



All dimensions are in mm; tolerances according to ISO 2768 m-H

**Interface**

QN according to

QLF® (Quick Lock Formula)

Rosenberger is an authorized QLF® manufacturer

RPC-N according to

IEC 61169-16

**Documents**

Application note

AN001 "Calibration Services"

**Material and plating**

**Connector parts**

- Center conductor
- Outer conductor QN
- Contact spring QN
- Outer conductor RPC-N
- Dielectric
- Gasket QN
- Unlocking sleeve QN
- Coupling nut RPC-N

**Material**

- CuBe
- Brass
- CuBe
- Stainless steel
- PPE
- Silicone
- Brass
- Stainless steel

**Plating**

- Gold, min. 1.27 µm, over chemical nickel
- Flash white bronze over silver(e.g. Optargen®)
- AuroDur®, gold plated
- Passivated
- White bronze(e.g. Optalloy®)
- Passivated

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**Electrical data**

Frequency	DC to 11 GHz
Return loss	≥ 34 dB, DC to 3 GHz ≥ 28 dB, 3 GHz to 6 GHz ≥ 20 dB, 6 GHz to 11 GHz

**Mechanical data**

	RPC-N	QN
Mating cycles	≥ 500	≥ 100
Maximum torque	1.70 Nm	
Recommended torque	1.10 Nm	
Engagement force		30 N (typ.)
Disengagement force		30 N (typ.)
Gauge	5.28 mm to 5.36 mm	4.10 mm to 4.50 mm

**General standard definition**

For proper operation the vector network analyzer (VNA) needs a model describing the electrical behaviour of this calibration standard. The different models, units, and terms used will depend on the VNA type and they will have to be entered into the VNA. All values are based on typical geometry and plating.

Offset $Z_0$ / Impedance / $Z_0$	50 $\Omega$
Offset Delay	131.8246 ps
Length (electrical) / Offset Length	39.52 mm
Offset Loss	1.50 G $\Omega$ /s
Loss	0.0172 dB/ $\sqrt{\text{GHz}}$

**Environmental data**

Operating temperature range <sup>1</sup>	+20 °C to +26 °C
Rated temperature range of use <sup>2</sup>	0 °C to +50 °C
Storage temperature range	-40 °C to +85 °C

RoHS compliant

<sup>1</sup> Temperature range over which these specifications are valid.

<sup>2</sup> This range is underneath and above the operating temperature range, within the open circuit is fully functional and could be used without damage.

**Declaration of calibration options**

**Factory Calibration**

Standard delivery for this calibration standard includes a Factory Calibration. The Calibration Certificate issued reports individual calibration results, **traceable to Rosenberger standards**, national / international standards are not available. Model based standard definitions are reported in an Agilent/Keysight, Rohde & Schwarz and Anritsu compatible VNA format.

**Accredited Calibration**

Not available.

*For further, more detailed information see application note AN001 on the Rosenberger homepage.*

**Calibration interval**

Recommendation 12 months

**Packing**

Standard 1 pce in box  
Weight 56.5 g/pce

While the information has been carefully compiled to the best of our knowledge, nothing is intended as representation or warranty on our part and no statement herein shall be construed as recommendation to infringe existing patents. In the effort to improve our products, we reserve the right to make changes judged to be necessary.

Draft	Date	Approved	Date	Rev.	Engineering change number	Name	Date
Herbert Babinger	25.04.12	Martin Moder	10.01.18	c00	17-2112	M.Ruf	10.01.18

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