Topcon LN-1000i

Layout Navigator

The LN-1000i layout navigator simplifies layout for MEP, interiors, and foundations with its one-person, self-leveling setup, reflectorless measurement, bright green laser pointer and camera-guided targeting.

- » One-man operation
- » Self-levelling
- » Integrated camera
- » Both prism and reflectorless measurements
- » Green laser pointer

Angle measurement

Method	Absolute rotary encoder method
Measuring range	Vertical: +90° to -32° Horizontal: 360°
Accuracy	5"

Inclination compensation

Type	Hydraulic dual-axis inclination sensors
Range of compensation	± 6' (0.1111 gon)

Distance measurement

Method	Retardation survey method
Light source	Laser diode
Wavelength	690 nm
Laser class	Class 3R
Atmospheric correction	Entry of the temperature and atmospheric pressure (Depending on the application) Atmospheric correction factor (ppm)
Prism constant correction	Yes

Measuring range

ATP2/ATP2SII	0.9 to 130 m (3 to 426.5 ft.)
CM-7PPO	0.9 to 50 m (3 to 164 ft.)
Reflectorless (White)	0.9 to 50 m (3 to 164 ft.)

Auto tracking

Method	Image sensor method using a coaxial optical system for beam emission and reception
Auto trackable range	0.9 to 130 m (3 to 426.5 ft.) (When using ATP2/ATP2SII) 0.9 to 50 m (3 to 164 ft.) (When using CM-7PPO)
Light source	Laser diode
Wavelength	793 nm
Laser class	Class 1

Ranging tracking optical system

Structure	Coaxial optical system for tracking a measurement of distance
Objective aperture	Ø 16.5 mm
Focus distance	50 mm

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Motor

Motion range	360° (Horizontal)
Maximum rotation speed	60°/second (10 rpm) (The time required for 180° rotation: 7.0 seconds)
Minimum feed angle (operated from an external application)	15" (±3.75 mm equivalent at a distance of 50 m)
Fine single measurement = every 30 seconds after worked 180 degrees and locking on prism	
External power source	6.7 to 12 V

Distance accuracy (D: Measurement distance in mm)

Circular or 360° prism ATP1	3.0 mm (0.010 ft.) + 2ppm X D
Reflectorless (White)	5.0 mm (0.016 ft.) + 2ppm X D
Update rate	20 Hz (When using 360° prism) 1 Hz (Reflectorless)

Laser pointer

Light source	Laser diode
Wavelength	520 nm
Laser class	Class 2
Spot size (at 20 m)	Width: 5 mm / Length: 7 mm

Guide light

Light source	LED (red 626 nm/green 524 nm)
Visible angle range	Horizontal : greater than 8° (full length: 7 m at a distance of 50 m) Vertical : usable range - see instruction manual

Auto leveling

Method	Main unit integral type
Auto leveling mechanism	Dual-axis
Leveling range	±3°

Camera

Pixel Effective pixels Total pixels	5M Pixel 2560 X 1920 2592 X 1944
Pixel size	1.4 µm x 1.4 µm
Angle of view (still image)	12.8° x 9.6
Angle of view (HD video)	12.8° x 7.2
Angle of view (Full HD video)	9.6°×5.4
Minimum focus distance	5 m
Digital zoom	up to 8x

Communication

Wireless LAN	Supports 802.11 n/b/g
Bluetooth®	Bluetooth 5.0 BLE

General

Operating temperature	Standard models: -20 to 50°C (-4 to 122°F) (no condensation)
Storage temperature	-30 to 60°C (-22 to 140°F) (no condensation)
Dust/Water rating	IP65 (IEC 60529: 2001)
Instrument height	195 mm
Dimensions (w x d x h)	185 x 222 x 331 mm
Weight (including battery)	4.7 kg
Power source	Rechargeable Li-ion battery BDC72
Working duration at 20°C	BDC72: approx. 4 hours
Wireless LAN mode switching	Mode A/B switching (Inside the battery box)
Wireless communication method switching	Wireless LAN/Bluetooth switching (Inside the battery box)

Specifications subject to change without notice.
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