

SOKKIA

MADE TO FIT YOUR WORLD.

SX Series

Robotic Total Station





Advanced tracking technology

Incorporating cutting-edge laser and image processing technologies, the SX provides superior prism tracking capability. This professional-grade robotic total station brings world-class performance to any job site.

Like all of our solutions, you can customize it to meet your needs and create your own workflows.

- Exceptionally accurate auto-tracking
- RED-tech reflectorless EDM technology
- Long-range data communication
- RC-PR5 remote control system
- TSshield™ protection
- Waterproof, rugged, and user-friendly

Precision auto-tracking

Even with intensive reflections from behind a prism, or with repetitive interruptions in the line of sight, the SX tightly tracks a moving prism. Advanced tracking algorithms enhance the ability to predict future prism positions, dramatically increasing tracking stability.

Long-range communication

The SX series total station features Bluetooth® Class 1 wireless technology for reliable data communications. All SX data is instantly available on your Bluetooth® equipped controller.

Complete control

The RC-PR5 on-demand remote allows for rapid prism search no matter your position. A built-in directional sensor constantly monitors the prism movement so the SX can turn left or right, whichever direction is closer.



Precise positioning

An advanced six-prism configuration provides unsurpassed measurement precision due to a minimum offset of each prism center.



Advanced angle measurement system

The SX series features our best-in-class absolute encoders that provide long-term reliability in any job site condition. The dual-axis compensator ensures stable measurements even when set up on uneven terrain.



TSshield™

Every SX total station is equipped with a telematics-based multifunction communications module providing the ultimate security and maintenance capabilities for your investment.



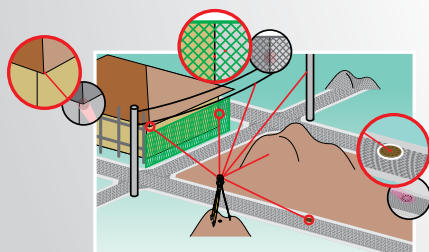
If the activated instrument is lost or stolen, you can send a coded signal to the instrument and disable it, from anywhere in the world.



RED-tech technology reflectorless EDM

- Fast distance measurement of 0.9 s regardless of object
- Pinpoint precision in reflectorless distance measurement
- Reflectorless operation from 30 cm to 1,000 m*
- Coaxial EDM beam and laser-pointer provide fast and accurate aiming
- Ensures accuracy even with reflective sheets

* With Kodak Gray Card white side (90% reflective).
Brightness level at object surface: ≤ 500 lx.



Field ready

- Waterproof / dustproof IP65 rating design handles the toughest environments
- Magnesium-alloy housing provides stable angle accuracy
- Standard usage temperature range of -20 to 50°C

Specifications

MODEL		SX-101T	SX-103T	SX-105T
Rotation Speed / Auto-Tracking Speed		85°/sec (at 20°C) / 20°/sec		
Operating Range		ATP1/ATP1S 360° Prism: 2 to 600 m CP01 mini prism: 1.3 to 700 m OR1PA mini prism: 1.3 to 500 m AP prism: 1.3 to 1,000 m		
Angle Measurement				
Minimum Reading		1" / 5"		
Angle Measurement		1"	3"	5"
Tilt Compensation		Dual Axis, Compensation Range: $\pm 6'$		
Distance Measurement				
Prism	Measuring Range	ATP1/ATP1S 360° Prism: 1.3 to 1,000 m CP01 mini prism: 1.3 to 2,500 m OR1PA mini prism: 1.3 to 500 m AP prism: 1.3 to 6,000 m under good conditions*1		
	Accuracy	$\pm (1.5 \text{ mm} + 2 \text{ ppm} \times D) \text{ mm}$ (D=measuring distance in mm)		
Reflective Sheet Target	Measuring Range*3 Accuracy*3	1.3 to 500 m with RS90N-K reflective sheet $\pm (2 \text{ mm} + 2 \text{ ppm} \times D) \text{ mm}$		
Reflectorless	Measuring Range*2 Accuracy*2	0.3 to 1,000 m under good conditions*1 $\pm (2 \text{ mm} + 2 \text{ ppm} \times D) \text{ mm}$		
Interface and Data Management				
Operating System		Microsoft Windows® CE 6.0		
Display		3.5 in. / Transmissive TFT QVGA color LCD		
Memory		500MB internal memory, USB flash memory (up to 8GB)		
Interface		USB2.0 (Type A/mini B) / RS-232C		
Wireless Communication				
Bluetooth® Class 1		Communication range: 600 m*4		
General				
Dust/Water Rating		IP65 (IEC 60529:2001)		
Operating Temperature		-20°C to 50°C		
Laser Pointer		Coaxial red laser pointer using EDM measuring beam, Class 3R laser		
Guide Light		Green and Red LED, Working range: 1.3 to 150 m		
Size (w x d x h)		230 x 207 x 393 mm		
Power Supply				
BDC70 Standard Battery		7.2 V, 5.2 Ah		
Operating Time		Approx. 4 hours*5		
Signal source / Laser output		Red laser diode (690nm) / Reflectorless mode: Class 3R, Prism / Sheet mode: Class 1 equivalent		
RC-PRS Remote Control System (Option of Auto-Collimating Model)				
Operating Range (slope distance)		Far mode: 2 to 300 m / Standard mode: 2 to 100 m		
Measuring Time		15 sec		

*1 Condition 1: No haze with visibility about 40 km, overcast with no heat shimmer.

*2 Fine mode. With Kodak Gray Card White Side (90% reflective).

Brightness level at object surface: ≤ 500 lx.

When brightness on measured surface is 30,000 lx. or less. Reflectorless range/accuracy may vary according to measuring objects, observation situations and environmental conditions.

*3 When the measuring beam's incidence angle is within 30° in relation to the reflective sheet target.

*4 Wireless communication range may vary depending on obstruction and other environmental conditions.

*5 In continuous face-1 and face-2 observations by using Auto-Collimating.

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