

Nikon Nivo™ C Series Total Stations

Specifications Sheet

QUALITY • COMPACT • ACCURATE

DISTANCE MEASUREMENT

Range with Nikon specified prisms (Good conditionsⁱⁱ)

With reflector sheet 5 cm x 5 cm (2 in x 2 in)			
Nivo ^{1.C} , Nivo ^{2.C}	1.5 m to 270 m (4.9 ft to 886 ft)		
Nivo ^{3.C} , Nivo ^{5.C}	1.5 m to 300 m (4.9 ft to 984 ft)		
With single prism 6.25 cm (2.5 in)			
Nivo ^{1.C} , Nivo ^{2.C}	1.5m to 3,000 m (4.9 ft to 9,843 ft)		
Nivo ^{3.C} , Nivo ^{5.C}	1.5 m to 5,000 m (4.9 ft to 16,404 ft)		

Range reflectorless modeⁱ

Nivo ^{1.C} , Nivo ^{2.C}	Good ⁱⁱ	Normal ⁱⁱⁱ	Difficult ^{iv}
KGC ^{ix} (18%)	350 m (1,148 ft)	250 m (820 ft)	200 m (656 ft)
KGC ^{ix} (90%)	500 m (1,640 ft)	400 m (1,312 ft)	250 m (820 ft)
Nivo ^{3.C} , Nivo ^{5.C}	Good ⁱⁱ	Normal ⁱⁱⁱ	Difficult ^{iv}
KGC ^{ix} (18%)	280 m (920 ft)	250 m (820 ft)	200 m (656 ft)
KGC ^{ix} (90%)	500 m (1,640 ft)	500 m (1,640 ft)	300 m (984 ft)

Shortest possible range 1.5m (4.9 ft)

Accuracy^v (Precise mode)

ISO 17123-4	
Prism	±(2+2 ppm × D) mm
Reflectorless	±(3+2 ppm × D) mm

Measuring interval^{vi}

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

ANGLE MEASUREMENT

ISO 17123-3 accuracy (horizontal and vertical); 1"/0.3mgon Nivo^{1.C}
2"/0.6 mgon Nivo^{2.C}; 3"/1 mgon Nivo^{3.C}; 5"/1.5 mgon Nivo^{5.C}

Reading system Absolute encoder

Circle diameter 62 mm (2.4 in)

Horizontal/Vertical angle Diametrical

Minimum increment

Nivo ^{1.C}	Degree: 0.5"; Gon: 0.1 mgon
Nivo ^{2.C} , Nivo ^{3.C} , Nivo ^{5.C}	Degree: 1"; Gon: 0.1 mgon

TELESCOPE

Tube length 125 mm (4.9 in)

Image Erect

Magnification 30× (18×/36× with optional eyepieces)

Nivo^{1.C}, Nivo^{2.C} Effective diameter of objective 40 mm (1.6 in)

Nivo^{1.C}, Nivo^{2.C} EDM diameter 45 mm (1.8 in)

Nivo^{3.C}, Nivo^{5.C} Effective diameter of objective 45 mm (1.8 in)

Nivo^{3.C}, Nivo^{5.C} 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

TILT SENSOR

Type Dual-axis

Method Liquid-electric detection

Compensation range ±3.5'

COMMUNICATIONS

Communication ports 1 x serial (RS-232C), 2 x USB (host and client)

Wireless communications Integrated Bluetooth



CONTACT DETAILS

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POWER

Internal Li-ion battery (x2)

Output voltage 3.8 V DC

Operating time^{viii}

Nivo ^{1.C} , Nivo ^{2.C}	approx. 12 hours (continuous distance/angle measurement)
	approx. 26 hours (distance/angle measurement every 30 s)
	approx. 28 hours (continuous angle measurement)

Nivo^{3.C}, Nivo^{5.C}

	approx. 7.5 hours (continuous distance/angle measurement)
	approx. 16 hours (distance/angle measurement every 30 s)
	approx. 20 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 ∞

Focusing range 0.5 m (1.6 ft) to 5

Display face 1 QVGA, 16 bit color, TFT LCD, backlit (320x240 pixel)

Display face 2 Backlit, graphic LCD (128x64 pixel)

Laser plummet (optional) 4 levels

Memory 128 MB RAM, 128MB Flash memory

Processor Marvell PXA300 XScale 624 MHz

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^{1.C}, Nivo^{2.C} Main unit (without batteries) 3.9 kg (8.6 lb)

Nivo^{3.C}, Nivo^{5.C} Main unit (without batteries) 3.8 kg (8.4 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 (Nivo^{1.C} IP56)

CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval, C-Tick.

Laser safety IEC 60825-1 am2:2007

Prism mode: Class 1 Laser / Laser Plummet (optional): Class 2 laser

Nivo^{1.C}, Nivo^{2.C} Reflectorless / Laser Pointer: Class 3R laser

Nivo^{3.C}, Nivo^{5.C} Reflectorless / Class 1 laser

Nivo^{3.C}, Nivo^{5.C} Laser Pointer: Class 2 laser

- i* Measuring distance may vary depending on targets and measuring conditions.
 - ii* Good conditions (good visibility, overcast, twilight, underground, low ambient light).
 - iii* Normal conditions (normal visibility, object in the shadow, moderate ambient light).
 - iv* Difficult conditions (haze, object in direct sunlight, high ambient light).
 - v* ±(3+3 ppm × D) mm -20 °C to -10 °C, +40 °C to +50 °C (-4 °F to +14 °F, +104 °F to +122 °F)
 - vi* Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few more seconds.
 - vii* Measured to KGC 90% at 20 m (65 ft)
 - viii* Battery life specification at 25 °C (77 °F). Operation time may be shorter in low temperatures or if the battery is not new.
 - ix* Kodak Gray Card, Catalog number E1527795
- Specifications subject to change without notice. Bluetooth type approvals are country specific.

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