

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 mode ⁱⁱ	Nivo ^{2.M}	Good ⁱ	Normal ^{iv}	Difficult ^v
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 diameter62 mm (2.4 in)
 Horizontal/Vertical angle Diametrical Nivo^{2.M}, Nivo^{3.M}
 Single Nivo^{5.M}
 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 power3"
 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
 Magnification3x
 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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