

Leica TPS800 Series Powerful, efficient, reliable and intuitive

PinPoint
Technology



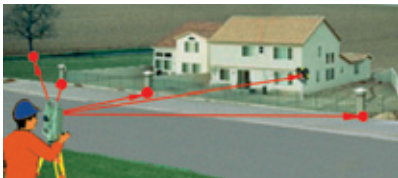
- when it has to be **right**

Leica
Geosystems

efficient

...with an application for every task

On board software and application programs simplify and speed up work in the field. The user is guided through the routines by clear menus and measurement prompts.



Surveying & Orientation

With the Surveying program, measurements of an unlimited number of points is supported. Included are the functions of defining the set-up station and determining the orientation from measurements up to five points.



Reference Line and Arc

For setting-out or checking points along a defined line or arc. Orthogonal stakeout elements of the target points are calculated in relation to the defined reference. Reference lines can be shifted with parallel offsets or even rotated to match predefined setting-out instructions.



Remote Height

The position of an inaccessible point can be computed by measuring to a base point and then aiming at the remote point. This can be used to determine the ground clearance of a structure.



Free Station

Set up your instrument anywhere and calculate station coordinates, elevation and Hz circle orientation. Up to five orientation points may be used with any combination of directions and distances in one or two faces.



Tie Distance

Tie Distance determines the distance, grade, azimuth and height difference between two points. The distances can be calculated continuously (traversing) or from a central point. The Tie Distance between the last two measured points can be checked instantly while surveying.



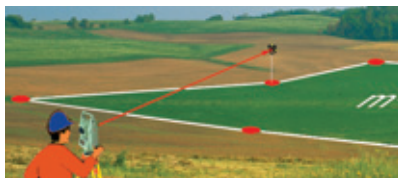
Hidden Point

Easily measure points that are not directly visible by using a hidden point rod. The length of the rod and the spacing between the reflectors is configurable. The rod can be held at any angle when measured and the program calculates the hidden point as if it were observed directly.



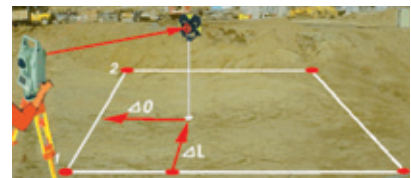
Stake Out

Points can be staked from manually entered data or from an uploaded file stored in the instrument memory. 3D stakeout elements are calculated using the point coordinates and the station data.



Area (3D) & Volume

This program calculates the area, volume and perimeter of plan and slope surfaces. The points used can be measured, entered manually or selected from the instruments memory.

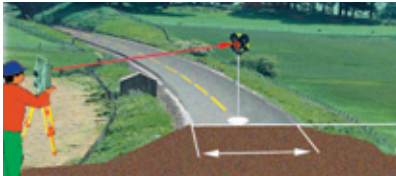


Construction

The layout of a construction site can be defined relative to construction lines. Points can be staked out relative to the selected line. Graphic displays show the position of the instrument, prism and stake out point relative to the construction line.

reliable

Leica TPS800 an overview of the models



Road Alignment (Optional)

Stake out and check routes of roads or other curvilinear projects. A reference line is defined and can consist of straight and curved sections. Points are staked out at any defined chainage and offset from this reference line.



COGO Routines (Optional)

Coordinate Geometry offers you a wide range of calculation functions. These include inverse, traverse, intersections using combinations of bearings, distances or lines, offset calculations and line extensions. Computed coordinates can immediately be staked out.

Leica TC802/3/5	-Infrared Distance Measurement (IR)
Leica TCR802/3/5 power	-Infrared Distance Measurement (IR) -PinPoint R100 Reflectorless Distance Measurement (RL)
Leica TCR802/3/5 ultra	-Infrared Distance Measurement (IR) -PinPoint R300 Reflectorless Distance Measurement (RL)

Technical data	TPS802	TPS803	TPS805
Angle measurements (Hz, V)			
Method	Absolute continuous		
Display resolution	1" (0.1 mgon)		
Standard deviation (ISO 17123-3)	2" (0.6 mgon)	3" (1 mgon)	5" (1.5 mgon)
Telescope			
Magnification	30 x		
Field of view	1° 30' (26 m at 1 km)		
Minimum target distance	1.7 m		
Reticle	illuminated		
Compensator			
System	Electronic 2 axis oil compensator		
Setting accuracy	1"	1"	1.5"
Infrared distance measurement (IR)			
Measuring range with circular prism GPR1	3'500 m		
Measuring with reflective foil (60 mm x 60 mm)	250 m		
Standard deviation (ISO 17123-4) (fine/quick/tracking)	2 mm + 2 ppm/5 mm + 2 ppm/5 mm + 2 ppm		
Time for a measurement (fine/quick/tracking)	< 1 sec/< 0.5 sec/< 0.15 sec		
PinPoint- Reflectorless Distance measurement (RL)			
Range:	PinPoint R100 ("power")	170 m (90 % reflective)	
(Medium atmospheric conditions)	PinPoint R300 ("ultra")	> 500 m (90 % reflective)	
	Laser at GPR circular reflector	7'500 m	
Standard deviation (ISO 17123-4) (Normal/Tracking)	3 mm + 2 ppm/5 mm + 2 ppm		
Time per meas. (Normal/Tracking)	typ. 3 s/1 s		
Point size at 100 m	12 mm x 40 mm		
Communication			
Internal data storage	10'000 data blocks		
Interface	RS232		
Data formats	GSI/IDEX/ASCII/dxf/Freely definable formats		
Operation			
Display	Graphics 160 x 280 pixels, Alphanumeric 8 lines x 31 characters		
Laser plummet			
Type	Laser point, brightness adjustable in steps		
Accuracy	1.5 mm at 1.5 m instrument height		
Environmental conditions			
Temperature range (operation)	-20° C to +50° C (-4° F to +122° F)		
Dust and splash proof (IEC 60529)	IP54		
Humidity	95 %, non condensing		
Weight			
Weight including battery and tribrach	5.4 kg		
Operating period with GEB121	approx. 6 hours		
Number of distance measurements with GEB121	approx. 9'000		

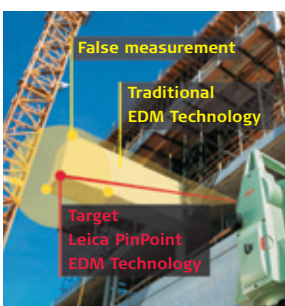
...with many included extras



PinPoint Technology with its accurately and extremely bundled visible Laser provides you the highest degree of pointing and measurement accuracy. Wall corners and inaccessible points can be measured without special applications. Furthermore the EDM system gives many other advantages such as very high measurement quality and reliability even under hardest conditions like rain and snow. All these unique features have been combined in the two reflectorless models:

- R100 in the "TPS800power" with a range of up to 200 m
- and the R300 in the "TPS800ultra" with a range of over 500 m.

The link between spot size and accuracy:



Easy to learn Simple to use
Start regular surveys immediately with a definable start-up sequence. Easy and direct operations using the function keys. Frequently used tasks are assigned to the numeric keys for increased productivity. Coding and settings can be selected with one button push. These features have been designed to save your time.



Individual data exchange
Data exchange has been implemented in such a flexible way that just about any format can be created. This allows data to be transferred to any software directly from the instrument. The data can also be formatted to be compatible for transfer to other survey instruments and GPS. The required programs are delivered with the instrument.



Compatible accessories
Leica Geosystems accessories are designed to withstand tough survey conditions. An accessory kit suitable to the specifications of the instrument, consisting of 2 batteries, a quick charger, data cable, mini prism set, tribrach and instrument height meter, fit into the instrument container for convenient and secure transportation.



External connections
Information can be exchanged between the instrument and a computer by standard RS232 cable, USB connection or wireless Bluetooth® Wireless-Technology. Data can be configured to enable communication with most data collectors.



Direct.dxf
With "Direct.dxf" functionality, data can be read directly from the instrument in dxf-format and read into AutoCAD, on a PC without any intermediate steps. Coordinates, codes and point numbers can be stored in different layers.



Theft-protection
The PIN-code feature prevent unauthorized persons from using the instrument. This increases your data security. Without correct code, the Equipment can't be operated, data erased and makes it unattractive to steal. This protects you from having damages, increases your safety and possibly lowers your insurance rates.

Whether you want to survey a parcel of land or objects on a construction site, determine measured points on facades or in rooms, gather the coordinates of a bridge or a tunnel – Leica Geosystems' total stations provide the right solution for every application.

They unite reliable results with easy operation and user-friendly applications. Our total stations are designed to meet your specific requirements. Modern technology enables you to work fast and productively, thanks to the straightforward and clearly structured range of functions.

When it has to be right.

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Total Quality Management –
Our commitment to total customer satisfaction

Ask your local Leica Geosystems dealer for more information about our TQM program.

Distance meter (PinPoint R100/R300):
Laser class 3R in accordance with IEC 60825-1 resp. EN 60825-1

Laser plummet:
Laser class 2 in accordance with IEC 60825-1 resp. EN 60825-1

Distance meter (IR):
Laser class 1 in accordance with IEC 60825-1 resp. EN 60825-1

Guide light (EGL):
LED class 1 in accordance with IEC 60825-1 resp. EN 60825-1

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Leica TPS400
Product brochure



Leica TPS700
Product brochure



Leica TPS1200
Product brochure



Leica DNA
Product brochure