

ER-Gyro03 FOG Gyro While Drilling



1.Introduction:

The instrument uses three axis fiber optic gyro and three axis accelerometer which consists of an inertial measurement unit. Using track calculation of well trajectory characteristic by real time solution(inclination, azimuth, tool face angle and No. 1 pole angle), and can be used for drawing, data Display etc.

Compared with the last generation, under the situation of ensuring measurement accuracy, it achieves size and volume more miniaturized, more wide application, suit for narrow borehole oil and gas wells. This instrument without any moving parts, with characteristics of strong impact resistance, small drift and high precision etc.

2.Characteristics:

- High precision fast continuous attitude and position measurement
- It has the function of self seeking, easy to use
- High precision, unaffected by magnetic field
- Good seismic performance
- Long life, high reliability, long calibration period
- Real-time uploading and drawing of measurement data through cable
- Multi sensor simultaneous complementary redundancy measurement, high reliability
- Can be matched with existing logging instruments to achieve a variety of underground parameters and measurements
- Inner diameter 38mm, which can be used in the field of drilling

3.Application:

3.1 Oil and gas exploitation,

- cased hole, well retest
- Open window positioning, downhole directional perforation
- Oil pipe logging
- measurement while drilling

3.2 Coal mining

- Measurement of gas drainage hole in coal seam

4. Technical parameter

Technical parameter	Index
Measuring range	Inclination: 0° ~ 180°
	Azimuth: 0° ~ 360°
	Tool face angle: 0° ~ 360°
Measuring precision	Inclination: ±0.2°
	Azimuth: ±1° (inclination ≥ 3°)
	Tool face angle: ±0.5°
Working temperature	-25 °C ~ 125 °C Up to 175 °C (with heat shield)
Pressure	140MPa
Inner diameter	38mm
Outer diameter	Φ48mm (without heat shield) Φ55mm (with heat shield)
Battery	Li-ion rechargeable
Instrument length	1700mm
Weight	45Kg
Adaptation to well diameter	≥Φ60mm
Power supply	DC48V±10%
Output interface	RS232、RS422、CAN
Measuring rate	Reachable 2m/s