

# TFPORTABLE 1010

EDDY CURRENT MEASUREMENT SYSTEM



## HIGHLIGHTS

- ▶ Realtime
- ▶ Multilayer characterization
- ▶ Easy to use
- ▶ Encapsulated layers measurement

## Specifications

- ▶ 100mOhm/sq to 1000hm/sq
- ▶ Flat or curve sample
- ▶ Conductive oxides or polymers
- ▶ Metal, nanowire or printed films

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TF series non-contact measurement systems contain a set of sensors that induce weak currents in conductive and semi-conductive layers. These induced currents, also called eddy currents, generate an electromagnetic field directly which is linked to the intrinsic parameters of the sample. Thus, without any contact, it will be able to characterize:

- Resistivity
- Thickness
- Emissivity



By modulating the emission frequencies of the initial magnetic field, we will be able to control its depth of penetration and therefore the thickness of the layer that we wish to measure. It is therefore possible to perform measurements of one or more layers simultaneously on a wide range of materials such as metals, glasses, thin coating layers, conductive films, electrode layers, papers and textiles. conductors, or even polymers.

The technology is independent of surface characteristics or morphology. In addition, it does not require any type of contact or special preparation of the sample as for four-point tests, Hall effect or Van-der-Pauw measurements. The system does not require the placement of test structures and is unaffected by surface roughness, non-conductive encapsulations or passivation layers. Moreover, the measurement does not physically affect the thin film tested.

Eddy current instruments have a long life because they are free from any mechanical wear due to their non-contact nature. It also achieves high repeatability and high accuracies in an ultra-fast manner which ensures the quality of measurement of various thin layers.

Measurement technology			Non-contact Eddy current sensor		
Substrates			Foils, Glass, Wafer etc..		
Substrate size			Flat samples > 150 x 150 mm Curved editions are available for several applications		
Measurement spot / high sensitivity zone			40 mm diameter		
Measurement mode			Realtime, constant distance measurement		
Thickness measurement range of metal films			5 nm – 0,5 mm (in accordance with sheet resistance)		
Emissivity range			0.005 – 0.2		
Display			2.8" colored touch screen		
Interfaces			Bluetooth (optional) + data center		
Device dimension (w/h/d) / weight			179x87x48mm / 340g		
Config	VLSR	LSR	MSR	HSR	VHSR
Range (Ohm/sq)	0.001 – 0.1	0.04 – 0.1	0.3 - 30	0.3 – 50	0.3 – 100
Accuracy / Bias		< 0.3%		< 0.5%	

## **Software & handling:**



- ▶ Very user friendly touch screen
- ▶ Intuitive, touch display navigation
- ▶ Compact system
- ▶ Data recording function

- ▶ Real-time measurement of sheet resistance and layer thickness
- ▶ Customizable calibration
- ▶ Data aggregation in PC via bluetooth