## Leica FlexLine TS03 Manual Total Stations



## LEICA FLEXLINE TS03MANUAL TOTAL STATIONS

- Work faster: measure more points per day due to faster measurement and stakeout procedures (endless drives, trigger key, drives on both sides, pinpoint EDM and more), supported by our comprehensive and user-friendly Leica FlexField software.
- Use it trouble-free: increase productivity and minimise downtime by relying on instruments that simply work and come with a global service and support network.
- Choose products that are built to last: FlexLine operates with the same high level of quality even after years of use under harsh conditions (like mud, dust, blowing rain, extreme heat and cold).
- Control your investment: reliability, speed and accuracy ensure a lower investment over the product lifetime and a higher resell value.
- Save time with AutoHeight: measure, read and set the instrument height automatically with this revolutionary feature in the FlexLine. Errors are minimised and the setup process onsite is faster.

The Leica FlexLine TS03 high-quality, manual total stations are based on a proven product concept that has been revolutionising the world of measurement and survey for nearly 200 years. The instruments are equipped with a comprehensive application-based software package - Leica FlexField software - that enables most survey and stakeout tasks to be carried out easily and efficiently. The new FlexLine manual total stations work reliably and deliver accurate results even in harsh environments.



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## Leica FlexLine TS03



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ANGULAR MEASUREMENT		
Accuracy Hz and V	Absolute, continuous, diametrical <sup>1</sup>	2" / 3" / 5"
	<ul> <li>Display resolution: 0.1" (0.1 mgon)</li> <li>Quadruple axis compensation</li> <li>Compensator setting accuracy<sup>2</sup>: 0.5" / 1"/ 1.5" / 2"</li> <li>Compensator range: +/- 4'</li> <li>Electronic level resolution: 2"</li> <li>Circular level sensitivity: 6' / 2 mm</li> </ul>	~
DISTANCE MEASUREMENT		
Range	<ul> <li>Prism (GPR1, GPH1P): 0.9 m to 3,500 m</li> <li>Prism GPR1 (Long Range mode) &gt; 10,000 m</li> </ul>	v
	Non-Prism / Any surface ■ R500 <sup>3</sup> ■ R1000 <sup>4</sup>	X
Accuracy / Measurement time	<ul> <li>Single prism</li> <li>Precise+ / Once: 1 mm + 1.5 ppm (typical 2.4 s)</li> <li>Precise&amp;Fast / Once&amp;Fast: 2 mm + 1.5 ppm (typical 2 s)</li> <li>Tracking / Continously: 3 mm + 1.5 ppm (typical &lt; 0.15 s)</li> <li>Averaging: 1 mm + 1.5 ppm</li> <li>Long Range mode / &gt; 4 km: 5 mm + 2 ppm (typical 2.5 s)</li> </ul>	~
	Non-Prism / Any surface ■ 0 m - 500 m: 2 mm + 2 ppm (typical 2.4 s <sup>5</sup> ) ■ > 500 m: 4 mm + 2 ppm	V
Laser dot size	At 30 m: 7 mm x 10 mm At 50 m: 8 mm x 20 mm At 100 m: 16 mm x 25 mm	V
Telescope	<ul> <li>Magnification: 30x</li> <li>Resolving power: 3"</li> <li>Focusing range: 1.55 m / 5.08 ft to infinity</li> <li>Field of view: 1°30' / 1.66 gon / 2.7 m at 100 m</li> </ul>	~
GENERAL		
Display and keyboard		3.5" (inch), 320 x 240 px QVGA, grayscale, 28 keys <sup>6a</sup>
	2 <sup>nd</sup> keyboard	×
	Key illumination	X
Operation	<ul> <li>Endless drives for HZ &amp; V</li> <li>Trigger-Key: user definable with 2 functions</li> </ul>	<ul> <li></li> </ul>

•	Ingger-key: user definable with 2 functions		
	Exchangeable Lithium-Ion battery <sup>7</sup>		
Power management	Operating time with GEB364	up to 32 h	
	Operating time with GEB334	up to 16 h	
	Battery charging time with	2 h 20 min / 2 h	
	GKL341 charger for GEB364 / GEB334	3 h 30 min / 3 h	
	<ul> <li>GKL311 charger for GEB364 / GEB334</li> <li>External supply voltage</li> </ul>	6 h 30 min / 3 h 30 min	
	<ul> <li>Nominal voltage 13.0 V DC &amp; 16 W max</li> </ul>	V	
	<ul> <li>Internal memory: 4 GB Flash</li> </ul>		
Data storage	<ul> <li>Memory card: SD card 1 GB or 8 GB</li> </ul>	<ul> <li></li> </ul>	
Data storage	<ul> <li>Menory card. 3D card 1 GB of 8 GB</li> <li>USB memory stick: 1 GB</li> </ul>	v v	
	■ TI OMAP4430 1GHz Dual-core ARM® Cortex™ A9 MPCore™		
Processor	<ul> <li>Operating system – Windows EC7</li> </ul>	$\checkmark$	
Interfaces	RS232 <sup>8</sup> , USB device	~	
	Bluetooth® <sup>9</sup> , WLAN <sup>10</sup>	×	
	Mobile Data sidecover: LTE-Modem for internet access	×	
	Working range: 5 m to 150 m		
Guide Light (EGL)	Position accuracy: 5 cm at 100 m	×	
3 ( 7 )	Wavelength red /orange: 617 nm / 593 nm		
1 1	Accuracy		
Laser plummet	Plumb line deviation: 1.5 mm at 1.5 m instrument height	<ul> <li>V</li> </ul>	
(Laserclass 2)	Diameter of laser point: 2.5 mm at 1.5 m instrument height		
AutoHeight module for	Accuracy		
automatic instrument height	Distance accuracy: 1.0 mm (1 Sigma)	×	
measurement (Laserclass 2)	Distance range: 0.7 m to 2.7 m		
Weight		4.3 kg	
	Working temperature range: -20°C to +50°C <sup>11</sup>	V	
Environmental	Arctic version: -35°C to +50°C	×	
specifications	Dust / Water (IEC 60529) / Humidity: IP66 / 95%,	V	
specifications	non-condensing		
	Military Standard 810G, Method 506.5	· · · · · · · · · · · · · · · · · · ·	
LOC8	Tracking and theft deterrence device	•	

Legend: 1. 1" (0.3 mgon), 2" (0.6 mgon), 3" (1 mgon), 5" (1.5 mgon), 7" (2 mgon) 2. Angular accuracy / Compensator setting accuracy: 1" (0.5" (0.2 mgon), 2"/0.5" (0.2 mgon), 3"/1.0" (0.3 mgon), 5"/1.5" (0.5 mgon), 7"/2.0" (0.7 mgon) 3. R500: Kodak gray 90% reflective (0.9 m to >500 m), Kodak gray 18% reflective (0.9 m to >200 m) 4. R1000: Kodak gray 90% reflective (0.9 m to >1000 m), Kodak gray 18% reflective (0.9 m to >500 m) 5. Up to 50 m, max. measurement time 15 s

(a) Face I standard, (b) Face I standard, face II optional
 Continuous angle measurement, new battery
 S PIN Lemo-0 for power, communication and data transfer
 For communication and data transfer
 Tor internet access, communication and data transfer, WLAN range up to 200 m
 Storage temperature: -40°C to +70°C



Laser radiation, avoid direct eye exposure. Class 3R laser product in accordance with IEC 60825-1:2014.

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