

TNC (50 Ω) - Coaxial Connectors with Screw Thread Coupling Mechanism for Applications up to 4 GHz

TNC connectors are based on the electrical characteristics and interface dimensions of BNC connectors. Their optimum working frequency is up to 4 GHz (max. 10 GHz). The modified threaded coupling mechanism makes fast and easy connections possible.

50 Ω and 75 Ω versions can be interconnected without restriction.

Product Features

- Interface according to IEC 60169- 17, MI- PRF- 39012, DIN EN 122200
- Quality tested according to US MIL- STD 202
- Frequency range optimum up to 4 GHz, max. up to 10 GHz
- VSWR (straight connector): ≤ 1.20 typ.
- Threaded coupling mechanism
- Interchangeable with TNC, 75 Ω version.

Product Range

- Cable connectors (straight and right angle) for flexible, semi- flex and semi- rigid cables
- PCB connectors (straight and right angle)
- Panel connectors in various flanges
- Adaptors
- Terminations
- Accessories.

Further connectors are available on request.

Application Examples

A wide range of applications in various segments like data systems, telecommunication, especially mobile radio base stations and aerospace applications.

TNC (50 Ω) - Koaxialsteckverbinder mit Schraub- Verbindung für Anwendungen bis 4 GHz

TNC-Steckverbinder basieren auf den elektrischen Eigenschaften und Interface-Abmessungen von BNC-Steckverbindern. Der Einsatzfrequenzbereich reicht optimal bis zu 4 GHz (max. 10 GHz). Die modifizierte Schraub-Befestigungsform ermöglicht eine schnellere und einfachere Montage im Vergleich zu BNC-Steckverbindern.

50- Ω- und 75- Ω- Typen sind uneingeschränkt miteinander koppelbar.

Produkteigenschaften

- Interface gemäß IEC 60169- 17, MIL- PRF- 39012, DIN EN 122200
- Qualitätsprüfung gemäß US MIL- STD 202
- Frequenzbereich optimal bis 4 GHz, max. bis zu 10 GHz
- VSWR (gerader Steckverbinder): ≤ 1,20 typ.
- Interface gemäß IEC 60169- 17, MIL- PRF- 39012, DIN EN 122200
- Qualitätsprüfung gemäß US MIL- STD 202
- Schraub- Kopplungsart
- Steckkompatibel mit TNC, 75- Ω- Variante.

Produktspektrum

- Kabelsteckverbinder (gerade und gewinkelt) für flexible, Semi- Flex- und Semi- Rigid- Kabel
- Leiterplatten- Steckverbinder (gerade und gewinkelt)
- Gehäuse- Steckverbinder in verschiedenen Flanschen
- Adapter
- Abschlusswiderstände
- Zubehör.

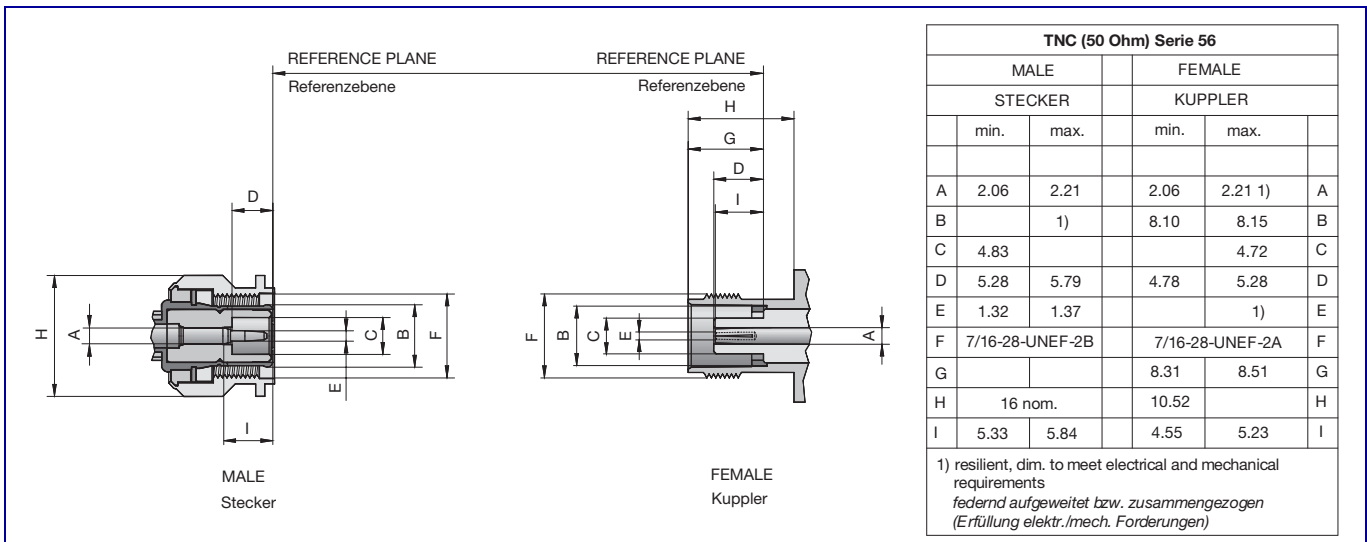
Weitere Steckverbinder auf Anfrage erhältlich.

Anwendungsbeispiele

Weites Anwendungsfeld mit vielfältigen Einsatzmöglichkeiten in der Datentechnik, Telekommunikation, besonders in Mobilfunkbasisstationen und in der Flugzeugindustrie.

Interface Dimensions

Anschlussmaße



Technical Data

Technische Daten

Applicable standards		Anwendbare Standards
Interface according to	IEC 60169- 17, MIL- PRF- 39012, DIN EN 122200	Interface gemäß
Quality tested according to	US MIL- STD 202	Qualitätsprüfung gemäß

Electrical data		Elektrische Daten
Impedance	50 Ω	Wellenwiderstand
Frequency range	max. 0...10 GHz opt. 0...4 GHz	Frequenzbereich
VSWR (straight contacts)	≤ 1.20 typ.	VSWR (gerader Kontakt)
VSWR (right angle connector)	≤ 1.25 typ.	VSWR (rechtwinkliger Stecker)
Insertion loss	≤ 0.1 x √ f (GHz) dB	Dämpfung
Insulation resistance	≥ 5 x 10 ³ MΩ	Isolationswiderstand
Center contact resistance	≤ 1.5 mΩ	Übergangswiderstand Innenleiter
Outer contact resistance	≤ 1 mΩ	Übergangswiderstand Außenleiter
Test voltage	1500 V rms	Prüfspannung
Working voltage	500 V rms	Betriebsspannung
Power handling	≤ 80 W (2 GHz) typ.	Leistungsbelastbarkeit

Mechanical data		Mechanische Daten
Mating cycles	≥ 500	Steckzyklen
Coupling test torque	max. 1.7 Nm	Prüf- Anzugsdrehmoment
Recommended coupling torque	0.46 Nm - 0.69 Nm	Empfohlenes Anzugsdrehmoment
Center contact captivation	axial: ≥ 27 N	Innenleiter Haltekraft

Environmental data		Umweltdaten
Temperature range	- 65°C - +165°C	Temperaturbereich
Vibration	US MIL- STD 202, Meth. 204, Cond. B	Vibration
Climatic class	IEC 60068 65/165/21	Klimaklasse
Shock	US MIL- STD 202, Meth. 213, Cond. G	Schock
Corrosion resistance	US MIL- STD 202 Meth. 101, Cond. B	Korrosionsbeständigkeit
Moisture resistance	US MIL- STD 202, Meth. 106	Feuchtigkeitsbeständigkeit
Degree of protection (mated pair)	IEC 60529	Schutzgrad für gekoppeltes Paar

Materials		Materialien
Body, outer contact	CuZn	Gehäuse, Außenleiter
Spring loaded contact parts	CuBe / CuSn	Federnde Kontaktteile
Pin contacts	CuZn	Stiftkontakte
Dielectric	PTFE	Dielektrikum
Crimping ferrule	Copper Alloy	Crimphülse
Gasket	Rubber	Dichtung
Plating outer contact	Ni/white bronze	Oberfläche Außenleiter
Plating center contact	Au	Oberfläche Innenleiter

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

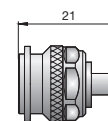
Kabel-Steckverbinder - Semi-Rigid-Kabel

Straight Plug, solder

Stecker gerade, löt

Semi-Rigid

Ordering Number	Cable Group	Assembly Instruction	Packing Unit
56 S 101-272 B4	72	51 S2	100

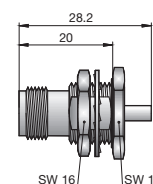


Panel Jack, solder, hexagonal flange

Gehäusekuppler, löt, 6-kant-Flansch

Semi-Rigid

Ordering Number	Version	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	Packing Unit
56 K 611-271 N4	rear mount	71	51 S1	B 3	1
56 K 611-272 N4	rear mount	72	51 S2	B 3	100



Cable Connectors - Flexible Cables

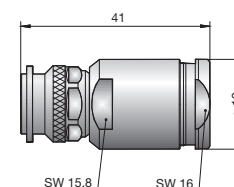
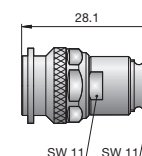
Kabel-Steckverbinder - Flexible Kabel

Straight Plug, clamp

Stecker gerade, klemm

Flexible Cables

Ordering Number	Remarks	Cable Group	Assembly Instruction	Packing Unit
56 S 106-006 N4	captive center contact	06, 07, 08	51 E	1
56 S 105-015 N4		15, 17	51 D	1

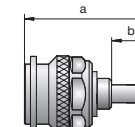


Straight Plug, crimp

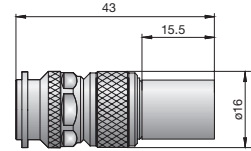
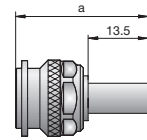
Stecker gerade, crimp

Flexible Cables

Ordering Number	Remarks	Cable Group	Assembly Instruction	Packing Unit	Crimp Inserts
56 S 107-801 N4	a = 24.2; b = 7	01	51 T	100	11 W 150-402
56 S 107-802 N4	a = 24.2; b = 7	02	51 T	100	11 W 150-402
56 S 107-803 N4	a = 24.2; b = 7	03	51 T	100	11 W 150-402



Ordering Number	Remarks	Cable Group	Assembly Instruction	Packing Unit	Crimp Inserts
56 S 107- 106 N4	a = 28,6	06	51 P10	1	11 W 150- 208
56 S 107- 108 N4	a = 28,6	07, 08	51 P10	1, 100	11 W 150- 208
56 S 107- 1Y8 N4	a = 27.1	Y8	51 P10	100	11 W 150- 209
56 S 101- 115 N4		15	51 O	1	11 W 150- 215
56 S 101- 117 N4		17	51 O	100	11 W 150- 215

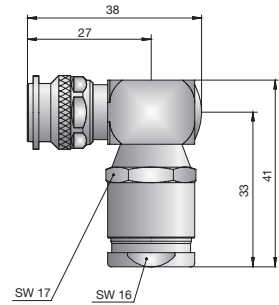
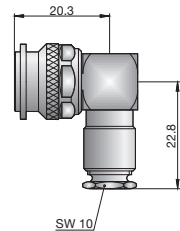


Right Angle Plug, clamp

Winkelstecker, klemm

Flexible Cables

Ordering Number	Cable Group	Assembly Instruction	Packing Unit
56 S 201- 006 N4	06, 07, 08	51 L	1
56 S 201- 015 N4	15, 17	53 F1	1

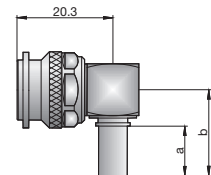


Right Angle Plug, solder crimp

Winkelstecker, löt- crimp

Flexible Cables

Ordering Number	Remarks	Cable Group	Assembly Instruction	Packing Unit	Crimp Inserts
56 S 207- 302 N4	a = 7.8; b = 15.5	02	51 M2	100	11 W 150- 102
56 S 207- 303 N4	a = 7.8; b = 15.5	03	51 M2	100	11 W 150- 102
56 S 209- 306 N4	a = 13.5; b = 21.2	06	51 M	100	11 W 150- 108
56 S 209- 308 N4	a = 13.5; b = 21.2	07, 08	51 M	100	11 W 150- 108

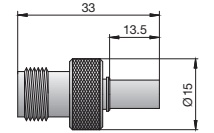
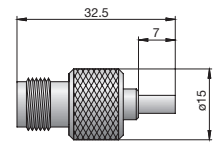


Straight Jack, crimp

Kuppler gerade, crimp

Flexible Cables

Ordering Number	Cable Group	Assembly Instruction	Packing Unit	Crimp Inserts
56 K 107-802 N4	02	51 T	1, 100	11 W 150-402
56 K 107-803 N4	03	51 T	100	11 W 150-402
56 K 107-106 N4	06	51 P1	1	11 W 150-208
56 K 107-108 N4	07, 08	51 P1	1	11 W 150-208

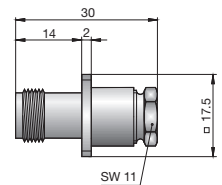


Panel Jack, clamp, 4- hole flange

Gehäusekuppler, klemm, 4- Loch- Flansch

Flexible Cables

Ordering Number	Remarks	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	Packing Unit
56 K 406-006 N4	4 x 3-56 UNF	06, 07, 08	51 E	B 6	1

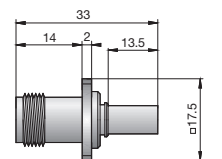
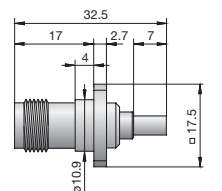


Panel Jack, crimp, 4- hole flange

Gehäusekuppler, crimp, 4- Loch- Flansch

Flexible Cables

Ordering Number	Remarks	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	Packing Unit	Crimp Inserts
56 K 407-802 N4	4 x M 2.5	02	51 T	B 101	100	11 W 150-402
56 K 407-803 N4	4 x M 2.5	03	51 T	B 101	100	11 W 150-402
56 K 407-106 N4	4 x 3-56 UNF	06	51 P1	B 101	1	11 W 150-208
56 K 407-108 N4	4 x 3-56 UNF	07, 08	51 P1	B 101	100	11 W 150-208

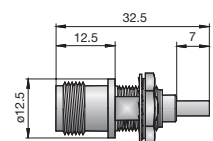


Panel Jack, crimp, round flange

Gehäusekuppler, crimp, Rundflansch

Flexible Cables

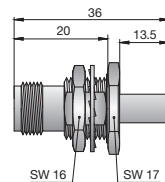
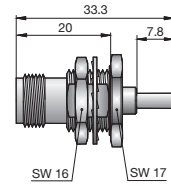
Ordering Number	Version	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	Packing Unit	Crimp Inserts
56 K 507-801 N4	front mount	01	51 T	B 2	100	11 W 150-402
56 K 507-802 N4	front mount	02	51 T	B 2	100	11 W 150-402
56 K 507-803 N4	front mount	03	51 T	B 2	100	11 W 150-402



Panel Jack, crimp,
hexagonal flangeGehäusekuppler, crimp,
6- kant- Flansch

Flexible Cables

Ordering Number	Version	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	Packing Unit	Crimp Inserts
56 K 607- 801 N4	rear mount	01	51 T3	B 3	100	11 W 150- 402
56 K 607- 802 N4	rear mount	02	51 T	B 3	100	11 W 150- 402
56 K 607- 803 N4	rear mount	03	51 T	B 3	100	11 W 150- 402
56 K 607- 106 N4	rear mount	06	51 P10	B 3	1	11 W 150- 208
56 K 607- 108 N4	rear mount	07, 08	51 P10	B 3	100	11 W 150- 208



Panel Connectors - Solder End

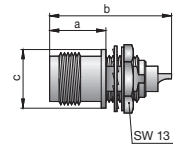
Gehäuse-Steckverbinder - Lötkech

Panel Jack, round flange

Gehäusekuppler, Rundflansch

Solder End

Ordering Number	Version	Remarks	Panel Piercing / PCB Layout	Packing Unit
56 K 504- 200 N4	front mount	a = 12; b = 26; c = 12.5	B 2	1
56 K 508- 200 N4	front mount	a = 14; b = 33; c = 15; pressurized	B 1	1

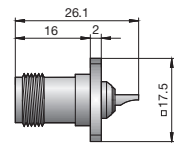


Panel Jack, 4- hole flange

Gehäusekuppler, 4- Loch- Flansch

Solder End

Ordering Number	Remarks	Panel Piercing / PCB Layout	Packing Unit
56 K 404- 200 N4	4 x Ø 3.1; without collar	B 6	1

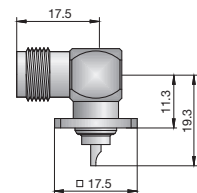


Right Angle Panel Jack, 4- hole flange

Flansch- Winkelkuppler, 4- Loch- Flansch

Solder End

Ordering Number	Remarks	Panel Piercing / PCB Layout	Packing Unit
56 K 201- 200 N4	4 x Ø 3.1	B 6	50



Panel Connectors - Coaxial End

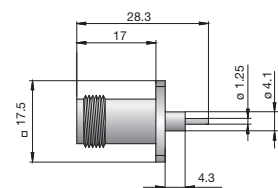
Gehäuse-Steckverbinder - Koaxiales Ende

Panel Jack, 4- hole flange

Gehäusekuppler, 4- Loch- Flansch

Coaxial End

Ordering Number	Remarks	Panel Piercing / PCB Layout	Packing Unit
56 K 405- 500 N4	4 x Ø 3.2	B 6	1



PCB Connectors - Solder Pin

Leiterplatten- Steckverbinder - Löt- Pin

Straight Jack, PCB

Leiterplatten- Kuppler gerade

Solder Pin

Ordering Number	Panel Piercing / PCB Layout	Packing Unit	
56 K 101- 400 A4	B 32	50 blister	

Right Angle Jack, PCB

Leiterplatten- Winkelkuppler

Solder Pin

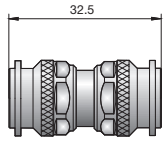
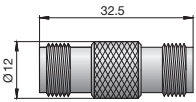
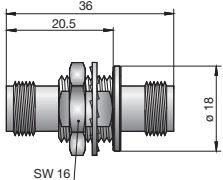
Ordering Number	Panel Piercing / PCB Layout	Packing Unit	
56 K 201- 400 A4	B 32	50 blister	

Adaptors (In- Serie)

Adapter (In- Serie)

Straight Adaptor

Adapter gerade

Ordering Number	Version	Remarks	Panel Piercing / PCB Layout	Packing Unit	
56 S 101- S00 N4	straight	male - male		1	
56 K 101- K00 N4	straight	TNC female - female		1	
56 K 501- K00 N4	straight	TNC female - female; round flange	B 3	1	

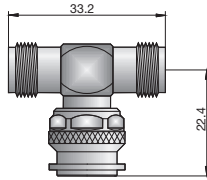
Right Angle Adaptor

Winkel- Adapter

Ordering Number	Version	Remarks	Packing Unit	
56 S 201- K00 N4	right angle	TNC male - female	1	

T- Adaptor

T- Adapter

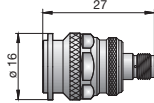
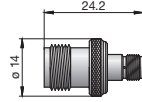
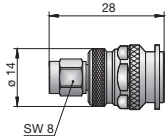
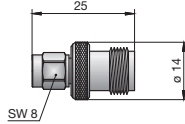
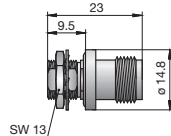
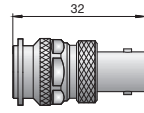
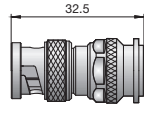
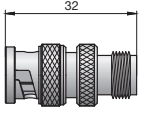
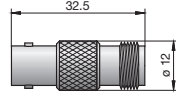
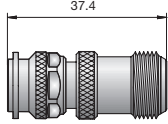
Ordering Number	Version	Remarks	Packing Unit	
56 S 301- K00 N4	T-Adapter	TNC female - male - female	1	

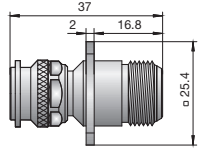
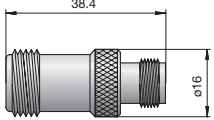
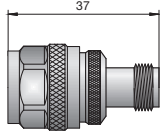
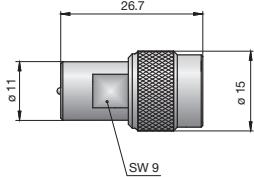
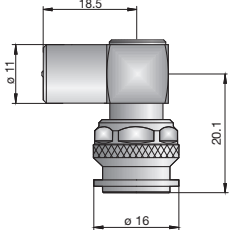
Adaptors (Between Series)

Adapter (serienübergreifend)

TNC - 50 Ω

TNC - 50 Ω

Ordering Number	Version	Remarks	Panel Piercing / PCB Layout	Packing Unit	
56 S 132- K00 E3	straight	TNC male - SMA female		1	
56 K 132- K00 E3	straight	TNC female - SMA female		1	
32 S 156- S00 E3	straight	SMA male - TNC male		1	
32 S 156- K00 E3	straight	SMA male - TNC male		1	
29 K 556- K00 A3	straight	MCX female - TNC female; round flange	B 2	1	
56 S 151- K00 N4	straight	TNC male - BNC female		1	
51 S 156- S00 N4	straight	BNC male - TNC male		1	
51 S 156- K00 N4	straight	BNC male - TNC female		1	
51 K 156- K00 N4	straight	BNC female - TNC female		1	
56 S 153- K00 N4	right angle	TNC male - N female		1	

Ordering Number	Version	Remarks	Panel Piercing / PCB Layout	Packing Unit	
56 S 453- K00 N4	straight	TNC male - N female; 4- hole flange	B 9	1	
53 K 156- K00 N3	straight	N female - TNC female		1	
53 S 156- K00 N3	straight	N male - TNC female		1	
26 S 156- S00 A1	straight	FME male - TNC male		1	
26 S 156- K00 A1	straight	FME male - TNC female		1	
26 S 256- S00 A1	right angle	FME male - TNC male		1	

Terminations

Abschlusswiderstände

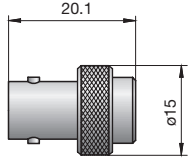
Termination Plug

Abschlusswiderstand Stecker

Ordering Number	Remarks	Packing Unit	
56 S 1RR- 001 N4	1 W; Frequency DC - 2 GHz VSWR < 1.2 @ DC to 1 GHz VSWR < 1.4 @ 1 to 2 GHz	1	

Termination Jack

Abschlusswiderstand Kuppler

Ordering Number	Remarks	Packing Unit	
56 K 1RR- 001 N4	1 W; Frequency DC - 2 GHz VSWR < 1.2 @ DC to 1 GHz VSWR < 1.4 @ 1 to 2 GHz	1	

Accessories

Zubehör

Protection Cap

Schutzkappe

Ordering Number	Remarks	Packing Unit	
56 Z 112-000 N	male with chain	1	