JJX-3A2 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 the vertical borehole or directional borehole. It is a priority used to determine the inclination of the 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 angle.
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 a 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 the 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. The man-machine operation is controlled by 6 keys. The data is recorded automatically.
8. It combines the keyboard operation and display interface to make it more convenient. The test result is printable on site with the optional micro-printer.
9. It can save the measurement data. The data can be stored for a long time if there is no one to clear it.

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: C 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℃～75℃

(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