



Mobile, Non-contact Measuring System for Detection of the Contact Wire Position



Online contact wire measuring system for monitoring the contact wire position during travel

- non-contact detection of the height and stagger of the contact wire
- detection of up to 4 wires simultaneously
- can also be used for twin-wire systems (optional: conductor rail)
- optional: compensation of the vehicle movements with laser or ultrasonic
- battery operated
- mobile system with an installation time of < 1 hour (optional: fixed installation)
- accuracy of ± 2 mm
- measuring speeds of up to 80 km/h
- extensive software package with post processing
- FMA software for comparing the actual against the planning data, taking into account the types

You will find the addresses of our numerous Foreign representatives in the Internet.

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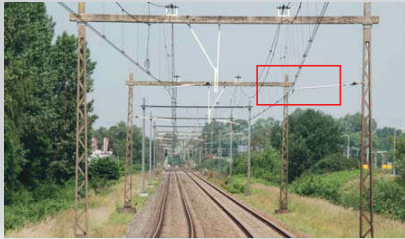
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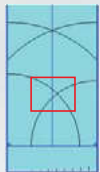


Requirements of online contact wire position measurement

Observance of the exact contact wire position is extremely important for the safe operation of electrified rail stretches, both on railways and tramways. This applies especially for modern high speed lines. The gradient between two masts is a criterion which has to be monitored constantly in addition to the contact wire height and stagger.

The OVHWizard system

Two specially developed high-performance ultrasonic distance sensors form the core of the OVHWizard contact wire position measuring system. These sensors are mounted at an optimum angle at the ends of the measuring instrument. The entire processing electronics are located in the connecting tube between the sensors. The system can be powered by battery or line-operated and can therefore be used on any vehicle.



Measuring principle and system concept

The OVHWizard measures the distance by means of ultrasound and the pulse echo method, i.e. a sonar pulse transmitted by the sensor is reflected by the contact wire and back to the sensor. The time which elapses (runtime) is proportional to the distance. The exact contact wire position is given by the point of intersection of the two distance sensors. The measured data are picked up in synchronisation with the line kilometering, triggered by pulses from a distance sensor.

Areas of application of the OVHWizard



The small size of the OVHWizard allows a wide range of application in contact wire position detection. The OVHWizard can be used on:

- road rail vehicles
- measuring trolleys
- measuring trains
- contact wire laying vehicles
- rail laying machines

Vehicle compensation



For precise measurements despite of vehicle movements in the vertical (suspension) and horizontal (track clearance) direction of the vehicle as well as for the rolling angle around a known pivot point a compensation can be provided with laser or ultrasound. The compensation takes place directly in the measuring system.

Data output

If the vehicles on which the OVHWizard is to be used already have a measurement data recording, all measurement data of the contact wire position with travel and time reference can be transferred to this system via TCP / IP.

PC software

The software which runs on Windows 7 (and higher) systems enables both measured data recording and online display and a comprehensive post-processing after completion of the measurement in addition to creation of the measuring profiles for the vehicle set-up.

The following standard evaluations are possible:

- tolerance monitoring for side and height
- height of the contact wire and of the support cable
- determination of the mast distance and of the gradient
- detection of line events (signals, crossings, points etc.)
- video surveillance of the wire (optional)



FMA software

The software, which runs on Windows 7 (and higher) displays not only the measured values of the OVHWizard but has also the following functions.

The following standard evaluations are possible:

- automatic detection of masts and hangers
- analysis of measurements and testing against type of construction tolerances (Re100, Re200, Re250, Re330)
- own tolerance definitions
- processing of large data volumes of 100 km and more
- preparation of DB-conform measurement reports with measurement data, tolerances and error lists

