

# SR-SCOPE® RMP30-S

Measurement of Copper Thickness  
on Printed Circuit Boards



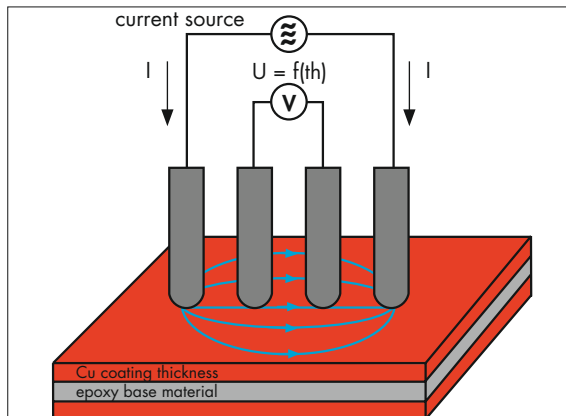
**Non-destructive, fast, accurate, and without influence  
from opposing copper layers**

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 of the 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 the probes:

**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) ≤  $s$  ≤ 2 % of reading

**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) ≤  $s$  ≤ 1.5 % of reading

<sup>(1)</sup> 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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