

Hand Held Display Module

HMD5000**APPLICATIONS**

- Compassing
- Navigation Systems
- Attitude Reference
- Magnetic Anomaly Detection
- Proximity Detection
- Laboratory Instrumentation
- Traffic and Vehicle Detection

Hand Held Display Module for digital magnetic sensor products. Displays heading, pitch and roll information when connected to the HMR3000 Digital Compass Module. If used with the HMR2300 Smart Digital Magnetometer, magnetic field readings in the X, Y and Z directions, as well as the magnitude of all three axes combined are shown.



FEATURES AND BENEFITS

Hand Held Portable, runs on batteries, easy to use in field applications

Flexible Design Works with Honeywell's HMR3000 Digital Compass Module or Honeywell's HMR2300 Smart Digital Magnetometer

GENERAL DESCRIPTION

The HMD5000 is a small hand held unit with actual case dimensions of 3.60 x 5.70 x 2.09 inches. It weighs 0.54 pounds. The interface cable is 3 feet long and has a female 9-pin “D” connector. The accuracy and resolution of the HMD500 is dependent on the instrument with which it is used — the HMR3000 Digital Compass Module or the HMR2300 Smart Digital Magnetometer.

Input Power Requirements

Supply Voltage	6-15 Vdc Unregulated
Power	72 mA @ 9 Vdc (300mA at Power Up)

Interface

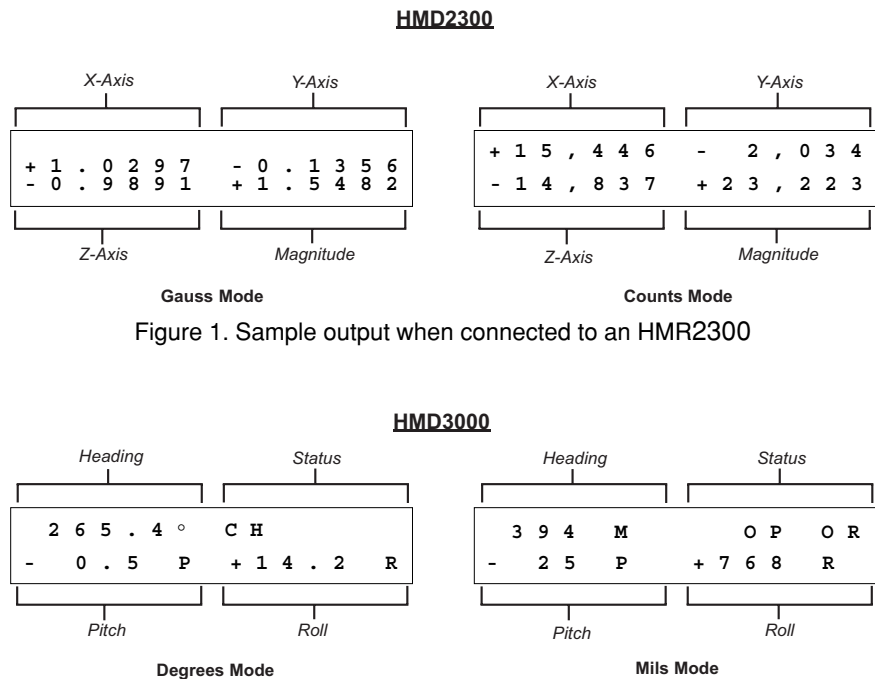
Interface Cable Pin Assignments

Pin	Name	Description
2	RD	RS-232 Receive In
3	TD	RS-232 Transmit Out
5	GND	Power and Signal Ground
9	V+	Unregulated Power

When outputting data the LCD display is divided into four quadrants. Each quadrant being 8 segments wide.

When connected to the HMR2300 Smart Digital Magnetometer the display outputs magnetic field strength data in the X, Y and Z axes along with Magnitude. Magnitude is calculated using the formula: $\sqrt{X^2 + Y^2 + Z^2}$. Figure 1 illustrates this output in both the “Gauss” and “Counts” mode.

If the display is interfaced to an HMR3000 Digital Compass, the output consists of Heading, Pitch and Roll data with Status indicators for each reading if it is out of range. Figure 2 shows the compass output in both Degree and Mils mode.



Heading

Status

Pitch

Roll

Degrees Mode

Heading

Status

Pitch

Roll

Mils Mode

*Status Output will only appear on the display if one of the indicators is something other than “N” (Normal)

Figure 2. Sample output when connected to an HMR3000

Honeywell reserves the right to make changes to any products or technology herein to improve reliability, function or design. Honeywell does not assume any liability arising out of the application or use of any product or circuit described herein; neither does it convey any license under its patent rights nor the rights of others.

