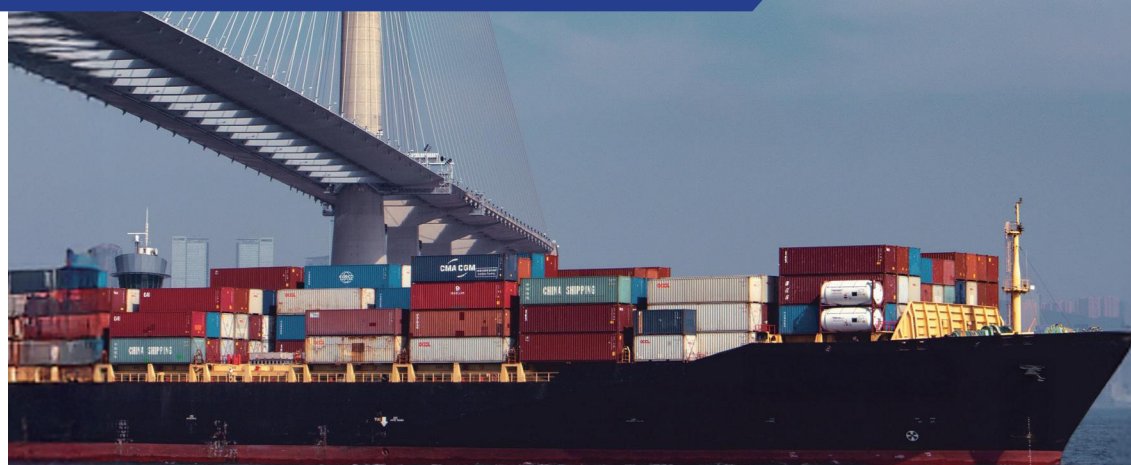


HIGHLANDER

GYRO

HLD-GC 100



GYRO COMPASS

The HLD-GC 100 type marine gyrocompass is a newly developed digital marine navigation product jointly developed by Hyland and CSIC 455 Factory in strict accordance with the latest IMO specifications, drawing on more than ten years of practical ship application experience of previous products. As the first domestically produced gyrocompass compliant with the international standard ISO 8728-1997 and certified with CCS type approval in China, this product also meets the relevant requirements specified in Chapter 6 of IACS UR E26 Rev.1 and Section 1.4 of the CCS Guidelines for Ship Cybersecurity (2025), making it applicable to the navigation, intelligent and cybersecurity compliance requirements of various types of ships.

Features

HLD-GC100 meets the following standards

IMO Performance Standards:	A.424(X1);A.694(17), MSC 64(67)
IEC Standards:	IEC 60945I5
ISO Standards:	08728-1997;150728-1997

Features

Fully Digital Design	IEC 61162-1 Interface
High Accuracy:0.25"xsecΦ	Automatic Speed and Latitude error correction

Gyrocompass Fast Settling Time

Settling time of the gyro compass can be shortened to 45minutes by setting the gyro compass to the magnetic north at power up.Settling time from cold start is less than 2.5h

High Dynamic Accuracy

Unique anti-vibration and dynamic swing compensation design to achieve high dynamic performance of the compass system.Dynamicaccuracy is 1.0"x secΦ.

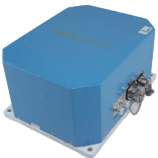
Scalability

Modular design allows system to be scaled as Compact, Standard and Redundancy System.

Easy installation and maintenance

Physical dimensions of the Master compass are 380 × 310 × 452 mm with a light weight (24 kg), allowing simple and fast installation. Software-based parameter settings (such as A-alignment) offer quick setup. No on-board annual maintenance service is required. Replacing the sensitive element before its MTBF offers convenience to owners.

Technical Specifications

Master Compass Unit			
Master Compass Unit 4201	Dimension(LxWxH):	380x322x454mm	Static accuracy: $\leq 0.25^{\circ} \times \text{sec } \varphi$
	Weight (est.) :	27.4kg	Dynamic accuracy: $\leq 1.0^{\circ} \times \text{sec } \varphi$
	IP protection:	IP22	Settling point error: $< 0.75^{\circ} \times \text{sec } \varphi$
	Installation:	Desk Mount	ettling time: < 2.5 hours (from cold start)
	Power Supply:	DC 24V	Gyro life span: 20,000 h
	Power Consumption :	<60W	
			
Master Gyrocompass (Fiber-Optic Gyrocompass) TF601	Dimensions (LxWxH):	270x212x140mm	Specifications:
	Weight (approx.):	$\leq 7.2\text{kg}$ (standard)	Heading Accuracy: $\leq 0.1^{\circ}$
	Supply Voltage:	18-36V (DC)	Heave & Roll Accuracy: $\leq 0.01^{\circ}$
	Operating Temperature:	-40 C ~65 C	External Aid: GPS/BDS
	Storage Temperature:	-50 C ~80 C	Start-up Time: ≤ 5 s
	Power Consumption:	$\leq 20\text{W}$	Alignment Time: ≤ 10 min
	Material:	Aluminum alloy	
Master Gyrocompass (Fiber-Optic Gyrocompass) TF605	Dimensions (LxWxH):	270x212x140mm	Specifications:
	Weight (approx.):	$\leq 7.2\text{kg}$ (standard)	Heading Accuracy: $\leq 0.5^{\circ}$
	Supply Voltage:	18-36V (DC)	Heave & Roll Accuracy: $\leq 0.02^{\circ}$
	Operating Temperature:	-40 C ~65 C	External Aid: GPS/BDS
	Storage Temperature:	-50 C ~80 C	Start-up Time: ≤ 5 s
	Power Consumption:	$\leq 20\text{W}$	Alignment Time: ≤ 10 min
	Material:	Aluminum alloy	

Distribution Unit			
Distribution Unit 4202	Dimension(LxWxH): 425*360*187mm Weight (est.) : 9.2kg IP protection: IP22 Installation: Flush Mount Power Supply: DC 24V Power Consumption : <10W	Outputs: Heading: 8 × IEC 61162-1 @ 1/10/50 Hz Heading: 8 × digital repeater Alarm: 4 × volt-free contacts Inputs: Alarm: 4 × volt-free contacts Position: GPS / DGPS Heading source: Gyro, magnetic compass serial heading source, or magnetic compass serial input; auto baud rate	
Operation Unit			
Operation Unit 4204	Dimension(LxWxH): 96*193*54mm Weight (est.) : 2.74kg IP protection: IP22 Installation: Flush Mount Power Supply: DC24V Power Consumption : <5W	Functions: Heading Sensor Management Audio and Visual Alarm Dimmer Control CAN bus communication hub	
Power Supply Unit			
Power Supply Unit 4203	Dimension(LxWxH): 330*220*120mm Weight (est.) : 4.2kg IP protection: IP22 Installation: Wall Mount Power Supply: AC110/220V, DC Power Consumption : 24VDC,300W	Features: Automatic changeover between AC and DC Galvanic Isolated Outputs Volt-free failure alarm contact	
Course Printer			
Course Printer 4205	Dimension(LxWxH): 390x325x115mm Weight (est.) : 10kg IP protection: IP22 Installation: Desk mounting Power Supply: AC220V Power Consumption : <25W	Interface: RS232 serial	
Steering Gear Room Compass Repeater			
Steering Gear Room Compass Repeater 4211	Dimension(LxWxH): 222*222*58mm Weight (est.) : 2.8kg IP protection: IP44 Installation: Bulkhead mounting Power Supply: DC 24V Power Consumption : <6W	Features: Accuracy: ± 0.1° Analogue Compass Card and Digital Display Selectable baud rate IEC 61162-1 interface Manual Alignment Dimmer Control	
Bearing Compass Repeater			
Bearing Compass Repeater 4210	Dimension(LxWxH): Φ245x180(H) Weight (est.) : 10.5kg IP protection: IP56 Installation: flush, bulkhead or Desk mount Power Supply: DC 24V Power Consumption : <6W	Features: Accuracy: ± 0.1° Analogue Compass Card and Digital Display Selectable baud rate IEC 61162-1 interface Manual Alignment Dimmer Control Optional BearingSight Device	
Steering Compass Repeater			
Steering Compass Repeater HLD-RP200	Dimension(LxWxH): 222x222x57mm Weight (est.) : 3kg IP protection: IP22 Installation: Flush mount Power Supply: DC 24V Power Consumption : <10W	Features: Accuracy: ± 0.1° 360° and 10° Analogue Compass Card Selectable baud rate IEC 61162-1 interface Manual Alignment Dimmer Control	

LCD Displayer

LCD Displayer HLD-MD100

Dimension(LxWxH): 144x144x49mm
Weight (est.): 1kg
IP protection: IP22
Installation: Flush/Wall/Desk mount
Power Supply: DC 24V
Power Consumption : <5W

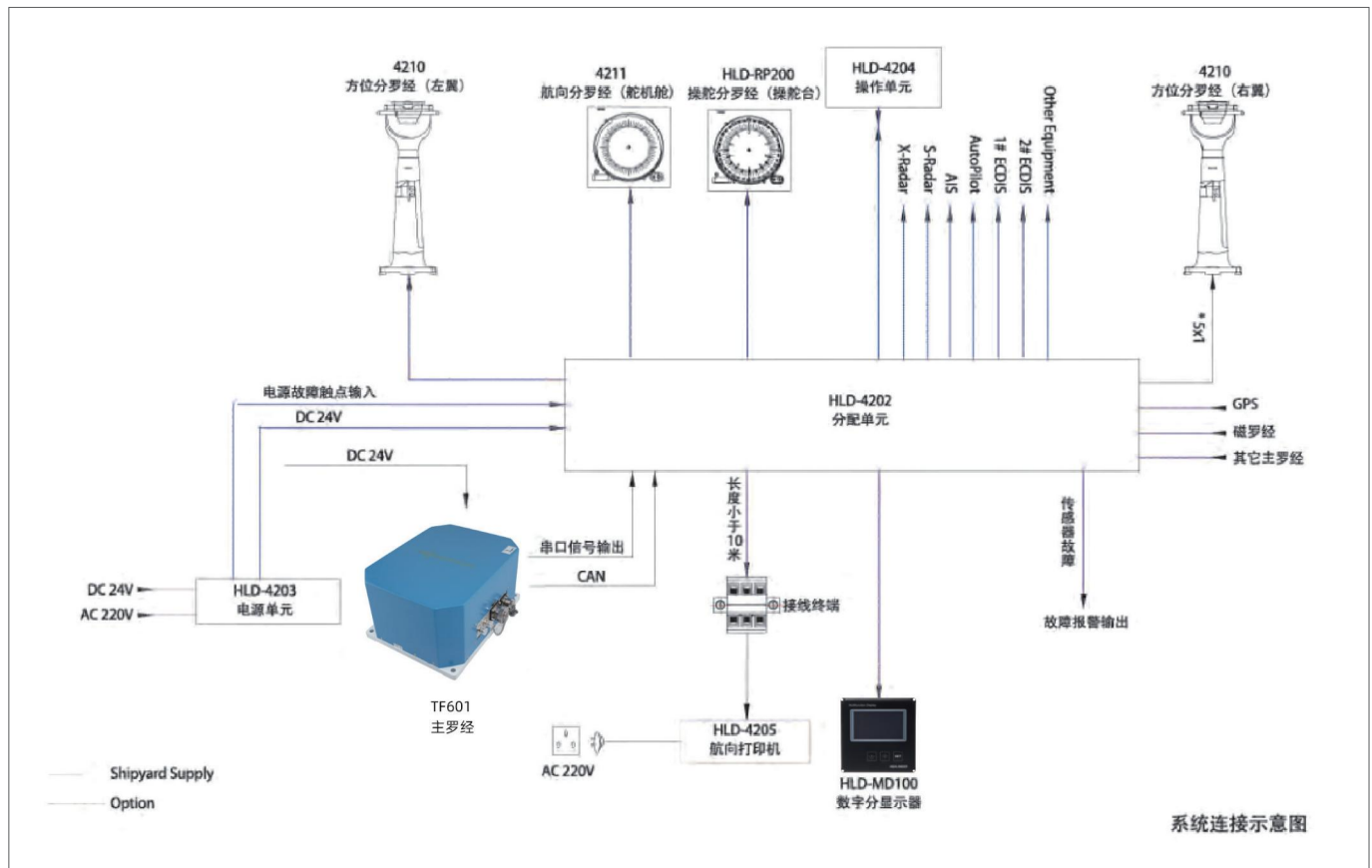
Features:
Accuracy: +0.1°error
Digital Display
Selectable baud rate
IEC 61162-1 interface
Tendency indication



configuration

Application

Standard configuration		Optional	
Master Compass	TF601	Course Printer	4205
Distribution Unit	4202	Bearing Compass Repeater	4210
Operation Unit	4204	Steering Gear Room Compass Repeater	4211
Power Supply Unit	4203	Steering Compass Repeater	HLD-RP200
		Multi LCD Display	HLD-MD100
		Signal distributor(1-16/2-8)	HID-DU220
		ROT Indicator	HLD-ROT 100



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