

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 x 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 x 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 mode¹) $\pm(3+2 \text{ ppm} \times D)$ mm

Measuring interval²

Prism mode

- 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

DIN 18723 accuracy (horizontal and vertical) 5"/1.5 mgon

Reading system Photoelectric detection by incremental encoder

Circle diameter88 mm (3.46 in)

Horizontal angle 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 158 mm (6.2 in)

Image Erect

Magnification 33x (21x/41x with optional eyepieces)

Effective diameter of objective 45 mm (1.77 in)

EDM 50 mm (1.97 in)

Field of view 1°20'

Resolving power 2.5"

Minimum focusing distance 1.5 m (4.92 ft)

¹ $\pm(3+3 \text{ ppm} \times D)$ mm -20 °C to -10 °C, +40 °C to +50 °C (-4 °F to +14 °F, +104 °F to +122 °F)
² Measuring time may vary depending on measuring distance and conditions.
³ 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 $\pm 3'$

Setting accuracy $\pm 1''$

COMMUNICATIONS

Communication ports 1 x serial (RS-232C)

POWER

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

Operating time³

- approx. 6 hours (continuous distance/angle measurement)
- approx. 15 hours (distance/angle measurement every 30 seconds)

Charging time

Full charge approx. 4 hours

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 Single side, graphic LCD (128 x 64 pixel)

Point memory 10,000 records

Dimensions (W x D x H) 168 mm x 173 mm x 335 mm
(6.6 in x 6.8 in x 13.2 in)

Weight (approx.)

Main unit (without battery) 4.8 kg (10.6 lb)

Battery 0.2 kg (0.4 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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