CMI250®

Advanced Coating Thickness Metrology on Ferrous and Non-ferrous Substrates and Structures

Dual Technology Features Magnetic Induction and Eddy Current Measurement Techniques with Statistical Analysis and PC Interface

The **CMI**250 is a feature rich instrument built upon our established Eddy Current / Magnetic Induction Dual Probe Technology. The instrument offers factory and user calibrations, automatic temperature compensation, base corrections, measurement storage options, date and time stamping, statistical analysis, and USB PC connectivity.

Useful in a wide variety of settings, the **CMI**250 measures non-conductive coatings over non-ferrous substrates and non-magnetic coatings over ferrous substrates.

This small but rugged, versatile, single-handed gauge equipped with a lanyard carry-case for portability is durably designed and temperature- compensating, enabling its use in the harshest of conditions. The unit is factory calibrated and only requires a swift base re-zero correction when measuring on different metallic substrates. For advanced applications the unit may also be user calibrated. The **CMI**250 is a high-quality, feature rich, yet economically designed complete Coating Thickness measurement package.

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Automatically selects Eddy Current or Magnetic Induction measurements to suit the substrate, date and time stamp your measurements for future verification

Ideal Metrology Solution for:

- Industrial Coatings and Painters
- Appliance Coaters and Surface Finishers
- Paint and Powder Coaters
- Automotive and Aerospace Finishers
- Coating Inspectors
- Electroplating Plants
- Painting Contractors

Store measurements, date and time stamp results, statistical analysis of the coating thickness, deliver measurement results direct to your PC

Eddy Current Technology for non-conductive coatings over non-ferrous metals like aluminum, brass or copper: Teflon, Enamel, Epoxy, Anodize, Paint & Powder Coats

Magnetic Induction Technology for non-magnetic coatings over steel or ferrous substrates: Zinc, Cadmium, Paint & Powder Coats

Specifications:

- Automatic Substrate Recognition
- No User Calibration required but can be User Calibrated if desired
- Factory calibrated, only requires a swift base re-zero correction when measuring on different metallic substrates
- Statistical analysis reporting included (data recording, mean, standard deviation, high-low reporting)
- USB 2.0 data transfer to MS Excel
- Backlit visual display unit
- Optional continuous mode measurement
- Storage Capacity: 9690 measurements with optional date and time stamp
- Long battery life (150 measurements per day ~ 1 month life)
- Temperature compensation calibrated over 40°F – 140°F (4°C – 60°C)
- User interface in English or simplified Chinese

Magnetic Induction:

- Conforms to methods AST M B499 & B530, DIN 50981, ISO 2178 and BS 5411 Parts 9 & 11

Eddy Current:

- Conforms to methods AST M B244 & B529, DIN 50984, ISO 2360 and BS 5411 Part 3

Measurement Ranges:

- Ferrous Substrates, Magnetic Induction: 0.001 – 2.04mm (0.1 – 80mils)
- Non-ferrous substrates, Eddy Current: 0.001 – 1.52mm (0.1 – 60mils)
- Minimum ferrous and non-ferrous substrate thickness: 305µm, 12mils

Accuracy:

- ± (2µm + 3% of reading) or ± (0.1mils + 3% of reading) relative to calibration with certified reference material

Precision:

- Ferrous Substrates, Magnetic Induction, σ = 0.6µm (0.02mils) for a 75µm (2.95mils) plastic standard on Steel σ = 0.9µm (0.04mils) for a 12.2µm (0.48mils) plastic standard on Steel
- Non-Ferrous Substrates, Eddy Current: σ = 0.15µm (0.01mils) for a 75µm (2.95mils) plastic standards on Cu σ = 0.2µm (0.01mils) for a 12.2µm (0.48mils) plastic standards on Cu

Units: Automatic conversion between imperial and metric units with a keystroke

Dimensions: 3.75"x2"x1", 9.53cm x5.08cm x2.52cm

Battery: 2 x AA

Oxford Instruments Industrial Analysis

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