

Standard 22 Compact

Gyro Compass Retrofit Solutions



Proven Gyro Compass Technology For More Than 100 Years

Standard 22 Compact And Retrofit Solutions

Standard 22 compact is the most popular gyro compass in the market – due to its performance and reliability. Standard 22 uses sophisticated gyro compass technology based on 100 years of experience. Operational safety was dramatically increased due to a patented data transmission technology that completely replaces the use of slip rings. The Standard 22 combines proven technology and long maintenance periods with most advanced features. A safe investment in your ship – for a long time. In addition to fulfill the main function as a heading sensor, the Standard 22 gyro compass offers many features that

provide additional value and make day-to-day work easier. The Standard 22 gyro compass compact is equipped with automatic speed/latitude error correction and dynamic error correction. By using the optional «quick settling mode» the heading information is provided within just one hour after start up of the compass. All Standard 22 gyro compasses are approved for standard and high-speed crafts. Standard 22 – really unique in its class.

Retrofit Solutions

Raytheon Anschütz provides a variety of converters that enable to retain your existing equipment as repeaters and autopilots when retrofitting an old gyro compass. Old gyro compasses transmit the heading information as analog synchro or step signals. By one of the new converters the serial/digital heading information from new compasses is converted into analog signals. Advantages: Reduced expenses for new equipment and reduced installation efforts.

Replacing A Gyro With 360° Axis (1:1)

The Serial / 360° synchro converter converts serial heading information (NMEA or course bus) to a coarse synchro output (360°, compatible to 11 CX synchro) and can be used to connect NautoCourse or old autopilots to new compasses. The reference voltage has to be supplied by the connected equipment.

Technical data

Based on the reference voltage the following signal voltages can be created:

| Reference voltage [V] | Signal voltage [V] | Frequency [Hz] |
|-----------------------|--------------------|----------------|
| 115 | 90 | 400 |
| 26 | 11.8 | 400 |
| 13 | 11.8 | 400 |
| 13 | 6 | 400 |
| 3.5 | 6 | 800 |

- Supply voltage 24 V DC,
- Max. synchro output power 1.2 V A.

Your Benefit®

Standard 22

- High accuracy of 0.1 degrees
- Automatic speed/latitude error correction and dynamic error correction
- Quick settling mode (option)
- Wide range of accessories
- Short installation time and long maintenance periods
- IMO approved for standard and high-speed crafts

Retrofit solutions

- Cost-efficient replacement of any old gyro compasses
- Existing repeaters, autopilots and other heading receivers (periphery) can remain on board
- Existing cabling can be used
- Minimum installation time
- Cost-efficient solution for ship owner
- Perfect solution for service organisations – almost all available compasses in the market can be retrofitted with only 3 different converters

Replacing a Gyro With Synchro Output

The serial / universal synchro converter converts serial heading information (NMEA or course bus) into various synchro signals. It is used when an old gyro compass (e.g from Anschütz, C. Plath, Tokimec, Yokogawa, Hokushin, Microtechnica, Amur, Kurs 4) with synchro output is replaced with a new Standard 22 to keep the existing equipment with synchro input (e.g. steering repeaters).

Technical data

- Configurable output of synchro signals:
Reference voltage: 1..110 V
Signal voltage: 1..100 V
- Turn ratio: 1:360; 1:90; 1:36; 1:2; 1:1
- Converter provides one selectable output signal format
- For a load of max. 12 reference receivers
- Supply voltage: 24 V DC

Replacing A Gyro With Step Output

The serial / universal step converter converts serial heading information (NMEA or course bus) into step (6step / degree) signals. It is used when an old gyro compass (e.g. from Sperry, Tokimec, Yokogawa, Robertson) with step output is replaced with a new Standard 22 to keep the existing equipment with step input (e.g. autopilots and steering repeaters). The serial / universal step converter can alternatively be used as a step booster.

Technical data

- Configurable output of step signals with 24, 35, 50 or 70 V DC
- One voltage configurable as common plus or common minus
- Max. step output power: 150 W
- 7 outputs (1 A fused), 1 output (6.3 A fused) for distribution
- Converter provides supply voltage for Standard 22 (max.150 W)
- Supply voltage: 115/230 V 50/60 Hz

Serial / 360° synchro converter



Serial / Universal synchro converter



Serial / Universal step converter



Technical Data

Accuracy

| | |
|---|------------------|
| Settle point error | 0.1°secLat., RMS |
| Static error | 0.1°secLat., RMS |
| Dynamic error | 0.4°secLat., RMS |
| (periodic roll and pitch + horizontal acceleration) | |
| secLat.=1/cosLatitude | |

Supply voltage 24 V DC (18 – 36 V DC)

Power consumption

80 W to 140 W (start-up) sensor unit

General data

| | |
|--|------------------------------------|
| Permissible ambient temperature | |
| Operation | –10° C to +55° C |
| Storage | –25° C to +70° C |
| | without supporting liquid |
| Settling time | 1h (< 3°) with «Quick settling» |
| Max. rate of follow-up | 100 °/s |
| Permissible periodic roll and pitch angle | ±45° |

Signal outputs

1 x Anschütz course bus
2 x Anschütz course bus or NMEA

With distribution unit compact additionally

- 12x RS 422 individually configurable
as Course Bus or NMEA
- 3 x step 35 V DC (6 steps/degree)
- 1x RS 232C for course printer
- Rate-of-turn ±10 V DC
for 30°/min, 100°/min or 300°/min
(non IMO compliant)

Alarms

| | |
|-----------------|--|
| Built-in alarms | power failure, gyro failure, system failure |
| Alarm outputs | potential-free relay contacts |

In accordance with

IMO A.424(XI), A694(17), A.821(19),
MSC.97(73), MSC.36(63), EN/IEC 60945,
EN/ISO 8728, ISO 16328, EN/IEC 61162

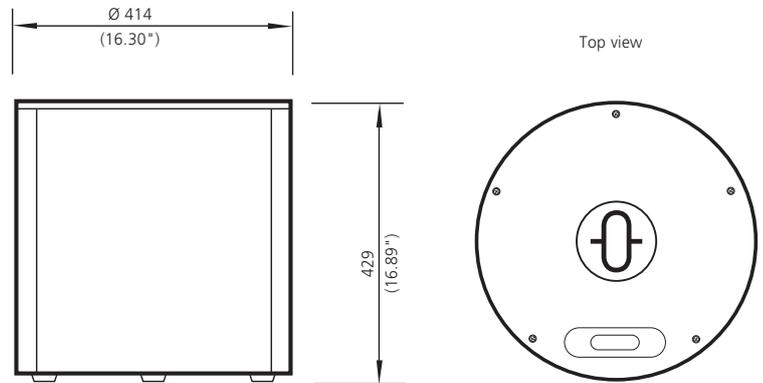
Weight

Master compass 17.5 kg

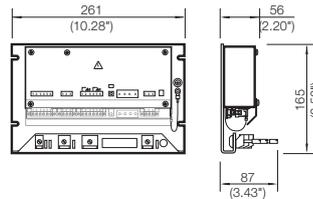
Type of enclosure acc. to IEC/EN 60529

Gyro compass IP 23

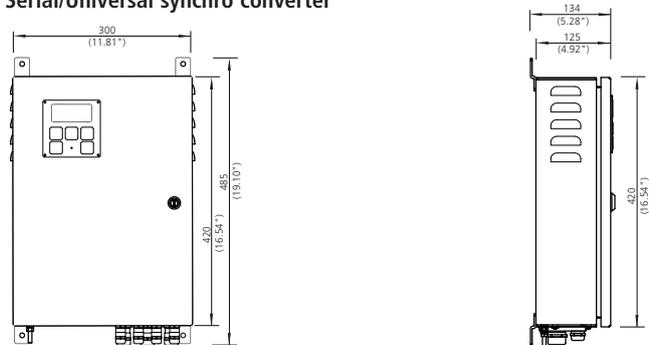
Standard 22 Gyro Compass



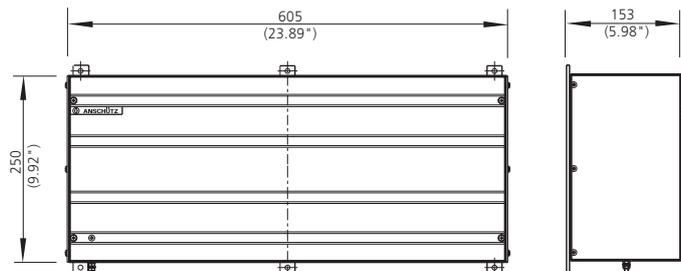
Serial/360° synchro converter



Serial/Universal synchro converter



Serial/Universal step converter



Subject to change due to technical
developments without notice.

All rights reserved · Printed in Germany
RAN 801.37 e / L&S 0115

Raytheon Anschütz GmbH

Headquarters
D-24100 Kiel, Germany
Tel +49(0)431-3019-0
Fax +49(0)431-3019-291
Email sales-commercial@raykiel.com
www.raytheon-anschuetz.com