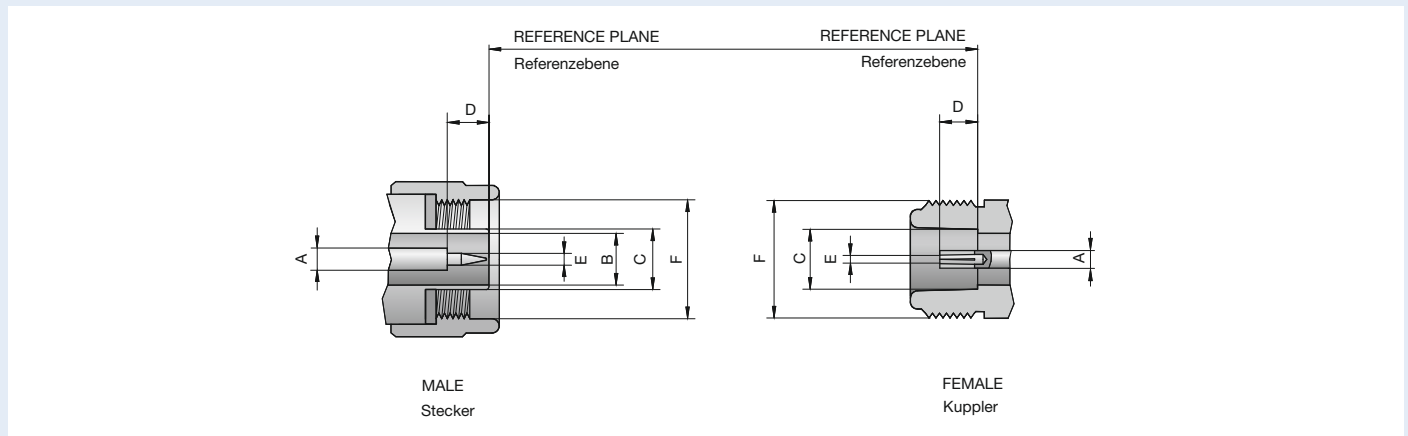


**Interface Dimensions Series RPC-N, 50 Ω (code 05)**



**Series RPC-N, 50 Ω**

dimension	Male   Stecker		Female   Kuppler	
	min.	max.	min.	max.
A	3.03	3.05	3.03	3.05
B	6.99	7.01	6.99	7.01
C	7.98	8.02	8.05	8.10
D	5.28	5.36	5.18	5.26
E	1.64	1.66	1.68	1.71
F	5/8-24UNEF-2B		5/8-24UNEF-2A	

## Technical Data Series RPC-N, 50 Ω

<b>Applicable standards   Anwendbare Standards</b>	
Interface according to   <i>Interface gemäß</i>	IEC 61169-16; CECC 22 210; MIL-STD 348A/402
<b>Electrical data   Elektrische Daten</b>	
Impedance   <i>Wellenwiderstand</i>	50 Ω
Frequency range   <i>Frequenzbereich</i>	DC to 18 GHz
Return loss (connector head)   <i>Rückflußdämpfung (Steckerkopf)</i>	≥ 30 dB, DC to 18 GHz
Insertion loss (connector head)   <i>Dämpfung (Steckerkopf)</i>	≤ 0.03 dB x $\sqrt{f[\text{GHz}]}$
Insulation resistance   <i>Isolationswiderstand</i>	≥ 5 GΩ
Center contact resistance   <i>Übergangswiderstand Innenleiter</i>	≤ 1.0 mΩ
Outer contact resistance   <i>Übergangswiderstand Außenleiter</i>	≤ 1.0 mΩ
Test voltage   <i>Prüfspannung</i>	2500 V rms
Working voltage   <i>Betriebsspannung</i>	1000 V rms
RF-leakage   <i>Schirmdämpfung</i>	≥ 90 dB up to 1 GHz
<b>Mechanical data   Mechanische Daten</b>	
Mating cycles   <i>Steckzyklen</i>	≥ 500
Center contact captivation   <i>Innenleiter Haltekraft</i>	≥ 28 N
Coupling torque recommended   <i>Anzugsdrehmoment empfohlen</i>	0.70 Nm to 1.10 Nm
Coupling test torque   <i>Prüfdrehmoment</i>	1.70 Nm
<b>Environmental data   Umweltdaten</b>	
Temperature range   <i>Temperaturbereich</i>	-40 °C to +85 °C
Thermal shock   <i>Temperaturzyklen</i>	IEC 61169-1, Subclause 9.4.4
Corrosion resistance   <i>Korrosionsbeständigkeit</i>	IEC 61169-1, Subclause 9.4.6
Vibration   <i>Vibration</i>	IEC 61169-1, Subclause 9.3.3
Shock   <i>Schock</i>	IEC 61169-1, Subclause 9.3.14
Moisture resistance   <i>Feuchtigkeitsbeständigkeit</i>	IEC 61169-1, Subclause 9.4.3
Max. soldering temperature   <i>Maximale Löttemperatur</i>	IEC 61760-1, +260 °C for 10 sec.
<b>Materials   Materialien</b>	
Center contact   <i>Innenleiter</i>	Beryllium copper, gold-plated
Outer contact   <i>Außenleiter</i>	Stainless steel, passivated
Dielectric   <i>Dielektrikum</i>	PPE

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**

Straight Plug

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

Straight Jack

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

Semi-Rigid

Ordering Number	Remarks	Return Loss	Cable Group	Assembly Instruction	
05 S 121-271 S3	a = 48.1 mm	≥ 25 dB @ DC to 18 GHz	71	02 A3	
05 S 121-272 S3	a = 41.2 mm	≥ 25 dB @ DC to 18 GHz	72	02 A3	
05 S 121-273 S3	a = 48.1 mm	≥ 25 dB @ DC to 18 GHz	73	03 A	

Straight Jack, solder

Semi-Rigid

Ordering Number	Remarks	Return Loss	Cable Group	Assembly Instruction	
05 K 121-271 S3	a = 46.9 mm	≥ 25 dB @ DC to 18 GHz	71	02 A3	
05 K 121-272 S3	a = 40.0 mm	≥ 25 dB @ DC to 18 GHz	72	03 A	
05 K 121-273 S3	a = 46.9 mm	≥ 25 dB @ DC to 18 GHz	73	03 A	

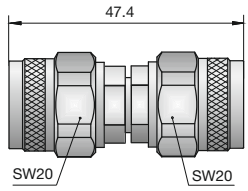
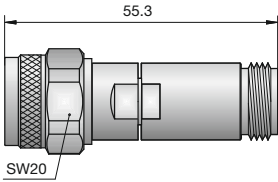
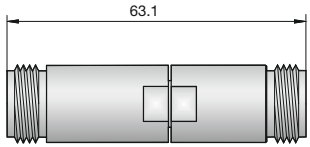
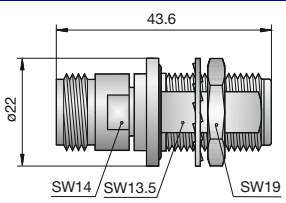
Panel Jack, round flange

Semi-Rigid

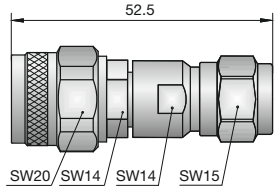
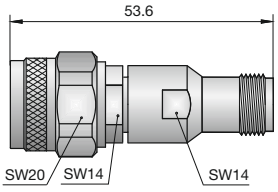
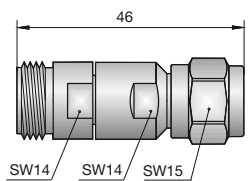
Ordering Number	Remarks	Return Loss	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	
05 K 521-271 S3	a = 46.9 mm	≥ 25 dB @ DC to 18 GHz	71	02 A3	MB 13	
05 K 521-272 S3	a = 40.0 mm	≥ 25 dB @ DC to 18 GHz	72	03 A	MB 13	
05 K 521-273 S3	a = 46.9 mm	≥ 25 dB @ DC to 18 GHz	73	03 A	MB 13	

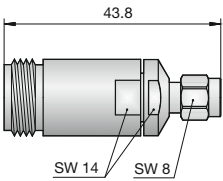
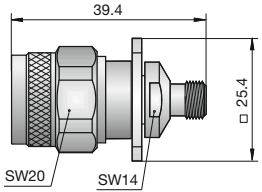
## Adaptors

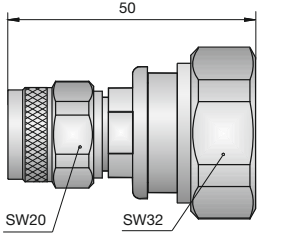
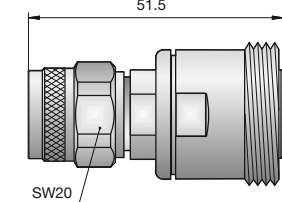
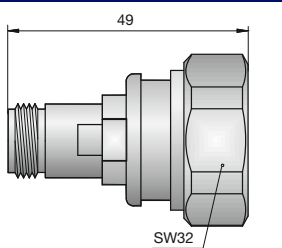
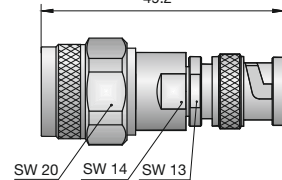
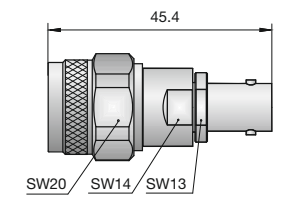
Adaptor (In Series)

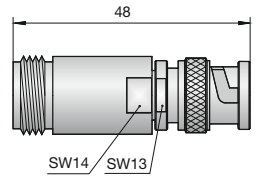
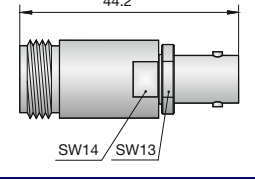
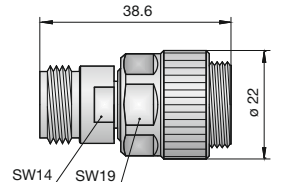
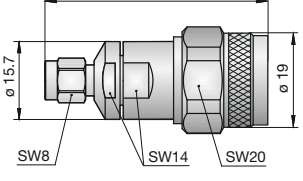
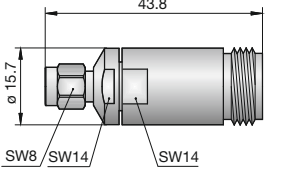
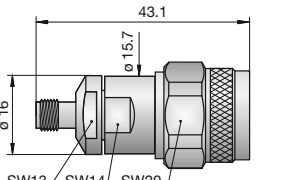
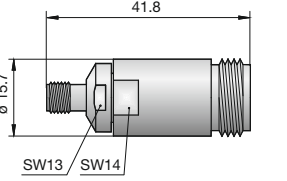
Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
05 S 121-S00 S3	straight	RPC-N 50 Ω male - male	≥ 26 dB @ DC to 18 GHz		
05 S 121-S20 S3	straight	RPC-N 50 Ω male - male, calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 30 dB @ 4 GHz to 18 GHz		
05 S 121-K00 S3	straight	RPC-N 50 Ω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

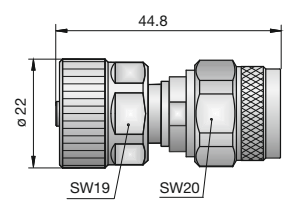
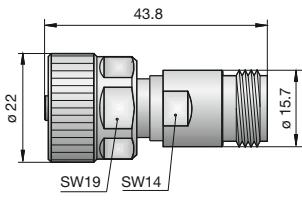
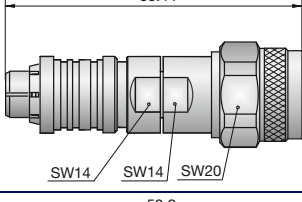
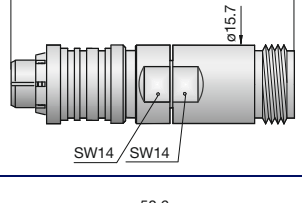
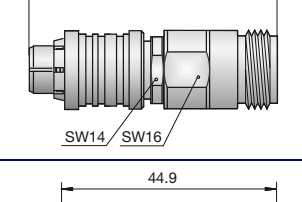
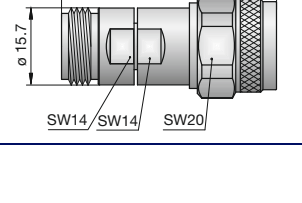
Adaptor (Inter Series)

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		

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
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		
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	MB 12	
05 S 432-K00 S3	straight	RPC-N 50 Ω male - SMA female, 4-hole flange	≥ 23 dB @ DC to 18 GHz	MB 12	
05 K 432-S00 S3	straight	RPC-N 50 Ω female - SMA male, 4-hole flange	≥ 23 dB @ DC to 18 GHz	MB 12	

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
05 K 432-K00 S3	straight	RPC-N 50 Ω female - SMA female, 4-hole flange	$\geq 23$ dB @ DC to 18 GHz	MB 12	
05 S 160-S50 D3	straight	RPC-N 50 Ω male - 7-16 male, calibration adaptor	$\geq 36.6$ dB @ DC to 8 GHz		
05 S 160-K50 D3	straight	RPC-N 50 Ω male - 7-16 female, calibration adaptor	$\geq 36.6$ dB @ DC to 8 GHz		
05 K 160-S50 D3	straight	RPC-N 50 Ω female - 7-16 male, calibration adaptor	$\geq 36.6$ dB @ DC to 8 GHz		
05 K 160-K50 D3	straight	RPC-N 50 Ω female - 7-16 female, calibration adaptor	$\geq 36.6$ dB @ DC to 8 GHz		
05 S 151-S00 S3	straight	RPC-N 50 Ω male - BNC 50 Ω male	$\geq 22$ dB @ DC to 4 GHz		
05 S 151-S20 S3	straight	RPC-N 50 Ω male - BNC 50 Ω male, calibration adaptor	$\geq 36$ dB @ DC to 2 GHz $\geq 30$ dB @ 2 GHz to 4 GHz		
05 S 151-K00 S3	straight	RPC-N 50 Ω male - BNC 50 Ω female	$\geq 22$ dB @ DC to 4 GHz		

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout
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	
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	

Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout	
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 QS 105-K20 S3	straight	SnapN male - RPC-N 50 Ω female calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 27 dB @ 4 GHz 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		



Ordering Number	Version	Remarks	Return Loss	Panel Piercing / PCB Layout
53 QK 105-S20 S3	straight	SnapN female - RPC-N 50 Ω male calibration adaptor	≥ 36 dB @ DC to 4 GHz ≥ 27 dB @ 4 GHz to 11 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	
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	

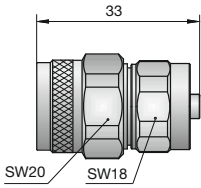
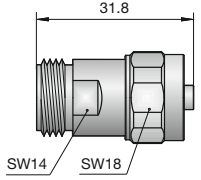
### DC-Block

DC-Block RPC-N 50 Ω male - female

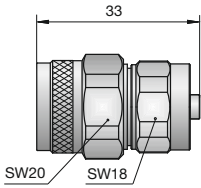
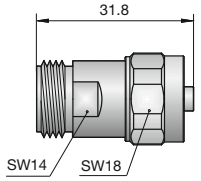
Ordering Number	Version	Return Loss	Insertion Loss	Panel Piercing / PCB Layout
05 DS 121-K00 S3	straight	≥ 25 dB @ 3 MHz to 18 GHz	< 1 dB @ 3 MHz to 18 GHz	

## Interchangeable Port Connector System

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	

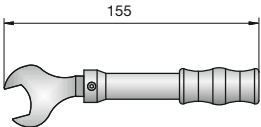
RPC-N 50 Ω - RPC-SL 40 GHz

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	

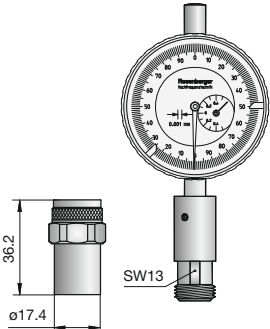
see also chapter interchangeable port connector system

**Tools**

Torque Wrench

Ordering Number	Remarks	
53 W 009-000	flat 20 mm - 1,1 Nm torque for RPC-N 50 Ω , RPC-N 75 Ω	

Gauge

Ordering Number	Remarks	
05 W 00S-000	compatible to male connectors for RPC-N 50 Ω incl. gauge block	
05 W 00K-000	compatible to female connectors for RPC-N 50 Ω , RPC-N 75 Ω incl. gauge block	