Leica TPS400 Series
Easy, quick, reliable and powerful

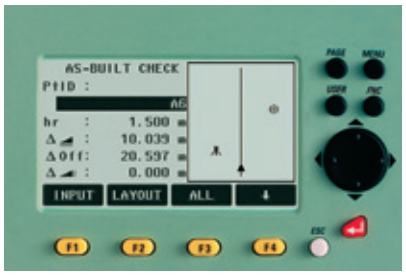
PinPoint Technology

- when it has to be **right**

Leica Geosystems

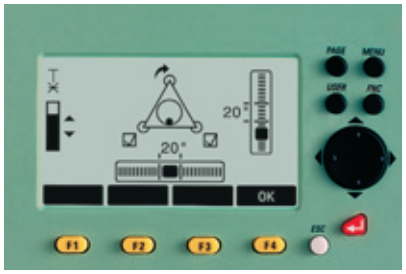
Leica TPS400 Series
The perfect solution for every construction site

Measuring with the TPS400 series of total stations could not be easier! With a laser plummet and electronic level the instrument is quickly set up and ready to measure. The proven endless fine drive and the accurate Leica telescope with 30-times magnification precisely targets each measuring point. The integrated electronic distance meter measures to target plates, prisms or even reflectorless to any given surface. These features save time and money.



Easy to learn – Simple to use

The new generation of total station was designed to be simple to use. With only four function keys the instrument can be used to its fullest. The large illuminated display is clear and easy to read. The graphical concept further simplifies the measuring tasks. All models of the TPS400 series support you with simple menu structures and integrated measuring programs that provide quick and simple solutions for your setting out & surveying tasks.



Your advantages in the field

- Easy and direct operations using the function keys
- Large, high resolution screen guarantees a clear display
- Intuitive program structure
- Integrated application programs
- Compatible with external data storage
- Definable start-up screen

Reflectorless measurements

PinPoint

Inaccessible measuring points are a thing of the past! TPS400 instruments also measure without reflector quickly and precisely. The 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 "TPS400power" with a range of up to 200 m and the
- R300 in the "TPS400ultra" with a range of over 500 m.

The link between spot size and accuracy

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.

direct.dxf

Direct.dxf

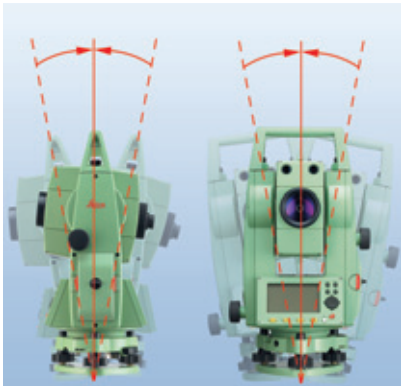
With "Direct.dxf" functionality, data can be read directly from the instrument in dxf-format and read into AutoCAD® on a PC without any intermediate steps. Coordinates, codes and point numbers can be stored in different layers.

Laser plummet

Easy to center over a set up point thanks to the laser plummet. The intensity of the laser point can be adjusted step-by-step to maintain visibility even in critical lighting conditions. The time consuming task of centering with the optical level is now redundant.

Dual axis compensator

A fully automatic dual axis compensator performs fine leveling and guarantees perfect horizontal alignment. For applications from mobile platforms the compensator may be deactivated.



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 compatible for transfer to other survey instruments and GPS. The required programs are delivered with the instrument. Information can be exchanged between the instrument and a computer by standard RS232 cable, USB connection or *Bluetooth*® Wireless-Technology. Data can be configured to enable communication with most data collectors.

Leica TPS400
Technical specifications and System features

Applications

In your daily work the TPS400 total stations supports you with a whole range of integrated easy to use programs.

- Surveying
- Reference line
- Stake Out
- Free Station
- Height transfers
- Area (plan)
- Volume
- Tie distance
- Remote height
- Hidden point
- Target Offset

Does your crew speak different languages? Ours does.

Multi lingual

The TPS400 is the only instrument of its class with multiple languages onboard. This allows the user to choose the preferred language – simply and with only one keystroke, for improved efficiency and convenience.

Leica TC403/5/7	-Distance Measurement on Reflector (IR)
Leica TCR403/5/7 power	-Distance Measurement on Reflector (IR) -PinPoint R100 Reflectorless Distance Measurement (RL)
Leica TCR403/5/7 ultra	-Distance Measurement on Reflector (IR) -PinPoint R300 Reflectorless Distance Measurement (RL)

Technical data		TPS 403	TPS 405	TPS 407
Angle measurements (Hz, V)				
Method			Absolute continuous	
Display resolution			1" / 0.1 mgon / 0.01 mil	
Standard deviation (ISO 17123-3)		3" (1 mgon)	5" (1.5 mgon)	7" (2 mgon)
Telescope				
Magnification			30 x	
Field of view			1° 30' (26 m at 1 km)	
Min. target distance			1.7 m	
Reticle			illuminated	
Compensator				
System			Electronic 2 axis oil compensator	
Setting accuracy		1"	1.5"	2"
Distance Measurement on Reflector (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		5.2 kg		
Operating period with GEB121		approx. 6 hours		
Number of distance measurements with GEB121		approx. 9'000		

Rough & tough

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.

Leica TPS700
Product brochure

Leica TPS800
Product brochure

Leica MobileMatrix
Product brochure

Leica Accessories
Product brochure

TQM
ISO 9001 / ISO 14001

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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