RTS010A Robotic Total Station

- Angle measurement accuracy: ± 0.5″ / 1″ , distance measurement accuracy: 1mm+1ppm(Prism)
- 1000m long range reflectorless distance measurement
- Vertical shafting: dense ball bearing and four detectors design;
  Horizantal shafting: unitary and four detectors design
- Adopts up-to-date automatic target recognition and positioning technology
- Supports SDK and external control protocol for software developing
- Windows CE 7.0 operating system, onboard software: FOIF Survey,FOIF Fieldgenius or Carlson SurvCE
- Applied for high precision surveying areas, such as rail traffic monitoring, dam monitoring

RTS010A Robotic Total Station

Technical data

RTS010A	
Telescope	
Resolution/Image	3″ / Erect
Objective aperture	Φ45,EDMΦ50
Magnification	30x
Field of view	1° 30′
Shortest focus distance	1.0m
Angle measurement	
Reading system	Absolute encoder(four detectors)
Angle unit	360° (dms/d)/400gon/6400mil
Minimum display resolution	0.1″
Shafting design	dense ball bearing for vertical shafting, unitary design for horizontal shafting
Accuracy*1	± 0.5″ / 1″
Distance measurement	
Accuracy	
Standard prism mode	1mm+1ppm
Reflective sheet/RP60	2mm+2ppm
Reflectorless	3mm+2ppm/ (2-150)m 5mm+3ppm/ (150-300)m 10mm+5ppm/ (300-500)m
Measurement range	
Standard prism	2 to 3000m*2
Reflective sheet/RP60	1 to 800m*2
Reflectorless*3	1 to 1000m*2
Typital measuring time	
Fine mode	≤1.0s(initial 1.5s)
Fast mode	≤0.5s(initial 1.0s)
Track mode	≤0.2s(initial 1.0s)
Unit selection	m/ft/US ft
Minimum display	0.0001 /0.001m(fine,fast modes); 0.01m(track mode)
ATR system	
Working range	5-1000m
Positioning accuracy	±1.5mm@≤200m, ±1.5″ @>200m
Positioning time(in field of view of telescope)	0.5 to 2s
Level vial sensitivity	
Plate level vial	30″ /2mm
Circular level vial	8′ /2mm
Compensator	

RTS010A	
Working range	⩾±3′
Compensating method	Dual-axis
Laser plummet*4	
Accuracy	±1.0mm/0.8-1.5m
Light spot	≤2.0mm/0.8-1.5m
Maximum output power	0.7-1.0mW
Laser wave length	635nm
Endless drive	H&V
Motor drive	
Max. rotational angular speed	35°/s
Min. value for micro-rotation control in low speed	1"
Display	
3.5" colour TFT LCD (320 x 240 dots) touch screen	
transflective sunlight readable display	
Power	
Battery	5800mAh Li-ion Rechargeable
Output voltage	7.4V DC
Operation time	5-8 hours
Charger	110/220V, charging about 4 hours
Application programs	
Data collection/Stake out/Resection/REM/MLM/Point to line	
AREA/Z coordinate/OFFset/3D Road/Traverse adjustment	
Tape measurement/section/Axis positioning measurement	
Others	
CPU frequency	1GHz
Memory	RAM 512MB, Flash 4GB
Sensor	Built-in temperature and pressure sensor
Keyboard	Both-side alphanumerical illuminated keyboard; 8 custom shortcuts
Operating system	WinCE 7.0
SDK	Supported
Operating temperature	-20℃ to +50℃
Storage temperature	-40℃ to +60℃
Interface	mini USB/RS-232C/Bluetooth(optional)
Water and dust protection	IP55(IEC60529)
Data transfer&processing software	FOIF Geomatics Office(FGO)
Data collector	F58, fully rugged PDA(Optional)
Diagonal eyepiece(optional)	FJ19
Dampproof	95%,no condensing

*1 Standard deviation based on ISO17123-3

*2 Visibility of 40km, clear without heat shimmer

*3 Reflector: KODAK CAT NO.E1527795 with 90% reflective

*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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