The Trimble® S8 Total Station is Trimble's most advanced total station. Designed to deliver unsurpassed performance in both surveying and specialized engineering applications, the Trimble S8 offers 1" angular accuracy and EDM precision of 1 mm + 1 ppm, plus numerous features to enhance efficiency and productivity.

THE MOST ADVANCED TOTAL STATION PLATFORM
The Trimble S8 instrument is built on Trimble’s latest total station platform. Whatever your application in surveying or specialized engineering, you can benefit from the latest optical technology to increase your productivity.

For instance, Trimble® MagDrive™ servo technology ensures the Trimble S8 is fast and silent, so you can survey or monitor (unobtrusively) targets up to 40% faster than conventional motorized total stations, detect movements faster, and initiate alarms earlier. Wear and tear is also greatly reduced due to the MagDrive frictionless motion, making worry-free 24/7 operation possible.

A COMPLETE SYSTEM FOR ENGINEERING APPLICATIONS
The Trimble S8 Total Station works in harmony with Trimble Survey Controller™ field software and the new Trimble® 4D Control software to provide a seamlessly connected, complete solution for specialized applications.

Trimble S8 Total Station
The Trimble S8 is equipped with unique features such as:

- Trimble® FineLock technology is a smart tracker sensor with a narrow field of view that enables the Trimble S8 to detect a target without interference from surrounding prisms. This feature makes the mounting of prisms more flexible, and offers outstanding and reliable accuracy.

- 10 Hz high-speed synchronized data output makes data collection in dynamic applications faster and more accurate. For example, for railway monitoring a trolley or ATV can move more quickly without compromising accuracy.

The flexibility of the Trimble S8 secures your investment and ensures a fast return on investment.
TRIMBLE S8 DR HIGH PRECISION

PERFORMANCE

Angle measurement
Accuracy (Standard deviation based on DIN 18723) 1° (0.3 mgon)

Angle reading (least count)
Standard

Tracking

Averaged observations 0.1° (0.04 mgon)

Automatic level compensator

Type

Accuracy

Range

Distance measurement
Accuracy (S. Dev.)

Prism mode
Standard

Tracking

DR mode
Standard measurement

Tracking

Measuring time
Prism mode
Standard

Tracking

Averaged observations

DR mode
Standard

Tracking

Averaged observations

Range (under standard clear conditions)

Prism mode
1 prism

1 prism Long Range mode

3 prism

3 prism Long Range mode

Shortest possible range

3000 m (9,800 ft)

5000 m (16,400 ft)

7000 m (23,000 ft)

120 m

150 m

1° (0.04 mgon)

1° (0.01 mgon)

4 s

Tracking

Average observations 3–15 s per measurement

EDM SPECIFICATIONS

Light source Laser diode 660 nm; Laser class 1 in Prism mode

Laser class 2 in DR mode

Beam divergence Prism mode
Horizontal

Vertical

Beam divergence DR mode
Horizontal

Vertical

Atmospheric correction

-130 ppm to 160 ppm continuously

GENERAL SPECIFICATIONS

Leveling
Circular level in tribrach

Electronic 2-axis level in
the LC-display with a resolution of

Servo system

MagDrive servo technology,
integrated servo/angle sensor; electromagnetic direct drive

Rotation speed 115 degrees/sec (128)

Rotation time Face 1 to Face 2 3.2 sec.

Positioning speed 180 degrees (200 gnm) 3.2 sec.

Clamps and slow motions

endless fine adjustment

Centering

Centering system

Optical plummet

Built-in optical plummet

Magnification/shortest focusing distance 2.3× (0.5 m–infinity)

Telescope (5 mgon)

Aperture 40 mm

Field of view (300 m (980 ft)) 2.6 m at 100 m (8.5 ft at 328 ft)

USB (short focusing) distance 1.5 m (4.92 ft–infinity)

USB (short focusing) Variable (10 steps)

Tracklight built in

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

Dust and water proofing IP55

Power supply Internal battery

Rechargeable Li-Ion battery 11.1 V, 4.4 Ah

Operating time

One internal battery

Approx. 18 hours

Three internal batteries

in multi-battery adapter

Communications

USB, Serial, Bluetooth

Security

Dual-layer password protection

ROBOTIC SURVEYING

Autolock and Robotic range

3

Passive prisms

500–700 m (1,640–2,297 ft)

Trimble MultiTrack Target

800 m (2,625 ft)

QuickLock

<2 mm

<0.007

<0.2 mm

<2 mm

GPS SEARCh/GEOLOCk with The TRIMBLE MULTITRACK TARGET

GPS Search/GeoLock

360 degrees (400)

or defined horizontal and vertical search window

<15–30 sec

Target re-acquisition time

<3 sec

Specifications subject to change without notice.

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