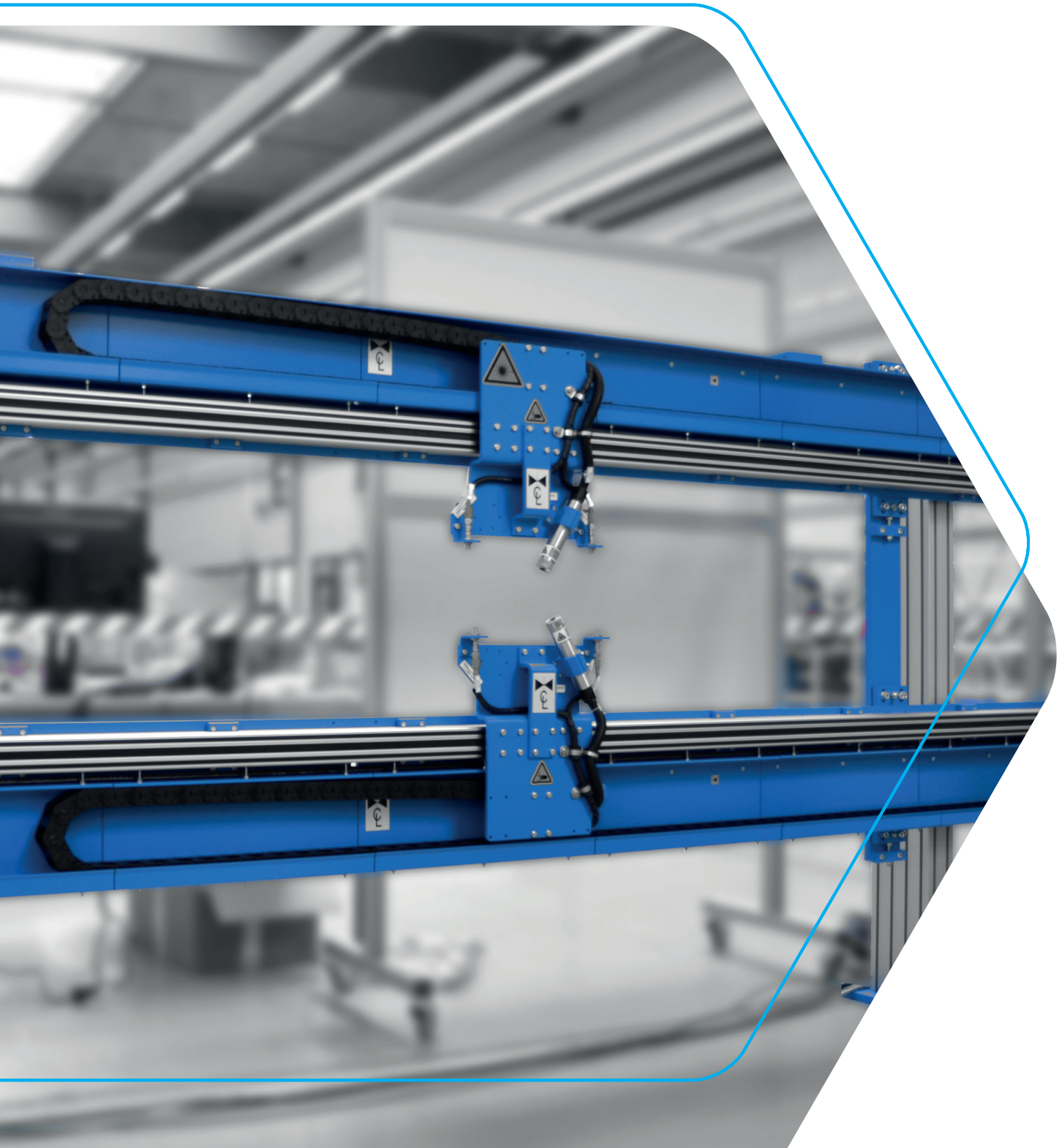
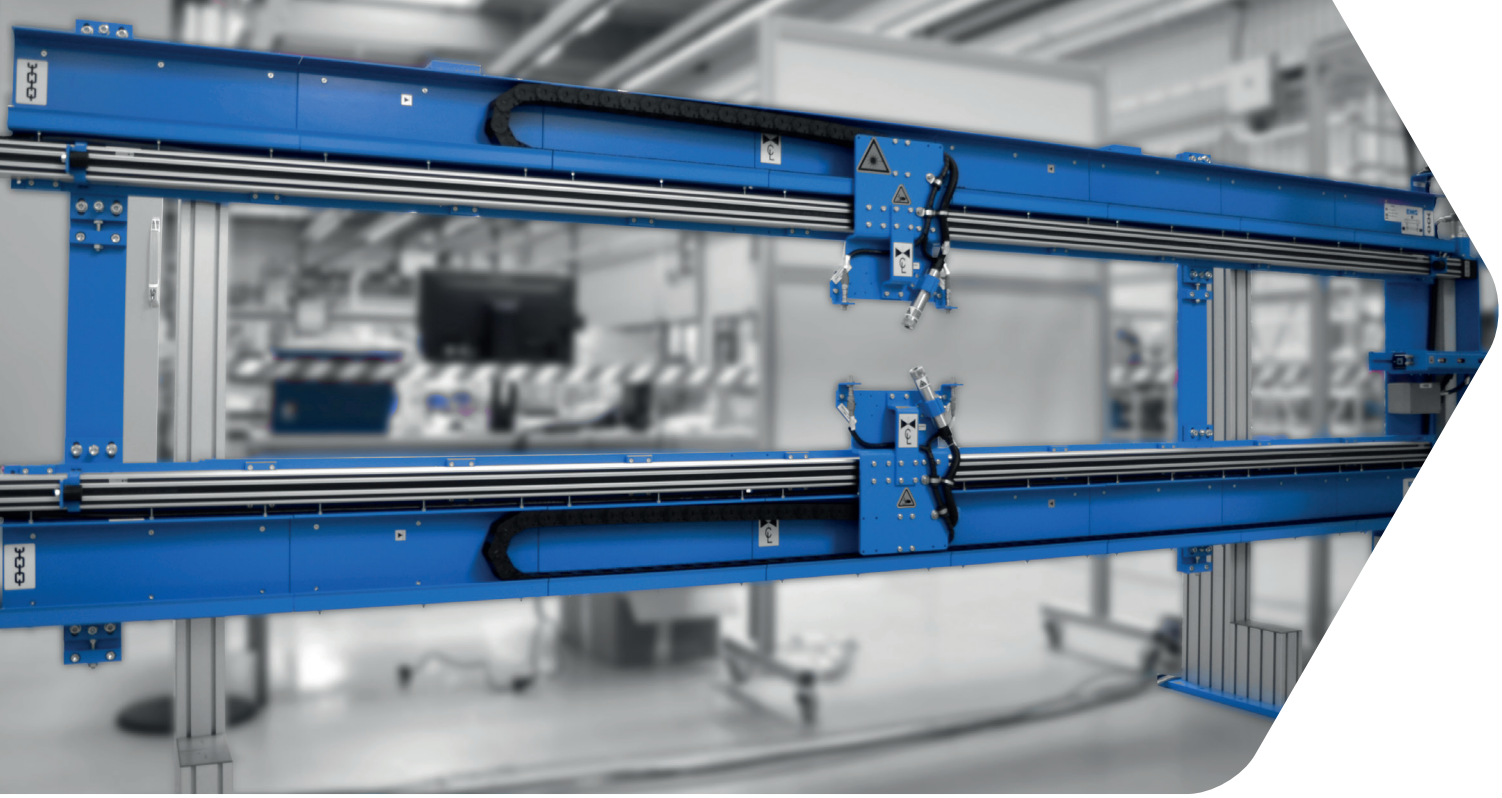
EMG
an ELEXIS company

THE solution for electrical strip

EMG SOLID® DFT
Dry Film Thickness measurement





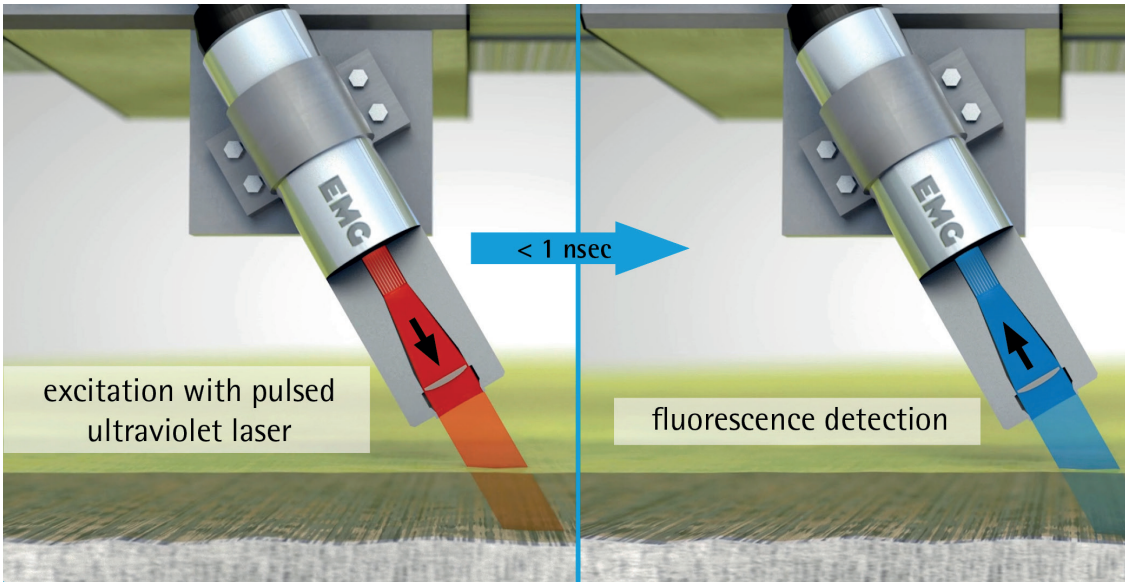
EMG SOLID® DFT

Dry film thickness measurement

Functional principle

EMG SOLID® DFT (Dry Film Thickness) measures the coating weight of the transparent and low pigmented film layer via laser-induced fluorescence spectroscopy and visualises it over the entire measured material surface:

» Special solid state laser delivers 10.000 single pulses per second and stimulates the film to glow.
» The more lacquer lies on the material surface, the stronger the glowing effect.
» A micro controller controls the analysing system, manages the system calibrations and calculates the results.

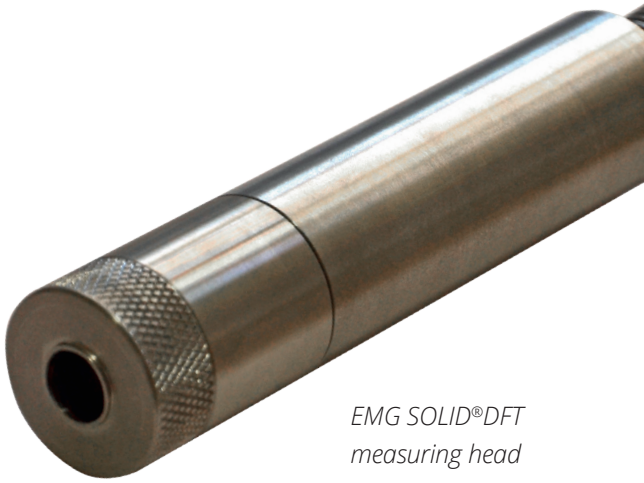


EMG SOLID® DFT

Transparency about quality features

Technical data

Measuring method	laser-induced fluorescence spectroscopy
Measured variable	dry film thickness of the lacquer in µm
Measuring range	0 - 9 µm (depending on the lacquer type)
Measuring accuracy	+/- 10 % of upper measuring range value (e.g. in the set measuring range of 0 - 0.5 µm: measurement accuracy: +/- 0.05 µm)
Repitition accuracy	0.1 g/m²
Measuring resolution	0.11% of the set measuring range end value
Coating materials	Classification according to insulation classes C3 to C6 in accordance with AISI-ASTM A 976-9, other lacquers on request
Strip temperature	+5°C up to +75°C (at constant strip temperature)
Operating distance (measuring position)	40 mm (traversing)
Strip height deviations	+/- 20 mm
Ambient temperature	+5 °C up to +45 °C (extended temperature range with cooling/heating possible)
Measuring frequency	10 kHz
Traversing speed	0.5 m/sec



EMG SOLID®DFT measuring head

EMG SOLID® DFT

Your benefits

- Improved process stability and reliability
- Transparency of input quality and of essential quality features as well as targeted control of the forming process
- Minimised scrap
- Secure production confirmation
- Joint database and combined visualisation of the measured values possible
- Delivery and system integration from a single source
- Low influence of roughness and textures
- Only very small space required
- Relative measurement possible
- Special EMG solution for keeping the lens clean
- Very high measuring frequency (10 kHz) and high definition of measuring spot (Ø = 8 mm)

EMG
an elexis company

EMG Automation GmbH
Industriestraße 1
57482 Wenden
Germany

T +49 2762 612-0
www.emg.elexis.group
info@emg-automation.com

EMG / P-A / EMG SOLID® DFT / EN / Revision 00 / 02.2023 / Printed in Germany / Subject to modification