TESATRONIC TWIN-T10 electronic display unit Mobile display unit for TESA electronic half-bridge length measuring probes

Application:

Mobile electronic display unit for mains-independent measurement display from electronic half-bridge length measuring probe.

Execution:

- Large, high-contrast display, 66 x 57 mm
- Combined scale and digital display
- 1 measuring probe input for single measurement function
- Maximum value, minimum value, maximum and
- minimum value
- Degree of protection IP 63

Advantage:

- Mobile display unit with combined scale and digital display
- Temporary 5x zoom of the displayed scale interval

Deliverv:

Operating instructions, 4 x LR6 AA batteries, 1x stencil for classification





Model		TWIN-T10		
Measuring range of electronic length measuring technology		+/- 5 μm +/- 20 μm +/- 50 μm +/- 200 μm +/- 500 μm +/- 2 r +/- 5 mm		
Scale value, electronic display unit		0.1 µm 1 µm		
Digit increment, electronic display unit		0.1 µm 1 µm		
Measured value memory		Yes		
Data transmission type		RS232		
Energy supply		Battery		
39652	Ident. No.	115		
		\bullet		

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electronic display units TESATRONIC TT20, TT60 and TT80

stationary display units for TESA electronic length measuring probe with half bridge

Application:

For displaying measurements from a maximum of two connected TESA electronic half-bridge length measuring probes. Displays measured values from individual measurements A or B, measurements of difference between A and B and total measurements of A + B.

Execution:

- Large, high-contrast LCD display, 126 x 62 mm
- Combined scale and digital display (6 digit)
- Ident. No. 020:
 - Two measuring probe inputs
 - Analogue output, +/- 2 V
 - Static measuring procedures
- Ident. No. 020-060: 7 adjustable measuring ranges

Ident. No. 060-080:

- 2 measuring probe inputs
- Analogue output, +/- 2 V to +/- 10 V

- Static and dynamic measuring procedures Relay-controlled output signals via integrated 15-pin connector
- Ident. No. 080: 9 adjustable measuring ranges

Advantage:

- Measured values classified by coloured LED lights
- Automatic detection of connected TESA half-bridge length measuring probe
- Switch between internal and external measurement
- Enter limit values easily using membrane keypad on display unit

Delivery: Mains power supply adapter with EU mains cable

Technical data:

- Data transmission type: RS232
- Energy supply: Mains operation







Ident. No. 060

Model	Measuring range of elec- tronic length measuring technology	Scale value, electronic display unit	Digit increment, electronic display unit	Measured value memory	3964 Ident.	<mark>0</mark> No.
TT 20	+/- 5000 μm +/- 2000 μm +/- 500 μm +/- 200 μm +/- 50 μm +/- 20 μm +/- 5 μm	0.2 μm 1 μm 2 μm 10 μm 20 μm 100 μm 200 μm	0.1 µm	No	020	•
TT 60	+/- 5000 μm +/- 2000 μm +/- 500 μm +/- 200 μm +/- 50 μm +/- 20 μm +/- 5 μm	0.2 μm 1 μm 2 μm 10 μm 20 μm 100 μm 200 μm	0.1 µm	Yes	060	•
TT 80	+/- 5000 μm +/- 2000 μm +/- 500 μm +/- 200 μm +/- 50 μm +/- 20 μm +/- 5 μm +/- 2 μm +/- 0.5 μm	0.02 µm 0.1 µm 0.2 µm 1 µm 2 µm 10 µm 20 µm 100 µm 200 µm	0.01 µm	Yes	080	0

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Electronic length measuring probes - basic terms

Nitrile gaiter for standard applications

Viton gaiter for applications involving coolants and lubricants

Connection nipple fixed or adaptable for vacuum measuring pin retraction or compressed air measuring pin adjustment

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Precise, ball-guided measuring pin

Ident. No. 021

GT21



Measuring probe without/with micrometer bolt lift-off using vacuum

Measuring probes with micrometer bolts operated using compressed air

TESA electronic length measuring probe with half bridge

universal length measuring probe for a variety of standard applications

Ident, No. 027

GT27

Application:

Execution:

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For a wide variety of standard applications in multi-point measuring technology. Can also be used as an alternative to dial gauges or precision pointers in manual measuring instruments such as internal precision measuring instruments, precision pointer snap gauges, etc.

Clamping shaft diameter 8 mm can be clamped along entire length

· Mechanical or vacuum lifting of measuring pins, depending on version

GT22

Cemented carbide gauge slide M2.5 with 3 mm ball diameter

5-pin plug in line with DIN 45322, cable length 2 m

Advantage:

- Insensitive to lateral forces and temperature fluctuations
- Excellent electromagnetic shielding

Delivery:

Measuring probe, test report with declaration of conformity

Technical data:

- Measuring span of electronic length measuring technology: 4 mm
- Measuring range of electronic length measuring technology: +/- 2 mm

(1) Front end position of measuring pin

Clamping shank (sensor housing)

Connection for pneum. measuring pin retraction Adjustment to electr. zero point
Connection for compressed air measuring pin retraction

Max. measuring pin travel

Electr. zero point

Gauge slide

3466

Measurement force: 0.63 N



Ident, No. 028

Ident, No. 022 Model GT 21 GTL 21 GTL 211 GT 22 GTL 22 GT 27 GT 27 GT 28 Max. spindle travel (mm) 4.3 4.3 4.3 4.3 4.3 10.3 10.3 10.3 Cable output direction Axial Axia Axial Radial Radia Axial Axial Radial Viton Bellow material Nitrile Viton Viton Nitrile Viton Viton Viton Spindle lift Mechanical Mechanical Vacuum Vacuum Vacuum Mechanical Vacuum Vacuum Max, linearity error (L in mm. 0.2 µm + (3 x 0.2 µm + (2.4 x 0.2 µm + (2.4 x 0.2 µm + (3 x 0.2 µm + (2.4 x 0.2 µm + (3 x 0.2 µm + (3 x 0.2 µm + (3 x measured from electric zero Ĺ³) μm L²) µm Ľ²) µm Ĺ³) μm Ľ²) µm Ĺ³) μm Ĺ³) μm Ĺ³) μm point) Repetition standard deviation 0.01 0.01 0.01 0.01 0.01 0.05 0.05 0.05 acc. to DIN 1319 (µm) -2,2 mm Front end position of spindle -2.2 mm -2.2 mm 2.2 mm -2.2 mm -2.2 mm -5.1 mm -2.2 mm 021 321 324 022 322 027 325 028 39655... Ident. No. .

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TESANORM clamping system 'ESA

for electronic length measuring probe, dial gauges and precision pointers with 8h6 shaft diameter

Application:

For mounting electronic length measuring probes, dial gauges and precision pointers with a shaft diameter of 8 mm h6 in measuring devices.

Execution:

- Tension using VKD clamping screw and VKE clamping sleeve
- VKD clamping screw M4 x 6 with offset diameter 1.5 mm and length 0.7 mm



TESA	A clamping	TESA clamping		
screv	v type VKD	sleeve type VKE		
3953	6	39537		
Ident. No.		Ident. No.		
010	•	010	•	

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No. 39537



1042

Availability subject to country specific rules and regulations.

Bore diameter 10H7 for holding the VKE clamping sleeve

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Advantage:

0.7

No. 39536

• Slotted clamping sleeve for uniform surface tension over the sleeve surface No deformation of the micrometer bolt guide

VKE clamping sleeve diameter I = 8 mm and A = 10 mm and length 12 mm



Multi-point measuring technology

Multi-point measurement technology is a quick and effective solution for evaluating samples. In addition to static characteristics such as length, diameter, etc. deviations of form and position also be detected. Suitable CAQ systems enable measured values to be graphically displayed, evaluated and analysed. Control information that is activated by the respective situation can also be stored for reasons of process reliability. This guarantees high production guality. Correct documentation is required in many sectors. It also protects manufacturers against possible compensation claims from customers and clients.



1 Movable sensor body Sensor cable with induction coil Gauge slide holder (Ă Interchangeable Interchangeable measuring force spring 6 Measuring force spring stop Anti-twist guide Adjustable stop 8 Ball cage Ferromagnetic core Guide sleeve for high-precision axial movement 1

Zero setting, mechanical 12 Fixed sensor body



FMS electronic length-measuring probe - it's all down to correct configuration!

Application example I:

Gauge slide works continuously in the direction of the test specimen via a compression spring

- Not possible to retract the gauge slide by applying compressed air!
- 1 Fixed sensor body
- 2 Movable sensor body
- 3 Gauge element with precision adjustment
- 4 Adjustable stop as 39658187-39658192, but without spring
- 5 Measuring force spring element 39658187-39658192
- 6 Location hole
- 7 Gauge slide holder

Application example II:

Gauge slide works continuously in the direction of the test specimen via a

compression spring

Gauge slide retracted by applying compressed air!

- 5 Measuring force spring element 39658187-39658192
- 8 Compressed air cylinder 39658170
- 9 Compressed air straight connection 39658160 or angled 39658165

Application example III:

Gauge slide is pressurised and moved towards test specimen by compression spring element

- Gauge slide retracted by deactivating compressed air application!
- 5 Measuring force spring element 39658187-39658192
- 8 Compressed air cylinder 39658170
- 9 Compressed air connection straight 39658160 or angled 39658165 10 Additional spring element 39658180-39658186





Example application II



Extension cable for electronic length measuring probes and lever gauge probes For 5-pin plug in line with DIN 45322

Application:

For extending the distance between the measuring probe and display unit. For TESA electronic length measuring probes and lever gauge probes

Notes:

DC version of extension cable for electronic length measuring probes deliverable on request







TESA USB interface for electronic length measuring and lever gauge probes With 5-pin plug in line with DIN 45322

Application:

To connect an electronic length measuring device or lever gauge probe with 5-pin plug in line with DIN 45322, for example, to a computer with USB interface.

Execution:

- Ident. No. 400: For length measuring probe versions GT2x, GT3x, GT4x and FMS100/102
- Ident. No. 410: For length measuring probe version GT6x with measuring range +/- 5 mm

39665...

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Notes:

Ident. No.

Ident. No. 400: Excludes length measuring probes in DC version

 $\mbox{Ident.}$ No. 410: Excludes length measuring probes GT61S and GT62S, and length measuring probes in DC version



- Measuring input signal: Analogue (half bridge)
- Measuring output signal: Digital
- \bullet Limit value of deviation range: 0.3% \pm 0.1 μm

410



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