智腾科技
ZITN TECH

Directional sensor

DS560

Product features

- Temperature: 0～135℃
  Accuracy:
  ±0.2°for inclination
  ±0.2°for tool face
  ±0.5° for azimuth
- Shock resistance 2000g，vibration resistance 30g
- Digital data transmission
- With minimum size of 20.4mm×19.1mm×116.8mm

Product applications

- Borehole logging
- Magnetic compass
- Orientation determination for buoys, sonar systems, etc.

Product description

The DS560 directional module is designed to enable high accuracy measurement of the roll, axis alignment and azimuth orientation angles in borehole logging and drilling applications.

Using 4.9-12V DC voltage power supply and adopting UART asynchronous transmitter for digital transmission. It consists of 3-axis fluxgate magnetometers and 3-axis accelerometers.

The DS560 communicates with the outside world over a UART interface. It is compatible with TTL through logic level, and the baud rate is normally set at 9600~115200 to operate. The user can change baud rate by setting data bits in E^2PROM. Logic level 5V(customization), data update rate once per second.

TWO communication protocols can be selected according to specific requirements:

(1) Binary system: under this system, user needs to send one bit for data request and DS560 responds with multi-bit data package.

(2) ASCII : ASCII protocol acquires data by sending ASCII character to DS560. data returned from DS560 is transmitted as ASCII data flow，therefore can be easily indicated on the video terminal.

Directional sensor
DS560

Accuracy	
Inclination	±0.2°
Tool face	±0.2°
Azimuth	±0.5°

Power interface	
Input Voltage Range	+4.9～+12V
Input current	45mA@5V
Interface	TTL / RS232
Baud rate	9600(default)up to 115200
Communication protocol	ASCⅡ or Binary
Leads	20" x 4

Environmental performance	
Operating Temperature Range	0~135℃
Storage Temperature Range	-40℃~135℃
Shock	2000g ， 1ms
Vibration Peak Sine	30g

Physical parameters	
Width	20.4mm
Height	19.1mm
Length	116.8mm