DIGITAL MAGNETIC COMPASS

FEATURES

- Heading Accuracy: ±1°
- Roll and Pitch Accuracy: ±0.5°
- Output Rate: 1 / 10 / 20 Hz
- Low Power Consumption
- Compact and Easy to Use
- Hard Iron and Soft Iron Calibration
- RS232 or RS485 Interfaces



APPLICATIONS

- Unmanned vehicle navigation
- Robot navigation
- Marine navigation
- Antenna orientation
- Surveying

DESCRIPTION

GALILEO family includes reliable, low power and compact digital magnetic compass DMC300. The device measures magnetic heading with high accuracy and is suitable for land and marine applications.

GLO-DMC300 comprises of triaxial solid state MEMS accelerometer and magnetometer. Accelerometer is used to measure the roll and pitch in static conditions and magnetometer is used for estimation of heading. The roll and pitch measurements are used for tilt compensation of heading angle. The GLO-DMC300 runs a proprietary digital filter for noise reduction and computation of heading information even under dynamic conditions.

GLO-DMC300 is a plug-and-play device with configurable update rates and RS232 and RS485 interfaces. GLO-DMC300 is most suited for compassing, surveying, antenna orientation and other direction sensing applications.

MADE IN INDIA

Datasheet Ver. 2.1, May 2025

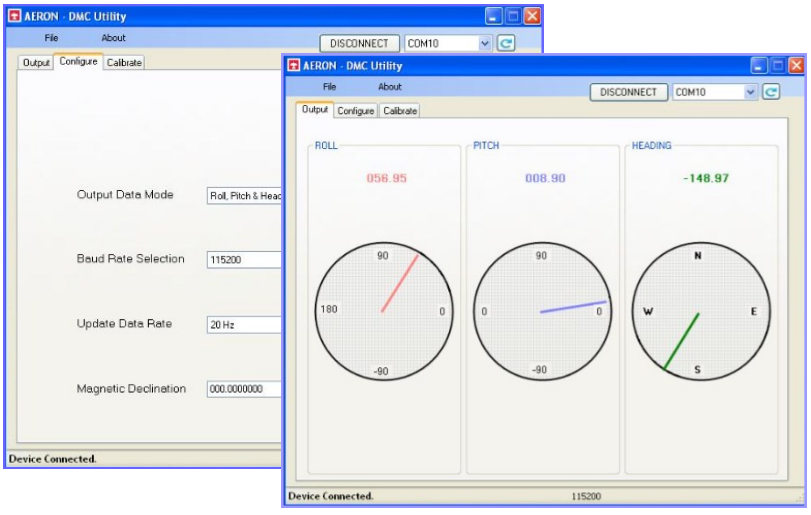
TECHNICAL SPECIFICATIONS

Parameter Name	GALILEO		
	DMC300		
	Parameter Value	Unit	Precondition
Heading			
Accuracy	±1 (1σ)	deg	In static and semi-static conditions Accuracy valid within latitudes of ±60° Roll/Pitch < 45°
Resolution	0.01	deg	-
Range	±180	deg	-
Magnetometer Range	±2	gauss	-
Roll & Pitch			
Roll Range	±180	deg	-
Pitch Range	±60	deg	Full Accuracy Range
Accuracy	±0.5 (1σ)	deg	In static and semi-static conditions
Resolution	0.01	deg	-
Output Rate	1 / 10 / 20	Hz	User Configurable
Interfaces			
Protocol	RS232 ASCII or RS485 ASCII or RS485 RTU	-	-
Baud Rate	9600, 9200, 38400, 57600, 115200	-	-
Electrical			
Power Supply	+9 to +28	V DC	-
Current Consumption	< 150	mA	@ 12 V DC
Mechanical			
Dimension	106.7 (L) x 47.6 (W) x 27.5 (H)	mm	-
Weight	180 ± 25	gms	-
Environmental			
Operating Temperature	-10 to +70	° C	-
Humidity	0 - 95	%	-
Sealing	IP50	-	-

DESKTOP APPLICATION

DMC300 comes with a desktop software suite, for configuration, data display and data logging.

Note: *These images of the software suite are for reference.*

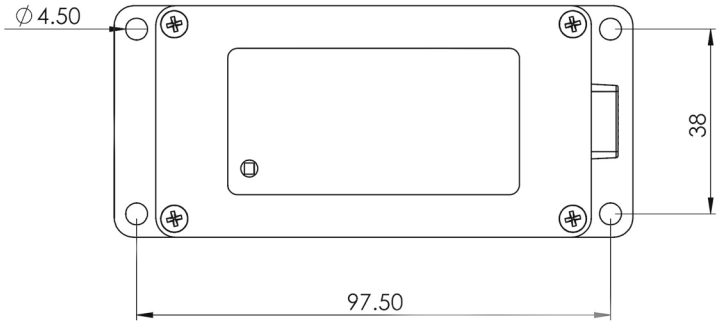


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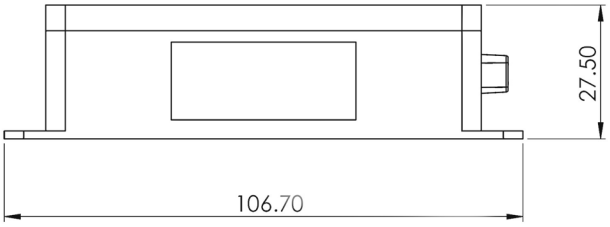
MECHANICAL DIMENSIONS

All dimensions in mm

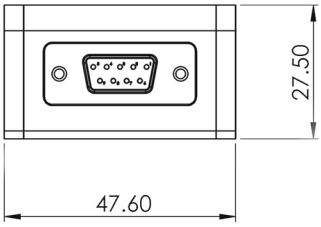
TOP VIEW



SIDE VIEW



FRONT VIEW



ORDERING INFORMATION

GLO - DMC300-2 (Product Code: 13002)

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