



## TESATRONIC TWIN-T20 nano

High-precision metrological display unit featuring dual display for HEIDENHAIN\* probes or other measuring instruments

The TWIN-T20 nano digital display unit is very similar to the TWIN-T20 digital display unit. The main differences are the ability to connect two HEIDENHAIN probes instead of TESA probes as well as a new digital display mode.

Connecting HEIDENHAIN probes means that the unit is compatible with various measuring applications on the market thus complying with the highest metrological requirements.

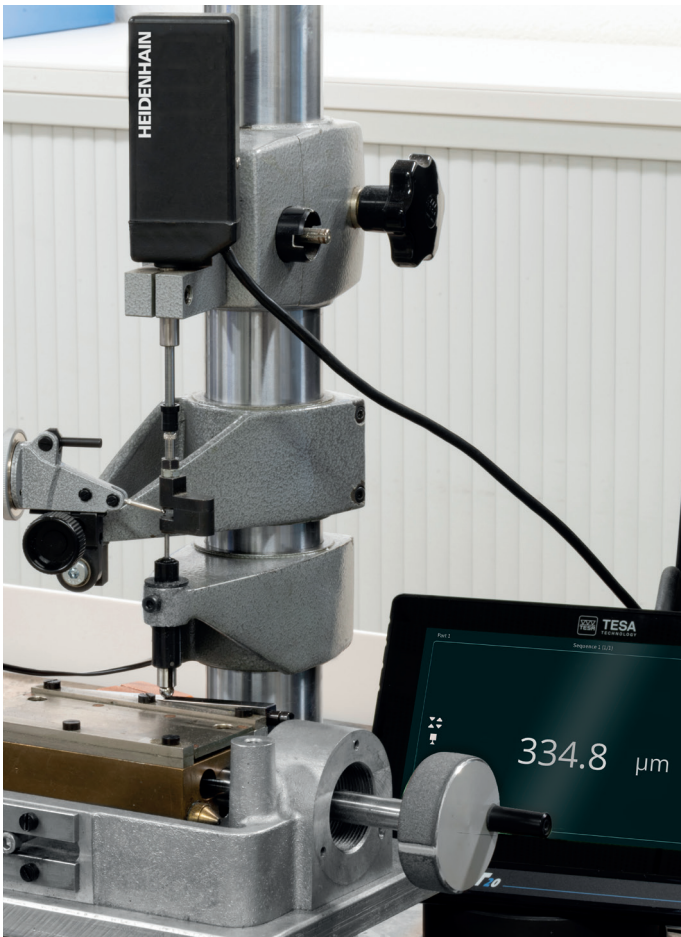
This display unit is compatible with all HEIDENHAIN probes, types 1 Vpp and 11 μApp.

The digital indicator display makes it easy to access changes in the standard value and dynamic mode (max., min., etc.) from the measurement screen.

### Key features:

- 2 HEIDENHAIN probe inputs
- Simultaneous display of 2 values
- Static or dynamic measurements
- Large 7" touch screen
- 4 integrated display styles to simplify reading of probes
- Intuitive measurement setting
- Equipped in the standard configuration for data collection and transfer





Checking of lever indicator indication error

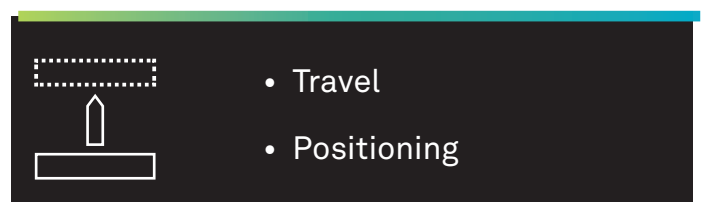
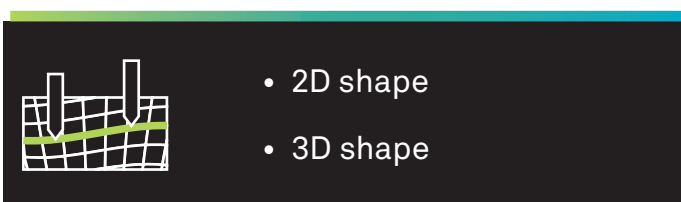
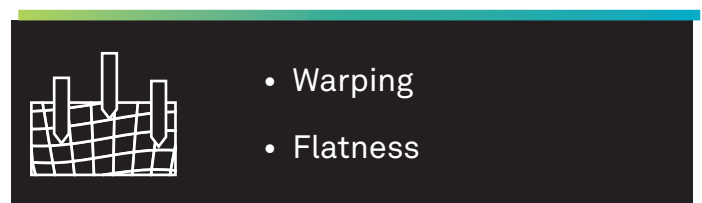
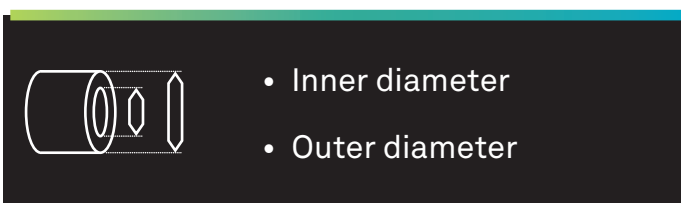
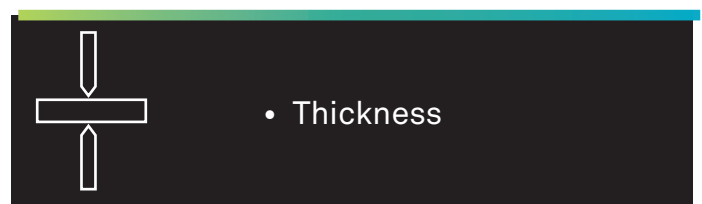
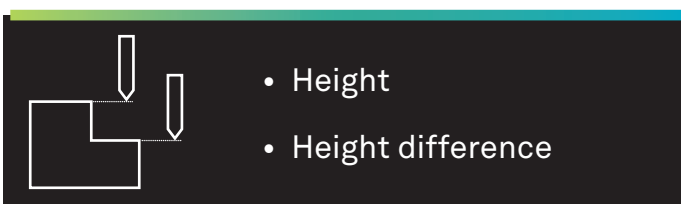


Checking of ceramic gauge block

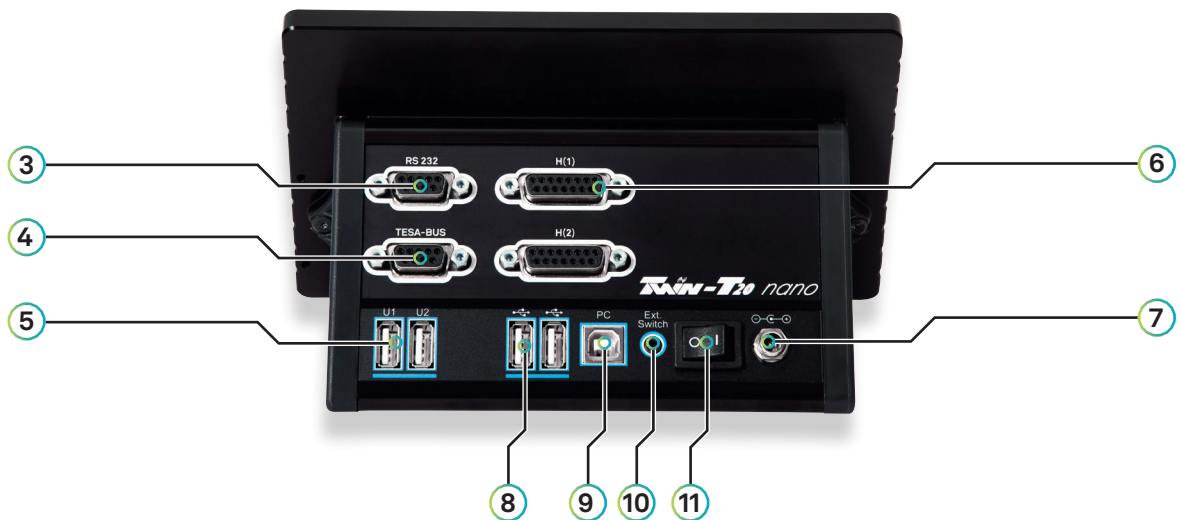
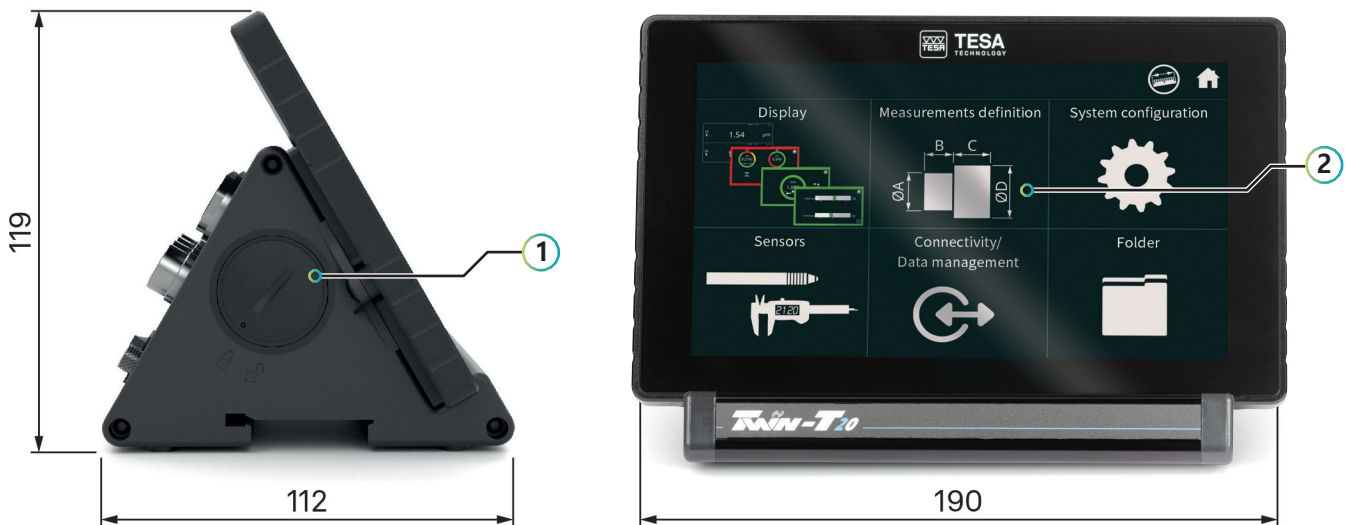
The TWIN-T20 nano display allows you to measure distance, diameter and to check shape or orientation tolerances (straightness, run-out, parallelism, perpendicularity, etc.)

This display is thus the perfect tool for dimensional inspection, adjustment or assembly of mechanical parts guaranteeing accuracy with a quick and instinctive user display.

Examples of possible measurements using the TWIN T-20 nano display:



## Product description



No	Description
1	TLC cap
2	7" touch screen
3	RS 232 serial port Sub-D 9S
4	TESA-BUS port Sub-D 9S
5	2 x USB-A host for measuring instruments
6	2x Sub-D 15p connectors for HEIDENHAIN incremental probes (1 Vpp and 11 $\mu$ App)
7	Connector for 15-24 V power supply
8	2 x USB-A host for peripherals (USB footswitch, keyboard, memory stick, QR code reader)
9	1 x USB-B device (HID keyboard output + firmware update)
10	Jack $\varnothing$ 2.5 port for footswitch
11	ON/OFF switch



## Specifications

Designation	TESATRONIC TWIN-T20 nano
Order number	04430020
Description	TESA dual display for HEIDENHEIM incremental probes (1 Vpp and 11 µApp)
Number of HEIDENHAIN incremental probes	2
Number of digital probe inputs	2
Number of USB measuring device inputs	2
Resolution	0,001 µm / 0.0000001 in
Static measurement	Yes
Dynamic measurement	Min, Max, Max-Min, Median, (Max-Min)/2, Mean
Sampling frequency	260 kHz
Integrated functions	<ul style="list-style-type: none"> <li>- Measurement tolerance</li> <li>- 8 classifications</li> <li>- Calibration</li> <li>- OK/NOK/ADJUST display</li> <li>- Data transfer (via RS232, TLC or HID keyboard device)</li> <li>- Setting lock</li> <li>- Footswitch/button programming</li> <li>- Storage of 2 measurement programs</li> </ul>
Display types	<ul style="list-style-type: none"> <li>- Bar graph</li> <li>- Rotating indicators</li> <li>- Circular indicators</li> <li>- Numerical indicators</li> </ul>
Standard working conditions	20°C +/- 1°C, humidity: 40<HR<65%, no condensation
Limit working conditions	10°C<T°<40°C, humidity <80%, no condensation
Conditions de stockage	-10°C<T°<60°C, humidity <80%, no condensation
Dérive du zéro (à 20 °C et 50 % HR)	Max 0,15 µm/°C
IP level	IP65 for front side, IP20 others
Input voltage	Input: 100 - 240 V/50 - 60 Hz, 3,6 A Output : 24 VDC/0,75 A
Power consumption	18 W without device
Compatible standards	CE, UKCA
Weight	1,2 kg
Delivery contents	<ul style="list-style-type: none"> <li>- TWIN-T20 nano</li> <li>- Power supply</li> <li>- Power cable</li> <li>- 4 x power cable connectors EU, UK, USA, CH</li> <li>- Auto-test report</li> <li>- Quick start manual</li> <li>- 2 x packaging foams</li> </ul>

## Optional accessories

Item no	Description
04460016	Power supply + power cable + 4 x power cable connectors EU, UK, USA, CH
04460013	Stylus set + holder for TWIN-T20
04460017	TWIN-T20 screen
04460022	TWIN-T20 nano mounting base
04768000	Manual footswitch, jack, 1.8 m
04768001	Footswitch, jack, 1.8 m
04761071	Footswitch, USB, 2 m
04760181	TLC-USB PC cable 2 m
04760184	TLC-BLE Bluetooth® transmitter
04761062	Opto-RS232 cable to USB, 2 m
04760151	USB A-B cable, 1,8 m



04460016



04460013



04460017



04460022



04768000



04768001



04761071



04760181



04760184



04761062

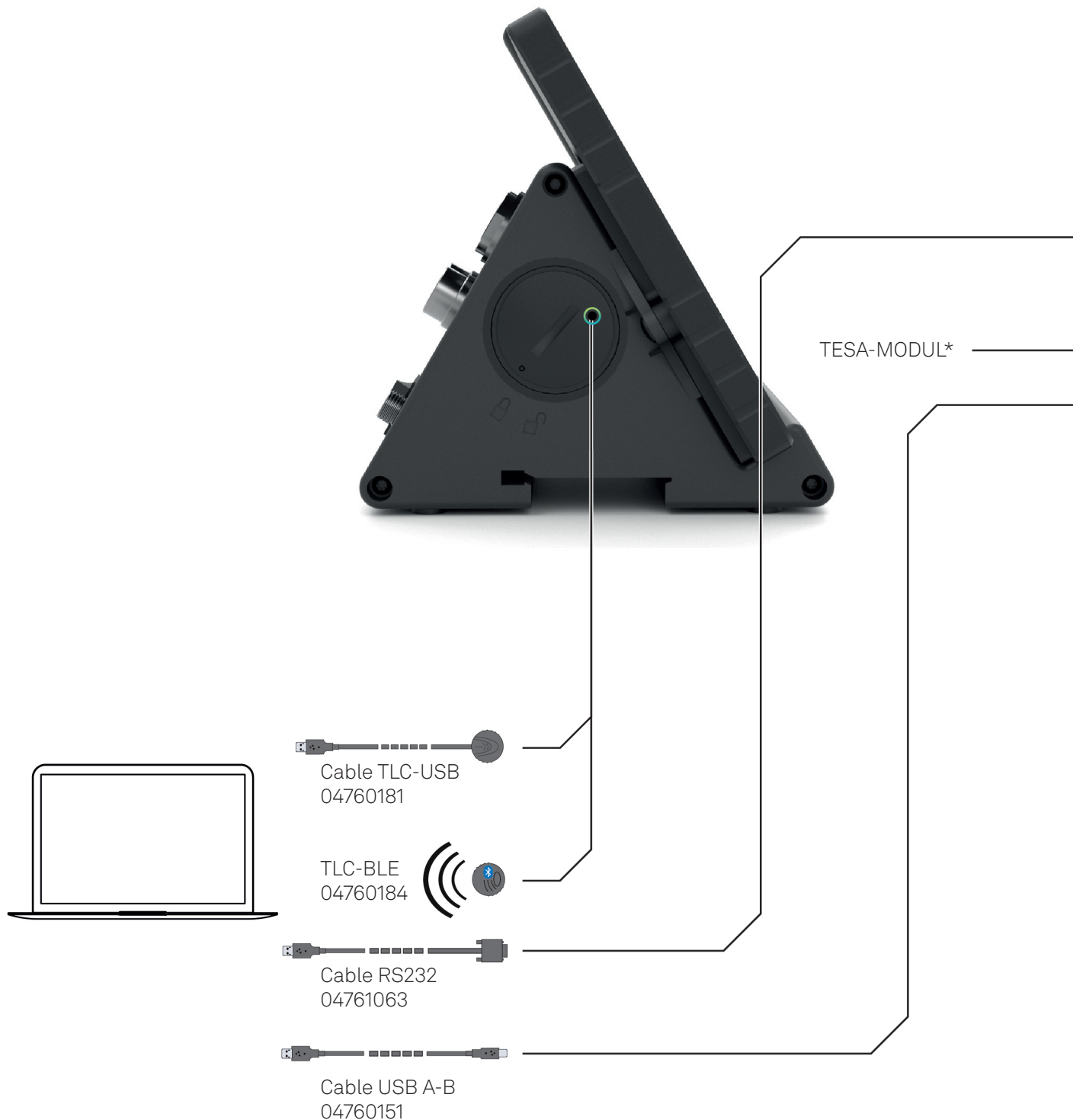


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## Connectivity

TESA device connectivity is essential to ensure the connection of as many measuring devices as possible in order to easily collect, analyse and store data thus ensuring perfect traceability.

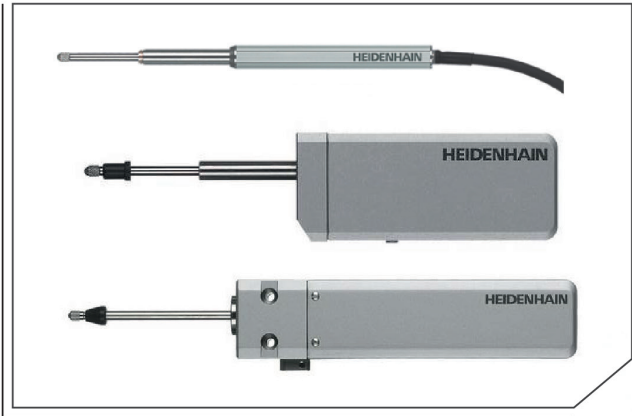
The TWIN-T20 nano display is thus equipped with numerous ports in the standard configuration, allowing multiple measuring instruments to be connected to collect data or send data to a PC via a wide range of connections.



\*Detailed information to come

Compatibility with HEIDENHAIN probes, type :

- SPECTO
- METRO
- CERTO



Manual footswitch, jack  
04768000

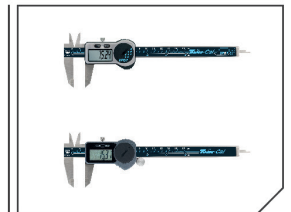
Footswitch, jack  
04768001

Footswitch, USB  
04761071

Memory stick

Cable TLC-USB  
04760181

Cable OPTO RS232-USB  
04761062



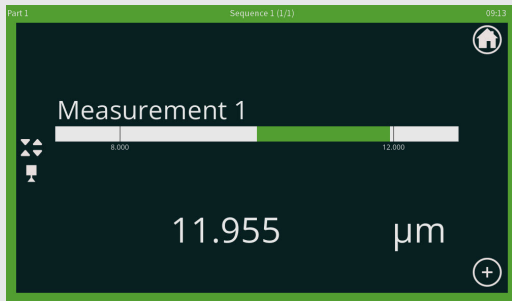
## User interface

The TWIN-T20 nano metrological display allows you to choose your display type to optimise result readout with four different displays.

### One probe connected to display unit



Numerical indicators display, 1 measurement



Bar graph indicators type display, 1 measurement

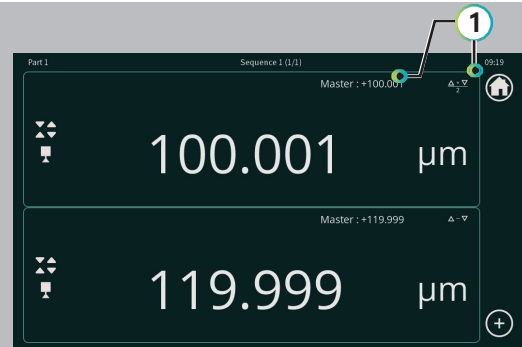


Circular indicators type display, 1 measurement

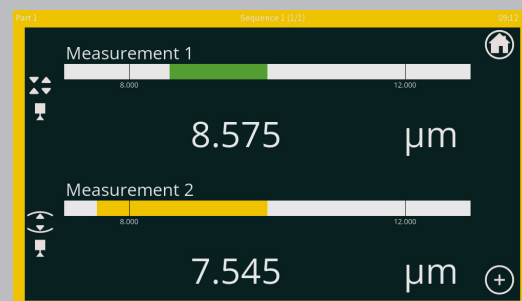


Rotating indicators type display, 1 measurement

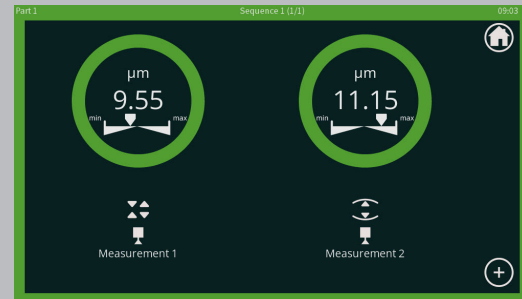
### Two probes connected to display unit



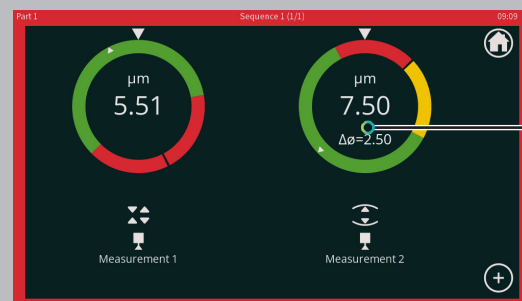
Numerical indicators display, 2 measurements



Bar graph indicators type display, 2 measurements



Circular indicators type display, 2 measurements



Rotating indicators type display, 2 measurements

- ① The “Numerical indicators” type display allows access to changes of the dynamic modes (min., max., max.-min., median, (max.-min.)/2) and changes of the calibration value directly from the measurement screen.
- ② The “rotating indicators” display shows an additional value if the measurement result is out of tolerance. This value indicates the difference in value to bring the measurement back to nominal value.



## Applications



Checking of ceramic gauge block



Intuitive comparative measurement with “Rotating indicators” type display

### About Hexagon and TESA

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

TESA Technology, part of Hexagon's Manufacturing Intelligence division, is a leading innovator and manufacturer of precision measuring instruments, long-established in Switzerland. Learn more at [tesatechnology.com](https://tesatechnology.com). Hexagon's Manufacturing Intelligence division provides solutions that utilize data from design and engineering, production and metrology to make manufacturing smarter.

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