

# Meridian Surveyor

GYROCOMPASS

## The world's smallest digital marine gyrocompass.

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.

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.



### Features

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



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## TECHNICAL SPECIFICATIONS

<b>Display type</b>	360° compass card and VFD display
<b>Settle point</b>	0.1° secant latitude
<b>Static accuracy</b>	0.05° RMS secant latitude
<b>Dynamic accuracy</b>	0.2° secant latitude
<b>Follow up speed</b>	200°/sec
<b>Settling time</b>	<40 minutes, to within 0.7°
<b>Latitude input</b>	Automatic – via RS232 or RS422, NMEA 0183 from GPS or Manual
<b>Speed input</b>	Automatic – via RS232 or RS422, NMEA 0183 from log or pulse/contact closure at 100, 200 or 400 per NM from log or manual
<b>Latitude compensation</b>	80N to 80S
<b>Speed compensation</b>	0 – 90 knots
<b>Operating temperature</b>	-15°C to +55°C
<b>Storage temperature</b>	-25°C to +80°C
<b>Gimbal limits</b>	±45° pitch and roll
<b>Shock</b>	10g
<b>Mean time before failure</b>	30,000 hours
<b>Input voltage</b>	24VDC (18-36 VDC)
<b>Start-up current</b>	1.8A at switch on
<b>Dimensions</b>	344mm (h) x 267mm (w) x 440mm (d)
<b>Weight</b>	15.5 Kg
<b>Accessories included</b>	Operators handbook, transit case, spare connectors
<b>Standards</b>	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
<b>'S' type output format</b>	Step by Step (5V TTL) 6 steps/1°
<b>Synchro output format</b>	1 x 26V, 400Hz, 360° (1:1 ratio) 11.8V line to line
<b>Serial data output format</b>	5 x RS422; 5 x RS232; 5 x 20mA loop
<b>Analogue output</b>	ROT ±20°/sec (±10mA); 1x 5V TTL system ready ; 1 x 5V TTL power fail/gyro fail
<b>Warranty</b>	24 months international warranty including parts and labour

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



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