Trimble GEDO IMS

SYSTEM FOR RELATIVE TRACK GEOMETRY MEASUREMENTS

The Trimble GEDO IMS system enables highly productive track measurements and subsequent determination of all relevant parameters of the relative track geometry (chainage, gauge, cant, twist, horizontal and vertical curvature). The measurements comply with the EN 13848-4 standard. The state-of-the-art inertial measurement technology used in the system guarantees maximum productivity and is almost independent from weather conditions.

In combination with a Trimble GEDO Profiler, distance and height to control points can also be measured and offsets to platform edges and other objects close to the track can be checked.

TRIMBLE GEDO SYSTEMS

Trimble GEDO systems can be used for various applications to measure, record and analyse track position and quality, as well as for construction and maintenance work. Trimble GEDO instruments and software are designed specifically for various surveying tasks on railway lines, simplifying work procedures in the field and in the office. Using standard data formats, information can be exchanged with leading track design software products and track maintenance equipment.

Track geometry measurement with Trimble GEDO IMS

The Trimble GEDO IMS system combines the Trimble GEDO CE 2.0 track measurement trolley with the Trimble GEDO IMU.
The Trimble GEDO IMU is a high-precision sensor based on inertial measurement technology. This guarantees a high internal accuracy of the measurement. Based on the measurements a relative three-dimensional trajectory is created.

Object measurements with the Trimble GEDO Profiler

The optional laser measurement unit enables distance measurements to structures and platforms next to the track for clearance checks.It can also be used to determine permanent or temporary control points along the track. This creates a quasi-absolute framework that can be used to calculate an improved track design and to check it after track reconstruction.

Track optimisation with Trimble GEDO NovaTrack

Optional software for calculating a new track position based on the relative trajectory measured with the Trimble GEDO IMS system. Regression algorithms are used to calculate a best-fit track alignment that can be optimised using a graphically interactive editor. The result is a track alignment with horizontal, vertical and cant (superelevation) alignments. This can be used immediately for track maintenance tasks.

Trimble GEDO Office Module IMS

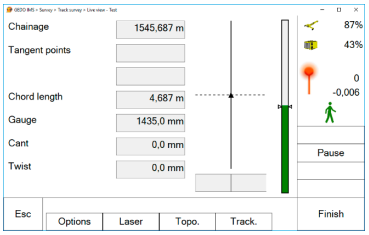
Software for evaluation and further data analysis of Trimble GEDO IMS measurements.

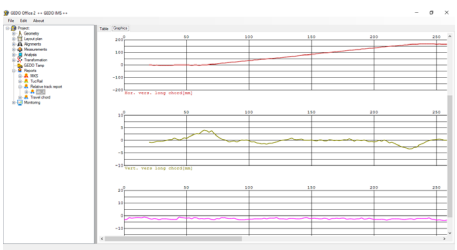
Trimble GEDO Office Module Quality

Software for generating reports to verify relative the track geometry through a travel chord to ensure conformity with track safety and quality parameters.

Key Benefits

- Continuous recording of horizontal and vertical curvature, gauge, and cant in a single one single operation
- Precise and reliable inspection of track geometry according to EN 13848-4 specifications
- Use of a universal track measurement trolley with modular options for enhancements
- Short initialisation time enables rapid on-site use
- Easy handling and intuitive user interface
- High productivity and flexibility lowers costs and reduces personnel expenses
- Optional: Calculation of a best-fit track alignment and data generation for the tamping machine





DATASHEET

SYSTEM FOR RELATIVE TRACK GEOMETRY MEASUREMENTS

GENERAL

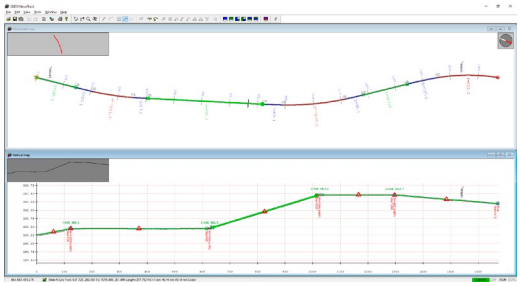
Application . . . . . Relative track inspection in compliance with EN 13848-4
Track optimisation

Accuracy

Relative accuracy . . . . . <+/-1 mm for standard chord length

Initialisation time . . . . . 5 minutes
Measurement frequency . . . . . 200 Hz
Measurement speed . . . . . up to 5.000 m/h

Trimble GEDO NovaTrack software for track optimisation (optional)



TRIMBLE GEDO CE 2.0 TRACK MEASUREMENT SYSTEM WITH TRIMBLE GEDO IMU

Description . . . . . Track measurement trolley with IMU
(optional expansions available)
Gauge . . . . . 1.000 mm, 1.067 mm, 1.435 mm, 1.520 mm,
1.600 mm, 1.668 mm, 1.676 mm
(other gauges per request)
Weight . . . . . 24.5 kg

Gauge measurement

Range . . . . . –20 mm to +60 mm
Accuracy . . . . . ±0.3 mm

Cant measurement

Range . . . . . ±9° or ±235 mm at 1435 mm gauge
Accuracy . . . . . ±0.5 mm (static)

Battery

Type . . . . . Trimble S-Series Li-Ion, rechargeable
Life . . . . . 6-8 hours
(hot swappable)

Connection to control unit

Track measurement trolley . . . . . Bluetooth®
IMU . . . . . Wi-Fi

TRIMBLE GEDO PROFILER (OPTIONAL)

Weight . . . . . 3.5 kg
Range . . . . . 0.3 m to 30 m
Accuracy (typical) . . . . . ±1.0 mm

TRIMBLE TSC7 CONTROL UNIT

Operating system . . . . . Windows® Microsoft 10 Pro
Operation . . . . . Touchscreen, Keyboard
Interfaces . . . . . USB, RS232, Bluetooth, Wi-Fi (802.11 a/b/g/n)
Environmental protection IP68; MIL-STD-810G
Weight . . . . . 1.6 kg

Battery

Type . . . . . Li-Ion, rechargeable
Life . . . . . up to 7 hours
(hot swappable)

Specifications are subject to change without notice.

Optional

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