

# NDT

**NDT INTERNATIONAL, INC.**

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## *DUALSCOPE® FMP100 from Fischer Technology, Inc.*



The DUALSCOPE® FMP100 is a new unique instrument type for coating measurement according to the magnetic induction method and to the eddy current method with automatic detection of the substrate material. With the magnetic induction method you can measure e.g. zinc, chromium, copper, tin or paint, varnish, plastics, enamel on iron or steel. With the eddy current method you can measure e.g. paint, varnish or plastics on aluminum, brass or zinc as well as anodized coatings on aluminum.

On the one hand, the instrument has the practical small size of a handheld instrument. On the other hand, it has all the advantages of the software of PC-based lab instruments.

There are many fields of applications, e.g. on the production floor, for the income inspection, or in the lab. The high precision of the probes ensures a significantly increased measurement range. In addition there are improved, robust probe connectors.

Here are some of the instruments' new features:

- Elegant, ergonomical design
- Bright color LC display
- Touch screen or soft keys
- Intelligent probe technology
- Drag-and-drop printform configuration
- Printforms in PDF format
- USB communication and printer port
- Automatic data backup
- Password protection



The instrument is very user-friendly. The operation is straightforward and easy to use. The buttons are self-explanatory. Furthermore a personal computer, printer or keyboard can be connected via the USB port. A new feature is the data export in PDF format.

By using the drag-and-drop feature, the user will be able to create interfaces himself and application-specific printform templates.

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 then quickly be evaluated, and differences between various shipments can be pinpointed quickly during the incoming inspection.

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### Exact Measurements

The DUALSCOPE® FMP100 and the F-probes form an integral measurement system, harmonized for best-possible trueness and optimum repeatability precision. 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 measurement methods conforming 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 non-ferrous 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-O5-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.

### Technical Data and Features (brief overview)

Instrument platform: Application software based on MS Windows™ CE

Display: Bright graphics rushes, (color, touch screen)

Keyboard/operation: 4 membrane keys, soft key board, up to 12 soft keys

Probe connector: Rugged connector socket, 10-pin Communication Interface: USB (model Mini-AB) for connecting printer or PC

Memory: 256 MByte for meas. applications and measurement data

Statistics:

- Mean value, standard deviation, Cp, Cpk et al,
- Final result, histogram, sum frequency

Safety Mechanisms:

- Applications and system password protected
- Automatic saving of data

Data export:

- Measurement print forms generated in PDF
- Data output in ASCII format, e.g. to a PC

Languages: US, DE, FR, IT, ES, CH, JP

Operating Temperature: 10°C to +40°C

Power Supply: Battery/rechargeable battery operation (e. g., 4 x LR6) or via AC adapter 110/230 VAC

Dimensions: 170mm x 89mm x 40mm (H x W x D)

Weight: approximately 395 g (without probe, ready to operate)

Handling / Transporting Aid:

- Shoulder carrying strap
- Desk stand for the instrument (fold-out design)

Order No. 604-140 for the DUALSCOPE® FMP100 standard kit (without probe) includes 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 (including driver library on CD-ROM).

Order No. 604-143, Probe FD10 dual for magnetic induction and eddy current methods, 0-80 mils  
604-142, Probe FTA3.3H for the eddy current method, 0-45 mils  
604-141, Probe FGAB1.3 for the magnetic induction method, 0-80 mils