

ALPHATRON
Alphatron Marine

The human touch in technology

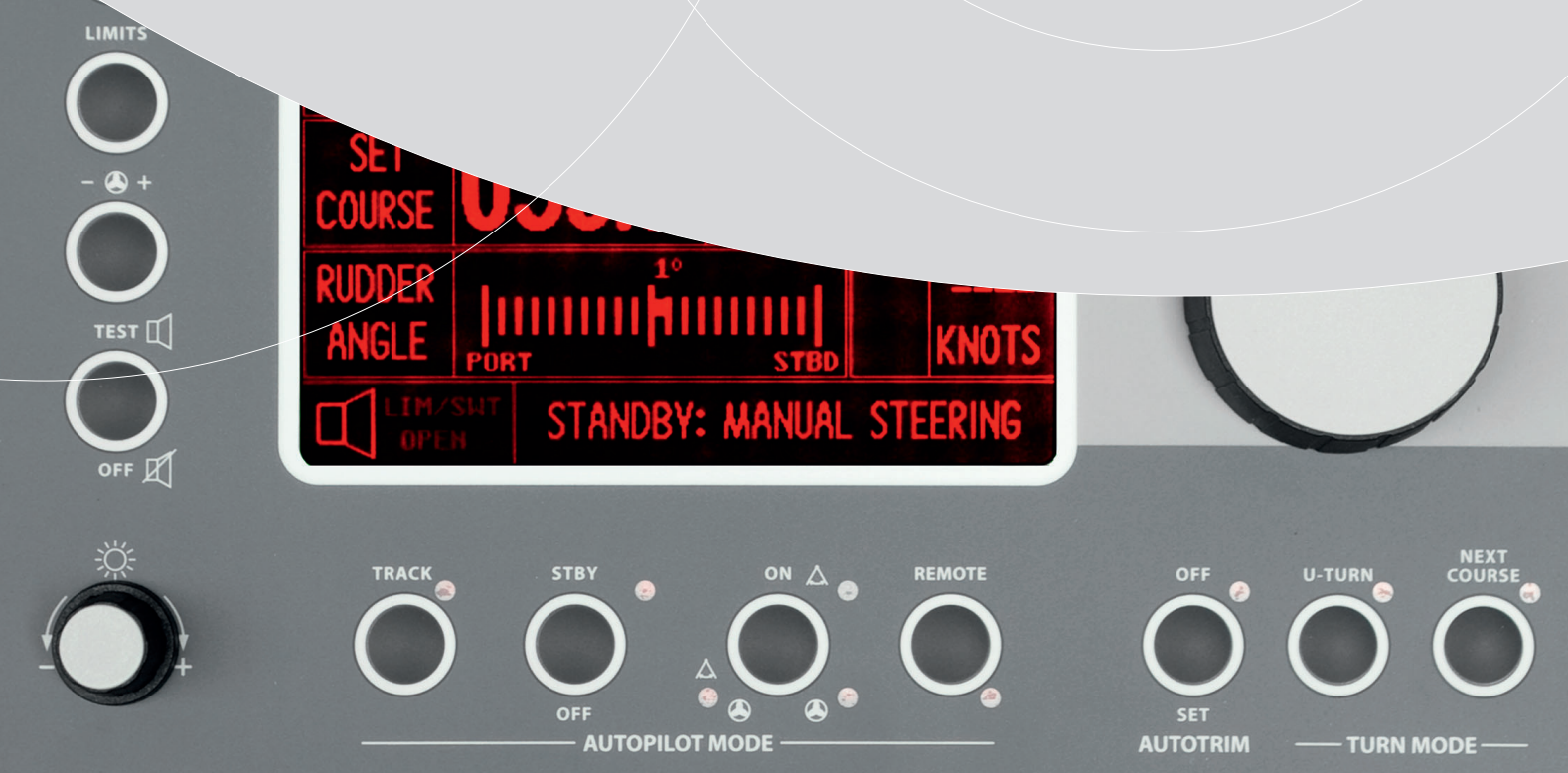
Adaptive ALPHASEAPILOT MFA

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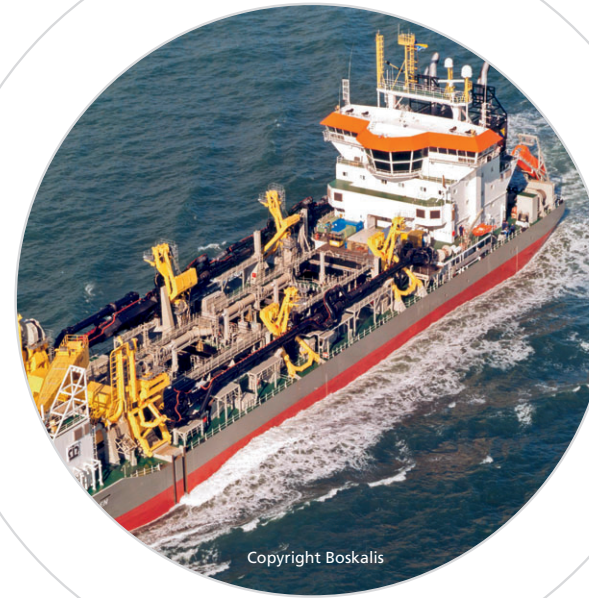
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Alphatron Marine

Alphaseapilot MFA

Versatile compact MED approved speed adaptive autopilot for all class of vessels up to unlimited size



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MFA CONTROL UNIT

Features

- Suitable for single and independent ruddersystems
- Magnetic Sensor Coil Heading Input
- Multi Waypoint Track pilot in combination with ALPHACHART T
- Adaptive / PID steering
- Large TFT info screen
- Integral Off Course Alarm
- Integral Watch Alarm
- Bow thruster and rudder control
- Custom U-Turn & Next Course functions
- NMEA & Furuno Heading Outputs
- 11-40 Vdc Power supply
- 11-120 V DC/5A rated solid state switch
- Outputs to Solenoids
- +/- 10 volt output isolated
- Connectable to rudder propellers or water jets
- Also available in black color

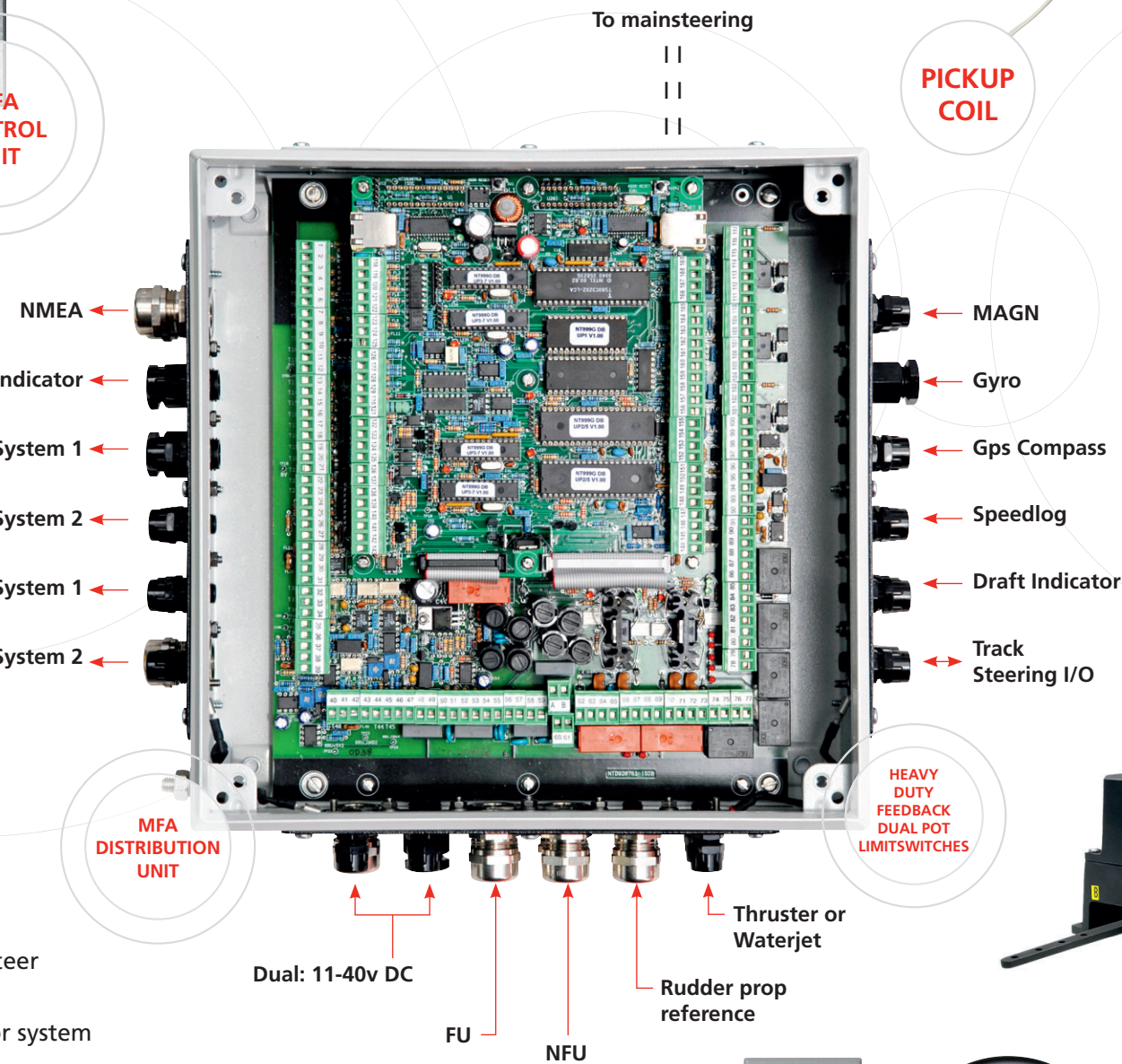
Including high speed version HSC MED wheelmark approval

Accessories

- Full Main Steering Alphasteer
- Alarm units
- Alphatron rudder indicator system
- Tiller Follow up & Non follow up with take over function
- Follow up wheel unit
- Relay box for high volt solenoids
- AC power supply



The colours and pictures in this brochure can deviate from reality.



MFA DISTRIBUTION UNIT

PICKUP COIL



Technical data

Feature	ALPHASEAPILOT MFA
• 11-40 Vdc Primary supply	✓
• 11-40 Vdc Backup supply	✓
• HSC2 compass coil	1
• IEC 61162/1 or 2 heading input	3
• IEC 61162/1 or 2 track input	1
• IEC 61162/1 or 2 speed input	2x NMEA or 1x NMEA, 1x pulse
• Isolated rudder reference input (Single ended or Sin/Cos)	2
• Max. number of control units	3
• Rudder Angle Indicator output	2
• Isolated IEC 61162/1 or /2 output	2
• Furuno AD10 Style heading output	✓
• Solenoid output (11-120Vdc)	2 (independent)
• Volt free switch line standby/engaged	✓
• RSC input	2
• Volt free alarm contacts	3
• Remote standby input	✓
• Power monitor changeover contact	✓
• Spare (status) digital input/output	✓
• +/- 10V isolated analogue o/p	4
• 4-20mA isolated o/p	4
• 5V step output	1
• Step heading i/p (5V DC only)	✓
• Draft indicator input	✓
• 4-20mA Isolated draft I/P	✓
• Opto-isolated remote power up i/p	1
• Opto-isolated remote enable i/p	2
• V isolated I/p (FU /HSC spec use)	1
• '+/- 10V isolated i/p (FU / HSC spec use)	2
• Ethernet	2



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Gyro converter S2N, U/N 9028C

(scale 1:1)



Description

The Synchro/Stepper – NMEA converter S2N is intended to be used for interfacing gyros to AIS, VDR, S-VDR, ECDIS etc as well as acting as a gyro repeater. It is compliant not only with IEC 60945 and IEC 61162-1/-2 but also also with all relevant IMO gyro standards, including the need for 40 Hz update rate and 20 °/second tracking rate as required by IMO for High Speed Craft.

The unit converts from any standard synchro (any frequency or DC) or stepper formats to standard NMEA 0183/IEC 61162-1/-2 serial data.

This includes also 1:1 synchro at full 0.1 ° resolution, thereby avoiding the alignment problem completely. Update rate can be set from 1 Hz up to 40 Hz.

Alignment for geared synchro/stepper formats can be done using the push-buttons and monitored using the built-in LED displays, which are also dimmable within a wide range.

Mounting options

The standard version (shown above) has two mounting flanges that allows the unit to be mounted in a panel from front or rear or, if the flanges are reversed, on a bulkhead. Cable intake glands are located under the box.

For mounting on a horizontal surface, a trunion mounting kit 9089A is available. This can be used both for deckhead mount (shown left) or for mounting on top of a horizontal surface (shown right).

The kit also includes an extra rear panel with holes for cable glands, which makes it possible to move the cable intake from the underside of the panel to the rear panel.



Type approvals

The unit complies with all environmental and general requirements as defined by IEC 60945. Serial data is in compliance with NMEA 0183/IEC 61162-1/-2 and gyro repeater performance complies with relevant IMO performance standards (including HSC).

Manual

Each unit is shipped with a 20-page manual, describing installation and set-up.

Technical data

- Dimensions: 140 x 82 x 40 mm, not including mounting flanges.
- Material: Stainless steel, mounting flanges black-anodized aluminum. Compass safe distance 0.4 m.
- Accuracy: Better than 0.1°
- Update rate: 1, 2, 5, 10, 20, 30 or 40 Hz
- Message: HDT or HDM. ROT conversion at 1 Hz settable.
- Synchro input: R1/R2 ref input, up to 120 V S1/S2/S3, any voltage up to nominal 115/90 V, any frequency up to 2 kHz, including DC.
- Stepper input: DC or rectified AC, voltage levels 5 – 120 V
- Gear ratio: 1:360, 180, 90, 45, 36 (also 1:1 in synchro mode)
- Output: NMEA/IEC 61162-1/-2 output, using RS485-compliant driver.
- Alignment: Using “+” and “-“ keys or via NMEA input.
- Set-up: Push-buttons/display or using NMEA input.
- Display: 5 7-segment LED displays, dimmable.
- Inputs: Fully isolated from DC power and output
- Connectors: Spring-loaded terminal blocks.
- Power: 18 - 36 V DC, Less than 1 W, typically 60 mA

Options

For integration into customer's equipment, junction boxes etc, a bare board version 9027C with all components and connectors on the forward facing side of the board can be delivered.

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Rev 9101E1, printed in Sweden



Delivery

The units are shipped in individual cardboard boxes and the standard configuration of U/N 9028C is that each unit is supplied with mounting flanges and a 20-page Installation/Setup manual.

OEM versions, with customer's panel foil, labeling and manuals can be delivered, inquiries are most welcome.

