

ER-DOS-03 Dynamic Direction Sensor

1. Introduction

ER-DOS-03 Dynamic Direction Sensor includes a three-axis high-temperature high-precision acceleration sensor and a three-axis high-temperature flux-gate sensor. The product uses a 24-bit high-resolution ADC to digitize the output signal of the sensor for temperature drift and quadrature compensation. The sensor can accurately measure well angle, tool face angle and azimuth angle within the range of 0~150°C.

The product has the characteristics of small size, compact structure, strong anti-vibration ability, high reliability and excellent performance. The built-in digital filter and compensation algorithm can remove the interference signal of vibration and rotation, and accurately measure the vibration and rotation under the angle. In addition, the external size, installation method and digital output interface (UART or rs-232) of the probe can be customized according to different customer requirements.

2. Features

High temperature resistant

Resistance to vibration and shock

Dynamic measurement under rotation

Low power consumption

3. Specifications

Azimuth (static)	inclination $\geq 10^{\circ}$	± 1	°
Azimuth (dynamic)	inclination $\geq 45^{\circ}$, 300RPM	± 1.5	
Inclination (static)	0~180°	± 0.1	
Inclination (dynamic)	300RPM	± 0.2	
Sine vibration	20~100Hz, 6G	± 0.2	
Toolface (static)	inclination $\geq 10^{\circ}$	± 1	°C
Operation Temp	-	0~150	
Storage Temp	-	-40~160	
Input Voltage	-	10~36	
Input Current	TA=25°C, Vs=15V	≤ 80	
Interface	-	TTL	-
Baud Rate	-	9600	Hz
Data Request Rate	-	2	Times/Sec