

Leica Nova TS60

Data sheet

Nova



When working on demanding surveying projects your main priority is to avoid mistakes and have an instrument that always works with the expected highest accuracy – an instrument you can rely on. This way you **reduce the risk of cost and delays** due to inaccurate or unreliable measurements, even under challenging environmental conditions. The Leica Nova TS60 leaves no room for compromises: it delivers the **world's best angular accuracy of 0.5"** and **distance accuracy of 0.6mm + 1ppm**. The instrument remains extremely accurate even under the **harshest conditions** like rain, fog, dust, sun, heat shimmer or reflections with the sole intention of giving you the ultimate peace of mind.

LEICA NOVA TS60 TOTAL STATION: ACCURACY AT ITS BEST

- **Highest accuracy for stakeout tasks in construction projects:** stakeout design data, guiding pre-fabricated elements to the right location.
- **Reference network measurements for construction and infrastructure projects:** define the reference network frame with precise angle and distance measurements.
- **Measuring buildings and structures:** bridge condition/clearance analysis, BIM and as-built.
- **Checking pre-fabricated elements in shipbuilding and for wind turbines:** as-built checks and dimension control.
- **Monitoring measurements:** permanent or campaign monitoring of bridges, buildings and steel structures.
- **Railways:** control of slab track installation and clearance surveys.

Leica Nova TS60 Total Station

ANGLE MEASUREMENT

Accuracy ¹ Hz and V	■ Absolute, continuous, quadruple	0.5" (0.15 mgon)
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DISTANCE MEASUREMENT

Range ²	■ Prism (GPR1, GPH1P) ³ ■ Non-Prism / Any surface ⁴	0.9m to 3,500m 0.9m to >1,000m
Accuracy / Measurement time	■ Single (prism) ^{2,5} ■ Single (any surface) ^{2,4,5,6}	0.6mm + 1ppm / typically 2.4s 2mm + 2ppm / typically 2s ⁷
Laser dot size	At 50m	8mm x 20mm
Measurement technology	System analyser	Coaxial, visible red laser

IMAGING

Overview and telescope camera	■ Sensor ■ Field of view (overview / telescope) ■ Frame rate	5 megapixel CMOS sensor 19.4° / 1.5° Up to 20 frames per second
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MOTORISATION

Direct drives based on Piezo technology	Rotation speed / Time to change face	Maximum 200 gon (180°) per s / typically 2.9s
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AUTOMATIC AIMING - ATRplus

Target aiming range ² / Target locking range ²	■ Circular prism (GPR1, GPH1P) ■ 360° prism (GRZ4, GRZ122)	■ 1,500m / 1,000m ■ 1,000m / 1,000m
Accuracy ^{1,2} / Measurement time	ATRplus angle accuracy Hz, V	0.5" (0.15 mgon) / typically 3-4s

POWERSEARCH

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

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

Operating System / Field Software	Windows EC7 / Leica Captivate with apps	
Processor	TI OMAP4430 1GHz Dual-core ARM® Cortex™- A9 MPCore™	
Autofocus telescope	Magnification / Focus Range	30 x / 1.7m to infinity
AutoHeight Module	■ Distance accuracy ■ Distance range	1.0 mm (1 Sigma) 0.7 m to 2.7 m
Display and keyboard	5" (inch), WVGA, colour, touch, both faces	37 keys, illumination
Operation	3x endless drives, 1x Servofocus drive, 2x Autofocus keys, user-definable SmartKey	
Power management	Exchangeable Lithium-Ion battery	Up to 9h, internal charging capability
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	7.7kg
Environmental specifications	■ Working temperature range ■ Dust & Water (IEC 60529) / Blowing rain ■ Humidity	-20°C to +50°C IP65 / MIL-STD-810G, Methods 506.5 I and 507.5 95%, non-condensing

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 typ. 6s

⁷ Up to 50m, max. measurement time 15s



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

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Integrate with LOC8 – Lock & Locate

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