

**Paint Resistance  
Measuring Instrument**

**RESISTIVITY METER  
515**



testing equipment for quality management

**ERICHSEN**

**Technical Description and Operating Instructions**

**VDA  
Test Sheet No. 621-107**

**For the measurement  
of electrical resistance  
of liquid paints and  
varnishes**



## Safety Instructions

The instrument has been built in accordance with the state-of-the-art standards and the recognized safety rules. Nevertheless its use may constitute a risk of life and limb of the user or of third parties, or cause damage to the instrument or to other material property, if the following instructions are not observed!

1. For power supply only use batteries as described in this manual.
2. Never make any modifications, additions or conversions which might effect safety without written approval of ERICHSEN GMBH & CO KG. Before opening the instrument make sure that the power is cut.
3. The manufacturer/supplier cannot be held liable for any damage resulting from unauthorized opening and modifications. The risk of such actions lies entirely with the user.
4. Before cleaning the instrument take off the batteries from the battery box. Never allow liquids to enter into the instruments. Do not use neither scrubbing nor plastic dissolving cleansing agents.
5. Read carefully the operating manual and observe strictly all instructions **before** commissioning the instrument.
6. The instrument must be operated within the limits of its designated use only.

### Supplier:

ERICHSEN GMBH & CO KG  
Am Iserbach 14  
D-58675 HEMER  
Tel.: +49(0) 2372 96 83-0  
Fax: +49(0) 2372 6430  
eMail: [info@erichsen.de](mailto:info@erichsen.de)  
Internet: <http://www.erichsen.de>

## Technical Data

Power supply:	1 x 9 V Alkaline
Measurement signal:	45 V
Measuring range:	100 k $\Omega$ - 15 M $\Omega$
Accuracy:	0.1 - 0.5 M $\Omega$ = $\pm$ 3%
	0.5 - 5.0 M $\Omega$ = $\pm$ 1%
	5.0 - 10.0 M $\Omega$ = $\pm$ 2%
	10.0 - 20.0 M $\Omega$ = $\pm$ 3%

### Dimensions:

Supply and Display Unit:	100 x 200 x 30 mm
Probe:	230 mm long, $\varnothing$ 42 mm

Liquid glass display

## Instrument Data

### *Name / Type*

**Paint Resistance Measuring Instrument  
RESISTIVITY METER 515**  
to classify the characteristics of electro-dip  
paints and electro-static spray paints  
Ord.-No. 0118.01.31

### *Scope of supply*

Basic instrument, Model 515, including

- supply and display unit
- measuring probe, type "Ransburg"
- carrying case
- operating instruction manual



Fig. RESISTIVITY METER with probe

## Description of the Apparatus and Mode of Operation

The RESISTIVITY METER 515, consists of a supply and display unit and a measuring probe.

Before commencing with the measurement, the probe must be connected to the supply and display unit.

The instrument has two buttons:

- "ON / OFF"
- Measure "START"
- First switch on the instrument by pushing "ON/OFF" during 1 second approximately.
- Introduce the probe into the solvent or paint to be measured, until the holes on the probe.

**Don't cover the holes with liquid.**

- Push "START" for measuring.
- The instrument has an internal auto-scale system, so it's possible to measure full scale of Resistivity in only a unique scale.
- The measurements are in Megaohms (M).

## Care and Maintenance

If the power supply is not sufficient, "Batt Low" is shown on the display, so the battery must be changed.

Clean probe regularly and carefully with a sufficient, mild solvent.

Subject to technical modification.  
BAE 515 - II/2005

<b>Different systems for measuring Resistivity</b>			
<b>NESAG</b>	<b>STRATONSAMES</b>	<b>VLSTATIC HURSANT</b>	<b>RANSBURG*</b>
Megaohms	Megaohms	Megaohms	Kilohms
0,2	0,6	0,04	9
0,5	1,5	0,2	22
0,7	2,1	0,3	31
1	3	0,4	44
1,5	4,5	0,6	66
1,7	5	0,7	74
2	6	0,8	88
3	9	1,2	131
4	12	1,6	175
5	15	2	219
6	18	2,4	263
7	21	2,8	306
8	24	3,2	350
9	27	3,6	394
10	30	4	438
10,3	30,9	4,1	450
11	33	4,4	481
12	36	4,8	525
12,5	37,5	5	547
13	39	5,2	569
14	42	5,6	613
15	45	6	656
16	48	6,4	700
16,7	50	6,7	731
17	51	6,8	744
18	54	7,2	788
18,2	54,6	7,3	800
19	57	7,6	831
20	60	8	875

\* A measuring probe, Type "RANSBURG", is included in the delivery specification.