



Non-Contact Inline Sheet Resistance Measurement Solutions

DATA SHEET - EddyCus[®] TF inline series

HIGHLIGHTS

- Contact-free & real-time
- Accurate measurement
 - Sheet resistance of thin films (Ohm/sq)
 - Layer thickness of metal films (nm/ μm)
 - Metal foil thickness measurement [μm]
- High degree of variability and flexibility
 - In- and ex-vacuo solutions
 - Fixed sensor and traversing solutions
 - Single-lane and multi-lane solutions
 - Sensor sizes: S / M / L according space requirements
- High sample rate up to 1.000 measurement/ s and hardware trigger
- Comprehensive software with user friendly GUI, SQL database, statistics and export functions
- Direct communication with sensors

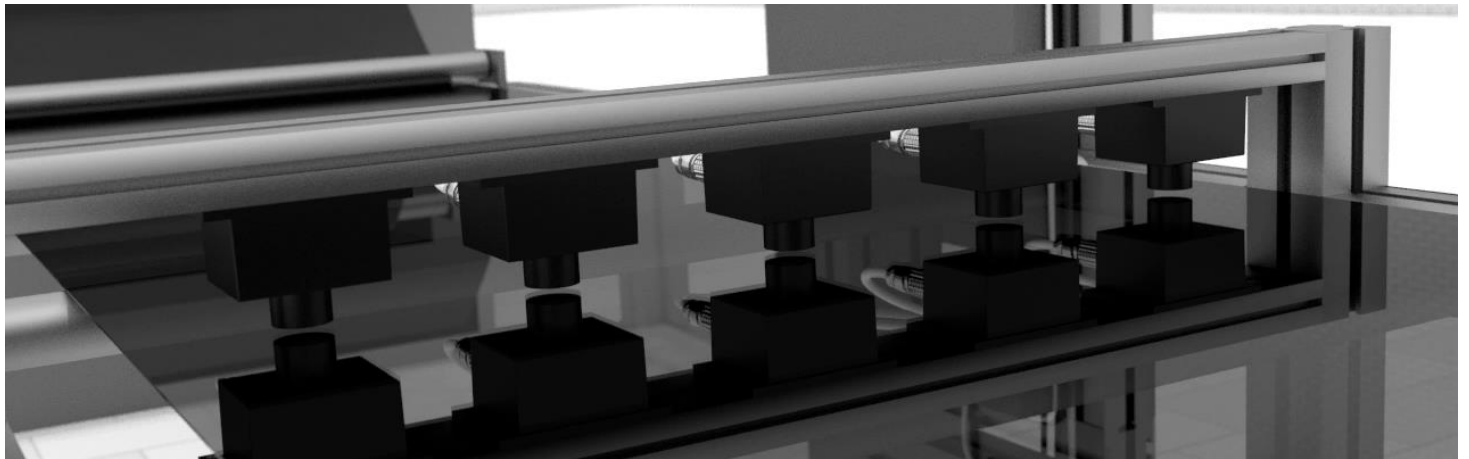
APPLICATIONS

- > Architectural glass (LowE)
- > Packaging materials
- > Touch Panel Sensors & displays
- > Photovoltaic
- > Mirror coatings
- > Capacitor coatings
- > OLED & LED applications
- > Smart-glass applications
- > Transparent antistatic foils
- > Metallization in Semiconductor Industries
- > De-icing & heating applications
- > Batteries & fuel cells



DATA SHEET

EddyCus® TF inline series – Inline Sheet Resistance Measurement



EddyCus® TF inline series

Sheet resistance and metal film thickness measurement technology

Substrates

Measurement gap size

Number of sensor pairs/monitoring lanes

Substrate thickness measurement for non-conductive substrates

Conductive layers

Sheet resistance range covered by every sensor

Environment

Sample rate

Thickness measurement of metal films (e.g. Al, Ag, Mo, Ag paste)

Other integrated measurements

Other integrated available features

Non-contact eddy current sensor

e.g. foils, glass, wafer

1 / 5 / 10 / 15 / 25 / 50 mm (other on request)

1 – 99

Ultrasonic, capacitive or optical sensor on request

Metals/TCOs/CNTs/nanowires/graphene/grids/other

0.0001 – 10 Ohm/sq < 2 % accuracy

10 – 100 Ohm/sq < 3 % accuracy

100 – 1.000 Ohm/sq < 5 % accuracy

Ex-vacuo/ in-vacuo

< 60°C/ 140°F (on request < 90°C/ 194°F)

1 / 10 / 50 / 100 / 1,000 measurement per second

2 nm – 2 mm (in accordance with sheet resistance)

Metal thickness / optical transparency / density / electrical anisotropy

Hardware trigger / DMC or bar code reader

Communication and Software

Direct Sensor Communication

- Analog or digital communication via I/O module(s)
- Direct communication with sensors via .Net libraries
- Data access via standardized protocols (e.g. Modbus) or TCP-based simplified custom protocols upon request
- Data access via OPC (e.g. KEPServer with ODBC Client)

Software “EddyCus TF inline control”

- Several views and user level
- Live view with upper and lower limits and alarm functions
- Analysis view providing statistics
- Can handle data of several thousands measurements per second
- Data storage into SQL database
- Customizable automatic data export (csv, txt, xls,...)
- Several smart functions (automated DB cleaning, self-reference etc.)
- Parameterizable I/O modules (triggering of actions or alarms)

