

RTS100

Series Total Station

The RTS100 series total station adopts a newly designed bracket and a completely new design on the internal structure. Rubber pads are added to all gaps in the instrument, making the protection grade to IP66. Built-in large-capacity memory and various application survey programs, powerful, stable performance and easy to use. It is suitable for surveying work such as construction stake-out, road stakeout, topographic cadastral survey and control point surveying.

- New bracket design
- 32-bit microprocessor
- Absolute coding system
- USB port rapid communication
- Laser ranging, long prism-free ranging (R series)
- Large-capacity storage, expandable SD card (standard 4G)
- Large capacity lithium battery
- Optimize software workflow
- New rapid digital rangefinder

Product Specification

Telescope		Compensator	Dual-axis
Length	156mm	Range	±3'
Image	Erect	Setting accuracy	1"
Objective aperture	φ45mm	Level vial sensitivity	
Magnification	30 ×	Plate level vial	30" / 2mm
Field of view	1° 30'	Circular level vial	8' / 2mm
Shortest focus distance	1.0m	Laser plummet (Standard) *4	
Angle measurement		Accuracy	±1mm / 1.5m
Reading system	Absolute encoder	Laser class	Class 2 / IEC60825-1
Angel unit	360° /400gon/6400mil, selectable	Laser spot brightness	Adjustable
Display resolution	1"/5" /10" (or 0.2mgon / 1mgon / 2mgon)	Laser wave length	635nm
Accuracy * 1	RTS102: 2" RTS105: 5"	Optical plummet (Factory Optional)	
Distance measurement		Accuracy	±0.8mm / 1.5m
Laser class (IEC60825-1)		Image	Erect
Reflectorless	Class 3R	Magnification / Field of view	3 × / 4°
Reflective sheet / RP60	Class 3R	Focus range	0.5m to ∞
Prism	Class 1	Power	
Measurement range (Good condition)*2		Battery	3400mAh Li-ion Rechargeable
Reflectorless*3	R600: 1 to 600m R1000: 1 to 1000m	Output voltage	7.4V DC
Reflective sheet / RP60	1 to 800m	Continuous operation time	Approx. 26 hours (At + 20° C) (Single distance measurement every 30 seconds)
Single prism	1 to 5000m	Charger	FDJ6-LI (100V / 240V)
Accuracy		Charging time (at + 20° C)	Approx.4 hours
Prism	2mm+2ppm	Application programs	
Reflective sheet/RP60	3mm+2ppm	Data collection / Stake out / Resection / REM / MLM / Road AREA / Point to line / Z coordinate / OFFset / Arc staking out	
Reflectorless	R600: 1-150m: 3mm+2ppm; 150-300m:5mm+3ppm; >300m: 10mm+5ppm R1000: 1-150m: 3mm+2ppm; 150-300m:5mm+3ppm; 300-500m: 10mm+5ppm >500m: 20mm+10ppm	Others	
Measuring time	Initial: 2s Prism typ.1.0-1.5s Reflective sheet/RP60 typ.1.5s Reflectorless typ.1.5-5s, max.20s	Display	LCD, 6lines X 20characters (96 X 160 dots)
Display resolution (m/inch selectable)	0.2mm/1mm	CPU	32Bit
Temperature input range	-40° C to + 60° C (1° C steps)	Memory	120000 points, support SD card (max. 16G)
Pressure input range	500hPa to 1500hPa (1hPa steps)	Keyboard	Alphanumerical key board, both sides
Prism constant correction	-99.9mm to +99.9mm	Weight (including batteries)	5.1kg
		Dimensions (W x D x H)	175 x 178 x 340mm
		Operating temperature	-20° C to + 50° C
		Storage temperature	-40° C to + 70° C
		Interface	USB / RS-232C / Bluetooth (Factory Optional)
		Water and dust protection	IP66 (IEC60529)
		Data transfer software	Geomatics Office
		Data collector	F58, fully rugged PDA (Optional)

*1 Standard deviation based on ISO17123-3

*3 Reflector: White side of Kodak Gray Card with 90% reflective

*2 Good conditions: no haze, visibility about 40km, no heat shimmer, breeze

*4 Laser plummet mounted on the bottom of the vertical axis

Illustrations, descriptions and technical specifications are not binding and may change



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