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

GALILEO DMC300

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.
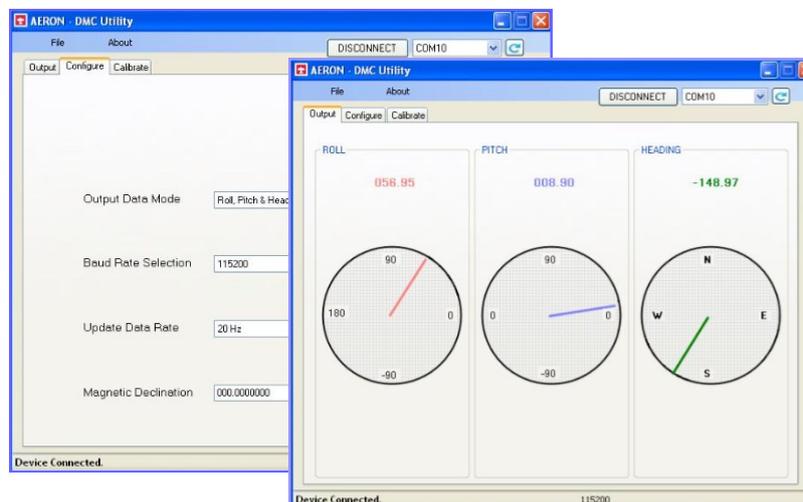
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TECHNICAL SPECIFICATIONS

Parameter Name	Parameter Values
	GALILEO
	DMC300
HEADING	
Accuracy[1,2,3]	±1˚ (1σ)
Resolution	0.01˚
Range	±180°
Magnetometer Range	±2 gauss
ROLL & PITCH	
Range	±180˚ (Roll) ±60˚ (Pitch)[4]
Accuracy[1]	±0.5 (1σ)
Resolution	0.01˚
OUTPUT RATE [5]	1 Hz / 10 Hz / 20 Hz
INTERFACES	
Protocol	RS232 ASCII or RS485 ASCII or RS485 MODBUS
Baud Rate	9600 (default), 19200, 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 gms
ENVIRONMENTAL	
Operating Temperature	-10 ˚C to +70 ˚C
Humidity	0 - 95 %
Sealing	IP60

1 : In static and semi-static conditions
2 : Accuracy valid within latitudes of ±60°
3 : Roll/Pitch < 45°
4 : Full Accuracy Range
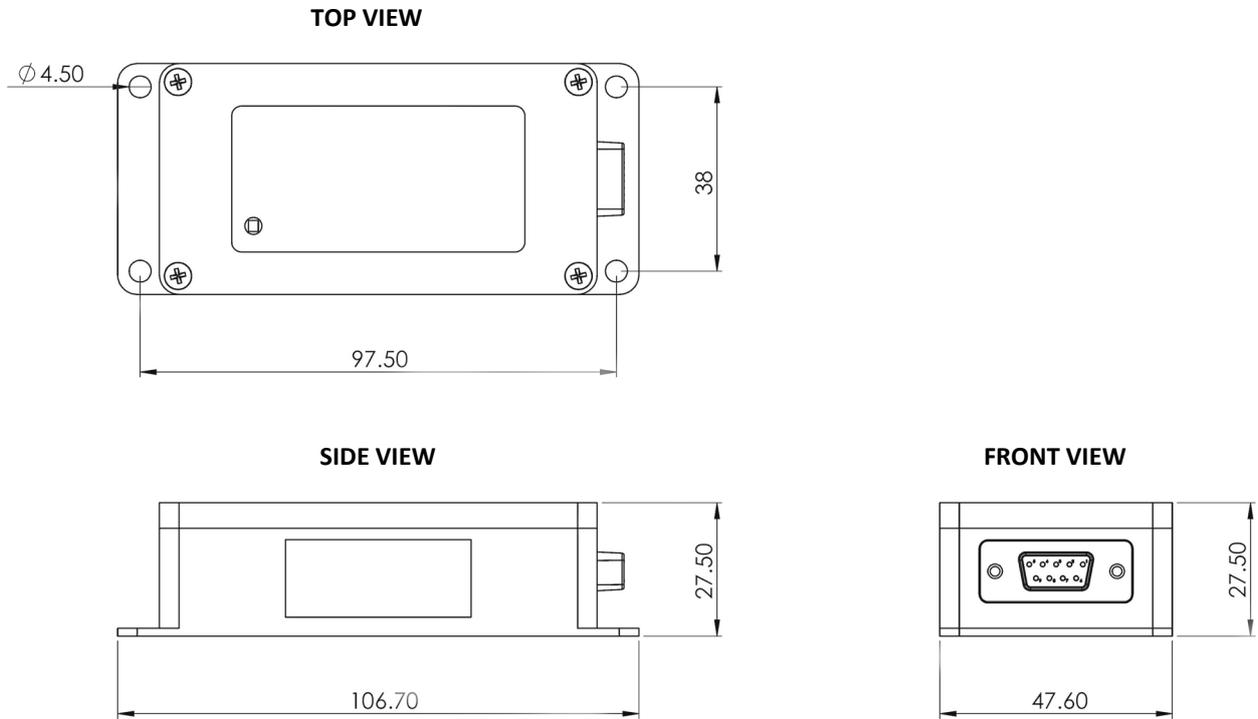5 : Configurable

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

⌀ 4.50

38

97.50

SIDE VIEW

27.50

106.70

FRONT VIEW

27.50

47.60

ORDERING INFORMATION

GLO - DMC300 - X

01 - RS232 ASCII (Product Code: 13001)
02 - RS485 ASCII (Product Code: 13002)
03 - RS485 MODBUS (Product Code: 13003)