Wheel Profile Sensor

ELAG Elektronik AG

OPTIMESS® WP

The non-contact measurement system

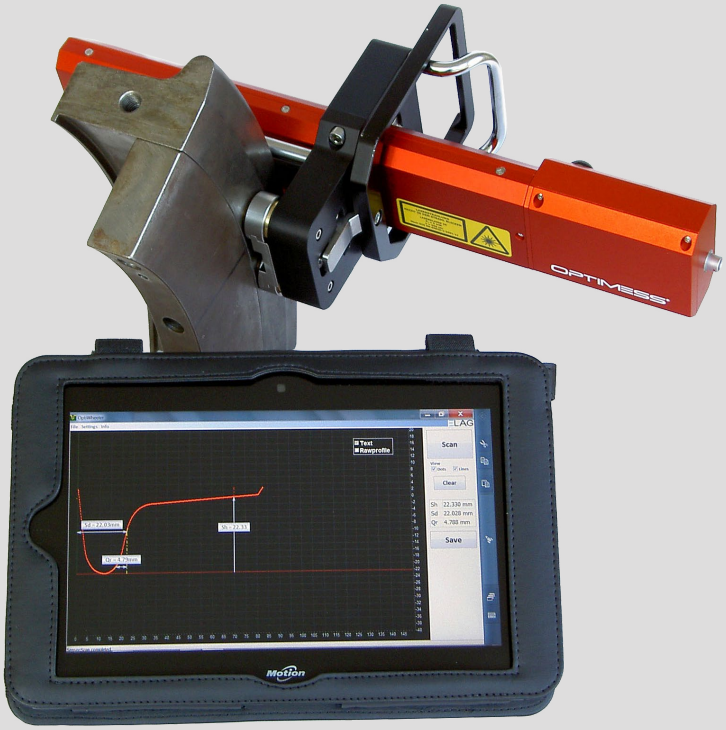
ELAG Elektronik AG has developed and supplied measurement systems worldwide since 1983, and sets the highest standards of quality.

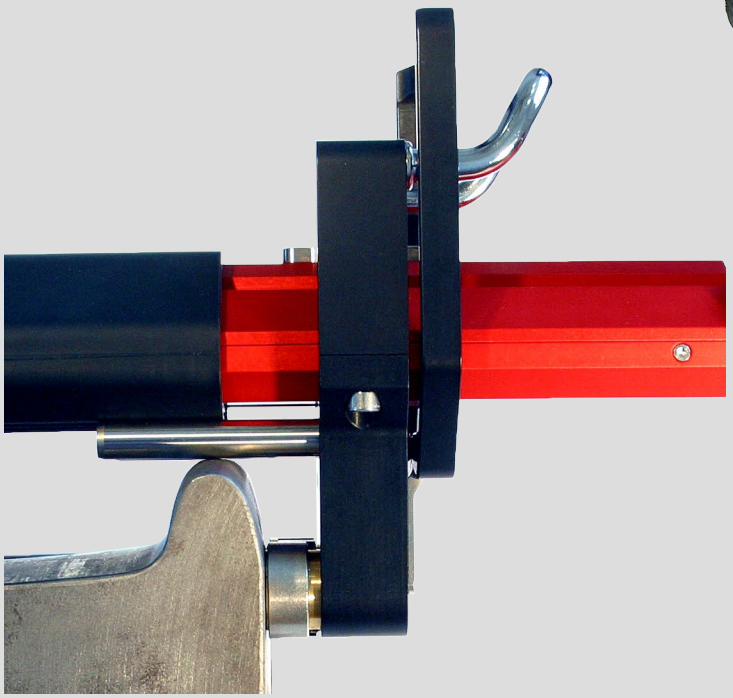
The efficient, innovative engineering team at ELAG Elektronik AG develops and manufactures all measurement systems including sensors, mechanical systems and software applications.

Our customers benefit from tried and tested sensors and seamlessly integrated measurement devices that combine guaranteed high precision results with simple operation.

We are committed to working in close partnership with our customers. We believe that short lines of communication are essential to implementing your requirements in line with consistently high quality standards.

This includes providing our customers with professional consultation from the sales stage to commissioning through to system maintenance.





The new Optimess WP wheel profile sensor has been designed to measure wheel profile and wheel diameter rapidly and with the highest precision. A contactless laser scan of the wheel profile is performed and different profile parameters are calculated and displayed automatically.

The measurement process, wheel and the type of train can be configured freely, and the fully automated measurement is performed with a one-button operation.

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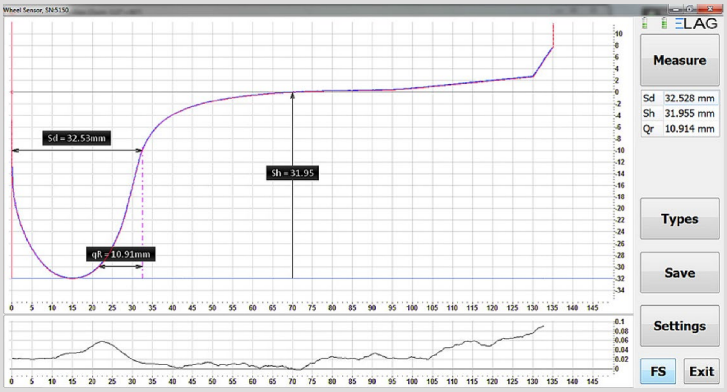
Wheel Profile Sensor

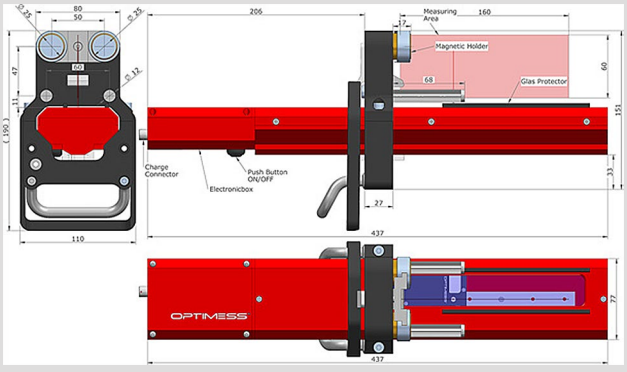
- Maximum precision (± 25 µm)
- Quick measurement of wheel profile and diameter (< 5 seconds)
- Wireless communication between sensor and tablet via Bluetooth
- Perfect for measurement in confined spaces
- Risk-free operation – no reaching between wheel and rail with hands
- Simple, intuitive user interface
- Online profile comparison
- Data export in multiple formats: Excel, CSV, XML
- Unicode support (UTF-8)
- Up to 700 measurements per battery charge
- Battery charges in under an hour



Technical Data

Type: OMS 15037

Measurement range	60 (9-96) mm
Distance resolution (Z)	5 µm
Distance precision (Z)	±25 µm
Scan range (Y)	160 µm
Scan resolution (Y)	1 µm
Scan precision (Y)	± 2 µm
Scan straightness (Y)	±10 µm
Battery time	> 500 Measurements
Operating temperature	-15 to 50° C (5 to 122° F)

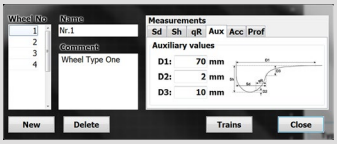


Handling

Software

The measurement software can be used for the simple measurement of single wheels, axles or entire trains. The profile is displayed online during the measurement. The required profile values are available as soon as the measurement has been completed, and are then displayed in a color-coded format based on the pre-set tolerance values. Thus, the values can easily be checked immediately after the measurement.

A train inspection is managed by the software using a graphical overview, and the next measurement starts at the touch of a button.



The software runs on Windows XP or higher. Different Windows 8.1 tablet solutions are available for data collection.

Optional Equipment

Wheel flange distance Ar measurement module

A compact measurement module integrated in the wheel profile sensor. The electronic tape measures the distance between the two plane surfaces of the wheels.

Equivalent conicity

Software module for the calculation of equivalent conicity according to DIN EN 15302 and UIC 519 respectively. The rail profile, inclination and distance can be selected freely and stored as a type of track. Data are calculated and displayed, and tolerances are monitored online.

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