# Alphatron Marine

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## The human touch in technology

Maintenance free Fiber Optic "Gyro" compass ALPHAFIBERCOURSE

## **ALPHAFIBERCOURSE GYRO COMPASS**

### STATE OF THE ART FOG (FIBER OPTIC) STRAPDOWN TECHNOLOGY

### HEADING, ROLL, PITCH AND RATE OF TURN

### **APPLICATIONS**

The Alphafibercourse is an environmentally friendly high quality product for marine applications without the need of periodic maintenance.

### **TYPICAL APPLICATIONS**

- High speed vessels
- RIB's
- Mega Yachts
- Offshore Patrol Vessels
- Survey vessels
- Dredgers
- DP operation vessels
- Cruise ships
- Seismic vessels
- Anchor handlers
- Platform vessels
- Fast Patrol boats
- Vessels with a helicopter deck
- Vessels needing roll & pitch info
- Military vessels\*
- Research vessels

\* Export license required outside the EU



### FOG SENSOR WITH OPTIONAL DOCKING STATION

By connecting the main Alphafibercourse sensor to the docking station, 12 repeater stations are easily connected up galvanically isolated. In order to prevent failures of the system caused by external factors.

Via the docking station it is also possible to connect the DNV OSV approved Alphatron interswitch for multiple heading sensor applications.

The docking station is fitted with a digital heading display.

### FOG SENSOR

- All-in-one high accuracy Altitude and Heading Reference Sensor Heading, Roll, Pitch, rate of turn
- Fiber-Optic Gyroscope (FOG), unique strapdown technology No spinning element, no gas cavity hence maintenance free
- Compact, lean and reliable Appropriate for all marine applications
- Multiple interfaces aiding sensors for a range of applications
- Ethernet for fast and easy integration
- Time stamping for all data
- Low latency for real time control loops
- IXBLUE FOG inside



### FEATURES

- Maintenance free
- Fast settling time <10 minutes (I/O to GPS)
- Low power consumption 10 watt (excl. repeaters)
- Small size 160x160x113mm (excl. docking station)
- Worldwide support
- Wheelmark MED approved
- Suitable for all kinds of vessels
- Automatic start up and alignment
- Automatic speed and latitude correction
- High follow up rate
- Light weight 2.8 kg (excl. docking station)
- Shock resistant up to 5G
- One unit design
- Low cost of ownership
- Complies with high speed HSC code
- Built-in test function
- Quadriple gyro configuration via interswitch
- Full range of serial repeaters available
- Vessel speed up to 50 knots

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### CONFIGURATION

The Alphafibercourse has a monoblock design and if combined with the optical docking station output to 12 repeaters



### STEERING REPEATER WITH VERNIER

Alphacourse G NMEA Type

### DNV APPROVED

### ALSO AVAILABLE

- NMEA Booster
- Gyro interswitch
- Horizontal stand
- Tilting bracket
- Rate of turn indicator



### **TECHNICAL DATA HEADING REFERENCE SENSOR**



ANALOGUE/ DIGITAL **MULTIFUNC-TIONAL GYRO** REPEATER (at) 

### **ALPHACOURSE MF**

- NMEA Type
- Analogue gyro course
- Digital gyro course
- Rate of turn trend
- Audible stepper clicks

#### **GYROCOMPASS AND MOTION SENSOR**

Heading accuracy Roll and pitch accuracy Setup time Range

### **MECHANICAL**

Dimensions (I x W x H) Weight Water tightness

CONTROL Serial RS232 or RS422

Ethernet

Pulse port Input/output formats

**Baud** rate Data output rate Data input rate

**POWER SUPPLY** Power supply Power consumption

RELIABILITY MTBF (computed) Preventive maintenance

### **ENVIRONMENT**

Operating temperature Storage temperature Acceleration dynamic range Vibration

**INPUTS** Latitude GPS

Speed Log

Remote access via

**OUTPUTS** Via gyro docking station

SIGNAL AVAILABLE

True north Rate of turn **Roll & Pitch** 

0.23 deg 0.1 deg <15 minutes Heading: 0 to 360° Roll: -180° to + 180° Pitch: -90° to + 90°

160mm x 160mm x 113mm 2.8 kg (excl. docking station) IP66

2 input and 2 output ports & repeater port UDP (unicast, multicast, broadcast) / TCP (client or server) 4 inputs/2 outputs, 5V (TTL Level) Industry standards: NMEA 0183, ASCII, BINARY 600 bauds to 460 kbauds 0.1 Hz to 200 Hz Up to 100 Hz

24V DC (15 to 36V DC) 10W

40.000h None

-20°C to +55°C -40°C to +80°C +/- 5q Sinus 0.5g max (4 to 50Hz)

NMEA 0183 via RS232 / RS422 from GPS Pulse or contact at 100, 200 and 400 per nm from log TTL (SV) NMEA 0183 via RS232 / RS422 from log, ASC II Binary UDP TCP client or server

12x RS422 NMEA 183 or RS422

### **ALPHACOURSE MFC TS**

- NMEA Type
- Digital gyro course
- Rate of turn trend
- Audible stepper clicks
- Recording data of the FOG
- Configuration tool

#### **Approvals**

- ISO 8728
- HSC ISO 16328 EU Directive 89/336/EEC
- IEC60945

**FUNCTIONAL COLOUR DISPLAY** REPEATER



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