



MERIDIAN SURVEYOR GYROCOMPASS

PRECISION MARINE NAVIGATION GYROCOMPASS

- IMO, Wheelmark & HSC certified
- Innovative chassis design incorporating state-of-the-art digital electronics for improved reliability
- Maintenance free DTG element
- World's smallest & lightest marine gyro
- Dynamic heading accuracy of $\pm 0.2^\circ$
- Static heading accuracy of $\pm 0.05^\circ$
- <40 minutes settling time
- Start up power requirement of 1.8A
- Comprehensive range of analogue & digital output options
- Gyro element design ensures low cost of ownership
- MTBF of 30,000 hrs
- High turn rate of 200° per second
- User friendly digital set-up and self-test



The world's smallest, digital marine gyrocompass

TSS and SG Brown, part of the Vosper Thornycroft group, have combined 85 years of gyro experience to offer a new survey gyrocompass.

SG Brown have been designing and supplying marine gyrocompasses to the world's navies for more than half a century. Still manufacturing and supporting the most accurate systems the new Meridian has been designed to be the smallest, lightest, most flexible and accurate mechanical gyrocompass available to commercial users. The Meridian is also the first to offer IMO, Wheelmark and HSC certification.

The new 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.

Hence the Meridian Surveyor provides reliable, maintenance free operation with a MTBF in excess of 30,000 hrs. Calibration is likely to be the only required expenditure during this period unlike the large element replacement costs associated with most gyrocompasses.

The remarkably stable heading can be maintained for turn rates in excess of 200° per second making the system ideal for use on fast survey craft and in river/harbour environments.

The Meridian Surveyor gyrocompass is backed by the largest global support network of any manufacturer, TSS has complete repair, test and calibration facilities in the UK and USA aided by factory trained service engineers on every continent.

SG Brown

TSS TECHNOLOGY IN MOTION



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Technical Specifications

Display type	360° Compass Card and VFD Display
Settle point	0.1° secant latitude
Static accuracy	0.05° RMS secant latitude
Dynamic accuracy	0.2° secant latitude
Follow up speed	200°/sec.
Settling time	<40 minutes, to within 0.7°

Latitude Input	Automatic - via RS232 or RS422, NMEA 0183 from GPS or Manual
Speed Input	Automatic - via RS232 or RS422, NMEA 0183 from Log, or pulse / contact closure at 100, 200 or 400 per NM from Log or manual
Latitude Compensation	80°N to 80°S
Speed Compensation	0 - 90 knots
Operating Temperature	-15°C + 55°C
Storage Temperature	-25°C to + 80°C
Gimbal Limits	± 45° Pitch and Roll
Shock	10g
Mean Time Between Failure	30,000 hours
Service intervals	No scheduled maintenance, Calibration recommended every 2 years
Input Voltage	24VDC (18 - 36VDC)
Start up current	1.8A at Switch on
Dimensions	344mm (H) x 267 mm (W) x 440mm (D)
Weight:	15.5kg
Accessories Included	Operators Handbook, Spare Fuse, Connector Kit
Options	Transit Case, Repeater, 110/220V Power Supply Unit
Standards	IMO A 424 (X1), IMO A 821 (1bv9), BS EN 60945, BS EN ISO 8728. 1994, BS 6217. 1981 CE Marking, Electromagnetic Compatibility (EMC) Directive and the Marine Equipment Directive 96/98/EC
Warranty	12 months parts and labour international warranty

	Outputs Format		
"S" type	Step by Step (5V TTL) 6 steps/1o		
Synchro	1 x 26V, 400Hz, 360 o (1:1 ratio) 11.8V line to line		
Serial Data	5 x RS 422	5 x RS 232	5 x 20mA loop
Analogue	R.O.T. ± 20o/sec. (±10mA)	1 x 5V TTL system ready	1 x 5V TTL power fail / gyro fail

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