

# Meridian

## GYROCOMPASSES

### TECHNICAL SPECIFICATIONS

		Standard	Surveyor	
<b>Display</b>		360° compass card and digital display		
<b>Performance</b>	Settle point error	0.25° secant latitude	0.10° secant latitude	
	Settle point repeatability	0.25° secant latitude		
	Static accuracy	0.10° RMS secant latitude	0.05° RMS secant latitude	
	Dynamic accuracy	0.30° secant latitude scorsby/intercardinal motion	0.20° secant latitude scorsby/intercardinal motion	
	Follow-up speed	~200°/second		
	Setting time	<40 minutes to within 0.70° (from initial 30°)		
<b>Outputs</b>	S' type	1 x Step by Step (5V TTL), 6 steps per degree		
	Synchro	1 x 26V 400Hz sector value 360° (1:1 ratio) 11.8V line to line		
	Serial data	11 x RS422, NMEA 0183 (IEC 61162-1/2)	5 x RS422, NMEA 0183 (IEC 61162-1/2)	
		5 x RS232, NMEA 0183		
		1 x printer port, NMEA 0183	5 x 20mA current loop	
		1 x ROT (±10V)		
	Status/alarm	5V TTL power fail/gyro fail		
5V TTL system ready				
Potential free relays				
<b>Inputs</b>	Latitude	Automatic - via RS232 or RS422, NMEA 0183 from GPS or manual		
	Speed	Automatic - via RS232 or RS422, NMEA 0183 from log or pulse/contact closure at 100, 200 or 400/NM from log or manual		
<b>Compensation</b>	Latitude	80°N to 80°S		
	Speed	0-90 knots		
<b>Environmental</b>	Ambient operating temperature	0°C – 45°C (–15°C – +55°C with reduced accuracy)		
	Storage temperature	–25°C – +80°C		
	Gimbal limits	±45° roll and pitch		
	Meantime between failures (MTBF)	>30,000 hours		
	Shock (survival)	10g		
<b>Operating Voltage</b>	Input voltage	24V DC (19-36V DC)		
<b>Power</b>	Start-up	>3A at switch on / <1.5A in ready mode		
<b>Dimensions</b>	Size	344mm (h) x 267mm (w) x 440mm (d)		
	Weight	15.5Kg		
<b>Accessories</b>	Included	Operator handbook, spare fuse	Operator manual, transit case, spare connectors	
	Optional	Remote control unit, various repeaters and accessories		
<b>Standards</b>		IMO A424(X1), IMO A821(19), BS EN 60945, BS EN ISO8728 (1994), CE Marking, Electromagnetic Compatibility (EMC) Directive and Marine Equipment Directive 96/98/EC		
<b>Warranty</b>	24 months (from date of invoice) including parts and labour			

*Due to continuous development, specifications may vary from those listed above.*

# Meridian

REPEATERS

TECHNICAL SPECIFICATIONS

	Bearing Repeater	Changeover Switch	Data Repeater	Dial Repeater	Digital Repeater	Heading Repeater
<b>Display</b>	Heading	6 x Digital heading; 3 x Heading comparator	Simulated 360° tape & digital ROT, digital compass and digital ROT	360° x 1	Heading & ROT	Simulated 360° tape & numerical ROT, digital compass bar and digital ROT, full screen digital display, compass comparator (dual input); heading selection
<b>Alarm</b>	Gyro fail					
<b>Illumination</b>	Buttons & Dial	Buttons & Display		Dial	Buttons & Display	Display
<b>Controls</b>	Illumination 8 levels, stepper alignment	Illumination 8 levels, manual alignment, displayed information	Manual alignment displayed information	Illumination	Illumination 8 levels, manual alignment, displayed information	
<b>Heading accuracy (static)</b>	±0.1° digital, <±0.5° dial					
<b>Follow-up rate</b>	>20° per second					
<b>Input</b>	1 x RS422, 4,800/9,600/38,400 baud NMEA 0183, 1 Step 5-70 VDC	3 x RS422, 4,800/9,600/38,400 baud NMEA 0183	1 x RS422, 4,800/9,600/38,400 baud NMEA 0183, 1 Step 5-70 VDC	1 x RS422, 4,800 baud NMEA 0183 HDT	1 x RS422, 4,800/9,600/38,400 baud NMEA 0183, 1 Step 5-70 VDC	1 x RS422, 4,800/9,600/38,400 baud NMEA 0183 (synchro option)
<b>Output</b>	1 x RS422, NMEA 0183, 4,800/9,600/38,400 baud	15 x RS422, NMEA 0183, 4,800/9,600/38,400 baud, Step 5 VDC	1 x RS422, NMEA 0183, 4,800/9,600/38,400 baud	N/A	1 x RS422, NMEA 0183, 4,800/9,600/38,400 baud	1 x RS422, NMEA 0183, 4,800/9,600/38,400 baud, 1 x RS232 (printer)
<b>Gimbal limits</b>	±45°	N/A				
<b>Operating temperature</b>	-25°C to +55°C	-15°C to +55°C		-10 C to +70°C	-15 C to +55°C	
<b>Storage temperature</b>	-25°C to +55°C			-10 C to +70°C	-15 C to +55°C	
<b>Water resistance</b>	IP66	IP52		IP54	IP52	
<b>Power input voltage</b>	18-36VDC			18-30VDC	18-36 VDC	
<b>Power input</b>	15W	25W	10W	6W	5W	15W
<b>Dimensions</b>	287x388x388mm	300x400x25mm (Display 96x192x145)	96x152x145mm	144x144x100mm	96x192x145mm	144x288x130mm
<b>Warranty</b>	24 months international warranty (including parts & labour) from date of invoice, 24 months when purchased with a Meridian Gyrocompass.					

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# Meridian Gyrocompasses

MARINE NAVIGATION SYSTEMS

## Highly accurate performance with low cost of ownership.






The Meridian gyrocompass product range is suitable for the ever-changing needs of a modern integrated navigation bridge system. This includes highly accurate performance with low cost of ownership and system flexibility. Due to the Meridian's small size and fast settle time of less than 45 minutes, there are no limits to the type of vessel for which it is suitable.

The Meridian gyrocompass can be installed as a stand-alone unit or, together with any of the Meridian range of repeaters and ancillaries, it becomes a single, dual or triple gyro system. The Meridian can also be used to replace many existing gyrocompasses as a retro fit unit.

For simple installation the Meridian offers a large array of digital and analogue outputs plus easy to use set-up and self-test modes that are activated via the control unit. The versatility and flexibility of the Meridian can be clearly demonstrated with the remote control unit option. This gives freedom to install the main unit in the most convenient location whilst installing the remote control unit where it can be seen and regularly used.

Unlike virtually every other marine navigation gyrocompass currently available, the Meridian has a maintenance-free dry element with a meantime between failure of more than 30,000 hours. After installation there are no scheduled annual maintenance and servicing costs.

### Features

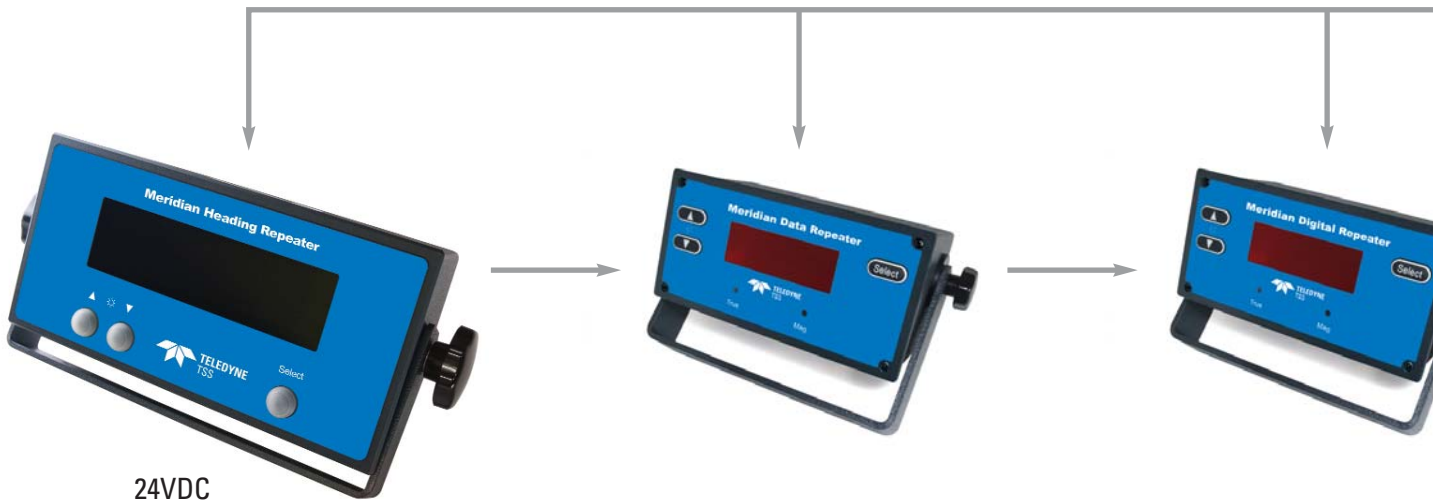
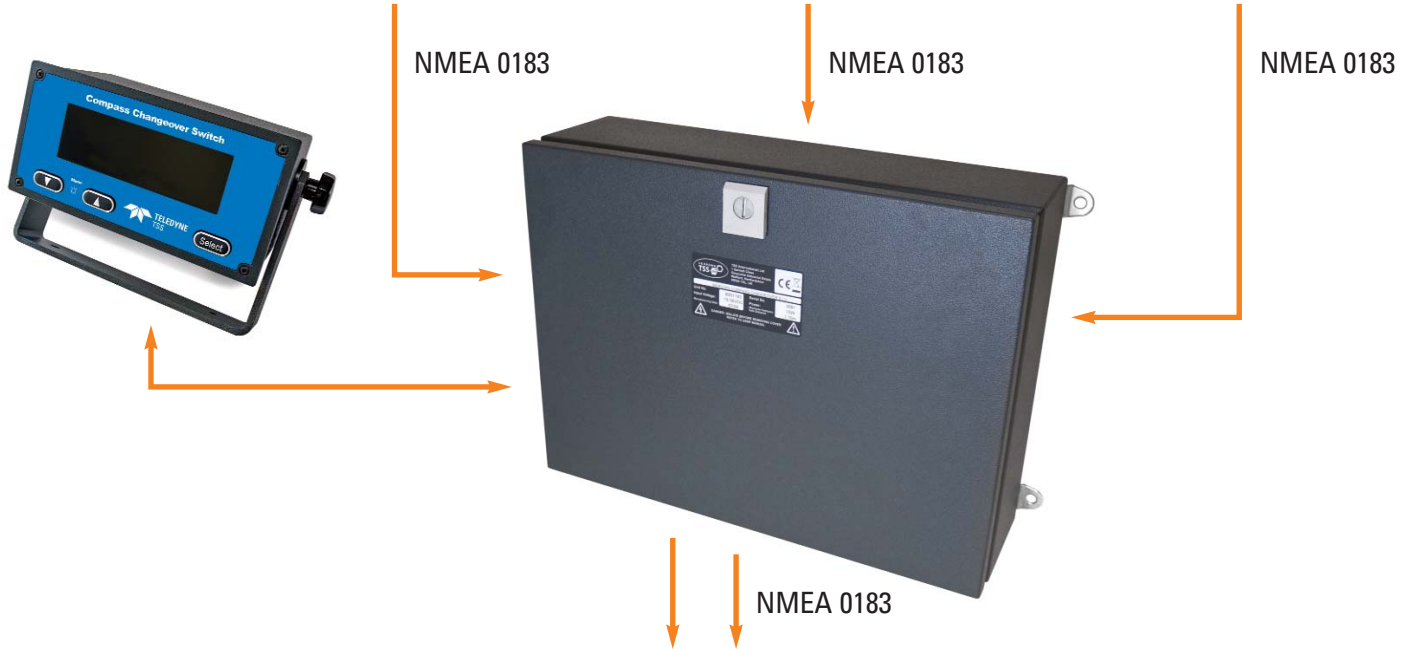
-  Type approved to marine equipment directive
-  Economic one-box solution
-  Fast initial settle time
-  Small, lightweight and versatile
-  High dynamic heading accuracy



# Meridian

GYROCOMPASSES

Accepts 3 heading inputs from gyrocompass/magnetic compass



24VDC

### Remote Control Unit Option



For simple installation the Meridian offers a large array of digital and analogue outputs plus easy to use digital set up and self test modes that are activated via the control unit.

The versatility and flexibility of the Meridian gyrocompass can be clearly demonstrated with the remote control unit option, which is supplied with the gyrocompass system. This gives freedom to install the Main unit in the most convenient location whilst installing the remote control unit where it can be seen and regularly used.



# Meridian Surveyor

The Meridian Surveyor boasts a wide range of interfaces to enable use on any marine vessel. The unit utilises a DTG gyro element which provides exceptional performance with an accuracy unmatched by even the latest fibre optic designs. Unlike conventional spinning mass gyrocompasses, the Meridian Surveyor uses a dry tuned element (DTG) that removes the need for routine maintenance thereby significantly reducing cost of ownership.



# Meridian Standard

The heart of the Meridian gyrocompass is the element, which is a dynamically tuned gyroscope (DTG). The DTG is a high precision technology which, due to its size, accuracy, reliability and shock resistance, is used in many different applications.

The guaranteed accuracy of the Meridian gyrocompass is obtained through specialised high quality engineering. This gives exceedingly stable heading and means that the gyro will follow a high turn rate of up to 200° per second.



Azimuth Circle  
(Prism and Vane Types)



Pedestal Stand



Bulkhead Bracket