

Reverse Polarity Connectors (SMA, BNC, TNC)



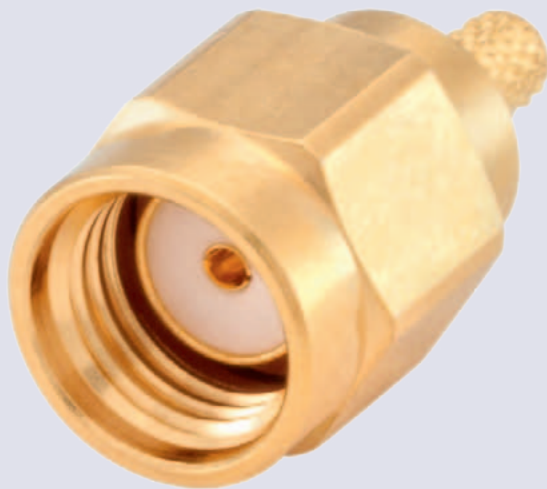
“Reverse Polarity” coaxial connectors are non-standardized versions of standard connector series: interfaces are similar to the standards, center contacts and dielectricum are reversed: male connectors would have female center contacts, female connectors would have male center contacts. Reverse polarity connectors are used for connecting W-LAN components.

Rosenberger provides SMA, BNC and TNC reverse polarity connectors.

„Reverse Polarity“-Koaxial-Steckverbinder sind nicht genormte Versionen von Standard-Steckverbinder-Serien: Innenleiter und Dielektrika sind invers bestückt, d.h. Stecker haben einen Kuppler-Innenleiter und Kuppler einen Stecker-Innenleiter. Reverse Polarity Steckverbinder werden eingesetzt zum Verbinden von W-LAN-Komponenten.

Rosenberger bietet Reverse Polarity-Steckverbinder in den Serien SMA, BNC und TNC.

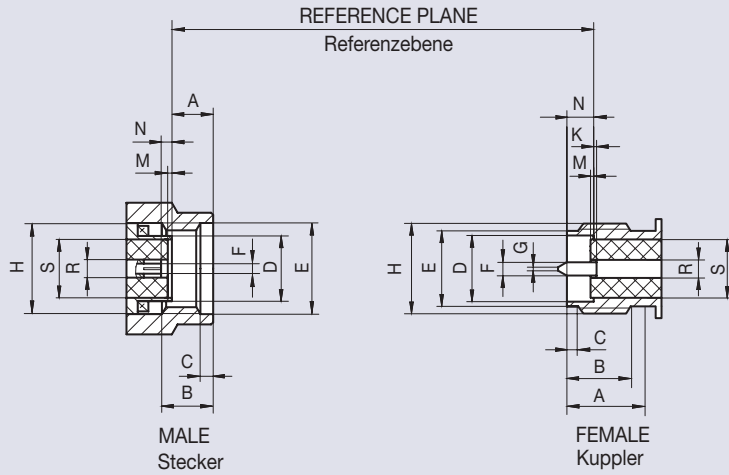
SMA Reverse
BNC Reverse 50 Ω
TNC Reverse 50 Ω



SMA Reverse

Interface Dimensions SMA Reverse

Code 32R



	Male Stecker		Female Kuppler	
	min.	max.	min.	max.
A	–	3.43	5.54	–
B	2.54	–	4.32	–
C	0.38	1.14	0.38	1.14
D	–	Ø 4.59	Ø 4.60	Ø 4.67
E	Ø 6.35	–	Ø 5.28	Ø 5.49
F	1)		Ø 0.902	Ø 0.94
G	–	–	–	Ø 0.38
H	1/4-36 UNS-2B		1/4-36 UNS-2A	
K	–	–	0.00	0.25
M	–	0.00	–	0.00
N	0.00	0.25	1.88	1.98
R	Ø 1.245	Ø 1.295	Ø 1.245	Ø 1.295
S	–	Ø 4.178	–	Ø 4.178

Dimensions in mm

¹⁾ Resilient, dimension to meet electrical and mechanical requirements

Features

- ▶ Interface according to Rosenberger Reverse SMA, FCC Standard
- ▶ Frequency range DC to 18 GHz
- ▶ Return loss (cable connector straight) ≥ 26 dB (typ.)
- ▶ Impedance 50 Ω
- ▶ Screw-on coupling

Product Range

- ▶ Cable connectors
- ▶ PCB connectors
- ▶ Adaptors

Technical Data SMA Reverse

Code 32R

Applicable standards Anwendbare Normen	
Interface according to Interface gemäß	Rosenberger SMA Reverse compliant with FCC standard (part 15, section 15.203) derived from IEC 60169-15, MIL-PRF-39012, EN 122110
Electrical data Elektrische Daten	
Impedance Wellenwiderstand	50 Ω
Frequency range Frequenzbereich	DC to 18 GHz
Return loss (cable connector straight) Rückflussdämpfung (Kabelsteckverbinder gerade)	≥ 26 dB (typ.)
Insertion loss Dämpfung	≤ 0.1 × √f (GHz) dB
Insulation resistance Isolationswiderstand	≥ 5 GΩ
Center contact resistance Übergangswiderstand Innenleiter	≤ 3 mΩ
Outer contact resistance Übergangswiderstand Außenleiter	≤ 2 mΩ
Test voltage Prüfspannung	1000 V rms
Working voltage Betriebsspannung	480 V rms
Power handling Leistungsbelastbarkeit	200 W @ 2 GHz
RF leakage - Interface Schirmdämpfung	≥ 100 dB @ DC to 1 GHz
Mechanical data Mechanische Daten	
Mating cycles Steckzyklen	≥ 100
Coupling nut retention Überwurfmutter Haltekraft	≥ 180 N
Center contact captivation Innenleiter Haltekraft	axial: ≥ 20 N
Coupling test torque Prüfdrehmoment	≤ 0.6 Nm
Coupling torque recommended Drehmoment empfohlen	0.5 Nm
Environmental data Umweltdaten	
Temperature range Temperaturbereich	-65 °C to +165 °C
Thermal shock Temperaturzyklen	MIL-STD-202, Method 107, Condition B
Corrosion resistance Korrosionsbeständigkeit	MIL-STD-202, Method 101, Condition B
Moisture resistance Feuchtigkeitsbeständigkeit	MIL-STD-202, Method 106
Vibration Vibration	MIL-STD-202, Method 204, Condition B
Shock Schock	MIL-STD-202, Method 213, Condition I
Max. soldering temperature (PCB connectors) Max. Löttemperatur (Leiterplattensteckverbinder)	IEC 61760-1, +260 °C for 10 sec.
Materials Materialien	
Spring loaded contact parts Federnde Kontaktteile	CuBe, Au plating
Center contact Innenleiter	CuZn, Au plating
Outer contact Außenleiter	CuZn, Au plating
Body Gehäuse	CuZn, Au plating
Coupling nut Überwurfmutter	CuZn, Au plating
Crimping ferrule Crimphülse	Cu, Au plating
Dielectric Dielektrikum	PTFE
Gasket Dichtung	Silicone

Rosenberger connectors generally fulfill the indicated technical data. Individual values of connectors may deviate depending upon application, design, type of cable, assembly method and workmanship. Data sheets for particular products can be downloaded on our website or can be provided on request from your Rosenberger sales partner.

Rosenberger-Steckverbinder erfüllen grundsätzlich die hier angegebenen technischen Daten. Je nach Anwendung, Bauart, Kabeltyp, Montageart und -ausführung können einzelne Werte der Steckverbinder hiervon abweichen. Datenblätter zu einzelnen Produkten können Sie von unserer Website herunterladen oder auf Anfrage von Ihrem Rosenberger-Ansprechpartner erhalten.

Cable Connectors - Flexible Cables


Straight Plug, solder-crimp

Flexible Cables

Rosenberger No.	Order No.	Sales Unit	Packaging	Cable Group	
32R S 147-302 L5	147305	50	standard	02	


Right Angle Plug, solder-crimp

Flexible Cables

Rosenberger No.	Order No.	Sales Unit	Packaging	Cable Group	
32R S 247-302 L5	155778	25	standard	02	

Straight Panel Jack, solder-crimp, hexagonal flange

Flexible Cables

Rosenberger No.	Order No.	Sales Unit	Packaging	Remarks	Cable Group	
32R K 647-302 L5	147308	25	standard	hexagonal flange rear mount	02	

PCB Connectors - Solder Pin



Right Angle Jack

Solder Pin

Rosenberger No.	Order No.	Sales Unit	Packaging	
32R K 241-400 L5	147310	50	blister	

Adaptors

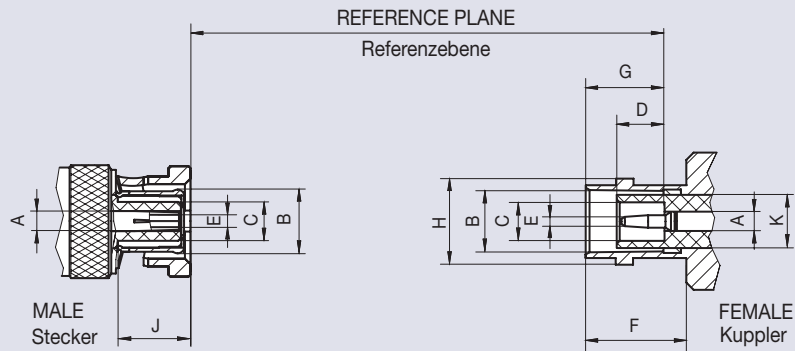
Adaptors SMA Reverse - SMA

Rosenberger No.	Order No.	Sales Unit	Packaging	Remarks	
32R S 132-K00 L5	159287	1	standard	SMA Reverse male - SMA Standard female	
32R K 132-S00 L5	180528	1	standard	SMA Reverse female - SMA Standard male	

BNC Reverse 50 Ω

Interface Dimensions BNC Reverse 50 Ω

Code 51R



	Male Stecker		Female Kuppler	
	min.	max.	min.	max.
A	Ø 2.06	Ø 2.21	Ø 2.06	Ø 2.21
B	1)		Ø 8.10	Ø 8.15
C	–	Ø 4.72	Ø 4.83	–
D	–	–	4.78	5.28
E	1)		Ø 1.32	Ø 1.37
F	–	–	10.52	–
G	–	–	8.31	8.51
H	–	–	Ø 10.97	Ø 11.07
J	5.28	5.79	–	–
K	–	–	Ø 7.00 nom.	

Dimensions in mm

¹⁾ Resilient, dimension to meet electrical and mechanical requirements

Features

- ▶ Interface according to Rosenberger Reverse BNC, FCC Standard
- ▶ Frequency range DC to 10 GHz (max.), DC to 4 GHz (opt.)
- ▶ Return loss (cable connector straight) ≥ 20 dB (typ.)
- ▶ Impedance 50 Ω
- ▶ Bayonet coupling

Product Range

Connectors are available on request

Technical Data BNC Reverse 50 Ω

Code 51R

Applicable standards Anwendbare Normen	
Interface according to Interface gemäß	Rosenberger BNC Reverse compliant with FCC standard (part 15, section 15.203) derived from IEC 61169-8, MIL-PRF-39012, CECC 22120
Electrical data Elektrische Daten	
Impedance Wellenwiderstand	50 Ω
Frequency range Frequenzbereich	DC to 10 GHz (max.) DC to 4 GHz (opt.)
Return loss (cable connector straight) Rückflusdämpfung (Kabelsteckverbinder gerade)	≥ 20 dB (typ.)
Insertion loss Dämpfung	≤ 0.1 x √f (GHz) dB
Insulation resistance Isolationswiderstand	≥ 5 GΩ
Center contact resistance Übergangswiderstand Innenleiter	≤ 1.5 mΩ
Outer contact resistance Übergangswiderstand Außenleiter	≤ 1 mΩ
Test voltage Prüfspannung	1500 V rms
Working voltage Betriebsspannung	400 V rms
Power handling Leistungsbelastbarkeit	80 W @ 2 GHz
Mechanical data Mechanische Daten	
Mating cycles Steckzyklen	≥ 500
Center contact captivation Innenleiter Haltekraft	axial: ≥ 15 N
Environmental data Umweltdaten	
Temperature range Temperaturbereich	-65 °C to +165 °C
Thermal shock Temperaturzyklen	MIL-STD-202, Method 107, Condition B
Corrosion resistance Korrosionsbeständigkeit	MIL-STD-202, Method 101, Condition B
Moisture resistance Feuchtigkeitsbeständigkeit	MIL-STD-202, Method 106
Vibration Vibration	MIL-STD-202, Method 204, Condition B
Shock Schock	MIL-STD-202, Method 213, Condition G
Max. soldering temperature (PCB connectors) Max. Löttemperatur (Leiterplattensteckverbinder)	IEC 61760-1, +260 °C for 10 sec.
Materials Materialien	
Spring loaded contact parts Federnde Kontaktteile	CuBe / CuSn, Au plating
Center contact Innenleiter	CuZn, Au plating
Outer contact Außenleiter	CuZn, white bronze plating
Crimping ferrule Crimphülse	Cu, white bronze plating
Dielectric Dielektrikum	PTFE
Gasket Dichtung	Silicone

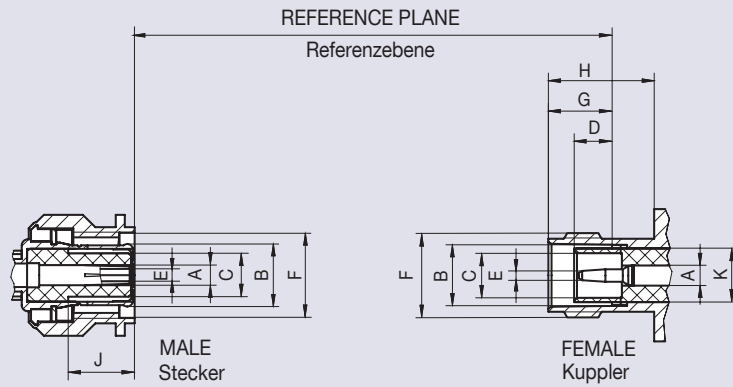
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TNC Reverse 50 Ω

Interface Dimensions TNC Reverse 50 Ω

Code 56R



	Male Stecker		Female Kuppler	
	min.	max.	min.	max.
A	Ø 2.06	Ø 2.21	Ø 2.06	Ø 2.21
B	1)		Ø 8.10	Ø 8.15
C	–	Ø 4.72	Ø 4.83	–
D	–	–	4.78	5.28
E	1)		Ø 1.32	Ø 1.37
F	7/16-28 UNEF-2B		7/16-28 UNEF-2A	
G	–	–	8.31	8.51
H	–	–	Ø 10.52	–
J	5.28	5.79	–	–
K	–	–	Ø 7.00 nom.	

Dimensions in mm

¹⁾ Resilient, dimension to meet electrical and mechanical requirements

Features

- ▶ Interface according to Rosenberger Reverse TNC, FCC Standard
- ▶ Frequency range DC to 10 GHz (max.), DC to 4 GHz (opt.)
- ▶ Return loss (cable connector straight) ≥ 20 dB (typ.)
- ▶ Impedance 50 Ω
- ▶ Screw-on coupling

Product Range

Connectors are available on request

Technical Data TNC Reverse 50 Ω

Code 56R

Applicable standards Anwendbare Normen	
Interface according to Interface gemäß	Rosenberger TNC Reverse compliant with FCC standard (part 15, section 15.203) derived from IEC 60169-17, MIL-PRF-39012, DIN EN 122200
Electrical data Elektrische Daten	
Impedance Wellenwiderstand	50 Ω
Frequency range Frequenzbereich	DC to 10 GHz (max.) DC to 4 GHz (opt.)
Return loss (cable connector straight) Rückflussdämpfung (Kabelsteckverbinder gerade)	≥ 20 dB (typ.)
Insertion loss Dämpfung	≤ 0.1 × √f (GHz) dB
Insulation resistance Isolationswiderstand	≥ 5 GΩ
Center contact resistance Übergangswiderstand Innenleiter	≤ 1.5 mΩ
Outer contact resistance Übergangswiderstand Außenleiter	≤ 1 mΩ
Test voltage Prüfspannung	1500 V rms
Working voltage Betriebsspannung	500 V rms
Power handling Leistungsbelastbarkeit	80 W @ 2 GHz
Mechanical data Mechanische Daten	
Mating cycles Steckzyklen	≥ 500
Center contact captivation Innenleiter Haltekraft	axial: ≥ 15 N
Coupling torque recommended Drehmoment empfohlen	0.46 Nm to 0.69 Nm
Environmental data Umweltdaten	
Temperature range Temperaturbereich	-65 °C to +165 °C
Thermal shock Temperaturzyklen	MIL-STD-202, Method 107, Condition B
Corrosion resistance Korrosionsbeständigkeit	MIL-STD-202, Method 101, Condition B
Moisture resistance Feuchtigkeitsbeständigkeit	MIL-STD-202, Method 106
Vibration Vibration	MIL-STD-202, Method 204, Condition B
Shock Schock	MIL-STD-202, Method 213, Condition G
Max. soldering temperature (PCB connectors) Max. Löttemperatur (Leiterplattensteckverbinder)	IEC 61760-1, +260 °C for 10 sec.
Materials Materialien	
Spring loaded contact parts Federnde Kontaktteile	CuBe / CuSn, Au plating
Center contact Innenleiter	CuZn, Au plating
Outer contact Außenleiter	CuZn, white bronze plating
Crimping ferrule Crimphülse	Cu, white bronze plating
Dielectric Dielektrikum	PTFE
Gasket Dichtung	Silicone

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