

SR-SCOPE® RMP30-S

Measurement of Copper Thickness
on Printed Circuit Boards



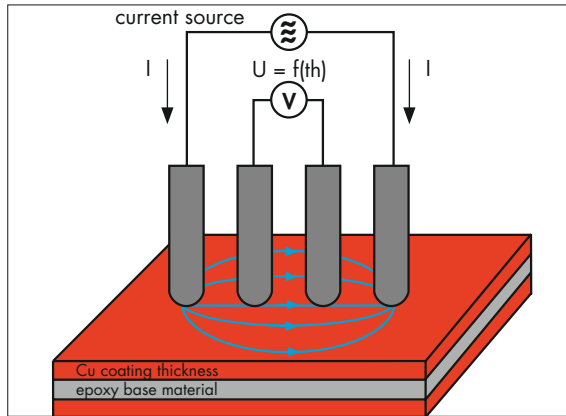
**Non-destructive, fast, accurate, and without influence
from opposing copper layers**

The SR-SCOPE® measures the thickness of copper coatings on the top side of pc-boards according to EN 14571. It is particularly well suited for measure-

ments on multilayers or on thin laminates due to the measurement method, copper layers that are located opposite of one another do not influence each other.

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Measurement method

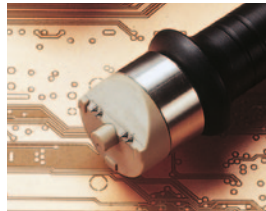


Principle electr. resistance method for coating thickness measurements

Electrical 4-point resistance method. A DC current is introduced into the copper coating using the two outer contact pins. The two inner contact pins are used to tap the electrical potential generated by the current flow. This potential is converted to an equivalent copper thickness via a calibration characteristic. The measurement is not affected by isolated copper coatings opposite of one another.



Measurement probe ERCU N for small measurement areas



Measurement probe ERCU-D10 for large measurement areas

Technical data

Measurement range of probe ERCU N

Range I: 0.1 – 10 μm (0.004 – 0.4 mils)

Range II: 5 – 120 μm (0.2 – 4.7 mils)

Repeatability precision $s^{(1)}$:
0.2 μm (0.008 mils) $\leq s \leq 2\%$ of reading

Measurement range of probe ERCU-D10

Range I: 0.1 – 10 μm (0.004 – 0.4 mils)

Range II: 5 – 200 μm (0.2 – 8 mils)

Repeatability precision $s^{(1)}$:
0.075 μm (0.003 mils) $\leq s \leq 1.5\%$ of reading

⁽¹⁾ dependent on range

Features

- Hand-held instrument with large LCD display
- Battery or line operation
- Automatic probe recognition
- Automatic measurement upon placement of probe
- Specification limits
- Acoustic signals for measurement acceptance and limit violation
- Lockable keyboard
- Automatic power off
- Storage of a maximum of 10,000 measurements in up to 100 applications, divided into a maximum of 1,000 blocks
- Statistical evaluation
- Outlier monitoring
- Calibration with certified Cu/Iso standards provides traceability of measurement results
- Unit of measurement switchable between μm and mils
- 8 display languages selectable
- RS232 interface

Order information

Order no.

SR-SCOPE® RMP30-S	603-714
Standard scope of delivery: instrument, carrying case, battery, AC adapter, manual	
Probe ERCU N	603-220
Probe ERCU-D10	603-387
Kal-S ERCU Cu/Iso 5 μm (0.2 mils)	603-175
Kal-S ERCU Cu/Iso 12 μm (0.5 mils)	603-176
Kal-S ERCU Cu/Iso 18 μm (0.7 mils)	603-177
Kal-S ERCU Cu/Iso 35 μm (1.4 mils)	603-178
Kal-S ERCU Cu/Iso 70 μm (2.8 mils)	603-179
Kal-S ERCU Cu/Iso 105 μm (4.2 mils)	603-180
Kal-S ERCU Cu/Iso 140 μm (5.6 mils)	603-668
Support stand V12 Base	604-420
Clamping device for ERCU probe types	603-658
Support for hand-held instruments	600-025
Interface connection set MP	602-341
Adapter USB – RS232	603-650
Evaluation software FISCHER DataCenter	604-575

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