

JTL-40FWL Cable Free Horizontal Fiber Optic Gyroscope Inclinometer



Summary

The instrument is a new type inclination measuring instrument which adopts the high-precision fiber optic gyroscope as a measuring element. It is a specially designed new high-precision borehole inclinometer for the magnetic field and the measurement in the borehole drilled in the level of the iron casing drilling angle and azimuth. Suitable for directional hole angle and azimuth of the magnetic mine precision measurement. It has been widely used in engineering, hydrology, oil field, coal field, and geology for borehole determination.

The instrument is composed of measuring probe, positioning tripod, laptop computer, and charger, and designed for portable working style without cable. Equipped with special software can display and print borehole inclinometer data tables, drawing drilling plan, section, side projection Figure and space trajectories.

I. Main technical features

1. It adopts a high precision fiber optic gyroscope as the measuring component. Small size, long lifetime, good shock and vibration resistance. The zero drift is small. It is the magnetic area and the azimuth angle of the ideal orientation sensor measurement iron casing drilling.
2. It adopts a high precision double-shaft sensor to measure the dip angle. The dip angle data will be collected by 24 bit AD and processed.
3. Equipped with special software, it can show test data table, and plot plane diagram, sectional diagram, side projection diagram, and space trace diagram.

II. Main technical specifications

1. Measuring range: Angle: $+60^{\circ}\sim-60^{\circ}$
Azimuth: $0^{\circ}\sim360^{\circ}$
2. Measurement accuracy:
Angle measurement error: $\pm 0.1^{\circ}$
Azimuth measurement error: $\pm 0.3^{\circ}$ (Angle changes $< \pm 10^{\circ}$, azimuth changes $< \pm 30^{\circ}$)
3. The azimuth drift is $< 0.3^{\circ}/h$
4. Measuring depth: 1200 m (temperature $< 60^{\circ}\text{C}$)
5. Measuring time: > 5 h (It will continue after full of power)
6. Measurement mode: measuring point
7. Charging Power: AC 100V \sim AC 240V, 50Hz
8. Battery: 4-core lithium battery
9. Ambient temperature: $-10^{\circ}\text{C}\sim 60^{\circ}\text{C}$
10. Measuring probe dimensions and weight: $\Phi 40$ mm \times 1800 mm