Handling Instructions 38700A

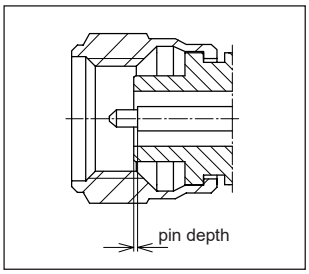
SPINNER Connector Gauge

BN 53 08 15 for measuring the pin depth of the 0.8 mm plug according to IEEE Std 287

Range of application

The connector gauge measures:

- Pin depth for metrology grade connectors (yellow range)
- Pin depth for instrument grade connectors (green range)



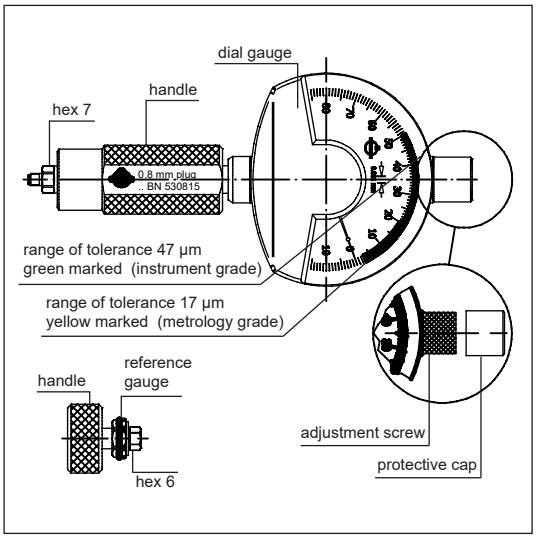
Handling

- Clean the interface of connector gauge, reference gauge and connector under test
- Check zero setting of pointer with the reference gauge
  The following procedure must be executed prior to the test of every inspection lot:
  - Insert reference gauge and tighten with a torque wrench
    Torque: 34 ±3 N·cm recommended
    45 ±5 N·cm acc. to IEEE Std 287
  - Pointer = 0 : pointer adjustment is not necessary
  - Pointer ≠ 0 : loosen protective cap, adjust pointer to zero position and tighten protective cap
  - Remove reference gauge
- Insert connector and tighten with the same torque wrench as before
- Check measured value of pin depth according to table

NOTICE

The connector gauge and reference gauge are precision measurement devices.
Therefore handle with care and consider as following:

- The connector gauge and the connector interface must be neat and clean.
- Hold the calibration device steady and turn the nut only.
- Hold connector gauge and reference gauge at the knurled handle only.
- Use only the reference gauge supplied.
- Always use a torque wrench to achieve best measurement accuracy and repeatability.
  Torque: 34 ±3 N·cm recommended for lab use
  45 ±5 N·cm acc. to IEEE Std 287
- Measuring temperature: 23 ±5 °C.
- Protect against humidity.
- Prevent soiling.
- Avoid shocks.
- Do not lubricate.
- A calibration is recommended at regular intervals.
  The suggested initial interval for recalibration is 12 months. The actual need for recalibration depends on the use and the maintenance of the gauge.
  The recalibration interval should begin with the day of initial use.



Measurement accuracy

Pin depth is the distance between outer conductor mating plane and inner conductor mating plane. Starting from the zero position, measured values in counterclockwise direction mean that the inner conductor is recessed, measured values in clockwise direction mean that the inner conductor is protruding.

Type	Specified pin depth acc. to IEEE Std 287	Measurement error, max.
Metrology grade	3 to 20 µm	3 µm
Instrument grade	3 to 50 µm	3 µm

The measurement error includes the measurement inaccuracy of the connector gauge.
Example:
A measured value of 6 µm means that the actual value is between 3 µm and 9 µm, taking into account the measurement error.

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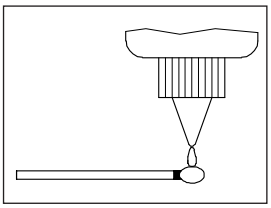
Cleaning

Connector gauge, reference gauge and connector interface, especially the outer conductor, should be kept clean and free of dirt and other debris.

- Dampen a lint-free swab with denaturated alcohol
- Gently rotate the swab in the interface around the inner conductor being careful not to stress or bend the pin
- Ensure that no foreign material remains in the interface after cleaning
- Ensure that the inner conductor of the connector has not been bent or damaged



NOTICE

- Only dampen the swab. Do **NOT** saturate it.
- Do **NOT** use other cleaning fluids nor solvents than denaturated alcohol.
- Do **NOT** use water.
- Never put lateral pressure on the connector's inner conductor.
- Do **NOT** put in the swab at an angle, otherwise you will damage the connector.
- Do **NOT** use too large swabs, otherwise you will damage the connector. Only use lint-free swabs which are designed for precision applications needing pinpoint accuracy (e.g. swabs with polyvinylidene fluoride tip).
- The inner conductor does not require cleaning.