

Provided by Xpert Survey Equipment
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KEY FEATURES

Everything you need to perform efficient surveying jobs

Built on proven, reliable, Trimble technology

Dependability backed by world-class training, service, and support

Foundation for Integrated Surveying



TRIMBLE S3 TOTAL STATION

EVERYTHING YOU NEED FOR EFFICIENT COAXIAL OPTICS, EDM, TRACKER, LASER POINTER SURVEYING CAMPAIGNS

All you need to perform efficient surveying campaigns is included in the Trimble® S3 Robotic Total Station solution: An accurate and reliable instrument, integrated robotic radio and popular Trimble TSC3 controller optimized for Trimble Access field software, integrated high capacity battery and dual charger. The Trimble TSC3 controller, included in the robotic solution, is a groundbreaking handheld field computing solution that streamlines the flow of everyday surveying work and the number of peripheral devices you need in the field.

The new Trimble S3 Total Station is backed by Trimble's extensive and knowledgeable dealer network providing world-class training, service, and support to maintain your productivity. Whether you need to equip a new survey crew, replace older gear, or start a new office, the Trimble S3 Total Station can be depended on to get the job done well.

PROVEN, RELIABLE TRIMBLE TECHNOLOGY SERVO AND AUTOLOCK

The Trimble S3 Total Station is built upon proven Trimble technologies. The instrument contains the reliable servo drives based on MagDrive electro-magnetic technology with fewer moving parts which reduce servicing requirements. It also includes intelligent battery and power management systems for 6 hours of operation on a single battery, and Trimble DR technology providing exceptional measurement performance and accuracy.

TRIMBLE DR TECHNOLOGY

Direct Reflex (DR) technology from Trimble enables measurement without a prism on almost any type of surface. Operators in the field can capture information on hard-to-reach targets in dangerous/unsafe locations. Measure quickly and safely without compromising accuracy. Overhead cables, tunnels, bridges, quarry faces, stockpiles, buildings, and elevations can all be measured quickly, easily, and safely.

The Trimble S3 Total Station optics by Carl Zeiss are fully coaxial for measurement confidence and reliability. With over 100 years of high accuracy optical instrument knowledge and expertise, Trimble builds the Trimble S3 system with the same high standards of quality that Trimble is known for.

HIGH CAPACITY INTERNAL BATTERY AND INTELLIGENT SYSTEM CHARGER

The Trimble S3 runs for six hours in Robotic mode on one internal integrated lithium-ion battery, with no cable needed. With intelligent batteries, you can immediately check how much power each battery contains. The convenient, all-in-one battery charger included in the Trimble S3 package, allows you to simultaneously recharge your total station and GPS/GNSS system batteries in the same charger.

The Trimble S3 Total Stations are also available in servo or autolock only versions. The Trimble S3 Servo and Autolock versions contain a fixed Control Unit with Trimble Access on board for convenient, simple operation in any environment.

STEPPING INTO INTEGRATED SURVEYING

The Trimble S3 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 GPS/GNSS and optical measurements, which allows you to use the most appropriate tool for the jobsite conditions. Trimble's field and office software combine and manage all the data, making it easy to take advantage of the best that each technology has to offer. Combine the Trimble S3 with Trimble's GNSS receivers to create a Trimble I.S. Rover and start reaping the productivity gains from Integrated Surveying.

For more information about the benefits of Trimble's Integrated Surveying, check out the technical white paper at www.trimble.com/IntegratedSurveyingWP.

TRIMBLE S3 TOTAL STATION

PERFORMANCE

Angle measurement	Accuracy (Standard deviation based on DIN 18723)
Angle reading (least count)	Standard
Tracking	Averaged observations
Automatic level compensator	Type
Accuracy	Range
Distance measurement	Accuracy (RMSE)
Prism mode	Standard
Standard deviation according to ISO17123-4	Tracking
DR mode	Standard measurement
Tracking	Measuring time
Prism mode	Standard
Tracking	DR mode
Standard	Tracking
Range (under standard clear conditions)	Prism mode
1 prism	3 prism
Shortest possible range	

DR mode

	Good	Normal	Difficult
White card (90% reflective)	>400 m (>1,312 ft)	400 m (1,312 ft)	200 m (656 ft)
Gray card (18% reflective)	>250 m (>820 ft)	250 m (820 ft)	150 m (492 ft)

Reflective foil 20 mm	>200 m (656 ft)
Reflective foil 60 mm	>500 m (1,640 ft)
Shortest possible range	1.5 m (4.92 ft)

EDM SPECIFICATIONS

Light source	Laser diode 660 nm; Laser class 1 in Prism mode, Laser class 3R in DR mode
Laser pointer coaxial (standard)	Laser class 3R
Beam divergence Prism mode	Horizontal
Vertical	4 cm/100 m (0.13 ft/328 ft)
Beam divergence DR mode	Horizontal
Vertical	.2 cm/50 m (0.066 ft/164 ft)
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	86 degrees/sec
Rotation time Face 1 to Face 2	3.2 sec
Positioning speed	3.2 sec
Clamps and slow motions	Servo-driven, endless fine adjustment
Centering	Centering system
Trimble 3-pin	Optical plummet
In Tribrach	Magnification/shortest focusing distance
2.3x/0.5 m to infinity (1.6 ft to infinity)	Telescope
Magnification	30x
Aperture	.40 mm (1.57 in)
Field of view at 100 m (328 ft)	2.6 m at 100 m (8.5 ft at 328 ft)
Shortest focusing distance	1.5 m (4.92 ft to infinity)
Illuminated crosshair	Variable (10 steps)
Tracklight built in	Standard
Operating temperature	-20 °C to +50 °C (-4 °F to +122 °F)
Dust and water proofing	IP55
Humidity	100% condensing
Power supply	Rechargeable Li-Ion battery 11.1 V, 4.4 Ah
Internal battery	Operating time
3-15 sec	One internal battery
Approx. 6 hours	Weight
Instrument (Servo & Autolock)	5.6 kg (12.35 lb)
Instrument (Robotic)	5.25 kg (11.57 lb)
Tribrach	0.7 kg (1.54 lb)
Internal battery	0.35 kg (0.77 lb)
Trunnion axis height	196 mm (7.71 in)
Communication	USB, Serial

ROBOTIC SURVEYING

Robotic Range	Passive prisms (Active prisms optional)
300-500 m (984-1,640 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)
.2-10 sec	

SERVO & AUTOLOCK CONTROL PANEL

Display	QVGA, 16 bit color, TFT LCD, backlit (320x240 pixel)
Keyboard	19-key alpha-numeric + 4-way arrow key, dedicated navigation and instrument control key(s)
Audio	Integrated speaker for audio systems events, warnings and notifications
Operating system	Windows Embedded CE 6.0
Memory	128 MB SDRAM, 128 MB Flash Memory
Processor	624 MHz Marvell ARM920T-PXA300 CPU

- Standard clear: No haze. Overcast or moderate sunlight with very light heat shimmer.
- Range and accuracy depend on atmospheric conditions, size of prisms and background radiation.
- Kodak Gray Card, Catalog number E1527795.
- The capacity in -20 °C (-5 °F) is 75% of the capacity at +20 °C (68 °F).
- Dependent on selected size of search window.

Specifications subject to change without notice.



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