

# Nikon DTM-652 Total Station

## DISTANCE MEASUREMENT

Range with Nikon specified prisms

Good conditions

(no haze with visibility over 40 km (25 miles))

With reflector sheet	.5 m to 100 m (16.4 ft to 328.1 ft)
With mini prism 2.5 cm (1 in)	1,100 m (3,600 ft)
With single prism 6.25 cm (2.5 in)	2,700 m (8,900 ft)
With triple prism	3,600 m (11,800 ft)
With nine prisms	4,400 m (14,400 ft)

Normal conditions

(ordinary haze with visibility about 20 km (12.5 miles))

With reflector sheet	.5 m to 100 m (16.4 ft to 328.1 ft)
With mini prism 2.5 cm (1 in)	950 m (3,100 ft)
With single prism 6.25 cm (2.5 in)	2,400 m (7,900 ft)
With triple prism	3,100 m (10,200 ft)
With nine prisms	3,700 m (12,100 ft)

Readout display . . . . . 9999.9999 m (29999.999 ft)

Accuracy

Precise mode	±(2 + 2 ppm x D) mm
Normal mode	±(4 + 2 ppm x D) mm

Least count

Precise mode	.01 mm (0.0005 ft)/1 mm (0.002 ft) selectable
Normal mode	1 mm (0.002 ft)/10 mm (0.02 ft) selectable

Measuring intervals

Precise mode	.10 sec. (initial 1.0 sec.)
Normal mode	.05 sec. (initial 1.0 sec.)

Prism offset . . . . . -999 mm to 999 mm

## ANGLE MEASUREMENT

DIN 18723 accuracy (horizontal and vertical) . . . . . 1"/0.3 mgon

Reading system . . . . . Photoelectric detection by incremental encoder

Horizontal angle . . . . . Diametrical

Vertical angle . . . . . Diametrical

Circular diameter . . . . . 79 mm (3.1 in)

Minimum increment . . . . . Degree: 0.5/1/5"

Gon: 0.1/0.2/1 mgon

MIL6400: 0.002/0.005/0.02 mil

## TELESCOPE

Tube length . . . . . 158 mm (6.22 in)

Image . . . . . Erect

Effective diameter of objective . . . . . 45 mm (1.77 in)

EDM: 50 mm (1.97 in)

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

Field of view . . . . . 1°20' (2.3 m at 100 m) (2.3 ft at 100 ft)

Resolving power . . . . . 2.5"

Minimum focusing distance . . . . . 1.3 m (4.26 ft)

Reticle illumination . . . . . Provided (3 steps)

## TILT SENSOR

Type . . . . . Dual-axis

Method . . . . . Liquid-electric detection

Compensation range . . . . . ±3'

Setting accuracy . . . . . 1"

## COMMUNICATIONS

Communication ports . . . . . 1 x serial, 1 x USB Client

External memory ports . . . . . 1 x CompactFlash (CF Types I and II), 1 x USB Host

(Each unit includes a 128 MB CompactFlash card)

## POWER

On-board Ni-MH battery BC-80

Output voltage . . . . . 7.2V DC

Operating time . . . . . approx. 10 hours (continuous distance/angle measurement)

approx. 27 hours (distance/angle measurement every 30 seconds)

approx. 28 hours (angle measurement only)

Charging time

Full charge . . . . . 3 hours

## GENERAL SPECIFICATIONS

Lumi-Guide

Working range . . . . . 100 m (330 ft)

Positioning accuracy . . . . . within approx. 6 cm at 100 m (2.4 in at 330 ft)

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 . . . . . Graphic LCD (128 x 64 dot); both sides

Point memory raw/coordinates . . . . . 10,000 records

Dimensions (W x D x H) . . . . . 166 mm x 168 mm x 365 mm

(6.5 in x 6.6 in x 14.4 in)

Weight (approx.)

Main unit (without battery) . . . . . 5.1 kg (11.2 lb)

BC-80 clip-on battery . . . . . 0.6 kg (1.3 lb)

Carrying case . . . . . 4.0 kg (8.8 lb)

## ENVIRONMENTAL

Operating 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

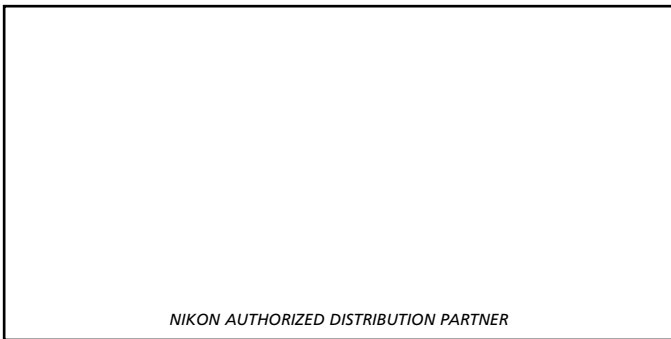
533 hPa to 1,332 hPa/15.8 in.Hg to 39.3 in.Hg

Dust and water protection . . . . . IP54

## CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval.

*Simple • Dependable • Accurate*



NIKON AUTHORIZED DISTRIBUTION PARTNER

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