



## RATE OF TURN (ROT)

ROT-100 Rate of Turn Gyro sensor represents a fundamental aid for manoeuvring and steering during maritime navigation, providing accurate ship's turning rate reference.

The in-house development and design of specific algorithms for solid state sensors navigation allows GEM elettronica to realize a wide range of high performance products in the field of inertial platforms directional and vertical stabilization.

ROT-100 provides instantaneous, accurate and stable data on the ship's turning rate and it is one of the most important equipment in maritime navigation guidance and steering.

## BENEFITS

- High Accuracy
- Extremely Reliable
- Compact and Robust
- Calibration Free
- Maintenance Free
- Easy installation
- Integrated self-monitoring and testing



## PERFORMANCES

DESCRIPTION	SPECIFICATION
Sensor output	Rate of Turn, NMEA-0183 sentence ROT (\$**ROT)
Sensor accuracy	1 deg/min, 1 $\sigma$
Resolution	0.01 deg/min
Output frequency	20 to 100 Hz
Serial port baud rate	4800 baud, no parity, 1 stop bit, no handshaking
Time to valid data	Time to first valid data (10 deg/min), 5 sec
Time to stable valid data	(1 deg/min), 60 sec
Dynamic range	$\pm 300$ deg/sec
Output interface	DB25 form factor, hosting 2 serial RS422 ports and power input
Output protocol	Serial NMEA-0183 ROT sentence
Power supply	9-36 V
Power consumption	< 2 W
Operative temperature	-10°C ÷ 55°C

## ENVIRONMENTAL FEATURES

TYPE	REQUIREMENTS
Operative temperature	-15°C ÷ +55°C, according to IEC 60945 §8.2 and §8.4 Ref.[2]
Storing temperature	-20°C ÷ +70°C
Humidity	93% @ 40°C, according to IEC 60945 §8.3 Ref.[2]
Vibrations	2 Hz ÷ 13.2 Hz @ $\pm 1$ mm; 13.2 Hz ÷ 100 Hz @ 0.7g; according to IEC 60945 §8.7 Ref.[2]/ IEC 60068-2-6 Ref.[3]
Radiated emissions	in accordance with IEC 60945
IP protection	According to IP65
Shock	Semisinusoidal 10 g x 11 ms, according to IEC 60068-2-27 Ref.[3]

## PHISICAL FEATURES

