SOKKIA

SRX

New Generation Robotics



## **■ Extremely Robust Auto-Tracking**

Incorporating cutting-edge laser and image processing technologies, the SRX offers extremely robust prism tracking capability that 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 SRX tightly tracks a moving prism.



The RC-PR4 On-Demand Remote allows for rapid prism search no matter your position. A built-in directional sensor constantly monitors the prism movement so the SRX can turn left or right whichever direction is closer. The SRX stops turning as soon as it detects the vertical laser fan beam projected by the RC-PR4 to quickly locate the prism. Class 1 *Bluetooth*® technology creates a strong data link between the SRX and a data collector at distances up to 300m (984ft.).



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



RC-TS3 handle



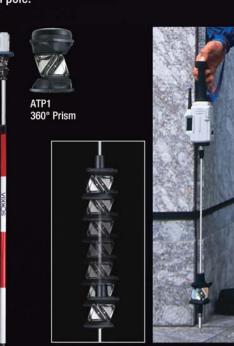
RC-PR4



Predicting future prism positions

#### ■ Precision 360° Prisms

Advanced 6-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.



ATP1S sliding prism

# **New Technologies Boost All Robotic Performances.**

## ■ 1000m (3281ft.) 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.



### **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	7 x 9mm	14 x 14mm	29 x 24mm	10.000 (10.0000	123 x 89mm
(height x width)	(0.28 x 0.35in.)	(0.55 x 0.55in.)	(1.14 x 0.94in.)		(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.

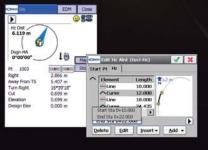


#### SSF Software

Spectrum Survey Field data collection software offers full robotic control capability. An onboard version of this software is also available for standalone use of the SRX.











### **SPECIFICATIONS**

				OI LOIT		
Model		SRX1X	SRX2X	SRX3X	SRX5X	
Telescope		Fully transiting, coaxial	optics for sighting, EDM, A	uto-Tracking/-Pointing		
100			olving power: 2.5", Minimu	mm (1.77in.) [EDM/Auto-Tra im focus: 1.3m (4.3ft.), Fie		
Angle measurement		Rotary absolute encode	r scanning. Both circles ad	opt diametrical detection.		
Accuracy (ISO17123-3:2001)		1" (0.3mgon)	2" (0.6mgon)	3" (1mgon)	5" (1.5mgon)	
Display resolution (selectable)		0.5"/1" (0.0001/0.0002	gon, 0.002/0.005mil)	1"/5" (0.0002/0.001gon	, 0.005/0.02mil)	
IACS (Independent Angle Calibrat	ion System)	Provided				
Dual-axis compensator			Working range: ±4' (±74r	ngon)		
Collimation compensation	, in the second	On / Off, selectable	15/1/31 11/13			
Distance measurement		Coaxial phase shift mea	CONTROL OF THE PARTY OF THE PAR			
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 <sup>13</sup>				
	3 AP prisms	to 8,000m (26,247ft.) / to 10,000m (32,808ft.) under good conditions <sup>-3</sup>				
		1.3 to 500m (4.3 to 1,640ft.) with RS90N-K (90x90mm) reflective sheet				
Accuracy*2	Reflectorless*5*6 Prism	0.3 to 800m (1 to 2,625ft.) / 0.3 to 1,000m (1 to 3,281ft.) <sup>77</sup>				
(ISO17123-4:2001)	Reflective sheet target*4					
(D=measuring distance in mm)	Reflectorless*5*6					
	Reflectoriess	(2 + 2ppm x D)mm : D≦200m (D≦656ft.)*® (5 + 10ppm x D)mm : 200 <d≦350m (656<d≦1,148ft.)<="" td=""></d≦350m>				
		(5 + 10ppm x D)mm : 200 <d≦350m (650<d≦1,146ft.)<br="">(10 + 10ppm x D)mm : 350<d≦1,000m (1,148<d≦3,281ft.)<="" td=""></d≦1,000m></d≦350m>				
Measuring time*6	11111			initial 1.3s), Tracking: Every	/ 0.4s	
Auto-Tracking / Auto-Pointing	/ Motor drive				777.5	
Operating range*9	A CONTRACTOR OF THE PARTY OF TH	1.3 to 1,000m (4.3 to 3	,281ft.)			
		n 2.0 to 600m (6.6 to 1,969ft.)				
		5 to 50m (16.4 to 164ft.): Auto-Pointing only				
Laser		Infrared laser diode (980nm), Class 1 laser <sup>11</sup>				
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 managemen	nt					
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 an				
Data storage		750MB internal memory, CF card (up to 4GB), USB flash memory (up to 4GB)				
Interface				S-232C (baud rate: 1,200 t	o 38,400bps)	
Bluetooth wireless*11 (built into RC	-TS3 / H-BT1 handles)	Ver. 2.0 + EDR, Class 1, C	Communication range: 300	m (984ft.)*12		
General						
Laser pointer			r using EDM measuring be			
Guide light	Plate level		rking range: 1.3 to 150m	(4.3 to 492ft.)		
Sensitivity of levels	Plate level Circular level	20"/2mm 10'/2mm	30"/2mm			
Optical plummet	Magnification / Minimum focus		3x / 0.3m (1ft.)			
Handles	magnineacion/ Minimum 10cus		C-Detector / H-BT1: Blueto	oth / H-BC1 · Basic		
Dust and water protection		IP64 (IEC 60529:2001)	Detector / H-DIT. Blueto	outi / ir bc1. basic		
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	-	onigio dispidi, modeli, /	. a. ( , 2010 10 ) / , Dadi dispi	e, modernions (x iz lo.)		
BDC58 standard battery		Li-ion rechargeable batt	erv. 7.2V. 4.3Ah. 195a (6.	9oz.), 2 pcs. included as sta	indard	
Operating time in Auto-Tracking/-Pointing mode*13		Li-ion rechargeable battery, 7.2V, 4.3Ah, 195g (6.9oz.), 2 pcs. included as standard  Approx. 4 hours (approx. 8 hours using two standard batteries)				
Recharging time with CDC68 standard charger		Approx. 4 hours (two hatteries 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*11	Ver.2.0+EDR, Class 1, Communication range: 300m (984ft.)*12		
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: 0.35D\$0.66m (1\$D\$2.17ft.) \*9 Atmospheric conditions: No haze, visibility 20km (12 miles) or more, slightly overcast (brightness 30,000 lx. or less), no scintillation. \*10 When the measuring beam's incidence angle is within ±15° to the target surface. \*11 Availability and usage approval of Bluetooth wireless technology varies according to country. Please cording to country. Please cording to country. Please cording to country. Please the variety of the surface and fine-single 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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