





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

Features

- External sensor
- Data interface RS-232, standard
- 11 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



















Model	Measuring range	Measuring range	Readout	Sensor	Sound velocity	Option	
	Echo-echo	Pulse-echo				ISO Calibration Certificate	
			[d]			ISO	
SAUTER	mm	mm	mm		m/sec	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	

SAUTER Pictograms:





Adjusting program (CAL):

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



Data interface Infrared:

(optocoupler, digital I/O):

To transfer data from the balance to a printer, PC or other peripheral devices.



Battery operation:

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



Rechargeable battery pack:

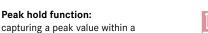
rechargeable set.



Calibration block:

measuring process.

standard for adjusting or correcting the measuring device.





SWITCH

Analogue interface:

Control outputs

to connect a suitable peripheral device for analogue processing of the measurements.

to connect relays, signal lamps, valves, etc.



ACCU

Mains adapter:

230V/50Hz in standard version for EU. On request GB, AUS or USA version available.



PEAK

Scan mode:

Push and Pull:

continuous capture and display of measurements.



Statistics:

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



Power supply:

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

by a single lever movement.



PC Software:

to transfer the measurements from the device to a PC.



Motorised drive:

The mechanical movement is carried out by a motorised drive.



Length measurement:

and compression forces.

captures the geometric dimensions of a test object or the movement during a test process.

the measuring device can capture tension



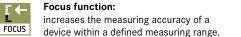
Printer:

a printer can be connected to the device to print out the measurements.



Fast-Move:

the total length of travel can be covered





GLP/ISO record keeping:

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



ISO Calibration:

The time required for ISO calibration is shown in days in the pictogram.



Internal memory:

to save measurements in the device memory.

Data interface RS-232:

bidirectional, for connection



Measuring units:

Weighing units can be switched to e.g. non-metric at the touch of a key. Please refer to website for more details.



Measuring with tolerance range:

Upper and lower limiting can be programmed individually, e.g. for sorting and dosing.



1 DAY

in days in the pictogram.

Package shipment:

Pallet shipment: The time required for internal shipping preparations is shown

The time required for internal

shipping preparations is shown



ZERO:

Resets the display to "0".



Warranty:

The warranty period is shown in the pictogram.

in days in the pictogram.



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RS 232

Data interface USB:

of printer and PC.

To connect the balance to a printer, PC or other peripheral devices.



Your SAUTER specialist dealer: