

Nikon Nivo M Series Total Stations

Specifications Sheet

QUALITY • COMPACT • ACCURATE

DISTANCE MEASUREMENT

Range with Nikon specified prisms (Good conditions)ⁱ

With reflector sheet 5 cm 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}	1.5 m 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)

Reflectorless modeⁱⁱ

	Good ⁱ	Normal ^{iv}	Difficult ^v
Nivo ^{2.M}			
KGC ⁱⁱⁱ (18%)	350 m (1,148 ft)	250 m (820 ft)	200 m (656 ft)
KGC (90%)	500 m (1,640 ft)	400 m (1,312 ft)	250 m (820 ft)
Nivo ^{3.M} , Nivo ^{5.M}	Good	Normal	Difficult
KGC (18%)	250 m (820 ft)	200 m (656 ft)	150 m (492 ft)
KGC (90%)	400 m (1,312 ft)	300 m (984 ft)	250 m (820 ft)

Shortest possible range 1.5m (4.9 ft)

Accuracy ^{vi} (Precise mode)	Prism	Reflectorless
Nivo ^{2.M}	±(2+2 ppm x D) mm	±(3+2 ppm x D) mm
Nivo ^{3.M} , Nivo ^{5.M}	±(3+2 ppm x D) mm	±(3+2 ppm x D) mm
Measuring interval ^{vii}	Precise mode	Normal mode
Prism mode		
Nivo ^{2.M}	1.6 s	0.8 s
Nivo ^{3.M} , Nivo ^{5.M}	1.5 s	0.8 s
Reflectorless mode		
Nivo ^{2.M}	2.1 s	1.2 s
Nivo ^{3.M} , Nivo ^{5.M} ^{viii}	1.8 s	1.0 s
Least count	1 mm (0.002 ft)	10 mm (0.02 ft)

ANGLE MEASUREMENT

DIN 18723 accuracy (horizontal and vertical) 2"/0.6 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 Good conditions (good visibility, overcast, twilight, underground, low ambient light).
- ⁱⁱ Measuring distance may vary depending on targets and measuring conditions.
- ⁱⁱⁱ Kodak Gray Card, Catalog number E1527795
- ^{iv} Normal conditions (normal visibility, object in the shadow, moderate ambient light).
- ^v Difficult conditions (haze, object in direct sunlight, high ambient light).
- ^{vi} ±(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)
- ^{vii} Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.
- ^{viii} Measured to KGC 90% at 20 m (65 ft).
- ^{ix} Battery life specification at 25 °C (77 °F). Operation time may be shorter in low temperatures or if the battery is not new.

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^{ix}

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 (Nivo^{2.M} only) 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)

Nivo^{5.M}^{MW} -30 °C to +50 °C (-22 °F to +122 °F)

Storage temperature range -25 °C to +60 °C (-13 °F to +140 °F)

Nivo^{5.M}^{MW} -30 °C to +60 °C (-22 °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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