**TRIMBLE S6 TOTAL STATION**

**POWERFUL AND FLEXIBLE**
The Trimble® S6 Total Station provides the power and flexibility required by today's Surveying Professionals. With the industry's most advanced technology and available feature set, the Trimble S6 Total Station will meet the changing needs of your business, allowing your investment to go further.

**TRIMBLE VISION TECHNOLOGY**
Now available with optional Trimble VISION™ technology, the Trimble S6 gives you the power to see everything the instrument sees without a trip back to the tripod. Direct your survey with live video images on the controller. Now you are free to capture measurements, to prism or reflectorless surfaces, remotely, and with point-and-click efficiency. The on-board camera integrates surveyed data with the live scene images, so you can verify the work that you’ve done before leaving the job site. Calibrated photo documentation provides customers with deliverables they know they can trust.

**TRIMBLE DR PLUS TECHNOLOGY**
Trimble DR Plus™ range measurement technology provides extended range of Direct Reflex measurement without a prism to exceptionally long range distances. Hard-to-reach or unsafe targets are no obstacle to the Trimble S6. Trimble DR Plus, combined with MagDrive™, creates unmatched capability for quick and safe measurements, without compromising on accuracy.

**MAGDRIVE SERVO TECHNOLOGY**
The Trimble S6 Total Station redefines surveying instrument performance with unsurpassed integration of servos, angle sensors and measurement technology. The instrument’s advanced error compensation provides fast, accurate measurement every time. With smooth, silent MagDrive servo motors, the Trimble S6 offers exceptional speed.

**TRIMBLE SUREPOINT ACCURACY ASSURANCE**
The Trimble S6 Total Station aims and stays on target through windy weather, vibrations, handling, and sinkage. Trimble SurePoint™ technology enables the Trimble S6 to actively correct for unwanted movement ensuring accurate pointing and measurement every time. Reduce aiming error, avoid costly re-measurement and be confident in your results with Trimble SurePoint.

With its exclusive MultiTrack™ technology and Target ID capabilities, surveyors can choose the type of target, passive or active, that best suits the jobsite conditions and be confident that they will find and lock to the correct target.

**ELIMINATE SEARCH TIME WITH GPS SEARCH**
With GPS Search the Trimble S6 locks onto a prism in just seconds. Using a consumer grade GPS card with Bluetooth receiver or your survey grade GNSS in a Trimble I.S. rover configuration, GPS Search uses GPS positioning at the robotic rod to locate or reacquire targets rapidly. With GPS Search, waiting for target search becomes a thing of the past.

**INTEGRATED SURVEYING**
Put the equipment in your truck or van to the best possible use by combining your GNSS with your robotic rod into a Trimble I.S. Rover™. In clear sky, enjoy the high productivity of GNSS measurements. In obstructed areas, Trimble Access seamlessly switches to optical measurements. Or collect both GNSS and optical data simultaneously for redundant results. With the Trimble I.S. Rover, you have the freedom to use the best tool for the jobsite conditions, optimizing your productivity.
TRIMBLE S6
DR PLUS

PERFORMANCE
Angle measurement
Sensor type ........................................... Absolute encoder with diametrical reading
Accuracy (Standard deviation based on DIN 18723) ................................... 2" (0.6 mgon)
3" (1.0 mgon), or 5" (1.5 mgon)
Angle Display (least count) ........................................... 0.1" (0.01 mgon)
Automatic level compensator
Type .......................................................... Centered dual-axis
Accuracy .......................................................... 0.5" (0.15 mgon)
Range .......................................................... ± 5.4' (±100 mgon)

Distance measurement
Accuracy (RMSE)
Prism mode
Standard ........................................... 2 mm + 2 ppm (0.0065 ft + 2 ppm)
Standard deviation according to ISO17123-4 ................................... 1 mm + 2 ppm (0.003 ft + 2 ppm)
Tracking .......................................................... 2 mm + 2 ppm (0.0065 ft + 2 ppm)
DR mode
Standard ........................................... 2 mm + 2 ppm (0.0065 ft + 2 ppm)
Tracking .......................................................... 4 mm + 2 ppm (0.013 ft + 2 ppm)

Measuring time
Prism mode
Standard ......................................................... 1.2 sec
Tracking ......................................................... 0.4 sec
DR mode
Standard ......................................................... 1–5 sec
Tracking ......................................................... 0.4 sec

Range
Prism mode (under standard clear conditions1,2)
1 prism .......................................................... 2500 m (8202 ft)
1 prism Long Range mode ................................... 5500 m (18,044 ft) (max. range)
Shortest range ...................................................... 0.2 m (0.65 ft)

DR mode
White card (90% reflective)3 1,300 m (4,265 ft) 1,300 m (4,265 ft) 1,200 m (3,937 ft)
Gray card (18% reflective)3 600 m (1,969 ft) 600 m (1,969 ft) 550 m (1,804 ft)

Shortest range ......................................................... 1 m (3.28 ft)

DR Ranges (typically)
Concrete ......................................................... 600 m–800 m (1968–2624 ft)
Wood construction ................................................... 400 m–800 m (1312–2624 ft)
Metal construction ................................................... 400 m–500 m (1312–1640 ft)
Light rock ......................................................... 400 m–600 m (1312–1968 ft)
Dark rock .......................................................... 300 m–400 m (984–1312 ft)
Reflective foil 20 mm .................................................. 1000 m (3280 ft)

DR Extended Range Mode
White Card (90% reflective)3 2000 m–2200 m
Gray Card (18% reflective)3 900 m–1000 m

Accuracy .......................................................... 10 mm + 2 ppm (0.033 ft + 2 ppm)

Camera
Chip .......................................................... Color Digital Image Sensor
Resolution ....................................................... 2048 x 1536 pixels
Focal length ..................................................... 23 mm (0.07 ft)
Depth of field ..................................................... 3 m to infinity (9.84 ft to infinity)
Field of view .................................................... 16.5° x 12.3° (18.3 gon x 13.7 gon)
Digital zoom .................................................... 4-step (1x, 2x, 4x, 8x)
Exposure .......................................................... Automatic
Brightness ..................................................... User-definable
Contrast .......................................................... User-definable
Image storage .................................................. Up to 2048 x 1536 pixels
File format ...................................................... JPEG

Good
(Good visibility, low ambient light)

Normal
(Normal visibility, moderate sunlight, some heat shimmer)

Difficult
(Haze, object in direct sunlight, turbulence)
GENERAL SPECIFICATIONS

EDM SPECIFICATIONS

Light source ......................................... Pulsed laserdiode 905 nm, Laser class 1
Laser pointer coaxial (standard) ................................................ Laser class 2
Beam divergence
  Horizontal ................................................ 4 cm/100 m (0.13 ft/328 ft)
  Vertical ................................................... 8 cm/100 m (0.26 ft/328 ft)
Atmospheric correction ................................... –130 ppm to 160 ppm continuously

Leveling
  Circular level in tribrach ............................................ 8'/2 mm (8'/0.007 ft)
  MagDrive servo technology, integrated servo/angle sensor electromagnetic direct drive
Rotation speed .............................................. 115 degrees/sec (128 gon/sec)
Rotation time Face 1 to Face 2 .................................................... 2.6 sec
Positioning time 180 degrees (200 gon) ............................................. 2.6 sec
Clamps and slow motions ........................................... Servo-driven, endless fine adjustment
Centering
  Trimble 3-pin
  Built-in optical plummet
Magnification/Shortest focusing distance ..................... 2.3×/0.5 m–infinity (1.6 ft–infinity)
Telescope
  30x
  40 mm (1.57 in)
  2.6 m at 100 m (8.5 ft at 328 ft)
  1.5 m (4.92 ft)–infinity
  Variable (10 steps)
  Not available in all models
Operating temperature ................................... –20 ºC to +50 ºC (–4 ºF to +122 ºF)
Dust and water proofing .................................. IP55
Humidity ............................................................ 100% condensing
Power supply
  Rechargeable Li-Ion battery 11.1 V, 5.0 Ah
  Approx. 6.5 hours
  Approx. 20 hours
  13.5 hours
  Not available in all models
Weight
  Instrument (servo/Autolock) ............................................ 5.15 kg (11.35 lb)
  Instrument (Robotic) ................................................... 5.25 kg (11.57 lb)
  Trimbler CU controller ................................................... 0.4 kg (0.88 lb)
  Trunnion axis height ................................................. 196 mm (7.71 in)
  Communication ................................................ USB, Serial, Bluetooth®
  Dual-layer password protection; available on some models
TRIMBLE S6 TOTAL STATION

ROBOTIC SURVEYING

Autolock and Robotic Range\(^2\)
- Passive prisms: 500 m–700 m (1,640–2,297 ft)
- Trimble MultiTrack Target: 800 m (2,625 ft)

AutoLock pointing precision at 200 m (656 ft) (Standard deviation)\(^2\)
- Passive prisms: <2 mm (0.007 ft)
- Trimble MultiTrack Target: <2 mm (0.007 ft)

Shortest search distance: 0.2 m (0.65 ft)

Type of radio: internal/external: 2.4 GHz frequency-hopping, spread-spectrum radios

Search time (typical)\(^6\): 2–10 sec

GPS SEARCH/GEOLock WITH THE TRIMBLE MULTITRACK TARGET

GPS Search/GeoLock: 360 degrees (400 gon) or defined horizontal and vertical search window

Solution acquisition time\(^7\): 15–30 sec

Target re-acquisition time: <3 sec

Range: Autolock & Robotic range limits

Specifications subject to change without notice.

---

1 Standard clear: No haze. Overcast or moderate sunlight with very light heat shimmer.
2 Range and accuracy depend on atmospheric conditions, size of prisms and background radiation.
3 Kodak Gray Card, Catalog number E1527795.
4 The capacity in –20 ºC (–5 ºF) is 75% of the capacity at +20 ºC (68 ºF).
5 Bluetooth type approvals are country specific. Contact your local Trimble Authorized Distribution Partner for more information.
6 Dependent on selected size of search window.
7 Solution acquisition time is dependent upon solution geometry and GPS position quality.

© 2005–2013, Trimble Navigation Limited. All rights reserved. Trimble, the Globe & Triangle logo and Autolock are trademarks of Trimble Navigation Limited registered in the United States and in other countries. DR Plus, MagDrive, MultiTrack, SurePoint, and Trimble Survey Controller are trademarks of Trimble Navigation Limited. The Bluetooth word mark and logos are owned by the Bluetooth SIG, Inc. and any use of such marks by Trimble Navigation Limited is under license. All other trademarks are the property of their respective owners. PN 022543-098L (06/13)

---

NORTH AMERICA
Trimble Navigation Limited
10368 Westmoor Drive
Westminster CO 80021
USA

EUROPE
Trimble Germany GmbH
Am Prime Parc 11
65479 Baunheim
GERMANY

ASIA-PACIFIC
Trimble Navigation Singapore Pty Limited
80 Marine Parade Road #22-06, Parkway Parade
Singapore 449269
SINGAPORE

TRIMBLE AUTHORIZED DISTRIBUTION PARTNER

---