



QN coaxial connectors (quick-lock N connectors) are based on the N connector interface with a frequency range up to 11 GHz. The quick-lock coupling mechanism enables reliable and easy connections 10 times faster than standard N in the tightest spaces, primarily in mobile base stations. Assembly tools are not necessary.

QN and standard N connectors are not intermateable.

Rosenberger is an authorized QLF® manufacturer.

Rosenberger QN connectors fulfil the QLF® standard (Quick Lock Formula, a registered trademark). QLF® guarantees full intermateability between connectors produced by licensing agreement parties. Rosenberger as licensee is free to market QN connectors as QLF® products. For further information, please see: [www.qlf.info](http://www.qlf.info)

*QN-Koaxial-Steckverbinder – Quick-Lock-N-Steckverbinder – basieren in Eigenschaften und Abmessungen auf der Serie N, der Frequenzbereich reicht bis 11 GHz. Der Quick-Lock-Einrastmechanismus ermöglicht zuverlässige, einfache und im Vergleich zu Standard N 10-fach schnellere Steckverbindungen auf engstem Raum, z. B. in Mobilfunk-Basisstationen. Werkzeuge sind nicht erforderlich.*

*Steckkompatibilität zwischen den Serien QN und N ist nicht gegeben.*

*Rosenberger ist autorisierter QLF®-Hersteller.*

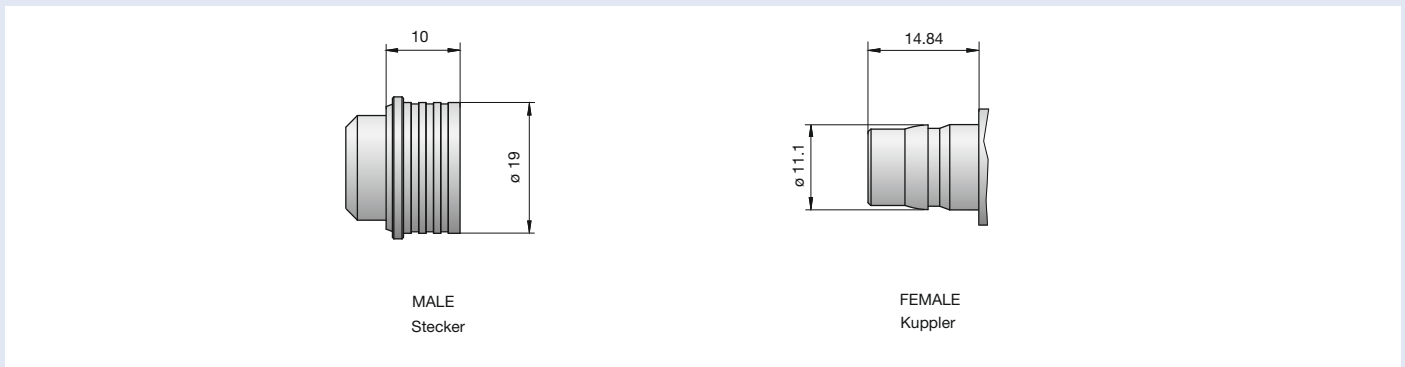
*Rosenberger QN-Steckverbinder entsprechen dem QLF®-Standard, der als Warenzeichen eingetragen ist. QLF® (Quick Lock Formula) stellt die Steckbarkeit von Produkten der Lizenzparteien sicher. Rosenberger ist als Lizenznehmer berechtigt, QN Steckverbinder als QLF®-Produkte zu vermarkten. Weitere Informationen unter: [www.qlf.info](http://www.qlf.info)*



QN

#### Features

- Interface according to QLF (Quick Lock Formula)
- Frequency range DC to 11 GHz
- Return loss (cable connector straight)  $\geq 25$  dB @ 6 GHz
- Minimum pitch: 20 mm
- Flexibility: 360° turnable
- Impedance 50  $\Omega$
- Quick-lock coupling

**Interface Dimensions QN****Code 153****Features**

Interface according to QLF (Quick Lock Formula)  
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Impedance 50  $\Omega$   
Quick-lock coupling

**Product Range**

Cable connectors  
Panel connectors  
Adaptors  
Terminations

Further connectors available on request

## Technical Data QN

## Code 153Q

<b>Applicable standards   Anwendbare Normen</b>	
Interface according to   <i>Interface gemäß</i>	QLF® (Quick Lock Formula) Rosenberger is an authorized QLF® manufacturer
Quality tested according to   <i>Qualitätsprüfung gemäß</i>	IEC 60169
<b>Electrical data   Elektrische Daten</b>	
Impedance   <i>Wellenwiderstand</i>	50 Ω
Frequency range   <i>Frequenzbereich</i>	DC to 11 GHz
Return loss (cable connector straight)   <i>Rückflussdämpfung (Kabelsteckverbinder gerade)</i>	≥ 32 dB @ DC to 3 GHz ≥ 25 dB @ 3 GHz to 6 GHz ≥ 20 dB @ 6 GHz to 11 GHz
Insertion loss   <i>Dämpfung</i>	≤ 0.05 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>	≤ 1.5 mΩ
Test voltage   <i>Prüfspannung</i>	2500 V rms
Working voltage   <i>Betriebsspannung</i>	1000 V rms
Power handling   <i>Leistungsbelastbarkeit</i>	300 W @ 2.5 GHz
RF-leakage   <i>Schirmdämpfung</i>	≥ 90 dB @ DC to 3 GHz ≥ 80 dB @ 3 GHz to 6 GHz
Intermodulation 3rd order   <i>Intermodulation 3. Ordnung</i>	≥ 155 dBc (2 x 43 dBm)
<b>Mechanical data   Mechanische Daten</b>	
Mating cycles   <i>Steckzyklen</i>	≥ 100
Interface retention force   <i>Interface Haltekraft</i>	≥ 450 N
Engagement force   <i>Steckkraft</i>	30 N (typ.)
Disengagement force   <i>Ziehkraft</i>	30 N (typ.)
<b>Environmental data   Umweltdaten</b>	
Temperature range   <i>Temperaturbereich</i>	-40 °C to +125 °C
Thermal shock   <i>Temperaturwechsel</i>	IEC 60169-1, Sub-clause 16.4 (-40 °C / +125 °C)
Damp Heat   <i>Feuchte Wärme</i>	IEC 60169-1, Sub-clause 16.3 (96 hrs; steady state)
Climatic sequence   <i>Klimasequenz</i>	IEC 60169-1, Sub-clause 16.2, 40/125/21
Degree of protection (mated pair)   <i>Schutzgrad (gekuppeltes Paar)</i>	IEC 60529, IP 68
Corrosion resistance   <i>Korrosionsbeständigkeit</i>	Saltspray test acc. to MIL-STD-202F, Method 101, Condition B
Mixed flowing gas   <i>Schadgas</i>	DIN EN 60068-2-60, Method 4
Vibration   <i>Vibration</i>	MIL-STD-202F, Method 204, Condition A (10 to 500 Hz, 5 g)
Shock   <i>Schock</i>	MIL-STD-202F, Method 213, Condition I
Max. soldering temperature (PCB connectors)   <i>Max. Löttemperatur (Leiterplattensteckverbinder)</i>	IEC 61760-1, +260 °C for 10 sec.
<b>Materials   Materialien</b>	
Spring loaded contact parts   <i>Federnde Kontaktteile</i>	CuBe, Au plating
Center contact   <i>Innenleiter</i>	CuZn / CuSn, Au plating
Outer contact   <i>Außenleiter</i>	CuZn, white bronze plating
Body   <i>Gehäuse</i>	CuZn, white bronze plating
Locking sleeve   <i>Verriegelungshülse</i>	CuZn, white bronze plating
Crimping ferrule   <i>Crimphülse</i>	Copper alloy, white bronze plating
Dielectric   <i>Dielektrikum</i>	PTFE
Gasket   <i>Dichtung</i>	Silicone

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 Cables

Straight Plug, solder

Semi-Rigid Cables

Ordering Number	Cable Group	Assembly Instruction	Packing Unit	
153 QS 102-272 N5	72	53 T13	100	

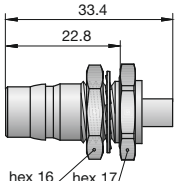
Right Angle Plug, solder

Semi-Rigid Cables

Ordering Number	Cable Group	Assembly Instruction	Packing Unit	
153 QS 202-272 N5	72	53 T8	50	

Panel Jack, solder, hexagonal flange

Semi-Rigid Cables

Ordering Number	Version	Cable Group	Assembly Instruction	Panel Piercing / PCB Layout	Packing Unit	
153 QK 601-272 N5	rear mount	72	53 T2	B 185	100	

**Cable Connectors - Flexible Cables**

Straight Plug, crimp

Flexible Cables

Ordering Number	Cable Group	Assembly Instruction	Crimp Inserts	Packing Unit	
153 QS 108-106 N5	06	51 P15	11 W 150-208	100	
153 QS 108-108 N5	08	51 P15	11 W 150-208	100	
153 QS 101-115 N5	15	53 O3	11 W 150-215	50	
153 QS 101-117 N5	17	53 O3	11 W 150-215	50	

Right Angle Plug, solder-crimp

Flexible Cables

Ordering Number	Cable Group	Assembly Instruction	Crimp Inserts	Packing Unit	
153 QS 205-306 N5	06	53 S1	11 W 150-108	50	
153 QS 205-308 N5	08	53 S1	11 W 150-108	50	
153 QS 205-315 N5	15	53 S8	11 W 150-115	50	
153 QS 205-317 N5	17	53 S8	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	
153 QK 607-106 N5	rear mount	06	53 P	B 185	11 W 150-208	100	
153 QK 607-108 N5	rear mount	08	53 P	B 185	11 W 150-208	100	
153 QK 601-115 N5	rear mount	15	53 O3	B 185	11 W 150-215	100	
153 QK 601-117 N5	rear mount	17	53 O3	B 185	11 W 150-215	100	

QN

## Panel Connectors - Solder End

Panel Jack, 4-hole flange

Ordering Number	Panel Piercing / PCB Layout	Packing Unit	
153 QK 401-200 N5	B 6	25 blister	

## Adaptors

Adaptors (Inter Series)

Ordering Number	Version	Remarks	Packing Unit	
153 QS 153-K00 N5	straight	QN male - N female	1	
153 QK 153-S00 N5	straight	QN female - N male	1	

## Terminations

Termination Plug

Ordering Number	Remarks	Return Loss	Packing Unit	
153 QS 15R-001 N4	1 Watt Frequency: DC to 6 GHz	$\geq 26$ dB @ DC to 2 GHz $\geq 21$ dB @ 2 GHz to 4 GHz $\geq 19$ dB @ 4 GHz to 6 GHz	1	
153 QS 15R-005 N4	5 Watt Frequency: DC to 6 GHz	$\geq 26.4$ dB @ DC to 2 GHz $\geq 21.2$ dB @ 2 GHz to 6 GHz	1	