



R9 ROBOTIC TOTAL STATION



RC9 FIELD CONTROLLER



R9 ROBOTIC TOTAL STATION

Technical Data



Technical features		R9 ROBOTIC TOTAL STATION	
Angle measurement		2" Type	3" Type
Accuracy	Hz:	2" (0.6 mgon)	3" (1 mgon)
(standard deviation, ISO 17123-3)	Display resolution:	0.1"(0.1 mgon)	0.1"(0.1 mgon)
Method	absolute, continuous, diametrical	0.1"(0.1 mgon)	0.1"(0.1 mgon)
Compensator	Working range:	4' (0.07 gon)	4' (0.07 gon)
	Setting accuracy:	0.5" (0.2 mgon)	1.0" (0.3 mgon)
	Method:	centralized dual axis compensator	
Distance measurement			
Range	Round prism:	3000 m	
(average atmospheric conditions)	360° reflector:	1500 m	
	Mini prism:	1200 m	
	Reflective tape (60 x 60 mm):	250 m	
	Shortest measurable distance:	1.5 m	
Accuracy / Measurement time	Standard mode:	1 mm + 1.5 ppm / typ. 2.4sec	
	Fast mode:	3 mm + 1.5 ppm / typ. 0.8 s	
	Tracking mode:	3 mm + 1.5 ppm / typ. 0.15 s	
	Display resolution:	0.1 mm	
Method	Phase measurement (coaxial, visible red laser)		
DR reflectorless distance measurement			
Range	DR 400 - 400m model	400 m / 200 m (Kodak Grey Card: 90% reflective / 18% reflective)	
	DR1000 - 1000m model	1000 m / 500 m (Kodak Grey Card: 90% reflective / 18% reflective)	
	Shortest measurable distance:	1.5 m	
	Long Range to round prism:	1000 m - 7500 m	
Accuracy / Measurement time	Reflectorless < 500 m:	2 mm + 2 ppm / typ. 3-6 s, max. 12 s	
(standard deviation, ISO 17123-4)	Reflectorless > 500 m:	4 mm + 2 ppm / typ. 3-6 s, max. 12 s	
(object in shade, sky overcast)	Long Range:	5 mm + 2 ppm / typ. 2.5 s, max. 12 s	
Laser dot size	At 20m:	approx. 7 mm x 14 mm	
	At 100 m:	approx. 12 mm x 40 mm	
	At 200 m:	approx. 25 mm x 80 mm	
Method	DR400 / DR1000	Phase measurement (coaxial, visible red laser)	
Motorized			
Maximum speed	Rotating speed:	45° / s	
iLock (Target Recognition)			
Range iLock mode	Round prism:	1000 m / 800 m	
	360° reflector:	600 m / 500 m	
	Mini prism:	500 m / 400 m	
	Reflective tape (60 x 60 mm):	55 m	
	Shortest measurable distance:	1.5 m / 5 m	
Accuracy / Measurement time	Positioning accuracy:	< 2 mm	
	Measurement time:	3 - 4 s	
Maximum speed (LOCK mode)	Tangential (standard mode):	5 m/s at 20 m, 25 m/s at 100 m	
	Radial (tracking mode):	4 m/s	
Method	Digital image processing (laser beam)		
SureBeam			
Range (average atmospheric conditions)	Working range:	5 m - 150 m	
Accuracy	Positioning accuracy:	5 cm at 100m	

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General data	R9 ROBOTIC TOTAL STATION
Telescope	
Magnification:	30X
Free objective aperture:	40 mm
Field of view:	1°30' (1.66 gon) / 2.7 m at 100m
Focusing range:	1.7 m to infinity
Keyboard and display	
Display:	1/4 VGA (320*240 pixels), graphic LCD, illumination, touch screen
Keyboard:	28 keys (6 function keys, 12 alphanumeric keys)
Angle display:	360° ' ", 360° decimal, 400 gon, 6400 mil, V%
Distance display:	meter, int. Ft, int. ft/inch, US ft, US ft/inch
Position:	Face I standard
Data Storage	
Memory card:	CF cards (256 MB)
Interfaces:	RS232, Bluetooth
Circular level	
Sensitivity:	6' / 2 mm
Laser plummet	
Centering accuracy:	1.5 mm at 1.5 m
Laser dot diameter:	2.5 mm at 1.5 m
Endless drives	
Number of drives:	1 horizontal / 1 vertical
Battery	
Type:	Lithium-Ion
Voltage:	7.4 V
Capacity:	3.8 Ah
Operating time:	Typically 5-8 hours
Weight	
Total station:	5.5 Kg
Battery:	0.2 Kg
Tribrach:	0.8 Kg
Environmental specifications	
Working temperature range:	-20°C to +50°C
Storage temperature range:	-40°C to +70°C
Dust / water (IEC 60529):	IP54
Humidity:	95%, non-condensing

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Technical features	RC9 FIELD CONTROLLER
Technical Specifications	
Communication	via integrated radio modem
Control unit	
Display:	1/4 VGA (320*240 pixels), graphic colour LCD, illumination, touch screen
Keyboard:	62 keys (12 function keys, 40 alphanumeric keys), illumination
Interface:	RS232
Battery	
Type:	Lithium-Ion
Voltage:	7.4 V
Capacity:	1.9 Ah
Operating time:	typ. 8 h
Weights	
Control Unit:	0.8 Kg
Battery:	0.1 Kg
Reflector pole adapter:	0.25 Kg
Environmental specifications	
Working temperature range:	-30°C to +50°C
Storage temperature range:	-40°C to +80°C
Dust / water (IEC 60529):	IP67
Waterproof (MIL-STD-810F)	temporary submersion to 1 m



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