

DIGITAL MAGNETIC COMPASS

Preliminary data sheet

FEATURES

- Heading accuracy: $\pm 0.5^\circ$
- Roll & Pitch accuracy: $\pm 0.2^\circ$
- Output Rate: 10 Hz
- Power supply: 8 to 12 VDC
- Vibration Resistant

APPLICATIONS

- Surveying
- Robot navigation
- Inertial guidance
- Marine navigation
- Platform stabilization & control
- Antenna positioning
- Unmanned vehicle navigation
- Embedded vehicle electronics and avionics



INTRODUCTION

ARN-DMC115 is high performance digital magnetic compass for land, sea and air applications. It gives tilt compensated heading angle with high accuracy and reliability. The data output is available on RS232 at fixed baud rate.

It measures the earth's magnetic field in three axes and orientation of gravity. The roll and pitch angles are calculated with Aeron's high accuracy MEMS digital inclinometer. This information is used to compensate body orientation in calculating heading. The proprietary digital filter reduces the noise to provide accurate heading information even in dynamic conditions. The use of solid-state sensors make ARN-DMC115 a rugged digital magnetic compass for reliable operation in variety of environment.



SPECIFICATIONS

Parameter	Value/Description	Units
Heading		
Accuracy	± 0.5 (1σ) For Dip < 50 deg, Tilt < 20 deg	deg
Resolution	0.1	deg
Roll & Pitch		
Range	± 40	deg
Accuracy	± 0.2 (1σ)	deg
Resolution	0.1	deg
Output rate	1 – 20*	Hz
Interface		
Format	RS232	-
Baud Rate	9600	-
Electrical		
Power supply	9-15	VDC
Current consumption	< 150	mA
Mechanical		
Size	98 (L) x 62 (W) x 27 (H)	mm
Weight	< 250 gm	gm
Environment		
Operating Temperature	-10 to +70	°C
Storage Temperature	-20 to +85	°C
Humidity	0 - 95%	RH

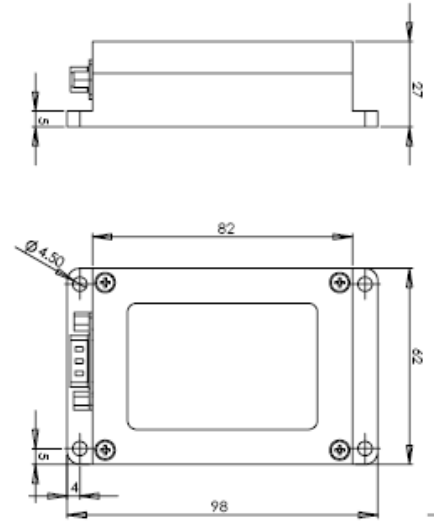
* Default at 10 Hz, different models available

MODEL INFORMATION

Model	Description	Update rate
ARN-DMC115-1	Digital magnetic compass with interface cable, user manual	1 Hz
ARN-DMC115-10	Digital magnetic compass with interface cable, user manual	10 Hz
ARN-DMC115-20	Digital magnetic compass with interface cable, user manual	20 Hz

Note: Aeron constantly endeavors to improve product performance, therefore, specifications are subject to change without notice. You are requested to contact us for any clarification.

MECHANICAL DIMENSION



Note: All dimensions are in mm

PIN DIAGRAM

