Advancing with Technology

ElektroPhysik

Messgeräte für Oberflächentechnik • Surface Testing Instruments

Coating Thickness Measurement

MiniTest 725 · 735 · 745

The intelligent solution for coating thickness measurement

- Modular design made-to-measure
- With built-in, external or convertible sensors
- Bluetooth for data transfer to a PC, Tablet-PC or smartphone
- Wireless sensors
- Special miniature and tube sensors



Precision gauges »Made in Germany« since 1947

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MiniTest 725 · 735 · 745

Precise – flexible – smart

Made in Germany – Tradition in quality

ElektroPhysik has a long-standing tradition of more than 70 years in the manufacture of non-destructive coating thickness gauges for the finishing industry. Typical applications: non-magnetic coatings such as paint, varnish, enamel, chrome and galvanizing on steel substrates or insulating coatings such as paint, anodized layers or ceramic on non-ferrous substrates such as copper, aluminium, die cast zinc, brass etc.

Innovation through Bluetooth and mobile app

The new MiniTest 725 · 735 · 745 series sets new standards in precision and flexibility. All models of the new series are equipped with a Bluetooth interface for wireless data transfer to a PC, Tablet-PC or smartphone. As an alternative, data transfer can also be made via a conventional USB connection. Further data processing on the end device can be done via a comprehensive evaluation software, MSoft 7 professional, or the mobile app.

Practice-oriented and versatile

MiniTest 725 with a built-in sensor is especially suited for quick measurement on car bodies, hulls or steel constructions. Thanks to its ergonomic design for one-handed operation all functions can be easily accessed with one hand only.
MiniTest 735 with an external sensor combines high precision and ease of measurement. The cable-connected sensor ensures convenient measurement on objects difficult to access.

MiniTest 745 – the top model of the series – convinces through its flexible sensor design. Its built-in sensor can be easily converted into an external sensor. Thus you can take advantage of the features of both sensor designs. Additional comfort and flexibility is provided by the wireless sensor.



Flexibility and mobility through wireless sensors

Take full advantage of today's innovative and flexible connectivity options by using the wireless MiniTest 745 sensors. Just connect your digital sensor to the Bluetooth Smart-adapter and your readings will be transferred immediately to the MiniTest 745 gauge – in a distance of up to a 10 m. All MiniTest 745 sensors are Bluetooth Smart-adapter capable.



Advanced precision through digital signal processing SIDSP®

All models of the MiniTest 725 · 735 · 745 series connect to SIDSP®-sensors. Thanks to the use of the most-advanced SIDSP®-technology, these sensors are unsusceptible to interference and provide an excellent measuring accuracy. Even variations in temperature will not affect measurement and readings remain stable to ensure a very good reproducibility over the complete measuring range.



Special sensors adapted to difficult conditions

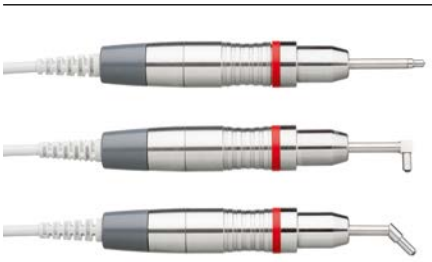
In addition to the comprehensive range of standard sensors, ElektroPhysik offers a number of special sensors for particularly difficult applications:

- FN 2.6 sensor, particularly adapted for measurement on car bodies, highly unsusceptible to varying geometries or base materials
- Miniature sensors in 0°, 45° or 90° design for measurement on thin layers and very small surfaces, in grooves, bore holes or recesses
- HD-sensors for heavy-duty use in rough environments, with the sensor electronics especially protected against dust, paint or other aggressive substances
- Tube sensors with grip extension for easy access in pipes and tubes

Sensors

Measuring procedure	Sensor model	Measuring range	Accuracy	Minimum measuring spot	Available in combination with		
					MiniTest 725	MiniTest 735	MiniTest 745
Magnetic-induction sensors	F 0.5M-0° F 0.5M-45° F 0.5M-90°	0 … 0.5 mm/20 mils	± (0.5 µm/0.02 mils + 0.75 %)	ø 3 mm/0.1 in		X	X
	F 1.5	0 … 1.5 mm/60 mils	± (1.0 µm/0.04 mils + 0.75 %)	ø 5 mm/0.2 in	X	X	X
	F 1.5-90°	0 … 1.5 mm/60 mils	± (1.0 µm/0.04 mils + 0.75 %)	ø 5 mm/0.2 in		X	X
	F2	0 … 2.0 mm/80 mils	± (1.5 µm/0.06 mils + 0.75 %)	ø 10 mm/0.4 in	X	X	X
	F2.6	0 … 2.6 mm/100 mils	± (1.0 µm/0.04 mils + 0.75 %)	ø 5 mm/0.2 in	X	X	X
	F 5	0 … 5.0 mm/200 mils	± (1.5 µm/0.06 mils + 0.75 %)	ø 10 mm/0.4 in	X	X	X
	F 15	0 … 15 mm/590 mils	± (5.0 µm/0.2 mils + 0.75 %)	ø 25 mm/1 in	X	X	X
	F 35	0 … 35 mm/1380 mils	± (20 µm/0.8 mils + 0.75 %)	ø 100 mm/4 in		X	X
Eddy current sensors	N 0.3M-0° N 0.3M-45° N 0.3M-90°	0 … 0.3 mm/12 mils	± (0.5 µm/0.02 mils + 0.75 %)	ø 3 mm/0.1 in		X	X
	N 0.7	0 … 0.7 mm/30 mils	± (1.0 µm/0.04 mils + 0.75 %)	ø 5 mm/0.2 in	X	X	X
	N 0.7-90°	0 … 0.7 mm/30 mils	± (1.0 µm/0.04 mils + 0.75 %)	ø 5 mm/0.2 in		X	X
	N 2.5	0 … 2.5 mm/100 mils	± (1.5 µm/0.06 mils + 0.75 %)	ø 10 mm/0.4 in	X	X	X
	N 7	0 … 7.0 mm/280 mils	± (5.0 µm/0.2 mils + 0.75 %)	ø 25 mm/1 in	X	X	X
	N 20	0 … 20 mm/790 mils	± (20 µm/0.8 mils + 0.75 %)	ø 100 mm/4 in		X	X
Dual sensors	FN 1.5	F: 0 … 1.5 mm/60 mils N: 0 … 0.7 mm/30 mils	± (1.0 µm/0.04 mils + 1.5 %)	ø 5 mm/0.2 in	X	X	X
	FN 1.5-90°	F: 0 … 1.5 mm/60 mils N: 0 … 0.7 mm/30 mils	± (1.0 µm/0.04 mils + 0.75 %)	ø 5 mm/0.2 in		X	X
	FN 2.6	F: 0 … 2.6 mm/100 mils N: 0 … 1.3 mm/40 mils	± (1.0 µm/0.04 mils + 0.75 %)	ø 5 mm/0.2 in	X	X	X
	FN 5	F: 0 … 5.0 mm/200 mils N: 0 … 2.5 mm/100 mils	± (1.5 µm/0.06 mils + 0.75 %)	ø 10 mm/0.4 in	X	X	X

* referring to multipoint calibration



Micro sensors:
Miniature sensors
F 0.5M and N 0.3M



Standard sensors:
Sensors F 1.5, F 2,
F 2.6, F 5,
N 0.7, N 2.5, FN 1.5,
FN 2.6, FN 5



Pencil shape sensors:
Sensors F 1.5-90°, N 0.7-90°,
FN 1.5-90°



Sensors for thick coatings:
Sensors F 15, N 7



Heavy-duty sensors:
Heavy-duty sensor



Sensors for thick coatings:
Sensors F 35, N 20

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Precise – flexible – smart

Advantages at a glance

- Large memory capacity for up to 100,000 readings
- Easy, menu-guided operation in up to 20 languages
- Bluetooth interface for wireless data transfer to a PC, Tablet-PC or smartphone
- Increased precision through various calibration modes
- Perfect compensation of temperature variations over the complete measuring range
- Utmost accuracy and reproducibility thanks to the SIDSP®-technology
- Monitoring of limits, user-adjustable Offset and correction value for rough substrate materials
- Continuous measuring mode
- Free software update downloads for sensor and gauge via the internet

Standard Supply Schedule

- MiniTest, model 725, 735 or 745
- SIDSP®-sensor according to choice
- Set with calibration foils and zero reference plate(s)
- Operating instructions in German, English, French and Spanish on a CD-ROM
- Shoulder bag with belt clip
- Batteries (2 pcs, type AA Mignon)
- Manufacturer's Certificate
- MSoft 7 basic data transfer software

Technical Data

Dual sensors	Automatic recognition of the substrate material with FN sensors
Data memory	10 batches for a maximum of 10,000 readings (MiniTest 725 and 735) 100 batches for a maximum of 100,000 readings (MiniTest 745) Memories can be partitioned as needed.
Statistical evaluation	Number of readings, min, max, mean value, standard deviation, coefficient of variation, single value statistics, blocks statistics (norm-conforming / freely configurable)
Calibration modes	Factory calibration, zero-point-, 2-point-, 3-point-calibration, calibration method "rough"
Calibration procedures according to international standards	ISO, SSPC, "Swedish", "Australian"
Monitoring of limits	Visual and audible signal output
Measuring units	Switchable from metric (µm, mm, cm) to imperial (mils, inch, thou)
Measuring rate	70 readings per minute in the single mode 20 readings per second in the continuous mode
Continuous mode	For quick identification of thickness variations
Operating temperature	–10 °C ... 60 °C
Storage temperature	–20 °C ... 70 °C
Data interfaces	USB and Bluetooth
Power supply	2 pcs batteries, type AA (Mignon); rechargeable NiMH batteries, type AA/HR6 as an option. Battery or rechargeable battery setting option to adapt to the matching nominal voltage
Norms and standards	DIN EN ISO 1461, 2064, 2178, 2360, 2808, 3882, 19840, ASTM B 244, B 499, D7091, E 376, AS 3894.3, SS 1841 60, SSPC-PA 2

Recommended Accessories

- Measuring stand for F 1.5, N 0.7, FN 1.5 and miniature sensors
- Protective rubber cover
- MSoft 7 professional data evaluation software
- MiniPrint, portable data printer
- Bluetooth Smart-adapter

ElektroPhysiks Range of Products

- Coating thickness gauges
- Wall thickness gauges
- Pinhole detectors
- Cross hatch cutters
- Asphalt layer thickness measurement

ElektroPhysik

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153-A3 02/2019 Specifications subject to change without notice