

Nikon NPL-322+ Series

Reflectorless and Prism-Only Total Stations



Datasheet



Nikon Quality You Can Trust

Key Features

- 2" and 5" angle accuracies
- Reflectorless and prism-only models
- Fast, accurate EDM
- Convenient and long-lasting Li-ion battery
- Easy-to-use keypad
- Rugged and lightweight
- Bluetooth enabled
- Dual axis compensation
- 50,000 point storage

NPL-322+ Series

The NPL-322+ Total Stations deliver an economic, versatile, and easy-to-use platform to ensure you get the job done right. Nikon's legendary optics effectively allow in more light to give you brighter, clearer images. You'll see the difference when you look through a Nikon Total Station even in the low-visibility conditions typical in the field. You'll see much more detail and much less distortion, especially over longer distances. Better optics help you aim more precisely, and they're much easier on your eyes - something you'll really appreciate on long workdays.

Using the same rechargeable long life Li-ion battery as the Nivo series, combined with low power consumption design, the NPL-322+ provides the longest possible time in the field. For convenience, the Nikon NPL-322+ total stations include two batteries and a dual charger, to support even the longest of working days.

The Nikon NPL-322+ Series of mechanical total stations include 2" and 5" accuracies, reflectorless and prism-only models. All four NPL-322+ models feature dual axis compensation to correct for errors in tilt in the horizontal and vertical axes, wireless Bluetooth connections to external data collectors and 50,000 point onboard storage. All models have a 3,000m (9,840 ft) range to a single prism, with reflectorless models additionally having a 400m (1,300 ft) non-prism range.

The Nikon NPL-322+ is built tough for all occasions.

Nikon NPL-322+ Series Total Stations

Distance measurement

- Range with Nikon specified prisms
 - Good conditions (No haze, visibility over 40 km (25 miles))
 - With reflector sheet (5 x 5 cm): 1.5 m to 200 m (4.9 ft to 787 ft)
 - With single prism 6.25 cm (2.5 in): 3,000 m (9,840 ft)
- Range NPL-322+ 2"/5" models
 - KGC (18%)¹
 - Good: 250 m (820 ft)
 - Normal: 200 m (656 ft)
 - Difficult: 150 m (492 ft)
 - KGC (90%)¹
 - Good: 400 m (1312 ft)
 - Normal: 350 m (1148 ft)
 - Difficult: 250 m (820 ft)
- Accuracy ISO 17123-4 (Precise mode)
 - Prism²: $\pm(2+2 \text{ ppm} \times D) \text{ mm}$
 - Reflectorless³/Reflector sheet³: $\pm(3+3 \text{ ppm} \times D) \text{ mm}$
- Measuring interval⁴
 - Prism mode
 - Precise mode: 1.1 sec.
 - Normal mode: 0.8 sec.
 - Reflectorless mode⁵
 - Precise mode: 1.2 sec.
 - Normal mode: 1.0 sec.
 - Least count
 - Precise mode: 1 mm (0.002 ft)
 - Normal mode: 10 mm (0.02 ft)

Angle Measurement

- ISO 17123-3 accuracy (horizontal and vertical): 2"/0.6 mgon, 5"/1.5 mgon
- Reading system: Photoelectric detection by incremental encoder
- Circle diameter: 88 mm (3.46 in)
- Horizontal angle: 2":Diametrical, 5":Single
- Vertical angle: Single
- 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)
- Effective diameter of objective: 45 mm (1.77in)
 - EDM: 50 mm (1.97 in)
- Field of view: 1°20'
- Resolving power: 3"
- Minimum focusing distance: 1.5 m (4.9 ft)
- Laser Pointer: Coaxial Red Light (NPL-322+ 2"/5" models only)

Tilt Sensor

- Type: Dual axis
- Method: Liquid-electric detection
- Compensation range: $\pm 3'$

Communications

- Communication ports: 1 x serial (RS-232C)

Wireless Communications

- Integrated Bluetooth

General Specifications

- Level vials
 - Sensitivity of Plate level vial: 30"/2 mm
 - 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:
 - 2":Both sides, backlit, graphic LCD (128 x 64 pixel),
 - 5":Single side, backlit, graphic LCD (128 x 64 pixel)
- Point memory: 50,000 records
- Dimensions (W x D x H): 168 mm x 173 mm x 335 mm (6.6 in x 6.8 in x 13.1 in)
- Weight (approx.)
 - Main unit (without battery): 4.9 kg (10.8 lb)
 - Battery: 0.1 kg (0.2 lb)
 - Carrying case: 2.5 kg (5.5 lb)
 - Dual charger and AC adaptor: 0.6 kg (1.3 lb)

Power

- Clip-on Li-on battery (x2 incl.)
 - Output voltage: 3.8 V DC
- Operating time⁵
 - approx. 22 hours (continuous angle measurement)
 - approx. 11 hours (distance/angle measurement every 30 seconds)
 - approx. 4.5 hours (continuous distance/angle measurement)
- Charging time
 - Full charge: 4 hours
 - External power supply: N/A

Environmental

- Ambient temperature range: -20 °C to +50 °C (-4 °F to +122 °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: IP55

Certification

- Class B Part 15 FCC certification, CE Mark approval.
- Laser safety IEC60825-1:2007
- Reflectorless mode: Class 1
- Laser Pointer: Class 2
- Prism mode: Class 1
- Bluetooth type approvals are country specific

- (1) Kodak Gray Card, Catalog number E1527795
- (2) $\pm(2+3 \text{ ppm} \times D) \text{ mm}$ -20 °C to -10 °C, +40 °C to +50 °C (-4 °F to +14 °F, +104 °F to +122 °F) 1.5m to 5m $\pm(5 + 3 \text{ ppm} \times D) \text{ mm}$
- (3) 1.5m to 5m $\pm(10 + 3 \text{ ppm} \times D) \text{ mm}$
- (4) Measuring time may vary depending on measuring distance and conditions. For the initial measurement, it may take a few seconds.
- (5) Battery life specification is per battery at 25 °C (77 °F). Operation time may be shorter if battery is not new. Operation time may be shorter in low temperatures.
- (6) NPL-322+ 2"P and NPL-322+ 5" models feature prism only measurements.

Model	NPL-322+ 2"	NPL-322+ 5"	NPL-322+2"P	NPL-322+ 5"P
EDM Mode(s)	Prism & Reflectorless		Prism-only	
Displays	Dual	Single	Dual	Single
Laser Pointer	Yes	Yes	No	No



Contact Information:

AMERICAS

Spectra Precision Division
10368 Westmoor Drive
Westminster, CO 80021, USA
+1-720-587-4700 Phone
888-477-7516 (Toll Free in USA)

EUROPE, MIDDLE EAST AND AFRICA

Spectra Precision Division
Rue Thomas Edison
ZAC de la Fleuriaye - CS 60433
44474 Carquefou (Nantes), France
+33 (0)2 28 09 38 00 Phone

ASIA-PACIFIC

Spectra Precision Division
80 Marine Parade Road
#22-06, Parkway Parade
Singapore 449269, Singapore
+65-6348-2212 Phone



www.spectraprecision.com

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