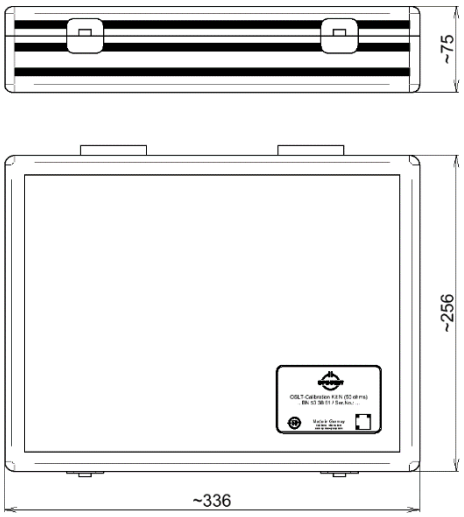
# OSLT Calibration Kit || BN 533861




all dimensions in millimeter

## Radio frequency characteristics

| | | |
|---|---|---|
| Interface type | | N plug and socket per IEC 61169-16 |
| Frequency range | | DC to 18 GHz |
| THROUGH | Return loss, min. | 38 dB @ DC to 4 GHz<br>34 dB @ 4 to 8 GHz<br>32 dB @ 8 to 12 GHz<br>28 dB @ 12 to 18 GHz |
| | Insertion loss, max. | 0.04 dB x $\sqrt{f\ (GHz)}$ |
| OPEN [1)] | Phase deviation, max. | 1 deg. @ DC to 4 GHz<br>1.25 deg. @ 4 to 8 GHz<br>1.5 deg. @ 8 to 12 GHz<br>2 deg. @ 12 to 18 GHz |
| | Offset | see calibration data |
| SHORT [1)] | Phase deviation, max. | 1 deg. @ DC to 4 GHz<br>1.25 deg. @ 4 to 8 GHz<br>1.5 deg. @ 8 to 12 GHz<br>2 deg. @ 12 to 18 GHz |
| | Offset | see calibration data |
| LOAD | DC-resistance | 50 Ω ± 0.5 Ω |
| | Return loss, min. | 42 dB @ DC to 6 GHz<br>38 dB @ 6 to 8 GHz<br>35 dB @ 8 to 12 GHz<br>33 dB @ 12 to 18 GHz |
| | Power rating, max. | 0.5 W |

[1)] The specifications for the opens and shorts are given as allowed deviation from the nominal model as defined in the calibration data.

# OSLT Calibration Kit || BN 533861

## Mechanical characteristics

| | |
|---|---|
| Center conductor material / surface finish | CuBe age hardened / gold-plated |
| Outer conductor material / surface finish | copper alloy / gold-plated |
| Insulation | PMP |
| Other metallic parts / surface finish | copper alloy / nickel-plated |
| Weight, approx. | 1.8 kg |
| Marking | laser engraving |

The environmental protection use period of 50 years is valid, if the product is used as intended.

## Environmental conditions

| | |
|---|---|
| **Operation** | |
| Ambient temperature range | +18 to +28°C [2)] |
| **Storage** | |
| Ambient temperature range | -40 to +70°C (in line with EN 60068-2-1 and EN 60068-2-2) |

[2)] Temperature range within all components maintain conformance to their specification.

## Scope of delivery

| Description | Qty per kit | Part No | Calibration Option |
|---|---|---|---|
| N Open circuit plug | 1 | BN 533914R000 | Factory calibration |
| N Open circuit socket | 1 | BN 533915R000 | Factory calibration |
| N Short circuit plug | 1 | BN 533912R000 | Factory calibration |
| N Short circuit socket | 1 | BN 533913R000 | Factory calibration |
| N Load plug | 1 | BN 533910R000 | Factory calibration |
| N Load socket | 1 | BN 533911R000 | Factory calibration |
| N Through plug / plug | 1 | BN 533916R000 | Factory calibration |
| N Through socket / socket | 1 | BN 533917R000 | Factory calibration |
| Torque Wrench 19 mm / 90 N·cm | 1 | BN 537091R000 | Factory calibration |
| Certificate of calibration incl. calibration data | | | |
| USB flash drive including<br>certificate of calibration incl. calibration data<br>data sheet<br>Product manual calibration kit<br>Handling instruction torque wrench | | <br><br><br>M36043<br>M31071 | |
| Aluminium storage case | | | |

## Accessories

| | |
|---|---|
| N Through plug / socket | BN 533918R000 |
| N Gauge male conductor | BN 537011 |
| N Gauge female conductor | BN 537013 |

# OSLT Calibration Kit || BN 533861

## Calibration data

Calibration data in formats for the common VNAs are included in the kit. It includes individual calibration coefficients for every kit to achieve the best possible performance.

## Re-Calibration

The suggested initial interval for recalibration is 12 months or 500 mating's, whichever comes first. The actual need for recalibration depends on the use and the maintenance of the kit. The recalibration interval should begin with the day of initial use after recalibration.

## Pin depth limits

Pin depth is the distance between outer conductor mating plane and inner conductor mating plane. Positive values stand for protrusion of the inner conductor, negative values for recession.

| Connector Type N | Typical Pin Depth | Measurement Uncertainty | Ranges of measurement [3)] |
|---|---|---|---|
| male | -5.28 to -5.36 mm | 0.005 mm | -5.275 to -5.365 mm |
| female | +5.18 to +5.26 mm | 0.005 mm | +5.175 to +5.265 mm |

[3)] Ranges of measurement is the limit that could be measured with a suitable gauge due to the measurement uncertainty. These values could still be within the specification. The measurement uncertainty is based on the measurement with SPINNER gauges and the specified operating temperature. Deviation from these conditions may cause higher measurement uncertainty.