

Tersus GNSS TAS-Z1 Total Station

Overview

TAS-Z1 adopts a new ranging system, with a longer measurement range and faster speed. Laser pointing technology on the same vertical axis provides more accurate alignment. Full number+letter keyboard for faster input. The latest circuit design reduces battery power consumption. A brand new ranging circuit system adopts an ultra-low noise broadband amplifier with independent intellectual property rights, greatly improving measurement accuracy. Dual-face keyboards with buttons illumination to minimize mistakes provide optimum viewing and convenience under any environmental conditions.



Key Features

- ✓ The noise phase analysis method is used to greatly reduce the interference of various noises on the phase measurement results under bad weather and small-signal conditions
- ✓ 150MHz modulation frequency, shorter precision measurement ruler, and higher accuracy at the same signal-to-noise ratio and phase discrimination resolution
- ✓ The new optical path design fully isolates the transmitting and receiving optical signals, ensuring high accuracy
- ✓ Support EXCEL table data and DAT data import and export;
- ✓ It can display 19-bit code, and the road stakeout point information is clear at a glance
- ✓ Add known point files, all projects can call known point coordinates
- ✓ A brand new road measurement program that can calculate horizontal and vertical curves of any type of road, allowing for discontinuous changes in the radius of horizontal curves, including non-complete transition curves with any large deviation angle, straight line elements with straight turning points, and any broken chain piles

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Technical Specifications

Performance

Distance Measurement:	
- Range:	Single prism: 5000m Reflective sheet (60mm × 60mm): 1000m Non-prism ⁽¹⁾ : 1000m
- Accuracy:	Single prism: 2mm+2ppm Reflective sheet (60mm × 60mm): 2mm+2ppm Non-prism: 3mm+2ppm
- Measuring Time:	Prism fine: 0.3s Prism tracking: 0.1s Non-prism: 0.3~3s
Angle Measurement:	
- Method:	Absolute encoding angle measurement technology
- Disc Diameter:	79mm
- Minimum Reading:	0.1"/1"/5"/10" optional
- Accuracy:	2"
- Detection Method:	Horizontal & Vertical disc: diametrically aligned
Telescope:	
- Imaging:	Erect
- Mirror Tube Length:	154mm
- Effective Aperture Of Objective Lens:	45mm
- Magnification:	30X
- Field Of View:	1°30'
- Resolution:	3"
- Minimum Focus Distance:	1.2m
Comprehensive Parameters:	
- Compensator:	Dual-axis liquid photoelectric electronic compensator compensation range: ±4' resolution: 1"
- Meteorological Correction:	Automatic correction of input temperature and pressure
- Prism constant Correction:	Automatic correction of input parameters

Level:	
- Pipe Level:	30"/2mm
- Circular Level:	8'/2mm
Laser Plummet:	
- Brightness Level:	5-stage regulation
- Accuracy:	±1.5mm
EDM System:	
	Laser Class 3R Wave Length: 665nm - 695nm

System & Data

Operating System:	DOS
Storage:	Built-in 12MB (ready for 100,000 points)
Data Input:	CSV
Data Output:	DAT, CSV, DXF File
Data Transmission:	USB Bluetooth (optional)
Dist.Unit:	Meter, Feet, Feet-inch

Battery

Rechargeable Lithium Battery:	DC 7.4V 3100mAh x2
Continuous Working Hours:	8h x2

Physical

Display:	LCD, 6 lines digital screen
Keyboard:	Alphanumeric, 24 keys with backlight
Control panel:	Double
Reading:	Max: 99999999.9999m Min: 0.1mm
Dimension:	200x190x330mm
Weight:	5.5kg
Operating Temperature:	-20°C ~ +60°C
Storage Temperature:	-30°C ~ +70°C
Dust- & Waterproof:	IP55

Note:
(1) Kodak White, 90% reflectivity

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