Trimble S5
TOTAL STATION

TRUSTED PERFORMANCE
All you need to perform efficient surveying campaigns is available in the Trimble® S5 Robotic Total Station solution: An accurate and reliable instrument, DR Plus EDM, MagDrive™ technology, the popular Trimble TSC3 controller with Trimble Access™ field software and quick data processing with Trimble Business Center office software.

Trimble has been manufacturing the industry’s leading robotic total stations for over a decade. You can depend on the Trimble S5 Total Station to keep you productive in the field no matter what you encounter.

Trimble Technology
The Trimble S5 Total Station is built upon proven Trimble technologies like SurePoint™, MagDrive and our DR Plus EDM, helping you work more efficiently while maintaining the highest accuracy possible. Smooth and silent, Trimble MagDrive electro-magnetic technology means fewer moving parts, which reduces servicing requirements. Trimble SurePoint ensures accurate pointing and measurements by actively correcting for unwanted movements like wind, handling, and sinkage. The Trimble DR Plus EDM allows you to measure with fewer instrument set-ups and enhance your direct reflex performance.

Manage Your Assets 24/7
Know where your total stations are 24 hours a day with Trimble L2P technology. See where your equipment is at any given time and get alerts if your instrument leaves a jobsite or experiences unexpected equipment shock or abuse.

Trimble AllTrak™ software lets you view usage and keep up-to-date on firmware, software and maintenance requirements. With Trimble L2P and AllTrak, you can rest assured knowing your equipment is up-to-date and where it should be.

Robotic and Autolock
The Trimble S5 Total Stations are available in robotic or Autolock™-only versions. The Trimble S5 robotic and Autolock versions have an optional TCU data collector with Trimble Access field software for convenient, simple operation in any environment.

Integrated Surveying
The Trimble S5 Total Station provides the foundation for Trimble’s Integrated Surveying™ solutions. With Integrated Surveying, you can seamlessly integrate complementary technologies on the job site, such as Trimble GNSS receivers and optical measurements.

Powerful Field and Office Software
Choose from a variety of Trimble controllers operating the feature rich, intuitive Trimble Access field software. Streamlined workflows guide crews through common project types, helping to get the job done faster with less distractions. Trimble Access workflows can also be customized to fit your needs.

Back in the office, trust Trimble Business Center software to help you check, process and adjust your optical, leveling, and GNSS data in one software solution. No matter what Trimble instruments you use in the field, you can trust that Trimble Business Center office software will help you generate industry-leading deliverables.

Trimble S5 Configurations

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<th>EDM</th>
<th>Angle Accuracy</th>
<th>Servo Control</th>
<th>Active Track</th>
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<td>DR Plus</td>
<td>1&quot;, 2&quot;, 3&quot;, 5&quot;</td>
<td>Robotic, Autolock</td>
<td>Optional</td>
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Key Features
- Everything you need to perform survey campaigns
- Measure further and faster with the Trimble DR Plus EDM
- Trimble L2P real-time equipment management
- Seamless integration with the Trimble V10 Imagine Rover and GNSS receivers
- Intuitive Trimble Access Field Software
- Trimble Business Center Office Software for quick data processing
Trimble S5 TOTAL STATION

PERFORMANCE

Angle measurement
- Sensor type: Absolute encoder with diametrical reading
- Accuracy (Standard deviation based on DIN 18723): 1” (0.3 mgon)
- Angle Accuracy (least count): 0.1” (0.05 mgon)
- Type: Centered dual-axis
- Range: +5.4” (-100 mgon)

Distance measurement
- Accuracy (ISO):
  - Prism mode: 1 mm + 2 ppm (0.003 ft + 2 ppm)
  - Tracking: 4 mm + 2 ppm (0.013 ft + 2 ppm)
- Accuracy (RMSE):
  - DR mode: 0.4 sec
  - Prism mode (under standard clear conditions): 1.2 sec

Measurement time
- Prism mode:
  - Standard: 1 sec
  - Tracking: 0.4 sec
- DR mode:
  - Standard: 1.5 sec
  - Tracking: 0.4 sec

Range:
- Prism mode (under standard clear conditions):
  - 1 prism: 2500 m (8202 ft)
  - Long Range mode: 5500 m (18,044 ft)
- Prism mode (Autolock): 10 mm + 2 ppm (0.033 ft + 2 ppm)
- Tracking:
  - Standard: 4 mm + 2 ppm (0.013 ft + 2 ppm)
  - Tracking: 10 mm + 2 ppm (0.033 ft + 2 ppm)

 EDM SPECIFICATIONS

Light source: Pulsed laser diode 905 nm
Beam divergence: 0.2 m (0.65 ft)
Aperture: 40 mm (1.57 in)
Magnification: 30×
Field of view: 2.6 m at 100 m (8.5 ft at 328 ft)
Shortest focusing distance: 0.2 m (0.65 ft)

SYSTEM SPECIFICATIONS

Laser class:
- Laser class 1
- Laser class 2
- Laser class 2

Optical plummet:
- Built-in optical plummet

Magnification/shortest focusing distance:
- 2.3×/0.5 m–infinity (16 ft–infinity)

Operating conditions:
- Operating temperature: 0°C to +50°C (32°F to 120°F)
- Storage temperature: -20°C to +70°C (4°F to +158°F)
- Humidity: 100% condensing
- Security: Dual-layer password protection, L2P

Communication:
- USB, Serial, Bluetooth®

Other:
- Other

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

Specifications subject to change without notice.

1. Standard deviation according to 1007213-4.
2. Standard clear: No haze. Overcast or moderate sunlight with very light heat shimmer.
3. Range and accuracy depend on atmospheric conditions, paint type, and background radiation.
5. The capacity in +20°C (-5°F) is 75% of the capacity at +20°C (68°F).
6. Bluetooth type approvals are country specific. Contact your local Trimble Authorized Distribution Partner for more information.
7. Depending on selected size of search window.
8. Solution acquisition time is dependent upon solution geometry and GPS position quality.
9. Functionality and availability depend on region.

Contact your local Trimble Authorized Distribution Partner for more information.

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