

# POLARIS FOG-200

FIBER-OPTIC GYROCOMPASS

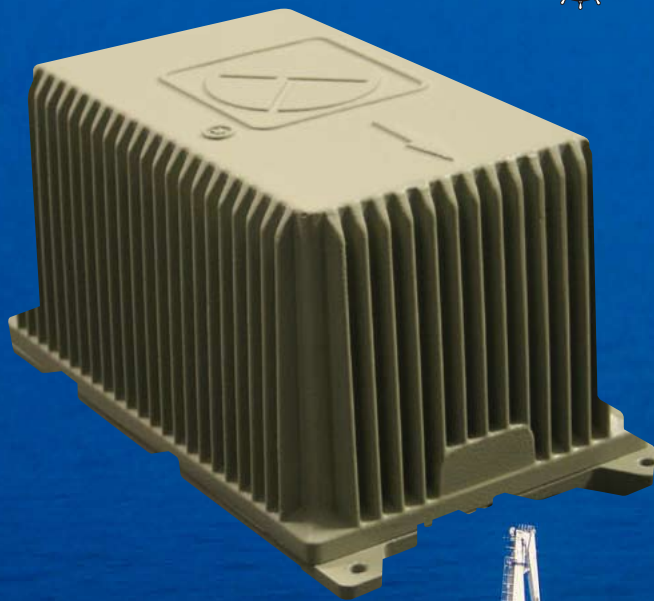
Attitude Reference System

Type Approved



WHEELMARK  
Notified Body N°: 0098

Certificate N°: 94 022 - 10 HH  
Certificate N°: 94 838 - 10 HH  
Certificate N°: 94 849 - 10 HH



*Ideal for:*

Hydrographic Survey

High precision applications

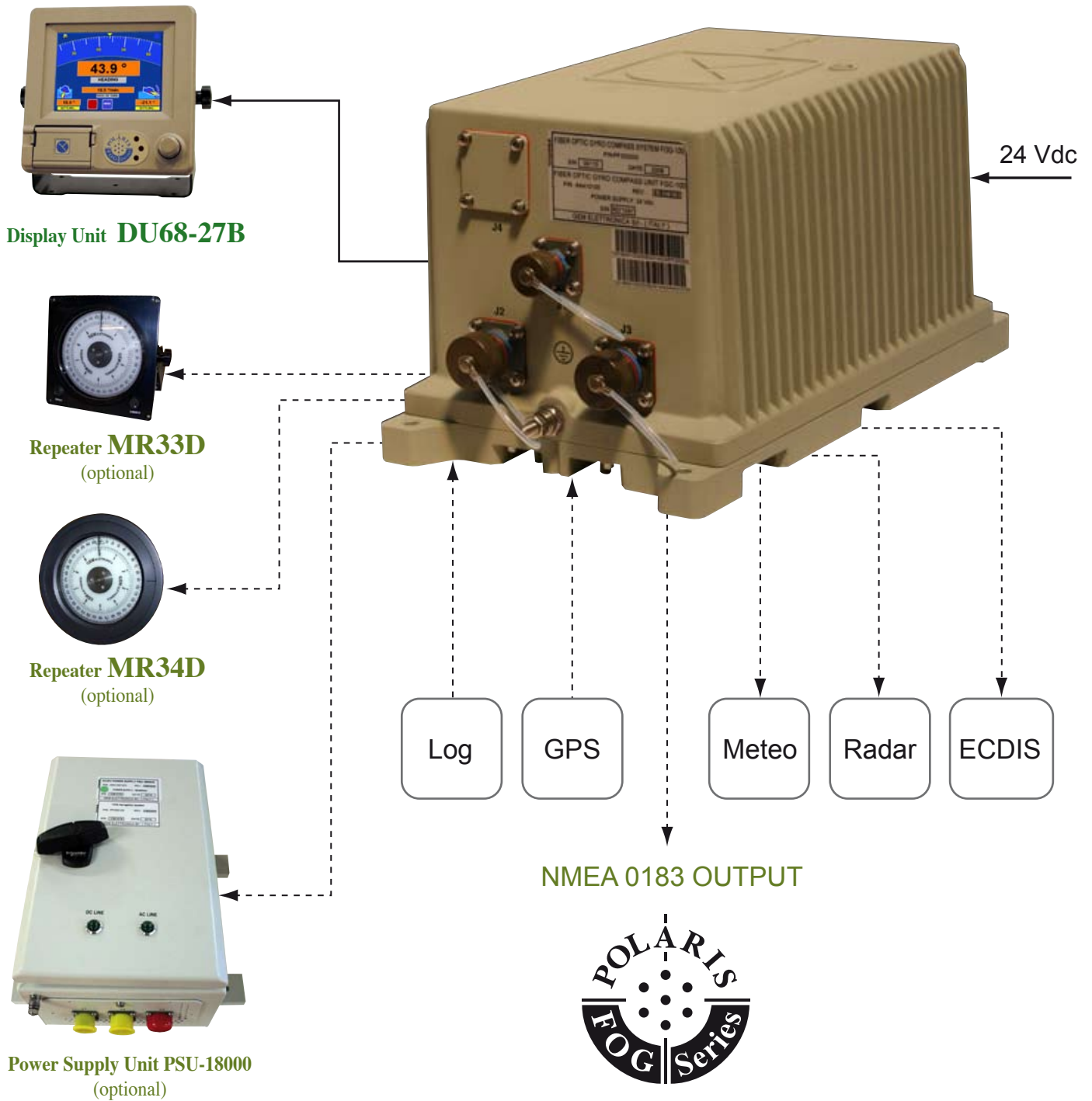
Navy Vessels

Precise reference for Stabilization

The strapdown gyrocompass based on state-of-the-art Fiber Optic Gyroscope technology offers a highly reliable and cost effective solution for both commercial and military vessels. It gives an accurate, real-time reading of true north as well as control of attitude without need of GPS.

## ORDERING INFORMATION

## INERTIAL MEASUREMENT UNIT FGC-200



### SUPPLY COMPOSITION

- FGC Inertial Measurement Unit
- Display Unit DU68-27B
- Cable of connection (10 m)
- Technical manual of the system in English language
- Certificate of conformance

### OPTIONS

- \* Self-aligning repeaters MR33D, MR34D
- Power Supply Unit PSU-18000
- 115/220 Vac, 50 Hz, 1 phase mains available through external unit
- NMEA 0183 -> synchro available through external unit

## TECHNICAL SPECIFICATION

### Inertial Measurement Unit FGC-200

<i>Performances*</i>	
Heading accuracy	≤ 0.1° Secant (Latitude) RMS **
Roll / Pitch accuracy	≤ 0.018° RMS
Heave	5 cm or 5% whichever is greater
Heading range	0° ÷ 360°
Roll / Pitch range	± 60°
Settling time	≤ 10 min (static) ≤ 30 min (full accuracy, all conditions)

\* Certified according to IMO A.424 (XI), A.821 (19), A.526 (13)  
ISO 8728 (1997), ISO 16328 (2001), ISO 20672 (2001),  
IEC 60945 (2008), IEC 62288 (2008), IEC 61162 series.  
\*\* Secant (Latitude) = 1/cosine (Latitude)

<i>Signal Outputs</i>	<i>Signal Inputs</i>	
Number of outputs	7 serial lines	
Data output	HDG, ROLL, PITCH, ROT, HEAVE	
Output protocols (user defined)	NMEA 0183, IEC-61162, Binary	
Baud rate (user defined)	4800 bps, 38400 bps	
Output rate (user defined)	0.25 Hz to 100 Hz	
	Number of inputs	3 serial lines
	Input protocols	NMEA 0183, IEC-61162
	Baud rate (user defined)	up to 115200 bps
	Input rate (user defined)	up to 10 Hz

<i>Environmental conditions</i>	<i>Power requirements</i>	
Operating temperature	-0° C to +55°C	
Storage temperature	-40° C to +80°C	
MTBF	≥ 50000 hours	
Protection grade	IP66	
Other requirements	Fully compliant to IEC-60945	
	Supply	24V DC -10%, +30%
	Consumption	12 W

<i>Weight and dimensions</i>	
Weight	6.8 Kg
Dimensions (W x D x H)	328 x 177 x 167.5 mm

### DU68-27B Display Unit

<i>Features</i>	<i>Weight and dimensions</i>	
Display size	6.5" Touch Screen	
Display resolution	640 x 480 pixel (VGA)	
Supply	24V DC -10%, +30%	
Consumption	15W	
	Weight	1.2 Kg
	Width	234 mm
	Depth	148.5 mm
	Height	224.2 mm

## OPTIONAL UNITS

### MR33D Repeater / MR34D Repeater

<i>Features</i>	<i>Weight and dimensions</i>	
Interface	NMEA0183, RS422	
Baud rate	4800 bps	
Supply	24V DC -10%, +30%	
Consumption:	5W	
Protection	IP56 (MR34D) - IP40 (MR33D)	
	Weight	5 Kg (MR34D) 2.5 Kg (MR33D)
	Dimensions (W x D x H)	Ø 208 x 191 mm (MR34D) 192 x 88 x 192 mm (MR33D)

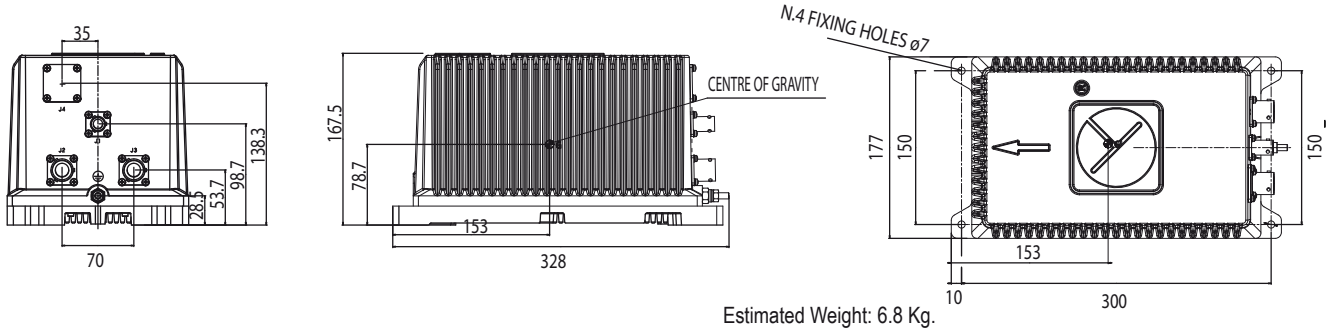
### PSU-18000 AC / DC with automatic changeover

<i>Features</i>	<i>Weight and dimensions</i>	
Main input	115/230V AC, 50/60 Hz	
Aux input	18V to 36V DC	
Output	24V DC	
Power output	600 W max	
	Weight	6 Kg
	Width	200 mm
	Depth	150 mm
	Height	300 mm

OUTLINE DRAWING

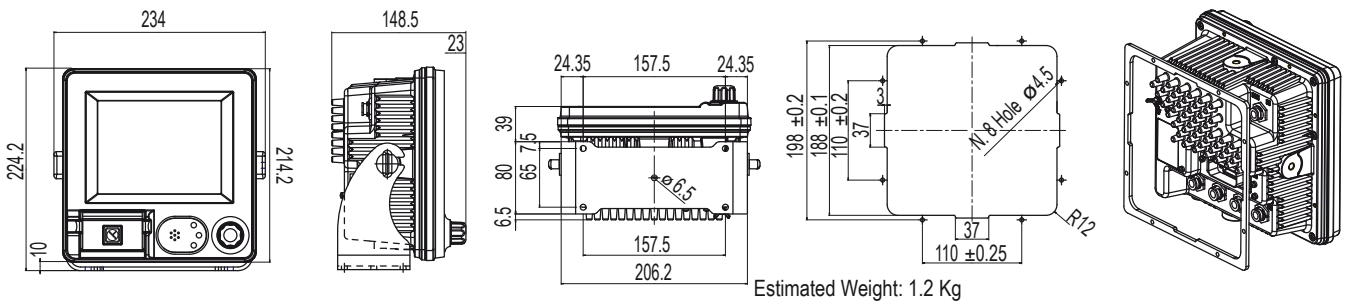
dimensions in mm.

FIBER-OPTIC GYRO COMPASS FGC-200



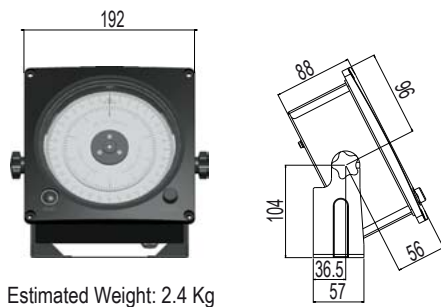
Estimated Weight: 6.8 Kg.

7" DISPLAY UNIT DU68-27B



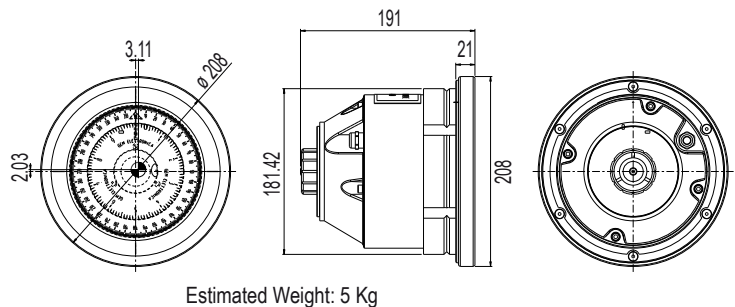
Estimated Weight: 1.2 Kg

MR33D REPEATER (optional)



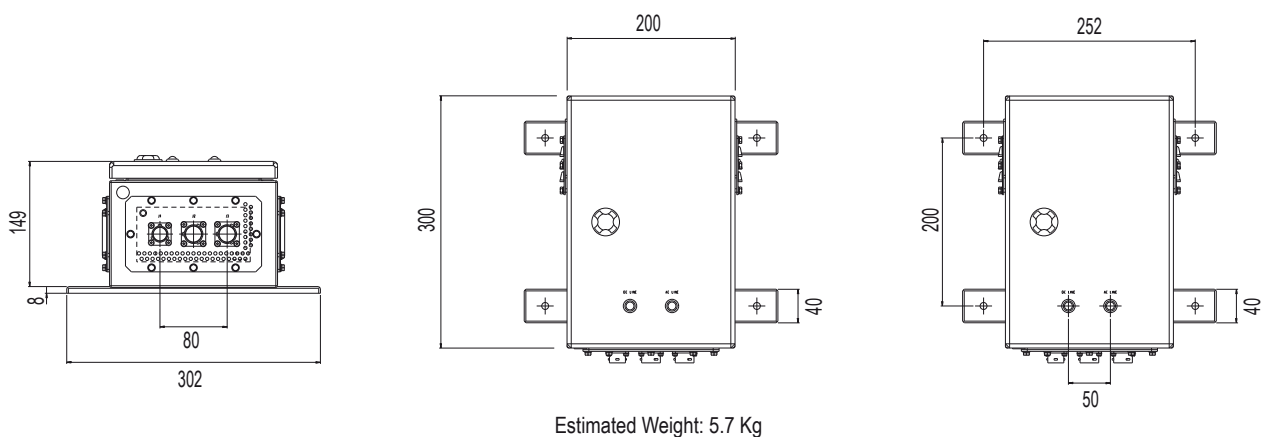
Estimated Weight: 2.4 Kg

MR34D REPEATER (optional)



Estimated Weight: 5 Kg

PSU-18000 POWER SUPPLY UNIT (optional)



Estimated Weight: 5.7 Kg

SURVEILLANCE & SECURITY

GUIDANCE, NAVIGATION & POSITIONING

MILITARY & DEFENCE

MARINE ELECTRONICS

This brochure should not be considered a contractual offer to sell. The specifications given herein may be changed by the manufacturer, GEM elettronica S.r.l., without notice.

