

Leica TS13

Data sheet



Upgradable

The Leica TS13 total station provides a fast, reliable and efficient solution tailored to the users needs to measure and layout more points. Equipped with Automatic Target Recognition (ATR) technology and optionally with target lock and SpeedSearch to find and lock on to prisms quickly, it provides accurate measuring to targets. Combined with Leica Captivate field software, the TS13 offers a simple and productive way of coding and line work.



Bridging the field to the office

The TS13 works with the revolutionary Leica Captivate field software, turning complex data into the most realistic and workable 3D models. It spans industries and applications with little more than a simple swipe, regardless of whether you work with GNSS, total stations or both. A smooth data transfer ensures the project stays on track. Captivate and Leica Infinity office software work in conjunction to join previous survey data and edit projects faster and more efficiently.

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- when it has to be **right**

Leica
Geosystems



Leica TS13 Total Station

Basic variant



ANGULAR MEASUREMENT

Accuracy ¹ Hz and V	Absolute, continuous, diametrical	1" (0.3 mgon), 2" (0.6 mgon) 3" (1 mgon), 5" (1.5 mgon)
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DISTANCE MEASUREMENT

Range ²	Prism (GPR1, GPH1P) ³ Non-Prism / Any surface ⁴	1.5 m to 3500 m R500: 1.5 m to >500 m, R1000: 1.5 m to >1000 m
Accuracy / Measurement time	Single (prism) ^{2,5} Single (any surface) ^{2,4,5,6}	1 mm + 1.5 ppm / Typically 2.4 s 2 mm + 2 ppm / Typically 3 s
Laser dot size	At 50 m	8 mm x 20 mm
Measurement technology	System analyser	Coaxial, visible red laser

AUTOMATIC AIMING - ATR

Target aiming range ²	Circular prism (GPR1, GPH1P) 360° prism (GRZ4, GRZ122)	1000 m 800 m
Accuracy ^{1,2} / Measurement time	ATR angle accuracy Hz, V	1" (0.3 mgon), 2" (0.6 mgon), 3" (1 mgon), 5" (1.5 mgon) / Typically 3-4 s

GUIDE LIGHT (EGL)

Working range / Accuracy	5 - 150 m / Typically 5 cm @ 100 m
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GENERAL

Processor	TI OMAP4430 1GHz Dual-core ARM® Cortex™ A9 MPCore™	Operating system – Windows® EC7
Power management	Exchangeable Lithium-Ion battery	Operating time 8 - 10 h
Field software	Leica Captivate incl. apps	Running on field controller (Leica CS20)
Data storage	Internal memory 2 GB SD card 1 GB or 8 GB	On field controller (Leica CS20)
Interfaces	RS232, USB, Bluetooth®, WLAN	
Weight	Total station including battery	5.0 kg
Environmental specifications	Working temperature range Dust / Water (IEC 60529) / Humidity	-20°C to +50°C IP55 / 95%, non-condensing
Keyboard	Face I standard	4 button keyboard with status LEDs

Upgrades⁷



KEYBOARD DISPLAY UNIT (Optional)

Keyboard with display	Face I and face II optional	5" (inch), WVGA, colour, touch 25 keys, illumination
Power management	Exchangeable Lithium-Ion battery	Operating time 6 - 8 h
Field software	Leica Captivate including apps	Running on TS13 instrument
Data storage	Internal memory 2 GB SD card 1 GB or 8 GB	On TS13 instrument
Weight	Total station including battery	5.3 kg

TARGET LOCK (Optional)

Target locking range ²	Circular prism (GPR1, GPH1P) 360° prism (GRZ4, GRZ122)	800 m 600 m
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ROBOTIC SURVEYING including PRISM FAST SEARCH (Optional)

SpeedSearch range / Search time	360° prism (GRZ4, GRZ122)	300 m / Typically 7 s
Robotic range with long-range Bluetooth® ⁸	To CS20 internal long-range Bluetooth® To CTR20 expansion pack	500 m 1000 m

¹ Standard deviation ISO 17123-3

² Overcast, no haze, visibility about 40 km, no heat shimmer

³ 1.5 m to 2000 m for 360° prisms (GRZ4, GRZ122)

⁴ Object in shade, sky overcast, Kodak Gray Card (90% reflective)

⁵ Standard deviation ISO 17123-4

⁶ Distance > 500 m: Accuracy 4 mm + 2 ppm, Measurement time typically 6 s

⁷ Initial or after sales, independent from each other

⁸ Under good radio conditions

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Laser radiation, avoid direct eye exposure. Class 3R laser product in accordance with IEC 60825-1:2014.

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