



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

Interface

According to IEC 61169-16

Documents

Application note AN001 "Calibration Services"

Documentation

This Part is delivered with:

- **USB Stick**
with S2p data file of the reference measurement values. Calibration Certificate as PDF file.
- **Calibration Certificate**
Details see "Declaration of calibration" options.

Material and plating

Connector parts

Center conductor
Outer conductor
Coupling nut

Material

CuBe
Brass
Stainless steel

Plating

Gold, min. 1.27 μm, over chemical nickel
Gold, min. 1.27 μm, over chemical nickel
Passivated

Technical Data Sheet

Rosenberger

RPC-N
50 Ω

Mismatch Airline
Plug / Jack

05S102-K100

Mechanical data

Mating cycles	≥ 500
Maximum torque	1.70 Nm
Recommended torque	1.10 Nm
Nominal Airline dimensions at 23 °C:	
- Diameter outer conductor	7.000 mm
- Diameter inner conductor 50 Ω section	3.040 mm
- Diameter inner conductor 25 Ω section	4.615 mm
- Length outer conductor	100.00 mm
- Length inner conductor	100.00 mm
- Length difference (outer conductor – inner conductor)	≤ 0.04 mm
- Length 25 Ω section	75.00 mm

Electrical verification standard

This Mismatch Airline is designed as an electrical verification standard. Reference measurement values (calibration results) for transmission and reflection are included. Connected to a calibrated VNA the actual measured transmission and reflection values can be compared to the reference measurement values and the quality of the VNA calibration can be evaluated.

Environmental data

Operating temperature range ¹	+20 °C to +26 °C
Storage temperature range	0 °C to +50 °C
RoHS	compliant

1. This range is a recommendation. However, the mismatch airline can be used in a wider range. Any temperature change from 23 °C results in dimensional changes.

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 national / international standards. A S2p data file with the reference measurement values is included.

Accredited Calibration

Optional this Mismatch Airline can be delivered with an Accredited Calibration (DAkkS) having the highest confidence in the traceability. The DAkkS Calibration Certificate issued reports individual transmission and reflection calibration results traceable to national / international standards. A S2p data file with reference measurement values and measurement uncertainties in electronic format is included. The measurement uncertainties are smaller than in a Factory Calibration.

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

Calibration interval

Recommendation	12 months
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Packing

Standard	1 pce in box
Weight	108.3 g/pce
Center conductor	loose in an acrylic glass tube

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
F. Reiner	17.12.18	Martin Moder	10.01.19	g00	18-2366	M. Rahberger	10.01.19

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