Leica Nova TM60

Data sheet



Leica Geosystems' new monitoring solution comes with a strong promise: real-time information and reports you can always rely on, helping you make informed decisions in time and on time. Be it settling, flexing, shifting, sliding or any other change of state – you will have it under control 24 hours a day, seven days a week. The robust, precise and enduring TM60 comes with the world's longest ATRplus range, half-second automatic aiming accuracy, advanced imaging and the longest continuous operation. Combined with the Leica GeoMoS monitoring solution, you will be able to react to complex demands of any project – be it continuous or periodic. The decision is easy: maximum safety, minimum risk, half-second at a time.

LEICA NOVA TM60 MONITORING STATION: MONITOR IT.

- Permanent monitoring (24/7): remote operation, continuous monitoring, real-time measurement data, robust against various environmental conditions.
- Campaign monitoring (periodical): flexible instrument setup, automated measurements, Leica Captivate field software, dedicated monitoring app, connectivity to cloud services.
- **Buildings and structures:** monitoring of buildings, skyscrapers, industrial and sports facilities, offshore and underground structures.
- **Transportation infrastructure:** monitoring of tunnels, railway, bridges, roads & highways, airports, ports & canals.
- Environmental monitoring: monitoring of landslides, rock falls, subsidence.
- Energy infrastructure: monitoring of dams, oil & gas, nuclear facilities, pipelines power plants.
- Mining: monitoring of slope stability, high walls and quarries.



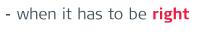
leica-geosystems.com













Leica Nova TM60 Monitoring Station

ANGLE MEASUREMENT		
Accuracy ¹ Hz and V	Absolute, continuous, quadruple	0.5" (0.15 mgon) or 1" (0.3 mgon)
DISTANCE MEASUREMENT		
Range ²	 Prism (GPR1, GPH1P)³ Non-Prism / Any surface⁴ 	0.9 m to 3,500 m 0.9 m to >1,000 m
Accuracy / Measurement time	■ Single (prism) ^{2,5} ■ Single (any surface) ^{2,4,5,6}	0.6 mm + 1 ppm / typ. 2.4 s 2 mm + 2 ppm / typ. 2 s $^{\circ}$
Laser dot size	At 50 m	8 mm x 20 mm
Measurement technology	System analyser	Coaxial, visible red laser
IMAGING ⁷		
Overview and telescope camera	SensorField of view (overview / telescope)Frame rate	5 megapixel CMOS sensor 19.4° / 1.5° Up to 20 frames per second
MOTORISATION		
Direct drives based on Piezo technology	Rotation speed / Time to change face	Maximum 200 gon (180°) per s / typically 2.9 s
AUTOMATIC AIMING - LONG RANGE ATRE	olus	
Target aiming range ²	Circular prism (GPR1, GPH1P)360° prism (GRZ4, GRZ122)	■ 3,000 m ■ 1,500 m
Accuracy 1.2 / Measurement time	ATRplus angle accuracy Hz, V	0.5" (0.15 mgon) or 1" (0.3 mgon) / typically 3-4 s
GENERAL		
Operating System / Field Software	Windows EC7 / Leica Captivate with apps	
Processor	TI OMAP4430 1GHz Dual-core ARM® Cortex™- A9 MPCore™	
Autofocus ⁸ telescope	Magnification / Focus Range	30 x / 1.7m to infinity
Display and keyboard	5" (inch), WVGA, colour, touch, Face 1 standard, Face 2 optional	37 keys, illumination
Operation	3x endless drives, 1x Servofocus drive, 2x Autofocus keys 8, user-definable SmartKey	
Power management	Exchangeable Lithium-Ion battery with internal charging capability	Operating Time up to 9 h
Data storage	Internal memoryMemory card	2 GB SD card 1 GB or 8 GB
Interfaces	RS232, USB, Bluetooth®, WLAN	
Weight	Total station including battery	7.2 kg
Environmental specifications	Working temperature rangeDust & Water (IEC 60529) / Blowing rainHumidity	-20°C to +50°C IP65 / MIL-STD-810G, Method 506.5-I 95%, non-condensing

¹ Standard deviation ISO 17123-3

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

 O.9 m to 2,000 m for 360° prisms (GRZ4, GRZ122)

 Object in shade, sky overcast, Kodak Gray Card (90% reflective)
- ⁵ Standard deviation ISO 17123-4



Laser radiation, avoid direct eye exposure.

Class 3R laser product in accordance with IEC 60825-1:2014.

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- ⁶ Distance > 500 m: Accuracy 4 mm + 2 ppm, Measurement Time typ. 6 s
- Available on TM60 I models
- Autofocus for TM60 I models, Servofocus only for TM60 models
 Up to 50 m, max. measurement time 15 s for full range



