

# Nikon Nivo™ C 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 cm x 5 cm ( 2 in x 2 in)

Nivo<sup>2.C</sup> . . . . . 1.5 m to 270 m (4.9 ft to 886 ft)

Nivo<sup>3.C</sup>, Nivo<sup>5.C</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.C</sup> . . . . . 1.5m to 3,000 m (4.9 ft to 9,843 ft)

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup> . . . . . 1.5 m to 5,000 m (4.9 ft to 16,404 ft)

Accuracy<sup>ii</sup> (Precise mode)

Nivo<sup>2.C</sup> Prism . . . . . ±(2+2 ppm x D) mm

Nivo<sup>2.C</sup> Reflectorless . . . . . ±(3+2 ppm x D) mm

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup> Prism . . . . . ±(3+2 ppm x D) mm

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup> Reflectorless . . . . . ±(3+2 ppm x D) mm

Measuring interval<sup>iii</sup>

Prism mode

Nivo<sup>2.C</sup> Precise mode . . . . . 1.6 sec.

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup> Precise mode . . . . . 1.5 sec.

Normal mode . . . . . 0.8 sec.

Reflectorless mode

Nivo<sup>2.C</sup> Precise mode . . . . . 2.1 sec.

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup> Precise mode . . . . . 1.8 sec.

Nivo<sup>2.C</sup> Normal mode . . . . . 1.2 sec.

Nivo<sup>3.C</sup>, Nivo<sup>5.C</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.C</sup>

3"/1 mgon Nivo<sup>3.C</sup>

5"/1.5 mgon Nivo<sup>5.C</sup>

Reading system . . . . . Absolute encoder

Circle diameter . . . . . 62 mm (2.4 in)

Horizontal/Vertical angle . . . . . Diametrical

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.C</sup> Effective diameter of objective . . . . . 40 mm (1.6 in)

Nivo<sup>2.C</sup> EDM diameter . . . . . 45 mm (1.8 in)

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup> Effective diameter of objective . . . . . 45 mm (1.8 in)

Nivo<sup>3.C</sup>, Nivo<sup>5.C</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

*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.



#### CONTACT DETAILS

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### 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

### POWER

Internal Li-ion battery (x2)

Output voltage . . . . . 3.8 V DC

Operating time<sup>iv</sup>

Nivo<sup>2.C</sup>

approx. 12 hours (continuous distance/angle measurement)

approx. 26 hours (distance/angle measurement every 30 seconds)

approx. 28 hours (continuous angle measurement)

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup>

approx. 7.5 hours (continuous distance/angle measurement)

approx. 16 hours (distance/angle measurement every 30 seconds)

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 . . . . . 5°

Focusing range . . . . . 0.5 m (1.6 ft) to ∞

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<sup>2.C</sup> Main unit (without battery) . . . . . 3.9 kg (8.6 lb)

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup> Main unit (without battery) . . . . . 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

### CERTIFICATION

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

Laser safety IEC 60825-1 am2:2007

Nivo<sup>2.C</sup> Reflectorless / Prism mode / Laser Pointer: Class 3R laser

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup> Reflectorless / Prism mode: Class 1 laser

Nivo<sup>3.C</sup>, Nivo<sup>5.C</sup> Laser Pointer: Class 2 laser

Laser Plummet (optional): Class 2 laser

Bluetooth type approvals are country specific.

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