FOERSTER

STATOGRAPH TCL

Smart eddy current crack detection in components critical for safety and operation



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Smart and intuitive crack detection. Manufacturing processes such as hardening, grinding, or forming can cause cracks, grinding burns, and other surface defects in safety-critical and performance-critical components. STATOGRAPH TCL enables reliable detection of these defects using eddy current testing – for non-destructive 100% inspection directly within the production process.

The compact testing system is suitable for automated inspection in series production as well as manual testing applications. With a frequency range from 4 Hz to 20 MHz and flexible sensor options, STATOGRAPH TCL can be adapted to different component geometries, cycle times, and defect specifications. Depending on the inspection task, individual areas, contours, or larger surfaces can be reliably inspected.

TCL sensors are automatically recognized via an integrated data chip, and the relevant settings are loaded automatically. This reduces parameterization effort and simplifies sensor changes. Existing STATOGRAPH sensors can also be used with adapters.

The intuitive software supports inspection setup with integrated assistance functions and provides clear visualization and evaluation of eddy current signals. Material-specific clearance curves compensate for variations in the distance between sensor and component, supporting reliable defect evaluation.

For automated applications, the TCL can be installed directly in the production line and close to the sensor. Short cable lengths reduce interference and improve signal quality. Digital I/O and Industrial Ethernet enable straightforward integration into existing production and automation environments. Depending on the application, up to four TCL test channels can be combined within one system.

YOUR ADVANTAGES AT A GLANCE

100 % control by non-destructive testing: optimally prepared for all testing requirements

Eddy current crack detection: wide frequency range from 4 Hz to 20 MHz

State-of-the-art software with intuitive user interface: support functions (wizard) ensure easy operation during parameterization

Clearance compensation: learning of material-specific distance curves to suppress clearance fluctuations

Improved test quality: short cable runs between the TCL and the sensor system minimize interference

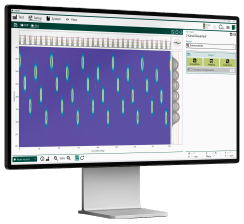
Innovative probe recognition: data chip automatically recognizes the probe, directly loading its settings

Easy automation and line integration: via I/O interface

TECHNICAL INFORMATION

DIMENSION AND WEIGHT:	176 × 109 × 35 mm; 0,5 kg
POWER SUPPLY:	24 V, 400 mA (AC adapter optional)
PERMISSIBLE AMBIENT TEMPERATURE:	+5°C to +40°C (+41°F to +104°F)
RELATIVE HUMIDITY:	8% to 80%
IP:	IP40
FREQUENCY RANGE:	4 Hz to 20 MHz
HIGH-/LOW-PASS FILTER:	0 – 50 kHz
EVALUATION:	Vector (360° threshold), |Y| (phase selective)
SENSORS:	Differential sensor (with clearance compensation), absolute sensor
SIGNAL CHARTS:	Impedance, evaluation signal, y/t diagram,clearance signal (each per revolution or as a time-based scan)
INTERFACES:	Digital I/O, industrial ethernet, remote

ACCESSORIES



STATOVISION TCL
Software for Surface Quality Visualization



PANEL PC FOR TCL
High-performance Industrial PC with touchscreen for eddy current testing



TCL MULTIPLEXER
Flexible multi-sensor testing with just one test channel



STATOGRAPH PROBES
Probes for non-destructive crack detection of complex components using eddy current testing



ROTATING HEAD R2 AND ROTATING PROBES
Contactless eddy current component testing

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