

Nikon DTM-322+ Total Stations

Specifications Sheet

Distance Measurement

- Range with Nikon specified prisms
 - Good conditions (No haze, visibility over 40 km (25 miles))
 - With reflector sheet (5 × 5 cm): 5 m to 100 m (16.4 ft to 328 ft)
 - With mini prism 2.5 cm (1 in): 1,200 m (3,930 ft)
 - With single prism 6.25 cm (2.5 in): 2,300 m (7,540 ft)
 - With triple prism: 3,000 m (9,840 ft)
 - Normal conditions (Ordinary haze, visibility approx 20 km (12.4 miles))
 - With reflector sheet (5 × 5 cm): 5 m to 100 m (16.4 ft to 328 ft)
 - With mini prism 2.5 cm (1 in): 1,000 m (3,280 ft)
 - With single prism 6.25 cm (2.5 in): 2,000 m (6,560 ft)
 - With triple prism: 2,600 m (8,530 ft)
- Accuracy (Prism/Precise mode)^{1, 2}: ±(3+2 ppm × D) mm
 - Measuring interval³
 - Precise mode: 1.6 sec. (initial 1.6 sec.)
 - Normal mode: 1.0 sec. (initial 1.4 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: 1/5/10"
 - Gon: 0.2/1/2 mgon
 - MIL6400: 0.005/0.02/0.05 mil

Telescope

- Tube length: 158 mm (6.2 in)
- Image: Erect
- Magnification: 33× (21×/41× with optional eyepieces)
- Effective diameter of objective: 45 mm (1.77 in)
- EDM diameter: 50 mm (1.97 in)
- Field of view: 1°20'
- Resolving power: 2.5"
- Minimum focusing distance: 1.5 m (4.92 ft)

Tilt Sensor

- Type: Dual axis
- Method: Liquid-electric detection
- Compensation range: ±3'

Communications

- Communication ports: 1 × serial (RS-232C)
- Wireless communications: Integrated Bluetooth

Power

- Clip-on Li-ion battery (x2 incl.): Output voltage: 3.8 V DC
- Operating time⁴:
 - approx. 12 hours (continuous distance/angle measurement)
 - approx. 24 hours (distance/angle measurement every 30 seconds)
- 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 face 1: Backlit, graphic LCD (128 × 64 pixel)
- Display face 2 (DTM-322 2" only): Backlit, graphic LCD (128 × 64 pixel)
- Point memory: 50,000 records
- Dimensions (W × D × H): 168 mm × 173 mm × 335 mm (6.6 in × 6.8 in × 13.2 in)
- Weight (approx.)
 - Main unit (without battery): 4.8 kg (10.6 lb)
 - Battery: 0.1 kg (0.2 lb)
 - Carrying case: 2.4 kg (5.3 lb)

Environmental

- Ambient temperature range: -20 °C to +50 °C (-4 °F to +122 °F)
- Atmospheric correction
 - Temperature range: -40 °C to +55 °C (-40 °F to +131 °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, C-Tick.
- Bluetooth type approvals are country specific.

1 ±(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)
2 Standard deviation based on ISO 17123-4.
3 Measuring time may vary depending on measuring distance and conditions.
4 Battery life specification is per battery at 25 °C (77 °F).

Specifications are subject to change without prior notice.



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