

Nikon Nivo™ M Series Total Stations

Specifications Sheet

QUALITY • COMPACT • ACCURATE

DISTANCE MEASUREMENT

Reflectorless mode (white target)ⁱ 1.5 m to 300 m (4.9 ft to 984 ft)
Range with Nikon specified prisms

Good conditions (No haze, visibility over 40 km (25 miles))
With reflector sheet 5 x 5 cm (2 in x 2 in)
Nivo^{2.M} 1.5 m to 270 m (4.9 ft to 886 ft)
Nivo^{3.M}, Nivo^{5.M} 1.5 m to 300 m (4.9 ft to 984 ft)
With single prism 6.25 cm (2.5 in)
Nivo^{2.M} 1.5m to 3,000 m (4.9 ft to 9,843 ft)
Nivo^{3.M}, Nivo^{5.M} 1.5 m to 5,000 m (4.9 ft to 16,404 ft)

Accuracyⁱⁱ (Precise mode)
Nivo^{2.M} Prism ±(2+2 ppm x D) mm
Nivo^{2.M} Reflectorless ±(3+2 ppm x D) mm
Nivo^{3.M}, Nivo^{5.M} Prism ±(3+2 ppm x D) mm
Nivo^{3.M}, Nivo^{5.M} Reflectorless ±(3+2 ppm x D) mm

Measuring intervalⁱⁱⁱ
Prism mode
Nivo^{2.M} Precise mode 1.6 sec.
Nivo^{3.M}, Nivo^{5.M} Precise mode 1.5 sec.
Normal mode 0.8 sec.
Reflectorless mode
Nivo^{2.M} Precise mode 2.1 sec.
Nivo^{3.M}, Nivo^{5.M} Precise mode 1.8 sec.
Nivo^{2.M} Normal mode 1.2 sec.
Nivo^{3.M}, Nivo^{5.M} Normal mode 1.0 sec.
Least count
Precise mode 1 mm (0.002 ft)
Normal mode 10 mm (0.02 ft)

ANGLE MEASUREMENT

DIN 18723 accuracy (horizontal and vertical) 2"/0.5 mgon Nivo^{2.M}
3"/1 mgon Nivo^{3.M}
5"/1.5 mgon Nivo^{5.M}

Reading system Absolute encoder
Circle diameter 62 mm (2.4 in)
Horizontal/Vertical angle Diametrical Nivo^{2.M}, Nivo^{3.M}
Single Nivo^{5.M}

Minimum increment (Degree, Gon, MIL6400) Degree: 1/5/10"
Gon: 0.2/1/2 mgon
MIL6400: 0.005/0.02/0.05 mil

TELESCOPE

Tube length 125 mm (4.9 in)
Image Erect
Magnification 30x (18x/36x with optional eyepieces)
Nivo^{2.M} Effective diameter of objective 40 mm (1.6 in)
Nivo^{2.M} EDM diameter 45 mm (1.8 in)
Nivo^{3.M}, Nivo^{5.M} Effective diameter of objective 45 mm (1.8 in)
Nivo^{3.M}, Nivo^{5.M} EDM diameter 50 mm (2.0 in)
Field of view 1°20"
Resolving power 3"
Minimum focusing distance 1.5 m (4.9 ft)
Laser Pointer Coaxial Red Light

ⁱ White objects with high reflectivity (KGC 90%). Measuring distance may vary depending on targets and measuring conditions.
ⁱⁱ ±(3+3 ppm x D) mm -20 °C to -10 °C, +40 °C to +50 °C (-4 °F to +14 °F +104 °F to +122 °F)
ⁱⁱⁱ Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.
^{iv} Battery life specification at 25 °C (77 °F). Operation time may be shorter in low temperatures and if the battery is not new.

Specifications subject to change without notice.

TILT SENSOR

Type Dual-axis
Method Liquid-electric detection
Compensation range ±3.5'

COMMUNICATIONS

Communication ports 1 x serial (RS-232C)
Wireless communications Optional integrated Bluetooth

POWER

Internal Li-ion battery (x2)
Output voltage 3.8 V DC
Operating time^{iv}
Nivo^{2.M}

approx. 19 hours (continuous distance/angle measurement)
approx. 57 hours (distance/angle measurement every 30 seconds)
approx. 62 hours (continuous angle measurement)

Nivo^{3.M}, Nivo^{5.M}
approx. 10 hours (continuous distance/angle measurement)
approx. 26 hours (distance/angle measurement every 30 seconds)
approx. 31 hours (continuous angle measurement)

Charging time
Full charge 4 hours

GENERAL SPECIFICATIONS

Level vials
Sensitivity of circular level vial 10/2 mm
Optical plummet
Image Erect
Magnification 3x
Field of view 5°
Focusing range 0.5 m (1.6 ft) to ∞
Display face 1 backlit, graphic LCD (128x64 pixel)
Display face 2 (optional Nivo^{2.M}) backlit, graphic LCD (128x64 pixel)
Laser plummet (optional) 4 levels
Point memory 10,000 records
Dimensions (W x D x H) 149 mm x 145 mm x 306 mm
(5.8 in x 5.7 in x 12.0 in)

Weight (approx.)
Nivo^{2.M} Main unit (without battery) 3.8 kg (8.4 lb)
Nivo^{3.M}, Nivo^{5.M} Main unit (without battery) 3.6 kg (8.0 lb)
Battery 0.1 kg (0.2 lb)
Carrying case 2.3 kg (5.1 lb)

ENVIRONMENTAL

Operating temperature range -20 °C to +50 °C (-4 °F to +122 °F)
Storage temperature range -25 °C to +60 °C (-13 °F to +140 °F)
Atmospheric correction
Temperature range -40 °C to +60 °C (-40 °F to +140 °F)
Barometric pressure 400 mmHg to 999 mmHg/533 hPa to 1,332 hPa/15.8 inHg to 39.3 inHg
Dust and water protection IP66

CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval. C-Tick.
Laser safety IEC 60825-1 am2:2007
Nivo^{2.M} Prism mode: Class 1 laser
Nivo^{2.M} Reflectorless / Laser Pointer: Class 3R laser
Nivo^{3.M}, Nivo^{5.M} Reflectorless / Prism mode: Class 1 laser
Nivo^{3.M}, Nivo^{5.M} Laser Pointer: Class 2 laser
Laser Plummet (optional): Class 2 laser
Bluetooth type approvals are country specific.



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