TESA TECHNOLOGY

PRODUCT INFO

TESATRONIC TWIN-T40

High-precision metrological display unit featuring 4 measurements for TESA probes or other measuring instruments.

The TWIN-T40 digital display unit allows four measurement values to be displayed simultaneously, whether on the production floor or in the test laboratory.

Multiple inputs allow TESA probes and a wide range of measuring devices to be connected via the integrated USB ports.

Intuitive navigation makes it easy to set measurement tolerances and to choose the type of display to optimize the user reading experience.

The TWIN-T40 includes mathematical functions enabling calculations based on the measurements displayed. This means, for example, that several measurements can be displayed simultaneously, including the result of the flatness value. Trigonometric functions are also available for calculating, for example, the angle of a cone.

Key features:

- *4 values displayed simultaneously*
- *Large 7" touch screen*
- *4 integrated display styles*
- *Optimized sampling with 6500 acquisitions per second*
- *16 tolerance classes available*
- *Mathematical functions available (calculation of flatness, cone, etc.)*

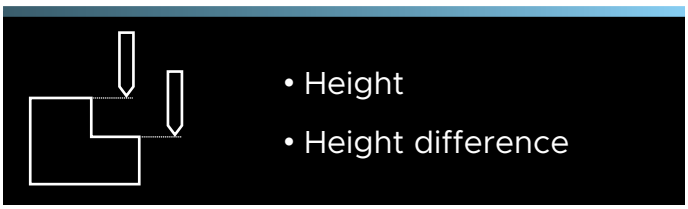
Measurement 1	Probe A
Measurement 2	Probe B
Measurement 3	Probe C
Measurement 4	Straightness with "Max-Min" function of the 3 displayed measurements

Straightness measurement with 3 probes on a ground shaft. The 4th value is configured with the mathematical function to display straightness.

The TWIN-T40 display unit can be used to measure distances and diameters, as well as to check shape or orientation tolerances (straightness, run-out, parallelism, perpendicularity, etc.).

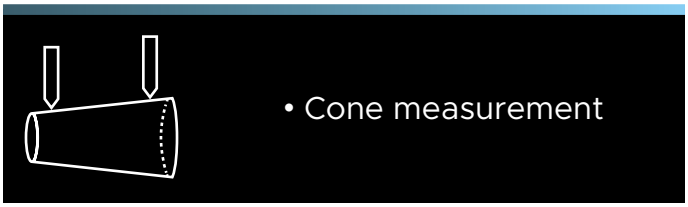
This display unit is therefore the ideal tool for dimensional inspection, adjustment or assembly of mechanical parts, providing users with precision and a quick, instinctive display.

Examples of measurements possible with the TWIN-T40 display unit:



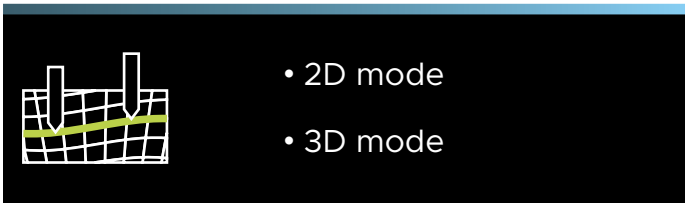
- Height
- Height difference

- Thickness

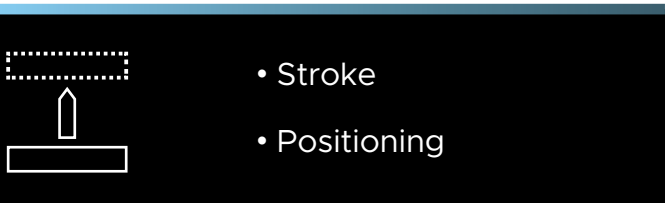


- Cone measurement

- Warping
- Flatness



- 2D mode
- 3D mode



- Stroke
- Positioning

Product description

Number	Description
1	TLC connection plug
2	7" Touch screen
3	RS232 Sub-D 9S serial port
4	TESA-BUS Sub-D 9S port
5	4x USB-A "host" for measuring instruments
6	4x connettori DIN45322 per tastatori TESA a semi-ponte
7	Connector for 15-24 V power supply
8	2x USB-A "host" for peripherals (USB pedal, keyboard, USB key, QR code reader)
9	1x USB-B "device" (connection for HID PC keyboard + firmware update)
10	Ø 2.5 jack for pedal
11	ON/OFF switch

Spring blades fitted in the display profile allow the device to be mounted on a 35x7.5 mm DIN rail.

Specifications

	TESATRONIC TWIN-T40
Part number	04430015
Description	Display unit with 4-measurement display for TESA inductive probes
Number of inductive probe inputs	4
Number of USB measuring device inputs	4
Resolution	0,1 µm / 0.000005 in
Static measurement	Yes
Dynamic measurement	Min, Max, Max-Min, Median, (Max-Min)/2, Average
Sampling frequency	6500/s
Integrated functions	- Measurement tolerances - 16 classifications - Calibration - OK/NOK/RETURN display - Data transfer (via RS232, TLC or HID keyboard) - Locking the settings - Programming the pedals/button - Stores 4 measurement programs - Mathematical functions
Display types	- Bargraph - Rotating indicators - Circular indicators - Numerical indicators
Standard operating conditions	20 °C +/- 1 °C, humidity 40 < HR < 65 %, no condensation
Operating conditions	10 °C < T° < 40°C, humidity < 80 %, no condensation
Storage conditions	-10 °C < T° < 60 °C, humidity < 80 %, no condensation
Indication error (at 20 °C, RH = 50 %, on dummy probes)	± (0,2 % measured value + 0,3 µm)
Zero drift (at 20 °C and 50 % RH	Max 0,15 µm/°C
Degree of protection	IP65 front side, IP20 other sides
Supply voltage	Input voltage: 100 ÷ 240 V / 50 ÷ 60 Hz, 3,6 A Output voltage: 15 VDC/1,2 A
Power consumption	18 W without device connected
Compatible standards	CE, UKCA
Weight	1,2 kg
Included in delivery	- TWIN-T40 - Power supply - Supply cable - 4x EU, UK, USA and CH interchangeable connector - Self-test report - Calibration certificate - Instructions for use - 2x packaging foam

Optional accessories

Part number	Description
04460016	Power supply + power cable + 4x EU, UK, USA and CH interchangeable connector
04460013	Stylus set + holder for TWIN-T20/40
04768000	Manual switch, Jack, 1.8 m
04768001	Foot switch, Jack, 1.8 m
04761071	Foot switch, USB, 2 m
04760181	TLC-USB computer cable, 2 m
04760184	TLC-BLE *Bluetooth®* transmitter
04761062	Opto-RS232 to USB cable, 2 m
04760151	USB A-B cable, 1.8 m

04460016

04760184

04460013

04768001

04761071

04768000

04761062

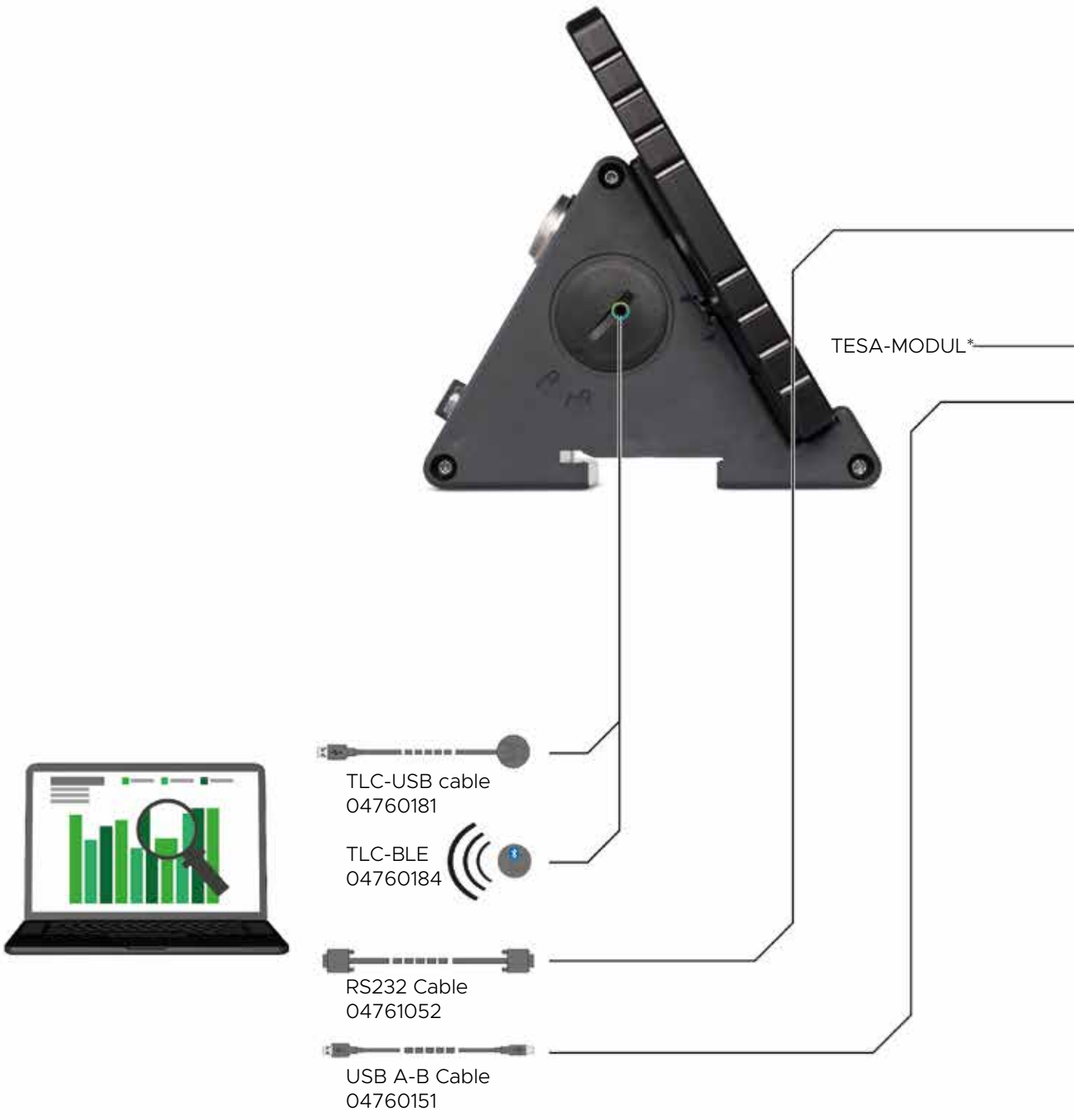
04760151

04760181

Connectivity

The connectivity of TESA instruments is essential to ensure the connection of a maximum number of measuring instruments in order to collect, analyze and store data easily, thus ensuring perfect traceability.

The TWIN-T40 display unit is therefore fitted with a wide range of ports as standard, enabling multiple measuring instruments to be connected for data collection or for sending data to a PC with a wide choice of connections.



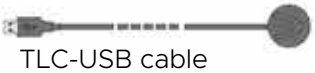
* Detailed information to come

Manual switch, Jack
04768000

Foot switch, Jack
04768001

Foot switch, USB
04761071

USB memory
stick



TLC-USB cable
04760181

Power-USB cable (90°)
04760162

OPTO RS232-USB cable
04761062

User interface

The TWIN-T40 metrological display unit allows you to choose the type of display to optimize the reading of the result with four different displays.

One probe connected to the display unit

"Numeric indicator" display type, one measurement

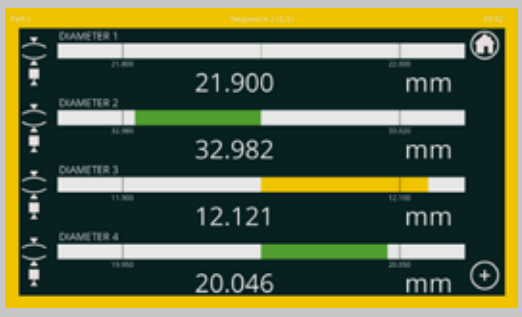
"Bar graph indicators", one measurement

"Circular indicators" display type, one measurement

"Rotating indicator" display type, one measurement

Four probes connected to the display unit

"Digital indicator" display type, four measurements



"Bar graph" display type, four measurements

"Circular indicators" display type, four measurements

"Rotating indicators" display type, four measurements

(1) The "Digital Indicators" display type provides direct access from the measurement screen to changes in dynamic modes (Min, Max, Max-Min, Average, (Max-Min)/2) and to changes in the calibration value.

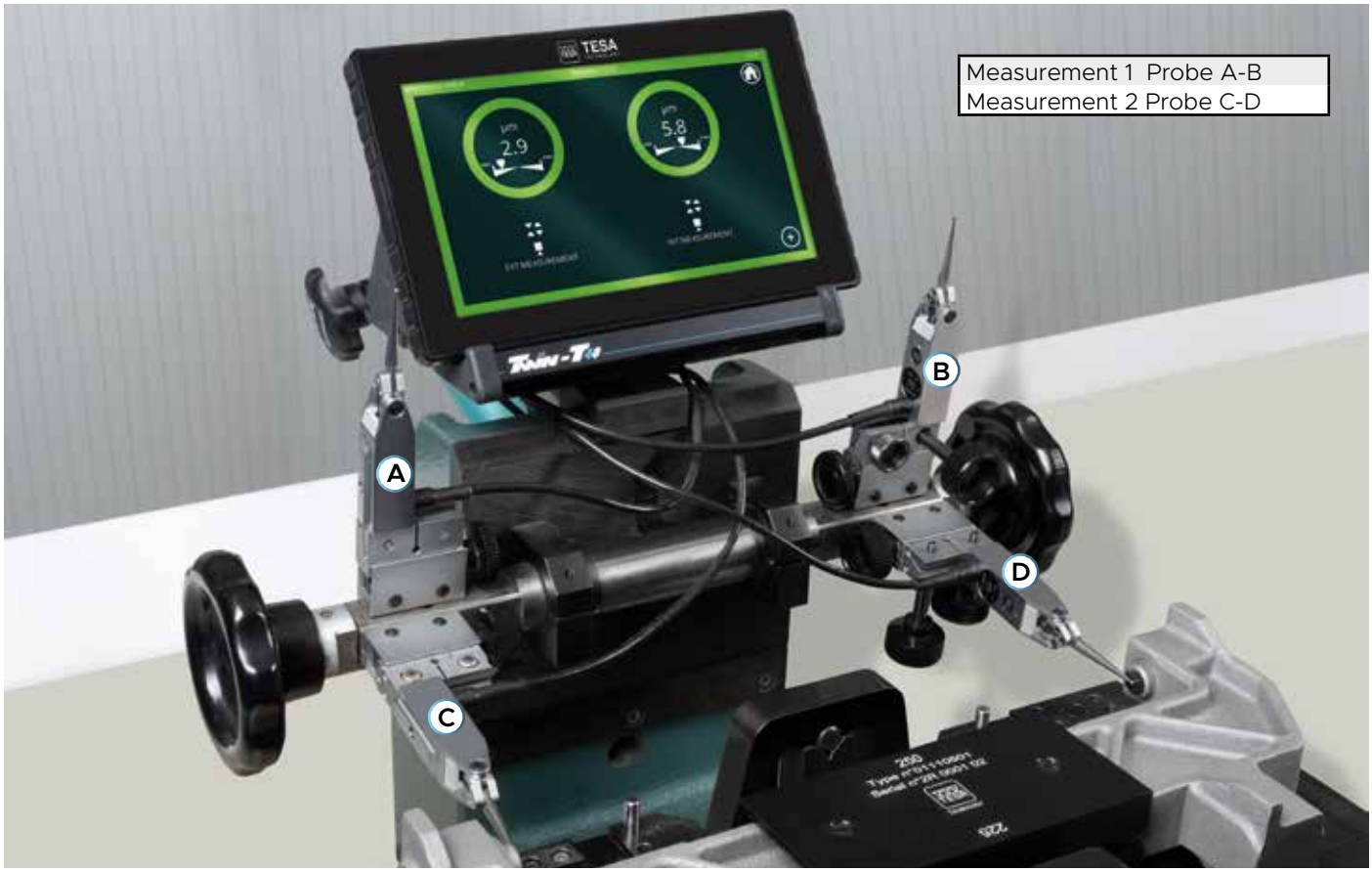
(2) The "Rotating indicators" display type shows an additional value if the measurement result is out of tolerance. This value indicates the deviation from the nominal value.

Applications

Position control during an assembly operation.

Flatness measurement in two axes simultaneously.

Applications

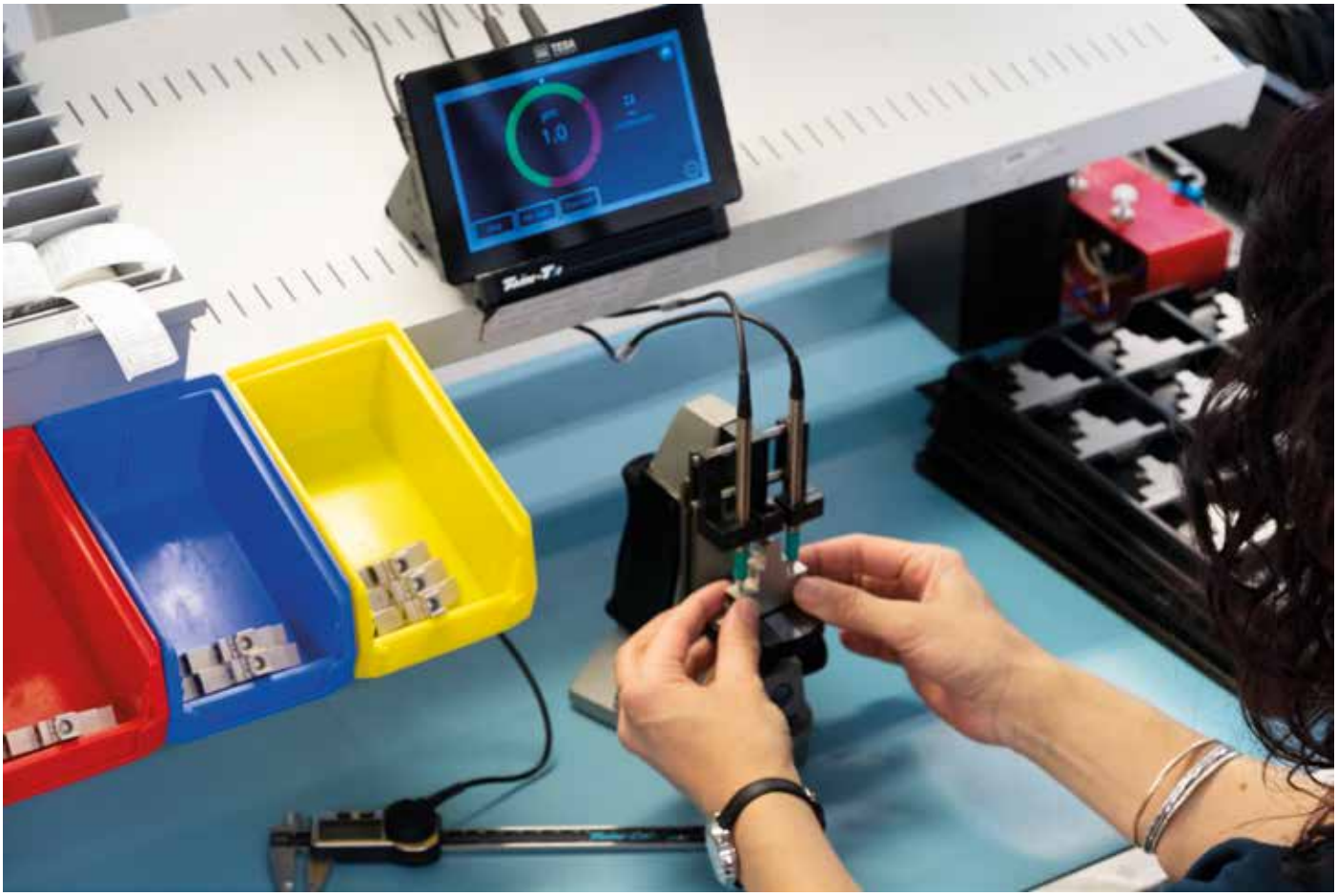


Parallelism check with GT31 electronic lever probes.

Concentricity measurement prior to assembly of cylindrical parts.

Applications

Measurement of cone angle using trigonometric functions.



Part classification: the operator classifies the parts in the bin in the same color as the screen outline.

Product range at a glance

			TWIN-T10 04430013	TWIN-T20 04430014	TWIN-T20 nano 04430020	TWIN-T40 04430015
						
Instruments	 TESA probe	 DIN 5p	1	2	—	4
	 Instrument USB	 USB A	—	2	2	4
	 HEIDENHAIN probe	 SUB-D 15p	—	—	2	—
Functions	Displayed measurements		1	2	2	4
	Sequences		—	2	2	4
	Measurement programs		—	2	2	4
	Classifications		—	8	8	16
	Mathematical functions		—	—	—	✓