

Ultrasonic thickness gauge SAUTER TN-US



Portable measuring device for ultrasonic material thickness testing

**Features**

- External sensor
- Data interface USB, standard (only for models with readout [d] = 0,01 mm)
- Scan mode (10 measurements per sec.) or single point measuring mode possible
- Internal memory for up to 20 files (with up to 100 values per file)
- Selectable measuring units: mm, inch
- Delivered in a robust carrying case

**Technical data**

- Measuring precision: 0,5 % of [Max] ± 0,04 mm
- Dimensions W×D×H 74×32×150 mm
- Battery operation, batteries standard 2× 1.5 V AA, AUTO-OFF function to preserve batteries
- Net weight approx. 245 g











































**Accessories**

- Data transfer software, USB interface cable included, SAUTER ATU-04
- External sensor, 2,5 MHz, ø 14 mm, for thick samples, in particular cast iron with rough upper surfaces: Measuring range 3–300 mm (steel), SAUTER ATU-US01
- External sensor, 7 MHz, ø 6 mm, for thin test materials: Measuring range 0,75–80 mm (steel), SAUTER ATU-US02
- External sensor, 5 MHz, ø 6 mm, SAUTER ATB-US01
- External sensor, 5 MHz, ø 10 mm, SAUTER ATU-US09
- External sensor, 5 MHz, ø 10 mm, transducer at an angle of 90°, SAUTER ATU-US10
- External sensor, 5 MHz, ø 12 mm, for hot test materials: Measuring range (steel) 3–200 mm at temperatures of up to 300 °C, SAUTER ATB-US02
- Ultrasound contact gel, standard, can be reordered, approx. 60 ml, SAUTER ATB-US03

STANDARD						OPTION	
[d] < 0,01 mm						+4 DAYS	

Model	Measuring range	Readout	Sensor	Sound velocity	Option	
					Factory calibration certificates	
SAUTER	[Max] mm	[d] mm		m/sec	KERN	
TN 80-0.1US	0,75–80	0,1	7 MHz   ø 6 mm	1000–9999	961-113	
TN 230-0.1US	1,2–230	0,1	5 MHz   ø 10 mm	1000–9999	961-113	
TN 300-0.1US	3–300	0,1	2,5 MHz   ø 14 mm	1000–9999	961-113	
TN 80-0.01US	0,75–80	0,01	7 MHz   ø 6 mm	1000–9999	961-113	
TN 230-0.01US	1,2–200   230	0,01   0,1	5 MHz   ø 10 mm	1000–9999	961-113	
TN 300-0.01US	3–200   300	0,01   0,1	2,5 MHz   ø 14 mm	1000–9999	961-113	

## Pictograms

 <b>Adjusting program (CAL):</b> For quick setting of the instrument's accuracy. External adjusting weight required	 <b>WLAN data interface:</b> To transfer data from the balance/measuring instrument to a printer, PC or other peripherals	 <b>Protection against dust and water splashes IPxx:</b> The type of protection is shown in the pictogram.
 <b>Calibration block:</b> Standard for adjusting or correcting the measuring device	 <b>Data interface Infrared:</b> To transfer data from the measuring instrument to a printer, PC or other peripheral devices	 <b>ZERO:</b> Resets the display to "0"
 <b>Peak hold function:</b> Capturing a peak value within a measuring process	 <b>Control outputs (optocoupler, digital I/O):</b> To connect relays, signal lamps, valves, etc.	 <b>Battery operation:</b> Ready for battery operation. The battery type is specified for each device
 <b>Scan mode:</b> Continuous capture and display of measurements	 <b>Analogue interface:</b> To connect a suitable peripheral device for analogue processing of the measurements	 <b>Rechargeable battery pack:</b> Rechargeable set
 <b>Push and Pull:</b> The measuring device can capture tension and compression forces	 <b>Analog output:</b> For output of an electrical signal depending on the load (e.g. voltage 0 V – 10 V or current 4 mA – 20 mA)	 <b>Mains adapter:</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version available
 <b>Length measurement:</b> Captures the geometric dimensions of a test object or the movement during a test process	 <b>Statistics:</b> Using the saved values, the device calculates statistical data, such as average value, standard deviation etc.	 <b>Power supply:</b> Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or USA on request
 <b>Focus function:</b> Increases the measuring accuracy of a device within a defined measuring range	 <b>PC Software:</b> To transfer the measurement data from the device to a PC	 <b>Motorised drive:</b> The mechanical movement is carried out by a electric motor
 <b>Internal memory:</b> To save measurements in the device memory	 <b>Printer:</b> A printer can be connected to the device to print out the measurement data	 <b>Motorised drive:</b> The mechanical movement is carried out by a synchronous motor (stepper)
 <b>Data interface RS-232:</b> Bidirectional, for connection of printer and PC	 <b>Network interface:</b> For connecting the scale/measuring instrument to an Ethernet network	 <b>Fast-Move:</b> The total length of travel can be covered by a single lever movement
 <b>Profibus:</b> For transmitting data, e.g. between scales, measuring cells, controllers and peripheral devices over long distances. Suitable for safe, fast, fault-tolerant data transmission. Less susceptible to magnetic interference.	 <b>KERN Communication Protocol (KCP):</b> It is a standardized interface command set for KERN balances and other instruments, which allows retrieving and controlling all relevant parameters and functions of the device. KERN devices featuring KCP are thus easily integrated with computers, industrial controllers and other digital systems	 <b>Verification possible:</b> The time required for verification is specified in the pictogram
 <b>Profinet:</b> Enables efficient data exchange between decentralised peripheral devices (balances, measuring cells, measuring instruments etc.) and a control unit (controller). Especially advantageous when exchanging complex measured values, device, diagnostic and process information. Savings potential through shorter commissioning times and device integration possible	 <b>GLP/ISO record keeping:</b> Of measurement data with date, time and serial number. Only with SAUTER printers	 <b>DAKkS calibration possible:</b> The time required for DAKkS calibration is shown in days in the pictogram
 <b>Profinet:</b> Enables efficient data exchange between decentralised peripheral devices (balances, measuring cells, measuring instruments etc.) and a control unit (controller). Especially advantageous when exchanging complex measured values, device, diagnostic and process information. Savings potential through shorter commissioning times and device integration possible	 <b>GLP/ISO record keeping:</b> Of measurement data with date, time and serial number. Only with SAUTER printers	 <b>Factory calibration:</b> The time required for factory calibration is specified in the pictogram
 <b>Data interface USB:</b> To connect the measuring instrument to a printer, PC or other peripheral devices	 <b>Measuring units:</b> Weighing units can be switched to e.g. non-metric at the touch of a key. Please refer to website for more details	 <b>Package shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram
 <b>Bluetooth* data interface:</b> To transfer data from the balance/measuring instrument to a printer, PC or other peripherals	 <b>Measuring with tolerance range (limit-setting function):</b> Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model	 <b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram

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