



“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.

Reverse Polarity Connectors (SMA, BNC, TNC)

Contents

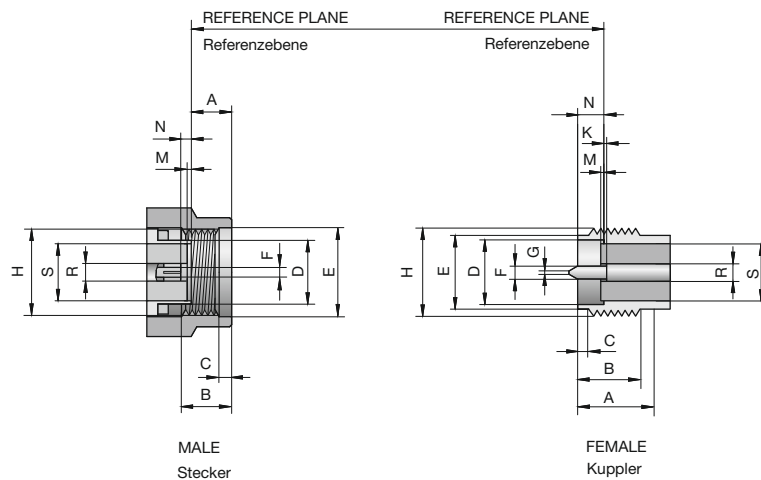
Reverse SMA

Reverse BNC

Reverse TNC

Interface Dimensions SMA Reverse

Code 32R



SMA Reverse

dimension [mm]	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		4.59	4.60	4.67
E	6.35		5.28	5.49
F			0.902	0.94
G				0.38
H	1/4-36 UNS-2B		1/4-36 UNS-2A	
K				0.25
M		0.00		0.00
N		0.25	1.88	1.98
R	1.245	1.295	1.245	1.295
S		4.178		4.178

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
 Panel connectors

Further connectors available on request

Technical Data SMA Reverse

Code 32R

Applicable standards Anwendbare Normen	
Interface according to <i>Interface gemäß</i>	Rosenberger SMA Reverse compliant with FCC standard (part 15, section 15.203) derived from IEC 60169-15, MIL-PRF-39012, EN 122110
Quality tested according to <i>Qualitätsprüfung gemäß</i>	MIL-STD-202
Electrical data Elektrische Daten	
Impedance <i>Wellenwiderstand</i>	50 Ω
Frequency range <i>Frequenzbereich</i>	DC to 18 GHz
Return loss (cable connector straight) <i>Rückflussdämpfung (Kabelsteckverbinder gerade)</i>	≥ 26 dB (typ.)
Insertion loss <i>Dämpfung</i>	≤ 0.1 x √f(GHz) dB
Insulation resistance <i>Isolationswiderstand</i>	≥ 5 GΩ
Center contact resistance <i>Übergangswiderstand Innenleiter</i>	≤ 3 mΩ
Outer contact resistance <i>Übergangswiderstand Außenleiter</i>	≤ 2 mΩ
Test voltage <i>Prüfspannung</i>	1000 V rms
Working voltage <i>Betriebsspannung</i>	480 V rms
Power handling <i>Leistungsbelastbarkeit</i>	200 W @ 2 GHz
Rf-leakage <i>Schirmdämpfung</i>	≥ 100 dB @ DC to 1 GHz
Mechanical data Mechanische Daten	
Mating cycles <i>Steckzyklen</i>	≥ 100
Coupling nut retention <i>Überwurfmutter Haltekraft</i>	≥ 180 N
Center contact captivation <i>Innenleiter Haltekraft</i>	axial: ≥ 20 N
Coupling test torque <i>Prüfdrehmoment</i>	≤ 0.6 Nm
Coupling torque recommended <i>Drehmoment empfohlen</i>	0.5 Nm
Environmental data Umweltdaten	
Temperature range <i>Temperaturbereich</i>	-65 °C to +165 °C
Thermal shock <i>Temperaturzyklen</i>	MIL-STD-202, Method 107, Condition B
Climatic category <i>Klimakategorie</i>	IEC 60068 65/165/21
Corrosion resistance <i>Korrosionsbeständigkeit</i>	MIL-STD-202, Method 101, Condition B
Moisture resistance <i>Feuchtigkeitsbeständigkeit</i>	MIL-STD-202, Method 106
Vibration <i>Vibration</i>	MIL-STD-202, Method 204, Condition B
Shock <i>Schock</i>	MIL-STD-202, Method 213, Condition I
Max. soldering temperature (PCB connectors) <i>Max. Löttemperatur (Leiterplattensteckverbinder)</i>	IEC 61760-1, +260 °C for 10 sec.
Materials Materialien	
Spring loaded contact parts <i>Federnde Kontaktteile</i>	CuBe, Au plating
Center contact <i>Innenleiter</i>	CuZn, Au plating
Outer contact <i>Außenleiter</i>	CuZn, Au plating
Body <i>Gehäuse</i>	CuZn, Au plating
Coupling nut <i>Überwurfmutter</i>	CuZn, Au plating
Crimping ferrule <i>Crimphülse</i>	Copper alloy, Au plating
Dielectric <i>Dielektrikum</i>	PTFE
Gasket <i>Dichtung</i>	Rubber

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 - Flexible Cables

Straight Plug, solder-crimp

Flexible Cables

Ordering Number	Cable Group	Assembly Instruction	Crimp Inserts	Packing Unit	
32 RS 147-302 L5	02	32 B5	11 W 150-102	100	
32 RS 147-303 L5	03	32 B5	11 W 150-102	100	
32 RS 147-306 L5	06	32 B8	11 W 150-108	100	
32 RS 147-307 L5	07	32 B8	11 W 150-108	100	

Right Angle Plug, solder-crimp

Flexible Cables

Ordering Number	Cable Group	Assembly Instruction	Crimp Inserts	Packing Unit	
32 RS 247-302 L5	02	32 B6	11 W 150-102	100	

Straight Panel Jack, solder-crimp,
hexagonal flange

Flexible Cables

Ordering Number	Version	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	Crimp Inserts	Packing Unit	
32 RK 647-302 L5	rear mount	02	32 B21	B 57	11 W 150-102	100	
32 RK 647-303 L5	rear mount	03	32 B21	B 57	11 W 150-102	100	

PCB Connectors - solder pin

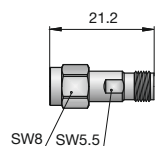
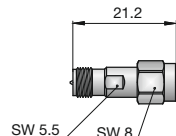
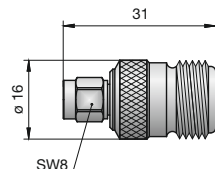
Right Angle Jack

Solder pin

Ordering Number	Panel Piercing / PCB Layout	Packing Unit	
32 RK 241-400 L5	B 30B	200 blister	

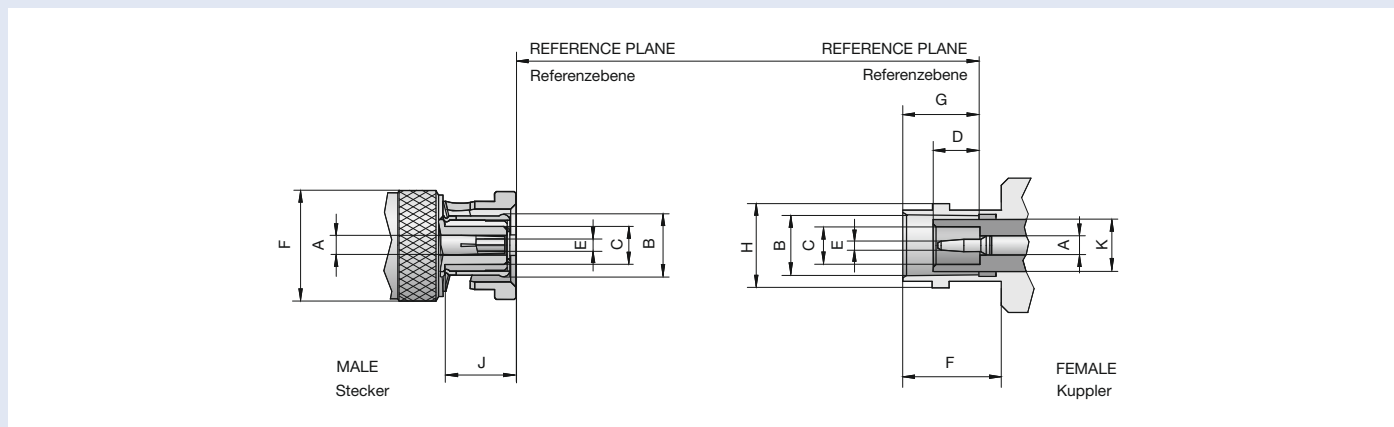
Adaptors

Adaptors (Inter Series)

Ordering Number	Version	Remarks	Packing Unit	
32 RS 132-K00 L5	straight	SMA reverse male - SMA Standard female	1	
32 RK 132-S00 L5	straight	SMA reverse female - SMA Standard male	1	
32 RS 153-K00 N5	straight	SMA reverse male - N Standard female	1	

Interface Dimensions BNC Reverse, 50 Ω

Code 51R



BNC Reverse, 50 Ω

dimension [mm]	Male Stecker		Female Kuppler	
	min.	max.	min.	max.
A	2.06	2.21	2.06	2.21
B		1)	8.10	8.15
C		4.72	4.83	
D			4.78	5.28
E		1)	1.32	1.37
F		15.06	10.52	
G			8.31	8.51
H			10.97	11.07
J	5.28	5.79		
K			7.00 nom.	

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

Further connectors 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
Quality tested according to Qualitätsprüfung gemäß	MIL-STD-202
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	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
Climatic category Klimakategorie	IEC 60068 65/165/21
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	Copper alloy, white bronze plating
Dielectric Dielektrikum	PTFE
Gasket Dichtung	Rubber

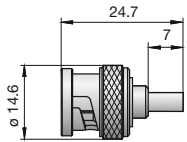
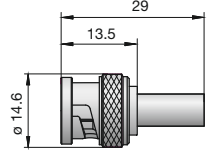
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Cable Connectors - Flexible Cables

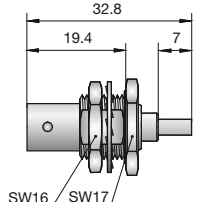
Straight Plug, crimp

Flexible Cables

Ordering Number	Cable Group	Assembly Instruction	Crimp Inserts	Packing Unit	
51 RS 107-802 N5	02	51 T	11 W 150-402	100	
51 RS 107-803 N5	03	51 T	11 W 150-402	100	
51 RS 107-106 N5	06	51 P 10	11 W 150-208	100	
51 RS 107-108 N5	08	51 P 10	11 W 150-208	100	
51 RS 107-1N8 N5	N8	51 P 10	11 W 150-206	100	

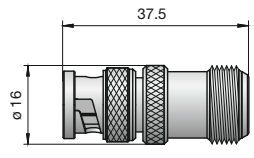
Panel Jack, crimp, hexagonal flange

Flexible Cables

Ordering Number	Version	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	Crimp Inserts	Packing Unit	
51 RK 607-802 N5	rear mount	02	51 T	B 3	11 W 150-402	100	
51 RK 607-803 N5	rear mount	03	51 T	B 3	11 W 150-402	100	

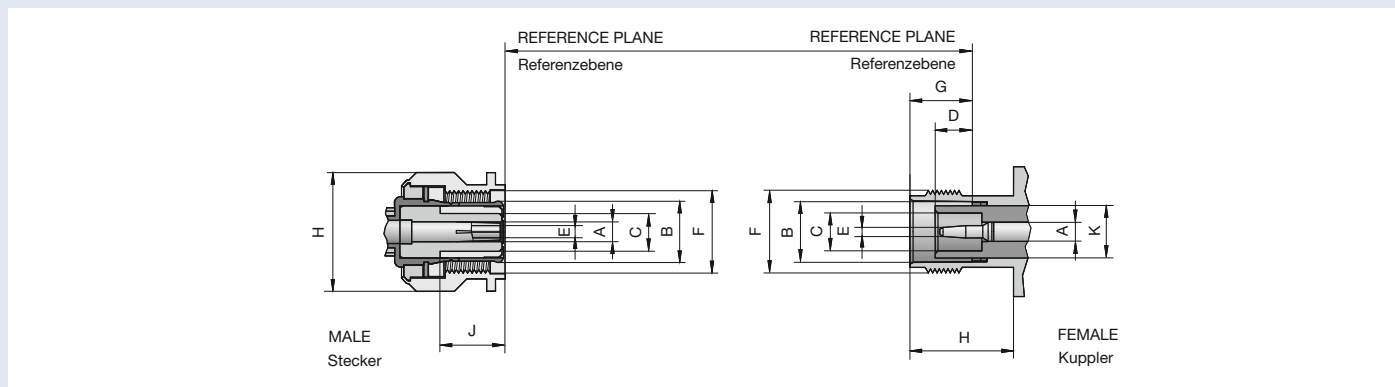
Adaptors

Adaptors (Inter Series)

Ordering Number	Version	Remarks	Packing Unit	
51 RS 153-K00 N5	straight	BNC reverse male - N Standard female	1	

Interface Dimensions TNC Reverse, 50 Ω

Code 56R



TNC Reverse, 50 Ω

dimension [mm]	Male Stecker		Female Kuppler	
	min.	max.	min.	max.
A	2.06	2.21	2.06	2.21
B		1)	8.10	8.15
C		4.72	4.83	
D			4.78	5.28
E		1)	1.32	1.37
F	7/16-28 UNEF-2B		7/16-28 UNEF-2A	
G			8.31	8.51
H	16.00 nom.		10.52	
J	5.28	5.79		
K			7.00 nom.	

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

Further connectors available on request

Technical Data TNC Reverse, 50 Ω

Code 56R

Applicable standards Anwendbare Normen	
Interface according to <i>Interface gemäß</i>	Rosenberger TNC Reverse compliant with FCC standard (part 15, section 15.203) derived from IEC 60169-17, MIL-PRF-39012, DIN EN 122200
Quality tested according to <i>Qualitätsprüfung gemäß</i>	MIL-STD-202
Electrical data Elektrische Daten	
Impedance <i>Wellenwiderstand</i>	50 Ω
Frequency range <i>Frequenzbereich</i>	DC to 10 GHz (max.) DC to 4 GHz (opt.)
Return loss (cable connector straight) <i>Rückflussdämpfung (Kabelsteckverbinder gerade)</i>	≥ 20 dB (typ.)
Insertion loss <i>Dämpfung</i>	≤ 0.1 x √f(GHz) dB
Insulation resistance <i>Isolationswiderstand</i>	≥ 5 GΩ
Center contact resistance <i>Übergangswiderstand Innenleiter</i>	≤ 1.5 mΩ
Outer contact resistance <i>Übergangswiderstand Außenleiter</i>	≤ 1 mΩ
Test voltage <i>Prüfspannung</i>	1500 V rms
Working voltage <i>Betriebsspannung</i>	500 V rms
Power handling <i>Leistungsbelastbarkeit</i>	80 W @ 2 GHz
Mechanical data Mechanische Daten	
Mating cycles <i>Steckzyklen</i>	≥ 500
Center contact captivation <i>Innenleiter Haltekraft</i>	axial: ≥ 15 N
Coupling torque recommended <i>Drehmoment empfohlen</i>	0.46 Nm to 0.69 Nm
Environmental data Umweltdaten	
Temperature range <i>Temperaturbereich</i>	-65 °C to +165 °C
Thermal shock <i>Temperaturzyklen</i>	MIL-STD-202, Method 107, Condition B
Climatic category <i>Klimakategorie</i>	IEC 60068 65/165/21
Corrosion resistance <i>Korrosionsbeständigkeit</i>	MIL-STD-202, Method 101, Condition B
Moisture resistance <i>Feuchtigkeitsbeständigkeit</i>	MIL-STD-202, Method 106
Vibration <i>Vibration</i>	MIL-STD-202, Method 204, Condition B
Shock <i>Schock</i>	MIL-STD-202, Method 213, Condition G
Max. soldering temperature (PCB connectors) <i>Max. Löttemperatur (Leiterplattensteckverbinder)</i>	IEC 61760-1, +260 °C for 10 sec.
Materials Materialien	
Spring loaded contact parts <i>Federnde Kontaktteile</i>	CuBe / CuSn, Au plating
Center contact <i>Innenleiter</i>	CuZn, Au plating
Outer contact <i>Außenleiter</i>	CuZn, white bronze plating
Crimping ferrule <i>Crimphülse</i>	Copper alloy, white bronze plating
Dielectric <i>Dielektrikum</i>	PTFE
Gasket <i>Dichtung</i>	Rubber

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Cable Connectors - Flexible Cables

Straight Plug, crimp

Flexible Cables

Ordering Number	Remarks	Cable Group	Assembly Instruction	Crimp Inserts	Packing Unit	
56 RS 107-802 N5		02	51 T	11 W 150-402	100	
56 RS 107-803 N5		03	51 T	11 W 150-402	100	
56 RS 107-106 N5	a = 13.5 mm	06	51 P 10	11 W 150-208	100	
56 RS 107-108 N5	a = 13.5 mm	08	51 P 10	11 W 150-208	100	
56 RS 107-1N8 N5	a = 13.5 mm	N8	51 P 10	11 W 150-206	100	
56 RS 107-1Y8 N5	a = 12.0 mm	Y8	51 P 10	11 W 150-209	100	
56 RS 101-1N9 N5		N9	53 W 4	11 W 150-115	50	

Panel Jack, crimp, hexagonal flange

Flexible Cables

Ordering Number	Version	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	Crimp Inserts	Packing Unit	
56 RK 607-802 N5	rear mount	02	51 T	B 3	11 W 150-402	100	
56 RK 607-803 N5	rear mount	03	51 T	B 3	11 W 150-402	100	

Adaptors

Adaptors (Inter Series)

Ordering Number	Version	Remarks	Packing Unit	
56 RS 153-K00 N5	straight	TNC reverse male - N Standard female	1	