

# Nikon Nivo M Series Total Stations

## Specifications Sheet

QUALITY • COMPACT • ACCURATE

### DISTANCE MEASUREMENT

Reflectorless mode (white target)<sup>i</sup> . . . . . 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<sup>2.M</sup> . . . . . 1.5 m to 270 m (4.9 ft to 886 ft)  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> . . . . . 1.5 m to 300 m (4.9 ft to 984 ft)  
With single prism 6.25 cm (2.5 in)  
Nivo<sup>2.M</sup> . . . . . 1.5m to 3,000 m (4.9 ft to 9,843 ft)  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> . . . . . 1.5 m to 5,000 m (4.9 ft to 16,404 ft)

Accuracy<sup>ii</sup> (Precise mode)  
Nivo<sup>2.M</sup> Prism . . . . . ±(2+2 ppm x D) mm  
Nivo<sup>2.M</sup> Reflectorless . . . . . ±(3+2 ppm x D) mm  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> Prism . . . . . ±(3+2 ppm x D) mm  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> Reflectorless . . . . . ±(3+2 ppm x D) mm

Measuring interval<sup>iii</sup>  
Prism mode  
Nivo<sup>2.M</sup> Precise mode . . . . . 1.6 sec.  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> Precise mode . . . . . 1.5 sec.  
Normal mode . . . . . 0.8 sec.  
Reflectorless mode  
Nivo<sup>2.M</sup> Precise mode . . . . . 2.1 sec.  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> Precise mode . . . . . 1.8 sec.  
Nivo<sup>2.M</sup> Normal mode . . . . . 1.2 sec.  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> 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<sup>2.M</sup>  
3"/1 mgon Nivo<sup>3.M</sup>  
5"/1.5 mgon Nivo<sup>5.M</sup>

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

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<sup>2.M</sup> Effective diameter of objective . . . . . 40 mm (1.6 in)  
Nivo<sup>2.M</sup> EDM diameter . . . . . 45 mm (1.8 in)  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> Effective diameter of objective . . . . . 45 mm (1.8 in)  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> 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

<sup>i</sup> White objects with high reflectivity (KGC 90%). Measuring distance may vary depending on targets and measuring conditions.  
<sup>ii</sup> ±(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)  
<sup>iii</sup> Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.  
<sup>iv</sup> 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 . . . . . integrated Bluetooth

### POWER

Internal Li-ion battery (x2)  
Output voltage . . . . . 3.8 V DC  
Operating time<sup>iv</sup>  
Nivo<sup>2.M</sup>

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

Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup>  
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<sup>2.M</sup>) . . . . . 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<sup>2.M</sup> Main unit (without battery) . . . . . 3.8 kg (8.4 lb)  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> 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<sup>2.M</sup> Prism mode: Class 1 laser  
Nivo<sup>2.M</sup> Reflectorless / Laser Pointer: Class 3R laser  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> Reflectorless / Prism mode: Class 1 laser  
Nivo<sup>3.M</sup>, Nivo<sup>5.M</sup> Laser Pointer: Class 2 laser  
Laser Plummet (optional): Class 2 laser  
Bluetooth type approvals are country specific.



#### CONTACT DETAILS

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