

### KEY FEATURES

A rugged workhorse with practical hardware and software functionality

Proven Nikon optics and Trimble onboard software

Unique features for accuracy and measurement confidence

Not just a total station, a partnership with Trimble



### ONE OF YOUR TOUGHEST AND MOST RELIABLE CREW MEMBERS

When you arrive on the job site, just pull the Trimble® M3 Total Station out of its ruggedized case and get to work. This rugged and reliable instrument delivers whatever the conditions.

The Trimble M3 combines tough construction with practical hardware and software functionality:

- Rugged aluminum housing ensures IPX6 water resistance.
- Long battery life provides 7 hours of continual measurement or one full day of typical measurement activities without needing to recharge.
- A large internal memory stores up to 10,000 data lines in the field ... several days' worth of data collection.
- The onboard software supports multiple jobs so you can work on different jobs or projects without downloading in-between.
- DR (direct reflex) technology lets you measure safely to hard-to-reach places without a prism. This feature also enables one-person surveying, freeing up the time of other crew members.

The Trimble M3 Total Station is also extremely easy to use. Its intuitive software and workflow mean your crew won't lose time and productivity on a steep learning curve.

### THE ACCURACY YOU NEED EVERY TIME

No matter what the conditions, you can rely on the Trimble M3 to consistently deliver the accuracy you need for every job.

To ensure accuracy, the Trimble M3 offers the following features:

- An internal optical plummet expedites setup and ensures high accuracy stationing.

- Choose the Trimble M3 model with the accuracy you need: 3" or 5".
- Proven Nikon optics ensure clear, quality and precise aiming.
- 3 mm + 2 ppm EDM provides fast, accurate and reliable measurements.

Focusing DR technology provides complete measurement confidence. You always know that what you see is what you're measuring.

### BY THE SURVEYORS AT TRIMBLE FOR SURVEYORS LIKE YOU

Only a surveyor knows what a surveyor needs. And at Trimble, qualified surveyors develop products they know will help surveying professionals like you get the job done ... every time. So when you're investing in a total station, Trimble is the name you can trust.

The Trimble M3 Total Station gives you access to Trimble's long reputation in developing the highest quality surveying instruments. And our 24/7 worldwide support means you're never alone; the surveyors at Trimble are ready to lend a hand whenever you need it.

# TRIMBLE M3 TOTAL STATION

## PERFORMANCE

### Angle Measurement

(Standard deviation based on DIN 18732) . . . 3" (1.0 mgon) or 5" (1.5 mgon)  
 Angle reading (least count) . . . . . 1"/0.2 mgon (for 3" DR),  
 1"/0.5 mgon (for 5" DR)  
 Automatic level compensator . . . . . Dual-axis compensator  
 ±3', (±50 mgon)

### Distance Measurement

Accuracy

Prism mode

Standard . . . . . ±(3 mm + 2 ppm) ±(0.01 ft + 2 ppm)<sup>1</sup>,  
 ±(3 mm + 3 ppm) ±(0.01 ft + 3 ppm)<sup>2</sup>,  
 ±5 mm (±0.016 ft) for less than 10 m (32.8 ft) with mini-prisms

Tracking . . . . . ±(10 mm + 5 ppm), ±(0.033 ft + 5 ppm)

Reflex tape

Standard . . . . . ±(3 mm + 2 ppm) ±(0.01 ft + 2 ppm)<sup>1</sup>,  
 ±(3 mm + 3 ppm) ±(0.01 ft + 3 ppm)<sup>2</sup>,  
 ±5 mm (±0.016 ft) for less than 5 m (16.4 ft) with reflector sheet

Tracking . . . . . ±(10 mm + 5 ppm), ±(0.033 ft + 5 ppm)

DR mode

Standard . . . . . ±(5 mm + 2 ppm) ±(0.016 ft + 2 ppm)<sup>1</sup>,  
 ±(5 mm + 3 ppm) ±(0.016 ft + 3 ppm)<sup>2</sup>

Tracking . . . . . ±(10 mm + 5 ppm) ±(0.033 ft + 5 ppm)

Shortest possible range to target . . . . . 1.6 m (5.25 ft)

Measuring time<sup>3</sup>

Prism mode

Standard . . . . . 1.3 sec (initial 2.0 sec)

Tracking . . . . . 0.5 sec (initial 1.6 sec)

DR mode

Standard . . . . . 1.6 sec (initial 2.6 sec)

Tracking . . . . . 0.8 sec (initial 2.0 sec)

Range (under standard clear conditions<sup>4</sup>)

Prism mode

1 prism . . . . . 5000 m (16,404 ft)

3 prism . . . . . 5000 m (16,404 ft)

Reflective foil 20 mm . . . . . 200 m (656 ft)

Reflective foil 60 mm (1.97 in) . . . . . 300 m (984 ft)

DR mode

Kodak Grey Card (18% reflective) . . . . . 85 m (278 ft)

Kodak Grey Card (90% reflective) . . . . . 210 m (688 ft)

## CERTIFICATION

Class B Part 15 FCC certification, CE Mark approval and C-tick approval.

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## GENERAL SPECIFICATIONS

Light source . . . . . Pulsed laser diode 870 nm, Laser Class 1

Atmospheric correction . . . . . Manual setting temperature and pressure

Leveling . . . . . Plate level vial 30"/2 mm, circular level vial 10"/2 mm

Clamps and slow motions . . . . . Coaxial tangent, clamp knobs

Centering

Centering system . . . . . Trimble 3-pin

Optical plummet . . . . . Erect

Magnification . . . . . 3x

Shortest focusing distance . . . . . 0.5 m (1.64 ft)

Telescope

Magnification . . . . . 26x

Aperture . . . . . 40 mm (1.57 in)

Field of view at 100 m . . . . . 2.6 m (8.5 ft) at 100 m (328 ft) (1°30")

Shortest focusing distance . . . . . 1.6 m (5.25 ft)

Environmental

Operating temperature . . . . . -20 °C to +50 °C (-4 °F to +122 °F)

Dust and water proofing . . . . . IP56

Display . . . . . Graphic LCD (128x64) with LED backlight

Keyboard . . . . . 25 keys, alphanumeric (cell phone style)

Optional second keyboard . . . . . Upgrade kit is available

Power supply

Internal battery . . . . . Rechargeable Ni-MH 7.2 V, 3.8 Ah

Operating time<sup>5</sup> . . . . . Approx 7 hours

Weight

Instrument . . . . . 4.7 kg (10.4 lb) (no tribrach w/battery)

Tribrach . . . . . 0.7 kg (1.54 lb), detachable

Dimensions

Dimensions (instrument) (DxWxH) . . . . . 173 mm x 168 mm x 347 mm  
 (6.81 in x 6.61 in x 13.66 in)

Trunnion axis height . . . . . 181.5 mm (7.15 in)

## Software and Recording

Software features . . . . . Resection; known station; station elevation;  
 measure topo; stakeout (known stake out elements);  
 RefLine 2D; DivLine 2D; eccentric measurement;  
 connecting distances (radial, polygonal); remote object;  
 station and offset; vertical plane; computation area

Memory capacity . . . . . 10,000 data lines

Data input/output . . . . . RS232, baud rate up to 38,400 bps,  
 data formats: M5 and Nikon

External recording via RS232 . . . . . Nikon

## RECYCLING INFORMATION

For product recycling instructions and more information, please go to [www.trimble.com/environment/summary.html](http://www.trimble.com/environment/summary.html).

- 1 -10 °C to +40 °C (14 °F to 104 °F).
- 2 -20 °C to -10 °C, +40 °C to +50 °C (4 °F to 14 °F, 104 °F to 122 °F).
- 3 Measuring time may vary depending on measuring distance and conditions.
- 4 No haze, visibility over 40 km (25 miles).
- 5 Battery life specification at 25 °C. Operation time may be shorter if battery is not new.

Specifications are subject to change without notice



### NORTH AMERICA

Trimble Engineering &  
 Construction Group  
 5475 Kellenburger Road  
 Dayton, Ohio 45424-1099 • USA  
 800-538-7800 (Toll Free)  
 +1-937-245-5154 Phone  
 +1-937-233-9441 Fax

### EUROPE

Trimble GmbH  
 Am Prime Parc 11  
 65479 Raunheim • GERMANY  
 +49-6142-2100-0 Phone  
 +49-6142-2100-550 Fax

### ASIA-PACIFIC

Trimble Navigation  
 Singapore Pty Limited  
 80 Marine Parade Road  
 #22-06, Parkway Parade  
 Singapore 449269 • SINGAPORE  
 +65-6348-2212 Phone  
 +65-6348-2232 Fax



[www.trimble.com](http://www.trimble.com)