JJX-3A1 Digital Inclinometer

Summary

The instrument is a newly designed digital inclination measuring instrument with a function of manual test data recording. It is an upgraded product used to determine dip angle and azimuth angle of vertical borehole or directional borehole. It is a priority used to determine inclination of borehole which is more than 54 mm in diameter, in the non-magnetic mining area, hydrology, oil field, coal field, and geology.

I. Main technical features

1. It adopts a high precision gravity accelerator as the dip angle measuring sensor. The resolution is 0.01. It can measure the dip angle accurately.
2. It adopts a 3D magneto-resistance sensor to detect the signal in Earth's magnetic field. It forms a mathematical model to calculate the azimuth angel.
3. It uses modern digital signal processing techniques, so it can calculate dip angle and azimuth angle accurately, so that they can meet the requirement for accuracy.
4. It adopts new type A/D converting SCM to collect the probe data. It achieves a high precision data collection.
5. It adopts long distance transmitting technology, so it can transmit digital signal through long cable reliably. This highly improves anti-interference ability of the instrument.
6. It removes hammer swing parts in the probe tube. This highly improves anti-shaking ability of the instrument. The depth interval and measurement point numbers can be preset at random. This improves measurement efficiency.
7. It adopts an ultra-brighten LCD for display, so it is convenient for use in the field.

II. Main technical specifications

1. Measurement depth: ≤1200 meters
2. Measurement range and precision:
(1) Dip angle: 0～50°; ±0.2°
(2) Azimuth angle: 0～360°
When dip angle is 1～3°: ±5.0°
When dip angle is 3～50°: ±3.0°
3. Measurement mode: At fixed points; the depth intervals and measurement points can be preset at random
4. Record mode: manual
5. Power supply: AC 220V±10%, 50 Hz
6. Working environment for controlling unit:
(1) Temperature: -10℃～50℃
(2) Relative humidity: ≤85%
7. Working environment for inclinometer probe:
(1) Temperature: 0℃～55℃
(2) Enduring pressure: ≤15MPa
8. Size and weight: (1) Controlling unit: 270×220×155 (mm); 2.4 kg
(2) Inclinometer probe: Φ54×1345 (mm); 13.5 kg