

Ultrasonic Thickness Gauge SAUTER TU-US













Premium ultrasonic thickness gauge

Features

- External measuring head for difficult-to-access measuring points
- · Base plate for adjustment included
- II USB data interface, as standard
- 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)
- Measuring with tolerance range (limit-setting function): Upper and lower limiting can be programmed individually. The process is supported by an audible and visual signal
- · Selectable measuring units: mm, inch
- · Robust metal housing
- · Scope of delivery: Operating instructions, batteries, device-specific measuring head and ultrasound contact gel
- 2 Delivered in a robust carrying case

Technical data

- Measuring precision: 0,5 % of [Max] \pm 0,04 mm
- Overall dimensions W×D×H 130×76×32 mm
- Battery operation, batteries standard (2×1.5 V AA)
- · Net weight approx. 0,50 kg

Accessories

- · Software, interface cable included, SAUTER ATU-04TU
- External measuring head, 2,5 MHz, \emptyset 14 mm, for thick samples, in particular cast iron with rough upper surfaces: Measuring range 3-300 mm (steel), SAUTER ATU-US01
- External measuring head, 7 MHz, Ø 6 mm, for thin test materials: Measuring range 0,75-80 mm (steel), SAUTER ATU-US02
- External measuring head, 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
- External measuring head, 5 MHz, Ø 10 mm, **SAUTER ATU-US09**
- External measuring head, 5 MHz, Ø 10 mm, transducer at an angle of 90°, SAUTER ATU-US10
- · Ultrasound contact gel, refill pack, approx. 70 ml, **SAUTER ATB-US03**





















Model	Measuring range	Readout [d]	Measuring head	Sound velocity	Option Factory Calibration Certificate
SAUTER	mm	mm		m/sec	KERN
TU 80-0.01US	0,75 - 80	0,01	7 MHz Ø 6 mm	1000 - 9999	961-113
TU 230-0.01US	1,2 - 230	0,01	5 MHz Ø 10 mm	1000 - 9999	961-113
TU 300-0.01US	3 - 300	0,01	2,5 MHz Ø 14 mm	1000 - 9999	961-113

MEASURING TECHNOLOGY & TEST SERVICE 2024

SAUTER Pictograms



Conformity assessment

Models with type approval

DAkkS calibration

The time required for

DAkkS calibration is shown

Factory calibration (ISO)

The time required for factory

calibration is specified in

Package shipment

The time required for

internal shipping prepara-

tions is shown in days in

the pictogram

the pictogram

the pictogram

Pallet shipment

The time required for

internal shipping prepara-

tions is shown in days in

in days in the pictogram

systems

possible

for construction of verifiable

M

DAkkS

+3 DAYS

ISO

1 DAY



Adjusting program (CAL)

For quick setting of the instrument's accuracy. External adjusting weight required



Calibration block

Standard for adjusting or correcting the measuring



Peak hold function

Capturing a peak value within a measuring process



Scan mode

Continuous capture and display of measurements



Push and Pull

The measuring device can capture tension and compression forces



Length measurement

Captures the geometric dimensions of a test object or the movement during a test process



Focus function

Increases the measuring accuracy of a device within a defined measuring range



Internal memory

To save measurements in the device memory



Data interface RS-232

Bidirectional, for connection of printer and PC



Profibus

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



Profinet

Enables efficient data exchange between de-centralised 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



Data interface USB

To connect the measuring instrument to a printer, PC or other peripheral devices



Bluetooth* data interface

To transfer data from the balance/measuring instrument to a printer, PC or other peripherals



WIFI data interface

To transfer data from the balance/measuring instrument to a printer, PC or other peripherals



Data interface infrared

To transfer data from the measuring instrument to a printer, PC or other peripheral devices



Control outputs (optocoupler, digital I/O) To connect relays, signal

lamps, valves, etc.



Analogue interface

To connect a suitable peripheral device for analogue processing of the measurements



Analogue output

For output of an electrical signal depending on the load (e.g. voltage 0 V - 10 V or current 4 mA - 20 mA)



Statistics

Using the saved values, the device calculates statistical data, such as average value, standard deviation etc.



PC Software

To transfer the measurement data from the device to a PC



Printer

A printer can be connected to the device to print out the measurement data



Network interface

For connecting the scale/ measuring instrument to an Ethernet network



KERN Communication Protocol (KCP)

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



GLP/ISO record keeping

of measurement data with date, time and serial number. Only with SAUTER printers



Measuring units

Weighing units can be switched to e.g. non-metric. Please refer to website for more details



Measuring with tolerance range (limit-setting function)

Upper and lower limiting can be programmed individually. The process is supported by an audible or visual signal, see the relevant model



Protection against dust and water splashes IPxx

The type of protection is shown in the pictogram cf. DIN EN 60529:2000-09, IEC 60529:1989 +A1:1999+A2:2013



ZERO

Resets the display to "0"



Battery operation

Ready for battery operation. The battery type is specified for each device



Rechargeable battery pack

Rechargeable set



Plug-in power supply 230V/50Hz in standard

version for EU. On request GB, AUS or US version available



Integrated power supply unit

Integrated, 230V/50Hz in EU. More standards e.g. GB, AUS or US on request



Motorised drive

The mechanical movement is carried out by a electric motor



Motorised drive

The mechanical movement is carried out by a synchronous motor (stepper)



Fast-Move

The total length of travel can be covered by a single lever movement



The Bluetooth® word mark and logos are registered trademarks owned by Bluetooth SIG, Inc. and any use of such marks by KERN & SOHN GmbH is under license Other trademarks and trade names are those of their respective owners