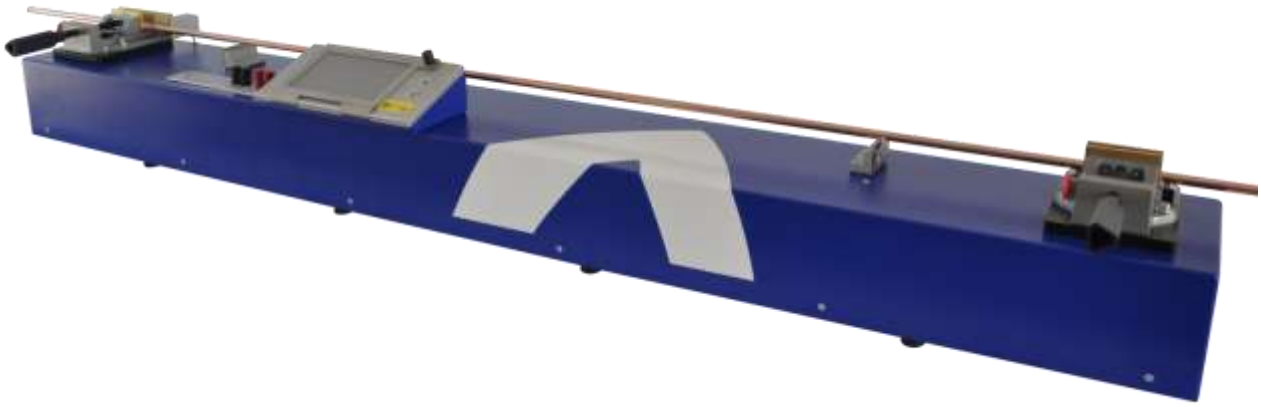
ResTest 1

Simple but performant equipment for solid conductors and rods (class 1)



DESCRIPTION

ResTest 1 perfectly masters the measurement of class 1 conductors of different materials.

A contact monitoring system along with a ruler with its calibrated length and a temperature sensor are providing an accurate linear resistance value directly in Ω/km @ 20ºC.

This fully integrated equipment not only offers operating comfort, but also the mastering of all the uncertainties connected with the measurement. Therefore AESA specifies the overall accuracy of the measurement and not the accuracy of the micro-ohmmeter only.

This equipment is specially designed to suit the needs found after a casting or drawing process. ResTest 1 can also master conductivity/resistivity measurements required by such activities (option).

KEY FEATURES

- Very broad measuring range
  - high accuracy and wide range starting with fine wires up to Ø40mm (1.57") conductors
- Ideal for any class 1 conductor
  - rods & wires of any material
- Simple and dedicated system
  - for the needs of the rod and conductor production facilities
- Easy to use
  - direct readings in Ω/km @20ºC
- Overall accuracy
  - specifications related to the whole measurement, not the instrument only

AESA Cortaillod

TECHNICAL SPECIFICATIONS

Measuring range		10 µΩ - 200 Ω					
Measuring length		1'000 mm					
Minimum sample length		1'600 mm / 63"					
Maximum sample Ø		40 mm / 1.57"					
Accuracy (± 3 digits)		**Copper**			**Aluminium**		
	Class 1	< 1'200 mm^2	< 2'400 MCM	± 0.1%	< 1'200 mm^2	< 2'400 MCM	± 0.1%
	Class 2	< 50 mm^2	< 1/0 AWG	± 0.1%	< 5 mm^2	< 10 AWG	± 0.1%
Resolution		4 ½ digits					
Display		State-of-the-art interface thanks to a 7" touchscreen					
Operating mode		Simple (buttons) / Advanced (touchscreen)					
Consisting of		• Measuring ruler (with all integrated functionalities: temperature, voltage, current,…) • Embedded metrology • Embedded Windows based PC • ISO 17025 Certificate					
Supply Voltage		100 - 240 VAC / 50-60Hz					
Interfaces		2 x USB (e.g. for printer) 1 x Display Port connector for external monitor 2 x RJ45 for LAN connection					
Dimensions		1722 x 340 x 220 mm (68" x 13.4" x 8.6")					
Weight		≈ 25 kg (55 lb)					
Article No		32.0001.0001.00					

OPTIONS

- Label printer
- Conductivity/Resistivity
- Remote control software
- ISO17025 certified calibration box
- ISO17025 certified rod
- Warranty extension
- Maintenance contract

AESA proposes other specific equipment for the measurement in the laboratory and directly on the production line

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KEY BENEFITS

USER-FRIENDLY

- ResTest is multilingual
- Direct results without post calculation
- Only two buttons for simplified use in production
- Extended function for the use in the laboratory

ISO 17025 ACCREDITED

ACCURATE

- The equipment is certified ISO 17025
- All uncertainties are mastered
- The risk of human error is reduced to its strict minimum
- Specifications apply to the overall measurement
- Improved repeatability thanks to adequate jaws

ROI < 1 year

COST EFFECTIVE

- High accuracy allows raw material savings
- Simplicity of use reduces operational costs
- Reliable information allows process improvement
- Options can make the system even more efficient

SIMPLICITY

- Broad measuring range (diameters)
- Specially designed for class 1 conductors (rods & wires)

Options

1. *Label printer* (e.g. Brother QL-700)

Article No: 51.0500.0012.0

AESA SA
AESA ResTest Resistance Bridge

ID	AESA310	Sn :	1#05659
Date	4/15/2011	Time	8:49:00 AM
α_CU	0.393 %/°C	θN1	20 °C
Rmes	+3.8109 Ω/km	Duration	00:00:14 / 2
Tmes	+20.70 °C		

This printer is directly connected to the USB port, printing labels like the example above.

2. *Conductivity / Resistivity*

Article No: 51.0030.0079.0

AESA Cortaillod developed a novel, fast and accurate solution to measure the conductivity / resistivity. The principle consists in 3 different steps:

1. Resistance & temperature (with ResTest)
2. Length with special ruler
3. Cross-section by volume measurement

➔ Results are automatically computed & displayed

This new solution fills a gap in the linear resistance field with the precise conductivity / resistivity measurement for class 1 conductors (according to the IEC 60228 standard) in raw material incoming inspection test.

3. *Remote control software (ResSoft)*

Article No: 52.0030.0007.0

This software allows driving the resistance bridge in a remote mode with a compatible PC-Type computer. This is done using a USB interface.

This software enables:

- Library of conductor specifications
- Measurement monitoring
- Reporting
- Maintenance

4. *ISO 17025 certified calibration box ResCal 1*

Article No: 45.0001.0001.0

This standard is needed to verify the accuracy of each range of the ohmmeter.
This standard is delivered with an ISO 17025 certificate.

Specification: ± 0.1% and ± 50 ppm/°C

Including 4 reference values:

- 1.0 mΩ
- 10.0 mΩ
- 100.0 mΩ
- 1.0 Ω
- 10.0 Ω
- 100.0 Ω

Delivered with ISO 17025 certificate

5. *ISO 17025 certified calibration box ResCal 2*

Article No: 45.0001.0002.0

This standard is needed to verify the accuracy of each range of the ohmmeter.
This standard is delivered with an ISO 17025 certificate.

Specification: ± 0.1% and ± 50 ppm/°C

Including 4 reference values:

- 0.1 m Ω
- 1.0 mΩ
- 10.0 mΩ
- 100.0 mΩ

Delivered with ISO 17025 certificate

6. *ISO 17025 certfied manganin rod Ø 5.5 mm*

Article No: 45.0030.0002.0

This standard is needed to verify the overall accuracy of the equipment, including the ruler and clamping jaws. This standard is delivered with an ISO 17025 certificate

7. *Warranty Extension*

Article No: 60.0900.0004.0

AESA is confident with its technology and the quality of its goods.This is why the system is supplied with a 2-years warranty period. In order to protect its customer's investment, AESA offers the possibility to extend the warranty period to 3 years.

8. *Maintenance Contract*

Article No: 60.0100.0002.0

Even the most reliable systems require regular, planned and preventive maintenance as well as periodical calibrations. AESA proposes service packages to extend the operating life of your equipment, control of your maintenance costs and ensure optimal performances.