

Coating thickness measurement with flexible control



The DUALSCOPE® FMP100 by Helmut Fischer sets new standards in coating thickness measurement. It harmonizes the flexibility and capabilities of PC-based lab instruments with the manageability and clear arrangement of compact portable units – it leaves nothing to be desired when it comes to measuring and processing quality-relevant coating thicknesses.

Highlights

- Bright color LC display
- Touchscreen
- Revolutionary probe technology
- Drag-and-drop printform configuration
- USB communication and printer port
- Printforms in PDF format
- Password protection
- Automatic data backup

A vital step ahead due to modern technology

Equipped with a new generation of trendsetting measurement probes and the precise evaluation and statistical elements of Helmut Fischer, the DUALSCOPE® FMP100 is the latest innovative measurement technology in a compact design. The operation is straightforward, easy to use, and the same for the various measuring methods. Whether on the production floor or in the lab, the compact DUALSCOPE® FMP100 is optimally equipped and capable of meeting your measurement requirements.

Easy handling

The combination of a bright color LC display with a touchscreen significantly simplifies settings, measurements and data evaluations. The user gains con-

fidence in the results and convenience during the process.

Modern control elements such as softkeys, menu bars and screen keyboard provide context-related support. Depending on the situation, the instrument can be operated with a stylus or by simply using fingers.

As an option, an external keyboard, a printer or a personal computer can be connected via the USB port for data or parameter input or output. New data export in PDF format is also available.

The DUALSCOPE® FMP100 is very versatile – both as a portable unit and as a bench top system. Configurable dialogs can assist the operator, improve understanding, and protect against errors.

Clear organization

The application software based on Windows™ CE enables intuitive operation

due to its familiar look and feel. In addition, the practice-oriented software concept ensures that the user has the ability to both manage measurement applications and configure the instrument.

The DUALSCOPE® FMP100 offers numerous configuration options for a clear presentation of the results. Very quickly the user will be able to create application-specific interfaces and printform templates using the drag-and-drop feature.

All relevant data and the configuration of a measurement application are centrally organized and stored in an associated file. Among them are material properties and the shape of the specimen – taken into account through the normalization and the calibration – as well as the settings for measurement, display and evaluation.

Exact measurements

The DUALSCOPE® FMP100 and the F-probes form an integral measurement system, harmonized for best-possible trueness and optimum repeatability preci-



Drag-and drop configuration of printform templates

sion. The high precision of the probes ensures a significantly increased measurement range – exceeding the typical range. Both very thin and thick coatings can be

measured precisely. A sturdy plug-type connector ensures a reliable connection between instrument and probe.

The DUALSCOPE® FMP100 combines two physical measurement methods and conforms to many standards and practices.

- Non-magnetic coatings on ferromagnetic substrate materials (using the magnetic induction method according to DIN EN ISO 2178, ASTM B499), e.g., zinc, chromium, copper, tin or paint, varnish, plastics, enamel on iron or steel.
- Electrically non-conducting coatings on NF-metals (using the eddy current method according to DIN EN ISO 2360, ASTM B244), e.g., paint, varnish or plastics on aluminum, brass or zinc as well as anodized coatings on aluminum.
- ASTM D7091-05 – standard practice for nondestructive measurement of dry film thickness of non-magnetic coatings applied to ferrous metals and non-magnetic, non-conductive coatings applied to non-ferrous metals.

Reliable evaluation

Measurement data statistics are available at the push of a button, optionally as an individually configurable list – with characteristic statistical values such as mean value, standard deviation, confidence interval and others.

In addition, various graphical display formats provide a clear overview. Sum frequency diagram and histogram provide easily seen indications of potential systematic influences in measurement series. It is understood that there is targeted comparisons of measurement blocks.

Production processes can be evaluated at one glance, and differences between various shipments can be pinpointed quickly during the incoming inspection. In no time, coating thickness measurement with the DUALSCOPE® FMP100 becomes a routine.

Order information

Product	Order no.
DUALSCOPE® FMP100 ¹	604-140
Measurement probes²	
Measurement probe FD10 – DUAL probe for magnetic induction and eddy current measurement methods	604-143
Meas. probe FGAB 1.3 – for the magnetic induction meas. method	604-141
Meas. probe FTA 3.3H – for the eddy current meas. method	604-142
Optional accessories	
Rechargeable battery pack	604-144
Communication cable for printer port (USB ⁴),	604-145
Printer F6000 – Inkjet, Color, USB ⁴	603-409
PC-Datex Software for data transfer to Excel® spreadsheets	602-465
PC-Dataacc Software for data transfer to Access® data bases	603-028
Measurement stand V12	602-260
Spare parts	
Plug-in AC adapter 110/230 VAC primary	603-233
Stylus – for operating the software	604-153

¹ Included in the shipment (without probe) are: Measurement instrument with protective film for the display, operating instructions, carrying case, stylus, AC adapter, batteries (4 x LR6), communication cable between DUALSCOPE® FMP100 and PC (incl. driver library on CD-ROM).

² Select probe model based on measurement application and order separately; not part of the standard shipment of the DUALSCOPE® FMP100 (instrument).

Technical data and features (brief overview)

Instrument platform	Application software based on MS Windows™ CE
Display	Bright graphics display (color, touchscreen)
Keyboard/operation	4 membrane keys, softkeyboard, up to 12 softkeys
Probe connector	Rugged connector socket, 10-pin
Communication interface	USB ⁴ (model: Mini-AB) for connecting a printer or a PC
Memory	256 MByte for meas. applications and meas. data
Statistics	<ul style="list-style-type: none"> • Mean value, standard deviation, Cp, Cpk et al. • Final result, histogram, sum frequency
Safety mechanisms	<ul style="list-style-type: none"> • Applications and system password protected • Automatic saving of data
Data export	<ul style="list-style-type: none"> • Measurement printforms generated in PDF • Data output in ASCII format, e.g., to a PC
Languages	us, de, fr, it, es, cn, jp
Power supply	Battery/rechargeable battery operation (e.g., Mignon LR6) or via AC adapter 110/230 VAC ³
Dimensions/weight	<ul style="list-style-type: none"> • 170 x 89 x 40 (H x W x D, in mm) • approx. 395 g (without probe, ready to operate)
Handling/transporting aid	<ul style="list-style-type: none"> • Shoulder carrying strap • Desk stand for the instrument (fold-out design)
Operating temperature	+10 °C ... +40 °C

³ One battery set (4 x Mignon LR6) and the AC adapter are included with the shipment.

⁴ Compatible with USB2.0

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Subject to changes

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