SOKKIA

SX Series
Superior X-ellence Station

The New Definition of Robotics

- Extremely Accurate Auto-Tracking
- RED-tech Technology Reflectorless EDM
- Long-range Data Communication
- RC-PR5 Remote Control System
- Waterproof, Rugged, and Operator Friendly
- MAGNET® Field On-Board Application Software

Tightly Tracks. Accurately Measures.

Extremely Accurate Auto-Tracking

Incorporating the industry's most advanced laser and image processing technologies, the SX offers prism tracking capability that leads the industry and provides exemplary performance on any job site. Advanced tracking algorithms also enhance the ability to predict future prism positions, dramatically increasing tracking stability. Even with intensive reflections from behind a prism, or with repetitive interruptions in the line-of-sight, the SX tightly tracks a moving prism.

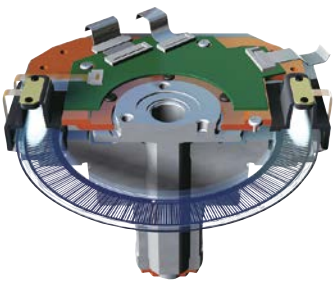
RED-tech Technology Reflectorless EDM

- Fast distance measurement of 0.9s regardless of object.
- Sokkia traditional 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.

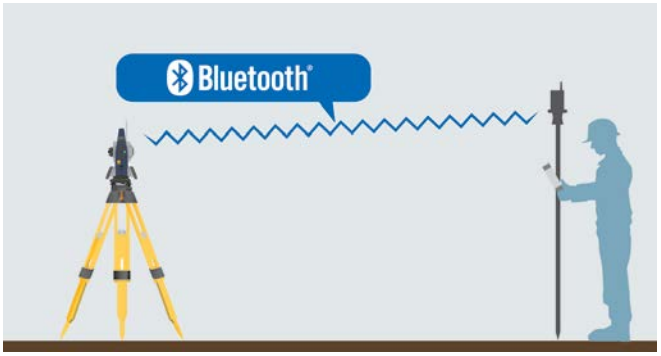
*With Kodak Gray Card white side (90% reflective). Brightness level at object surface: ≤500 lx.

Advanced Angle Measurement System

- SX features Sokkia's original absolute encoders that provide long-term reliability in any job site condition. Dual-axis compensator ensures stable measurements even when setup on uneven terrain.
- Sokkia's traditional motion clamp and tangent screw are employed to ensure stable angle measurement.



Long-range Data Communication



- The SX series of total stations features *Bluetooth*® Class1 wireless technology for reliable data communications.
- All SX data is instantly available at the *Bluetooth*®-equipped controller.

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

RC-PR5 Remote Control System

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.

* Red fan beam image is for explanation purposes only. The actual search beam is an eye-safe Class 1 invisible laser.

Cloud-based Solutions for Precise Positioning*

Advanced six-prism configuration provides unsurpassed measurement precision due to a minimum offset of each prism center. ATP1 fits a range pole; ATP1S sliding prism is designed for a pin pole.

ATP1 360° Prism

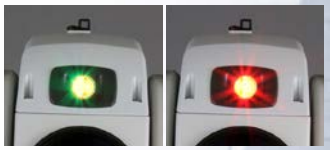
ATP1S Sliding Prism

Waterproof, Rugged, and Operator Friendly

- IP65 dustproof / waterproof rating.
- Metal chassis and heavy duty handle.
- Standard usage temperature range -20 to +50°C.

- New star key instantly brings up functions.
- Trigger key lets you take a series of measurements without removing your eye from the telescope.
- Control panel consists of 10-key pad with color LCD touch screen display.
- USB type A / mini B ports as well as serial ports.

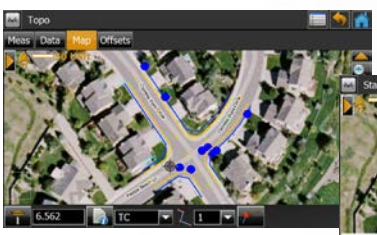
- Green / Red telescope guide lights provide efficient guidance in a range up to 150 m.



MAGNET®

- **Cloud-based Solutions for Precise Positioning**
  MAGNET® is a software family that uses the "cloud" to seamlessly connect the field and office for data exchange, communications, asset tracking and more. Real-time connections. When you need it. Where you need it.

- **MAGNET® Field**
  Data collection, stakeout, roads, and coordinate geometry.



MAGNET™ Field

World's First integrated support service

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 an activated instrument is lost or stolen, you can send a coded signal to the instrument and disable it – Your total station is secure anywhere in the world!

And, in the same module, you have daily connectivity to cloud-based Sokkia servers that can inform you of available software updates and firmware enhancements.

*For more detail of TSshield, please refer to the TSshield's leaflet.

TS shield

SX Series

Superior X-ellence Station

SX-101T/SX-103T/SX-105T

SPECIFICATIONS

Product Type		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 (6.6 to 1,969 ft.), CP01 mini prism: 1.3 to 700 m (4.3 to 2,297 ft.),		
		OR1PA mini prism: 1.3 to 500 m (4.3 to 1,640 ft.) , AP prism: 1.3 to 1,000 m (4.3 to 3,281 ft.)		
Angle Measurement				
Minimum Reading		1" / 5"		
Angle Measurement		1"	3"	5"
Tilt Compensation		Dual Axis, Compensation Range: ±6'		
Distance Measurement				
Prism	Measuring Range	ATP1/ATP1S 360° Prism: 1.3 to 1,000 m (4.3 to 3,281 ft.), CP01 mini prism: 1.3 to 2,500 m (4.3 to 8,200 ft.),		
		OR1PA mini prism: 1.3 to 500 m (4.3 to 1,640 ft.) , AP prism: 1.3 to 6,000 m (4.3 to 19,685 ft.) under good conditions*1		
	Accuracy	±(1.5mm + 2ppm x D) mm (D=measuring distance in mm)		
Reflective Sheet Target	Measuring Range*3	1.3 to 500 m (4.3 to 1,640 ft.) with RS90N-K reflective sheet		
	Accuracy*3	±(2mm + 2ppm x D) mm		
Reflectorless	Measuring Range*2	0.3 to 1,000 m (1 to 3,281ft.) under good conditions*1		
	Accuracy*2	±(2mm + 2ppm x D) mm		
Interface and Data management				
Operating System / Processor		Microsoft Windows® CE 6.0		
Display		3.5in. / 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 (1,969 ft.)*4		
General				
Dust/Water Protection		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 (4.3 to 492 ft.)		
Size		W230 x D207 x H393mm (W9.1 x D8.2 x H15.5in.)		
Weight		Approx. 6.9kg (15.2 lb.)		
Power supply				
BDC70 Standard Battery		7.2V, 5.2Ah		
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-PR5 Remote Control System (Option of Auto-Collimating Model)				
Operating Range (slope distance)		Far mode: 2 to 300 m (6.6 to 984 ft.) / Standard mode: 2 to 100 m (6.6 to 328 ft.)		
Measuring Time		15 sec		

*1 Condition 1: No haze with visibility about 40km, 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.

Standard Accessories

- SX main unit
- Battery (BDC70)
- Battery charger (CDC68)
- Power Cable
- Operation manual
- USB memory
- Carrying case
- Carrying strap
- Lens cap
- Lens hood
- Tool pouch
- Screwdriver
- Lens brush
- Adjusting pin x2
- Cleaning cloth
- Laser caution sign-board

SOKKIA

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Specifications subject to change without notice

SOK-1014 Rev B 10/14

Your local Authorized Dealer is: