Leica Viva TS16
Data sheet

Engaging software

The Leica Viva TS16 total station comes with the revolutionary Captivate software, turning complex data into the most realistic and workable 3D models. With easy-to-use apps and familiar touch technology, all forms of measured and design data can be viewed in all dimensions. Leica Captivate spans industries and applications with little more than a simple swipe, regardless of whether you work with GNSS, total stations or both.

Infinitely bridging the field to the office

While Leica Captivate captures and models data in the field, Leica Infinity processes the information back in the office. A smooth data transfer ensures the project stays on track. Leica Captivate and Leica Infinity work in conjunction to join previous survey data and edit projects faster and more efficiently.

ACC»

Customer care is only a click away

Through Active Customer Care (ACC), a global network of experienced professionals is only a click away to expertly guide you through any problem. Eliminate delays with superior technical service, finish jobs faster with excellent consultancy support, and avoid costly site revisits with online service to send and receive data directly from the field. Control your costs with a tailored Customer Care Package, giving you peace of mind you're covered anywhere, anytime.

PART OF HEXAGON

- when it has to be **right**

Leica Geosystems

Leica Viva TS16 Total Station

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)

DISTANCE MEASUREMENT

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

IMAGING

Overview camera	Sensor Field of view Frame rate	5 megapixel CMOS sensor 19.4° Up to 20 frames per second

AUTOMATIC AIMING - ATRplus

Target aiming range[2] / Target locking range[2]	Circular prism (GPR1, GPH1P) 360° prism (GRZ4, GRZ122)	1500m / 1000m 1000m / 1000m
Accuracy [1,2] / Measurement time	ATRplus angle accuracy Hz, V	1'' (0.3 mgon), 2'' (0.6 mgon), 3'' (1 mgon), 5'' (1.5 mgon) / typically 3-4s

POWERSEARCH

Range / Search time	360° prism (GRZ4, GRZ122)	300m / typically 5s

GUIDE LIGHT (EGL)

Working range / Accuracy		5–150m / typically 5cm @ 100m

GENERAL

Field software	Leica Captivate with apps	
Display and keyboard	5'' (inch), WVGA, colour, touch, face I standard / face II optional	37 keys, illumination
Processor	TI OMAP4430 1GHz Dual-core ARM® Cortex™ A9 MPCore™	Operating system – Windows EC7
Power management	Exchangeable Lithium-Ion battery	Operating time 5–8 h
Data storage	Internal memory Memory card	2 GB SD card 1 GB or 8 GB
Interfaces	RS232, USB, Bluetooth®, WLAN	
Weight	Total station including battery	5.3 - 6kg
Environmental specifications	Working temperature range Dust / Water (IEC 60529) / Humidity	−20°C to +50°C IP55 / 95%, non-condensing

LEICA VIVA	TS16 M	TS16 A	TS16 P	TS16 I
Angular measurement	✔	✔	✔	✔
Distance measurement to prism	✔	✔	✔	✔
Distance measurement to any surface	✔	✔	✔	✔
Automatic target aiming - ATRplus	✗	✔	✔	✔
PowerSearch (PS)	✗	✗	✔	✔
Overview camera	✗	✗	✗	✔
Guide Light (EGL)	✔	✔	✔	✔

✔ = Standard   ✗ = Not available

[1] Standard deviation ISO 17123-3
[2] Overcast, no haze, visibility about 40 km, no heat shimmer
[3] 1.5m to 2000m for 360° prisms (GRZ4, GRZ122)
[4] Object in shade, sky overcast, Kodak Gray Card (90% reflective)
[5] Standard deviation ISO 17123-4
[6] Distance > 500m: Accuracy 4mm + 2ppm, Measurement time typically 6s

SURVEYORS SOURCE
Instruments, GNSS, Training & Support

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when it has to be **right**

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