

Ultrasonic coating thickness measurement

QuintSonic



Measurement of:

- paint, plastics, enamel and other insulating coatings
- applied on wood, plastics, glass, ceramics and on metals
- wall thickness of plastics and metals through the coating

New: Measurement of a multi-layer system in only one measuring process

Application

The new portable gauge was especially designed for non-destructive coating thickness measurement of paint, varnish, plastics and other insulation coatings applied on wood, plastics, glass, ceramics etc. as well as for polymer layers on metals. As a special feature, the gauge offers the possibility to measure the total thickness as well as the individual layers of a multi-layer system in only one measuring process. The robust gauge is appropriate for use in the laboratory, in production and on site.

Measuring Procedure

When the probe is placed on the coated surface, it sends sound pulses which penetrate the coating through to the base material. Provided the coatings and the substrate possess different acoustic properties, these pulses are reflected by the different surfaces and transmitted to the transducer in the probe. The various time intervals are measured and calculated by a microprocessor to give individual and total coating thickness. The time to obtain a reading is approx. two seconds or less. If the portable MiniPrint printer is con-



Thickness measurement of a double-layer coating applied on wood

Technical data

Field of applications and measuring ranges:	Single layers: 10 µm ... 500 µm Multi-layers: max 500 µm total coating thickness Wall thickness of metals: 0.1 ... 8 mm Wall thickness of plastics: 0.2 ... 3 mm
Resolution:	1 µm
Measuring uncertainty < 100 µm	± (2 µm + 3 %*)
Measuring uncertainty > 100 µm	± (2 µm + 2 %*) (*of reading)
Memory capacity:	max. 10,000 measuring values in max. 500 batches
Statistical evaluation:	n, \bar{x} , s, kvar, max, min, with time and date of print-out and reading
Limit setting:	with optical and acoustic warning when limits are exceeded
Interface:	RS 232 C for MiniPrint data printer
Power supply:	2,4 V akkupack: 2 x 1,2 V AA NiMH or NiCd (approx. 2,500 measurements)
Charger:	90 V~ to 264 V (charging time: 4 hours)
Dimensions/weight:	Gauge: 150 mm x 82 mm x 35 mm/150 g, Probe 30 mm x 45 mm dia.
Ambient temperature:	-15 °C ... +55 °C

nected all readings and statistical data can be printed out in individual memories and batches.

Description

This new portable non-destructive coating thickness gauge has been developed for the easy and quick measurement of coatings on non-metallic materials which up to now could only be done destructively. The gauge will also measure paint coatings on a metal base.

Supply schedule

- Gauge conforming to DIN EN ISO 2808, ASTM D6132, with probe, cable and rechargeable batteries
- Mains unit with Euro / US adapter
- Operating instructions
- Plastic case
- Coupling liquid, 100 g
- Software Qsoft

- RS 232 connection cable
- Single layer control standard

Recommended accessories

- Portable printer MiniPrint
- Rubber protection case with mounting device (neck cord optional)
- Belt case set – two cases of different size for gauge and accessories
- Carrying case for gauge and printer MiniPrint



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