



## Portable measuring device for ultrasonic material thickness testing in Echo-Echo principle

### Features

- **External sensor**
- **Data interface RS-232**, standard
- Delivered in a hard carrying case
- **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
- Two measuring modes to determine material thickness:
  - Pulse-echo mode
  - Echo-echo mode
- Determining the actual thickness of materials regardless of any coating which might be present. In this way, the wall thickness of pipes, for example can be determined in a non-destructive manner, i.e. without having to remove the coating
- Echo-echo measurements are only possible with the measuring head included as part of the delivery (ATU-US12, see accessory)

### Technical data

- Precision: 0,5 % of [Max] ± 0,04 mm
- Dimensions WxDxH 74x32x150 mm
- Battery operation, batteries standard 2 x 1.5 V AA, AUTO-OFF function to preserve the batteries
- Net weight approx. 245 g
- Maximum thickness of coating (paints, lacquers or similar coatings which shall be eliminated): 3 mm

### Accessories

- **Software**, interface cable included, SAUTER ATU-04
- **External sensor**, 5 MHz, Ø 12 mm, for echo-echo measuring, SAUTER ATU-US12
- **Ultrasound contact gel**, standard, can be reordered, approx. 60 ml, SAUTER ATB-US03
- **RS-232/USB adapter**, SAUTER AFH 12
- **5 steel calibration blocks** without wooden box, SAUTER ATU-06
- **5 steel calibration blocks** with wooden box, SAUTER ATU-09































#### STANDARD



#### OPTION



Model	Measuring range Echo-echo	Measuring range Pulse-echo	Readout [d] mm	Sensor	Sound velocity m/sec	Option	
						ISO Calibration Certificate	
SAUTER	mm	mm				ISO KERN	
TN 30-0.01EE	3-30	0,65 - 600	0,01	5 MHz   Ø 12 mm	1000 - 9999	961-113	
TN 60-0.01EE	3-60	0,65 - 600	0,01	5 MHz   Ø 12 mm	1000 - 9999	961-113	

	<b>Adjusting program (CAL):</b> For quick setting of the balance's accuracy. External adjusting weight required.		<b>Data interface Infrared:</b> To transfer data from the balance to a printer, PC or other peripheral devices.		<b>Battery operation:</b> Ready for battery operation. The battery type is specified for each device.
	<b>Calibration block:</b> standard for adjusting or correcting the measuring device.		<b>Control outputs (optocoupler, digital I/O):</b> to connect relays, signal lamps, valves, etc.		<b>Rechargeable battery pack:</b> rechargeable set.
	<b>Peak hold function:</b> capturing a peak value within a measuring process.		<b>Analogue interface:</b> to connect a suitable peripheral device for analogue processing of the measurements.		<b>Mains adapter:</b> 230V/50Hz in standard version for EU. On request GB, AUS or USA version available.
	<b>Scan mode:</b> continuous capture and display of measurements.		<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>Push and Pull:</b> the measuring device can capture tension and compression forces.		<b>PC Software:</b> to transfer the measurements from the device to a PC.		<b>Motorised drive:</b> The mechanical movement is carried out by a motorised drive.
	<b>Length measurement:</b> captures the geometric dimensions of a test object or the movement during a test process.		<b>Printer:</b> a printer can be connected to the device to print out the measurements.		<b>Fast-Move:</b> the total length of travel can be covered by a single lever movement.
	<b>Focus function:</b> increases the measuring accuracy of a device within a defined measuring range.		<b>GLP/ISO record keeping:</b> of measurements with date, time and serial number. Only with SAUTER printers.		<b>ISO Calibration:</b> The time required for ISO calibration is shown in days in the pictogram.
	<b>Internal memory:</b> to save measurements in the device memory.		<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>Data interface RS-232:</b> bidirectional, for connection of printer and PC.		<b>Measuring with tolerance range:</b> Upper and lower limiting can be programmed individually, e.g. for sorting and dosing.		<b>Pallet shipment:</b> The time required for internal shipping preparations is shown in days in the pictogram.
	<b>Data interface USB:</b> To connect the balance to a printer, PC or other peripheral devices.		<b>ZERO:</b> Resets the display to "0".		<b>Warranty:</b> The warranty period is shown in the pictogram.

Your SAUTER specialist dealer: