

TRACKMASTER TM3000

Integrated system for measuring track geometry and spatial track position



TrackMaster TM3000 is a track trolley that measures track gauge, cant (superelevation) and distance travelled, the spatial position of the track together with a total station or a GNSS receiver, and – with a laser distance meter – the clearance profile.

±0.2 mm

gauge repeatability

±0.4 mm

cant repeatability

1 mm

distance resolution

18 h

battery life

APPLICATIONS

- **Track geometry** – gauge, cant and distance travelled
- **Measuring data for tamping machines**
- **Slab track setting out**
- **Inspection** of completed construction works
- **Railway line mapping**
- **Clearance profile** and overhead line position check

KEY FEATURES

- **Lightweight aluminium construction**, assembly without tools, compact transport case
- Maintenance-free wheels – also for **grooved rails** and ballast up to rail level
- **Clearance of 150 mm** above the top of rail
- For **track gauges from 750 to 1668 mm** (extension parts)
- **Long-range Bluetooth** up to 300 m to the total station, auto-connect after switch-on
- **Replaceable battery** (Leica / Topcon), about 18 hours of operation
- Mount for various prism types, prism constants set in the web application
- Compatible with **Leica Captivate** and **GEOKOD RailSURV**; Android app for recording and display
- Optional mount for **Leica DISTO X6** – clearance profile and mapping of surrounding objects

SPECIFICATIONS

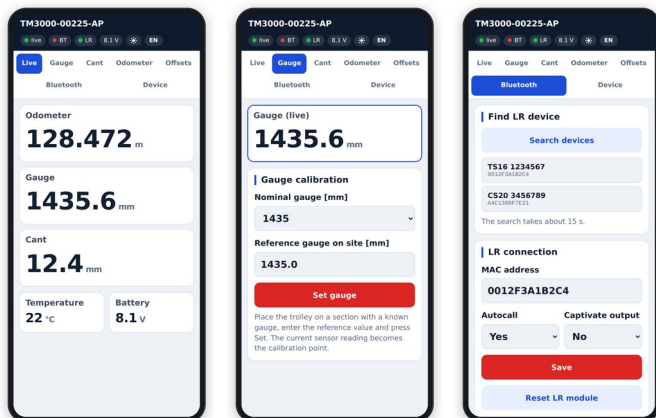
Gauge measuring range	-25 / +50 mm from nominal gauge
Gauge repeatability	±0.2 mm
Cant measuring range	±10° (260 mm / 1500 mm)
Cant repeatability	±0.4 mm
Distance travelled	unlimited, 1 mm resolution
Nominal track gauges	750 – 1668 mm
Clearance above top of rail	150 mm
Dimensions	1582 × 710 × 310 mm
Weight	12 kg
Transport case	1000 × 385 × 325 mm, approx. 8 kg
Battery	Leica GEB 222 / Topcon BDC70, replaceable
Battery life	approx. 18 hours
Operating temperature	-10 °C to +50 °C
Communication	Long-range Bluetooth (up to 300 m), Bluetooth, Wi-Fi hotspot
Software	Leica Captivate, GEOKOD RailSURV, Android app, built-in web application
Firmware	TM3000 1.5/2026, update over Wi-Fi
Made in	Czech Republic (EU)

WEB APPLICATION

- Built into the trolley – opens in any browser at **192.168.4.1**, no internet or app needed
- Live view of distance, gauge, cant, temperature and battery voltage
- **On-site calibration** of gauge (reference value) and cant (reversal method) with temperature compensation
- Selectable inclinometer filter: fast, standard, smooth, tamping machine
- **Odometer constant** from the wheel diameter, **prism offsets** (shift and height)
- Search and connect the **long-range Bluetooth** device, Captivate output
- **Firmware update over Wi-Fi**, protected by PIN; Czech, English and Polish

Clearance profile with Leica DISTO X6

With the optional mount, a Leica DISTO X6 laser distance meter is carried on the trolley. Together with the measured gauge, cant and position of the track it is used to measure the track clearance profile, check the position of the overhead contact line and map surrounding objects.



Built-in web application: Live · Gauge calibration · Bluetooth



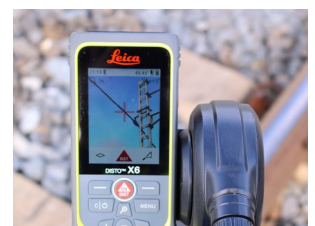
TM3000 with prism and Leica DISTO X6 on the tripod mount



Controller (tablet) mounted on the handle



Transport case – fits even in a small car



Leica DISTO X6 for the clearance profile