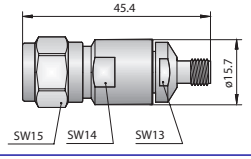
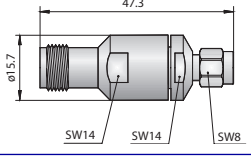
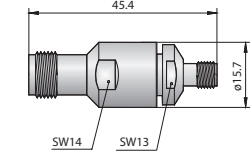
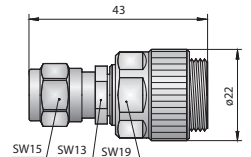
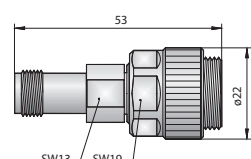
Adaptor (In Series)

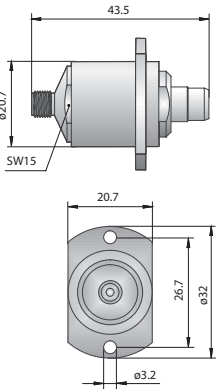
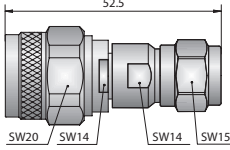
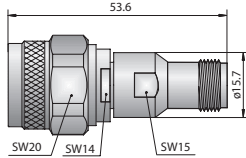
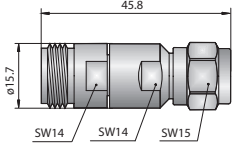
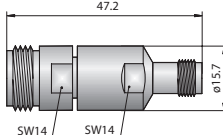
Adapter (In- Serie)

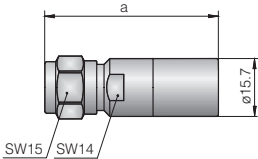
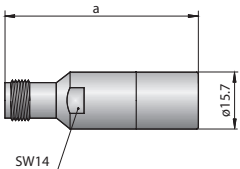
Ordering Number	Version	Remarks	Return Loss	
06 S 121- S20 S3	straight	RPC- TNC male - male, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 to 18 GHz	
06 S 121- K20 S3	straight	RPC- TNC male - female, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 to 18 GHz	
06 K 121- K20 S3	straight	RPC- TNC female - female, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 to 18 GHz	

Adaptor (Inter Series)

Adapter (serienübergreifend)

Ordering Number	Version	Remarks	Return Loss	
06 S 132- S00 S3	straight	RPC- TNC male - SMA male	≥ 19 dB @ DC to 18 GHz	
06 S 132- K00 S3	straight	RPC- TNC male - SMA female	≥ 19 dB @ DC to 18 GHz	
06 K 132- S00 S3	straight	RPC- TNC female - SMA male	≥ 19 dB @ DC to 18 GHz	
06 K 132- K00 S3	straight	RPC- TNC female - SMA female	≥ 19 dB @ DC to 18 GHz	
06 S 107- P20 S3	straight	RPC- TNC male - RPC- 7, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 to 18 GHz	
06 K 107- P20 S3	straight	RPC- TNC female - RPC- 7, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 to 18 GHz	

Ordering Number	Version	Remarks	Return Loss	
03 K 706- S23 S3	straight	RPC- 3.50 female - RPC-TNC male, 2- hole flange, floating test adaptor	≥ 35 dB @ DC to 2.5 GHz ≥ 25 dB @ 2.5 GHz to 6 GHz ≥ 20 dB @ 6 GHz to 16 GHz ≥ 17 dB @ 16 GHz to 18 GHz	
05 S 106- S00 S3	straight	RPC- N 50 Ω male - RPC-TNC male	≥ 20 dB @ DC to 18 GHz	
05 S 106- S20 S3	straight	RPC- N 50 Ω male - RPC-TNC male, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	
05 S 106- K00 S3	straight	RPC- N 50 Ω male - RPC-TNC female	≥ 20 dB @ DC to 18 GHz	
05 K 106- S00 S3	straight	RPC- N 50 Ω female - RPC-TNC male	≥ 20 dB @ DC to 18 GHz	
05 K 106- K00 S3	straight	RPC- N 50 Ω female - RPC-TNC female	≥ 20 dB @ DC to 18 GHz	
05 K 106- K20 S3	straight	RPC- N 50 Ω female - RPC-TNC female, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	

Test Devices				Testzubehör
Open - Short - Load				Open - Short - Load
Ordering Number	Remarks	Return Loss	Power Handling	
06 S 12L- 000 S3	RPC- TNC open circuit, male, a = 48.8 mm	≤ 0.14 dB @ DC to 4 GHz ≤ 0.25 dB @ 4 GHz to 18 GHz		
06 S 12S- 000 S3	RPC- TNC short circuit, male, a = 49.8 mm	≤ 0.05 dB @ DC to 4 GHz ≤ 0.17 dB @ 4 GHz to 18 GHz		
06 S 150- C10 S3	RPC- TNC broadband load, calibration kit, male, a = 50.3 mm	≥ 35 dB @ DC to 4 GHz ≥ 25 dB @ 4 GHz to 18 GHz	0.5 W	
06 K 12L- 000 S3	RPC- TNC open circuit, female, a = 59 mm	≤ 0.14 dB @ DC to 4 GHz ≤ 0.25 dB @ 4 GHz to 18 GHz		
06 K 12S- 000 S3	RPC- TNC short circuit, female, a = 58.6 mm	≤ 0.05 dB @ DC to 4 GHz ≤ 0.17 dB @ 4 GHz to 18 GHz		
06 K 150- C10 S3	RPC- TNC broadband load, calibration kit, female, a = 51.4 mm	≥ 35 dB @ DC to 4 GHz ≥ 25 dB @ 4 GHz to 18 GHz	0.5 W	

complete calibration kits also available

auch komplette Kalibrierkits erhältlich

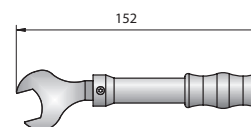
Tools

Werkzeuge

Torque Wrench

Drehmomentschlüssel

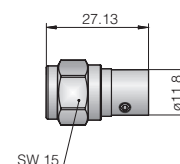
Ordering Number	Remarks
06 W021- 000	flat 15 mm - 55 Nm torque for RPC- TNC



Gauge Block male

Kalibrierblock - Stecker

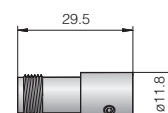
Ordering Number	Remarks
06 W00Z- 002	for RPC- TNC, useable only with gauge 06 W 00S- 000



Gauge Block female

Kalibrierblock - Kuppler

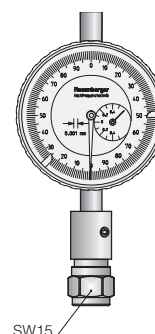
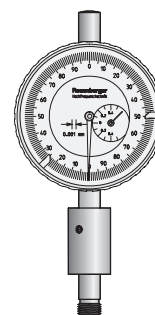
Ordering Number	Remarks
06 W00Z- 001	for RPC- TNC, useable only with gauge 06 W 00K- 000



Gauge

Messuhr

Ordering Number	Remarks
06 W00S- 000	compatible to male connectors for RPC- TNC, useable only with gauge block 06 W00Z- 002
06 W00K- 000	compatible to female connectors for RPC- TNC, useable only with gauge block 06 W00Z- 001



SERIES

Series
RPC-7



Rosenberger RPC- 7 connectors are 50 Ω precision coax connectors with an outer conductor diameter of 7 mm. They have been designed with excellent data over the full frequency range up to 18 GHz. This "hermaphroditic" connector mates electrically both centre and outer conductor by end-surface (butt) contact. The mechanical connection is designed as a counter-sinkable threaded socket.

Rosenberger RPC- 7 connectors conform to the following specifications:

- IEC- 457- 2 Part 2

Rosenberger RPC- 7 connectors are mechanically compatible (mateable) to APC- 7, PC- 7, GPC- 7, Precifix AA connectors. RPC- 7 and RPC- N connector heads using the same bead are interchangeable.

RPC- 7 connectors have been designed for semi-rigid cables, high performance flexible microwave cable assemblies and microwave components. We also offer adaptors to other precision coaxial connector series with a characteristic impedance of 50 Ω applicable in microwave measurements and accessories for precision microwave measurement units, e.g. components for calibration kits and beadless precision air- lines.

Rosenberger Steckverbinder vom Typ RPC- 7 sind 50- Ω - Präzisionsausführungen mit 7- mm- Außenleiter besonders für Anwendungen in der Mikrowellen- Messtechnik bis 18 GHz. Bei diesem "Zwitter- Steckverbinder" erfolgt die elektrische Verbindung sowohl am Innen- als auch am Außenleiter durch Stimmkontakt, die mechanische Verbindung wird durch eine versenkbare Gewindebuchse realisiert.

Rosenberger RPC- 7- Steckverbinder erfüllen die Normen:

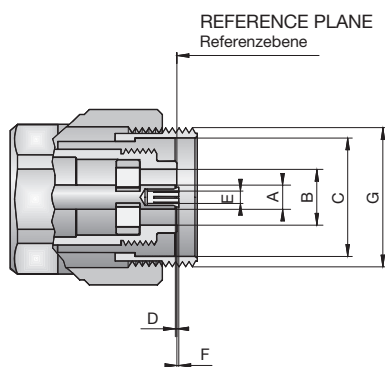
- IEC- 457- 2 Part 2

Rosenberger RPC- 7- Steckverbinder sind elektrisch und mechanisch kompatibel zu APC- 7, PC- 7, GPC- 7, Precifix AA und anderen. Durch gleiche Anschlussmaße auf der Montageseite sind die Steckverbinderköpfe der Typen RPC- N und RPC- 7 austauschbar.

RPC- 7- Steckverbinder wurden für halbstarre oder hochwertige flexible Mikrowellenkabel sowie für Mikrowellen- Gehäuseanwendungen entwickelt. Es existieren Adapter zu allen in der Mikrowellen- Messtechnik gebräuchlichen 50- Ω - Steckverbinder- Serien sowie Messzubehör für Präzisions- Messungen im Mikrowellenbereich (z.B. Kalibrier- Kit- Elemente) und stützenfreie Präzisions- Luftleitungen.

Interface Dimensions

Anschlussmaße



RPC-7		
	min.	max.
A	3.0397	nom.
B	6.995	7.005
C	14.850	14.860
D	0.000	0.050
E	1.060	1.085
F	0.050	0.380
G	11/16-24UNEF-2A	

Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Interface according to	IEC 457- 2	Interface gemäß

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 18 GHz	Frequenzbereich
Return loss (connector head)	≥ 32 dB, DC to 18 GHz	Rückflußdämpfung (Steckerkopf)
Insertion loss (connector head)	≤ 0.03 dB $\times \sqrt{f[\text{GHz}]}$	Dämpfung (Steckerkopf)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 1.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 0.1 m Ω	Übergangswiderstand Außenleiter
Test voltage	2500 V rms	Prüfspannung
Working voltage	1000 V rms	Betriebsspannung
RF- leakage	≥ 120 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 5000	Steckzyklen
Center contact captivation	≥ 28 N	Innenleiter Haltekraft
Coupling torque recommended	1.36 Nm	Anzugsdrehmoment empfohlen
Coupling test torque	1.95 Nm	Prüfdrehmoment

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	MIL- STD 202, Method 107, Condition B	Temperaturzyklen
Corrosion resistance	MIL- STD 202, Method 101, Condition B	Korrosionsbeständigkeit
Vibration	MIL- STD 202, Method 204, Condition D	Vibration
Shock	MIL- STD 202, Method 213, Condition I	Schock
Moisture resistance	MIL- STD 202, Method 106	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Beryllium copper, gold- plated	Außenleiter
Dielectric	PPE	Dielektrikum

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

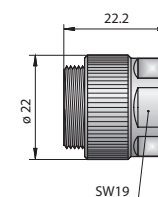
Connector Heads

Steckverbinderköpfe

Straight Connector Head

Steckverbinderkopf gerade

Ordering Number	Remarks	Return Loss
07 P 121- 000 S3	with bead	≥ 32 dB @ DC to 18 GHz



Cable Connectors Semi- Rigid Cable

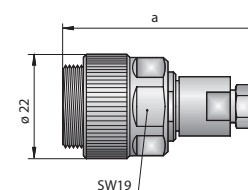
Kabel- Steckverbinder, Semi- Rigid- Kabel

Straight Connector, solder

Steckverbinder gerade, löt

Semi- Rigid

Ordering Number	Remarks	Return Loss	Cable Group	Assembly Instruction
07 P 121- 271 S3	a = 41.8 mm	≥ 26 dB @ DC to 18 GHz	71	02 A3
07 P 121- 272 S3	a = 35 mm	≥ 26 dB @ DC to 18 GHz	72	02 A3
07 P 121- 273 S3	a = 41.8 mm	≥ 26 dB @ DC to 18 GHz	73	03 A



Panel Connectors Coaxial End

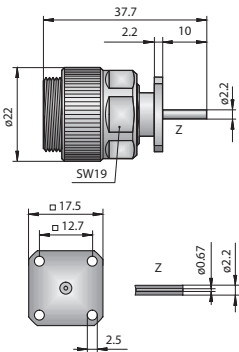
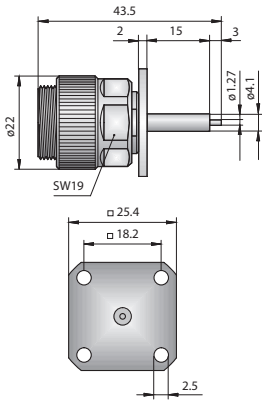
Gehäuse- Steckverbinder Koaxiales Ende

Panel Connector, 4- hole flange

Gehäusesteckverbinder 4- Loch- Flansch

Coaxial End

Ordering Number	Return Loss	Panel Piercing / PCB Layout
07 P 421- 500 S3	≥ 26 dB @ DC to 18 GHz	B 98
07 P 422- 500 S3	≥ 26 dB @ DC to 18 GHz	B 106a



3

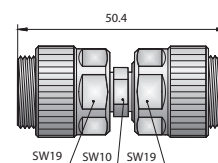
Adaptors

Adapter

Adaptor (In Series)

Adapter (In- Serie)

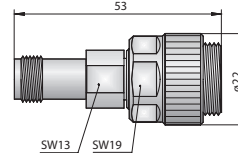
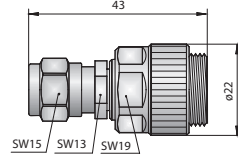
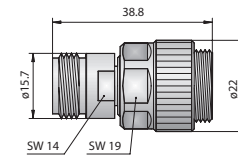
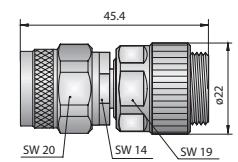
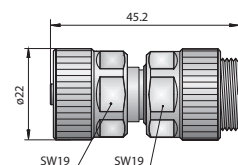
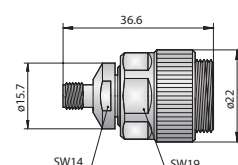
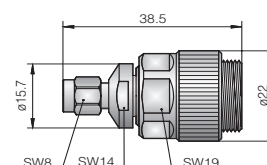
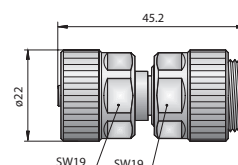
Ordering Number	Version	Remarks	Return Loss
07 P 121- P00 S3	straight	RPC- 7	≥ 28 dB @ DC to 18 GHz



Adaptor (Inter Series)

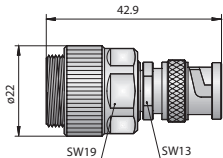
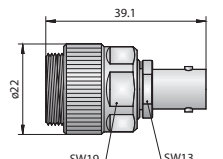
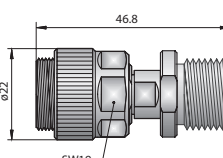
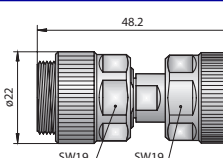
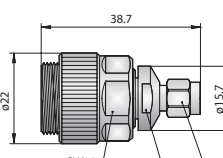
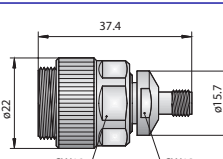
Adapter (serienübergreifend)

Ordering Number	Version	Remarks	Return Loss
02 KR 107- P00 S3	straight	RPC- 2.92 female, ruggedized - RPC- 7	≥ 28 dB @ DC to 18 GHz
03 S 107- P00 S3	straight	RPC- 3.50 male - RPC- 7	≥ 28 dB @ DC to 18 GHz
03 S 107- P20 S3	straight	RPC- 3.50 male - RPC- 7, calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 28 dB @ 4 GHz to 18 GHz
03 K 107- P00 S3	straight	RPC- 3.50 female - RPC- 7	≥ 28 dB @ DC to 18 GHz
03 K 107- P20 S3	straight	RPC- 3.50 female - RPC- 7, calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 28 dB @ 4 GHz to 18 GHz
03 KR 107- P00 S3	straight	RPC- 3.50 female, ruggedized - RPC- 7	≥ 28 dB @ DC to 18 GHz
05 S 107- P00 S3	straight	RPC- N 50 Ω male - RPC- 7	≥ 28 dB @ DC to 18 GHz
05 K 107- P00 S3	straight	RPC- N 50 Ω female - RPC- 7	≥ 28 dB @ DC to 18 GHz
06 S 107- P20 S3	straight	RPC- TNC male - RPC- 7, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 to 18 GHz
06 K 107- P20 S3	straight	RPC- TNC female - RPC- 7, calibration adaptor	≥ 30 dB @ DC to 4 GHz ≥ 20 dB @ 4 to 18 GHz



Adaptors

Series RPC- 7

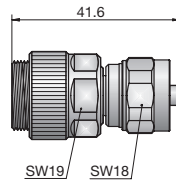
Ordering Number	Version	Remarks	Return Loss	
07 P 151- S00 S3	straight	RPC- 7 - BNC 50 Ω male	≥ 22 dB @ DC to 4 GHz	
07 P 151- K00 S3	straight	RPC- 7 - BNC 50 Ω female	≥ 22 dB @ DC to 4 GHz	
07 P 110- S20 S3	straight	RPC- 7 - RPC- SP male, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	
07 P 110- K20 S3	straight	RPC- 7 - RPC- SP female, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	
07 P 132- S00 S3	straight	RPC- 7 - SMA male	≥ 23 dB @ DC to 18 GHz	
07 P 132- K00 S3	straight	RPC- 7 - SMA female	≥ 23 dB @ DC to 18 GHz	

Interchangeable Port Connector System

Wechselport Steckersystem

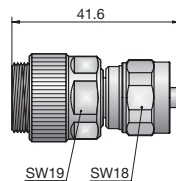
RPC- 7 - RPC- SL 26.5 GHz

RPC- 7 - RPC- SL 26.5 GHz

Ordering Number	Version	Remarks	Return Loss	
07 P 104- S00 S3	straight	RPC- 7 - RPC- SL 26.5 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz	

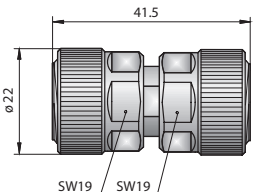
RPC- 7 - RPC- SL 40 GHz

RPC- 7 - RPC- SL 40 GHz

Ordering Number	Version	Remarks	Return Loss	
07 P 1P4- S00 S3	straight	RPC- 7 - RPC- SL 40 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz	

see also chapter interchangeable port connector system

siehe auch Kapitel Wechselport Steckersystem

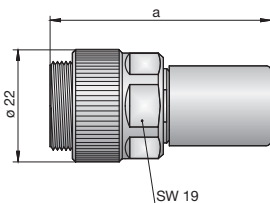
Attenuators						Dämpfungsglieder
RPC- 7						RPC- 7
Ordering Number	Remarks	Return Loss	Attenuation	Tolerance	Power Handling	
07 AP 122- P20 S3		≥ 32 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	20 dB	±0.3 dB @ 4 GHz ± 0.5 dB @ 18 GHz	0.5 W	
07 AP 122- P40 S3		≥ 32 dB @ DC to 4 GHz ≥ 23 dB @ 4 GHz to 18 GHz	40 dB	±0.5 dB @ 4 GHz ± 1.0 dB @ 18 GHz	0.5 W	

Test Devices

Testzubehör

Open - Short - Load

Open - Short - Load

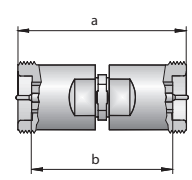
Ordering Number	Remarks	Return Loss	Power Handling	
07 P 12L- 000 S3	RPC- 7 open circuit, a = 42.4 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.15 dB @ 4 GHz to 18 GHz		
07 P 12S- 000 S3	RPC- 7 short circuit, a = 44.2 mm	≤ 0.07 dB @ DC to 4 GHz ≤ 0.12 dB @ 4 GHz to 18 GHz		
07 P 150- C10 S3	RPC- 7 broadband load, calibration kit, a = 42.4 mm	≥ 45 dB @ DC to 4 GHz ≥ 32 dB @ 4 GHz to 18 GHz	0.5 W	
07 P 150- 010 S3	RPC- 7 broadband load standard, a = 42.4 mm	≥ 28 dB @ DC to 18 GHz	0.5 W	

complete calibration kits also available

auch komplette Kalibrierkits erhältlich

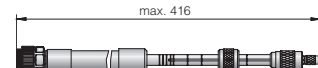
Airlines

Luftleitungen

Ordering Number	Remarks	Return Loss	Frequency	
07 P 101- P034	50 Ω ; a = 40 mm, b = 34 mm	≥ 45 dB @ 0.3 GHz to 4 GHz ≥ 40 dB @ 4 GHz to 18 GHz	0.3 GHz to 18 GHz	
07 P 101- P041	50 Ω ; a = 47 mm, b = 41 mm	≥ 45 dB @ 0.3 GHz to 4 GHz ≥ 40 dB @ 4 GHz to 18 GHz	0.3 GHz to 18 GHz	
07 P 101- P068	50 Ω ; a = 74 mm, b = 68 mm	≥ 45 dB @ 0.3 GHz to 4 GHz ≥ 40 dB @ 4 GHz to 18 GHz	0.3 GHz to 18 GHz	
07 P 101- P100	50 Ω ; a = 106.4 mm, b = 100 mm	≥ 45 dB @ 0.3 GHz to 4 GHz ≥ 40 dB @ 4 GHz to 18 GHz	0.3 GHz to 18 GHz	
07 P 102- P100	50 Ω with 25 Ω section, a = 106.4 mm, b = 100 mm		0.3 GHz to 18 GHz	

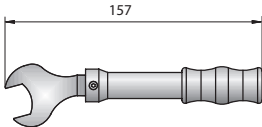
Sliding Load

Gleitlast

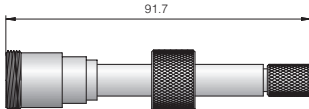
Ordering Number	Remarks	Return Loss	
07 P 150- G300	RPC- 7	≥ 35 dB @ 2 GHz to 18 GHz	

ToolsWerkzeuge

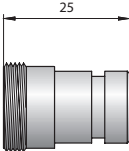
Torque WrenchDrehmomentschlüssel

Ordering Number	Remarks	
07 W021- 000	flat 19 mm - 136 Nm torque for RPC 7, RPC- SP	

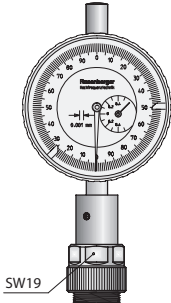
Collet ExtractorDemontagewerkzeug

Ordering Number		
07 W031- 000	for RPC- 7	

Gauge BlockKalibrierblock

Ordering Number		
07 W00Z- 001	for RPC- 7, useable only with gauge 07 W001- 000	

GaugeMessuhr

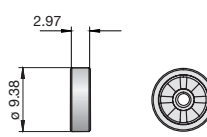
Ordering Number		
07 W001- 000	compatible to connectors for RPC- 7, useable only with gauge block 07 W00Z- 001	

Accessories

Zubehör

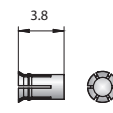
Bead

Stützscheibe

Ordering Number	Remarks	Return Loss	
07 B 003- 000	7 mm, 50 Ω	≥ 54 dB @ DC to 2 GHz ≥ 37 dB @ 2 GHz to 18 GHz	
07 B 003- 010	7 mm, 50 Ω	≥ 54 dB @ DC to 2 GHz ≥ 40 dB @ 2 GHz to 18 GHz	

Center Contact

Innenleiter

Ordering Number	Remarks	
07 P 121- 000/21	changeable center conductor	

SERIES

Series
RPC-SP



RPC- SP

Rosenberger RPC- SP connectors are blind mate 50 Ω precision coax connectors with an outer diameter of 4.10 mm. Through float mounting they are ideally suited for module to module design. They have been designed with excellent performance data for applications with multiple connections over the full frequency range up to 22 GHz.

Rosenberger RPC- SP connectors conform to the following specification:

- MIL- STD- 348A
- IEC 61169- 33

Interface dimensions of jacks may deviate from MIL- STD- 348A.

Rosenberger RPC- SP connectors are mechanically compatible (mateable) with OSP and BMA.

RPC- SP connectors have been developed to meet the highest levels of reliability and repeatability of performance and are designed for efficient mounting. RPC- SP connectors are indicated for applications where quick and reliable interconnects of coaxial cables are frequently required and for applications with racks and plug- in units.

RPC- SP connectors are available in float mounting configurations. The use of a float mounting design with its spring loaded female center contact can overcome possible radial and axial misalignment.

RPC- SP

Rosenberger Steckverbinder vom Typ RPC- SP sind 50- Ω - Präzisionsausführungen mit einem Außenleiterdurchmesser von 4.10 mm. Bei typgerechter Montage sind beide Steckverbinderteile selbstfindend mit Ausgleich von axialem Versatz; das Steckverbindersystem ist deshalb besonders für platzsparende Modulbauweise geeignet. RPC- SP- Steckverbinder besitzen hervorragende Eigenschaften für mehrfaches Stecken bei Einschüben im Frequenzbereich bis 22 GHz.

Rosenberger RPC- SP- Steckverbinder entsprechen der Norm:

- MIL- STD- 348A
- IEC 61169- 33

Einzelne Interface- Maße der Kuppler weichen von der Norm ab.

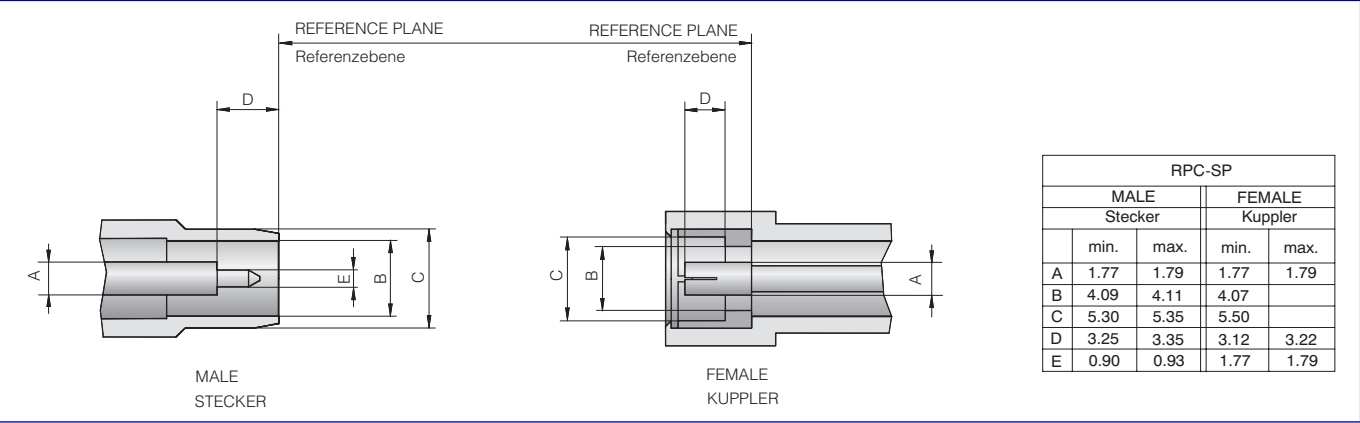
Rosenberger RPC- SP- Steckverbinder können mit allen typgleichen Ausführungen gekoppelt werden und sind darüber hinaus mechanisch kompatibel zu OSP und BMA Steckern.

RPC- SP- Steckverbinder zeichnen sich aus durch hohe Zuverlässigkeit, gute Reproduzierbarkeit und einfache Montage. Die Steckverbinderserie wurde für Anwendungen entwickelt, die zuverlässiges und wiederholtes Verbinden und Trennen von flexiblen oder starren Koaxialleitungen erfordern, außerdem für Einschübe in Gestellen.

RPC- SP- Steckverbinder für schwimmende Montage gleichen einen eventuell vorhandenen axialen oder radialen Versatz der beteiligten Verbinder aus, da der Außenleiter der Buchse federnd gelagert ist.

Interface Dimensions

Anschlussmaße



Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Interface according to	IEC 60169- 33; MIL- STD 348A	Interface gemäß
Mechanically compatible with	OSP and BMA	Mechanisch kompatibel mit

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 22 GHz	Frequenzbereich
Return loss (cable connector)	≥ 26 dB, DC to 22 GHz	Rückflußdämpfung (Kabelsteckverbinder)
Insertion loss (cable connector)	≤ 0.03 dB x $\sqrt{f}$ [GHz]	Dämpfung (Kabelsteckverbinder)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 2.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 2.0 m Ω	Übergangswiderstand Außenleiter
Test voltage	1000 V rms	Prüfspannung
Working voltage	400 V rms	Betriebsspannung
RF- leakage	≥ 85 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 1000	Steckzyklen
Center contact captivation	≥ 27 N	Innenleiter Haltekraft
Engagement force	≤ 13.5 N	Einsteckkraft
Disengagement force	≥ 2.0 N	Ausziehkraft

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	MIL- STD 202, Method 107, Condition B	Temperaturzyklen
Corrosion resistance	MIL- STD 202, Method 101, Condition B	Korrosionsbeständigkeit
Vibration	MIL- STD 202, Method 204, Condition D	Vibration
Shock	MIL- STD 202, Method 213, Condition I	Schock
Moisture resistance	MIL- STD 202, Method 106	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, passivated	Außenleiter
Dielectric	PS, PTFE	Dielektrikum

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Cable Connectors Semi- Rigid Cable

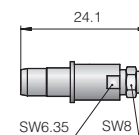
Kabel- Steckverbinder, Semi- Rigid- Kabel

Straight Plug, solder

Stecker gerade, löt

Semi- Rigid

Ordering Number	Remarks	Return Loss	Cable Group	Assembly Instruction
10 S 125- 271 S3	applicable to MIL C 38 999 shell	≥ 21 dB @ DC to 22 GHz	71	02 A3
10 S 125- 272 S3	applicable to MIL C 38 999 shell	≥ 21 dB @ DC to 22 GHz	72	03 A

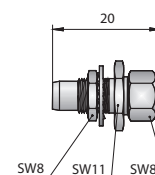


Panel Plug, hexagonal flange

Gehäusestecker löt, 6- kant- Flansch

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout
10 S 641- 271 E3	≥ 23 dB @ DC to 22 GHz	71	02 A3	B 92
10 S 641- 272 E3	≥ 23 dB @ DC to 22 GHz	72	03 A	B 92

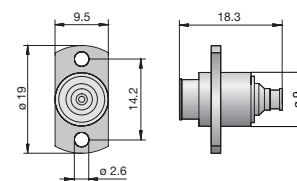


Panel Jack, 2- hole flange

Gehäusekuppler löt, 2- Loch- Flansch

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout
10 K 762- 271 N3	≥ 21 dB @ DC to 22 GHz	71	10 E	B 100
10 K 762- 272 N3	≥ 21 dB @ DC to 22 GHz	72	10 E	B 100

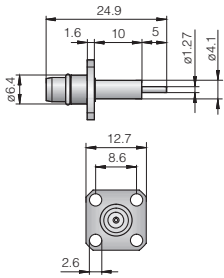


Panel Connectors Coaxial End

Gehäuse- Steckverbinder Koaxiales Ende

Panel Jack, 4- hole flange *Gehäusekuppler, 4- Loch- Flansch* Coaxial End

Ordering Number	Return Loss	Panel Piercing / PCB Layout
10 S 441-500 N3Q	≥ 21 dB @ DC to 22 GHz	B 55a



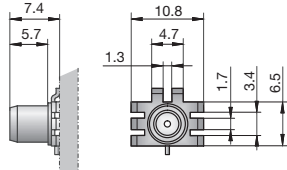
PCB Connectors SMD

Leiterplatten- Steckverbinder SMD

Straight Plug

Stecker gerade

SMD

Ordering Number	Remarks	Return Loss	Panel Piercing / PCB Layout	
10 S 101- 40MT3	tape & reel, VG 07.50000	≥ 25 dB @ DC to 18 GHz ≥ 21 dB @ 18 GHz to 22 GHz	on request	

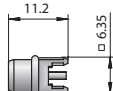
PCB Connectors Solder Pin

Leiterplatten- Steckverbinder - Löt- Pin

Straight Plug

Stecker gerade

Solder Pin

Ordering Number	Remarks	Return Loss	Panel Piercing / PCB Layout	
10 S 142- 400 E3	tape & reel, VG 07.50000	≥ 30 dB @ DC to 3 GHz ≥ 28 dB @ 3 to 6 GHz	on request	

Adaptors

Adapter

Adaptor (Inter Series)

Adapter (serienübergreifend)

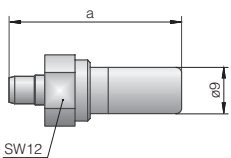
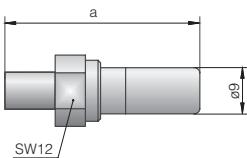
Ordering Number		Remarks	Return Loss	
03 S 110- S01 S3	straight	RPC- 3.50 male - RPC- SP male	≥ 23 dB @ DC to 22 GHz	
03 S 110- S21 S3	straight	RPC- 3.50 male - RPC- SP male, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 22 GHz	
03 S 110- K01 S3	straight	RPC- 3.50 male - RPC- SP female	≥ 23 dB @ DC to 22 GHz	
03 S 110- K21 S3	straight	RPC- 3.50 male - RPC- SP female, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 22 GHz	
03 K 110- S01 S3	straight	RPC- 3.50 female - RPC- SP male	≥ 23 dB @ DC to 22 GHz	
03 K 110- S21 S3	straight	RPC- 3.50 female - RPC- SP male, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 22 GHz	
03 K 110- K01 S3	straight	RPC- 3.50 female - RPC- SP female	≥ 23 dB @ DC to 22 GHz	
03 K 110- K21 S3	straight	RPC- 3.50 female - RPC- SP female, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 22 GHz	
07 P 110- S20 S3	straight	RPC- 7 - RPC- SP male, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	
07 P 110- K20 S3	straight	RPC- 7 - RPC- SP female, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	

Test Devices

Testzubehör

Open - Short - Load

Open - Short - Load

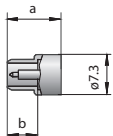
Ordering Number	Remarks	Return Loss	Power Handling	
10 S 12L- 000 S3	RPC- SP open circuit, male a = 34.4	≤ 0.15 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 GHz to 22 GHz		
10 S 12S- 000 S3	RPS- SP short circuit, male a = 33.6	≤ 0.10 dB @ DC to 4 GHz ≤ 0.15 dB @ 4 GHz to 22 GHz		
10 S 150- C10 S3	RPC- SP broadband load, male a = 31.4	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz ≥ 23 dB @ 18 GHz to 22 GHz	0.5 W	
10 K 12L- 000 S3	RPC- SP open circuit, female a = 38.8	≤ 0.15 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 GHz to 22 GHz		
10 K 12S- 000 S3	RPS- SP short circuit, female a = 40.2	≤ 0.10 dB @ DC to 4 GHz ≤ 0.15 dB @ 4 GHz to 22 GHz		
10 K 150- C10 S3	RPC- SP broadband load, female a = 34.4	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz ≥ 23 dB @ 18 GHz to 22 GHz	0.5 W	

complete calibration kits also available

auch komplette Kalibrierkits erhältlich

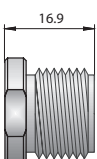
Airlines

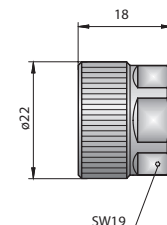
Luftleitungen

Ordering Number	Remarks	Return Loss	Frequency	
10 S 101- K005	50 Ω , a = 10.2 mm, b = 5.6 mm	≥ 36 dB @ 0.2 GHz to 4 GHz ≥ 32 dB @ 4 GHz to 22 GHz	0.2 GHz to 22 GHz	
10 S 101- K027	50 Ω ; a = 33 mm, b = 27.7 mm	≥ 36 dB @ 0.2 GHz to 4 GHz ≥ 32 dB @ 4 GHz to 22 GHz	0.2 GHz to 22 GHz	

Coupling Nut

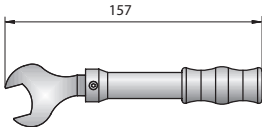
Überwurfmutter

Ordering Number	Remarks	
10 Z 001- S00 S	male, stainless steel	
10 Z 001- K00 S	female, stainless steel	



ToolsWerkzeuge

Torque Wrench Drehmomentschlüssel	
Ordering Number	Remarks
07 W021- 000	flat 19 mm - 136 Nm torque for RPC 7, RPC- SP



SERIES

Series
RPC-3.50



RPC- 3.50

Rosenberger RPC- 3.50 are 50 Ω precision connectors in microwave measurement quality with an outer diameter of 3.50 mm and air dielectric. They have been designed with excellent data over the full frequency range up to 26.5 GHz.

Rosenberger RPC- 3.50 connectors conform to the specification:

- Radio- frequency connectors, specified in IEC 169- 23

Rosenberger RPC- 3.50 connectors are mechanically compatible with APC- 3.5, GPC- 3.5, SMA, K and RPC- 2.92 connectors. RPC- 3.50 connectors meet the highest levels of reliability and repeatability performance.

RPC- 3.50 connectors have been designed for semi- rigid cables, high- performance flexible microwave cable assemblies and microwave components. Also available are adaptors to RPC- 3.5 male and/or female and to other relevant coaxial connector series, as well as accessories for precision microwave measurement devices, e.g. components for calibration kits and bead- less precision air- lines.

RPC- 3.50

Rosenberger Steckverbinder vom Typ RPC- 3.50 sind 50- Ω Präzisionsausführungen in Messtechnik- Qualität mit 3.50- mm- Außenleiter und Luft- Dielektrikum und dadurch hervorragenden Eigenschaften über den Frequenzbereich bis 26.5 GHz.

Rosenberger RPC- 3.50- Steckverbinder erfüllen die Normen für

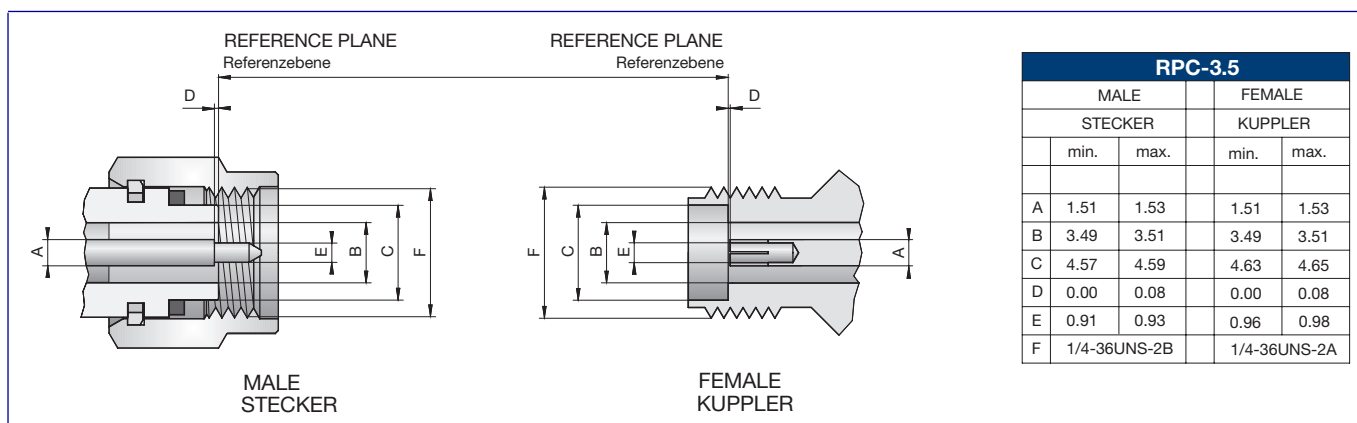
- HF- Steckverbinder, nach IEC 169- 23*

Rosenberger RPC- 3.50- Steckverbinder können mit allen entsprechenden typgleichen Ausführungen gekoppelt werden und sind mechanisch kompatibel zu APC- 3.5, GPC- 3.5, SMA, K- und RPC- 2.92- Steckverbindern. RPC- 3.50- Steckverbinder zeichnen sich aus durch höchste Zuverlässigkeit und sehr gute Reproduzierbarkeit.

RPC- 3.50- Steckverbinder wurden für halbstarre oder hochwertige flexible Mikrowellenkabel sowie für Mikrowellen- Gehäuseanwendungen entwickelt. Es existieren Zwischen- Steckverbindungen für die Serie RPC- 3.5 und Adapter auf andere Präzisions- Steckverbinderserien mit einem Wellenwiderstand von 50 Ω sowie Messzubehör für präzise Messungen im Mikrowellenbereich (z.B. Kalkit- Elemente) und stützenfreie Präzisions- Luftleitungen.

Interface Dimensions

Anschlussmaße



Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Interface according to	IEC 60169- 23	Interface gemäß
Mechanically compatible with	RPC- 2.92 and SMA	Mechanisch kompatibel mit

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 26.5 GHz	Frequenzbereich
Return loss (connector head)	≥ 30 dB, DC to 26.5 GHz	Rückflußdämpfung (Steckerkopf)
Insertion loss (connector head)	≤ 0.03 dB $\times \sqrt{f}$ [GHz]	Dämpfung (Steckerkopf)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 3.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 2.0 m Ω	Übergangswiderstand Außenleiter
Test voltage	1000 V rms	Prüfspannung
Working voltage	335 V rms	Betriebsspannung
RF- leakage	≥ 100 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 500	Steckzyklen
Center contact captivation	≥ 27 N	Innenleiter Haltekraft
Coupling torque recommended	0.80 Nm to 1.10 Nm	Anzugsdrehmoment empfohlen
Coupling test torque	1.70 Nm	Prüfdrehmoment

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	MIL- STD 202, Method 107, Condition B	Temperaturzyklen
Corrosion resistance	MIL- STD 202, Method 101, Condition B	Korrosionsbeständigkeit
Vibration	MIL- STD 202, Method 204, Condition D	Vibration
Shock	MIL- STD 202, Method 213, Condition I	Schock
Moisture resistance	MIL- STD 202, Method 106	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, passivated	Außenleiter
Dielectric	PS	Dielektrikum
Gasket	Silicone	Dichtung

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

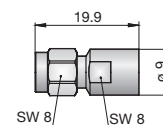
Connector Heads

Steckverbinderköpfe

Straight Plug

Stecker gerade

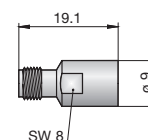
Ordering Number	Remarks	Return Loss
03 S 121- 000 S3	with bead	≥ 30 dB @ DC to 26.5 GHz



Straight Jack

Kuppler gerade

Ordering Number	Remarks	Return Loss
03 K 121- 000 S3	with bead	≥ 30 dB @ DC to 26.5 GHz



Cable Connectors Semi- Rigid Cable

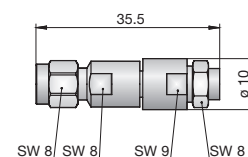
Straight Plug, solder

Kabel- Steckverbinder, Semi- Rigid- Kabel

Stecker gerade, löt

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction
03 S 121- 271 S3	≥ 25 dB @ DC to 26.5 GHz	71	02 A3
03 S 121- 272 S3	≥ 25 dB @ DC to 26.5 GHz	72	03 A

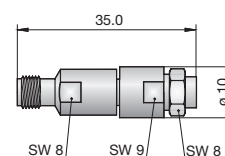


Straight Jack, solder

Kuppler gerade, löt

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction
03 K 121- 271 S3	≥ 25 dB @ DC to 26.5 GHz	71	02 A3
03 K 121- 272 S3	≥ 25 dB @ DC to 26.5 GHz	72	03 A

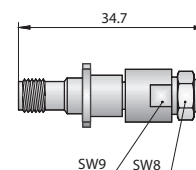


Panel Jack, 4- hole flange

Gehäusekuppler löt, 4- Loch- Flansch

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout
03 K 421- 271 S3	≥ 25 dB @ DC to 26.5 GHz	71	02 A3	B 55



Panel Connectors Stripline

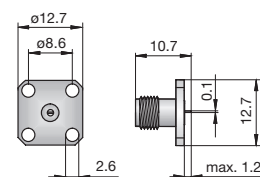
Gehäuse- Steckverbinder Stripline

Panel Jack, 4- hole flange

Gehäusekuppler, 4- Loch- Flansch

Stripline

Ordering Number	Remarks	Return Loss	Panel Piercing / PCB Layout
03 K 421- 600 S3	stripline	≥ 23 dB @ DC to 26.5 GHz	B 55d

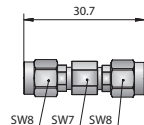
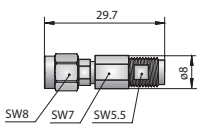
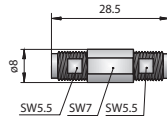
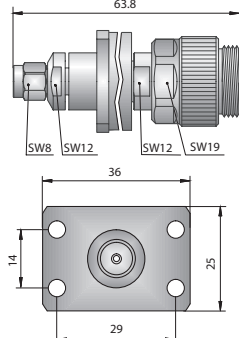
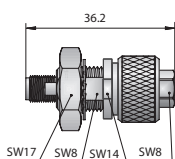
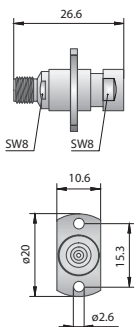
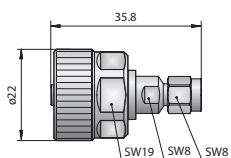
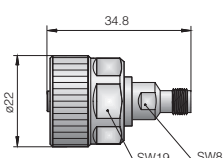


Adaptors

Adapter

Adaptor (In Series)

Adapter (In- Serie)

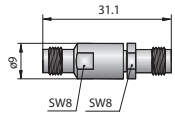
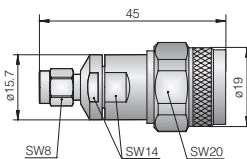
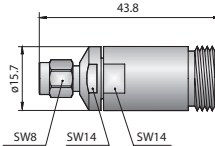
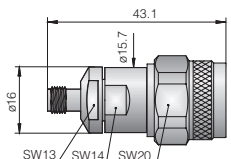
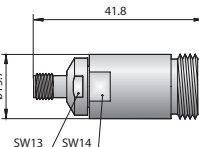
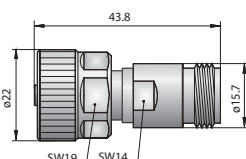
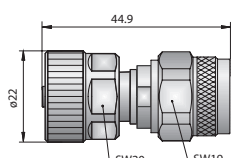
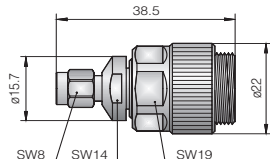
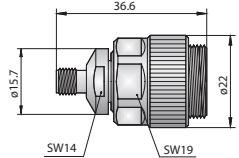
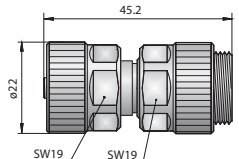
Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
03 S 121- S00 S3	straight	RPC- 3,50 male - male	≥ 26 dB @ DC to 26.5 GHz		
03 S 121- S20 S3	straight	RPC- 3,50 male - male, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 28 dB @ 4 GHz to 26.5 GHz		
03 S 121- K00 S3	straight	RPC- 3,50 male - female	≥ 26 dB @ DC to 26.5 GHz		
03 S 121- K20 S3	straight	RPC- 3,50 male - female, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 28 dB @ 4 GHz to 26.5 GHz		
03 K 121- K00 S3	straight	RPC- 3,50 female - female	≥ 26 dB @ DC to 26.5 GHz		
03 K 121- K20 S3	straight	RPC- 3,50 female - female, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 28 dB @ 4 GHz to 26.5 GHz		
03 S 422- S00 S3	straight	RPC- 3.50 male-male ruggedized, 4- hole flange	≥ 20 dB @ DC to 26.5 GHz		
03 K 521- S00 S3	straight	RPC- 3.50 female - male, round flange	≥ 26 dB @ DC to 26.5 GHz	B 107	
03 K 721- S23 S3	straight	RPC- 3,50 female - male, 2- hole flange, floating test adaptor	≥ 26 dB @ DC to 18 GHz ≥ 23 dB @ 18 GHz to 26.5 GHz		
03 KR 121- S00 S3	straight	RPC- 3.50 female ruggedized - male	≥ 26 dB @ DC to 26.5 GHz		
03 KR 121- K00 S3	straight	RPC- 3.50 female ruggedized - female	≥ 26 dB @ DC to 26.5 GHz		

Adapter (serienübergreifend)

Ordering Number	Version	Remarks	Return Loss	
03 S 159- S20 S3	straight	RPC- 3.50 male - FAKRA male, calibration adaptor	≥ 38 dB @ DC to 1 GHz ≥ 26 dB @ 1 to 3 GHz ≥ 21 dB @ 3 to 6 GHz	
03 S 159- K20 S3	straight	RPC- 3.50 male - FAKRA female, calibration adaptor	≥ 38 dB @ DC to 1 GHz ≥ 26 dB @ 1 to 3 GHz ≥ 21 dB @ 3 to 6 GHz	
03 K 159- S20 S3	straight	RPC- 3.50 female - FAKRA male, calibration adaptor	≥ 38 dB @ DC to 1 GHz ≥ 26 dB @ 1 to 3 GHz ≥ 21 dB @ 3 to 6 GHz	
03 K 159- K20 S3	straight	RPC- 3.50 female - FAKRA female, calibration adaptor	≥ 38 dB @ DC to 1 GHz ≥ 26 dB @ 1 to 3 GHz ≥ 21 dB @ 3 to 6 GHz	
03 S 128- S20 N3	straight	RPC- 3.50 male - QMA male, calibration adaptor	≥ 32 dB @ DC to 4 GHz ≥ 24 dB @ 4 GHz to 18 GHz	
03 S 128- K20 N3	straight	RPC- 3.50 male - QMA female, calibration adaptor	≥ 32 dB @ DC to 4 GHz ≥ 24 dB @ 4 GHz to 18 GHz	
03 K 128- S20 N3	straight	RPC- 3.50 female - QMA male, calibration adaptor	≥ 32 dB @ DC to 4 GHz ≥ 24 dB @ 4 GHz to 18 GHz	
03 K 128- K20 N3	straight	RPC- 3.50 female - QMA female, calibration adaptor	≥ 32 dB @ DC to 4 GHz ≥ 24 dB @ 4 GHz to 18 GHz	
03 K 728- S22 S3	straight	RPC- 3,50 female - QMA male, 2- hole flange, floating test adaptor	≥ 40 dB @ DC to 2.5 GHz ≥ 28 dB @ 2.5 GHz to 6 GHz ≥ 24 dB @ 6 GHz to 18 GHz	
03 S 109- S00 S3	straight	RPC- 3.50 male - RPC 2.40 male	≥ 23 dB @ DC to 26.5 GHz	
03 S 109- K00 S3	straight	RPC- 3.50 male - RPC 2.40 female	≥ 23 dB @ DC to 26.5 GHz	
03 K 109- S00 S3	straight	RPC- 3.50 female - RPC 2.40 male	≥ 23 dB @ DC to 26.5 GHz	

Adaptors

Series RPC- 3.50

Ordering Number	Version	Remarks	Return Loss	
03 K 109- K00 S3	straight	RPC- 3.50 female - RPC 2.40 female	≥ 23 dB @ DC to 26.5 GHz	
03 S 105- S00 S3	straight	RPC- 3.50 male - RPC- N 50 Ω male	≥ 26 dB @ DC to 18 GHz	
03 S 105- K00 S3	straight	RPC- 3.50 male - RPC- N 50 Ω female	≥ 26 dB @ DC to 18 GHz	
03 K 105- S00 S3	straight	RPC- 3.50 female - RPC- N 50 Ω male	≥ 26 dB @ DC to 18 GHz	
03 K 105- K00 S3	straight	RPC- 3.50 female - RPC- N 50 Ω female	≥ 26 dB @ DC to 18 GHz	
03 KR 105- K00 S3	straight	RPC- 3.50 female, ruggedized - RPC- N 50 Ω female	≥ 26 dB @ DC to 18 GHz	
03 KR 105- S00 S3	straight	RPC- 3.50 female, ruggedized - RPC- N 50 Ω male	≥ 26 dB @ DC to 18 GHz	
03 S 107- P00 S3	straight	RPC- 3.50 male - RPC- 7	≥ 28 dB @ DC to 18 GHz	
03 S 107- P20 S3	straight	RPC- 3.50 male - RPC- 7, calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 28 dB @ 4 GHz to 18 GHz	
03 K 107- P00 S3	straight	RPC- 3.50 female - RPC- 7	≥ 28 dB @ DC to 18 GHz	
03 K 107- P20 S3	straight	RPC- 3.50 female - RPC- 7, calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 28 dB @ 4 GHz to 18 GHz	
03 KR 107- P00 S3	straight	RPC- 3.50 female, ruggedized - RPC- 7	≥ 28 dB @ DC to 18 GHz	

Adaptors

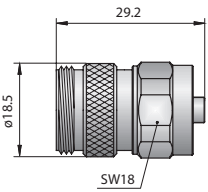
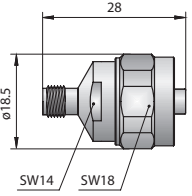
Ordering Number	Version	Remarks	Return Loss	
03 S 110- S01 S3	straight	RPC- 3.50 male - RPC- SP male	≥ 23 dB @ DC to 22 GHz	
03 S 110- S21 S3	straight	RPC- 3.50 male - RPC- SP male, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 22 GHz	
03 S 110- K01 S3	straight	RPC- 3.50 male - RPC- SP female	≥ 23 dB @ DC to 22 GHz	
03 S 110- K21 S3	straight	RPC- 3.50 male - RPC- SP female, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 22 GHz	
03 K 110- S01 S3	straight	RPC- 3.50 female - RPC- SP male	≥ 23 dB @ DC to 22 GHz	
03 K 110- S21 S3	straight	RPC- 3.50 female - RPC- SP male, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 22 GHz	
03 K 110- K01 S3	straight	RPC- 3.50 female - RPC- SP female	≥ 23 dB @ DC to 22 GHz	
03 K 110- K21 S3	straight	RPC- 3.50 female - RPC- SP female, calibration adaptor	≥ 34 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 22 GHz	
03 K 706- S23 S3	straight	RPC- 3.50 female - RPC-TNC male, 2- hole flange, floating test adaptor	≥ 35 dB @ DC to 2.5 GHz ≥ 25 dB @ 2.5 GHz to 6 GHz ≥ 20 dB @ 6 GHz to 16 GHz ≥ 17 dB @ 16 GHz to 18 GHz	
03 K 719- S22 S3	straight	RPC- 3.50 female - SMP male, full detent, 2- hole flange, floating test adaptor	≥ 30 dB @ DC to 12 GHz ≥ 20 dB @ 12 to 26.5 GHz	

Interchangeable Port Connector System

Wechselport Steckersystem

RPC- 3.50 - RPC- SL 26.5 GHz

RPC- 3.50 - RPC- SL 26.5 GHz

Ordering Number	Version	Remarks	Return Loss	
03 S 104- S00 S3	straight	RPC- 3.50 male - RPC- SL 26.5 GHz male	≥ 21 dB @ DC to 26.5 GHz	
03 K 104- S00 S3	straight	RPC- 3.50 female - RPC- SL 26.5 GHz male	≥ 21 dB @ DC to 26.5 GHz	

see also chapter interchangeable port connector system

siehe auch Kapitel Wechselport Steckersystem

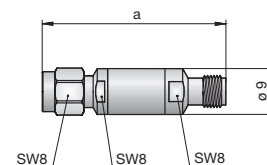
Attenuators

Dämpfungsglieder

RPC- 3.50, male - female

RPC- 3.50, Stecker - Kuppler

Ordering Number	Remarks	Return Loss	Attenuation	Tolerance	Power Handling
03 AS 102- K03 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	3 dB	±0.5 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K06 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	6 dB	±0.5 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K10 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	10 dB	±0.5 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K20 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	20 dB	±0.5 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K30 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	30 dB	±0.7 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K40 S3	a = 34.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	40 dB	±1.0 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 122- K20 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 20.1 dB @ 4 GHz to 26.5 GHz	20 dB	±0.3 dB @ 4 GHz ±0.5 dB @ 26.5 GHz	0.5 W
03 AS 122- K40 S3	a = 34.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 20.1 dB @ 4 GHz to 26.5 GHz	40 dB	±0.4 dB @ 4 GHz ±1.0 dB @ 26.5 GHz	0.5 W

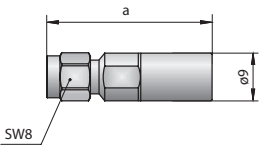
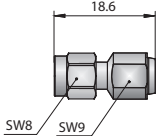
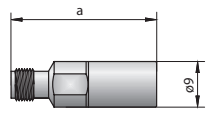
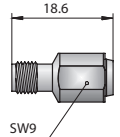


Test Devices

Testzubehör

Open - Short - Load

Open - Short - Load

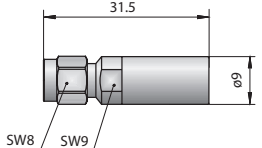
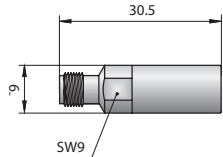
Ordering Number	Remarks	Return Loss	Power Handling	
03 S 12L- 000 S3	RPC- 3.50 open circuit, male, a = 30.9 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 GHz to 26.5 GHz		
03 S 12S- 000 S3	RPC- 3.50 short circuit, male, a = 35.3 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.15 dB @ 4 GHz to 26.5 GHz		
03 S 150- C10 S3	RPC- 3.50 broadband load, calibration kit, male, a = 31.5 mm	≥ 40 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 26.5 GHz	0.5 W	
03 S 150- 010 S3	RPC- 3.50 broadband load standard, male, a = 34 mm	≥ 28 dB @ DC to 26.5 GHz	0.5 W	
03 S 17R- 001 D3	RPC- 3.50 broadband load standard, male	≥ 36 dB @ DC to 4 GHz, ≥ 23 dB @ 4 GHz to 26.5 GHz	0.5 W	
03 K 12L- 000 S3	RPC- 3.50 open circuit, female, a = 28.7 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 GHz to 26.5 GHz		
03 K 12S- 000 S3	RPC- 3.50 short circuit, female, a = 34.3 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.15 dB @ 4 GHz to 26.5 GHz		
03 K 150- C10 S3	RPC- 3.50 broadband load, calibration kit, female, a = 30.5 mm	≥ 40 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 26.5 GHz	0.5 W	
03 K 150- 010 S3	RPC- 3.50 broadband load standard, female, a = 33.1 mm	≥ 28 dB @ DC to 26.5 GHz	0.5 W	
03 K 17R- 001 D3	RPC- 3.50 broadband load standard, female	≥ 36 dB @ DC to 4 GHz, ≥ 23 dB @ 4 GHz to 26.5 GHz	0.5 W	

complete calibration kits also available

auch komplette Kalibrierkits erhältlich

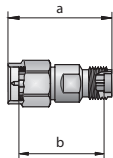
Mismatches

Fehlanschlüsse

Ordering Number	Remarks	VSWR	Power Handling	
03 S 150- 055 S3	RPC- 3.50 male, Impedance 55 Ω	1.1 ± 0.03 @ DC to 12 GHz 1.1 ± 0.05 @ 12 GHz to 26.5 GHz	0.5 W	
03 S 150- 060 S3	RPC- 3.50 male, Impedance 60 Ω	1.2 ± 0.03 @ DC to 12 GHz 1.2 ± 0.05 @ 12 GHz to 26.5 GHz	0.5 W	
03 S 150- 075 S3	RPC- 3.50 male, Impedance 75 Ω	1.5 ± 0.06 @ DC to 12 GHz 1.5 ± 0.10 @ 12 GHz to 26.5 GHz	0.5 W	
03 K 150- 055 S3	RPC- 3.50 female, Impedance 55 Ω	1.1 ± 0.03 @ DC to 12 GHz 1.1 ± 0.05 @ 12 GHz to 26.5 GHz	0.5 W	
03 K 150- 060 S3	RPC- 3.50 female, Impedance 60 Ω	1.2 ± 0.03 @ DC to 12 GHz 1.2 ± 0.05 @ 12 GHz to 26.5 GHz	0.5 W	
03 K 150- 075 S3	RPC- 3.50 female, Impedance 75 Ω	1.5 ± 0.06 @ DC to 12 GHz 1.5 ± 0.10 @ 12 GHz to 26.5 GHz	0.5 W	

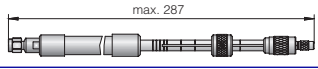
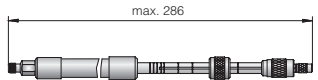
Airlines

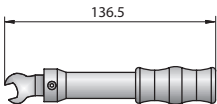
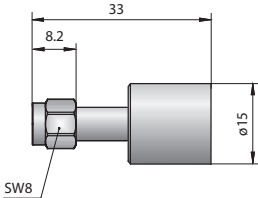
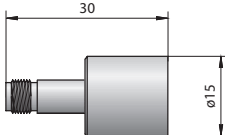
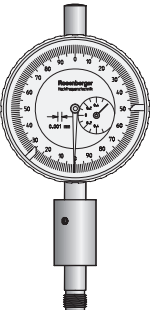
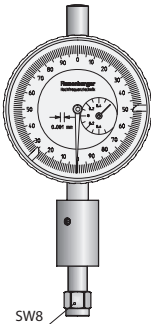
Luftleitungen

Ordering Number	Remarks	Return Loss	Frequency	
03 S 101- K015	50 Ω ; a = 19.9 mm, b = 15 mm	≥ 40 dB @ 0.3 GHz to 4 GHz ≥ 35 dB @ 4 GHz to 26.5 GHz	0.3 GHz to 26.5 GHz	
03 S 101- K020	50 Ω ; a = 24.9 mm, b = 20 mm	≥ 40 dB @ 0.3 GHz to 4 GHz ≥ 35 dB @ 4 GHz to 26.5 GHz	0.3 GHz to 26.5 GHz	
03 S 101- K038	50 Ω ; a = 43.6 mm, b = 38.5 mm	≥ 40 dB @ 0.3 GHz to 4 GHz ≥ 35 dB @ 4 GHz to 26.5 GHz	0.3 GHz to 26.5 GHz	
03 S 101- K100	50 Ω ; a = 105.1 mm, b = 100 mm	≥ 40 dB @ 0.3 GHz to 4 GHz ≥ 35 dB @ 4 GHz to 26.5 GHz	0.3 GHz to 26.5 GHz	
03 S 102- K100	50 Ω with 25 Ω section; a = 105.1 mm, b = 100 mm		0.3 GHz to 26.5 GHz	

Sliding Load

Gleitlast

Ordering Number	Remarks	Return Loss	
03 S 150- G300	RPC- 3.50 male	≥ 30 dB @ 2 to 26.5 GHz	
03 K 150- G300	RPC- 3.50 female	≥ 30 dB @ 2 GHz to 26.5 GHz	

Tools		Werkzeuge
Torque Wrench		Drehmomentschlüssel
Ordering Number	Remarks	
03 W021- 000	flat 8 mm - 0.9 Nm torque for RPC- 3.50 , RPC- 2.92, RPC- 2.40, RPC- 1.85	
Gauge Block male		Kalibrierblock - Stecker
Ordering Number	Remarks	
03 W00Z- 002	for RPC- 3.50, RPC- 2.92, useable only with gauge 03 W 00S- 000	
Gauge Block female		Kalibrierblock - Kuppler
Ordering Number	Remarks	
03 W00Z- 001	for RPC- 3.50, RPC- 2.92, useable only with gauge 03 W 00K- 000	
Gauge		Messuhr
Ordering Number	Remarks	 
03 W00S- 000	compatible to male connectors for RPC- 3.50, RPC- 2.92, useable only with gauge block 03 W00Z- 002	
03 W00K- 000	compatible to female connectors for RPC- 3.50, RPC- 2.92, useable only with gauge block 03 W00Z- 001	

SERIES
Series
RPC-2.92

Series
RPC-2.92



RPC- 2.92

Rosenberger RPC- 2.92 are 50 Ω precision connectors with an outer diameter of 2.92 mm. They have been designed with excellent data over the full frequency range up to 40 GHz, and they are useable up to 18 GHz without any matching being required.

Rosenberger RPC- 2.92 connectors are mechanically compatible (mateable) with K, APC- 3.5, GPC- 3.5, SMA and RPC- 3.50. Due to the shortened male pin and the fourfold slotted female center contact, RPC- 2.92 connectors meet highest levels of reliability and repeatability of performance.

Connectors with PEEK dielectricum are specifically suitable for high-temperature applications. Further information on request.

RPC- 2.92 connectors have been designed for semi-rigid cables, high performance flexible microwave cable assemblies and microwave components. Also available are adaptors to RPC- N male and/or female and to other relevant coaxial connector series, as well as accessories for precision microwave measurement devices, e.g. components for calibration kits and beadless precision air-lines.

RPC- 2.92

Rosenberger Steckverbinder vom Typ RPC- 2.92 sind 50- Ω Präzisionsausführungen mit 2,92-mm- Außenleiter und hervorragenden Eigenschaften über den Frequenzbereich bis 40 GHz, wobei sie besonders auch für Anwendungen mit höheren Anforderungen im Teilbereich bis 18 GHz eingesetzt werden können.

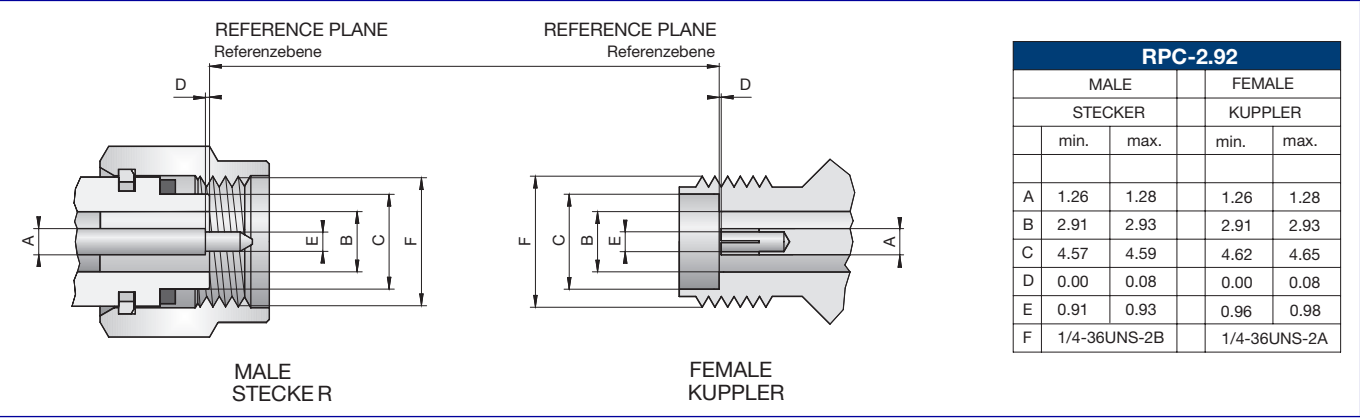
Rosenberger RPC- 2.92- Steckverbinder können mit allen entsprechenden Ausführungen des Typs K gekoppelt werden und sind darüber hinaus elektrisch und mechanisch kompatibel zu APC- 3.5, GPC- 3.5, SMA und RPC- 3.50. RPC- 2.92- Steckverbinder zeichnen sich bei guter mechanischer Stabilität aus durch höchste Zuverlässigkeit und sehr gute Reproduzierbarkeit auf Grund ihres verkürzten Steckerstiftes und der vierfach geschlitzten Innenleiterbuchse.

Steckverbinder mit PEEK- Dielektrikum sind für höhere Temperaturen geeignet. Nähere Informationen erhalten Sie auf Anfrage.

RPC- 2.92- Steckverbinder wurden für halbstarre oder hochwertige flexible Mikrowellenkabel sowie für Mikrowellen- Gehäuseanwendungen entwickelt. Es existieren Zwischen- Steckverbindungen für die Serie RPC- 2.92 und Adapter auf andere Präzisions- Steckverbinderreihen mit einem Wellenwiderstand 50 Ω sowie Messzubehör für präzise Messungen im Mikrowellenbereich (z.B. Kalibrier- Kit- Elemente) und stützenfreie Präzisionsluftleitungen.

Interface Dimensions

Anschlussmaße



Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Mechanically compatible with	RPC- 3.50 and SMA	Mechanisch kompatibel mit

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 40 GHz	Frequenzbereich
Return loss (connector head)	≥ 23 dB, DC to 40 GHz	Rückflußdämpfung (Steckerkopf)
Insertion loss (connector head)	≤ 0.04 dB $\times \sqrt{f}$ [GHz]	Dämpfung (Steckerkopf)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 3.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 2.0 m Ω	Übergangswiderstand Außenleiter
Test voltage	750 V rms	Prüfspannung
Working voltage	250 V rms	Betriebsspannung
RF- leakage	≥ 100 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 500	Steckzyklen
Center contact captivation	≥ 22 N	Innenleiter Haltekraft
Coupling torque recommended	0.80 Nm to 1.10 Nm	Anzugsdrehmoment empfohlen
Coupling test torque	1.70 Nm	Prüfdrehmoment

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	MIL- STD 202, Method 107, Condition B	Temperaturzyklen
Corrosion resistance	MIL- STD 202, Method 101, Condition B	Korrosionsbeständigkeit
Vibration	MIL- STD 202, Method 204, Condition D	Vibration
Shock	MIL- STD 202, Method 213, Condition I	Schock
Moisture resistance	MIL- STD 202, Method 106	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, passivated plating	Außenleiter
Dielectric	PS, PEEK	Dielektrikum
Gasket	Silicone	Dichtung

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

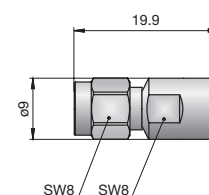
Connector Heads

Steckverbinderköpfe

Straight Plug

Stecker gerade

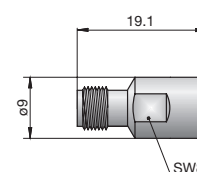
Ordering Number	Remarks	Return Loss
02 S 121- 000 S3	with bead	≥ 23 dB @ DC to 40 GHz



Straight Jack

Kuppler gerade

Ordering Number	Remarks	Return Loss
02 K 121- 000 S3	with bead	≥ 23 dB @ DC to 40 GHz



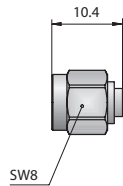
Cable Connectors Semi- Rigid Cable

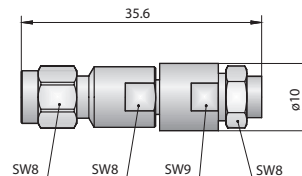
Straight Plug, solder

Kabel- Steckverbinder, Semi- Rigid- Kabel

Stecker gerade, löt

Semi- Rigid

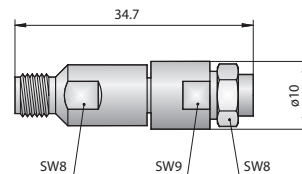
Ordering Number	Return Loss	Cable Group	Assembly Instruction	
02 S 141- 271 E4	≥ 30 dB @ DC to 4 GHz ≥ 22 dB @ 4 GHz to 32 GHz ≥ 20 dB @ 32 GHz to 40 GHz	71	02 A5	
02 S 141- 2W9 E4	≥ 30 dB @ DC to 4 GHz ≥ 22 dB @ 4 GHz to 32 GHz ≥ 20 dB @ 32 GHz to 40 GHz	W9	02 A8	
02 S 121- 271 S3	≥ 23 dB @ DC to 40 GHz	71	02 A3	

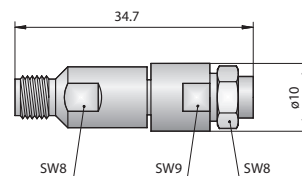


Straight Jack, solder

Kuppler gerade, löt

Semi- Rigid

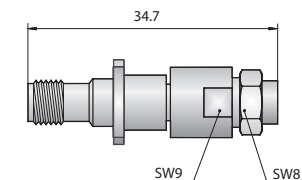
Ordering Number	Return Loss	Cable Group	Assembly Instruction	
02 K 121- 271 S3	≥ 23 dB @ DC to 40 GHz	71	02 A3	

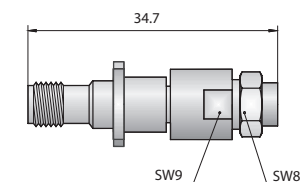


Panel Jack, 4- hole flange

Gehäusekuppler löt, 4- Loch- Flansch

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	
02 K 421- 271 S3	≥ 23 dB @ DC to 40 GHz	71	02 A3	B 55	

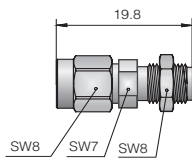


Panel Connectors

Gehäuse- Steckverbinder

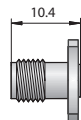
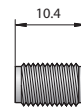
Panel Plug

Gehäusestecker

Ordering Number	Remarks	Return Loss	
02 S 521- 800 S3	without glass bead, for hermetic sealed glass bead pin 0,3 mm 02 Z 101- 000	≥ 19 dB @ DC to 40 GHz	

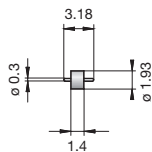
Panel Jack

Gehäusekuppler

Ordering Number	Remarks	Return Loss	Panel Piercing / PCB Layout	Packing Unit	
02 K 421- 800 S3	without glass bead, for hermetic sealed glass bead pin 0,3 mm 02 Z 101- 000	≥ 19 dB @ DC to 40 GHz	B 55	100	
02 K 521- 800 S3	without glass bead, for hermetic sealed glass bead pin 0,3 mm 02 Z 101- 000	≥ 19 dB @ DC to 40 GHz		100	

Glass Bead

Glasstütze

Ordering Number	Remarks	Return Loss	
02 Z 101- 000	hermetic sealed	≥ 19 dB @ DC to 40 GHz	

PCB Connectors SMD

Right Angle Panel Jack, edge mount

Gehäusewinkelkuppler, edge mount

Leiterplatten- Steckverbinder SMD

SMD

Ordering Number	Remarks	Return Loss	Panel Piercing / PCB Layout	
02 K 243- 40ME3	for various PCB's 0- 3 mm	≥ 14 dB @ DC to 40 GHz	B 208	

Adaptors

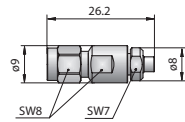
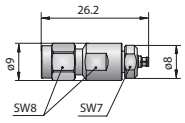
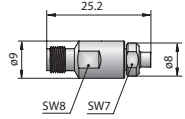
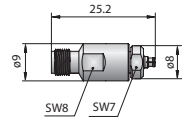
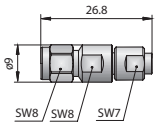
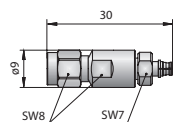
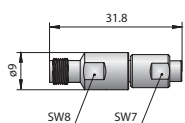
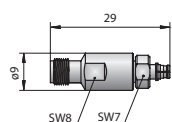
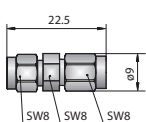
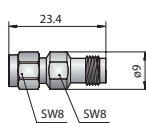
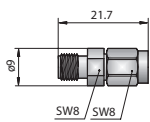
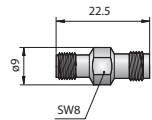
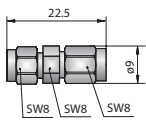
Adapter

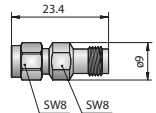
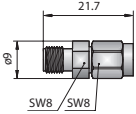
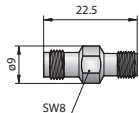
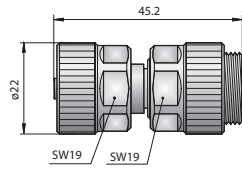
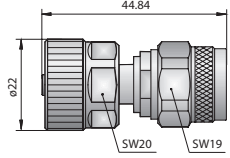
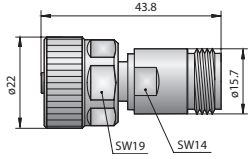
Adaptor (In Series)

Adapter (In- Serie)

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
02 S 121- S00 S3	straight	RPC- 2,92 male - male	≥ 21 dB @ DC to 40 GHz		
02 S 121- S20 S3	straight	RPC- 2,92 male - male, calibration adaptor	≥ 32 dB @ DC to 4 GHz ≥ 23 dB @ 4 GHz to 40 GHz		
02 S 121- K00 S3	straight	RPC- 2,92 male - female	≥ 21 dB @ DC to 40 GHz		
02 S 121- K20 S3	straight	RPC- 2.92 male - female, calibration adaptor	≥ 32 dB @ DC to 4 GHz ≥ 23 dB @ 4 to 40 GHz		
02 S 422- S00 S3	straight	RPC- 2,92 male-male, ruggedized, 4- hole flange	≥ 23 dB @ DC to 18 GHz ≥ 17 dB @ 18 GHz to 40 GHz		
02 K 121- K00 S3	straight	RPC- 2.92 female - female	≥ 21 dB @ DC to 40 GHz		
02 K 121- K20 S3	straight	RPC- 2.92 female - female, calibration adaptor	≥ 32 dB @ DC to 4 GHz ≥ 23 dB @ 4 GHz to 40 GHz		
02 K 521- S00 S3	straight	RPC- 2.92 female - male, round flange	≥ 19 dB @ DC to 40 GHz	B 107	
02 K 621- K00 S3	straight	RPC- 2.92 female - female, hexagonal flange	≥ 21 dB @ DC to 40 GHz	B 56	
02 K 641- KH0 S3	straight	RPC- 2.92 female - female, round flange, hermetic sealed	≥ 15.5 dB @ DC to 40 GHz	B 58	
02 KR 121- S00 S3	straight	RPC- 2.92 female, ruggedized - male	≥ 21 dB @ DC to 40 GHz		
02 KR 121- K00 S3	straight	RPC- 2.92 female, ruggedized - female	≥ 21 dB @ DC to 40 GHz		

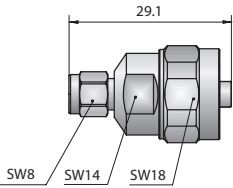
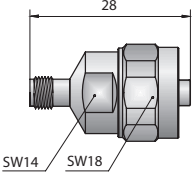
Adapter (serienübergreifend)

Ordering Number	Version	Remarks	Return Loss	
02 S 118- S00 S3	straight	RPC- 2.92 male - Mini- SMP male	≥ 30 dB @ DC to 12 GHz ≥ 26 dB @ 12 to 20 GHz ≥ 18 dB @ 20 to 40 GHz	
02 S 118- K00 S3	straight	RPC- 2.92 male - Mini- SMP female	≥ 30 dB @ DC to 12 GHz ≥ 26 dB @ 12 to 20 GHz ≥ 18 dB @ 20 to 40 GHz	
02 K 118- S00 S3	straight	RPC- 2.92 female - Mini- SMP male	≥ 30 dB @ DC to 12 GHz ≥ 26 dB @ 12 to 20 GHz ≥ 18 dB @ 20 to 40 GHz	
02 K 118- K00 S3	straight	RPC- 2.92 female - Mini- SMP female	≥ 30 dB @ DC to 12 GHz ≥ 26 dB @ 12 to 20 GHz ≥ 18 dB @ 20 to 40 GHz	
02 S 119- S00 E3	straight	RPC- 2.92 male - SMP male	≥ 32 dB @ DC to 12 GHz ≥ 26 dB @ 12 to 26.5 GHz ≥ 21 dB @ 26.5 to 40 GHz	
02 S 119- K00 E3	straight	RPC- 2.92 male - SMP female	≥ 32 dB @ DC to 12 GHz ≥ 26 dB @ 12 to 26.5 GHz ≥ 21 dB @ 26.5 to 40 GHz	
02 K 119- S00 E3	straight	RPC- 2.92 female - SMP male	≥ 32 dB @ DC to 12 GHz ≥ 26 dB @ 12 to 26.5 GHz ≥ 21 dB @ 26.5 to 40 GHz	
02 K 119- K00 E3	straight	RPC- 2.92 female - SMP female	≥ 32 dB @ DC to 12 GHz ≥ 26 dB @ 12 to 26.5 GHz ≥ 21 dB @ 26.5 to 40 GHz	
02 S 108- S00 S3	straight	RPC- 2.92 male - RPC- 1.85 male	≥ 19 dB @ DC to 40 GHz	
02 S 108- K00 S3	straight	RPC- 2.92 male - RPC- 1.85 female	≥ 19 dB @ DC to 40 GHz	
02 K 108- S00 S3	straight	RPC- 2.92 female - RPC- 1.85 male	≥ 19 dB @ DC to 40 GHz	
02 K 108- K00 S3	straight	RPC- 2.92 female - RPC- 1.85 female	≥ 19 dB @ DC to 40 GHz	
02 S 109- S00 S3	straight	RPC- 2.92 male - RPC- 2.40 male	≥ 19 dB @ DC to 40 GHz	

Ordering Number	Version	Remarks	Return Loss	
02 S 109- K00 S3	straight	RPC- 2.92 male - RPC- 2.40 female	≥ 19 dB @ DC to 40 GHz	
02 K 109- S00 S3	straight	RPC- 2.92 female - RPC- 2.40 male	≥ 19 dB @ DC to 40 GHz	
02 K 109- K00 S3	straight	RPC- 2.92 female - RPC- 2.40 female	≥ 19 dB @ DC to 40 GHz	
02 KR 107- P00 S3	straight	RPC- 2.92 female, ruggedized - RPC- 7	≥ 28 dB @ DC to 18 GHz	
02 KR 105- S00 S3	straight	RPC- 2.92 female, ruggedized - RPC- N 50 Ω male	≥ 26 dB @ DC to 18 GHz	
02 KR 105- K00 S3	straight	RPC- 2.92 female, ruggedized - RPC- N 50 Ω female	≥ 26 dB @ DC to 18 GHz	

Interchangeable Port Connector System

Wechselport Steckersystem

RPC 2.92 - RPC- SL 40 GHz				RPC 2.92 - RPC- SL 40 GHz	
Ordering Number	Version	Remarks	Return Loss		
02 S 1P4- S00 S3	straight	RPC- 2.92 male - RPC- SL 40 GHz male	≥ 21 dB @ DC to 26.5 GHz ≥ 19 dB @ 26.5 to 40 GHz		
02 K 1P4- S00 S3	straight	RPC- 2.92 female - RPC- SL 40 GHz male	≥ 21 dB @ DC to 26.5 GHz ≥ 19 dB @ 26.5 to 40 GHz		

see also chapter interchangeable port connector system

siehe auch Kapitel Wechselport Steckersystem

Test Devices

Testzubehör

Open - Short - Load

Open - Short - Load

Ordering Number	Remarks	Return Loss	Power Handling	
02 S 12L- 000 S3	RPC- 2.92 open circuit, male, a = 30.9 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.30 dB @ 4 to 40 GHz		
02 S 12S- 000 S3	RPC- 2.92 short circuit, male, a = 33.5 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 to 40 GHz		
02 S 150- C10 S3	RPC- 2.92 broadband load, male, a = 31 mm	≥ 40 dB @ DC to 4 GHz ≥ 30 dB @ 4 to 40 GHz	0.25 W	
02 S 17R- 001 D3	RPC- 2.92 broadband load standard, male	≥ 36 dB @ DC to 4 GHz, ≥ 21 dB @ 4 GHz to 40 GHz	0.5 W	
02 K 12L- 000 S3	RPC- 2.92 open circuit, female, a = 28.7 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.30 dB @ 4 GHz to 40 GHz		
02 K 12S- 000 S3	RPC- 2.92 short circuit, female, a = 32.5 mm	≤ 0.10 dB @ DC to 4 GHz ≤ 0.20 dB @ 4 GHz to 40 GHz		
02 K 150- C10 S3	RPC- 2.92 broadband load, calibration kit, female, a = 30.0 mm	≥ 40 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 40 GHz	0.25 W	
02 K 17R- 001 D3	RPC- 2.92 broadband load standard, female	≥ 36 dB @ DC to 4 GHz, ≥ 21 dB @ 4 GHz to 40 GHz	0.5 W	

complete calibration kits also available

auch komplette Kalibrierkits erhältlich

Mismatches

Fehlabschlüsse

Ordering Number	Remarks	VSWR	Power Handling	
02 S 150- 055 S3	RPC- 2.92 male, Impedance 55 Ω	1.1 ± 0.05 @ DC to 40 GHz	0.5 W	
02 S 150- 060 S3	RPC- 2.92 male, Impedance 60 Ω	1.2 ± 0.05 @ DC to 40 GHz	0.5 W	
02 S 150- 075 S3	RPC- 2.92 male, Impedance 75 Ω	1.5 ± 0.05 @ DC to 20 GHz 1.5 ± 0.08 @ 20 GHz to 40 GHz	0.5 W	
02 K 150- 055 S3	RPC- 2.92 female, Impedance 55 Ω	1.1 ± 0.05 @ DC to 40 GHz	0.5 W	
02 K 150- 060 S3	RPC- 2.92 female, Impedance 60 Ω	1.2 ± 0.05 @ DC to 40 GHz	0.5 W	
02 K 150- 075 S3	RPC- 2.92 female, Impedance 75 Ω	1.5 ± 0.05 @ DC to 20 GHz 1.5 ± 0.08 @ 20 GHz to 40 GHz	0.5 W	

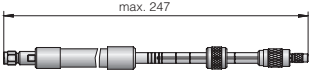
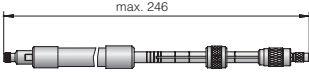
Airlines

Luftleitungen

Ordering Number	Remarks	Return Loss	Frequency	
02 S 101- K015	50 Ω ; a = 19.9 mm, b = 15 mm	≥ 38 dB @ 0.3 GHz to 4 GHz ≥ 30 dB @ 4 GHz to 40 GHz	0.3 GHz to 40 GHz	
02 S 101- K018	50 Ω ; a = 23.2 mm, b = 18.3 mm	≥ 38 dB @ 0.3 GHz to 4 GHz ≥ 30 dB @ 4 GHz to 40 GHz	0.3 GHz to 40 GHz	
02 S 101- K040	50 Ω ; a = 45.1 mm, b = 40 mm	≥ 38 dB @ 0.3 GHz to 4 GHz ≥ 30 dB @ 4 GHz to 40 GHz	0.3 GHz to 40 GHz	

Sliding Load

Gleitlast

Ordering Number	Remarks	Return Loss	
02 S 150- G300	RPC- 2.92 male	$\geq 30 \text{ dB @ 3 GHz to 40 GHz}$	
02 K 150- G300	RPC- 2.92 female	$\geq 30 \text{ dB @ 3 GHz to 40 GHz}$	

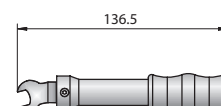
Tools

Werkzeuge

Torque Wrench

Drehmomentschlüssel

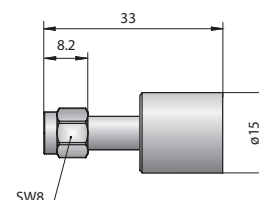
Ordering Number	Remarks
03 W021- 000	flat 8 mm - 0.9 Nm torque for RPC- 3.50 , RPC- 2.92, RPC- 2.40, RPC- 1.85



Gauge Block male

Kalibrierblock - Stecker

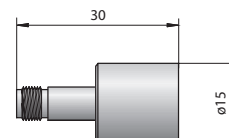
Ordering Number	Remarks
03 W00Z- 002	for RPC- 3.50, RPC- 2.92, useable only with gauge 03 W00S- 000



Gauge Block female

Kalibrierblock - Kuppler

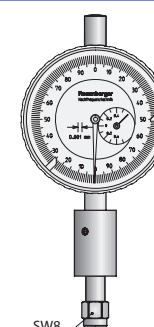
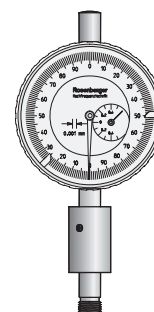
Ordering Number	Remarks
03 W00Z- 001	for RPC- 3.50, RPC- 2.92, useable only with gauge 03 W00K- 000



Gauge

Messuhr

Ordering Number	Remarks
03 W00S- 000	compatible to male connectors for RPC- 3.50, RPC- 2.92, useable only with gauge block 03 W00Z- 002
03 W00K- 000	compatible to female connectors for RPC- 3.50, RPC- 2.92, useable only with gauge block 03 W00Z- 001



SERIES

Series
RPC-2.40



RPC- 2.40

Rosenberger RPC- 2.40 are 50 Ω precision connectors with an outer diameter of 2.4 mm. They have been designed with excellent data over the full frequency range up to 50 GHz. Below 18 GHz electrical parameters of RPC- 2.40 exceed SMA connector specs.

Rosenberger RPC- 2.40 connectors are mechanically compatible (mateable) with APC- 2.4, OS- 50, HP- 2.40 mm, 1.85 mm and V connectors.

The design of the outer shell insures that the outer conductors are coupled before the inner conductors can engage, thus guaranteeing a damage free connection.

RPC- 2.40 connectors meet the highest levels of reliability and repeatability of performance.

Connectors with PEEK dielectricum are specifically suitable for high- temperature applications. Further information on request.

RPC- 2.40 connectors have been designed for semi- rigid cables and microwave components. Also available are adaptors to RPC- 2.40 male and/or female and to precision coaxial connector series RPC- 2.92 and RPC- 3.50 and accessories for precision microwave measurement units, e. g. components for calibration kits and beadless precision air- lines.

RPC- 2.40

Rosenberger Steckverbinder vom Typ RPC- 2.40 sind 50- Ω Präzisionsausführungen mit 2.4- mm- Außenleiter und hervorragenden Eigenschaften über den Frequenzbereich bis 50 GHz. Bis 18 GHz werden die Parameter der SMA- Steckverbindung überboten.

Rosenberger RPC- 2.40- Steckverbinder sind elektrisch und mechanisch kompatibel zu allen entsprechenden 2,4- mm- Steckverbinderserien, z. B. APC- 2.4, OS- 50, HP- 2.40 mm und 1.85 mm, sowie voll kompatibel zum V- Stecker.

Eine beschädigungsfreie Verbindung wird dadurch gewährleistet, dass die Außenleiter der Steckverbinder bei der Kopplung bereits verbunden werden, bevor die Innenleiter kontaktieren können.

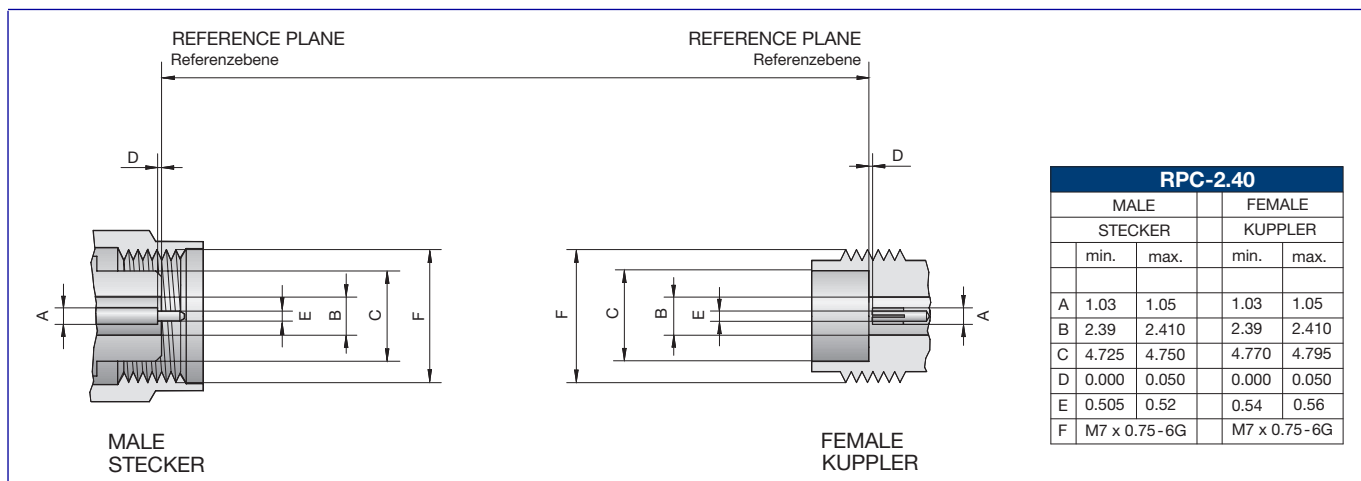
RPC- 2.40- Steckverbinder zeichnen sich durch höchste Zuverlässigkeit und sehr gute Reproduzierbarkeit aus.

Steckverbinder mit PEEK- Dielektrikum sind für höhere Temperaturen geeignet. Nähere Informationen erhalten Sie auf Anfrage.

RPC- 2.40- Steckverbinder wurden für halbstarre Mikrowellenkabel sowie für Mikrowellen- Gehäuseanwendungen entwickelt. Es existieren Zwischen- Steckverbindungen für die Serie RPC- 2.40 und Adapter auf die Präzisions- Steckverbinderserien RPC- 2.92 und RPC- 3.5 sowie Messzubehör für präzise Messungen im Mikrowellenbereich (z. B. Kalibrier- Kit- Elemente) und stützenfreie Präzisions- Luftleitungen.

Interface Dimensions

Anschlussmaße



Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Mechanically compatible with	RPC- 1.85	Mechanisch kompatibel mit

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 50 GHz	Frequenzbereich
Return loss (cable connector straight)	≥ 23 dB, DC to 50 GHz	Rückflußdämpfung (Kabelsteckverbinder, gerade)
Insertion loss (cable connector straight)	≤ 0.05 dB $\times \sqrt{f[\text{GHz}]}$	Dämpfung (Kabelsteckverbinder, gerade)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 4.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 2.5 m Ω	Übergangswiderstand Außenleiter
Test voltage	500 V rms	Prüfspannung
Working voltage	150 V rms	Betriebsspannung
RF- leakage	≥ 100 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 500	Steckzyklen
Center contact captivation	≥ 20 N	Innenleiter Haltekraft
Coupling torque recommended	0.80 Nm to 1.10 Nm	Anzugsdrehmoment empfohlen
Coupling test torque	1.65 Nm	Prüfdrehmoment

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	IEC 61169- 1, Subclause 9.4.4	Temperaturzyklen
Corrosion resistance	IEC 61169- 1, Subclause 9.4.6	Korrosionsbeständigkeit
Vibration	IEC 61169- 1, Subclause 9.3.3	Vibration
Shock	IEC 61169- 1, Subclause 9.3.14	Schock
Moisture resistance	IEC 61169- 1, Subclause 9.4.3	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, passivated	Außenleiter
Dielectric	PEEK	Dielektrikum

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Cable Connectors Semi- Rigid Cable

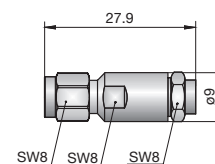
Kabel- Steckverbinder, Semi- Rigid- Kabel

Straight Plug, solder

Stecker gerade, löt

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction
09 S 121- 271 S3	≥ 23 dB @ DC to 50 GHz	71	02 A3

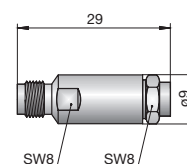


Straight Jack, solder

Kuppler gerade, löt

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction
09 K 121- 271 S3	≥ 23 dB @ DC to 50 GHz	71	02 A3

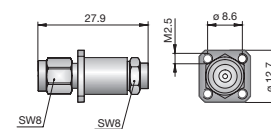


Panel Plug, 4- hole flange

Gehäusestecker löt, 4- Loch- Flansch

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout
09 S 421- 271 S3	≥ 23 dB @ DC to 50 GHz	71	02 A3	B 55

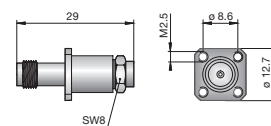


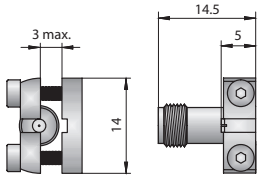
Panel Jack, 4- hole flange

Gehäusekuppler löt, 4- Loch- Flansch

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout
09 K 421- 271 S3	≥ 23 dB @ DC to 50 GHz	71	02 A3	B 55



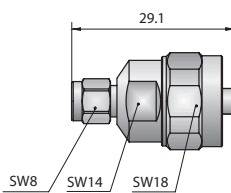
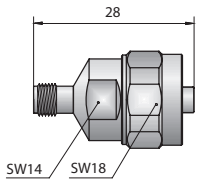
PCB Connectors SMD		Leiterplatten- Steckverbinder SMD	
Right Angle Panel Jack, edge mount		Gehäusewinkelkuppler, edge mount	
		SMD	
Ordering Number	Remarks	Return Loss	Panel Piercing / PCB Layout
09 K 243- 40ME3	for various PCB's 0- 3 mm	≥ 12 dB @ DC to 50 GHz	B 208
			

Interchangeable Port Connector System

Wechselport Steckersystem

RPC 2.40 - RPC- SL 40 GHz

RPC 2.40 - RPC- SL 40 GHz

Ordering Number	Version	Remarks	Return Loss	
09 S 1P4- S00 S3	straight	RPC- 2.40 male - RPC- SL 40 GHz male	≥ 21 dB @ DC to 26.5 GHz ≥ 19 dB @ 26.5 GHz to 40 GHz	
09 K 1P4- S00 S3	straight	RPC- 2.40 female - RPC- SL 40 GHz male	≥ 21 dB @ DC to 26.5 GHz ≥ 19 dB @ 26.5 GHz to 40 GHz	

see also chapter interchangeable port connector system

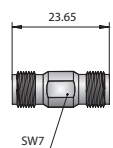
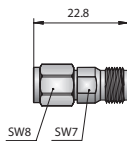
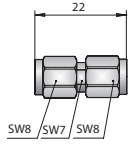
siehe auch Kapitel Wechselport Steckersystem

Adaptors

Adapter

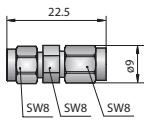
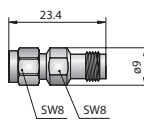
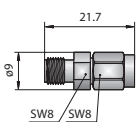
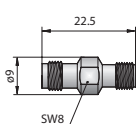
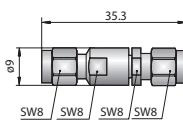
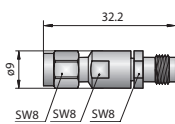
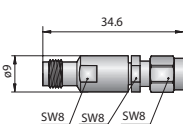
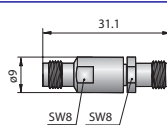
Adaptor (In Series)

Adapter (In- Serie)

Ordering Number	Version	Remarks	Return Loss	
09 K 121- K00 S3	straight	RPC- 2,40 female - female	$\geq 17 \text{ dB @ DC to 50 GHz}$	
09 K 121- K20 S3	straight	RPC- 2,40 female - female, calibration adaptor	$\geq 30 \text{ dB @ DC to 4 GHz}$ $\geq 17 \text{ dB @ 4 GHz to 50 GHz}$	
09 S 121- K00 S3	straight	RPC- 2,40 male - female	$\geq 17 \text{ dB @ DC to 50 GHz}$	
09 S 121- K20 S3	straight	RPC- 2,40 male - female, calibration adaptor	$\geq 30 \text{ dB @ DC to 4 GHz}$ $\geq 17 \text{ dB @ 4 GHz to 50 GHz}$	
09 S 121- S00 S3	straight	RPC- 2,40 male - male	$\geq 17 \text{ dB @ DC to 50 GHz}$	
09 S 121- S20 S3	straight	RPC- 2,40 male - male, calibration adaptor	$\geq 30 \text{ dB @ DC to 4 GHz}$ $\geq 17 \text{ dB @ 4 GHz to 50 GHz}$	

Adaptor (Inter Series)

Adapter (serienübergreifend)

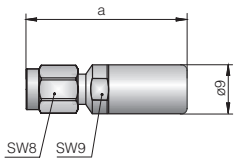
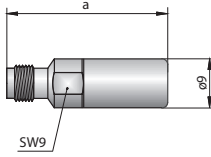
Ordering Number	straight	Remarks	Return Loss	
02 S 109- S00 S3	straight	RPC- 2.92 male - RPC- 2.40 male	$\geq 19 \text{ dB @ DC to 40 GHz}$	
02 S 109- K00 S3	straight	RPC- 2.92 male - RPC- 2.40 female	$\geq 19 \text{ dB @ DC to 40 GHz}$	
02 K 109- S00 S3	straight	RPC- 2.92 female - RPC- 2.40 male	$\geq 19 \text{ dB @ DC to 40 GHz}$	
02 K 109- K00 S3	straight	RPC- 2.92 female - RPC- 2.40 female	$\geq 19 \text{ dB @ DC to 40 GHz}$	
03 S 109- S00 S3	straight	RPC- 3.50 male - RPC 2.40 male	$\geq 23 \text{ dB @ DC to 26.5 GHz}$	
03 S 109- K00 S3	straight	RPC- 3.50 male - RPC 2.40 female	$\geq 23 \text{ dB @ DC to 26.5 GHz}$	
03 K 109- S00 S3	straight	RPC- 3.50 female - RPC 2.40 male	$\geq 23 \text{ dB @ DC to 26.5 GHz}$	
03 K 109- K00 S3	straight	RPC- 3.50 female - RPC 2.40 female	$\geq 23 \text{ dB @ DC to 26.5 GHz}$	

Test Devices

Testzubehör

Open - Short - Load

Open - Short - Load

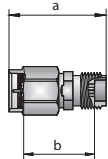
Ordering Number	Remarks	Return Loss	Power Handling	
09 S 12L- 000 S3	RPC- 2.40 open circuit, male, a = 30 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.30 dB @ 4 GHz to 50 GHz		
09 S 12S- 000 S3	RPC- 2.40 short circuit, male, a = 31.4 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.25 dB @ 4 GHz to 50 GHz		
09 S 150- C10 S3	RPC- 2.40 broadband load, calibration kit, male, a = 26.5 mm	≥ 36 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 20 GHz ≥ 26 dB @ 20 GHz to 26.5 GHz ≥ 22 dB @ 26.5 GHz to 50 GHz	0.5 W	
09 K 12L- 000 S3	RPC- 2.40 open circuit, female, a = 30 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.30 dB @ 4 GHz to 50 GHz		
09 K 12S- 000 S3	RPC- 2.40 short circuit, female, a = 32 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.25 dB @ 4 GHz to 50 GHz		
09 K 150- C10 S3	RPC- 2.40 broadband load, calibration kit female, a = 27.3 mm	≥ 36 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 20 GHz ≥ 26 dB @ 20 GHz to 26.5 GHz ≥ 22 dB @ 26.5 GHz to 50 GHz	0.5 W	

complete calibration kits also available

auch komplette Kalibrierkits erhältlich

Airlines

Luftleitungen

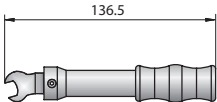
Ordering Number	Remarks	Return Loss	Frequency	
09 S 101- K013	50 Ω ; a = 18.4 mm, b = 13 mm	≥ 36 dB @ 0.4 GHz to 4 GHz ≥ 26 dB @ 4 GHz to 50 GHz	0.4 GHz to 50 GHz	
09 S 101- K015	50 Ω ; a = 20.9 mm, b = 15.5 mm	≥ 36 dB @ 0.4 GHz to 4 GHz ≥ 26 dB @ 4 GHz to 50 GHz	0.4 GHz to 50 GHz	
09 S 101- K025	50 Ω ; a = 30.9 mm, b = 25.5 mm	≥ 36 dB @ 0.4 GHz to 4 GHz ≥ 26 dB @ 4 GHz to 50 GHz	0.4 GHz to 50 GHz	

Tools

Werkzeuge

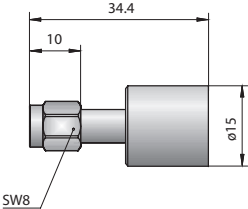
Torque Wrench

Drehmomentschlüssel

Ordering Number	Remarks	
03 W021- 000	flat 8 mm - 0.9 Nm torque for RPC- 3.50 , RPC- 2.92, RPC- 2.40, RPC- 1.85	

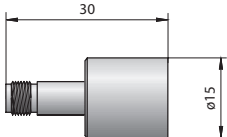
Gauge Block male

Kalibrierblock - Stecker

Ordering Number	Remarks	
08 W00Z- 002	for RPC- 2.40, RPC- 1.85, useable only with gauge 08 W 00S- 000	

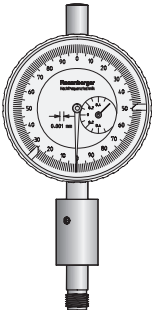
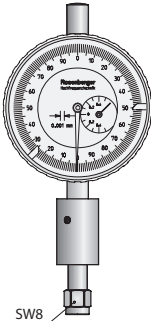
Gauge Block female

Kalibrierblock - Kuppler

Ordering Number	Remarks	
08 W00Z- 001	for RPC- 2.40, RPC- 1.85, useable only with gauge 08 W 00K- 000	

Gauge

Messuhr

Ordering Number	Remarks	
08 W00S- 000	compatible to male connectors for RPC- 2.40, RPC- 1.85, useable only with gauge block 08 W00Z- 002	
08 W00K- 000	compatible to female connectors for RPC- 2.40, RPC- 1.85, useable only with gauge block 08 W00Z- 001	

SERIES

Series
RPC-1.85



RPC- 1.85

Rosenberger RPC- 1.85 are 50 Ω precision connectors with an outer diameter of 1.85 mm. They have been designed with excellent data over the full frequency range up to 65 GHz. Below 18 GHz electrical parameters of RPC- 1.85 exceed SMA connector specs.

Interface of Rosenberger RPC- 1.85 connectors conform to the following specification:

- Radio- frequency connectors, specified in IEC 61169- 32

Rosenberger RPC- 1.85 connectors are mechanically compatible (mateable) with APC- 2.4, OS- 50, HP- 2.40 mm and V connectors.

The design of the outer shell insures that the outer conductors are coupled before the inner conductors can engage, thus guaranteeing a damage free connection.

RPC- 1.85 connectors meet the highest levels of reliability and repeatability of performance.

Connectors with PEEK dielectricum are specifically suitable for high- temperature applications. Further information on request.

RPC- 1.85 connectors have been designed for semi- rigid cables and microwave components. Also available are adaptors to RPC- 1.85 male and/or female and to precision coaxial connector series RPC- 2.92 and RPC- 3.50 and accessories for precision microwave measurement units, e. g. components for calibration kits and beadless precision air- lines.

RPC- 1.85

Rosenberger Steckverbinder vom Typ RPC- 1.85 sind 50- Ω Präzisionsausführungen mit 1.85 mm Außenleiter und hervorragenden Eigenschaften über den Frequenzbereich bis 65 GHz. Bis 18 GHz werden die Parameter der SMA- Steckverbindung überboten.

Das Interface der Rosenberger RPC- 1.85- Steckverbinder erfüllt die Norm:

- *HF- Steckverbinder nach IEC 61169- 32*

Rosenberger RPC- 1.85- Steckverbinder sind elektrisch und mechanisch kompatibel zu allen entsprechenden 2.4- mm- Steckverbinderserien, z. B. APC- 2.4, OS- 50, HP- 2.40 mm sowie voll kompatibel zum V- Stecker.

Eine beschädigungsfreie Verbindung wird dadurch gewährleistet, dass die Außenleiter der Steckverbinder bei der Kopplung bereits verbunden werden, bevor die Innenleiter kontaktieren können.

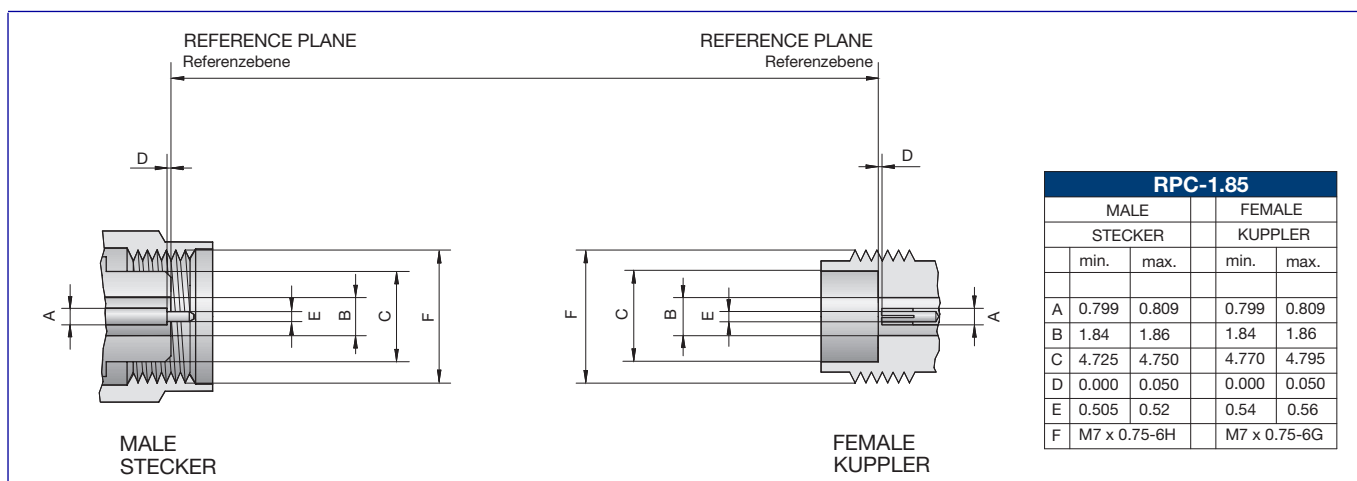
RPC- 1.85- Steckverbinder zeichnen sich durch höchste Zuverlässigkeit und sehr gute Reproduzierbarkeit aus.

Steckverbinder mit PEEK- Dielektrikum sind für höhere Temperaturen geeignet. Nähere Informationen erhalten Sie auf Anfrage.

RPC- 1.85- Steckverbinder wurden für halbstarre Mikrowellenkabel sowie für Mikrowellen- Gehäuseanwendungen entwickelt. Es existieren Zwischen- Steckverbindungen für die Serie RPC- 1.85 und Adapter auf die Präzisions- Steckverbinderserien RPC- 2.92 und RPC- 3.5 sowie Messzubehör für präzise Messungen im Mikrowellenbereich (z. B. Kalibrier- Kit- Elemente) und stützenfreie Präzisions- Luftleitungen.

Interface Dimensions

Anschlussmaße



Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Interface according to	IEC 61169- 32	Interface gemäß
Mechanically compatible with	RPC- 2.40	Mechanisch kompatibel mit

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 65 GHz	Frequenzbereich
Return loss (cable connector straight)	≥ 20 dB, DC to 65 GHz	Rückflußdämpfung (Kabelsteckverbinder, gerade)
Insertion loss (cable connector straight)	≤ 0.05 dB $\times \sqrt{f}$ [GHz]	Dämpfung (Kabelsteckverbinder, gerade)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 4.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 2.5 m Ω	Übergangswiderstand Außenleiter
Test voltage	500 V rms	Prüfspannung
Working voltage	150 V rms	Betriebsspannung
RF- leakage	≥ 100 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 500	Steckzyklen
Center contact captivation	≥ 20 N	Innenleiter Haltekraft
Coupling torque recommended	0.80 Nm to 1.10 Nm	Anzugsdrehmoment empfohlen
Coupling test torque	1.65 Nm	Prüfdrehmoment

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	IEC 61169- 1, Subclause 9.4.4	Temperaturzyklen
Corrosion resistance	IEC 61169- 1, Subclause 9.4.6	Korrosionsbeständigkeit
Vibration	IEC 61169- 1, Subclause 9.3.3	Vibration
Shock	IEC 61169- 1, Subclause 9.3.14	Schock
Moisture resistance	IEC 61169- 1, Subclause 9.4.3	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, passivated	Außenleiter
Dielectric	PEEK	Dielektrikum

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Cable Connectors Semi- Rigid Cable

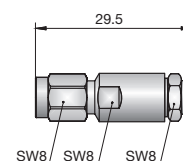
Straight Plug, solder

Kabel- Steckverbinder, Semi- Rigid- Kabel

Stecker gerade, löt

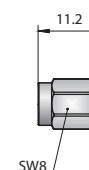
Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction
08 S 121- 270 S3	≥ 20 dB @ DC to 65 GHz	70	02 A6
08 S 121- 271 S3	≥ 20 dB @ DC to 65 GHz	71	02 A3
08 S 121- 2W7 S3	≥ 20 dB @ DC to 65 GHz	W7	02 A3

Straight Plug, solder,
without pin, without dielectricStecker gerade, löt,
ohne Pin, ohne Dielektrikum

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction
08 S 101- 271 D	≥ 20 dB @ DC to 65 GHz	71	08 A1

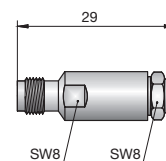


Straight Jack, solder

Kuppler gerade, löt

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction
08 K 121- 270 S3	≥ 20 dB @ DC to 65 GHz	70	02 A6
08 K 121- 271 S3	≥ 20 dB @ DC to 65 GHz	71	02 A3
08 K 121- 2W7 S3	≥ 20 dB @ DC to 65 GHz	W7	02 A3

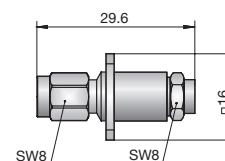


Panel Plug, 4- hole flange

Gehäusestecker löt, 4- Loch- Flansch

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout
08 S 421- 270 S3	≥ 20 dB @ DC to 65 GHz	70	02 A6	B 71
08 S 421- 271 S3	≥ 20 dB @ DC to 65 GHz	71	02 A3	B 71
08 S 421- 2W7 S3	≥ 20 dB @ DC to 65 GHz	W7	02 A3	B 71

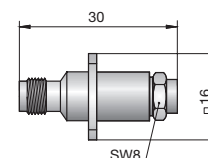


Panel Jack, 4- hole flange

Gehäusekuppler löt, 4- Loch- Flansch

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout
08 K 421- 270 S3	≥ 20 dB @ DC to 65 GHz	70	02 A6	B 71
08 K 421- 271 S3	≥ 20 dB @ DC to 65 GHz	71	02 A3	B 71
08 K 421- 2W7 S3	≥ 20 dB @ DC to 65 GHz	W7	02 A3	B 71

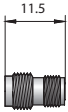


Panel Connectors

Gehäuse- Steckverbinder

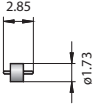
Panel Jack

Gehäusekuppler

Ordering Number	Remarks	Return Loss	Panel Piercing / PCB Layout	
08 K 521- 800 S3	without glass bead, for hermetic sealed glass bead pin 0,24 mm 08 Z 101- 000	≥ 15 dB @ DC to 65 GHz	B 71	

Glass Bead

Glasstütze

Ordering Number	Remarks	Return Loss	
08 Z 101- 000	hermetic sealed	≥ 17 dB @ DC to 65 GHz	 M 2:1

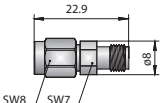
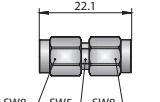
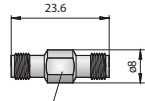
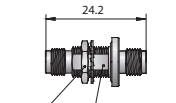


Adaptors

Adapter

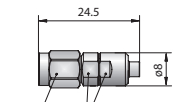
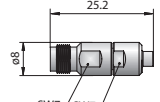
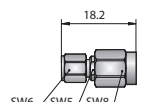
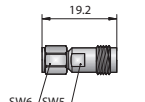
Adaptor (In Series)

Adapter (In-Serie)

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
08 S 121- K00 S3	straight	RPC- 1,85 male - female	≥ 17 dB @ DC to 65 GHz		
08 S 121- K20 S3	straight	RPC- 1,85 male - female, calibration adaptor	≥ 28 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 65 GHz		
08 S 121- S00 S3	straight	RPC- 1,85 male - male	≥ 17 dB @ DC to 65 GHz		
08 S 121- S20 S3	straight	RPC- 1,85 male - male, calibration adaptor	≥ 28 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 65 GHz		
08 K 121- K00 S3	straight	RPC- 1,85 female - female	≥ 17 dB @ DC to 65 GHz		
08 K 121- K20 S3	straight	RPC- 1.85 female - female, calibration adaptor	≥ 28 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 65 GHz		
08 K 641- KH0 S3	straight	RPC- 1.85 male - male, panel mount, round flange, hermetic sealed	≥ 12 dB @ DC to 65 GHz	B 58	

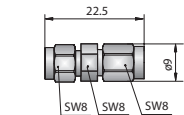
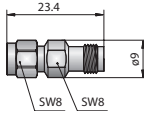
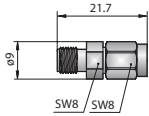
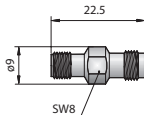
Adaptor (Inter Series)

Adapter (serienübergreifend)

Ordering Number	Version	Remarks	Return Loss	
08 S 118- S00 S3	straight	RPC- 1.85 male - Mini-SMP male	≥ 30 dB @ DC to 12 GHz ≥ 18 dB @ 12 to 50 GHz ≥ 15 dB @ 50 to 65 GHz	
08 S 118- K00 S3	straight	RPC- 1.85 male - Mini-SMP female	≥ 30 dB @ DC to 12 GHz ≥ 18 dB @ 12 to 50 GHz ≥ 15 dB @ 50 to 65 GHz	
08 K 118- S00 S3	straight	RPC- 1.85 female - Mini-SMP male	≥ 30 dB @ DC to 12 GHz ≥ 18 dB @ 12 to 50 GHz ≥ 15 dB @ 50 to 65 GHz	
08 K 118- K00 S3	straight	RPC- 1.85 female - Mini-SMP female	≥ 30 dB @ DC to 12 GHz ≥ 18 dB @ 12 to 50 GHz ≥ 15 dB @ 50 to 65 GHz	
01 S 108- S00 D3	straight	RPC- 1.00 male - RPC- 1.85 male	≥ 19 dB @ DC to 20 GHz ≥ 17 dB @ 20 to 50 GHz ≥ 14 dB @ 50 to 65 GHz	
01 S 108- K00 D3	straight	RPC- 1.00 male - RPC- 1.85 female	≥ 19 dB @ DC to 20 GHz ≥ 17 dB @ 20 to 50 GHz ≥ 14 dB @ 50 to 65 GHz	
01 K 108- S00 D3	straight	RPC- 1.00 female - RPC- 1.85 male	≥ 19 dB @ DC to 20 GHz ≥ 17 dB @ 20 to 50 GHz ≥ 14 dB @ 50 to 65 GHz	
01 K 108- K00 D3	straight	RPC- 1.00 female - RPC- 1.85 female	≥ 19 dB @ DC to 20 GHz ≥ 17 dB @ 20 to 50 GHz ≥ 14 dB @ 50 to 65 GHz	

Adaptors

Series RPC- 1.85

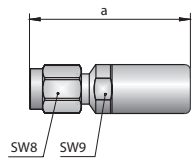
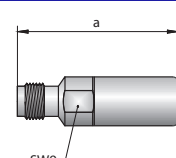
Ordering Number	Version	Remarks	Return Loss	
02 S 108- S00 S3	straight	RPC- 2.92 male - RPC- 1.85 male	≥ 19 dB @ DC to 40 GHz	
02 S 108- K00 S3	straight	RPC- 2.92 male - RPC- 1.85 female	≥ 19 dB @ DC to 40 GHz	
02 K 108- S00 S3	straight	RPC- 2.92 female - RPC- 1.85 male	≥ 19 dB @ DC to 40 GHz	
02 K 108- K00 S3	straight	RPC- 2.92 female - RPC- 1.85 female	≥ 19 dB @ DC to 40 GHz	

Test Devices

Testzubehör

Open - Short - Load

Open - Short - Load

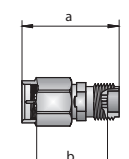
Ordering Number	Remarks	Return Loss	Power Handling	
08 S 12L- 000 S3	RPC- 1.85 open circuit, male, a = 30.2 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.40 dB @ 4 GHz to 65 GHz		
08 S 12S- 000 S3	RPC- 1.85 short circuit, male, a = 32 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.30 dB @ 4 GHz to 65 GHz		
08 S 150- C10 S3	RPC- 1.85 broadband load, calibration kit, male, a = 26.5 mm	≥ 34 dB @ DC to 4 GHz ≥ 25 dB @ 4 GHz to 26.5 GHz ≥ 22 dB @ 26.5 GHz to 50 GHz ≥ 20 dB @ 50 GHz to 65 GHz	0.5 W	
08 K 12L- 000 S3	RPC- 1.85 open circuit, female, a = 30 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.40 dB @ 4 GHz to 65 GHz		
08 K 12S- 000 S3	RPC- 1.85 short circuit, female, a = 32.7 mm	≤ 0.15 dB @ DC to 4 GHz ≤ 0.30 dB @ 4 GHz to 65 GHz		
08 K 150- C10 S3	RPC- 1.85 broadband load, calibration kit, female, a = 27.3 mm	≥ 34 dB @ DC to 4 GHz ≥ 25 dB @ 4 GHz to 26.5 GHz ≥ 22 dB @ 26.5 GHz to 50 GHz ≥ 20 dB @ 50 GHz to 65 GHz	0.5 W	

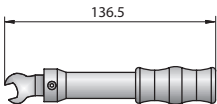
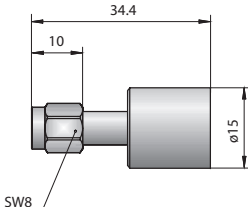
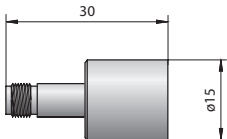
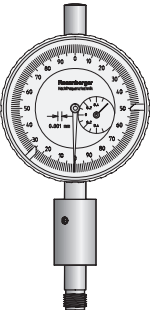
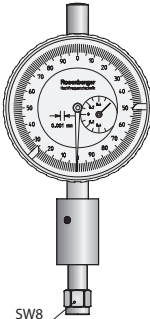
complete calibration kits also available

auch komplette Kalibrierkits erhältlich

Airlines

Luftleitungen

Ordering Number	Remarks	Return Loss	Frequency	
08 S 101- K013	50 Ω; a = 18.4 mm, b = 13 mm	≥ 34 dB @ 0.5 GHz to 4 GHz ≥ 24 dB @ 4 GHz to 65 GHz	0.5 GHz to 65 GHz	
08 S 101- K014	50 Ω; a = 20.3 mm, b = 14.9 mm	≥ 34 dB @ 0.5 GHz to 4 GHz ≥ 24 dB @ 4 GHz to 65 GHz	0.5 GHz to 65 GHz	
08 S 101- K022	50 Ω; a = 28 mm, b = 22.6 mm	≥ 34 dB @ 0.5 GHz to 4 GHz ≥ 24 dB @ 4 GHz to 65 GHz	0.5 GHz to 65 GHz	

Tools		Werkzeuge
Torque Wrench		Drehmomentschlüssel
Ordering Number	Remarks	
03 W021- 000	flat 8 mm - 0.9 Nm torque for RPC- 3.50 , RPC- 2.92, RPC- 2.40, RPC- 1.85	
Gauge Block male		Kalibrierblock - Stecker
Ordering Number	Remarks	
08 W00Z- 002	for RPC- 2.40, RPC- 1.85, useable only with gauge 08 W 00S- 000	
Gauge Block female		Kalibrierblock - Kuppler
Ordering Number	Remarks	
08 W00Z- 001	for RPC- 2.40, RPC- 1.85, useable only with gauge 08 W 00K- 000	
Gauge		Messuhr
Ordering Number	Remarks	
08 W00S- 000	compatible to male connectors for RPC- 2.40, RPC- 1.85, useable only with gauge block 08 W00Z- 002	
Ordering Number	Remarks	
08 W00K- 000	compatible to female connectors for RPC- 2.40, RPC- 1.85, useable only with gauge block 08 W00Z- 001	

SERIES

Series
RPC-1.00



RPC- 1.00

Rosenberger RPC- 1.00 are 50 Ω precision connectors with an outer diameter of 1.00 mm. They have been designed with excellent data over the full frequency range up to 110 GHz.

Rosenberger RPC- 1.00 connectors conform to the following specifications:

- IEC 61169- 31

Rosenberger RPC- 1.00 connectors are mechanically compatible (mateable) with Agilent 1.00 mm. The design of the outer shell insures that the outer conductors are coupled before the inner contacts can engage, thus guaranteeing a damage- free connection. RPC- 1.00 connectors meet the highest levels of reliability and repeatability of performance. Connectors with PEEK dielectricum are designed for higher temperature applications. Further information on request.

RPC- 1.00 connectors have been designed for semi- rigid cables. Spark plug versions, microwave launchers as well as calibration components are available on request.

RPC- 1.00

Rosenberger Steckverbinder vom Typ RPC- 1.00 sind 50- Ω Präzisionsausführungen mit 1.00- mm- Außenleiter und hervorragenden Eigenschaften für den Frequenzbereich bis 110 GHz.

Rosenberger RPC- 1.00- Steckverbinder erfüllen die Normen:

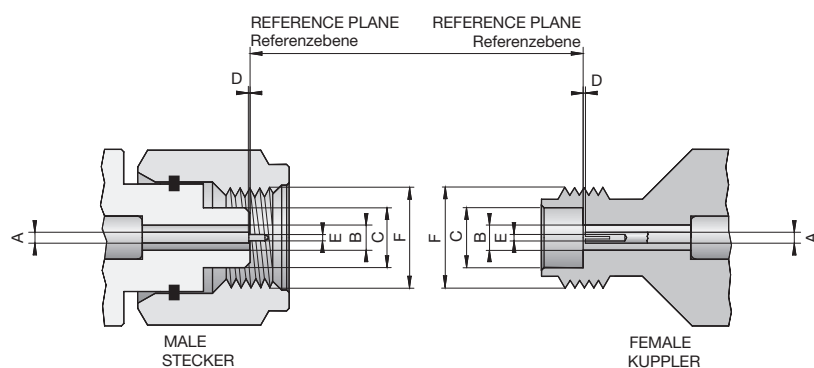
- IEC 61169- 31

Rosenberger RPC- 1.00- Steckverbinder sind elektrisch und mechanisch kompatibel zu entsprechenden 1.00- mm- Steckverbindern, z. B. Agilent- 1.00 mm. Eine beschädigungsfreie Verbindung wird dadurch gewährleistet, dass die Außenleiter der Steckverbinder bei der Kopplung bereits verbunden werden, bevor die Innenleiter kontaktieren können. RPC- 1.00- Steckverbinder zeichnen sich durch höchste Zuverlässigkeit und sehr gute Reproduzierbarkeit aus. Das PEEK- Dielektrikum ermöglicht Anwendungen mit höheren Temperaturen. Nähere Informationen erhalten Sie auf Anfrage.

RPC- 1.00- Steckverbinder wurden für halbstarre Mikrowellenkabel entwickelt; Mikrowellen- Gehäuseausführungen und Kalibrier- Kit- Elemente sind auf Anfrage erhältlich.

Interface Dimensions

Anschlussmaße



RPC-1.00				
MALE			FEMALE	
STECKER			KUPPLER	
	min.	max.	min.	max.
A	0.4315	0.4365	0.4315	0.4365
B	0.995	1.005	0.995	1.005
C	2.348	2.368	2.380	2.400
D	0.000	0.050	0.000	0.050
E	0.245	0.255	0.270	0.290
F	M4 x 0.7-6H		M4 x 0.7-6G	

Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Interface according to	IEC 61169- 31	Interface gemäß

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 110 GHz	Frequenzbereich
Return loss (cable connector straight)	≥ 23 dB, DC to 50 GHz ≥ 19 dB, 50 GHz to 75 GHz ≥ 14 dB, 75 GHz to 110 GHz	Rückflußdämpfung (Kabelsteckverbinder, gerade)
Insertion loss (cable connector straight)	≤ 0.05 dB x $\sqrt{f}$ [GHz]	Dämpfung (Kabelsteckverbinder, gerade)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 4.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 1.0 m Ω	Übergangswiderstand Außenleiter
Test voltage	500 V rms	Prüfspannung
Working voltage	150 V rms	Betriebsspannung
RF- leakage	≥ 90 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 500	Steckzyklen
Center contact captivation	≥ 10 N	Innenleiter Haltekraft
Coupling torque recommended	0.3 Nm to 0.41 Nm	Anzugsdrehmoment empfohlen
Coupling test torque	0.70 Nm	Prüfdrehmoment

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	IEC 61169- 1, Subclause 9.4.4	Temperaturzyklen
Corrosion resistance	IEC 61169- 1, Subclause 9.4.6	Korrosionsbeständigkeit
Vibration	IEC 61169- 1, Subclause 9.3.3	Vibration
Shock	IEC 61169- 1, Subclause 9.3.14	Schock
Moisture resistance	IEC 61169- 1, Subclause 9.4.3	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Beryllium copper, gold- plated	Außenleiter
Dielectric	PEEK	Dielektrikum

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

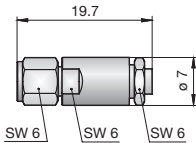
Cable Connectors Semi- Rigid Cable

Kabel- Steckverbinder, Semi- Rigid- Kabel

Straight Plug, solder

Stecker gerade, löt

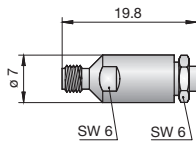
Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	
01 S 101- 270 E3	≥ 23 dB @ DC to 50 GHz ≥ 19 dB @ 50 to 75 GHz ≥ 14 dB @ 75 to 110 GHz	70	01 A1	

Straight Jack, solder

Kuppler gerade, löt

Semi- Rigid

Ordering Number	Return Loss	Cable Group	Assembly Instruction	
01 K 101- 270 E3	≥ 23 dB @ DC to 50 GHz ≥ 19 dB @ 50 to 75 GHz ≥ 14 dB @ 75 to 110 GHz	70	01 A1	

Adaptors

Series RPC- 1.00

Adaptors

Adapter

Adaptor (In Series)

Adapter (In- Serie)

Ordering Number	Version	Remarks	VSWR max.	
01 S 101-S20 D3	straight	RPC- 1.00 male - male, calibration adaptor, phase matched	≥ 20 dB @ DC to 20 GHz ≥ 17 dB @ 20 GHz to 50 GHz ≥ 15 dB @ 50 GHz to 75 GHz ≥ 12 dB @ 75 GHz to 110 GHz	
01 S 101-K20 D3	straight	RPC- 1.00 male - female, calibration adaptor, phase matched	≥ 20 dB @ DC to 20 GHz ≥ 17 dB @ 20 GHz to 50 GHz ≥ 15 dB @ 50 GHz to 75 GHz ≥ 12 dB @ 75 GHz to 110 GHz	
01 S 101-K01 D3	straight	RPC- 1.00 male - female, calibration adaptor, with retractable male nut	≥ 20 dB @ DC to 20 GHz ≥ 17 dB @ 20 GHz to 50 GHz ≥ 15 dB @ 50 GHz to 75 GHz ≥ 12 dB @ 75 GHz to 110 GHz	
01 S 101-K02 D3	straight	RPC- 1.00 male - female, calibration adaptor, with retractable female nut	≥ 20 dB @ DC to 20 GHz ≥ 17 dB @ 20 GHz to 50 GHz ≥ 15 dB @ 50 GHz to 75 GHz ≥ 12 dB @ 75 GHz to 110 GHz	
01 K 101- K20 D3	straight	RPC- 1.00 female - female, calibration adaptor, phase matched	≥ 20 dB @ DC to 20 GHz ≥ 17 dB @ 20 GHz to 50 GHz ≥ 15 dB @ 50 GHz to 75 GHz ≥ 12 dB @ 75 GHz to 110 GHz	

Adaptor (Inter Series)

Adapter (serienübergreifend)

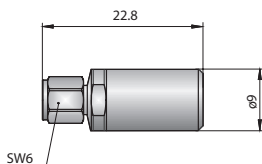
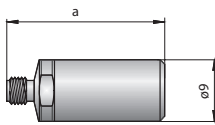
Ordering Number	Version	Remarks	VSWR max.	
01 S 108- S00 D3	straight	RPC- 1.00 male - RPC- 1.85 male	≥ 19 dB @ DC to 20 GHz ≥ 17 dB @ 20 to 50 GHz ≥ 14 dB @ 50 to 65 GHz	
01 S 108- K00 D3	straight	RPC- 1.00 male - RPC- 1.85 female	≥ 19 dB @ DC to 20 GHz ≥ 17 dB @ 20 to 50 GHz ≥ 14 dB @ 50 to 65 GHz	
01 K 108- S00 D3	straight	RPC- 1.00 female - RPC- 1.85 male	≥ 19 dB @ DC to 20 GHz ≥ 17 dB @ 20 to 50 GHz ≥ 14 dB @ 50 to 65 GHz	
01 K 108- K00 D3	straight	RPC- 1.00 female - RPC- 1.85 female	≥ 19 dB @ DC to 20 GHz ≥ 17 dB @ 20 to 50 GHz ≥ 14 dB @ 50 to 65 GHz	

Test Accessories

Testzubehör

Short - Load

Short - Load

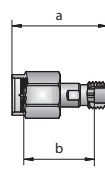
Ordering Number	Remarks	Return Loss	Power Handling	
01 S 12S- 000 D3	RPC- 1.00 short circuit, male	≤ 0.20 dB @ DC to 20 GHz ≤ 0.50 dB @ 20 GHz to 50 GHz ≤ 0.75 dB @ 50 GHz to 75 GHz ≤ 1.00 dB @ 75 GHz to 110 GHz		
01 S 150- C10 D3	RPC- 1.00 lowband load, calibration kit, male	≥ 36 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 18 GHz ≥ 28 dB @ 18 GHz to 22 GHz	0.5 W	
01 K 12S- 000 D3	RPC- 1.00 short circuit, female, a = 20.5 mm	≤ 0.20 dB @ DC to 20 GHz ≤ 0.50 dB @ 20 GHz to 50 GHz ≤ 0.75 dB @ 50 GHz to 75 GHz ≤ 1.00 dB @ 75 GHz to 110 GHz		
01 K 150- C10 D3	RPC- 1.00 lowband load, calibration kit, female, a = 23 mm	≥ 36 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 18 GHz ≥ 28 dB @ 18 GHz to 22 GHz	0.5 W	

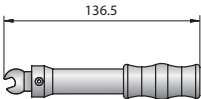
complete calibration kits also available

auch komplette Kalibrierkits erhältlich

Airlines

Luftleitungen

Ordering Number	Remarks	Return Loss	Frequency	
01 S 101- K011	50 Ω ; a = 14.1 mm, b = 11 mm	≥ 24 dB @ 0.8 GHz to 20 GHz ≥ 20 dB @ 20 GHz to 50 GHz ≥ 18 dB @ 50 GHz to 75 GHz ≥ 14 dB @ 75 GHz to 110 GHz	0.8 GHz to 110 GHz	
01 S 101- K012	50 Ω ; a = 15.2 mm, b = 12.14 mm	≥ 24 dB @ 0.8 GHz to 20 GHz ≥ 20 dB @ 20 GHz to 50 GHz ≥ 18 dB @ 50 GHz to 75 GHz ≥ 14 dB @ 75 GHz to 110 GHz	0.8 GHz to 110 GHz	
01 S 101- K016	50 Ω ; a = 19.7 mm, b = 16.68 mm	≥ 24 dB @ 0.8 GHz to 20 GHz ≥ 20 dB @ 20 GHz to 50 GHz ≥ 18 dB @ 50 GHz to 75 GHz ≥ 14 dB @ 75 GHz to 110 GHz	0.8 GHz to 110 GHz	

Tools		Werkzeuge
Torque Wrench		Drehmomentschlüssel
Ordering Number	Remarks	
01 W021- 000	flat 6 mm - 35 Ncm torque for RPC- 1.00	

CALIBRATION KITS

Calibration Kits & Verification Kits



RPC- N, 50 Ω Calibration Standards

RPC- N, 50Ω Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.20 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 1.5° ≤ 3.0°	DC to ≤ 4 > 4 to ≤ 18
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.15 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 1.2° ≤ 2.5°	DC to ≤ 4 > 4 to ≤ 18
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 45 dB ≥ 30 dB	DC to ≤ 4 > 4 to ≤ 18
	Resistance/Gleichstrom- Widerstand	50 Ω ± 0.25 Ω	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 18
Sliding loads ² Gleitlast (male and female)	Return Loss/ Rückflusdämpfung	≥ 35 dB	≥ 2 to ≤ 18
Precision air lines ³ Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 40 dB ≥ 35 dB	≥ 0.3 to ≤ 4 > 4 to ≤ 18
	Characteristic Impedance/ Wellenwiderstand	50 Ω ± 0.25 Ω	≥ 0.3 to ≤ 18
Adaptors, phase matched Adapter, phasenangepasst	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 30 dB	DC to ≤ 4 > 4 to ≤ 18
	Accuracy of Electrical Length/ Toleranz elektrische Länge	±0.07 mm (±1.5° at 18 GHz)	DC to 18

1. The specification for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.
2. The specification for the sliding load termination include the quality of the air line portions within the sliding load combined with the effective stability of the sliding element.
3. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to the skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).
2. Die Spezifikationen für die Gleitlast- Abschlüsse beziehen sich auf die Güte des Luftleitungs- Abschnitts in Verbindung mit der Reproduzierbarkeit des verschiebbaren Gleitlast- Elements.
3. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder- Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des Skin- Effektes frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit RPC- N, 50 Ω , Full VersionKalibrier- Kit RPC- N, 50 Ω Full Version

Calibration Kit

Kalibrier- Kit

Full Version

Ordering Number	Remarks
05 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
05 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
05 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
05 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
05 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
05 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	2	
05 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	2	
05 S 150- G300	Sliding loads (male) Gleitlast (Stecker)	1	
05 K 150- G300	Sliding loads (female) Gleitlast (Kuppler)	1	
05 S 121- S20 S3	Adaptor (RPC- N, 50 Ω male - male) Adapter (RPC- N, 50 Ω Stecker - Stecker)	1	phase matched phasenangepasst
05 K 121- K20 S3	Adaptor (RPC- N, 50 Ω female - female) Adapter (RPC- N, 50 Ω Kuppler - Kuppler)	1	phase matched phasenangepasst
53 W009- 000	Torque wrench Drehmomentschlüssel	1	20 mm wrench size / 1.1- Nm- torque 20- mm- Schlüssel / 1.1- Nm- Drehmoment
05 W00K- 000	Gauge (female) Messuhr (Kuppler)	1	to gauge female connectors für Vermessung von Steckverbindern (Kuppler)
05 W00Z- 001	Gauge block (female) Kalibrierblock (Kuppler)	1	to adjust gauge (female) für Justierung der Messuhr (Kuppler)
05 W00S- 000	Gauge (male) Messuhr (Stecker)	1	to gauge male connectors für Vermessung von Steckverbindern (Stecker)
05 W00Z- 002	Gauge block (male) kalibrierblock (Stecker)	1	to adjust gauge (male) für Justierung der Messuhr (Stecker)
-	Incl. 3 1/2" disk einschließlich 3 1/2"- Diskette	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W1: Wltron 360B W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- N, 50 Ω, Industrial Version

Kalibrier- Kit RPC- N, 50 Ω Industrial Version

Calibration Kit

Kalibrier- Kit

Industrial Version

Ordering Number	Remarks
05 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
05 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
05 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
05 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
05 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
05 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	
05 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	
53 W009- 000	Torque wrench Drehmomentschlüssel	1	20 mm wrench size / 1.1- Nm- torque 20- mm- Schlüssel / 1.1- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- N, 50 Ω, LRL Version

Kalibrier- Kit RPC- N, 50 Ω LRL Version

Calibration Kit

Kalibrier- Kit

LRL Version

Ordering Number	Remarks
05 CK 120- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

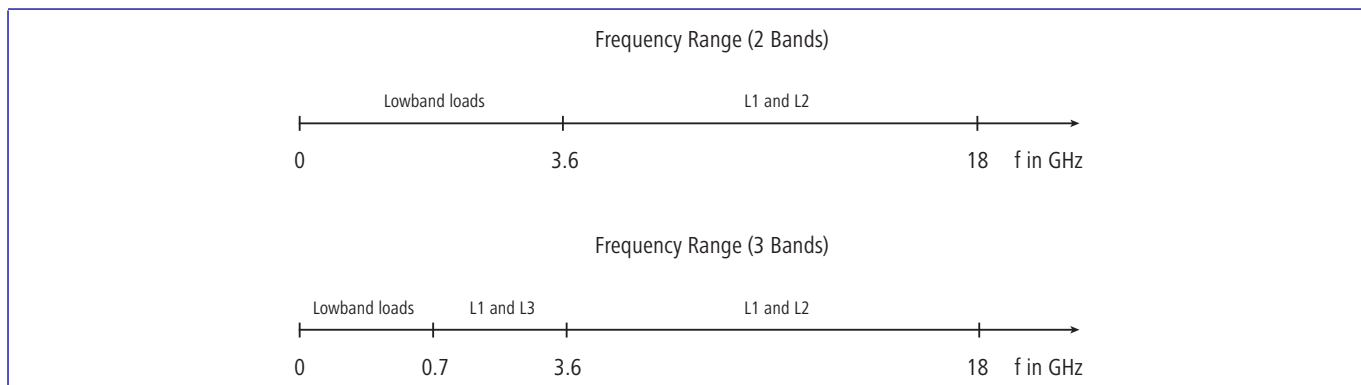
Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
05 S 101- K026	26.4 mm Air line (male - female) 26.4- mm- Luftleitung (Stecker - Kuppler)	1	L1
05 S 101- K033	33.3 mm Air line (male - female) 33.3- mm- Luftleitung (Stecker - Kuppler)	1	L2
05 S 101- K061	61 mm Air line (male - female) 61- mm- Luftleitung (Stecker - Kuppler)	1	L3
05 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	Reflect standard Reflexions- Norm
05 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	Reflect standard Reflexions- Norm
53 W009- 000	Torque wrench Drehmomentschlüssel	1	20 mm wrench size / 1.1- Nm- torque 20- mm- Schlüssel / 1.1- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C R1: R&S ZVR/ZVM/ZVK



LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using LRL with lowband loads. Without lowband loads the lower band cannot be calibrated.

LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-) bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier- Standard genutzt. Nebstehende Grafik zeigt zwei mögliche LRLKalibrierungen mit Niedrigband- Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden.

RPC- N, 75 Ω Calibration Standards

RPC- N, 75 Ω Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.07 dB ≤ 0.10 dB	DC to ≤ 2 > 2 to ≤ 4
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 1.0° ≤ 1.6°	DC to ≤ 2 > 2 to ≤ 4
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.07 dB ≤ 0.10 dB	DC to ≤ 2 > 2 to ≤ 4
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 0.8° ≤ 1.2°	DC to ≤ 2 > 2 to ≤ 4
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 40 dB ≥ 36 dB	DC to ≤ 2 > 2 to ≤ 4
	Resistance/Gleichstrom- Widerstand	75 Ω ± 0.75 Ω	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 4
Precision air lines ² Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 42 dB ≥ 40 dB	≥ 0.1 to ≤ 2 > 2 to ≤ 4
	Characteristic Impedance/ Wellenwiderstand	75 Ω ± 0.55 Ω	≥ 0.1 to ≤ 4
Adaptors, phase matched Adapter, phasenangepasst	Return Loss/ Rückflusdämpfung	≥ 38 dB ≥ 34 dB	DC to ≤ 2 > 2 to ≤ 4
	Accuracy of Electrical Length/ Toleranz elektrische Länge	±0.07 mm (±0.4° at 4 GHz)	DC to 4

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.

2. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).

2. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder-Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des "Skin- Effekts" frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit RPC- N, 75 Ω , Full VersionKalibrier- Kit RPC- N, 75 Ω Full Version

Calibration Kit

Kalibrier- Kit

Full Version

Ordering Number	Remarks
P5 CK 100- 170	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
P5 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
P5 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
P5 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
P5 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
P5 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	2	
P5 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	2	
P5 S 121- S20 S3	Adaptor (RPC- N, 75 Ω male- male) Adapter (RPC- N, 75 Ω Stecker - Stecker)	1	phase matched phasenangepasst
P5 K 121- K20 S3	Adaptor (RPC- N, 75 Ω female - female) Adapter (RPC- N, 75 Ω Kuppler - Kuppler)	1	phase matched phasenangepasst
53 W009- 000	Torque wrench Drehmomentschlüssel	1	20 mm wrench size / 1.1- Nm- torque 20- mm- Schlüssel / 1.1- Nm- Drehmoment
05 W00K- 000	Gauge (female) Messuhr (Kuppler)	1	to gauge female connectors für Vermessung von Steckverbindern (Kuppler)
05 W00Z- 001	Gauge block (female) Kalibrierblock (Kuppler)	1	to adjust gauge (female) für Justierung der Messuhr (Kuppler)
P5 W00S- 000	Gauge (male) Messuhr (Stecker)	1	to gauge male connectors für Vermessung von Steckverbindern (Stecker)
05 W00Z- 002	Gauge block (male) kalibrierblock (Stecker)	1	to adjust gauge (male) für Justierung der Messuhr (Stecker)
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D VW2: Anritsu 37XXXA/B R1: R&S ZVR/ZMWZVK

Calibration Kit RPC- N, 75 Ω, Industrial Version

Kalibrier- Kit RPC- N, 75 Ω Industrial Version

Calibration Kit

Kalibrier- Kit

Industrial Version

Ordering Number	Remarks
P5 CK 10A- 170	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
P5 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
P5 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
P5 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
P5 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
P5 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	
P5 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	
53 W009- 000	Torque wrench Drehmomentschlüssel	1	20 mm wrench size / 1.1- Nm- torque 20- mm- Schlüssel / 1.1- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- N, 75 Ω TRL VersionKalibrier- Kit RPC- N, 75 Ω TRL Version

Calibration Kit

Kalibrier- Kit

TRL Version

Ordering Number	Remarks
P5 CK 120- 170	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

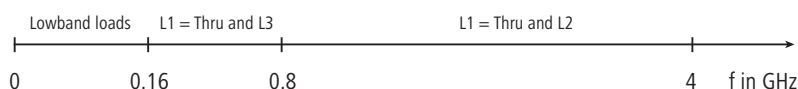
Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
P5 S 101- K031	31.2 mm Air line (male - female) 31.2- mm- Luftleitung (Stecker - Kuppler)	1	L2
P5 S 101- K150	150 mm Air line (male - female) 150- mm- Luftleitung (Stecker - Kuppler)	1	L3
P5 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	Reflect standard Reflexions- Norm
P5 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	Reflect standard Reflexions- Norm
53 W009- 000	Torque wrench Drehmomentschlüssel	1	20 mm wrench size / 1.1- Nm- torque 20- mm- Schlüssel / 1.1- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C R1: R&S ZVR/ZMW/ZVK

Frequency Range (2 Bands)



Frequency Range (3 Bands)



TRL/LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using TRL with lowband loads. Without lowband loads the lower band cannot be calibrated. In this calibration kit line 1 (L1) is the zero length thru connection.

TRL/LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-) bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier-Standard genutzt. Nebestehende Grafik zeigt zwei mögliche TRL- Kalibrierungen mit Niedrigband- Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden. In diesem Kalibrier- Kit ist die Leitung 1 (L1) eine Thru- Leitung mit Länge Null.

RPC- TNC Calibration Standards

RPC- TNC Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflussdämpfung	≤ 0.50 dB ≤ 1.00 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 3.5° ≤ 8.0°	DC to ≤ 4 > 4 to ≤ 18
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflussdämpfung	≤ 0.50 dB ≤ 1.00 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 1.0° ≤ 7.0°	DC to ≤ 4 > 4 to ≤ 18
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflussdämpfung	≥ 35 dB ≥ 25 dB	DC to ≤ 4 > 4 to ≤ 18
	Resistance/Gleichstrom- Widerstand	50 Ω ± 0.50 Ω	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 18
Adaptors Adapter	Return Loss/ Rückflussdämpfung	≥ 30 dB ≥ 20 dB	DC to ≤ 4 > 4 to ≤ 18
Adaptors (RPC- N/RPC- TNC) Adapter (RPC- N/RPC- TNC)	Return Loss/ Rückflussdämpfung	≥ 30 dB ≥ 20 dB	DC to ≤ 4 > 4 to ≤ 18

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).

Rosenberger connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit RPC- TNC, Full Version
Kalibrier- Kit RPC- TNC, Full Version
Calibration Kit RPC- TNC
Kalibrier- Kit RPC- TNC
Full Version

Ordering Number	Remarks
06 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit
Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
06 S 150- C10 S3	Termination (male) Abschlusswiderstand (Stecker)	2	
06 K 150- C10 S3	Termination (female) Abschlusswiderstand (Kuppler)	2	
06 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
06 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
06 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
06 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
06 S 121- S20 S3	Adaptor (RPC- TNC male - male) Adapter (RPC- TNC Stecker - Stecker)	1	
06 K 121- K20 S3	Adaptor (RPC- TNC female - female) Adapter (RPC- TNC Kuppler - Kuppler)	1	
05 S 106- S20 S3	Adaptor (RPC- N, 50 Ω male - RPC- TNC male) Adapter (RPC- N, 50 Ω Stecker - RPC- TNC Stecker)	1	
05 K 106- K20 S3	Adaptor (RPC- N, 50 Ω female - RPC- TNC female) Adapter (RPC- N, 50 Ω Kuppler - RPC- TNC Kuppler)	1	
06 W021- 000	Torque wrench Drehmomentschlüssel	1	15 mm wrench size / 55 Nm torque 15- mm - Schlüssel / 55 Nm Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- TNC, Industrial Version
Kalibrier- Kit RPC- TNC, Industrial Version
Calibration Kit RPC- TNC
Kalibrier- Kit RPC- TNC
Industrial Version

Ordering Number	Remarks
06 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

*Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.*

Contents of calibration kit
Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
06 S 150- C10 S3	Termination (male) Abschlusswiderstand (Stecker)	1	
06 K 150- C10 S3	Termination (female) Abschlusswiderstand (Kuppler)	1	
06 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
06 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
06 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
06 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
06 W021- 000	Torque wrench Drehmomentschlüssel	1	15 mm wrench size / 55 Nm torque 15- mm- Schlüssel / 55 Nm Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/Z/K

RPC- 7 Calibration Standards

RPC- 7 Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.15 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 1.2^\circ$ $\leq 2.5^\circ$	DC to ≤ 4 > 4 to ≤ 18
Short circuits ¹ Kurzschluss	Return Loss/ Rückflusdämpfung	≤ 0.07 dB ≤ 0.12 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 0.7^\circ$ $\leq 1.5^\circ$	DC to ≤ 4 > 4 to ≤ 18
Broadband loads Breitband- Last	Return Loss/ Rückflusdämpfung	≥ 45 dB ≥ 32 dB	DC to ≤ 4 > 4 to ≤ 18
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.50 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 18
Sliding loads ² Gleitlast	Return Loss/ Rückflusdämpfung	≥ 40 dB	≥ 2 to ≤ 18
Precision air lines ³ Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 45 dB ≥ 40 dB	≥ 0.3 to ≤ 4 > 4 to ≤ 18
	Characteristic Impedance/ Wellenwiderstand	$50 \Omega \pm 0.15 \Omega$	≥ 0.3 to ≤ 18

1. The specification for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.
2. The specification for the sliding load termination include the quality of the air line portions within the sliding load combined with the effective stability of the sliding element.
3. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to the skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).
2. Die Spezifikationen für die Gleitlast- Abschlüsse beziehen sich auf die Güte des Luftleitungs- Abschnitts in Verbindung mit der Reproduzierbarkeit des verschiebbaren Gleitlast- Elements.
3. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder- Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des Skin- Effektes frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit RPC- 7, Full Version

Kalibrier- Kit RPC- 7, Full Version

Calibration Kit

Kalibrier- Kit

Full Version

Ordering Number	Remarks
07 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
07 P 12L- 000 S3	Open circuit Leerlauf	1	
07 P 12S- 000 S3	Open circuit Leerlauf	1	
07 P 150- C10 S3	Broadband load Breitband- Last	2	
07 P 150- G300	Sliding load Gleitlast	1	
07 W031- 000	Collet extractor Demontage- Werkzeug	1	to remove center conductor collets zum Entfernen des Innenleiter- Kontaktes
07 W021- 000	Torque wrench Drehmomentschlüssel	1	19 mm wrench size / 1.36 Nm torque 19- mm- Schlüssel / 1.36- Nm- Drehmoment
07 W001- 000	Gauge Messuhr	1	to gauge connectors für Vermessung von Steckverbindern
07 W00Z- 001	Gauge block Kalibrierblock	1	to adjust gauge für Justierung der Messuhr
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- 7, Industrial Version

Kalibrier- Kit RPC- 7, Industrial Version

Calibration Kit

Kalibrier- Kit

Industrial Version

Ordering Number	Remarks
07 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
07 P 12L- 000 S3	Open circuit Leerlauf	1	
07 P 12S- 000 S3	Short circuit Kurzschluss	1	
07 P 150- C10 S3	Broadband load Breitband- Last	1	
07 W021- 000	Torque wrench Drehmomentschlüssel	1	19 mm wrench size / 1.36 Nm torque 19- mm- Schlüssel / 1.36- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- 7, LRL Version

Kalibrier- Kit RPC- 7, LRL Version

Calibration Kit

Kalibrier- Kit

LRL Version

Ordering Number	Remarks
07 CK 120-150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

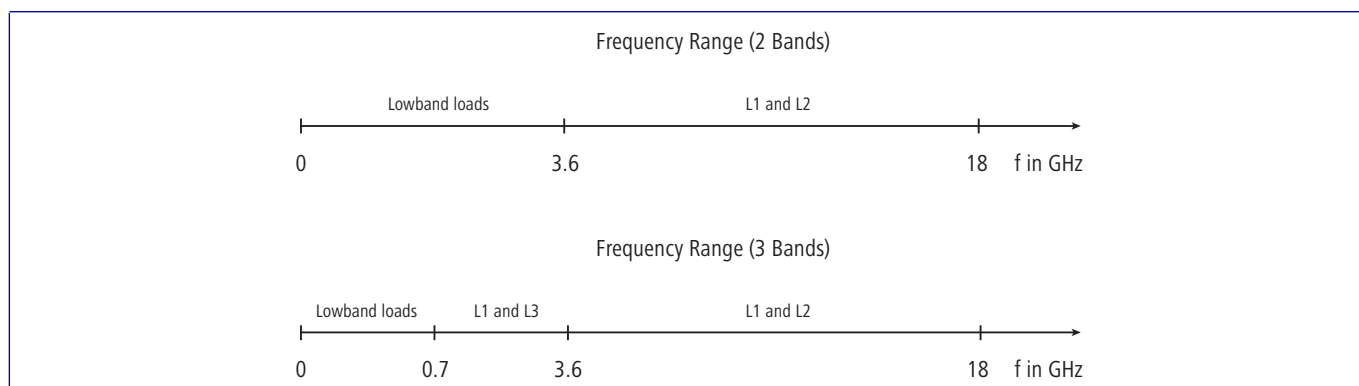
Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
07 P 101- P034	34 mm Air line 34- mm- Luftleitung	1	L1
07 P 101- P041	41 mm Air line 41- mm- Luftleitung	1	L2
07 P 101- P068	68 mm Air line 68- mm- Luftleitung	1	L3
07 P 12S- 000 S3	Short circuit Kurzschluss	1	Reflect standard Reflexions- Norm
07 W021- 000	Torque wrench Drehmomentschlüssel	1	19 mm wrench size / 1.36 Nm torque 19- mm- Schlüssel / 1.36- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C R1: R&S ZVR/ZVM/Z/K



LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using LRL with lowband loads. Without lowband loads the lower band cannot be calibrated.

LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-)bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier- Standard genutzt. Nebestehende Grafik zeigt zwei mögliche LRL Kalibrierungen mit Niedrigband- Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden.

RPC- SP, Calibration Standards

RPC- SP, Kalibrier- Standards

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.15 dB ≤ 0.20 dB	DC to ≤ 4 > 4 to ≤ 22
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 2.5^\circ$ $\leq 5.0^\circ$	DC to ≤ 4 > 4 to ≤ 22
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.15 dB	DC to ≤ 4 > 4 to ≤ 22
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 2.0^\circ$ $\leq 4.5^\circ$	DC to ≤ 4 > 4 to ≤ 22
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 34 dB ≥ 26 dB ≥ 23 dB	DC to ≤ 4 > 4 to ≤ 18 > 18 to ≤ 22
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.50 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 22
Precision air lines ² Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 32 dB	≥ 0.2 to ≤ 4 > 4 to ≤ 22
	Characteristic Impedance/ Wellenwiderstand	$50 \Omega \pm 0.70 \Omega$	≥ 0.2 to ≤ 22
Adaptors (RPC- 3.50/RPC- SP) Adapter (RPC- 3.50/RPC- SP)	Return Loss/ Rückflusdämpfung	≥ 34 dB ≥ 26 dB	DC to ≤ 4 > 4 to ≤ 22
Adaptors (RPC- 7/RPC- SP) Adapter (RPC- 7/RPC- SP)	Return Loss/ Rückflusdämpfung	≥ 34 dB ≥ 26 dB	DC to ≤ 4 > 4 to ≤ 18
Adaptors (RPC- 3.50/RPC- 7) Adapter (RPC- 3.50/RPC- 7)	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 28 dB	DC to ≤ 4 > 4 to ≤ 18

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.
2. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).
2. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder-Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des "Skin- Effekts" frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit RPC- SP, Full Version

Kalibrier- Kit RPC- SP, Full Version

Calibration Kit RPC- SP

Kalibrier- Kit RPC- SP

Full Version

Ordering Number	Remarks
10 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
10 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
10 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
10 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
10 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
10 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	
10 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	
07 P 110- S20 S3	Adaptor (RPC- 7 - RPC- SP male) Adapter (RPC- 7 - RPC- SP Stecker)	1	
07 P 110- K20 S3	Adaptor (RPC- 7 - RPC- SP female) Adapter (RPC- 7 - RPC- SP Kuppler)	1	
03 K 110- S21 S3	Adaptor (RPC- 3.50 female - RPC- SP male) Adapter (RPC- 3.50 Kuppler - RPC- SP Stecker)	1	
03 K 110- K21 S3	Adaptor (RPC- 3.50 female - RPC- SP female) Adapter (RPC- 3.50 Kuppler - RPC- SP Kuppler)	1	
03 S 110- S21 S3	Adaptor (RPC- 3.50 male - RPC- SP male) Adapter (RPC- 3.50 Stecker - RPC- SP Stecker)	1	
03 S 110- K21 S3	Adaptor (RPC- 3.50 male - RPC- SP female) Adapter (RPC- 3.50 Stecker - RPC- SP Kuppler)	1	
03 S 107- P20 S3	Adaptor (RPC- 3.50 male - RPC- 7) Adapter (RPC- 3.50 Stecker - RPC- 7)	1	
03 K 107- P20 S3	Adaptor (RPC- 3.50 female - RPC- 7) Adapter (RPC- 3.50 Kuppler - RPC- 7)	1	
07 W021- 000	Torque wrench Drehmomentschlüssel	1	19 mm wrench size / 1.36 Nm torque 19- mm- Schlüssel / 1.36 Nm Drehmoment
10 Z 001- S00 S	Coupling Nut with male thread Überwurfmutter mit Steckergewinde	2	11/16- 24 UNEF- 2A thread 11/16- 24 UNEF- 2A Gewinde
10 Z 001- K00 S	Coupling Nut with female thread Überwurfmutter mit Kupplergewinde	2	11/16- 24 UNEF- 2B thread 11/16- 24 UNEF- 2B Gewinde
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZMW/ZVK

Calibration Kit RPC- SP, TRL Version

Kalibrier- Kit RPC- SP, TRL Version

Calibration Kit RPC- SP

Kalibrier- Kit RPC- SP

TRL Version

Ordering Number	Remarks Bemerkung
10 CK 120- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

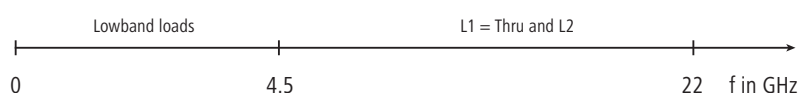
Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.

Contents of calibration kit

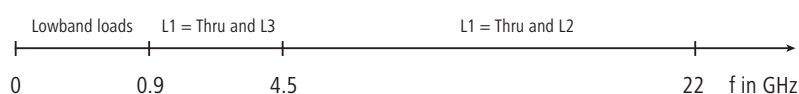
Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
10 S 101- K005	5.6 mm Air line (male - female) 5.6- mm- Luftleitung (Stecker - Kuppler)	1	L2
10 S 101- K027	27.7 mm Air line (male - female) 27.7- mm- Luftleitung (Stecker - Kuppler)	1	L3
10 S 125- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
10 K 125- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
10 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	may be used as lowband load auch als Niedrigfrequenz- Lastabschluss einsetzbar
10 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	may be used as lowband load auch als Niedrigfrequenz- Lastabschluss einsetzbar
03 K 110- S21 S3	Adaptor (RPC- 3.50 female - RPC- SP male) Adapter (RPC- 3.50 Kuppler - RPC- SP Stecker)	1	
03 K 110- K21 S3	Adaptor (RPC- 3.50 female - RPC- SP female) Adapter (RPC- 3.50 Kuppler - RPC- SP Kuppler)	1	
03 S 110- S21 S3	Adaptor (RPC- 3.50 male - RPC- SP male) Adapter (RPC- 3.50 Stecker - RPC- SP Stecker)	1	
03 S 110- K21 S3	Adaptor (RPC- 3.50 male - RPC- SP female) Adapter (RPC- 3.50 Stecker - RPC- SP Kuppler)	1	
07 W021- 000	Torque wrench Drehmomentschlüssel	1	19 mm wrench size / 1.36 Nm torque 19- mm- Schlüssel / 1.36 Nm Drehmoment
10 Z 001- S00 S	Coupling Nut with male thread Überwurfmutter mit Steckergewinde	2	11/16- 24 UNEF- 2A thread 11/16- 24 UNEF- 2A Gewinde
10 Z 001- K00 S	Coupling Nut with female thread Überwurfmutter mit Kupplergewinde	2	11/16- 24 UNEF- 2B thread 11/16- 24 UNEF- 2B Gewinde
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C, R1: R&S ZVR/ZMW/ZVK

Frequency Range (2 Bands)



Frequency Range (3 Bands)



TRL/LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using TRL with lowband loads. Without lowband loads the lower band cannot be calibrated. In this calibration kit line 1 (L1) is the zero length thru connection.

TRL/LRL-Kalibrierungen ohne Niedrigfrequenz-Lastabschlüsse sind (frequenz-) bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk-Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier-Standard genutzt. Nebstehende Grafik zeigt zwei mögliche TRL-Kalibrierungen mit Niedrigband-Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden.

RPC- 3.50, Calibration Standards

RPC- 3.50, Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.20 dB	DC to ≤ 4 > 4 to ≤ 26.5
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 1.5^\circ$ $\leq 3.5^\circ$	DC to ≤ 4 > 4 to ≤ 26.5
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.15 dB	DC to ≤ 4 > 4 to ≤ 26.5
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 1.2^\circ$ $\leq 3.0^\circ$	DC to ≤ 4 > 4 to ≤ 26.5
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 40 dB ≥ 30 dB	DC to ≤ 4 > 4 to ≤ 26.5
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.20 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 26.5
Sliding loads ² Gleitlast (male and female)	Return Loss/ Rückflusdämpfung	≥ 30 dB	≥ 3 to ≤ 26.5
Precision air lines ³ Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 40 dB ≥ 35 dB	≥ 0.3 to ≤ 4 > 4 to ≤ 26.5
	Characteristic Impedance/ Wellenwiderstand	$50 \Omega \pm 0.35 \Omega$	≥ 0.3 to ≤ 26.5
Adaptors, phase matched Adapter, phasenangepasst	Return Loss/ Rückflusdämpfung	≥ 34 dB ≥ 28 dB	DC to ≤ 4 > 4 to ≤ 26.5
	Accuracy of Electrical Length/ Toleranz elektrische Länge	± 0.12 mm ($\pm 3.8^\circ$ at 26.5 GHz)	DC to 26.5

1. The specification for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.
2. The specification for the sliding load termination include the quality of the air line portions within the sliding load combined with the effective stability of the sliding element.
3. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to the skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).
2. Die Spezifikationen für die Gleitlast- Abschlüsse beziehen sich auf die Güte des Luftleitungs- Abschnitts in Verbindung mit der Reproduzierbarkeit des verschiebbaren Gleitlast- Elements.
3. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder- Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des Skin- Effektes frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit RPC- 3.50, Full Version

Kalibrier- Kit RPC- 3.50, Full Version

Calibration Kit RPC- 3.50

Kalibrier- Kit RPC- 3.50

Full Version

Ordering Number	Remarks
03 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks Bemerkung
03 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
03 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
03 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
03 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
03 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	2	
03 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	2	
03 S 150- G300	Sliding load (male) Gleitlast (Stecker)	1	
03 K 150- G300	Sliding load (female) Gleitlast (Kuppler)	1	
03 S 121- S20 S3	Adaptor (RPC- 3.50 male - male) Adapter (RPC- 3.50 Stecker - Stecker)	1	phase matched phasenangepasst
03 K 121- K20 S3	Adaptor (RPC- 3.50 female - female) Adapter (RPC- 3.50 Kuppler - Kuppler)	1	phase matched phasenangepasst
03 W009- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
03 W00K- 000	Gauge (female) Messuhr (Kuppler)	1	to gauge female connectors für Vermessung von Steckverbindern (Kuppler)
03 W00Z- 001	Gauge block (female) Kalibrierblock (Kuppler)	1	to adjust gauge (female) für Justierung der Messuhr (Kuppler)
03 W00S- 000	Gauge (male) Messuhr (Stecker)	1	to gauge male connectors für Vermessung von Steckverbindern (Stecker)
03 W00Z- 002	Gauge block (male) Kalibrierblock (Stecker)	1	to adjust gauge (male) für Justierung der Messuhr (Stecker)
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZMW/ZVK

Calibration Kit RPC- 3.50, Industrial Version

Kalibrier- Kit RPC- 3.50, Industrial Version

Calibration Kit RPC- 3.50

Kalibrier- Kit RPC- 3.50

Industrial Version

Ordering Number	Remarks
03 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
03 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
03 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
03 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
03 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
03 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	
03 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	
03 W009- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- 3.50, LRL Version

Kalibrier- Kit RPC- 3.50, LRL Version

Calibration Kit RPC- 3.50

Kalibrier- Kit RPC- 3.50

LRL Version

Ordering Number	Remarks
03 CK 120-150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

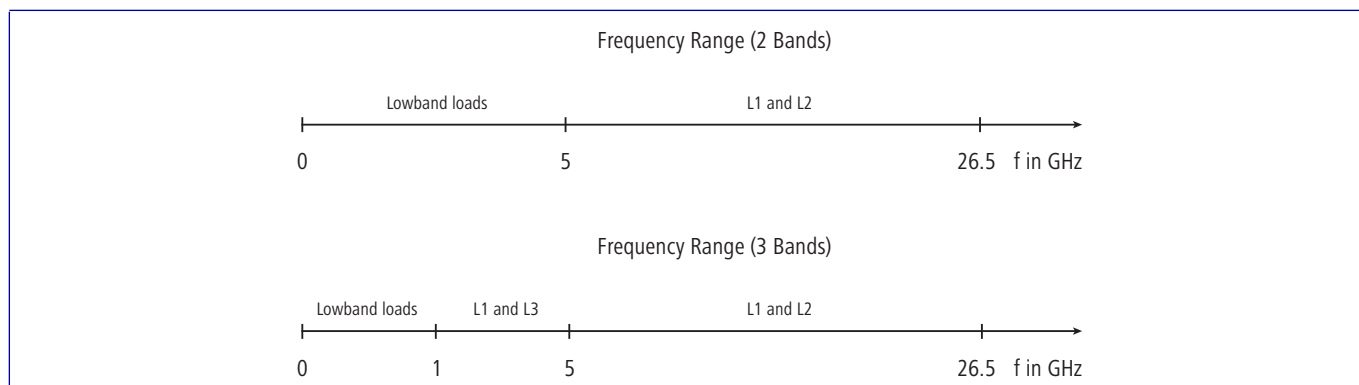
Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
03 S 101-K015	15 mm Air line (male - female) 15- mm- Luftleitung (Stecker - Kuppler)	1	L1
03 S 101-K020	20 mm Air line (male - female) 20- mm- Luftleitung (Stecker - Kuppler)	1	L2
03 S 101-K038	38.5 mm Air line (male - female) 38,5- mm- Luftleitung (Stecker - Kuppler)	1	L3
03 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	Reflect standard Reflexions- Norm
03 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	Reflect standard Reflexions- Norm
03 W021- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
-	Ind. 3 1/2" disk einschließlich 3 1/2"- Diskette	1	Disk available for the following network analyzers: Disk verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C, R1: R&S ZVR/ZVM/ZVK



LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using LRL with lowband loads. Without lowband loads the lower band cannot be calibrated.

LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-) bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier- Standard genutzt. Nebestehende Grafik zeigt zwei mögliche LRLKalibrierungen mit Niedrigband- Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden.

RPC- 2.92, Calibration Standards

RPC- 2.92, Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.15 dB ≤ 0.30 dB	DC to ≤ 4 > 4 to ≤ 40
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 1.6^\circ$ $\leq 4.0^\circ$	DC to ≤ 4 > 4 to ≤ 40
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.20 dB	DC to ≤ 4 > 4 to ≤ 40
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 1.3^\circ$ $\leq 3.5^\circ$	DC to ≤ 4 > 4 to ≤ 40
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 40 dB ≥ 30 dB	DC to ≤ 4 > 4 to ≤ 40
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.25 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 40
Sliding loads ² Gleitlast (male and female)	Return Loss/ Rückflusdämpfung	≥ 30 dB	≥ 2 to ≤ 40
Precision air lines ³ Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 38 dB ≥ 30 dB	≥ 0.3 to ≤ 4 > 4 to ≤ 40
	Characteristic Impedance/ Wellenwiderstand	$50 \Omega \pm 0.40 \Omega$	≥ 0.3 to ≤ 40
Adaptors, phase matched Adapter, phasenangepasst	Return Loss/ Rückflusdämpfung	≥ 32 dB ≥ 23 dB	DC to ≤ 4 > 4 to ≤ 40
	Accuracy of Electrical Length/ Toleranz elektrische Länge	± 0.12 mm ($\pm 5.8^\circ$ at 40 GHz)	DC to 40

1. The specification for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.
2. The specification for the sliding load termination include the quality of the air line portions within the sliding load combined with the effective stability of the sliding element.
3. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to the skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).
2. Die Spezifikationen für die Gleitlast- Abschlüsse beziehen sich auf die Güte des Luftleitungs- Abschnitts in Verbindung mit der Reproduzierbarkeit des verschiebbaren Gleitlast- Elements.
3. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder- Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des Skin- Effektes frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit RPC- 2.92, Full Version

Kalibrier- Kit RPC- 2.92, Full Version

Calibration Kit RPC- 2.92

Kalibrier- Kit RPC- 2.92

Full Version

Ordering Number	Remarks
02 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
02 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
02 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
02 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
02 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
02 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	2	
02 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	2	
02 S 150- G300	Sliding loads (male) Gleitlast (Stecker)	1	
02 K 150- G300	Sliding loads (female) Gleitlast (Kuppler)	1	
02 S 121- S20 S3	Adaptor (RPC- 2.92 male - male) Adapter (RPC- 2.92 Stecker - Stecker)	1	phase matched phasenangepasst
02 K 121- K20 S3	Adaptor (RPC- 2.92 female - female) Adapter (RPC- 2.92 Kuppler - Kuppler)	1	phase matched phasenangepasst
03 W009- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
03 W00K- 000	Gauge (female) Messuhr (Kuppler)	1	to gauge female connectors für Vermessung von Steckverbindern (Kuppler)
03 W00Z- 001	Gauge block (female) Kalibrierblock (Kuppler)	1	to adjust gauge (female) für Justierung der Messuhr (Kuppler)
03 W00S- 000	Gauge (male) Messuhr (Stecker)	1	to gauge male connectors für Vermessung von Steckverbindern (Stecker)
03 W00Z- 002	Gauge block (male) Kalibrierblock (Stecker)	1	to adjust gauge (male) für Justierung der Messuhr (Stecker)
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZMW/ZVK

Calibration Kit RPC- 2.92, Industrial Version

Kalibrier- Kit RPC- 2.92, Industrial Version

Calibration Kit RPC- 2.92

Kalibrier- Kit RPC- 2.92

Industrial Version

Ordering Number	Remarks Bemerkung
02 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
02 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
02 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
02 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
02 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
02 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	
02 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	
03 W009- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZMW/ZVK

Calibration Kit RPC- 2.92, LRL Version

Kalibrier- Kit RPC- 2.92, LRL Version

Calibration Kit RPC- 2.92

Kalibrier- Kit RPC- 2.92

LRL Version

Ordering Number	Remarks Bemerkung
02 CK 120- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

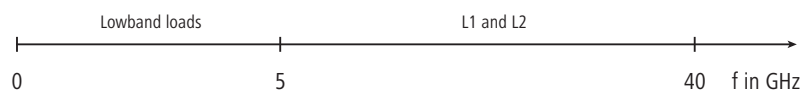
Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit

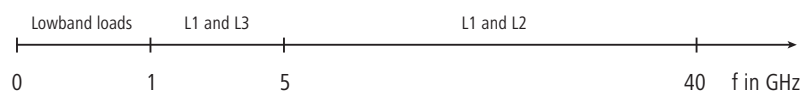
Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
02 S 101- K015	15 mm Air line (male - female) 15- mm- Luftleitung (Stecker - Kuppler)	1	L1
02 S 101- K018	18.3 mm Air line (male - female) 18.3- mm- Luftleitung (Stecker - Kuppler)	1	L2
02 S 101- K040	40 mm Air line (male - female) 38.5- mm- Luftleitung (Stecker - Kuppler)	1	L3
02 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	Reflect standard Reflexions- Norm
02 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	Reflect standard Reflexions- Norm
03 W021- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C, R1: R&S ZVR/ZVM/ZVK

Frequency Range (2 Bands)



Frequency Range (3 Bands)



LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using LRL with lowband loads. Without lowband loads the lower band cannot be calibrated.

LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-) bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier- Standard genutzt. Nebenstehende Grafik zeigt zwei mögliche LRLkalibrierungen mit Niedrigband- Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden.

RPC- 2.40, Calibration Standards

RPC- 2.40, Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.15 dB ≤ 0.30 dB	DC to ≤ 4 > 4 to ≤ 50
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 2.0^\circ$ $\leq 6.0^\circ$	DC to ≤ 4 > 4 to ≤ 50
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.15 dB ≤ 0.25 dB	DC to ≤ 4 > 4 to ≤ 50
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 1.5^\circ$ $\leq 4.5^\circ$	DC to ≤ 4 > 4 to ≤ 50
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 30 dB ≥ 26 dB ≥ 22 dB	DC to ≤ 4 > 4 to ≤ 20 > 20 to ≤ 26.5 > 26.5 to ≤ 50
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.25 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 50
Precision air lines ² Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 26 dB	≥ 0.4 to ≤ 4 > 4 to ≤ 50
	Characteristic Impedance/ Wellenwiderstand	$50 \Omega \pm 0.95 \Omega$	≥ 0.4 to ≤ 50
Adaptors, phase matched Adapter, phasenangepasst	Return Loss/ Rückflusdämpfung	≥ 30 dB ≥ 17 dB	DC to ≤ 4 > 4 to ≤ 50
	Accuracy of Electrical Length/ Toleranz elektrische Länge	± 0.15 mm ($\pm 0.9^\circ$ at 50 GHz)	DC to 50

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.

2. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).

2. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder- Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des "Skin- Effekts" frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit RPC- 2.40, Full Version

Kalibrier- Kit RPC- 2.40, Full Version

Calibration Kit RPC- 2.40

Kalibrier- Kit RPC- 2.40

Full Version

Ordering Number	Remarks
09 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
09 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
09 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
09 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
09 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
09 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	2	
09 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	2	
09 S 121- S20 S3	Adaptor (RPC- 2.40 male - male) Adapter (RPC- 2.40 Stecker - Stecker)	1	phase matched phasenangepasst
09 K 121- K20 S3	Adaptor (RPC- 2.40 female - female) Adapter (RPC- 2.40 Kuppler - Kuppler)	1	phase matched phasenangepasst
03 W009- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
08 W00K- 000	Gauge (female) Messuhr (Kuppler)	1	to gauge female connectors für Vermessung von Steckverbindern (Kuppler)
08 W00Z- 001	Gauge block (female) Kalibrierblock (Kuppler)	1	to adjust gauge (female) für Justierung der Messuhr (Kuppler)
08 W00S- 000	Gauge (male) Messuhr (Stecker)	1	to gauge male connectors für Vermessung von Steckverbindern (Stecker)
08 W00Z- 002	Gauge block (male) Kalibrierblock (Stecker)	1	to adjust gauge (male) für Justierung der Messuhr (Stecker)
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- 2.40, Industrial Version
Kalibrier- Kit RPC- 2.40, Industrial Version
Calibration Kit RPC- 2.40
Kalibrier- Kit RPC- 2.40
Industrial Version

Ordering Number	Remarks
09 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit
Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
09 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
09 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
09 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
09 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
09 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	
09 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	
03 W009- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- 2.40, LRL Version

Calibration Kit RPC- 2.40

Kalibrier- Kit RPC- 2.40, LRL Version

Kalibrier- Kit RPC- 2.40

LRL Version

Ordering Number	Remarks
08 CK 120-150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

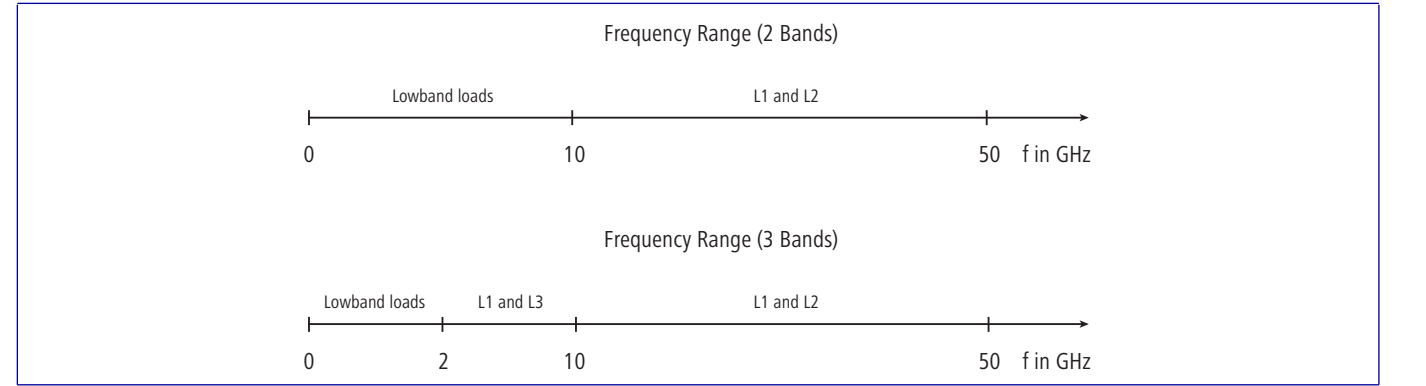
Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
09 S 101-K013	13 mm Air line (male - female) 13- mm- Luftleitung (Stecker - Kuppler)	1	L1
09 S 101-K015	15.5 mm Air line (male - female) 15.5- mm- Luftleitung (Stecker - Kuppler)	1	L2
09 S 101-K025	25.5 mm Air line (male - female) 25.5- mm- Luftleitung (Stecker - Kuppler)	1	L3
09 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	Reflect standard Reflexions- Norm
09 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	Reflect standard Reflexions- Norm
03 W021- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C, R1: R&S ZVR/ZVM/ZVK



LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using LRL with lowband loads. Without lowband loads the lower band cannot be calibrated.

LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-) bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier- Standard genutzt. Nebestehende Grafik zeigt zwei mögliche LRLKalibrierungen mit Niedrigband- Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden.

RPC- 1.85, Calibration Standards

RPC- 1.85, Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.15 dB ≤ 0.40 dB	DC to ≤ 4 > 4 to ≤ 65
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 2.5^\circ$ $\leq 9.0^\circ$	DC to ≤ 4 > 4 to ≤ 65
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.15 dB ≤ 0.30 dB	DC to ≤ 4 > 4 to ≤ 65
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 2.0^\circ$ $\leq 6.0^\circ$	DC to ≤ 4 > 4 to ≤ 65
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 34 dB ≥ 25 dB ≥ 22 dB ≥ 20 dB	DC to ≤ 4 >4 to ≤ 26.5 >26.5 to ≤ 50 >50 to ≤ 65
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.25 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 65
Precision air lines ² Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 34 dB ≥ 24 dB	≥ 0.5 to ≤ 4 > 4 to ≤ 65
	Characteristic Impedance/ Wellenwiderstand	$50 \Omega \pm 1.00 \Omega$	≥ 0.5 to ≤ 65
Adaptors, phase matched Adapter, phasenangepasst	Return Loss/ Rückflusdämpfung	≥ 28 dB ≥ 17 dB	DC to ≤ 4 > 4 to ≤ 65
	Accuracy of Electrical Length/ Toleranz elektrische Länge	± 0.15 mm ($\pm 0.15^\circ$ at 65 GHz)	DC to 65

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.
2. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).
2. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder- Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des "Skin- Effekts" frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit RPC- 1.85, Full Version

Kalibrier- Kit RPC- 1.85, Full Version

Calibration Kit RPC- 1.85

Kalibrier- Kit RPC- 1.85

Full Version

Ordering Number	Remarks
08 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
08 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
08 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
08 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
08 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
08 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	2	
08 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	2	
08 S 121- S20 S3	Adaptor (RPC- 1.85 male - male) Adapter (RPC- 1.85 Stecker - Stecker)	1	phase matched phasenangepasst
08 K 121- K20 S3	Adaptor (RPC- 1.85 female - female) Adapter (RPC- 1.85 Kuppler - Kuppler)	1	phase matched phasenangepasst
03 W021- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
08 W00K- 000	Gauge (female) Messuhr (Kuppler)	1	to gauge female connectors für Vermessung von Steckverbindern (Kuppler)
08 W00Z- 001	Gauge block (female) Kalibrierblock (Kuppler)	1	to adjust gauge (female) für Justierung der Messuhr (Kuppler)
08 W00S- 000	Gauge (male) Messuhr (Stecker)	1	to gauge male connectors für Vermessung von Steckverbindern (Stecker)
08 W00Z- 002	Gauge block (male) Kalibrierblock (Stecker)	1	to adjust gauge (male) für Justierung der Messuhr (Stecker)
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit RPC- 1.85, Industrial Version

Kalibrier- Kit RPC- 1.85, Industrial Version

Calibration Kit RPC- 1.85

Kalibrier- Kit RPC- 1.85

Industrial Version

Ordering Number	Remarks
08 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
08 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
08 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
08 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
08 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
08 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	
08 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	
03 W021- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZMW/ZVK

Calibration Kit RPC- 1.85, LRL Version

Calibration Kit RPC- 1.85

Kalibrier- Kit RPC- 1.85, LRL Version

Kalibrier- Kit RPC- 1.85

LRL Version

Ordering Number	Remarks
08 CK 120-150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

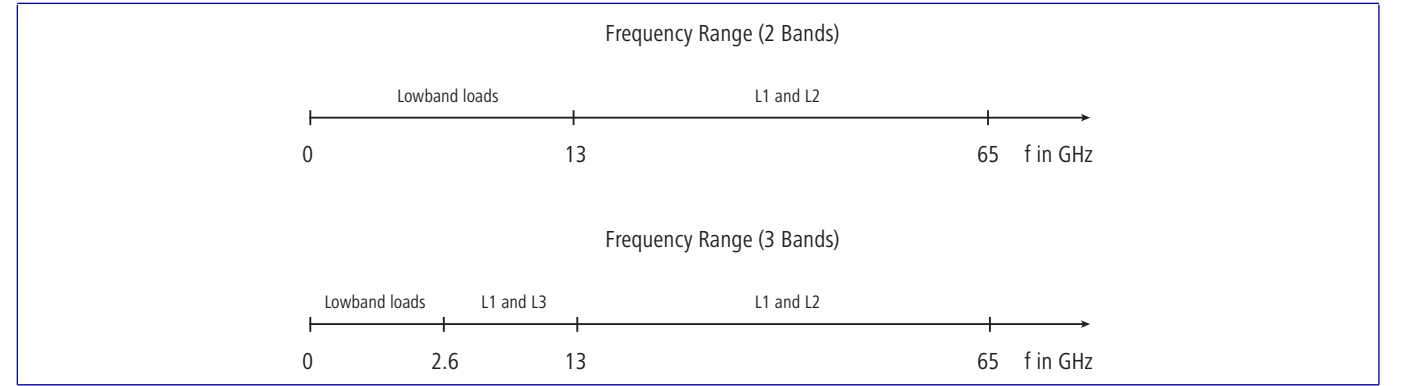
Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
08 S 101-K013	13 mm Air line (male - female) 13- mm- Luftleitung (Stecker - Kuppler)	1	L1
08 S 101-K014	14.9 mm Air line (male - female) 14.9- mm- Luftleitung (Stecker - Kuppler)	1	L2
08 S 101-K022	22.6 mm Air line (male - /female) 22.6- mm- Luftleitung (Stecker - Kuppler)	1	L3
08 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	Reflect standard Reflexions- Norm
08 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	Reflect standard Reflexions- Norm
03 W021- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9- Nm- torque 8- mm- Schlüssel / 0.9- Nm- Drehmoment
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C, R1: R&S ZVR/ZVM/ZVK



LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using LRL with lowband loads. Without lowband loads the lower band cannot be calibrated.

LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-) bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier- Standard genutzt. Nebestehende Grafik zeigt zwei mögliche LRLKalibrierungen mit Niedrigband- Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden.

Electrical Specifications

Elektrische Spezifikation

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.20 dB ≤ 0.50 dB ≤ 0.75 dB ≤ 1.00 dB	DC to ≤ 20 > 20 to ≤ 50 > 50 to ≤ 75 > 75 to ≤ 110
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 4.0^\circ$ $\leq 6.0^\circ$ $\leq 8.0^\circ$ $\leq 11.0^\circ$	DC to ≤ 20 > 20 to ≤ 50 > 50 to ≤ 75 > 75 to ≤ 110
Lowband loads Niedrigfrequenz- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 30 dB ≥ 28 dB	DC to ≤ 4 > 4 to ≤ 18 > 18 to ≤ 22
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.60 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 22
Precision air lines ² Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 24 dB ≥ 20 dB ≥ 18 dB ≥ 14 dB	≥ 0.8 to ≤ 20 > 20 to ≤ 50 > 50 to ≤ 75 > 75 to ≤ 110
	Characteristic Impedance/ Wellenwiderstand	$50 \Omega \pm 1.15 \Omega$	≥ 0.8 to ≤ 110
Adaptors, phase matched Adapter, phasenangepasst	Return Loss/ Rückflusdämpfung	≥ 20 dB ≥ 17 dB ≥ 15 dB ≥ 12 dB	DC to ≤ 20 > 20 to ≤ 50 > 50 to ≤ 75 > 75 to ≤ 110
	Accuracy of Electrical Length/ Toleranz elektrische Länge	± 0.15 mm $(\pm 19.8^\circ$ at 110 GHz)	DC to 110

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.

2. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).

2. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder- Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des "Skin- Effekts" frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

LRL Version

Inhalt des Kalibrier- Kits

LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using LRL with lowband loads. Without lowband loads the lower band cannot be calibrated.

LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-) bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier- Standard genutzt. Nebenstehende Grafik zeigt zwei mögliche LRLKalibrierungen mit Niedrigband- Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden.

7- 16, Calibration Standards

7- 16, Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.15 dB	DC to ≤ 4 > 4 to ≤ 8
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 1.2^\circ$ $\leq 2.0^\circ$	DC to ≤ 4 > 4 to ≤ 8
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.07 dB ≤ 0.12 dB	DC to ≤ 4 > 4 to ≤ 8
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 0.8^\circ$ $\leq 1.5^\circ$	DC to ≤ 4 > 4 to ≤ 8
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 40 dB ≥ 36 dB	DC to ≤ 4 > 4 to ≤ 8
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.50 \Omega$	DC
	Power Handling/Nennleistung	≤ 1.0 W (0° to 50° C)	DC to 8
Precision air lines ² Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 45 dB ≥ 40 dB	≥ 0.2 to ≤ 4 > 4 to ≤ 8
	Characteristic Impedance/ Wellenwiderstand	$50 \Omega \pm 0.10 \Omega$	≥ 0.2 to ≤ 8
Adaptors Adapter	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 26 dB	DC to ≤ 4 > 4 to ≤ 8
Adaptors (N7- 16) Adapter (N7- 16)	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 26 dB	DC to ≤ 4 > 4 to ≤ 8

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.
2. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).
2. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder-Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des "Skin- Effekts" frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit 7- 16, Full Version

Kalibrier- Kit 7- 16, Full Version

Calibration Kit 7- 16

Kalibrier- Kit 7- 16

Full Version

Ordering Number	Remarks
60 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
60 S 12L- 12S D3	Open circuit/short circuit (male) Leerlauf/Kurzschluss (Stecker)	1	one- piece open and short Leerlauf- Kurzschluss- Komponente
60 K 12L- 12S D3	Open circuit/short circuit (female) Leerlauf/Kurzschluss (Kuppler)	1	one- piece open and short Leerlauf- Kurzschluss- Komponente
60 S 17R- C01 D3	Broadband load (male) Breitband- Last (Stecker)	1	
60 K 17R- C01 D3	Broadband load (female) Breitband- Last (Kuppler)	1	
60 S 101- S50 N1	Adaptor (7- 16 male - male) Adapter (7- 16 Stecker - Stecker)	1	
60 K 101- K50 N1	Adaptor (7- 16 female - female) Adapter (7- 16 Kuppler - Kuppler)	1	
05 S 160- S50 D3	Adaptor (RPC- N, 50 Ω male - 7-16 male) Adapter (RPC- N, 50 Ω Stecker - 7-16 Stecker)	1	
05 K 160- K50 D3	Adaptor (RPC- N, 50 Ω female - 7-16 female) Adapter (RPC- N, 50 Ω Kuppler - 7-16 Kuppler)	1	
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit 7- 16, Industrial Version

Calibration Kit 7- 16

Kalibrier- Kit 7- 16, Industrial Version

Kalibrier- Kit 7- 16

Industrial Version

Ordering Number	Remarks
60 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
60 S 12L- 12S D3	Open circuit/short circuit (male) Leerlauf/Kurzschluss (Stecker)	1	one- piece open and short Leerlauf- Kurzschluss- Komponente
60 K 12L- 12S D3	Open circuit/short circuit (female) Leerlauf/Kurzschluss (Kuppler)	1	one- piece open and short Leerlauf- Kurzschluss- Komponente
60 S 17R- C01 D3	Broadband load (male) Breitband- Last (Stecker)	1	
60 K 17R- C01 D3	Broadband load (female) Breitband- Last (Kuppler)	1	
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZMWZ/K

Calibration Kit 7- 16, LRL Version

Kalibrier- Kit 7- 16, LRL Version

Calibration Kit 7- 16

Kalibrier- Kit 7- 16

LRL Version

Ordering Number	Remarks
60 CK 120- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

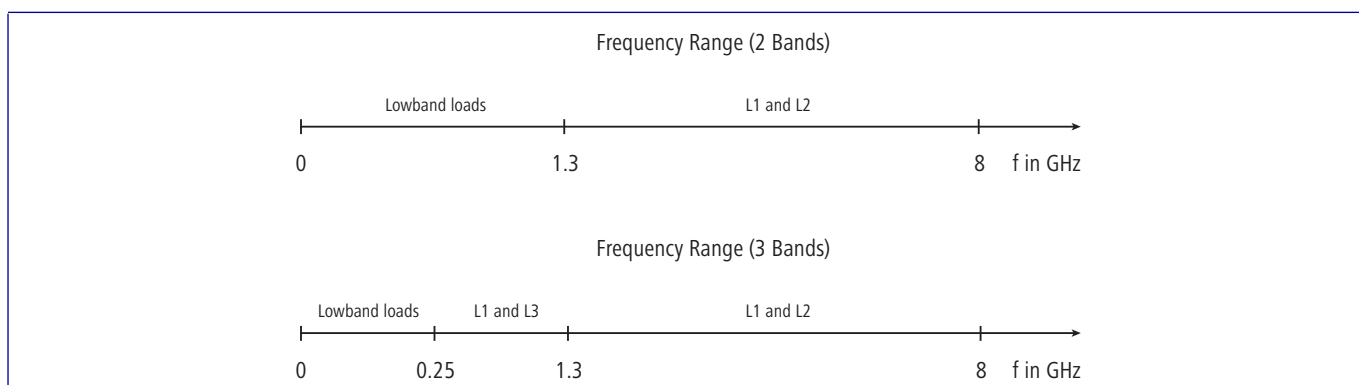
Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
60 S 101- K050	50 mm Air line (male - female) 50- mm- Luftleitung (Stecker - Kuppler)	1	L1
60 S 101- K066	66 mm Air line (male - female) 66- mm- Luftleitung (Stecker - Kuppler)	1	L2
60 S 101- K150	150 mm Air line (male - female) 150- mm- Luftleitung (Stecker - Kuppler)	1	L3
60 S 101- K300	300 mm Air line (male - female) 300- mm- Luftleitung (Stecker - Kuppler)	1	L4 verification standard L4 Verifikations- Norm
60 S 12S- 000 D3	Short circuit (male) Kurzschluss (Stecker)	1	Reflect standard Reflexions- Norm
60 K 12S- 000 D3	Short circuit (female) Kurzschluss (Kuppler)	1	Reflect standard Reflexions- Norm
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C, R1: R&S ZVR/ZMWZVK



LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using LRL with lowband loads. Without lowband loads the lower band cannot be calibrated.

LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-)bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier- Standard genutzt. Nebenstehende Grafik zeigt zwei mögliche LRLKalibrierungen mit Niedrigband- Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden.

BNC, 50 Ω Calibration Standards**BNC, 50 Ω Kalibrier- Standards****Electrical Specifications****Elektrische Spezifikation**

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflussdämpfung	≤ 0.20 dB ≤ 0.50 dB	DC to ≤ 2 > 2 to ≤ 4
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 3.0° ≤ 5.0°	DC to ≤ 2 > 2 to ≤ 4
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflussdämpfung	≤ 0.20 dB ≤ 0.50 dB	DC to ≤ 2 > 2 to ≤ 4
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 2.5° ≤ 4.0°	DC to ≤ 2 > 2 to ≤ 4
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflussdämpfung	≥ 34 dB ≥ 30 dB	DC to ≤ 2 > 2 to ≤ 4
	Resistance/Gleichstrom- Widerstand	50 Ω ± 0.50 Ω	DC
	Power Handling/Nennleistung	≤ 1.0 W (0° to 50° C)	DC to 4
Adaptors Adapter	Return Loss/ Rückflussdämpfung	≥ 34 dB ≥ 30 dB	DC to ≤ 2 > 2 to ≤ 4
Adaptors (N, 50 Ω/BNC, 50 Ω) Adapter (N, 50 Ω/BNC, 50 Ω)	Return Loss/ Rückflussdämpfung	≥ 36 dB ≥ 30 dB	DC to ≤ 2 > 2 to ≤ 4

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit BNC, 50 Ω , Full VersionKalibrier- Kit BNC, 50 Ω Full VersionCalibration Kit BNC, 50 Ω Kalibrier- Kit BNC, 50 Ω

Full Version

Ordering Number	Remarks
51 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
51 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
51 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
51 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
51 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
51 S 170- C10 S3	Broadband load (male) Breitband- Last (Stecker)	2	
51 K 170- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	2	
51 S 121- S20 S3	Adaptor (BNC 50 Ω male - male) Adapter (BNC 50 Ω Stecker - Stecker)	1	
51 K 121- K20 S3	Adaptor (BNC 50 Ω female - female) Adapter (BNC 50 Ω Kuppler - Kuppler)	1	
05 S 151- S20 S3	Adaptor (RPC- N 50 Ω male - BNC 50 Ω male) Adapter (RPC- N 50 Ω Stecker - BNC 50 Ω Stecker)	1	
05 K 151- K20 S3	Adaptor (RPC- N 50 Ω female- BNC 50 Ω female) Adapter (RPC- N 50 Ω Kuppler- BNC 50 Ω Kuppler)	1	
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit BNC, 50 Ω, Industrial Version

Calibration Kit BNC, 50 Ω

Kalibrier-Kit BNC, 50 Ω Industrial Version

Kalibrier-Kit BNC, 50 Ω

Industrial Version

Ordering Number	Remarks
51 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
51 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
51 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
51 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
51 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
51 S 170- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	
51 K 170- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

F- Connectors, 75 Ω Calibration Standards

F- Verbinder, 75 Ω Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.17 dB ≤ 0.20 dB	DC to ≤ 3 > 3 to ≤ 4
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 1.3^\circ$ $\leq 2.0^\circ$	DC to ≤ 3 > 3 to ≤ 4
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.17 dB ≤ 0.20 dB	DC to ≤ 3 > 3 to ≤ 4
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 1.0^\circ$ $\leq 1.5^\circ$	DC to ≤ 3 > 3 to ≤ 4
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 34 dB ≥ 30 dB	DC to ≤ 3 > 3 to ≤ 4
	Resistance/Gleichstrom- Widerstand	$75 \Omega \pm 0.75 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 4
Precision air lines ² Präzisions- Luftleitungen	Return Loss/ Rückflusdämpfung	≥ 40 dB ≥ 35 dB	≥ 0.1 to ≤ 3 > 3 to ≤ 4
	Characteristic Impedance/ Wellenwiderstand	$75 \Omega \pm 0.60 \Omega$	≥ 0.1 to ≤ 4
Adaptors, phase matched Adapter, phasengangepasst	Return Loss/ Rückflusdämpfung	≥ 32 dB ≥ 28 dB	DC to ≤ 3 > 3 to ≤ 4
	Accuracy of Electrical Length/ Toleranz elektrische Länge	± 0.20 mm (± 1.0 at 4 GHz)	DC to ≤ 4
Adaptors (N, 75 Ω /F) Adapter (N, 75 Ω /F)	Return Loss/ Rückflusdämpfung	≥ 32 dB ≥ 28 dB	DC to ≤ 3 > 3 to ≤ 4

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.
2. The characteristic impedance for the air lines is based on mechanical measurements. The return loss specification includes the connector interfaces. The minimum frequency of the air lines is based on calculations of the impedance change due to skin depth. Refer to the test report included in the kit for the exact dimensions of your precision air lines.

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).
2. Der angegebene Wellenwiderstand für Luftleitungen basiert auf mechanischen Messungen, die Rückflusdämpfung schließt das Steckverbinder-Interface mit ein. Die angegebene minimale Frequenz resultiert aus Berechnungen des aufgrund des "Skin- Effekts" frequenzabhängigen Wellenwiderstandes. Bitte beachten Sie den jedem Kalibrier- Kit beigelegten Testreport.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit for F- Connectors, Full Version

Kalibrier- Kit für F- Verbinder, Vollversion

Calibration Kit F- Connectors

Kalibrier- Kit F- Verbinder

Full Version

Ordering Number	Remarks
74 CK 100- 170	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
74 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
74 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
74 S 150- C10 CS	Broadband load (male) Breitband- Last (Stecker)	2	
74 S 121- S20 S3	Adaptor (F male- male) Adapter (F Stecker- Stecker)	1	phase matched phasenangepasst
74 K 121- K20 S3	Adaptor (F female- female) Adapter (F Kuppler- Kuppler)	1	phase matched phasenangepasst
P5 S 174- S20 CS	Adaptor (RPC- N 75 Ω male - F male) Adapter (RPC- N 75 Ω Stecker - F Stecker)	1	
P5 K 174- K20 CS	Adaptor (RPC- N 75 Ω female - F female) Adapter (RPC- N 75 Ω Kuppler - F Kuppler)	1	
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit for F- Connectors, Industrial Version**Kalibrier- Kit für F- Verbinder, Industrial Version****Calibration Kit F- Connectors****Kalibrier- Kit F- Verbinder****Industrial Version**

Ordering Number	Remarks
74 CK 10A- 170	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit**Inhalt des Kalibrier- Kits**

Ordering Number	Components	Quantity	Remarks
74 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
74 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
74 S 150- C10 CS	Broadband load (male) Breitband- Last (Stecker)	1	
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZMWZVK

Calibration Kit for F- Connectors, TRL Version

Calibration Kit F- Connectors

Kalibrier- Kit für F- Verbinder, TRL Version

Kalibrier- Kit F- Verbinder

TRL Version

Ordering Number	Remarks
74 CK 120-170	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

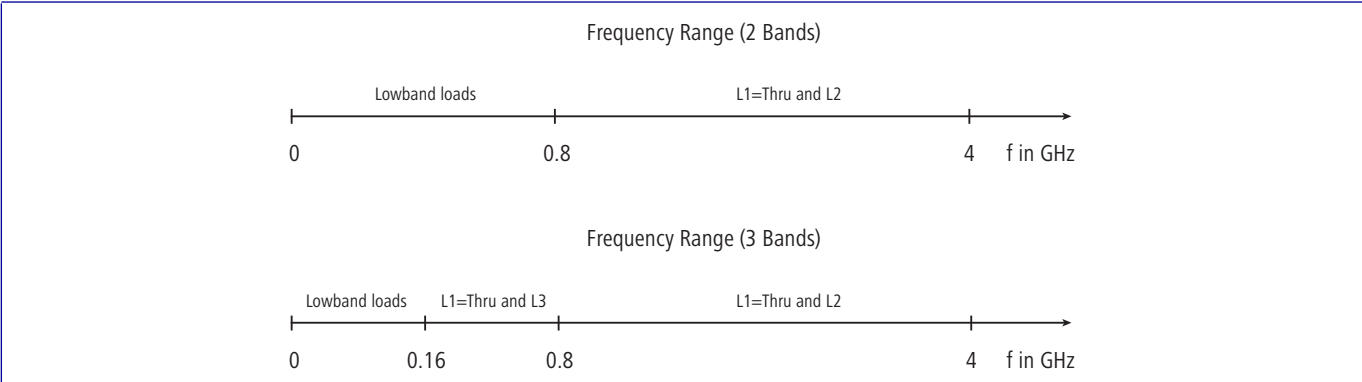
Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
74 S 101-K031	31.2 mm Air line (male - female) 31.2- mm- Luftleitung (Stecker - Kuppler)	1	L2
74 S 101-K150	150 mm Air line (male - female) 150- mm- Luftleitung (Stecker - Kuppler)	1	L3
74 S 101-K100	100 mm Air line (male - female) 100- mm- Luftleitung (Stecker - Kuppler)	1	L4 verification standard
74 S 12S- 001 S3	Short circuit (male) Kurzschluss (Stecker)	1	Reflect standard Reflexions- Norm
74 K 12S- 001 S3	Short circuit (female) Kurzschluss (Kuppler)	1	Reflect standard Reflexions- Norm
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C, R1: RGS ZVR/ZVM/ZVK



TRL/LRL calibrations without lowband loads are band limited. There are many different possibilities to calibrate a VNA depending from the line length and the number of lines used during the calibration procedure. If two lines are used the third line can be used as verification standard. The graph besides shows two possibilities using TRL with lowband loads. Without lowband loads the lower band cannot be calibrated. In this calibration kit line 1 (L1) is the zero length thru connection.

TRL/LRL- Kalibrierungen ohne Niedrigfrequenz- Lastabschlüsse sind (frequenz-) bandlimitiert. Abhängig von der Länge und der Anzahl der bei der Kalibrierung eingesetzten Leitungen gibt es eine Reihe von Möglichkeiten, vektorielle Netzwerk- Analysatoren zu kalibrieren. Bei Verwendung von zwei Leitungen wird die dritte Leitung als Verifizier-Standard genutzt. Nebestehende Grafik zeigt zwei mögliche TRL- Kalibrierungen mit Niedrigband-Lastabschlüssen. Ohne diese Abschlüsse kann der untere Frequenzbereich nicht kalibriert werden. In diesem Kalibrier- Kit ist die Leitung 1 (L1) eine Thru- Leitung mit Länge Null.

QMA Calibration Standards

QMA Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.15 dB ≤ 0.25 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 2.5^\circ$ $\leq 4.5^\circ$	DC to ≤ 4 > 4 to ≤ 18
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.15 dB ≤ 0.20 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 2.2^\circ$ $\leq 4.0^\circ$	DC to ≤ 4 > 4 to ≤ 18
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 26 dB	DC to ≤ 4 > 4 to ≤ 18
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.50 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 18
Adaptors, phase matched Adapter, phasenangepasst	Return Loss/ Rückflusdämpfung	≥ 32 dB ≥ 24 dB	DC to ≤ 4 > 4 to ≤ 18
	Accuracy of Electrical Length/ Toleranz elektrische Länge	± 0.25 mm ($\pm 5.4^\circ$ at 18 GHz)	DC to 18
Adaptors, phase matched (RPC- 3.50/QMA) Adapter, phasenangepasst (RPC- 3.50/QMA)	Return Loss/ Rückflusdämpfung	≥ 32 dB ≥ 24 dB	DC to ≤ 4 > 4 to ≤ 18
	Accuracy of Electrical Length/ Toleranz elektrische Länge	± 0.25 mm ($\pm 5.4^\circ$ at 18 GHz)	DC to 18

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit QMA, Full Version

Kalibrier- Kit QMA, Full Version

Calibration Kit

Kalibrier- Kit

Full Version

Ordering Number	Remarks
28 CK 100-150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
28 S 12L- 000 N3	Open circuit (male) Leerlauf (Stecker)	1	
28 K 12L- 000 N3	Open circuit (female) Leerlauf (Kuppler)	1	
28 S 12S- 000 N3	Short circuit (male) Kurzschluss (Stecker)	1	
28 K 12S- 000 N3	Short circuit (female) Kurzschluss (Kuppler)	1	
28 S 150- C10 N3	Broadband load (male) Breitband- Last (Stecker)	2	
28 K 150- C10 N3	Broadband load (female) Breitband- Last (Kuppler)	2	
03 S 128- S20 N3	Adaptor (RPC- 3.50 male - QMA male) Adapter (RPC- 3.50 Stecker - QMA Stecker)	1	phase matched phasenangepasst
03 S 128- K20 N3	Adaptor (RPC- 3.50 male - QMA female) Adapter (RPC- 3.50 Stecker - QMA Kuppler)	1	phase matched phasenangepasst
03 K 128- S20 N3	Adaptor (RPC- 3.50 female - QMA male) Adapter (RPC- 3.50 Kuppler - QMA Stecker)	1	phase matched phasenangepasst
03 K 128- K20 N3	Adaptor (RPC- 3.50 female - QMA female) Adapter (RPC- 3.50 Kuppler - QMA Kuppler)	1	phase matched phasenangepasst
28 S 121- S20 N3	Adaptor (QMA male - male) Adapter (QMA Stecker - Stecker)	1	phase matched phasenangepasst
28 S 121- K20 N3	Adaptor (QMA male - female) Adapter (QMA Stecker - Kuppler)	1	phase matched phasenangepasst
28 K 121- K20 N3	Adaptor (QMA female - female) Adapter (QMA Kuppler - Kuppler)	1	phase matched phasenangepasst
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D VW2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

SMP Calibration Standards

SMP Kalibrier- Standards

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.25 dB ≤ 0.40 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 3.0^\circ$ $\leq 5.0^\circ$	DC to ≤ 4 > 4 to ≤ 18
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.20 dB ≤ 0.30 dB	DC to ≤ 4 > 4 to ≤ 18
	Deviation from Nominal Phase/ Nominale Phasenabweichung	$\leq 2.5^\circ$ $\leq 4.0^\circ$	DC to ≤ 4 > 4 to ≤ 18
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 26 dB ≥ 23 dB	DC to ≤ 4 > 4 to ≤ 18
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.50 \Omega$	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 18
Adaptors, phase matched Adapter, phasenangepasst	Return Loss/ Rückflusdämpfung	≥ 26 dB ≥ 20 dB	DC to ≤ 4 > 4 to ≤ 18
	Accuracy of Electrical Length/ Toleranz elektrische Länge	± 0.20 mm ($\pm 4.3^\circ$ at 18 GHz)	DC to 18
Adaptors (RPC- 2.92/SMP) Adapter (RPC- 2.92/SMP)	Return Loss/ Rückflusdämpfung	≥ 32 dB ≥ 26 dB	DC to ≤ 4 > 4 to ≤ 18
15 cm Cable assembly (SMA/SMP) 15 cm Kabel, konfektioniert (SMA/ SMP)	Return Loss/ Rückflusdämpfung	≥ 23 dB ≥ 20 dB	DC to ≤ 4 > 4 to ≤ 18
	Insertion Loss/Dämpfung Insertion Loss/Dämpfung	≤ 0.25 dB ≤ 0.50 dB	DC to ≤ 4 > 4 to ≤ 18

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).

Rosenberger connectors fulfill in principle the indicated data of the Technical Characteristics. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit SMP, Industrial Version

Kalibrier- Kit SMP, Industrial Version

Calibration Kit

Kalibrier- Kit

Industrial Version

Ordering Number	Remarks
19 CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
19 S 10L- 000 D3	Open circuit (male) Leerlauf (Stecker)	1	
19 K 10L- 000 D3	Open circuit (female) Leerlauf (Kuppler)	1	
19 S 10S- 000 D3	Short circuit (male) Kurzschluss (Stecker)	1	
19 K 10S- 000 D3	Short circuit (female) Kurzschluss (Kuppler)	1	
19 S 150- C10 D3	Broadband load (male) Breitband- Last (Stecker)	1	
19 K 150- C10 D3	Broadband load (female) Breitband- Last (Kuppler)	1	
19 S 101- S20 D3	Adaptor (SMP male - male) Adapter (SMP Stecker - Stecker)	1	phase matched phasenangepasst
19 K 101- K20 D3	Adaptor (SMP female - female) Adapter (SMP Kuppler - Kuppler)	1	phase matched phasenangepasst
19 S 101- K20 D3	Adaptor (SMP male - female) Adapter (SMP Stecker - Kuppler)	1	phase matched phasenangepasst
LU5- 009- 150	Cable assembly (SMA male - SMP female) Kabel, konfektioniert (SMA Stecker - SMP Kuppler)	1	length 150 mm
LU5- 010- 150	Cable assembly (SMA male - SMP male) Kabel, konfektioniert (SMA Stecker - SMP Stecker)	1	length 150 mm
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZMW/Z/K

SnapN Calibration Standards

SnapN Kalibrier- Standards

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.20 dB	DC to ≤ 4 > 4 to ≤ 11
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 1.5° ≤ 3.0°	DC to ≤ 4 > 4 to ≤ 11
Short circuits ¹ Kurzschluss (male and female)	Return Loss/ Rückflusdämpfung	≤ 0.10 dB ≤ 0.15 dB	DC to ≤ 4 > 4 to ≤ 11
	Deviation from Nominal Phase/ Nominale Phasenabweichung	≤ 1.2° ≤ 2.5°	DC to ≤ 4 > 4 to ≤ 11
Broadband loads Breitband- Last (male and female)	Return Loss/ Rückflusdämpfung	≥ 40 dB ≥ 30 dB	DC to ≤ 4 > 4 to ≤ 11
	Resistance/Gleichstrom- Widerstand	50 Ω ± 0.50 Ω	DC
	Power Handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 11
Adaptor (female- female) Adapter (Kuppler- Kuppler)	Return Loss/ Rückflusdämpfung	≥ 36 dB ≥ 27 dB	DC to ≤ 4 > 4 to ≤ 11
Adaptor (male- male) Adapter (Stecker- Stecker)	Return Loss/ Rückflusdämpfung	≥ 32 dB ≥ 27 dB	DC to ≤ 4 > 4 to ≤ 11
Adaptors (both) Adapter (beide)	Accuracy of Electrical Length Toleranz elektrische Länge	± 0.10 mm (± 1.3° at 11 GHz)	DC to 11

1. The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.

Rosenberger connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit SnapN, Industrial Version

Kalibrier- Kit SnapN, Industrial Version

Calibration Kit SnapN

Kalibrier- Kit SnapN

Industrial Version

Ordering Number	Remarks
53Q CK 10A- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Kompo-
nenten verwenden.

Contents of calibration kit

Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
53 QS 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	
53 QK 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	
53 QS 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	
53 QK 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	
53 QS 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	
53 QK 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	
53 QS 121- S20 S3	Adaptor (SnapN male - male) Adapter (SnapN Stecker - Stecker)	1	phase matched phasenangepasst
53 QK 121- K20 S3	Adaptor (SnapN female - female) Adapter (SnapN Kuppler - Kuppler)	1	phase matched phasenangepasst
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D W2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Calibration Kit FAKRA- RF

Kalibrier- Kit FAKRA- HF

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
Open circuits ¹ Leerlauf (male and female)	Return loss/ Rückflusdämpfung	≤ 0.05 dB ≤ 0.10 dB ≤ 0.12 dB	DC to ≤ 1 > 1 to ≤ 3 > 3 to ≤ 6
	Deviation from nominal phase/ Nominale Phasenabweichung	$\leq 0.5^\circ$ $\leq 1.5^\circ$ $\leq 2.2^\circ$	DC to ≤ 1 > 1 to ≤ 3 > 3 to ≤ 6
Short circuits ¹ Kurzschluss (male and female)	Return loss/ Rückflusdämpfung	≤ 0.05 dB ≤ 0.10 dB ≤ 0.12 dB	DC to ≤ 1 > 1 to ≤ 3 > 3 to ≤ 6
	Deviation from nominal phase/ Nominale Phasenabweichung	$\leq 0.5^\circ$ $\leq 1.2^\circ$ $\leq 1.8^\circ$	DC to ≤ 1 > 1 to ≤ 3 > 3 to ≤ 6
Broadband loads Breitband- Last (male and female)	Return loss/ Rückflusdämpfung	≥ 42 dB ≥ 40 dB ≥ 36 dB	DC to ≤ 1 > 1 to ≤ 3 > 3 to ≤ 6
	Resistance/Gleichstrom- Widerstand	$50 \Omega \pm 0.50 \Omega$	DC
	Power handling/Nennleistung	≤ 0.5 W (0° to 50° C)	DC to 6
Adaptors, phase matched Adapter, phasenangepasst	Return loss/ Rückflusdämpfung	≥ 38 dB ≥ 26 dB ≥ 21 dB	DC to ≤ 1 > 1 to ≤ 3 > 3 to ≤ 6
	Accuracy of electrical length/ Toleranz elektrische Länge	± 0.4 mm $(\pm 2.9^\circ$ at 6 GHz)	DC to 6

1. The specification for the opens and shorts are given as allowed deviation from the nominal model as defined in the test report included in the kit.

1. Die Spezifikationen für Leerlauf und Kurzschluss beziehen sich auf die nominale Phasenabweichung wie im Testreport angegeben (im Kalibrier- Kit enthalten).

Rosenberger connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

Calibration Kit FAKRA- RF, Full Version
Kalibrier- Kit FAKRA- HF, Full Version
Calibration Kit
Kalibrier- Kit
Full Version

Ordering Number	Remarks
59 CK 100- 150	Rosenberger calibration kits are delivered in stable wooden boxes including test reports. Lieferung von Kalibrier- Kits erfolgt in stabiler Holzbox einschließlich Testreport.

Please use the following part numbers for ordering single components.

Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.

Contents of Calibration Kit
Inhalt des Kalibrier- Kits

Ordering Number	Components	Quantity	Remarks
03 S 12L- 000 S3	Open circuit (male) Leerlauf (Stecker)	1	RPC- 3.50 Interface
03 K 12L- 000 S3	Open circuit (female) Leerlauf (Kuppler)	1	RPC- 3.50 Interface
03 S 12S- 000 S3	Short circuit (male) Kurzschluss (Stecker)	1	RPC- 3.50 Interface
03 K 12S- 000 S3	Short circuit (female) Kurzschluss (Kuppler)	1	RPC- 3.50 Interface
03 S 150- C10 S3	Broadband load (male) Breitband- Last (Stecker)	1	RPC- 3.50 Interface
03 K 150- C10 S3	Broadband load (female) Breitband- Last (Kuppler)	1	RPC- 3.50 Interface
03 K 159- S20 S3	Adaptor (RPC- 3.50 female - FAKRA RF male) Adapter (RPC- 3.50 Kuppler - FAKRA HF Stecker)	1	phase matched phasenangepasst
03 K 159- K20 S3	Adaptor (RPC- 3.50 female - FAKRA RF female) Adapter (RPC- 3.50 Kuppler - FAKRA HF Kuppler)	1	phase matched phasenangepasst
03 S 159- S20 S3	Adaptor (RPC- 3.50 male - FAKRA RF male) Adapter (RPC- 3.50 Stecker - FAKRA HF Stecker)	1	phase matched phasenangepasst
03 S 159- K20 S3	Adaptor (RPC- 3.50 male - FAKRA RF female) Adapter (RPC- 3.50 Stecker - FAKRA HF Kuppler)	1	phase matched phasenangepasst
03 W021- 000	Torque wrench Drehmomentschlüssel	1	8 mm wrench size / 0.9 Nm torque 8- mm- Schlüssel / 0.9 Nm Drehmoment
59 Z014- 000 Z	Plastic housing male Kunststoff- Gehäuse Stecker	10	Spare Housing Ersatzgehäuse
59 Z013- 000 Z	Plastic housing female Kunststoff- Gehäuse Kuppler	10	Spare Housing Ersatzgehäuse
-	3 1/2" disk on request 3 1/2"- Diskette auf Anfrage	1	Disk available for the following network analyzers: Diskette verfügbar für folgende Netzwerk- Analysatoren: A1: HP 8510C A2: HP 8752D/8753D VW2: Anritsu 37XXXA/B R1: R&S ZVR/ZVM/ZVK

Verification Kits

Verification Kit RPC- N, 50 Ω

Each verification device is electrically characterized on a network analyzer measurement system. These measurements are traceable to the Physikalisch- Technische Bundesanstalt Braunschweig (PTB) through mechanical and electrical paths.

Alle Verifizier- Komponenten werden mit einem Netzwerk- Analysator elektrisch geprüft und gemessen. Die Messungen sind rückführbar auf Normale der Physikalisch- Technischen Bundesanstalt Braunschweig (PTB).

Verification Kit

Verifizier- Kit

RPC- N, 50 Ω

Ordering Number	Remarks
05 CK 200- 150	Rosenberger verification kits are delivered in stable wooden boxes including test reports and network analyzer measurements. Lieferung von Verifizier- Kits erfolgt in stabiler Holzbox einschließlich Testreport und Messprotokoll.

Contents

Inhalt

Ordering Number	Remarks	Quantity	Components
05 AS 122- K20 S3	20 dB Attenuator/Dämpfungsglied	1	Please use the following part numbers for ordering single components. Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.
05 AS 122- K40 S3	40 dB Attenuator/Dämpfungsglied	1	
05 S 101- K100	50 Ω Air line/Luftleitung	1	
05 S 102- K100	25 Ω Mismatch air line/Fehlabschluss- Luftleitung	1	

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
20 dB Attenuator 20- dB- Dämpfungsglied (male and female)	Return Loss/Rückflusdämpfung Return Loss/Rückflusdämpfung Insertion Loss/Dämpfung Insertion Loss/Dämpfung	≥ 32 dB ≥ 26 dB 20 dB ± 0.30 dB 20 dB ± 0.50 dB	DC to ≤ 4 > 4 to ≤ 18 DC to ≤ 4 > 4 to ≤ 18
40 dB Attenuator 40- dB- Dämpfungsglied (male and female)	Return Loss/Rückflusdämpfung Return Loss/Rückflusdämpfung Insertion Loss/Dämpfung Insertion Loss/Dämpfung	≥ 32 dB ≥ 23 dB 40 dB ± 0.50 dB 40 dB ± 1.00 dB	DC to ≤ 4 > 4 to ≤ 18 DC to ≤ 4 > 4 to ≤ 18
50 Ω Air line 50- Ω- Luftleitung (male and female)	Return Loss/Rückflusdämpfung Return Loss/Rückflusdämpfung Insertion Loss/Dämpfung Insertion Loss/Dämpfung 50 Ω Air line Outer Conductor/Aussenleiter: Diameter/Durchmesser Length/Länge Inner Conductor/Innenleiter: Diameter/Durchmesser Length/Länge	≥ 40 dB ≥ 35 dB ≤ 0.08 dB ≤ 0.15 dB 7.000 mm ± 0.005 mm 100.00 mm + 0.02 mm 3.040 mm ± 0.010 mm 100.00 mm - 0.02 mm	0.3 to ≤ 4 > 4 to ≤ 18 0.04 to ≤ 4 > 4 to ≤ 18
25 Ω Mismatch air line 25- Ω- Fehlabschluss- Luftleitung (male and female)	25 Ω Mismatch air line Outer Conductor/Aussenleiter: Diameter/Durchmesser Length/Länge Inner Conductor/Innenleiter: Diameter/Durchmesser - 50 Ω Section/Abschnitt - 25 Ω Section/Abschnitt Length/Länge - Total - 25 Ω Section/Abschnitt	7.000 mm ± 0.005 mm 100.00 mm + 0.02 mm 3.040 mm ± 0.010 mm 4.615 mm ± 0.010 mm 100.00 mm - 0.02 mm 75.00 mm ± 0.05 mm	

Verification Kit RPC- 7

Verification Kits

Each verification device is electrically characterized on a network analyzer measurement system. These measurements are traceable to the Physikalisch- Technische Bundesanstalt Braunschweig (PTB) through mechanical and electrical paths.

Alle Verifizier-Komponenten werden mit einem Netzwerk-Analysator elektrisch geprüft und gemessen. Die Messungen sind rückführbar auf Normale der Physikalisch- Technischen Bundesanstalt Braunschweig (PTB).

Verification Kit

Verifizier- Kit

RPC- 7

Ordering Number	Remarks
07 CK 200- 150	Rosenberger verification kits are delivered in stable wooden boxes including test reports and network analyzer measurements. Lieferung von Verifizier- Kits erfolgt in stabiler Holzbox einschließlich Testreport und Messprotokoll.

Contents

Inhalt

Ordering Number	Remarks	Quantity	Components
07 AP 122- P20 S3	20 dB Attenuator/Dämpfungsglied	1	Please use the following part numbers for ordering single components. Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.
07 AP 122- P40 S3	40 dB Attenuator/Dämpfungsglied	1	
07 P 101- P100	50 Ω Air line/Luftleitung	1	
07 P 102- P100	25 Ω Mismatch air line/Fehlabschluss- Luftleitung	1	

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
20 dB Attenuator 20- dB- Dämpfungsglied (male and female)	Return Loss/Rückflusdämpfung Return Loss/Rückflusdämpfung Insertion Loss/Dämpfung Insertion Loss/Dämpfung	≥ 32 dB ≥ 26 dB $20 \text{ dB} \pm 0.30 \text{ dB}$ $20 \text{ dB} \pm 0.50 \text{ dB}$	DC to ≤ 4 > 4 to ≤ 18 DC to ≤ 4 > 4 to ≤ 18
40 dB Attenuator 40- dB- Dämpfungsglied (male and female)	Return Loss/Rückflusdämpfung Return Loss/Rückflusdämpfung Insertion Loss/Dämpfung Insertion Loss/Dämpfung	≥ 32 dB ≥ 23 dB $40 \text{ dB} \pm 0.50 \text{ dB}$ $40 \text{ dB} \pm 1.00 \text{ dB}$	DC to ≤ 4 > 4 to ≤ 18 DC to ≤ 4 > 4 to ≤ 18
50 Ω Air line 50- Ω - Luftleitung (male and female)	Return Loss/Rückflusdämpfung Return Loss/Rückflusdämpfung Insertion Loss/Dämpfung Insertion Loss/Dämpfung 50 Ω Air line Outer Conductor/Aussenleiter: Diameter/Durchmesser Length/Länge Inner Conductor/Innenleiter: Diameter/Durchmesser Length/Länge	≥ 45 dB ≥ 40 dB $\leq 0.08 \text{ dB}$ $\leq 0.15 \text{ dB}$ $7.000 \text{ mm} \pm 0.005 \text{ mm}$ $100.00 \text{ mm} + 0.02 \text{ mm}$ $3.040 \text{ mm} \pm 0.005 \text{ mm}$ $100.00 \text{ mm} - 0.02 \text{ mm}$	0.3 to ≤ 4 > 4 to ≤ 18 0.04 to ≤ 4 > 4 to ≤ 18
25 Ω Mismatch air line 25- Ω - Fehlabschluss- Luftleitung (male and female)	25 Ω Mismatch air line Outer Conductor/Aussenleiter: Diameter/Durchmesser Length/Länge Inner Conductor/Innenleiter: Diameter/Durchmesser - 50 Ω Section/Abschnitt - 25 Ω Section/Abschnitt Length/Länge - Total - 25 Ω Section/Abschnitt	 $7.000 \text{ mm} \pm 0.005 \text{ mm}$ $100.00 \text{ mm} + 0.02 \text{ mm}$ $3.040 \text{ mm} \pm 0.005 \text{ mm}$ $4.615 \text{ mm} \pm 0.005 \text{ mm}$ $100.00 \text{ mm} - 0.02 \text{ mm}$ $75.00 \text{ mm} \pm 0.02 \text{ mm}$	

Verification Kits

Verification Kit RPC- 3.50

Each verification device is electrically characterized on a network analyzer measurement system. These measurements are traceable to the Physikalisch-Technische Bundesanstalt Braunschweig (PTB) through mechanical and electrical paths.

Alle Verifizier-Komponenten werden mit einem Netzwerk-Analysator elektrisch geprüft und gemessen. Die Messungen sind rückführbar auf Normale der Physikalisch-Technischen Bundesanstalt Braunschweig (PTB).

Verification Kit

Verifizier- Kit

RPC- 3.50

Ordering Number	Remarks
03 CK 200- 150	Rosenberger verification kits are delivered in stable wooden boxes including test reports and network analyzer measurements. Lieferung von Verifizier- Kits erfolgt in stabiler Holzbox einschließlich Testreport und Messprotokoll.

Contents

Inhalt

Ordering Number	Remarks	Quantity	Components
03 AS 122- K20 S3	20 dB Attenuator/Dämpfungsglied	1	Please use the following part numbers for ordering single components. Bitte folgende Artikel- Nummern für Nachbestellungen von Einzel- Komponenten verwenden.
03 AS 122- K40 S3	40 dB Attenuator/Dämpfungsglied	1	
03 S 101- K100	50 Ω Air line/Luftleitung	1	
03 S 102- K100	25 Ω Mismatch air line/Fehlabschluss- Luftleitung	1	

Electrical Specifications

Elektrische Spezifikation

Devices Komponenten	Parameters Parameter	Specifications Spezifikation	Frequency range in GHz Frequenzbereich in GHz
20 dB Attenuator 20- dB- Dämpfungsglied (male and female)	Return Loss/Rückflusdämpfung Return Loss/Rückflusdämpfung Insertion Loss/Dämpfung Insertion Loss/Dämpfung	≥ 26 dB ≥ 20 dB $20 \text{ dB} \pm 0.30 \text{ dB}$ $20 \text{ dB} \pm 0.50 \text{ dB}$	DC to ≤ 4 > 4 to ≤ 26.5 DC to ≤ 4 > 4 to ≤ 26.5
40 dB Attenuator 40- dB- Dämpfungsglied (male and female)	Return Loss/Rückflusdämpfung Return Loss/Rückflusdämpfung Insertion Loss/Dämpfung Insertion Loss/Dämpfung	≥ 26 dB ≥ 20 dB $40 \text{ dB} \pm 0.40 \text{ dB}$ $40 \text{ dB} \pm 1.00 \text{ dB}$	DC to ≤ 4 > 4 to ≤ 26.5 DC to ≤ 4 > 4 to ≤ 26.5
50 Ω Air line 50- Ω - Luftleitung (male and female)	Return Loss/Rückflusdämpfung Return Loss/Rückflusdämpfung Insertion Loss/Dämpfung Insertion Loss/Dämpfung 50 Ω Air line Outer Conductor/Außenleiter: Diameter/Durchmesser Length/Länge Inner Conductor/Innenleiter: Diameter/Durchmesser Length/Länge	≥ 40 dB ≥ 35 dB ≤ 0.15 dB ≤ 0.30 dB $3.500 \text{ mm} \pm 0.005 \text{ mm}$ $100.00 \text{ mm} + 0.02 \text{ mm}$ $1.520 \text{ mm} \pm 0.010 \text{ mm}$ $100.00 \text{ mm} - 0.02 \text{ mm}$	0.3 to ≤ 4 > 4 to ≤ 26.5 0.04 to ≤ 4 > 4 to ≤ 26.5
25 Ω Mismatch air line 25- Ω - Fehlabschluss- Luftleitung (male and female)	25 Ω Mismatch air line Outer Conductor/Außenleiter: Diameter/Durchmesser Length/Länge Inner Conductor/Innenleiter: Diameter/Durchmesser - 50 Ω Section/Abschnitt - 25 Ω Section/Abschnitt Length/Länge - Total - 25 Ω Section/Abschnitt	$3.500 \text{ mm} \pm 0.005 \text{ mm}$ $100.00 \text{ mm} + 0.02 \text{ mm}$ $1.520 \text{ mm} \pm 0.010 \text{ mm}$ $2.307 \text{ mm} \pm 0.007 \text{ mm}$ $100.00 \text{ mm} - 0.02 \text{ mm}$ $75.00 \text{ mm} \pm 0.050 \text{ mm}$	

TEST CABLES

Test Cables & Interchangeable Port Connectors



Microwave test cables for vector network analyzers feature high flexibility while maintaining excellent electrical characteristics. Outstanding phase and amplitude stability are guaranteed by special construction techniques. A flexible armouring protects the microwave cable against mechanical damage.

Test cables are delivered as individual cable assemblies or cable sets including 2 cables with a length of 60 cm each. Custom-made types in other lengths are available on request. All standard cables are terminated at one end with a special reinforced testport connector, which mates with the connector on the measuring equipment. Test cables sets are supplied in stable wooden boxes.

Overview

VA26 Test Cables

with RPC- 3.50 and/or RPC- SL connectors: for applications up to 26.5 GHz
with RPC- N (50 Ω) and/or RPC- 7 connectors: for applications up to 18 GHz

VA40 Test Cables

with RPC- 2.92 and/or RPC- SL connectors: for applications up to 40 GHz

VA41 Test Cables

with RPC- 2.92, RPC- 2.40 and/or RPC- SL connectors: for applications up to 40 GHz

VA50 Test Cables

with RPC- 2.40 connectors: for applications up to 50 GHz

VA75 Test Cables

With RPC- N (75 Ω) connectors: for applications up to 4 GHz

Test Cables with Interchangeable Connector Heads

Rosenberger offers a wide range of connector heads for test setups which often require other connector series, e.g. N, PC- 7 or SMA connectors. Due to the special cable interface, mounting of changeable connector heads is very easy to handle, without any need for tools. Thus, test cables can be readily adapted to the required connector types already available on the DUT.

Interchangeable Port Connector System

The **Rosenberger** Interchangeable Port Connector System was developed for use with test equipment featuring a test port that will be continually mated and re- mated. In a heavy use environment the test port is readily damaged and this can entail in large repair expenses. The **Rosenberger** Interchangeable Port Connector allows the equipment/device interface to be fully protected from damage.

The Interchangeable Port Connector consists of a panel mounting half and a sexless interface. This interface uses two spring loaded butt contacts, which ensure that no wear occurs during mating and allows no possibility of damage due to mismatching of the connector halves.

Testkabel für vektorielle Netzwerkanalysatoren weisen eine hohe Flexibilität bei sehr konstanten elektrischen Werten auf. Konstruktionsbedingt werden ausgezeichnete Werte für die Phasen- und Amplitudenstabilität bei Biegung erreicht. Die Kabel sind durch eine flexible Spezialarmierung gegen Beschädigungen geschützt.

Die Testkabel werden als Einzelkabel oder als Kabelsatz, bestehend aus 2 Kabeln mit einer Standardlänge von 60 cm, geliefert. Sonderanfertigungen in anderen Längen sind möglich. Auf einer Seite weisen alle Standardkabel einen speziellen verstärkten Testportstecker auf, der zu den jeweiligen Messgeräteanschlüssen kompatibel ist. Die Lieferung von Kabelsätzen erfolgt in einer stabilen Holzschatulle.

Überblick

VA 26- Testkabel

Mit RPC- 3.50- und/oder RPC- SL Steckverbindern: für Anwendungen bis 26.5 GHz

Mit RPC- N (50 Ω)- und/oder RPC- 7-Steckverbindern: für Anwendungen bis 18 GHz

VA 40- Testkabel

Mit RPC- 2.92- und/oder RPC- SL-Steckverbindern: für Anwendungen bis 40 GHz

VA 41- Testkabel

Mit RPC- 2.92-, RPC- 2.40- und/oder RPC- SL- Steckverbindern: für Anwendungen bis 40 GHz

VA 50- Testkabel

Mit RPC- 2.40-Steckverbindern: für Anwendungen bis 50 GHz

VA 75- Testkabel

Mit RPC- N (75 Ω)-Steckverbindern: für Anwendungen bis 4 GHz

Testkabel mit austauschbaren Wechselköpfen

Für Messaufbauten mit anderen Steckverbinder- Serien, z.B. N, PC- 7 oder SMA, bietet Rosenberger eine Vielzahl von Steckerköpfen. Das spezielle Kabel- Interface ermöglicht dem Anwender, Steckerköpfe ohne Werkzeug selbst zu wechseln und Testkabel auf die gewünschte Steckverbinder- Serie umzurüsten.

Wechselport- Steckersystem

*Das **Rosenberger** Wechselport- Steckersystem wurde für Messgeräte entwickelt, deren Testports durch Serienmessungen stark beansprucht werden und die an die verschiedenen Steckerfamilien, ohne Einsatz von Übergängen, in kurzer Zeit angepasst werden müssen. Durch den Einsatz des **Rosenberger** Wechselport- Steckersystems wird der Ausgangsstecker des Messgerätes sicher vor Beschädigung geschützt.*

Das Wechselport- Steckersystem besteht aus einem Gehäuseeinbauteil und einem speziell entwickelten Innenleistersystem, das eine Abnutzung der Innenleiterkontaktfläche verhindert. Die beiden federnden Innenleiter berühren sich nur auf ihren Kontaktflächen und gewährleisten so wiederholte Steckungen ohne Verschleiß.

Test Cables

The interface between the panel mount and the adaptor is slotted. This ensures that at no time the mating faces will be allowed to rotate, thus preventing any damage. Adaptors can be interchanged and are available in different connector series.

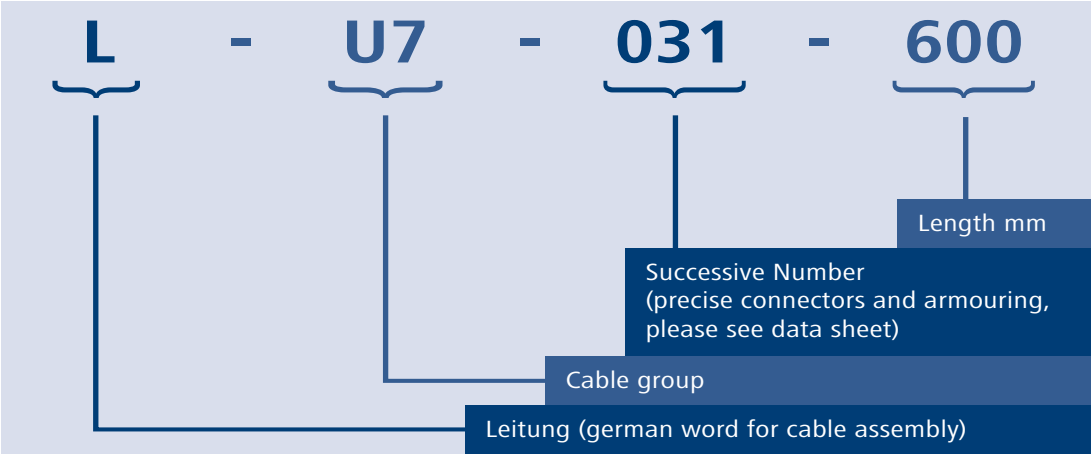
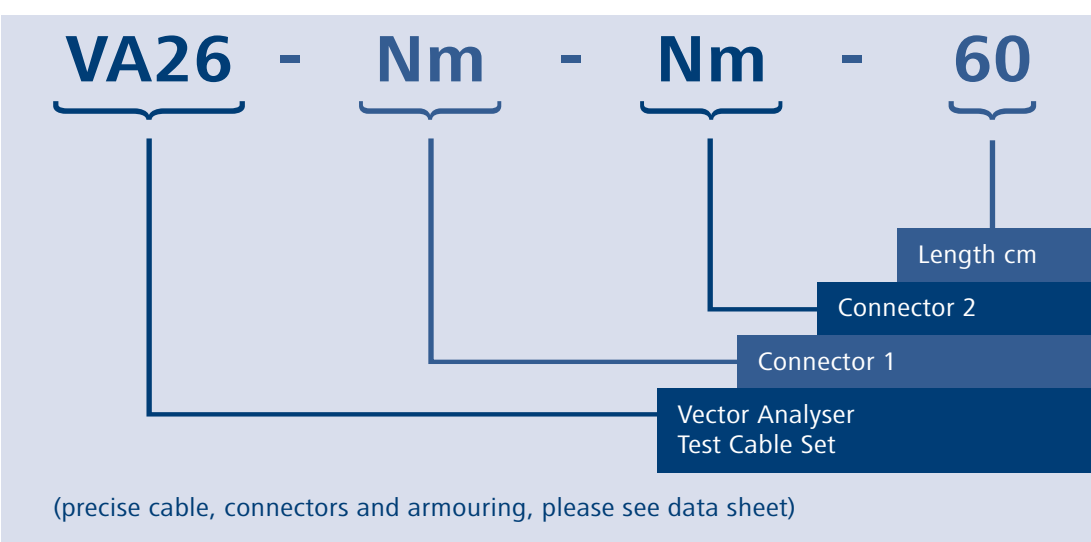
The connector heads for these two ranges are not compatible and can be used inside their own system only.

Durch die im Gehäuse- Verbindungsstück eingefräste Nut ist eine definierte Positionierung der verwendeten Adapter gewährleistet. Die Adapter können leicht gewechselt werden und sind für verschiedene Steckerfamilien lieferbar.

Die Steckerköpfe sind nur innerhalb ihres Systems verwendbar und nicht untereinander austauschbar.

Number Designation

Nummernschlüssel



Technical Data

Technische Daten

Cable Type	VA26	VA26	VA40 / VA41	VA 50
Length	60 cm	60 cm	60 cm	60 cm
Max. frequency range	18 GHz	26.5 GHz	40 GHz	50 GHz
Insertion loss	< 1.3 dB @ DC to 18 GHz	< 1.5 dB @ DC to 26.5 GHz	< 2.0 dB @ DC to 40 GHz	< 2.8 dB @ DC to 50 GHz
Return loss	28 dB @ DC to 4 GHz 20 dB @ 4 GHz to 18 GHz	26 dB @ DC to 4 GHz 20 dB @ 4 GHz to 26.5 GHz	26 dB @ DC to 4 GHz 17 dB @ 4 GHz to 40 GHz	26 dB @ DC to 4 GHz 17 dB @ 4 GHz to 50 GHz
Max. phase deviation ¹ (after 90° bending)	< 0.5° @ DC to 4 GHz < 2.0° @ 4 GHz to 18 GHz	< 1.0° @ DC to 4 GHz < 3.0° @ 4 GHz to 26.5 GHz	< 1.3° @ DC to 4 GHz < 6.0° @ 4 GHz to 40 GHz	< 1.3° @ DC to 4 GHz < 7.0° @ 4 GHz to 50 GHz
max. phase deviation ¹ (straight after 3x90° bending)	< 0.5° @ DC to 4 GHz < 1.5° @ 4 GHz to 18 GHz	< 0.5° @ DC to 4 GHz < 1.5° @ 4 GHz to 26.5 GHz	< 1.0° @ DC to 4 GHz < 4.0° @ 4 GHz to 40 GHz	< 1.0° @ DC to 4 GHz < 4.5° @ 4 GHz to 50 GHz
Amplitude stability ¹	< 0.03 dB @ DC to 4 GHz < 0.05 dB @ 4 GHz to 18 GHz	< 0.03 dB @ DC to 4 GHz < 0.05 dB @ 4 GHz to 26.5 GHz	< 0.03 dB @ DC to 4 GHz < 0.08 dB @ 4 GHz to 40 GHz	< 0.03 dB @ DC to 4 GHz < 0.08 dB @ 4 GHz to 50 GHz
Return loss stability ²	> 48 dB @ DC to 4 GHz > 40 dB @ 4 GHz to 18 GHz	> 48 dB @ DC to 4 GHz > 40 dB @ 4 GHz to 26.5 GHz	> 45 dB @ DC to 4 GHz > 35 dB @ 4 GHz to 40 GHz	> 45 dB @ DC to 4 GHz > 35 dB @ 4 GHz to 50 GHz

1. The test cable is terminated with a short circuit and tested on a calibrated vector network analyzer with a mandrel of 10 cm diameter. The one-way transmission phase stability is determined by dividing the two-way transmission phase measurement by two. The one-way transmission loss stability is determined by dividing the two-way transmission loss measurement by two. The DATA/MEM feature provides an indication of both stabilities.

2. The test cable is terminated with a fixed load and tested on a calibrated vector network analyzer with a mandrel of 10 cm diameter. The DATA/MEM feature provides an indication of the return loss stability.

1. Das Testkabel ist mit einem Kurzschluss abgeschlossen und wird an einem kalibrierten Netzwerkanalysator mit einem Biegedurchmesser von 10 cm getestet. Die Durchgangs-Phasenstabilität erhält man, indem man die Rückfluss-Phasenstabilität durch zwei teilt. Die Durchgangs-Amplitudenstabilität erhält man, indem man die Rückfluss-Amplitudenstabilität durch zwei teilt. Die DATA/MEM Funktion liefert eine Darstellung beider Stabilitäten.

2. Das Testkabel ist mit einem Festabschluss abgeschlossen und wird an einem kalibrierten Netzwerkanalysator mit einem Biegedurchmesser von 10 cm getestet. Die DATA/MEM Funktion liefert eine Darstellung der Rückfluss-Dämpfungsstabilität.

Test Cables

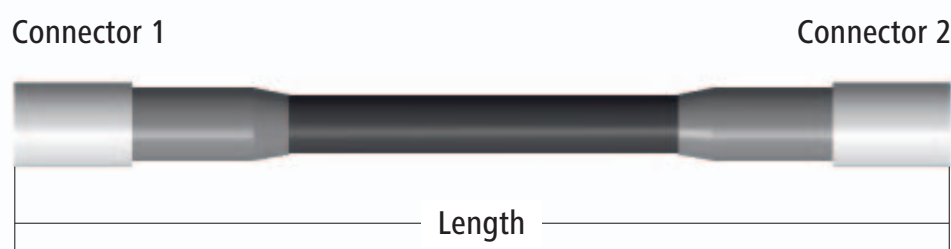
Testkabel



Test Cable Sets

Testkabelsets

Ordering Number	Return Loss	Frequency	Length	Cable	Cable Assemblies	Connector 1	Connector 2
VA26- 3.50m- 3.50f- 60	≥ 26 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 26.5 GHz	DC to 26.5 GHz	600 mm	RTK 162	2x LU7- 055- 600	RPC- 3.50 male 03 S 123- 2U7S3	RPC- 3.50 female 03 K 123- 2U7S3
VA26- Nm- Nm- 60	≥ 28 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	600 mm	RTK 162	2x LU7- 042- 600	RPC- N 50 Ω male 05 S 123- 2U7S3	RPC- N 50 Ω male 05 S 123- 2U7S3
VA26- PC7- PC7- 60	≥ 28 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	600 mm	RTK 162	2x LU7- 070- 600	RPC- 7 07 P 123- 2U7S3	RPC- 7 07 P 123- 2U7S3
VA26- TP- 3.50- 60	≥ 26 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 26.5 GHz	DC to 26.5 GHz	600 mm	RTK 162	1x LU7- 039- 600 1x LU7- 043- 600	RPC- 3.50 ruggedized female 03 KR 123- 2U7S3	RPC- 3.50 male and female 03 S 123- 2U7S3 03 K 123- 2U7S3
VA26- TP- N- 60	≥ 28 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	600 mm	RTK 162	1x LU7- 069- 600 1x LU7- 056- 600	RPC- 3.50 ruggedized female 03 KR 123- 2U7S3	RPC- N 50 Ω male and female 05 S 123- 2U7S3 05 K 123- 2U7S3
VA26- TP- PC7- 60	≥ 28 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	600 mm	RTK 162	2x LU7- 031- 600	RPC- 3.50 ruggedized female 03 KR 123- 2U7S3	RPC- 7 07 P 123- 2U7S3
VA26- TP- W- 60	≥ 26 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 26.5 GHz	DC to 26.5 GHz	600 mm	RTK 162	2x LU7- 035- 600	RPC- 3.50 ruggedized female 03 KR 123- 2U7S3	RPC- SL 26.5 GHz female 04 K 123- 2U7S3
VA40- TP- 2.92- 60	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	1x LU1- 005- 600 1x LU1- 006- 600	RPC- 2.92 ruggedized female 02 KR 123- 2U1S3	RPC- 2.92 male and female 02 S 123- 2U1S3 02 K 123- 2U1S3
VA40- TP- W- 60	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	2x LU1- 022- 600	RPC- 2.92 ruggedized female 02 KR 123- 2U1S3	RPC- SL 40 GHz female P4 K 123- 2U1S3
VA41- TP- 2.40- 60	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	1x LU1- 003- 600 1x LU1- 025- 600	RPC- 2.40 ruggedized female 09 KR 123- 2U1S3	RPC- 2.40 male and female 09 S 123- 2U1S3 09 K 123- 2U1S3
VA41- TP- 2.92- 60	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	1x LU1- 034- 600 1x LU1- 045- 600	RPC- 2.40 ruggedized female 09 KR 123- 2U1S3	RPC- 2.92 male and female 02 S 123- 2U1S3 02 K 123- 2U1S3
VA41- TP- W- 60	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	2x LU1- 004- 600	RPC- 2.40 ruggedized female 09 KR 123- 2U1S3	RPC- SL 40 GHz female P4 K 123- 2U1S3
VA50- TP- 2.40- 60	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 50 GHz	DC to 50 GHz	600 mm	RTK 125	1x LU8- 005- 600 1x LU8- 006- 600	RPC- 2.40 ruggedized female 09 KR 123- 2U1S3	RPC- 2.40 male and female 09 S 123- 2U1S3 09 K 123- 2U1S3
VA75- Nm- Nm- 60	≥ 28 dB @ DC to 3 GHz ≥ 23 dB @ 3 GHz to 4 GHz	DC to 4 GHz	600 mm	RG 216/U	2x L20- 001- 600	RPC- N 75 Ω male P5 S 123- 320CS	RPC- N 75 Ω male P5 S 123- 320CS



Cable Assemblies

Cable Assemblies

Ordering Number	Return Loss	Frequency	Length	Cable	Connector 1	Connector 2	Armouring
L20- 001- 600	≥ 28 dB @ DC to 3 GHz ≥ 23 dB @ 3 GHz to 4 GHz	DC to 4 GHz	600 mm	RG 216/U	RPC- N 75 Ω male, P5 S 123- 320CS	RPC- N 75 Ω male, P5 S 123- 320CS	Protection braid
LU1- 003- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	RPC- 2.40 female ruggedized, 09 KR 123- 2U1S3	RPC- 2.40 male, 09 S 123- 2U1S3	ETFE Tubing with protection braid
LU1- 004- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	RPC- 2.40 female ruggedized, 09 KR 123- 2U1S3	RPC- SL 40 GHz female, P4 K 123- 2U1S3	ETFE Tubing with protection braid
LU1- 005- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	RPC- 2.92 female ruggedized, 02 KR 123- 2U1S3	RPC- 2.92 male, 02 S 123- 2U1S3	ETFE Tubing with protection braid
LU1- 006- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	RPC- 2.92 female ruggedized, 02 KR 123- 2U1S3	RPC- 2.92 female, 02 K 123- 2U1S3	ETFE Tubing with protection braid
LU1- 022- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	RPC- 2.40 female ruggedized, 02 KR 123- 2U1S3	RPC- 2.40 female, P4 K 123- 2U1S3	ETFE Tubing with protection braid
LU1- 025- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	RPC- 2.40 female ruggedized, 09 KR 123- 2U1S3	RPC- 2.40 female, 09 K 123- 2U1S3	ETFE Tubing with protection braid
LU1- 034- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	RPC- 2.40 female ruggedized, 09 KR 123- 2U1S3	RPC- 2.92 male, 02 S 123- 2U1S3	ETFE Tubing with protection braid
LU1- 045- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 40 GHz	DC to 40 GHz	600 mm	RTK 106	RPC- 2.40 female ruggedized, 09 KR 123- 2U1S3	RPC- 2.92 female, 02 K 123- 2U1S3	ETFE Tubing with protection braid
LU5- 009- 150	≥ 23 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	150 mm	RTK 092	SMP female, 19 K 101- 2U5E4	SMA male, 32 S 101- 2U5E3	N/A
LU5- 010- 150	≥ 23 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	150 mm	RTK 092	SMP male, 19 K 101- 2U5E4	SMA male, 32 S 101- 2U5E3	N/A
LU7- 031- 600	≥ 28 dB @ DC to 4 GHz ≥ 20 dB @ 4 to 18 GHz	DC to 18 GHz	600 mm	RTK 162	RPC- 3.50 female ruggedized, 03 KR 123- 2U7S3	RPC- 7, 07 P 123- 2U7S3	ETFE Tubing with protection braid
LU7- 035- 600	≥ 26 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 26.5 GHz	DC to 26.5 GHz	600 mm	RTK 162	RPC- 3.50 female ruggedized, 03 KR 123- 2U7S3	RPC- SL 26.5 GHz female, 04 K 123- 2U7S3	ETFE Tubing with protection braid
LU7- 039- 600	≥ 26 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 26.5 GHz	DC to 26.5 GHz	600 mm	RTK 162	RPC- 3.50 male, 03 S 123- 2U7S3	RPC- 3.50 female ruggedized, 03 KR 123- 2U7S3	ETFE Tubing with protection braid
LU7- 042- 600	≥ 28 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	600 mm	RTK 162	RPC- N 50 Ω male, 05 S 123- 2U7S3	RPC- N 50 Ω male, 05 S 123- 2U7S3	ETFE Tubing with protection braid
LU7- 043- 600	≥ 26 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 26.5 GHz	DC to 26.5 GHz	600 mm	RTK 162	RPC- 3.50 female, 03 K 123- 2U7S3	RPC- 3.50 female ruggedized, 03 KR 123- 2U7S3	ETFE Tubing with protection braid
LU7- 055- 600	≥ 26 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 26.5 GHz	DC to 26.5 GHz	600 mm	RTK 162	RPC- 3.50 male, 03 S 123- 2U7S3	RPC- 3.50 female, 03 K 123- 2U7S3	ETFE Tubing with protection braid

Test Cables

Test Cables

Ordering Number	Return Loss	Frequency	Length	Cable	Connector 1	Connector 2	Armouring
LU7- 056- 600	≥ 28 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	600 mm	RTK 162	RPC- 3.50 female ruggedized, 03 KR 123- 2U7S3	RPC- N 50 Ω female, 05 K 123- 2U7S3	ETFE Tubing with pro- tection braid
LU7- 069- 600	≥ 28 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	600 mm	RTK 162	RPC- 3.50 female ruggedized, 03 KR 123- 2U7S3	RPC- N 50 Ω male, 05 S 123- 2U7S3	ETFE Tubing with pro- tection braid
LU7- 070- 600	≥ 28 dB @ DC to 4 GHz ≥ 20 dB @ 4 GHz to 18 GHz	DC to 18 GHz	600 mm	RTK 162	RPC- 7, 07 P 123- 2U7S3	RPC- 7, 07 P 123- 2U7S3	ETFE Tubing with pro- tection braid
LU8- 005- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 50 GHz	DC to 50 GHz	600 mm	RTK 125	RPC- 2.40 male, 09 S 123- 2U8S3	RPC- 2.40 female ruggedized, 09 KR 123- 2U8S3	ETFE Tubing with pro- tection braid
LU8- 006- 600	≥ 26 dB @ DC to 4 GHz ≥ 17 dB @ 4 GHz to 50 GHz	DC to 50 GHz	600 mm	RTK 125	RPC- 2.40 female, 09 K 123- 2U8S3	RPC- 2.40 female ruggedized, 09 KR 123- 2U8S3	ETFE Tubing with pro- tection braid

Technical Data RPC- SL 26.5 GHz

Technische Daten RPC- SL 26.5 GHz

Applicable standards		Anwendbare Standards
Interface according to	Interchangeable port connector system	Interface gemäß

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 26.5 GHz	Frequenzbereich
Return loss (mated pair)	≥ 21 dB, DC to 26.5 GHz	Rückflußdämpfung (gestecktes Paar)
Insertion loss (mated pair)	≤ 0.03 dB x $\sqrt{f}$ [GHz]	Dämpfung (gestecktes Paar)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 3.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 2.0 m Ω	Übergangswiderstand Außenleiter
Test voltage	1000 V rms	Prüfspannung
Working voltage	335 V rms	Betriebsspannung
RF- leakage	≥ 100 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 3000	Steckzyklen
Center contact captivation	≥ 27 N	Innenleiter Haltekraft
Coupling torque recommended	2.0 Nm	Anzugsdrehmoment empfohlen

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	MIL- STD 202, Method 107, Condition B	Temperaturzyklen
Corrosion resistance	MIL- STD 202, Method 101, Condition B	Korrosionsbeständigkeit
Vibration	MIL- STD 202, Method 204, Condition D	Vibration
Shock	MIL- STD 202, Method 213, Condition I	Schock
Moisture resistance	MIL- STD 202, Method 106	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

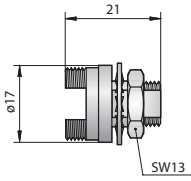
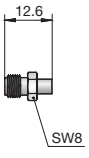
Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, gold- plated	Außenleiter
Dielectric	PS	Dielektrikum

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

Rosenberger- Steckverbinder erfüllen grundsätzlich die in den Technischen Daten angegebenen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und - ausführung können einzelne Werte von Steckverbindern hiervon abweichen. Spezifische Datenblätter zu einzelnen Produkten erhalten Sie auf Anfrage von Ihrem Rosenberger- Ansprechpartner.

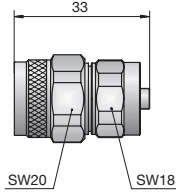
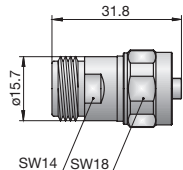
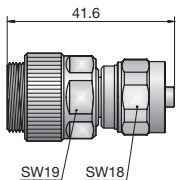
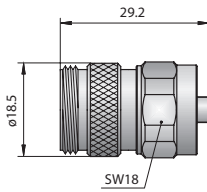
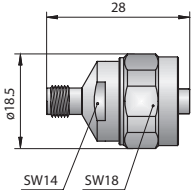
Adaptor and Cable Clamp RPC- SL 26.5 GHz

Adapter und Kabelabfangung RPC- SL 26.5 GHz

Ordering Number	Version	Remarks	Return Loss	
04 K 529- K00 S3	straight	RPC- SL 26.5 GHz female - female, panel mount, round flange	≥ 21 dB @ DC to 26.5 GHz	
03 Z 001- 272 D	straight	RPC- 3.50 cable clamp for 04K529- K00S3, UT 141		

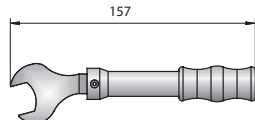
Adaptor RPC- SL 26.5 GHz

Adapter RPC- SL 26.5 GHz

Ordering Number	Version	Remarks	Return Loss	
05 S 104- S00 S3	straight	RPC- N 50 Ω male - RPC- SL 26.5 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz	
05 K 104- S00 S3	straight	RPC- N 50 Ω female - RPC- SL 26.5 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz	
07 P 104- S00 S3	straight	RPC- 7 - RPC- SL 26.5 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz	
03 S 104- S00 S3	straight	RPC- 3.50 male - RPC- SL 26.5 GHz male	≥ 21 dB @ DC to 26.5 GHz	
03 K 104- S00 S3	straight	RPC- 3.50 female - RPC- SL 26.5 GHz male	≥ 21 dB @ DC to 26.5 GHz	

Torque Wrench

Drehmomentschlüssel

Ordering Number	Remarks	
04 VV021- 000	flat 18 mm - 2 Nm torque for RPC- SL 26.5 GHz, RPC- SL 40 GHz	

Technical Data RPC- SL 40 GHz

Technische Daten RPC- SL 40 GHz

Applicable standards		Anwendbare Standards
Interface according to	Interchangeable port connector system	Interface gemäß

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	DC to 40 GHz	Frequenzbereich
Return loss (mated pair)	≥ 19 dB, DC to 40 GHz	Rückflußdämpfung (gestecktes Paar)
Insertion loss (mated pair)	≤ 0.04 dB $\times \sqrt{f[\text{GHz}]}$	Dämpfung (gestecktes Paar)
Insulation resistance	≥ 5 G Ω	Isolationswiderstand
Center contact resistance	≤ 3.0 m Ω	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 2.0 m Ω	Übergangswiderstand Außenleiter
Test voltage	750 V rms	Prüfspannung
Working voltage	250 V rms	Betriebsspannung
RF- leakage	≥ 100 dB up to 1 GHz	Schirmdämpfung

Mechanical data		Mechanische Daten
Mating cycles	≥ 3000	Steckzyklen
Center contact captivation	≥ 22 N	Innenleiter Haltekraft
Coupling torque recommended	2.0 Nm	Anzugsdrehmoment empfohlen

Enviromental data		Umweltdaten
Temperature range	- 40°C to +85°C	Temperaturbereich
Thermal shock	MIL- STD 202, Method 107, Condition B	Temperaturzyklen
Corrosion resistance	MIL- STD 202, Method 101, Condition B	Korrosionsbeständigkeit
Vibration	MIL- STD 202, Method 204, Condition D	Vibration
Shock	MIL- STD 202, Method 213, Condition I	Schock
Moisture resistance	MIL- STD 202, Method 106	Feuchtigkeitsbeständigkeit
Max. soldering temperature	IEC 61760- 1, +260°C for 10 sec.	Maximale Löttemperatur

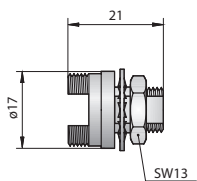
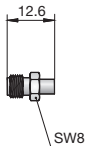
Materials		Materialien
Center contact	Beryllium copper, gold- plated	Innenleiter
Outer contact	Stainless steel, gold- plated	Außenleiter
Dielectric	PS	Dielektrikum

Rosenberger- connectors fulfill in principle the indicated data of the Technical Data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and execution. Specific data sheets for particular products can be provided on request from your Rosenberger sales partner.

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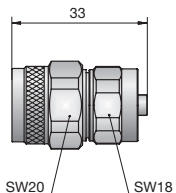
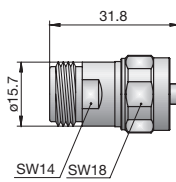
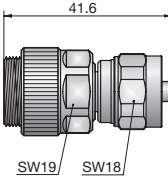
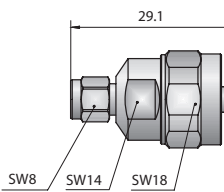
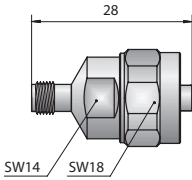
Adaptor and Cable Clamp RPC- SL 40 GHz

Adapter und Kabelabfangung RPC- SL 40 GHz

Ordering Number	Version	Remarks	Return Loss	
P4 K 52A- K00 S3	straight	RPC- SL 40 GHz female - female, panel mount, round flange	≥ 21 dB @ DC to 26.5 GHz ≥ 16 dB @ 26.5 to 40 GHz	
02 Z 001- 2W9 D	straight	RPC- 2.92 cable clamp for P4K52A- K00S3, UT 118		

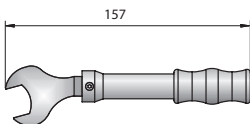
Adaptor RPC- SL 40 GHz

Adapter RPC- SL 40 GHz

Ordering Number	Version	Remarks	Return Loss	
05 S 1P4- S00 S3	straight	RPC- N 50 Ω male - RPC- SL 40 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz	
05 K 1P4- S00 S3	straight	RPC- N 50 Ω female - RPC- SL 40 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz	
07 P 1P4- S00 S3	straight	RPC- 7 - RPC- SL 40 GHz male, max. Frequency 18 GHz	≥ 21 dB @ DC to 18 GHz	
02 S 1P4- S00 S3	straight	RPC- 2.92 male - RPC- SL 40 GHz male	≥ 21 dB @ DC to 26.5 GHz ≥ 19 dB @ 26.5 to 40 GHz	
02 K 1P4- S00 S3	straight	RPC- 2.92 female - RPC- SL 40 GHz male	≥ 21 dB @ DC to 26.5 GHz ≥ 19 dB @ 26.5 to 40 GHz	

Torque Wrench

Drehmomentschlüssel

Ordering Number	Remarks	
04 W 021- 000	flat 18 mm - 2 Nm torque for RPC- SL 26.5 GHz, RPC- SL 40 GHz	

TEST DEVICES

Test
Devices



Test Devices

For microwave measurements Rosenberger offers a wide range of test devices designed for different requirements: from low-frequency devices for simple measurements to high-demanded components which permit high-precision broadband measurements:

- Attenuators up to 26.5 GHz for various connector series
- Mismatches
- Matching attenuators
- T-calibration adaptors
- Test accessories, e.g. gauges or tools

Additional devices, e. g. feed-through terminations or waveguide components, are available on request.

Test-Komponenten

Rosenberger bietet für verschiedene Aufgaben in der Mikrowellenmesstechnik eine Reihe von Test-Komponenten an, die für unterschiedliche Anforderungen geeignet sind: von Bauelementen mit relativ niedrigen Frequenzen für einfache Messaufgaben bis hin zu Bauteilen, die in Breitband-Messplätzen anspruchsvolle und hochpräzise Messungen ermöglichen:

- *Dämpfungsglieder bis 26.5 GHz für eine Reihe von Steckverbinder-Serien*
- *Fehlabschlüsse*
- *Anpassungsglieder*
- *T-Kalibrier-Adapter*
- *Zubehör-Komponenten wie z.B. Messuhren oder Werkzeuge*

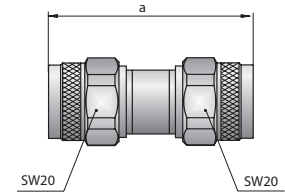
Weitere Messkomponenten wie z. B. Durchführungsabschlüsse oder Hohlleiter-Komponenten sind auf Anfrage erhältlich.

Attenuators

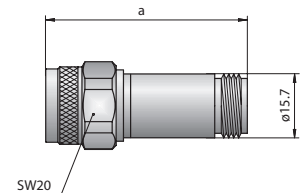
Dämpfungsglieder

RPC- N 50 Ω male - maleRPC- N 50 Ω Stecker - Stecker

Ordering Number	Remarks	Return Loss	Attenuation	Tolerance	Power Handling
05 AS 102-S03 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	3 dB	± 0.3 dB @ 8 GHz ± 0.5 dB @ 12.4 GHz ± 0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-S06 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	6 dB	± 0.3 dB @ 8 GHz ± 0.5 dB @ 12.4 GHz ± 0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-S10 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	10 dB	± 0.3 dB @ 8 GHz ± 0.6 dB @ 12.4 GHz ± 0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-S20 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	20 dB	± 0.3 dB @ 4 GHz ± 0.5 dB @ 8 GHz ± 0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-S30 S3	a = 51.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	30 dB	± 0.8 dB @ 4 GHz ± 1.0 dB @ 12.4 GHz ± 1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-S40 S3	a = 59.2 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	40 dB	± 0.8 dB @ 4 GHz ± 1.0 dB @ 12.4 GHz ± 1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C

RPC- N 50 Ω male - femaleRPC- N 50 Ω Stecker - Kuppler

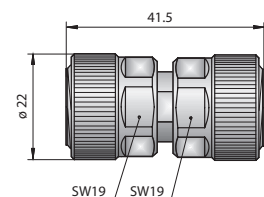
Ordering Number	Remarks	Return Loss	Attenuation	Tolerance	Power Handling
05 AS 102-K03 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	3 dB	± 0.3 dB @ 8 GHz ± 0.5 dB @ 12.4 GHz ± 0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-K06 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	6 dB	± 0.3 dB @ 8 GHz ± 0.5 dB @ 12.4 GHz ± 0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-K10 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	10 dB	± 0.3 dB @ 8 GHz ± 0.6 dB @ 12.4 GHz ± 0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-K20 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	20 dB	± 0.3 dB @ 4 GHz ± 0.5 dB @ 8 GHz ± 0.8 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-K30 S3	a = 49.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	30 dB	± 0.8 dB @ 4 GHz ± 1.0 dB @ 12.4 GHz ± 1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 102-K40 S3	a = 57.5 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 18 GHz	40 dB	± 0.8 dB @ 4 GHz ± 1.0 dB @ 12.4 GHz ± 1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125° C
05 AS 122-K20 S3	a = 49.5 mm	≥ 32 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	20 dB	± 0.3 dB @ 4 GHz ± 0.5 dB @ 18 GHz	0.5 W
05 AS 122-K40 S3	a = 57.5 mm	≥ 32 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	40 dB	± 0.3 dB @ 4 GHz ± 0.5 dB @ 18 GHz	0.5 W



RPC- 7

RPC- 7

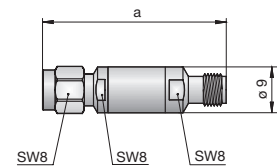
Ordering Number	Remarks	Return Loss	Attenuation	Tolerance	Power Handling
07 AP 122-P20 S3		≥ 32 dB @ DC to 4 GHz ≥ 26 dB @ 4 GHz to 18 GHz	20 dB	± 0.3 dB @ 4 GHz ± 0.5 dB @ 18 GHz	0.5 W
07 AP 122-P40 S3		≥ 32 dB @ DC to 4 GHz ≥ 23 dB @ 4 GHz to 18 GHz	40 dB	± 0.5 dB @ 4 GHz ± 1.0 dB @ 18 GHz	0.5 W



RPC- 3.50, male - female

RPC- 3.50, Stecker - Kuppler

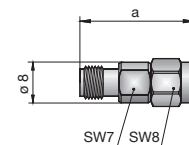
Ordering Number	Remarks	Return Loss	Attenuation	Tolerance	Power Handling
03 AS 102- K03 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	3 dB	±0.5 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K06 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	6 dB	±0.5 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K10 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	10 dB	±0.5 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K20 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	20 dB	±0.5 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K30 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	30 dB	±0.7 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 102- K40 S3	a = 34.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 23.1 dB @ 4 GHz to 12.4 GHz ≥ 19.1 dB @ 12.4 GHz to 26.5 GHz	40 dB	±1.0 dB @ 26.5 GHz	2 W @ 25° C to 0 W @ 125°C
03 AS 122- K20 S3	a = 32.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 20.1 dB @ 4 GHz to 26.5 GHz	20 dB	±0.3 dB @ 4 GHz ±0.5 dB @ 26.5 GHz	0.5 W
03 AS 122- K40 S3	a = 34.7 mm	≥ 26.4 dB @ DC to 4 GHz ≥ 20.1 dB @ 4 GHz to 26.5 GHz	40 dB	±0.4 dB @ 4 GHz ±1.0 dB @ 26.5 GHz	0.5 W



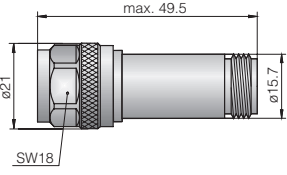
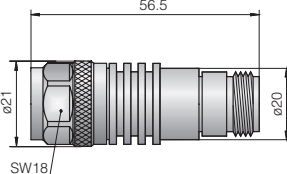
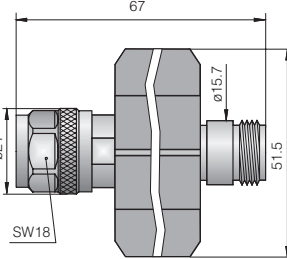
SMA, male- female

SMA, Stecker- Kuppler

Ordering Number	Remarks	Return Loss	Attenuation	Tolerance	Power Handling
32 AS 102- K03 S3	a = 20 mm	≥ 23.1 dB @ DC to 4 GHz ≥ 19.1 dB @ 4 GHz to 12.4 GHz ≥ 16.5 dB @ 12.4 GHz to 18 GHz	3 dB	±0.3 dB @ 8 GHz ±0.5 dB @ 12.4 GHz ±0.75 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
32 AS 102- K06 S3	a = 20 mm	≥ 23.1 dB @ DC to 4 GHz ≥ 19.1 dB @ 4 GHz to 12.4 GHz ≥ 16.5 dB @ 12.4 GHz to 18 GHz	6 dB	±0.3 dB @ 8 GHz ±0.5 dB @ 12.4 GHz ±0.75 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
32 AS 102- K10 S3	a = 20 mm	≥ 23.1 dB @ DC to 4 GHz ≥ 19.1 dB @ 4 GHz to 12.4 GHz ≥ 16.5 dB @ 12.4 GHz to 18 GHz	10 dB	±0.3 dB @ 8 GHz ±0.5 dB @ 12.4 GHz ±0.75 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
32 AS 102- K20 S3	a = 20 mm	≥ 23.1 dB @ DC to 4 GHz ≥ 19.1 dB @ 4 GHz to 12.4 GHz ≥ 16.5 dB @ 12.4 GHz to 18 GHz	20 dB	±0.3 dB @ 8 GHz ±0.5 dB @ 12.4 GHz ±0.75 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
32 AS 102- K30 S3	a = 20 mm	≥ 23.1 dB @ DC to 4 GHz ≥ 19.1 dB @ 4 GHz to 12.4 GHz ≥ 16.5 dB @ 12.4 GHz to 18 GHz	30 dB	±0.5 dB @ 8 GHz ±0.75 dB @ 12.4 GHz ±1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C
32 AS 102- K40 S3	a = 22 mm	≥ 23.1 dB @ DC to 4 GHz ≥ 19.1 dB @ 4 GHz to 12.4 GHz ≥ 16.5 dB @ 12.4 GHz to 18 GHz	40 dB	±0.5 dB @ 8 GHz ±1.0 dB @ 12.4 GHz ±1.5 dB @ 18 GHz	2 W @ 25° C to 0 W @ 125°C



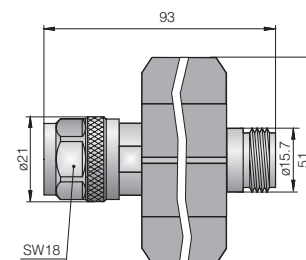
N 50 Ω Standard, male- femaleN 50 Ω Standard, Stecker- Kuppler

Ordering Number	Return Loss	Attenuation	Tolerance	Power Handling	
53 AS 102-K01 NB	≥ 26.4 dB @ DC to 4 GHz ≥ 20.8 dB @ 4 GHz to 10 GHz ≥ 19.1 dB @ 10 GHz to 12.4 GHz	1 dB	± 0.3 dB @ 8 GHz ± 0.5 dB @ 12.4 GHz	2 W @ 25° C to 0 W @ 125° C	
53 AS 102-K02 NB	≥ 26.4 dB @ DC to 4 GHz ≥ 20.8 dB @ 4 GHz to 10 GHz ≥ 19.1 dB @ 10 GHz to 12.4 GHz	2 dB	± 0.3 dB @ 8 GHz ± 0.5 dB @ 12.4 GHz	2 W @ 25° C to 0 W @ 125° C	
53 AS 102-K03 NB	≥ 26.4 dB @ DC to 4 GHz ≥ 20.8 dB @ 4 GHz to 10 GHz ≥ 19.1 dB @ 10 GHz to 12.4 GHz	3 dB	± 0.3 dB @ 8 GHz ± 0.5 dB @ 12.4 GHz	2 W @ 25° C to 0 W @ 125° C	
53 AS 102-K06 NB	≥ 26.4 dB @ DC to 4 GHz ≥ 20.8 dB @ 4 GHz to 10 GHz ≥ 19.1 dB @ 10 GHz to 12.4 GHz	6 dB	± 0.3 dB @ 8 GHz ± 0.5 dB @ 12.4 GHz	2 W @ 25° C to 0 W @ 125° C	
53 AS 102-K10 NB	≥ 26.4 dB @ DC to 4 GHz ≥ 20.8 dB @ 4 GHz to 10 GHz ≥ 19.1 dB @ 10 GHz to 12.4 GHz	10 dB	± 0.3 dB @ 8 GHz ± 0.6 dB @ 12.4 GHz	2 W @ 25° C to 0 W @ 125° C	
53 AS 102-K20 NB	≥ 26.4 dB @ DC to 4 GHz ≥ 20.8 dB @ 4 GHz to 10 GHz ≥ 19.1 dB @ 10 GHz to 12.4 GHz	20 dB	± 0.3 dB @ 4 GHz ± 0.6 dB @ 8 GHz ± 0.8 dB @ 12.4 GHz	2 W @ 25° C to 0 W @ 125° C	
53 AS 102-K30 NB	≥ 26.4 dB @ DC to 4 GHz ≥ 20.8 dB @ 4 GHz to 10 GHz ≥ 19.1 dB @ 10 GHz to 12.4 GHz	30 dB	± 0.3 dB @ 4 GHz ± 0.6 dB @ 8 GHz ± 1.0 dB @ 12.4 GHz	2 W @ 25° C to 0 W @ 125° C	
53 AS 105-K03 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	3 dB	± 0.3 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.0 dB @ 10 GHz	5 W @ 25° C to 0 W @ 125° C	
53 AS 105-K06 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	6 dB	± 0.3 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.0 dB @ 10 GHz	5 W @ 25° C to 0 W @ 125° C	
53 AS 105-K10 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	10 dB	± 0.3 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.0 dB @ 10 GHz	5 W @ 25° C to 0 W @ 125° C	
53 AS 105-K20 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	20 dB	± 0.4 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.5 dB @ 10 GHz	5 W @ 25° C to 0 W @ 125° C	
53 AS 105-K30 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	30 dB	± 0.4 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.75 dB @ 10 GHz	5 W @ 25° C to 0 W @ 125° C	
53 AS 110-K03 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	3 dB	± 0.3 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.0 dB @ 10 GHz	10 W @ 25° C to 0 W @ 125° C	
53 AS 110-K06 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	6 dB	± 0.3 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.0 dB @ 10 GHz	10 W @ 25° C to 0 W @ 125° C	
53 AS 110-K10 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	10 dB	± 0.3 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.0 dB @ 10 GHz	10 W @ 25° C to 0 W @ 125° C	
53 AS 110-K20 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	20 dB	± 0.4 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.5 dB @ 10 GHz	10 W @ 25° C to 0 W @ 125° C	
53 AS 110-K30 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	30 dB	± 0.4 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.75 dB @ 10 GHz	10 W @ 25° C to 0 W @ 125° C	

Attenuators

Test Devices

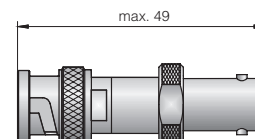
Ordering Number	Return Loss	Attenuation	Tolerance	Power Handling
53 AS 120-K03 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	3 dB	± 0.3 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.0 dB @ 10 GHz	20 W @ 25° C to 0 W @ 125° C
53 AS 120-K06 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	6 dB	± 0.3 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.0 dB @ 10 GHz	20 W @ 25° C to 0 W @ 125° C
53 AS 120-K10 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	10 dB	± 0.3 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.0 dB @ 10 GHz	20 W @ 25° C to 0 W @ 125° C
53 AS 120-K20 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	20 dB	± 0.4 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.5 dB @ 10 GHz	20 W @ 25° C to 0 W @ 125° C
53 AS 120-K30 NB	≥ 26.4 dB @ DC to 2 GHz ≥ 21.2 dB @ 2 GHz to 5 GHz ≥ 14.0 dB @ 5 GHz to 10 GHz	30 dB	± 0.4 dB @ 2 GHz ± 0.5 dB @ 4 GHz ± 1.75 dB @ 10 GHz	20 W @ 25° C to 0 W @ 125° C



BNC 50 Ω male- female

BNC 50 Ω Stecker- Kuppler

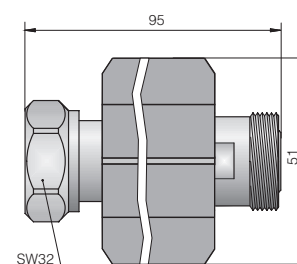
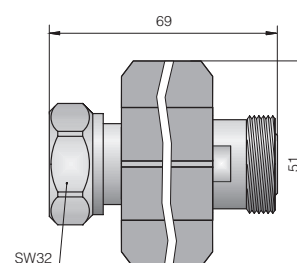
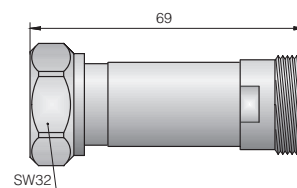
Ordering Number	Return Loss	Attenuation	Power Handling
51 AS 103-K03 N4	≥ 20.8 dB @ DC to 1.2 GHz ≥ 15.5 dB @ 1.2 GHz to 2 GHz	3 dB ± 0.4 dB	3 W @ 25° C to 0 W @ 125° C
51 AS 103-K06 N4	≥ 20.8 dB @ DC to 1.2 GHz ≥ 15.5 dB @ 1.2 GHz to 2 GHz	6 dB ± 0.4 dB	3 W @ 25° C to 0 W @ 125° C
51 AS 103-K10 N4	≥ 20.8 dB @ DC to 1.2 GHz ≥ 15.5 dB @ 1.2 GHz to 2 GHz	10 dB ± 0.4 dB	3 W @ 25° C to 0 W @ 125° C
51 AS 103-K20 N4	≥ 20.8 dB @ DC to 1.2 GHz ≥ 15.5 dB @ 1.2 GHz to 2 GHz	20 dB ± 0.5 dB	3 W @ 25° C to 0 W @ 125° C
51 AS 103-K30 N4	≥ 20.8 dB @ DC to 1.2 GHz ≥ 15.5 dB @ 1.2 GHz to 2 GHz	30 dB ± 1.0 dB	3 W @ 25° C to 0 W @ 125° C
51 AS 103-K40 N4	≥ 20.8 dB @ DC to 1.2 GHz ≥ 15.5 dB @ 1.2 GHz to 2 GHz	40 dB ± 1.4 dB	3 W @ 25° C to 0 W @ 125° C



7- 16, male- female

7- 16, Stecker- Kuppler

Ordering Number	Return Loss	Attenuation	Tolerance	Power Handling
60 AS 105- K03 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	3 dB	±0.3 dB @ 2 GHz ±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	5 W @ 25° C to 0 W @ 125° C
60 AS 105- K06 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	6 dB	±0.3 dB @ 2 GHz ±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	5 W @ 25° C to 0 W @ 125° C
60 AS 105- K10 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	10 dB	±0.3 dB @ 2 GHz ±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	5 W @ 25° C to 0 W @ 125° C
60 AS 105- K20 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	20 dB	±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	5 W @ 25° C to 0 W @ 125° C
60 AS 105- K30 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	30 dB	±0.4 dB @ 2 GHz ±0.5 dB @ 4 GHz ±1.0 dB @ 8 GHz	5 W @ 25° C to 0 W @ 125° C
60 AS 105- K40 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	40 dB	±0.4 dB @ 2 GHz ±0.5 dB @ 4 GHz ±1.2 dB @ 8 GHz	5 W @ 25° C to 0 W @ 125° C
60 AS 110- K03 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	3 dB	±0.3 dB @ 2 GHz ±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	10 W @ 25° C to 0 W @ 125° C
60 AS 110- K06 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	6 dB	±0.3 dB @ 2 GHz ±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	10 W @ 25° C to 0 W @ 125° C
60 AS 110- K10 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	10 dB	±0.3 dB @ 2 GHz ±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	10 W @ 25° C to 0 W @ 125° C
60 AS 110- K20 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	20 dB	±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	10 W @ 25° C to 0 W @ 125° C
60 AS 110- K30 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	30 dB	±0.4 dB @ 2 GHz ±0.5 dB @ 4 GHz ±1.0 dB @ 8 GHz	10 W @ 25° C to 0 W @ 125° C
60 AS 110- K40 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	40 dB	±0.4 dB @ 2 GHz ±0.5 dB @ 4 GHz ±1.2 dB @ 8 GHz	10 W @ 25° C to 0 W @ 125° C
60 AS 120- K03 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	3 dB	±0.3 dB @ 2 GHz ±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	20 W @ 25° C to 0 W @ 125° C
60 AS 120- K06 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	6 dB	±0.3 dB @ 2 GHz ±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	20 W @ 25° C to 0 W @ 125° C
60 AS 120- K10 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	10 dB	±0.3 dB @ 2 GHz ±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	20 W @ 25° C to 0 W @ 125° C
60 AS 120- K20 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	20 dB	±0.4 dB @ 4 GHz ±0.8 dB @ 8 GHz	20 W @ 25° C to 0 W @ 125° C
60 AS 120- K30 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	30 dB	±0.4 dB @ 2 GHz ±0.5 dB @ 4 GHz ±1.0 dB @ 8 GHz	20 W @ 25° C to 0 W @ 125° C
60 AS 120- K40 N1	≥ 30.7 dB @ DC to 1 GHz ≥ 26.4 dB @ 1 GHz to 2 GHz ≥ 20.0 dB @ 2 GHz to 8 GHz	40 dB	±0.4 dB @ 2 GHz ±0.5 dB @ 4 GHz ±1.2 dB @ 8 GHz	20 W @ 25° C to 0 W @ 125° C



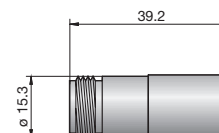
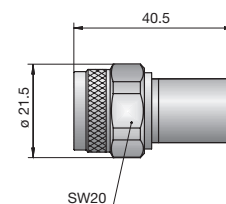
RPC- N 50 Ω

RPC- N 50 Ω

Mismatches

Fehlabschlüsse

Ordering Number	Remarks	VSWR	Power Handling
05 S 150- 055 S3	RPC- N 50 Ω male, Impedance 55 Ω	1.1 ± 0.04 @ DC to 12.4 GHz, 1.1 ± 0.06 @ 12.4 GHz to 18 GHz	1 W
05 S 150- 060 S3	RPC- N 50 Ω male, Impedance 60 Ω	1.2 ± 0.04 @ DC to 8 GHz 1.2 ± 0.05 @ 8 GHz to 12.4 GHz 1.2 ± 0.07 @ 12.4 GHz to 18 GHz	1 W
05 S 150- 075 S3	RPC- N 50 Ω male, Impedance 75 Ω	1.5 ± 0.05 @ DC to 8 GHz 1.5 ± 0.07 @ 8 GHz to 12.4 GHz 1.5 ± 0.09 @ 12.4 GHz to 18 GHz	1 W
05 K 150- 055 S3	RPC- N 50 Ω female, Impedance 55 Ω	1.1 ± 0.04 @ DC to 12.4 GHz, 1.1 ± 0.06 @ 12.4 GHz to 18 GHz	1 W
05 K 150- 060 S3	RPC- N 50 Ω female, Impedance 60 Ω	1.2 ± 0.04 @ DC to 8 GHz 1.2 ± 0.05 @ 8 GHz to 12.4 GHz 1.2 ± 0.07 @ 12.4 GHz to 18 GHz	1 W
05 K 150- 075 S3	RPC- N 50 Ω female, Impedance 75 Ω	1.5 ± 0.05 @ DC to 8 GHz 1.5 ± 0.07 @ 8 GHz to 12.4 GHz 1.5 ± 0.09 @ 12.4 GHz to 18 GHz	1 W



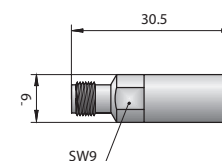
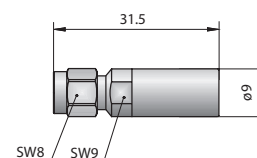
RPC- 3.50

RPC- 3.50

Mismatches

Fehlabschlüsse

Ordering Number	Remarks	VSWR	Power Handling
03 S 150- 055 S3	RPC- 3.50 male, Impedance 55 Ω	1.1 ± 0.03 @ DC to 12 GHz 1.1 ± 0.05 @ 12 GHz to 26.5 GHz	0.5 W
03 S 150- 060 S3	RPC- 3.50 male, Impedance 60 Ω	1.2 ± 0.03 @ DC to 12 GHz 1.2 ± 0.05 @ 12 GHz to 26.5 GHz	0.5 W
03 S 150- 075 S3	RPC- 3.50 male, Impedance 75 Ω	1.5 ± 0.06 @ DC to 12 GHz 1.5 ± 0.10 @ 12 GHz to 26.5 GHz	0.5 W
03 K 150- 055 S3	RPC- 3.50 female, Impedance 55 Ω	1.1 ± 0.03 @ DC to 12 GHz 1.1 ± 0.05 @ 12 GHz to 26.5 GHz	0.5 W
03 K 150- 060 S3	RPC- 3.50 female, Impedance 60 Ω	1.2 ± 0.03 @ DC to 12 GHz 1.2 ± 0.05 @ 12 GHz to 26.5 GHz	0.5 W
03 K 150- 075 S3	RPC- 3.50 female, Impedance 75 Ω	1.5 ± 0.06 @ DC to 12 GHz 1.5 ± 0.10 @ 12 GHz to 26.5 GHz	0.5 W



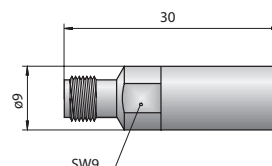
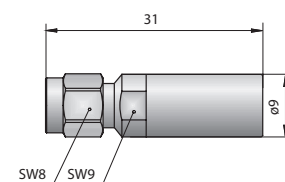
RPC- 2.92

RPC- 2.92

Mismatches

Fehlabschlüsse

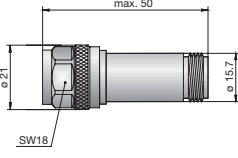
Ordering Number	Remarks	VSWR	Power Handling
02 S 150- 055 S3	RPC- 2.92 male, Impedance 55 Ω	1.1 ± 0.05 @ DC to 40 GHz	0.5 W
02 S 150- 060 S3	RPC- 2.92 male, Impedance 60 Ω	1.2 ± 0.05 @ DC to 40 GHz	0.5 W
02 S 150- 075 S3	RPC- 2.92 male, Impedance 75 Ω	1.5 ± 0.05 @ DC to 20 GHz 1.5 ± 0.08 @ 20 GHz to 40 GHz	0.5 W
02 K 150- 055 S3	RPC- 2.92 female, Impedance 55 Ω	1.1 ± 0.05 @ DC to 40 GHz	0.5 W
02 K 150- 060 S3	RPC- 2.92 female, Impedance 60 Ω	1.2 ± 0.05 @ DC to 40 GHz	0.5 W
02 K 150- 075 S3	RPC- 2.92 female, Impedance 75 Ω	1.5 ± 0.05 @ DC to 20 GHz 1.5 ± 0.08 @ 20 GHz to 40 GHz	0.5 W



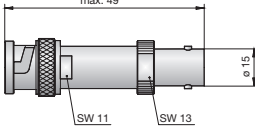
Matching Attenuators

Anpassungsglieder

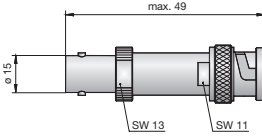
N 50 Ω male / N 75 Ω femaleN 50 Ω Stecker - N 75 Ω Kuppler

Ordering Number	Return Loss	Attenuation	Power Handling	
53 S 173- K00 N3	≥ 26.4 dB @ DC to 1 GHz ≥ 20.8 dB @ 1 to 2 GHz	5.72 dB	2 W @ 25° C to 0 W @ 125° C	

BNC 50 Ω male - BNC 75 Ω femaleBNC 50 Ω Stecker - BNC 75 Ω Kuppler

Ordering Number	Remarks	Attenuation	Power Handling	
51 S 171- K00 N4	Return Loss: ≥ 46 dB (male side), ≥ 44.5 dB (female side) @ DC to 30 MHz ≥ 42 dB (male side), ≥ 40.1 dB (female side) @ 30 MHz to 100 MHz ≥ 36.6 dB (male side), ≥ 34.1 dB (female side) @ 100 MHz to 300 MHz ≥ 28.3 dB (male side), ≥ 28.3 dB (female side) @ 300 MHz to 0.5 GHz ≥ 26.4 dB (male side), ≥ 23.1 dB (female side) @ 0.5 GHz to 1 GHz ≥ 23.1 dB (male side), ≥ 16.5 dB (female side) @ 1 GHz to 2 GHz	5.72 dB	1 W @ 25° C to 0 W @ 125° C	

BNC 50 Ω female - BNC 75 Ω maleBNC 50 Ω Kuppler - BNC 75 Ω Stecker

Ordering Number	Remarks	Attenuation	Power Handling	
51 K 171- S00 N4	Return Loss: ≥ 46 dB (male side), ≥ 44.5 dB (female side) @ DC to 30 MHz ≥ 42 dB (male side), ≥ 40.1 dB (female side) @ 30 MHz to 100 MHz ≥ 36.6 dB (male side), ≥ 34.1 dB (female side) @ 100 MHz to 300 MHz ≥ 28.3 dB (male side), ≥ 28.3 dB (female side) @ 300 MHz to 0.5 GHz ≥ 26.4 dB (male side), ≥ 23.1 dB (female side) @ 0.5 GHz to 1 GHz ≥ 23.1 dB (male side), ≥ 16.5 dB (female side) @ 1 GHz to 2 GHz	5.72 dB	1 W @ 25° C to 0 W @ 125° C	

T-Calibration- Adaptors

T-Kalibrier-Adapter

7- 16 Open - Short - Load

7- 16 Open - Short - Load

Ordering Number	Version	Remarks	Return Loss	
60 S 34R- M50 N3	T- Adaptor	7- 16 male- male- male Resulting phase uncertainty: Open $\leq 3.0^\circ$ to 4 GHz, Short $\leq 2.0^\circ$ to 4 GHz	Open/Short: ≤ 0.15 dB @ DC to 4 GHz Load: ≥ 40 dB @ DC to 2.5 GHz ≥ 38 dB @ 2.5 GHz to 4 GHz	
60 S 36R- M50 N3	T- Adaptor	7- 16 male- male- male Resulting phase uncertainty: Open $\leq 3.0^\circ$ to 6 GHz, Short $\leq 2.0^\circ$ to 6 GHz	Open/Short: ≤ 0.15 dB @ DC to 6 GHz Load: ≥ 40 dB @ DC to 2.5 GHz ≥ 38 dB @ 2.5 GHz to 6 GHz	
60 K 34R- M50 N3	T- Adaptor	7- 16 female- female- female Resulting phase uncertainty: Open $\leq 3.0^\circ$ to 4 GHz, Short $\leq 2.0^\circ$ to 4 GHz	Open/Short: ≤ 0.15 dB @ DC to 4 GHz Load: ≥ 40 dB @ DC to 2.5 GHz ≥ 38 dB @ 2.5 GHz to 4 GHz	
60 K 36R- M50 N3	T- Adaptor	7- 16 female- female- female Resulting phase uncertainty: Open $\leq 3.0^\circ$ to 6 GHz, Short $\leq 2.0^\circ$ to 6 GHz	Open/Short: ≤ 0.15 dB @ DC to 6 GHz Load: ≥ 40 dB @ DC to 2.5 GHz ≥ 38 dB @ 2.5 GHz to 6 GHz	

N Standard 50 Ω Open - Short - LoadN Standard 50 Ω Open - Short - Load

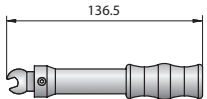
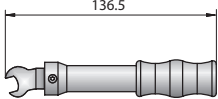
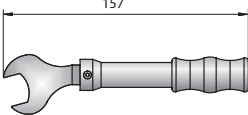
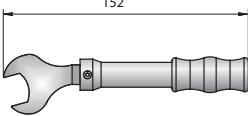
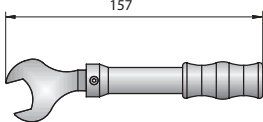
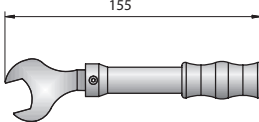
Ordering Number	Version	Remarks	Return Loss	
53 S 34R- M50 N3	T- Adaptor	N Standard 50 Ω male- male- male Resulting phase uncertainty: Open $\leq 3.0^\circ$ to 4 GHz, Short $\leq 2.0^\circ$ to 4 GHz	Open/Short: ≤ 0.1 dB @ DC to 4 GHz Load: ≥ 42 dB @ DC to 2.5 GHz ≥ 38 dB @ 2.5 GHz to 4 GHz	
53 S 36R- M50 N3	T- Adaptor	N Standard 50 Ω male- male- male Resulting phase uncertainty: Open $\leq 3.0^\circ$ to 6 GHz, Short $\leq 2.0^\circ$ to 6 GHz	Open/Short: ≤ 0.1 dB @ DC to 6 GHz Load: ≥ 42 dB @ DC to 2.5 GHz ≥ 38 dB @ 2.5 GHz to 6 GHz	
53 K 34R- M50 N3	T- Adaptor	N Standard 50 Ω female- female- female Resulting phase uncertainty: Open $\leq 3.0^\circ$ to 4 GHz, Short $\leq 2.0^\circ$ to 4 GHz	Open/Short: ≤ 0.1 dB @ DC to 4 GHz Load: ≥ 42 dB @ DC to 2.5 GHz ≥ 38 dB @ 2.5 GHz to 4 GHz	
53 K 36R- M50 N3	T- Adaptor	N Standard 50 Ω female- female- female Resulting phase uncertainty: Open $\leq 3.0^\circ$ to 6 GHz, Short $\leq 2.0^\circ$ to 6 GHz	Open/Short: ≤ 0.1 dB @ DC to 6 GHz Load: ≥ 42 dB @ DC to 2.5 GHz ≥ 38 dB @ 2.5 GHz to 6 GHz	

Torque Wrench

Drehmomentschlüssel

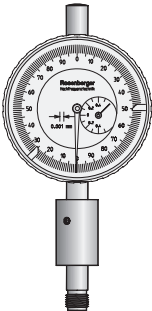
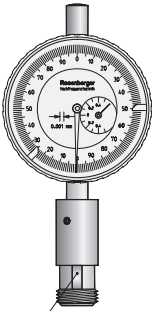
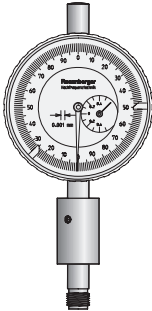
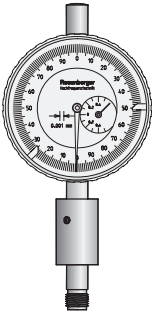
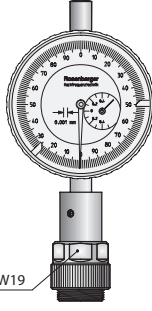
Torque Wrench

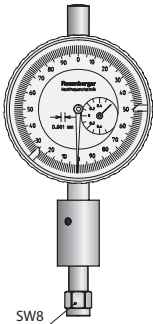
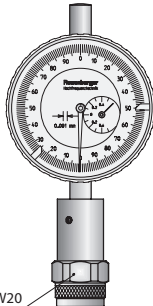
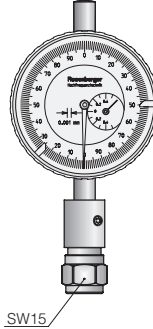
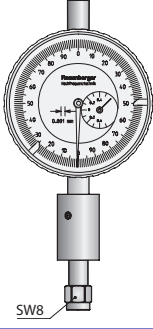
Drehmomentschlüssel

Ordering Number	Remarks	
01 W021-000	flat 6 mm - 35 Ncm torque for RPC- 1.00	
03 W021-000	flat 8 mm - 0.9 Nm torque for RPC- 3.50 , RPC- 2.92, RPC- 2.40, RPC- 1.85	
04 W021-000	flat 18 mm - 2 Nm torque for RPC- SL 26.5 GHz, RPC- SL 40 GHz	
06 W021-000	flat 15 mm - 55 Ncm torque for RPC- TNC	
07 W021-000	flat 19 mm - 136 Ncm torque for RPC 7, RPC- SP	
53 W009-000	flat 20 mm - 1,1 Nm torque for RPC- N 50 Ohm, RPC- N 75 Ohm	

Gauge

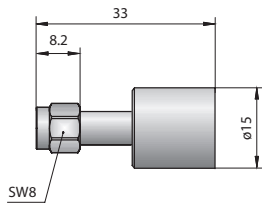
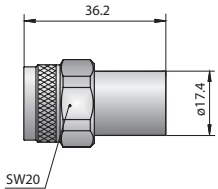
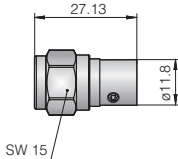
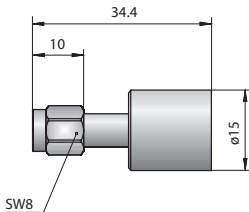
Messuhr

Ordering Number	Remarks	
03 W00S- 000	compatible to male connectors for RPC- 3.50, RPC- 2.92, useable only with gauge block 03 W00Z- 002	
05 W00S- 000	compatible to male connectors for RPC- N 50 Ω, useable only with gauge block 05 W00Z- 002	 SW13
P5 W 00S- 000	compatible to male connectors for RPC- N 75 Ω, useable only with gauge block 05 W00Z- 002	
06 W00S- 000	compatible to male connectors for RPC- TNC, useable only with gauge block 06 W00Z- 002	
08 W00S- 000	compatible to male connectors for RPC- 2.40, RPC- 1.85, useable only with gauge block 08 W00Z- 002	
07 W001- 000	compatible to connectors for RPC- 7, useable only with gauge block 07 W00Z- 001	 SW19

Ordering Number	Remarks	
03 W00K- 000	compatible to female connectors for RPC- 3.50, RPC- 2.92, useable only with gauge block 03 W00Z- 001	
05 W00K- 000	compatible to female connectors for RPC- N 50 Ω, RPC- N 75 Ω, useable only with gauge block 05 W00Z- 001	
06 W00K- 000	compatible to female connectors for RPC- TNC, useable only with gauge block 06 W00Z- 001	
08 W00K- 000	compatible to female connectors for RPC- 2.40, RPC- 1.85, useable only with gauge block 08 W00Z- 001	

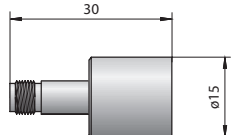
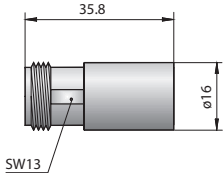
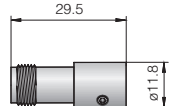
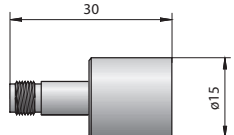
Gauge Block male

Kalibrierblock - Stecker

Ordering Number	Remarks	
03 W00Z-002	for RPC- 3.50, RPC- 2.92, useable only with gauge 03 W00S- 000	
05 W00Z-002	for RPC- N 50 Ω, useable only with gauge 05 W00S- 000 RPC- N 75 Ω, useable only with gauge P5 W00S- 000	
06 W00Z-002	for RPC- TNC, useable only with gauge 06 W00S- 000	
08 W00Z-002	for RPC- 2.40, RPC- 1.85, useable only with gauge 08 W00S- 000	

Gauge Block female

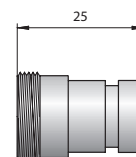
Kalibrierblock - Kuppler

Ordering Number	Remarks	
03 W00Z-001	for RPC- 3.50, RPC- 2.92, useable only with gauge 03 W00K- 000	
05 W00Z-001	for RPC- N 50 Ω, RPC- N 75 Ω, useable only with gauge 05 W00K- 000	
06 W00Z-001	for RPC- TNC, useable only with gauge 06 W00K- 000	
08 W00Z-001	for RPC- 2.40, RPC- 1.85, useable only with gauge 08 W00K- 000	

Gauge Block RPC- 7

Kalibrierblock - RPC- 7

Ordering Number	Remarks
07 W00Z- 001	for RPC- 7, useable only with gauge 07 W 001- 000



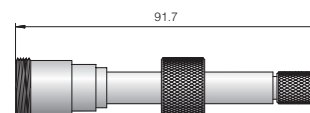
Collet Extractor

Demontagewerkzeug

Collet Extractor

Demontagewerkzeug

Ordering Number		Packing Unit
07 W031- 000	for RPC- 7, to remove 7 mm center contact	



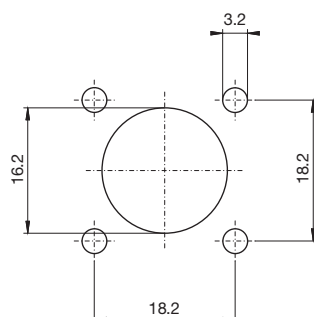
The selection of suitable PCB layout is essential for the best possible electrical and mechanical values when using SMD connectors. Above all, the dielectric constants and the PCB spacings to the base must be taken into account. The mechanical stability, although primarily the VSWR, is determined by the so-called "footprints".

Please note comments

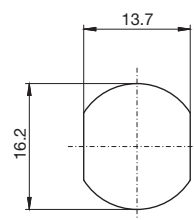
Voraussetzung für bestmögliche elektrische und mechanische Werte beim Einsatz von SMD-Steckverbindern ist die Auswahl eines geeigneten Leiterplatten-Layouts. Hierbei sind vor allem aber die Dielektrizitäts-Konstanten und die Leiterplattenabstände zur Grundfläche zu beachten. Die mechanische Stabilität, vor allem aber das VSWR wird durch die sogenannten "Footprints" bestimmt.

Bitte beachten Sie die entsprechenden Hinweise.

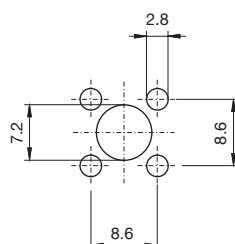
B 12



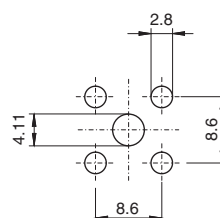
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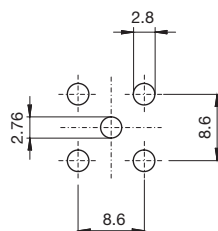
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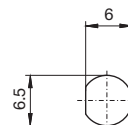
B 55a



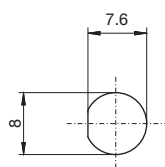
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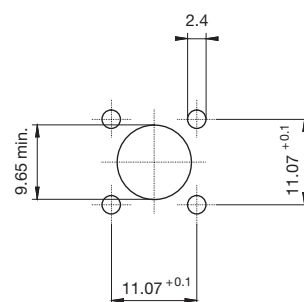
B 56



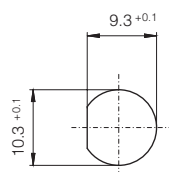
B 58



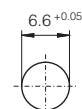
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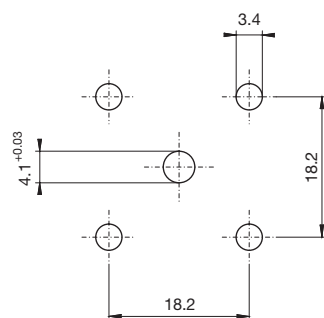
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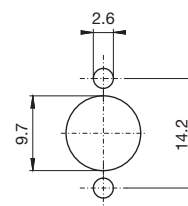
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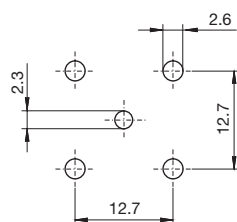
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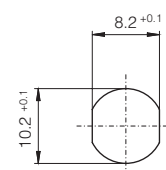
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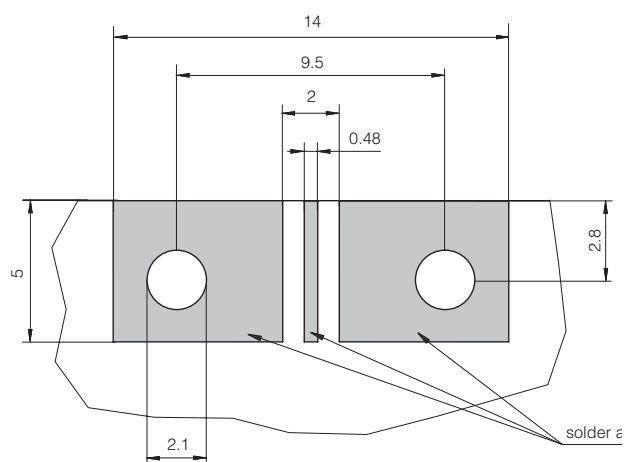
B 106a



B 107



B 208



M 5:1

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