SRX

SRX1X SRX2X SRX3X SRX5X

SPECIFICATIONS

Model		SRX1X	SRX2X	SRX3X	SRX5X
Telescope		Fully transiting, coaxial optics for sighting, EDM, Auto-Tracking/-Pointing			
		Length: 168mm (6.61in.), Objective aperture: 45mm (1.77in.) [EDM/Auto-Tracking: 50mm (1.97in.)], Magnification: 30x, Resolving power: 2.5", Minimum focus: 1.3m (4.3ft.), Field of view: 1°30', Reticle illumination: 5 brightness levels			
Angle measurement		Rotary absolute encoder scanning. Both circles adopt diametrical detection.			
Accuracy (ISO17123-3:2001)		1" (0.3mgon)	2" (0.6mgon)	3" (1mgon)	5" (1.5mgon)
Display resolution (selectable)		0.5"/1" (0.0001/0.0002gon, 0.002/0.005mil)		1"/5" (0.0002/0.001gon, 0.005/0.02mil)	
IACS (Independent Angle Calibration System)		Provided		-	
Dual-axis compensator		2-axis liquid tilt sensor, Working range: ±4' (±74mgon)			
Collimation compensation		On / Off, selectable			
Distance measurement		Coaxial phase shift measuring system			
Signal source / Laser output*1		Red laser diode (690nm) / Reflectorless mode: Class 3R, Prism/Sheet mode: Class 1 equivalent			
Measuring range*2	1 AP prism	1.3 to 5,000m (4.3 to 16,404ft.) / to 6,000m (to 19,685ft.) under good conditions*3			
	3 AP prisms	to 8,000m (26,247ft.) / to 10,000m (32,808ft.) under good conditions*3			
	ATP1/ATP1S 360° Prism	1.3 to 1,000m (4.3 to 3,281ft.)			
	Reflective sheet target*4	1.3 to 500m (4.3 to 1,640ft.) with RS90N-K (90x90mm) reflective sheet			
	Reflectorless*5*6	0.3 to 800m (1 to 2,625ft.) / 0.3 to 1,000m (1 to 3,281ft.)*7			
Accuracy*2 (ISO17123-4:2001) (D=measuring distance in mm)	Prism	(1.5 + 2ppm x D)mm			
	Reflective sheet target*4	(2 + 2ppm x D)mm			
	Reflectorless*5*6	(2 + 2ppm x D)mm : D≦200m (D≦656ft.)*8 (5 + 10ppm x D)mm : 200<D≦350m (656<D≦1,148ft.) (10 + 10ppm x D)mm : 350<D≦1,000m (1,148<D≦3,281ft.)			
Measuring time*6		Fine: Every 0.9s (initial 1.5s), Rapid: Every 0.6s (initial 1.3s), Tracking: Every 0.4s			
Auto-Tracking*9 / Auto-Pointing / Motor drive					
Operating range*10	AP prism	1.3 to 1,000m (4.3 to 3,281ft.)			
	ATP1/ATP1S 360° Prism	2.0 to 600m (6.6 to 1,969ft.)			
	Reflective sheet target*11	5 to 50m (16.4 to 164ft.): Auto-Pointing only			
Laser		Infrared laser diode (980nm), Class 1 laser*1			
Rotation speed at 20°C (68°F)		Max. 60°/s (approx. 7s for 180° rotation)			
Fine motion		Programmable 2-speed jog dials			
Interface and Data management					
Operating system		Windows CE Ver.5.0			
Display	Size / Type	3.7 inch / Transmissive TFT QVGA color LCD with LED backlight			
	Brightness control	Automatic control / 9 levels manual adjustment			
Keyboard		Fully backlit 32 keys and 1 trigger key			
Data storage		750MB internal memory, CF card (up to 4GB), USB flash memory (up to 4GB)			
Interface		USB1.1 Host (Type A) and Client (Type mini B) / RS-232C (baud rate: 1,200 to 38,400bps)			
Bluetooth wireless*12 (built into RC-TS3 / H-BT1 handles)		Ver.2.0+EDR, Class 1, Communication range: 300m (984ft.)*13			
General					
Laser pointer		Coaxial red laser pointer using EDM measuring beam, Class 3R laser*1			
Guide light		Green and Red LED, Working range: 1.3 to 150m (4.3 to 492ft.)			
Sensitivity of levels	Plate level	20"/2mm	30"/2mm		
	Circular level	10'/2mm			
Optical plummet	Magnification / Minimum focus	5.5x / 0.3m (1ft.)	3x / 0.3m (1ft.)		
Handles		RC-TS3: Bluetooth + RC-Detector / H-BT1: Bluetooth / H-BC1: Basic			
Dust and water protection		IP64 (IEC 60529:2001)			
Operating temperature		-20 to +50°C (-4 to +122°F)			
Size (with handle)	Single display model	W201 x D202 x H375mm (W7.91 x D7.95 x H14.76in.)			
	Dual display model	W201 x D220 x H375mm (W7.91 x D8.66 x H14.76in.)			
Weight (with battery and RC-TS3 handle)		Single display model: 7.6kg (16.8 lb.) / Dual display model: 7.8kg (17.2 lb.)			
Power supply					
BDC58 standard battery		Li-ion rechargeable battery, 7.2V, 4.3Ah, 195g (6.9oz.), 2 pcs. included as standard			
Operating time in Auto-Tracking/-Pointing mode*14		Approx. 4 hours (approx. 8 hours using two standard batteries)			
Recharging time with CDC68 standard charger		Approx. 4 hours (two batteries can be recharged consecutively)			

RC-PR4 On-Demand Remote Control System

Operating range (slope distance)	Far mode: 2 to 300m (6.6 to 984ft.) / Standard mode: 2 to 100m (6.6 to 328ft.)
Bluetooth wireless*12	Ver.2.0+EDR, Class 1, Communication range: 300m (984ft.)*13
Dust and water protection	IP55 (IEC 60529:2001)
Size / Weight (with battery)	W80.5 x D69 x H131mm (W3.17 x D2.72 xH 5.16in.) / 410g (14.5 oz.)
Operating time with BDC46B battery	Far mode: Approx. 35 hours / Standard mode: Approx. 40 hours

*1 IEC60825-1: Ed.2.0:2007 / FDA CDRH 21 CFR Part 1040.10 and 1040.11 *2 Under average conditions: Slight haze, visibility about 20km (12 miles), sunny periods, weak scintillation. *3 Under good conditions: No haze, visibility about 40km (25 miles), overcast, no scintillation. *4 When the measuring beam's incidence angle is within ±30° to the target surface. *5 With Kodak Gray Card white side (90% reflective). *6 Reflectorless range/accuracy/time may vary depending on measuring objects, observation situations and environmental conditions. *7 Brightness level at object surface: ≦500 lx. *8 (5 + 2ppm x D)mm: 0.3≦D≦0.66m (1≦D≦2.17ft.) *9 Auto-Tracking models only. *10 Atmospheric conditions: No haze, visibility 20km (12 miles) or more, slightly overcast (brightness 30,000 lx. or less), no scintillation. *11 When the measuring beam's incidence angle is within ±15° to the target surface. *12 Availability and usage approval of *Bluetooth* wireless technology varies according to country. Please consult your local Sokkia office or representative in advance. *13 Range between SRX and RC-PR4. *14 Continuous Auto-Tracking and distance measurement, or Auto-Pointing by both faces with 180° H&V rotation and fine-single distance measurement every 30s, at 20°C (68°F).

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SOKKIA

SRX

New Generation Robotics

Rapidly Points. Accurately Measures.

Superior Auto-Pointing Technology

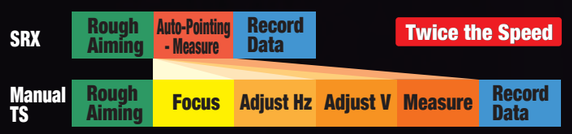
Incorporating cutting-edge laser and image processing technologies, the SRX provides extremely reliable auto-pointing capability. Even in dense woods or in dim light conditions, the SRX rapidly finds a prism and accurately measures its position, ensuring maximum work efficiency under all job site environments. The SRX provides a wide auto-pointing range from 1.3m to 1,000m with a standard prism.

■ Simple and Easy

Point the SRX in the general direction of the prism, press a trigger key, and the SRX automatically points to the prism center. This enables even a beginner to rapidly take accurate measurements.

■ Faster, Less Effort

By eliminating the need for focusing telescope and adjusting fine motion screws, the SRX dramatically increases survey speed.



■ Reducing Eye Strain

Operators do not need to specifically look through a telescope, which can cause eye strain.

■ Consistent Speed and Precision

With a manual total station, operator's fatigue may directly or indirectly cause a decline in work efficiency and accuracy. The Auto-Pointing capability of the SRX brings another benefit that provides consistent survey speed and precision regardless of operator's physical conditions.

Robust Auto-Tracking (Auto-Tracking models)

Sokkia's state-of-the-art technology dramatically increases auto-tracking capability. Even with intensive reflections from behind a prism, or with repetitive interruptions in the line-of-sight, the SRX tightly tracks a moving prism. The optional RC-PR4 On-Demand Remote allows for rapid prism search no matter an operator's position.


RC-TS3 handle


RC-PR4


ATP1 360° Prism

New Technologies Boost All Survey and Setting-out Efficiencies

■ 1,000m (3,281ft.) Reflectorless Measurement

The RED-tech 800 EDM incorporates new optical design, enhanced signal processing algorithms and ultra-high signal modulation frequencies of up to 468.75MHz. These advanced technologies increase both measurement accuracy and range … with or without reflectors.

RED-tech 800
Revolutionary Digital Processing EDM Technology

Ultra-Narrow Laser Beam

Ultra-narrow red laser beam is also used for a laser pointer, ensuring exceptional pinpoint precision in reflectorless measurement. In the modes for prism or sheet target, laser output level is automatically switched to Class 1 equivalent for eye safety.

Measuring beam spot size (reflectorless mode)

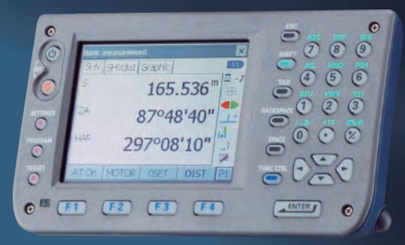
Distance	10m (33ft.)	40m (131ft.)	100m (328ft.)	300m (984ft.)	500m (1,640ft.)
Beam spot size (height x width)	7 x 9mm (0.28 x 0.35in.)	14 x 14mm (0.55 x 0.55in.)	29 x 24mm (1.14 x 0.94in.)	76 x 56mm (2.99 x 2.2in.)	123 x 89mm (4.84 x 3.5in.)

■ Technologies for Angle Measurement

Market-proven absolute encoder system provides accurate and reliable angle readings as well as long-term durability. One and two-arc second models (1" and 2") incorporate IACS (Independent Angle Calibration System) for maximum dependability. Programmable two-speed jog dials offer optimum motions to all users. New telescope maintains the industry's highest 2.5" resolving power. The SRX ensures unmatched precision and productivity even in manual angle readings, an important feature for accurate reflectorless measurement.

■ 3.7 inch Display with Automatic Brightness Control

Large 3.7 inch LCD display offers superior visibility even under direct sunlight. Using a built-in light sensor, the LCD brightness is automatically adjusted to optimum level.



■ Guide Light

Highly visible green and red LEDs allow for quick prism placement on the line of sight in a wide range of 1.3 to 150m (4.3 to 492ft.), significantly increasing setting-out/stakeout efficiency. It also assists the users with color perception disability by differentiating flashing pattern of each LED.

■ SSF Software

Spectrum Survey Field software offers full features of data collection, setting-out and calculation. An onboard version of this software is ideal for standalone use of the SRX Auto-Pointing models.