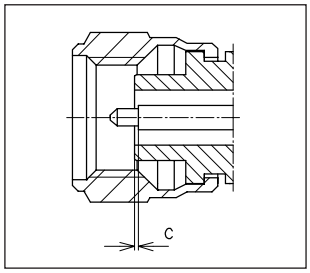
DIAL GAUGE
BN 53 70 83 for testing mating face dimension 1.85 mm plug according to IEC 61169-32

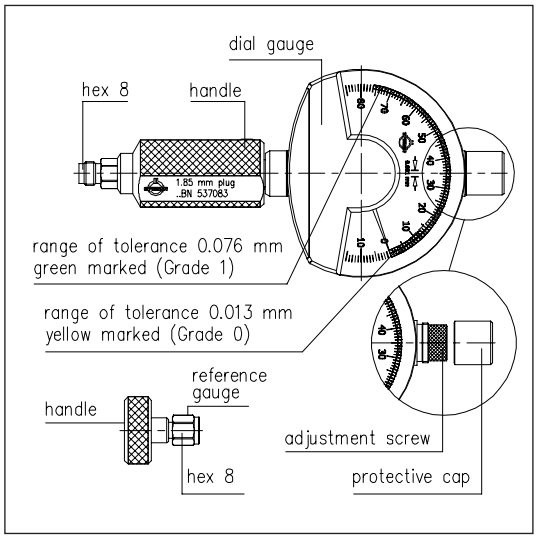
These instructions were written for qualified and experienced personnel. Please read them carefully before starting work. Any liability or warranty for the results of improper or unsafe use is disclaimed!

Range of application:
The dial gauge measures:
- Pin depth dimension **"c"** for standard test connectors (yellow range) (Grade 0)
- Pin depth dimension **"c"** for general purpose connectors (green range) (Grade 1)



Handling:
- Clean interface of dial gauge, reference gauge and connector
- Check zero setting of pointer with the reference gauge
  This procedure must be executed prior to the test of every inspection lot:
  - Insert reference gauge and tighten with a torque wrench. Torque: 90 ±10 Ncm
  - 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 a torque wrench. Torque: 90 ±10 Ncm
- Check measured value of pin depth according to the ranges of tolerance

Note:
The dial gauge and reference gauge are precision measurement devices.
Therefore handle with care and consider as following:
- The dial gauge and the connector interface must be neat and clean
- Hold the calibration device steady and turn the nut only
- Hold dial gauge and reference gauge at the knurled handle only
- Do use the included reference gauge only.
- Always use a torque wrench (Order no.: BN 15 41 41 R000) to achieve best measurement accuracy and repeatability. Torque: 90 ±10 Ncm.
- 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.



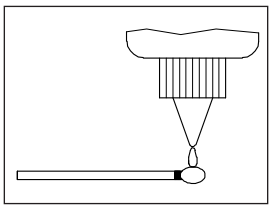
Measurement uncertainty:
Pin depth is the distance between outer conductor mating plane and inner conductor mating plane.Positive values stand for protrusion of the inner conductor, negative values for recession.

Type	pin depth acc. to IEC 61169-32	Measurement uncertainty	Range of measurement
Grade 0	0 to -0.013 mm	0.003 mm	+0.003 to -0.016 mm
Grade 1	0 to -0.076 mm	0.003 mm	+0.003 to -0.079 mm

Range of measurement is the limit for the measured value (resultant average of minimum three measurements) due to the measurement uncertainty. This value is still within the specification. The measurement uncertainty is based on the handling discribed in this instructions. Deviations cause higher measurement uncertainty.

Cleaning:
Dial 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



Note:
- 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.