Морские навигационные системы
Marine navigation systems

Гирокомпас
PGM-Arctic
Gyrocompass

ООО ПНППК-Морская Электроника

PGM-Arctic

APPLICATION

Gyrocompass PGM-Arctic is designed for installation on ice-class vessels and vessels operating in high latitudes. Gyrocompass provides heading data with accuracy 0.1 degree. Its design offers the possibility of display a wide range of data in addition to heading: latitude, longitude, rate of turn, current time, travel time, failure of components, etc. PGM-Arctic ensures accurate and stable readings at vessel speed up to 70 knots, pitch and roll up to 45 degrees and latitude up to 85 degrees. In latitudes higher than 85 degrees the gyrocompass operates in direct gyro mode. Heading data is produced in the form of a digital (RS232/422), step or synchro signal.

CONFIGURATION

Gyrocompass has a monoblock design. The compass casing is made of a foamed polyurethane and has a window on the top for the compass card. If necessary, the built-in Control Unit may be mounted remotely, at the distance up to 100 meters away from gyrocompass.

The heart of the gyrocompass is a dynamically-tuned gyroscope - a very accurate sensor that ensures the follow-up speed up to 100°/s.

Overall dimensions are
288 mm (H) x 240 mm (L) x 329 mm (W).

Weight is ***15,5 kg.***

FEATURES

- efficient one box design
- small size and versatility
- automatic start-up and alignment relative to the meridian
- short initial settling time
- high reliability
- high static and dynamic accuracy (latitude and speed compensation, automatic compensation of temperature drifts)
- easy installation and adjustment, built-in testing
- possibility of remote control
- scrolling of display windows and parameters by pressing two buttons on the Control Unit
- simple maintenance (no compass fluid, extra cooling and heating are not required, no periodic determination and compensation of azimuth drift, simplified methods of horizontal drift determination and compensation)
- adjustment of scale illumination brightness
- ecological safety
- operating temperature from –15°C to +55°C
- storage temperature from –60°C to +70°C
- shock resistance 10 g, 15 ms

TECHNICAL DATA

Settle Point Error	<±0,2° sec φ
Dynamic Accuracy (Scorsby and intercardinal motion tests)	<±0,3° sec φ
Settle Point Repeatability	<±0,2° sec φ
Follow-up Speed	≥ 100 °/s
Settling Time (with initial heading offset ± 30°)	≤ 45 min within 0.7°

OUTPUTS:

Step	1x(TTL level), 6 steps per degree update: 6 °/s, 12 °/s, no limits
Resolver	1 x 8 V 400 Hz (max 2 V per phase), full scale 360°
Serial Data	Channel A: 1 x RS232; 2 x RS422 Channel B: 1 x RS232; 2 x RS422 Channel C: 1 x RS232; 4 x RS422 Channel D: 1 x RS232; 4 x RS422
Analog ROT	1 x ROT (±10 V) ± 30 °/min; ± 60 °/min; ± 90 °/min; ± 120 °/min; ± 180 °/min; ± 300 °/min; ± 1200 °/min (customized)
Serial data formats	IEC 61162
Baud rate	4800, 9600, 19200, 38400
Data transmission rate	1 Hz, 10 Hz, 20 Hz, 50 Hz
Gyrocompass status:	
System ready	normally opened/ normally closed contacts of relay
Failure	normally opened/ normally closed contacts of relay

INPUTS:

Latitude	IEC 61162 RS232 or RS422 from GPS
Speed	IEC 61162 RS232 or RS422 from GPS or log 100, 200 or 400 pulses per nm from log
Input Voltage	24(18–36)V DC
Power Consumption	
- start-up	75 W
- operation	20 W
Assigned service life	40 000 h

ПЕРМСКАЯ НАУЧНО-ПРОИЗВОДСТВЕННАЯ ПРИБОРОСТРОИТЕЛЬНАЯ КОМПАНИЯ
PERM SCIENTIFIC-INDUSTRIAL INSTRUMENT MAKING COMPANY

Россия, 614990, г. Пермь, ул. 25-го Октября, 106
тел. (342) 240-05-07, 240-06-34
факс (342) 245-31-41
E-mail: root@ppk.perm.ru, http:// www.ppk.perm.ru

Russia, 614990, Perm, 25th October Str., 106
tel. (342) 240-05-07, 240-06-34
fax (342) 245-31-41
E-mail: root@ppk.perm.ru, http:// www.ppk.perm.ru