

Nikon DTM-322 Total Station

Specifications Sheet

SIMPLE • ACCURATE • VALUE

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 1.6 sec. (initial 1.6 sec.)

Precise mode 1.0 sec. (initial 1.4 sec.)

Normal mode 1.0 sec. (initial 1.4 sec.)

Least count 1 mm (0.002 ft)

Precise mode 10 mm (0.02 ft)

Normal mode 10 mm (0.02 ft)

ANGLE MEASUREMENT

ISO 17123-3 accuracy (horizontal and vertical) 3"/1.0 mgon; 5"/1.5 mgon

Reading system Photoelectric detection by incremental encoder

Circle diameter 88 mm (3.46 in)

Horizontal angle 3" 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)

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 at 25 °C (77 °F).

Specifications are subject to change without prior notice.

TILT SENSOR

Type Single-axis

Method Liquid-electric detection

Compensation range ±3'

Setting accuracy ±1"

COMMUNICATIONS

Communication ports 1 × serial (RS-232C)

POWER

Clip-on rechargeable battery system 4 × AA Ni-MH Battery

Operating time⁴ approx. 6 hours (continuous distance/angle measurement)

approx. 15 hours (distance/angle measurement every 30 seconds)

Charging time approx. 4 hours

Full charge approx. 4 hours

GENERAL SPECIFICATIONS

Level vials 30°/2 mm

Sensitivity of Circular level vial 10°/2 mm

Optical plummet 5"

Image Erect

Magnification 3×

Field of view 0.5 m (1.6 ft) to ∞

Focusing range 0.5 m (1.6 ft) to ∞

Display face 1 Backlit, graphic LCD (128 × 64 pixel)

Display face 2 (DTM-322 3" only) Backlit, graphic LCD (128 × 64 pixel)

Point memory 10,000 records

Dimensions (W × D × H) 168 mm × 173 mm × 335 mm

(6.6 in × 6.8 in × 13.2 in)

Weight (approx.) 4.8 kg (10.6 lb)

Main unit (without battery) 0.2 kg (0.4 lb)

Battery 2.4 kg (5.3 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.



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