

POLARIS FOG-100

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:

Patrol Boats

Navy Vessels

Commercial and Shipping Vessels

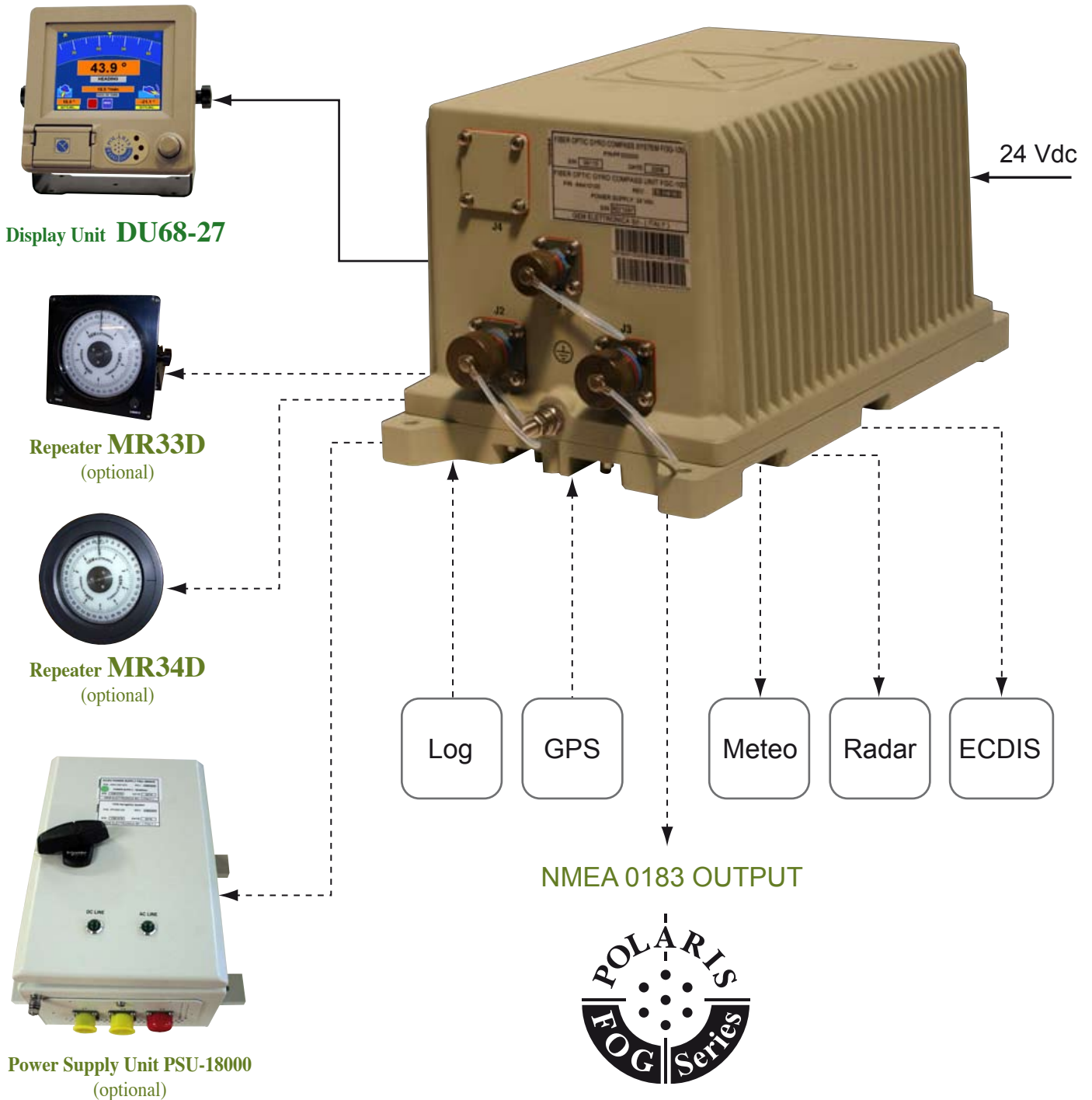
Stabilization System



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-100



SUPPLY COMPOSITION

- FGC Inertial Measurement Unit
- Display Unit DU68-27
- 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

Heading Sec (Lat) RMS	Roll/Pitch	Heave	Settling time	Range	MTBF	
0.2°	0.05° RMS	5 cm or 5% whichever is greater	< 10min (static) < 30min (full accuracy, all conditions)	0° ÷ 360° ± 60°	Heading range Roll / Pitch range	50000 hours

Environmental conditions

Operating temperature	0 °C to + 55 °C
Storage temperature	-40°C ÷ 80°C
Damp heat	up to 95% at 40° C
Vibrations	Fully compliant with IEC-60945 (sweep 2 Hz - 13.2 Hz at ± 1 mm, 13.2 Hz - 100 Hz at 7 m/s ² and for 2 h on each resonance, otherwise 2 h at 30 Hz in all three axes)
Waterproof	in accordance with IP66 standard
Electromagnetic interference	Fully compliant with IEC-60945
MTBF	≥ 50000 hours

Interfaces

Input	3 serial
Output	7 serial
Output protocol	IEC61162, Binary
I/O serial	RS422 or RS232
Output rate	0.025 Hz to 100 Hz (user-defined)

Power Supply *Fiber-Optic Gyrocompass*

Supply	24 VDC -10% +30%
Power consumption	Typical 12 W (24 V, 0.5 A)
Protection	Against over-voltage, low voltage and inversion of polarity

DU68-27 Repeater

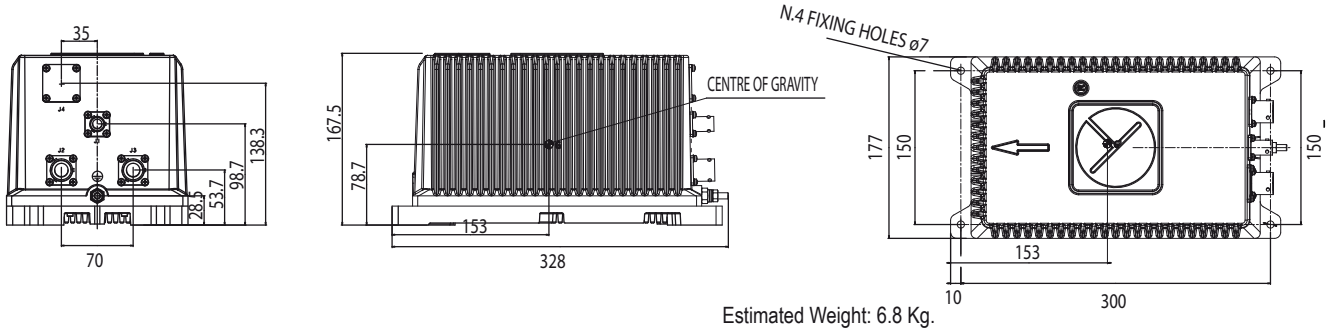
DISPLAY UNIT		WEIGHT AND DIMENSIONS	
		FGC-100	DU68-27
Display size	color 6.5" Touch Screen	Width	328 mm
Display colours	256	Depth	177 mm
Display resolution	640 x 480 pixel (VGA)	Height	167.5 mm
Display type	Transflective color TFT LCD	Weight	6.8 Kg
			1.2 Kg

MR33D Repeater / MR34D Repeater

MAIN TECHNICAL DATA

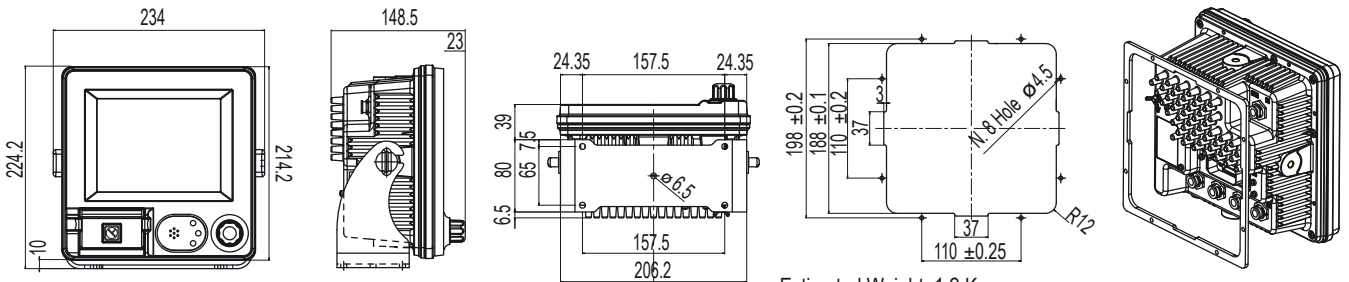
Interface	RS422, standard NMEA0183
Baud rate	4800bps
Input voltage	24Vcc (through external unit)
Power consumption:	5W
Resolution	0.1°
Repeater accuracy:	± 0.025°
Operating thermal range:	-25 ÷ + 55°C
Storage thermal range:	-25 ÷ + 70°C
Finishing:	MR34-D (IP56), MR33-D (IP40)

FIBER-OPTIC GYRO COMPASS FGC-100



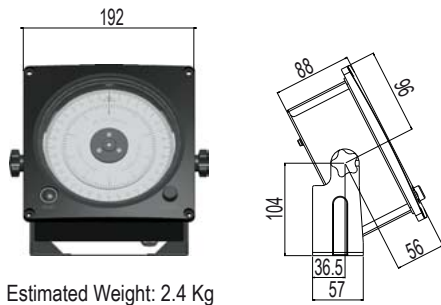
Estimated Weight: 6.8 Kg.

7" DISPLAY UNIT DU68-27



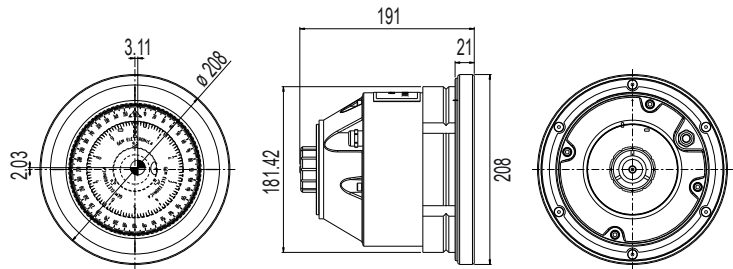
Estimated Weight: 1.2 Kg

MR33D REPEATER (optional)



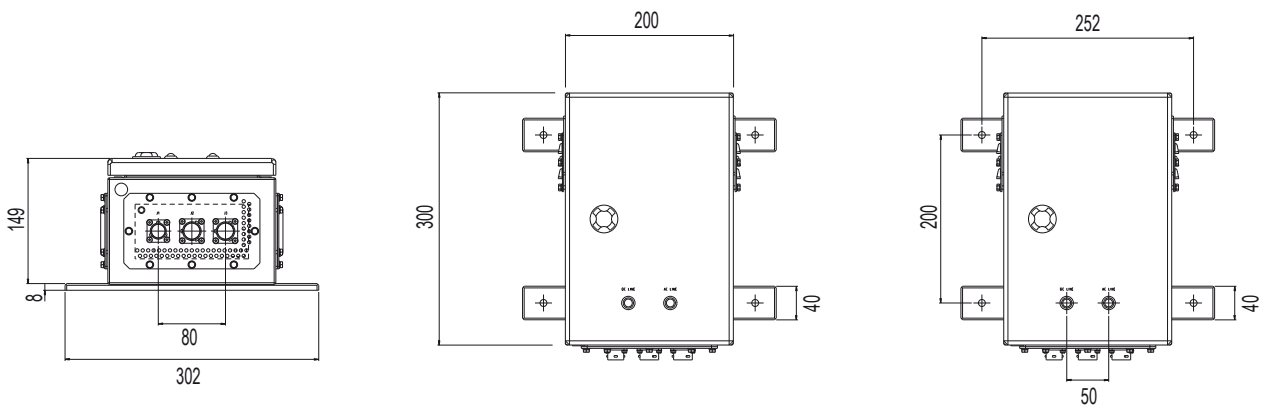
Estimated Weight: 2.4 Kg

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.

