

**Product features**

- I Temperature : 0 ~ 175°C
- Accuracy :
  - ±0.1° for Pitch
  - ±0.1° for Roll
  - ±0.3° for azimuth
- I Shock resistance 1000g , vibration resistance 20g
- I Digital data transmission
- I With minimum size of  $\Phi 31\text{mm} \times 384\text{mm}$

**175°C**  
**Directional sensor****Product applications**

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

**Product description**

The ZDS775H 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 10-36V DC voltage power supply and adopting UART asynchronous transmitter for digital transmission. It consists of 3-axis fluxgate magnetometers and 3-axis accelerometers.

The ZDS775 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<sup>2</sup>PROM. 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.

**Accuracy**

Pitch	$\pm 0.05 \sim 0.1^\circ$
Roll	$\pm 0.1^\circ$
Azimuth	$\pm 0.3^\circ @ 90^\circ$ $\pm 0.5^\circ @ 10^\circ$ $\pm 1^\circ @ 5^\circ$

**Power interface**

Input Voltage Range	10V~36V
Input current	75mA@15V
Interface	TTL/CMOS
Baud rate	9600(default)up to 115200
Communication protocol	ASCII or Binary

**Environmental performance**

Operating Temperature Range	0~175°C
Storage Temperature Range	-40°C~180°C
Shock	1000G , 0.5ms
Vibration Peak Sine	20g

**Physical parameters**

Size	$\Phi 31\text{mm} \times 384\text{mm}$
Connector	MDM9SH003P (MDM15PH003F)
Mating Connector	MDM9PH003L (MDM15SH003L)



