Tersus GNSS
TAS-Z1 pro Total Station

Overview

TAS-Z1 pro 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
✓ The new optical path design fully isolates the transmitting and receiving optical signals, ensuring high accuracy
✓ Built-in bluetooth and PC connected through bluetooth, using communication software for bidirectional wireless data transmission
✓ 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

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℃ ~ +60℃

Storage Temperature: -30℃ ~ +70℃

Dust- & Waterproof: IP66

Note:
(1) Kodak White, 90% reflectivity