

Nikon NPL-322 Series Total Stations



Datasheet



Nikon Quality You Can Trust

Key Features

- 2" and 5" angle accuracies
- Prism and reflectorless measurements
- Fast, accurate EDM
- Convenient and long-lasting
- Long life Li-ion Battery
- Easy-to-use keypad
- Rugged and lightweight

NPL 322 Series

The Nikon NPL-322 Total Station, an economic, versatile, and easy-to-use platform that ensures you get the job done right.

The NPL-322 is available in a 2" dual face model and a 5" single face model to meet your specific accuracy needs. Both NPL-322 total station models feature a reflectorless EDM with up to 200 meter (656 feet) range. Using the same rechargeable long life Li-ion battery as the Nivo series, combined with low power consumption design, the NPL-322 provides over 11 hours of operating time per battery. For convenience, the Nikon NPL-322 total stations include two batteries and a dual charger, to support even the longest of working days.

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.

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

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SIMPLE • DEPENDABLE • ACCURATE

DISTANCE MEASUREMENT

Range with Nikon specified prisms

Good conditions (No haze, visibility over 40 km (25 miles))

With reflector sheet (5 × 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 reflectorless mode

	Good	Normal	Difficult
KGC (18%) ¹	150m (492 ft)	120m (394 ft)	100m (328 ft)
KGC (90%) ¹	200m (656 ft)	180m (590 ft)	150m (492 ft)

Accuracy ISO 17123-4 (Precise mode)

Prism² ±(2+2 ppm × D) mm

Reflectorless /Reflector sheet³ ±(3+3 ppm × D) mm

Measuring interval⁴

Prism mode 1.8 sec.
Normal mode 0.8 sec.

Reflectorless mode

Precise mode 1.8 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 30× (18×/36× with optional eyepieces)

Effective diameter of objective 45 mm (1.77 in)

EDM 50 mm (1.97 in)

Field of view 1°20'

Resolving power3"

Minimum focusing distance 1.5 m (4.9 ft)

Laser Pointer Coaxial Red Light

¹ Kodak Gray Card, Catalog number E1527795

² ±(2+3 ppm × D) 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 ± (5 + 3 ppm × D) mm

³ 1.5m to 5m ± (10 + 3 ppm × D) 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 at 25 °C (77 °F). Operation time may be shorter if battery is not new.

Operation time may be shorter in low temperatures.

TILT SENSOR

Type Single-axis

Method Liquid-electric detection

Compensation range ±3'

Setting accuracy 1"

COMMUNICATIONS

Communication ports 1 x serial (RS-232C)

POWER

Clip-on Li-on battery

Output voltage 3.8 V DC

Operating time⁵

approx. 4.5 hours (continuous distance/angle measurement)

approx. 11 hours (distance/angle measurement every 30 seconds)

approx. 22 hours (continuous angle measurement)

Charging time

Full charge 4 hours

External power supply N/A

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 3×

Field of view 5°

Focusing range 0.5 m (1.6 ft) to ∞

Display 2":Both sides, backlit, graphic LCD (128 × 64 pixel)

5":Single side, backlit, graphic LCD (128×64 pixel)

Point memory 10,000 records

Dimensions (W × D × H) 168 mm x 173 mm x 355 mm
(6.6 in x 6.8 in x 13.1 in)

Weight (approx.)

Main unit (without battery) 4.9 kg (10.8 lb)

BC-65 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)

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 IP54

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



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