

◆ Introduction

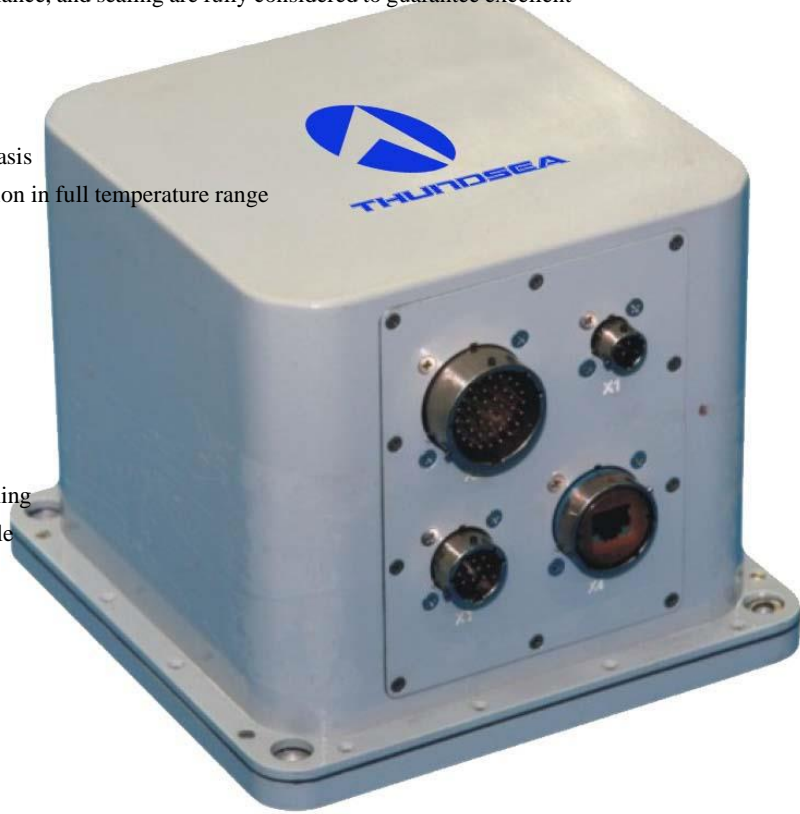
FG-800A model attitude and heading reference unit is an all-in-one gyrocompass and motion sensor, used to measure the position, velocity, attitude, angular rate and acceleration of the carrier. This system consists of three high cost-performance ratio fiber optic gyros, three quartz accelerometers and electric processing PCBs, fiber optic gyro to measure the attitude and accelerometer to measure the acceleration. FG-980S is designed according to military standards, and the electromagnetic shielding, thermo-balance, and sealing are fully considered to guarantee excellent performances even in extreme conditions.

◆ Features

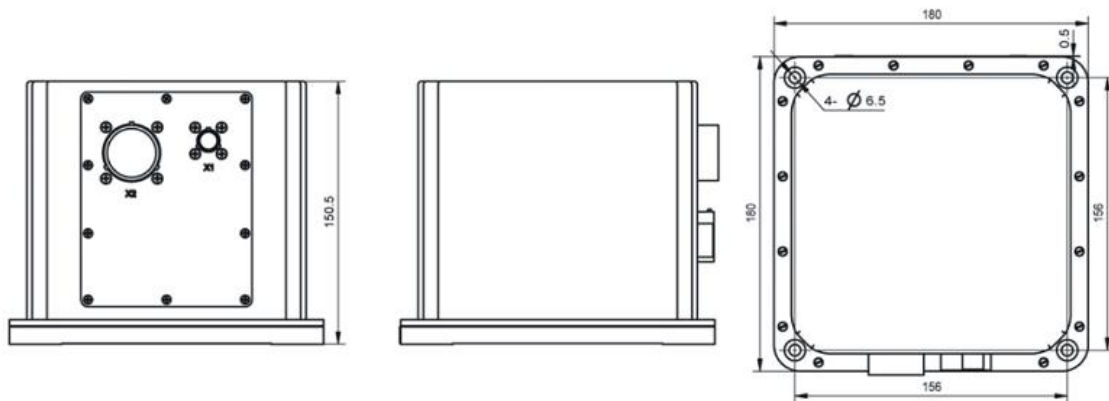
- Initial self-alignment on static or dynamic basis
- Error parameters calibration and compensation in full temperature range
- interfaces for GNSS/Odometer/DVL
- Configurable navigation modes
- High autonomous accuracy
- Real-time heave
- Military standards

◆ Applications

- Compass for sea vehicle
- Under-water vehicle navigation and positioning
- Positioning and north-finding for land vehicle
- Stabilization and control for moving carrier
- Attitude measurement



◆ Outline Drawing



◆ Specification

Performances	Settling Time	5min
	Attitude	0.02 deg, 1 σ
	Heading accuracy	0.1 sec(Lat) , 1 σ autonomous 0.05 ° sec(Lat), with GPS aiding
	Heave	5cm or 5%
Measuring Ranges	Rotation rate	$\pm 400\text{deg/s}$
	Acceleration	$\pm 20\text{g}$
Work Environment	Work Temperature	$-40^{\circ}\text{C}\sim+70^{\circ}\text{C}$
	Storage Temperature	$-55^{\circ}\text{C}\sim+85^{\circ}\text{C}$
	Vibration	$0.04\text{g}^2/\text{hz}$ @ 20~2000hz

	Shock	30g @ 6ms, keep accuracy 50g @ 11ms, no damage
Electrical Characteristics	Power supply	18~36VDC
	Consumption	≤15W
Physical Characteristics	Size (W x D x H)	180×180×150 mm
	Weight	≤4.8kg
	Water proof	IP 66
Interfaces	RS 232/RS 422 port	4 outputs/2inputs
	Ethernet port	4 outputs/ 2 inputs
	Pulse port	2 outputs/4 inputs
	Data formats	NMEA 0183, ASCII, BINARY
Reliability	MTBF	80000 hrs
	Warranty	Three years