

DUALSCOPE® MP20



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This instrument uses both the magnetic induction and the eddy current test method. The DUALSCOPE® MP20 offers an economic solution if applications call for measurements on ferromagnetic and on nonferrous materials and if there is no need for hard copy documentation. The instrument features the following measurement capabilities:

- NF metal coatings of zinc, chromium or copper as well as paint, enamel or plastic coatings on steel and iron.
- Paint and plastic coatings on NF metals and anodized coatings on aluminum.

This instrument version allows for evaluations of a measurement series according to established statistical methods. Minimum, maximum, mean value and standard deviation are displayed with the push of a button. The number of measurements in the current test series appears on the display in addition to the coating thickness reading.

Normally the instruments are immediately ready to measure. Normalization by measuring the uncoated part is generally sufficient when switching to a new measurement application involving the same substrate material but different geometry and test area. Use the ZERO function to determine the new zero point to quickly establish a valid calibration. If the ferromagnetic properties of the material change, use the CAL function to adapt the calibration to the new material. This requires the use of one or two calibration foils in addition to the bare substrate measurement. The calibration is stored in the probe and is available for immediate recall at any time.



Characteristic Features:

- Large LCD display for measurement and evaluation data as well as icons for status display and operation notes on display lines.
- All magnetic induction, eddy current and DUAL (suitable for both measurement methods) probes can be connected.
- Automatic probe recognition.
- Automatic material recognition.
- Automatic measurement capture when probe contacts test piece.
- Acoustic signals indicate measurement acceptance.
- Lockable keyboard.
- Statistical Evaluation of measurement series and display of minimum, maximum, mean value, number of measurements, standard deviation, and date and time.
- Continuous measurement data display to quickly determine the coating thickness distribution by means of surface scan.
- Immediately ready to measure.
- Simple calibration adjustment to the test area geometry with the ZERO key.
- Additional corrective calibration with one or two calibration foils.
- Master calibration for highest measurement accuracy if the material and geometric properties of the test piece are unusual.
- Corrective and master calibration are stored in the connected probe.
- Selection between automatic shut-off 4 minutes after the last measurement or continuous operation.
- Unit of measurement selectable between U.S. and metric units.
- Various status message displays (for instance, a warning message when the battery voltages is low).
- Five selectable display languages.

Fig. left:
DUALSCOPE® MP20 with eddy current probe to measure coating thickness on NF metals.

Fig. right:
Magnetic induction probe to measure the paint coating thickness on a steel wire.

ISOSCOPE® MP30, DELTASCOPE® MP30



ISOSCOPE® MP30 DELTASCOPE® MP30

The MP30 models of the hand-held coating thickness measuring instruments are:

- ISOSCOPE® MP30 models are used to measure non-conductive coatings such as paint, anodizing, enamel or plastic coatings on non-ferrous metals, and anodic coatings on aluminum;
- DELTASCOPE® MP30 models are used to measure non-ferrous metal coatings (e.g., chromium, copper, zinc, etc.), and paint, enamel, or plastic coatings on iron and steel.

These models are equipped with bi-directional serial interfaces. This allows for the connection to a printer for the printing of measurement data or for the transfer of measurement data to a computer or data collector. Transferring data to a computer and using a measurement software program such as the FISCHER FCC Software opens the possibility to integrate this hand-held coating thickness measuring instrument into a powerful workstation with full SPC/SQC capability.

The MP30 model series features statistical evaluation capabilities similar to the DUALSCOPE® MP20. However, in addition to the most common statistical parameters, this model also has the ability to print a histogram, a cumulative frequency distribution chart, and the Cp and Cpk indices (when specification limits are set). Additionally, date and time are displayed and stored with each measurement block.

The auto averaging mode is advantageous to reduce the effect of surface roughness on the measurement data range. The mean value of an arbitrary number of readings is stored as a single measurement.

Outlier rejection can be enabled to assure the validity of a measurements series statistical evaluation by eliminating outlier measurements which may be caused by faulty placement of the probe.

The additional matrix measurement mode enables simple storing of associated measurement data by respective data block (according to specific feature), allowing individual measurements to be made at different times. This measurement mode is ideally suited for applications in the steel and automotive industries.



Complete measurement system with Measurement Stand V12, DELTASCOPE® MP30 and printer

Characteristic Features:

- AC line connection is possible as an alternative to battery operation.
- Large LCD display for measurement and evaluation data as well as icons for status display and operation notes on display lines.
- Easily exchangeable plug-in type smart measurement probes.
- Automatic probe recognition.
- Automatic measurement capture when probe contacts test piece.
- Acoustic signals indicate measurement acceptance.
- Lockable keyboard.
- Statistical Evaluation of measurement series and display of minimum, maximum, mean value, number of measurements, standard deviation, and date and time.
- Continuous display mode with coating thickness display in an analog bar graph format between pre-set specification limits.
- External push button measurement accept, handy for measurements on the inside of small bores.
- Immediately ready to measure.
- Simple calibration adjustment to the test area geometry with the ZERO key.
- Additional corrective calibration with one or two calibration foils.
- Master calibration for highest measurement accuracy if the material and geometric properties of the test piece are unusual.
- Ability to calibrate on a coating of unknown thickness (for magnetic induction method only).
- Master calibration is stored in the connected probe.
- A maximum of 10,000 measurements can be stored in 1,000 blocks in up to 100 applications. The size of a block can either be selected freely or can be fixed.
- Standard and matrix measurement mode.
- Single measurement mode. Only the mean value of several single readings is stored.
- Outlier rejection to eliminate erroneous measurements.
- Connection of previously stored measurements is possible.
- Input of specification limits.
- Selection between automatic shut-off 4 minutes after the last measurement or continuous operation.
- Unit of measurement selectable between U.S. and metric units.
- Various status message displays (for instance, a warning message when the battery voltages is low).
- Five selectable display languages.