

SOKKIA

DT500-DT500A DT600

ELECTRONIC DIGITAL THEODOLITE



Sokkia's DT Series, with an All-New Design, is Setting a New Standard in Digital Theodolites.

Electronic Digital Theodolites DT500/500s are the top of the new line-up. The DT500A/500AS units are their more affordable counterparts having a single display on one side of the instrument. Completing the line-up are the DT600/600s units that also have a single display and provide all fundamental functionality at a price/performance ratio that is hard to beat.

Dual-axis auto-correction corrects for errors if the instrument becomes misaligned during use. The single unit dual-axis XY compensator normally found in total stations has been incorporated. (DT500/500s)

Diametrical detection provides enhanced angle measuring accuracy. RS-232C standard serial interface connection enables use of Sokkia's Electronic Field Book and customized data collection is possible. (DT500/500s; DT500A/500AS)



All New DT Series Instruments:

Are Environmentally Protected — to conform to IP66. This increased protection is not only against ingress of water or moisture, but also against dust and fine particles. Only this level of protection can ensure that your theodolite will function accurately and reliably in the sudden showers, persistent drizzle, high humidity and dusty conditions that are likely to be encountered during its operating life.

Now Require Less Power — in fact the operating voltage has been reduced to one half that of previous models. Just two batteries, that are readily available anywhere, replace the four batteries required to operate previous models. The batteries are simply placed in the body of the instrument that features a hermetically sealed battery cover.



Are Operated with Only 4 Keys — that have been designed for easy and safe instrument use:



Illumination on/off key — to illuminate the cross hairs and the LCD display in low light conditions.



"0" set key — to set the horizontal angle to zero at any desired position



Angle measurement mode selection key — selects the horizontal angle to measure positive to the clockwise or counterclockwise (clearly indicated on display)



Hold/Release key — freezes the horizontal angle display reading; useful when measuring from a particular angle

For safety of operation, the "0" set key and the hold/release key require a "double press" to operate, preventing inadvertent operation during measuring.

Incorporate an Auto Power Off Function — to increase battery life. If not operated for a period exceeding thirty minutes, the instrument automatically powers down.

Have Big Easy-to-Read Displays — on which the horizontal and vertical readings appear on different lines to make reading easier and quicker and mistakes harder to make.



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Have a Large Locking/Fine-Adjustment Knob —

that is knurled for non-slip operation and has a "wing-nut" type locking knob for easy and secure locking.

You can tell at a glance whether the scope is free or locked to prevent operating error.



Provide the Following Measuring Modes:

Horizontal Angle — Clockwise/counterclockwise Measuring, Hold, Zero Set

Vertical Angle — Measuring 0-360 from Zenith, Measuring 0-360 from Horizontal, Measuring $\pm 90^\circ$ from Horizontal, Measuring % Gradient from Horizontal

Are Provided with a Tribrach:

DT500/DT500A — Detachable Type and Shifting Type are available

DT600 — Fixed Type and Shifting Type are available



Shifting type (DT500AS)

Comparative Table

	Accuracy	Display Resolution*	Magnification	Display	Compensator	Tribrach
DT500/500S	5" (1.5mgon)	1"/5" (0.2mgon/1mgon)	30x	LCD on both faces	Dual-axis liquid tilt sensor	Detachable Type/Shifting Type
DT500A/500AS				LCD on single face		
DT600/600S	7" (2.2mgon)	10"/5" (2mgon/1mgon)	26x		—	Fixed Type/Shifting Type

*Selectable by internal SW.

Specifications

		DT500 / 500S	DT500A / 500AS	DT600 / 600S
Telescope		Fully transiting		
Length		165mm (6.5in.)		160mm (6.3in.)
Objective Aperture		45mm (1.8in.)		35mm (1.4in.)
Magnification, Image		30x, Erect		26x, Erect
Resolving Power		3.0"		3.5"
Field of View		1°30'(26m at 1,000m)		
Minimum Focus		0.9m (3.0ft)		
Stadia	Multiplication Constant	100		
	Additive Constant	0		
Reticle Illumination		Built-in. Bright /Dim, selectable		—
Angle Measurement		Photoelectric incremental rotary encoder scanning, Diametrical Detection		
Display Resolution (selectable)	H&V	1" / 0.2mgon / 0.005mil 5" / 1mgon / 0.02mil		10" / 2mgon / 0.05mil 5" / 1mgon / 0.02mil
Accuracy (ISO/DIS 12857-2:1997)	H&V	5" (1.5mgon)		7" (2.2mgon)
Measuring Time		Less than 0.5 seconds, continuous (25°C)		
Circle Automatic Indexing	H&V	Each circle is provided with 0 index point		
Compensator	Type	Dual-axis liquid tilt sensor ON (V&H, only V) / OFF selectable	—	
	Range	±3' (±55mgon)	—	
Display Mode	H	Clockwise, Counterclockwise, Hold, selectable		
	V	Zenith angle (Zenith 0), Vertical angle (Horizontal 0) ; Height angle (horizontal 0±), % of slope, selectable		
General				
Display unit		2LCDs (2 line, 8 digits per line), one on each face with built-in illumination	LCD (2 line, 8 digits per line) with built-in illumination	
Keyboard		4 keys on each face		4 keys
Sensitivity of Levels	Plate level	40" / 2mm		60" / 2mm
	Circular level	10' / 2mm (in tribrach)		
Optical Plummet		Image: Erect, Magnification: 3x, Minimum focus: 0.3m (0.99ft)		
Standing Axis		Single		
Self-Diagnostic Function		Codes displayed		
Automatic Power off		30 minutes after operation		
Interface		Asynchronous serial, RS-232C compatible		—
Operating Temperature		-20 to +50°C (-4 to +122°F)		
Tilting Axis Height	from Tribrach bottom	236mm (9.3in.)		
	from Tribrach dish	193mm (7.6in.) Detachable Tribrach type		—
Tribrach		Detachable / Shifting		Fixed / Shifting
Size with Handle		W165 x D165 x H341mm (W6.5 x D6.5 x H13.4in.)		
Weight with Handle		4.7kg(10.4lbs) / 4.8kg (10.6lbs)	4.6kg(10.1lbs) / 4.7kg (10.4lbs)	4.2kg (9.3lbs) / 4.7kg (10.4lbs)
Water and Dust Protection		Conforms to IP66 (IEC60529)		
Base Screw		5/8in. / 35mm		
Power Supply		R14 / C batteries (x2)		
Continuous use at 25°C (77°F)		Approx. 13hours		Approx. 23hours

Standard Configuration

Theodolite main unit, Batteries (R14 / C x 2) , Lens Cap, Sunshade, Plumb-bob, Tool Kit, Operator's Manual, Carrying Case, Shoulder strap.

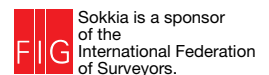
Optional Accessories

- Tubular Compass (CP7)
- Diagonal Eyepiece (DE25)
- 30x Eyepiece (EL6, for DT600)

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Designs and specifications are subject to change without notice.



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ISO9001 Certified (JQA-0557)

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