

ATTITUDE HEADING REFERENCE SYSTEM

BEIJING AUTOMATION CONTROL EQUIPMENT INSTITUTE



• mFOSC



• sFOSC

Overview of product

The institute has capabilities to develop and produce high/medium/low-end attitude heading reference system. Currently, it can produce multiple types of mature products, which can be used for underwater/surface carrier, manned/unmanned aircraft, flying boat, etc so as to provide weapon system and reconnaissance platform with navigation and control information like accurate azimuth and attitude.

Technical characteristics

Small volume, light weight, high accuracy, strong mechanical environment suitability, and higher technical maturity.

Field of application

Underwater weapon system, surface carrier, manned/unmanned flight control, attitude reference system, and radar attitude control.

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TYPE	mFOSC	sFOSC
Performance		
Accuracy	0.15 deg secant latitude	1 deg
Settling time (static conditions)	<1min	<1min
Full accuracy settling time(all conditions)	<5min	<5min
Heave/surge/sway accuracy	5 cm or 5% (whichever is greater)	5 cm or 5% (whichever is greater)
Roll/Pitch dynamic accuracy	0.02 deg	0.05 deg
Operating range/environment		
Rotation rate dynamic range	Up to 300 deg/s	Up to 300 deg/s
Acceleration dynamic range	±25g	±30g
Operating / Storage Temperature	-40 to +60°C/ -45 to +70 °C	-40 to +60°C/ -45 to +70 °C
Heading / Roll / Pitch	±180 deg/ ±180 deg / ±90 deg	±180 deg/ ±180 deg / ±90 deg
Electrical		
Serial RS232/RS422 port	3 inputs / 3 outputs / 1 configuration port	2 inputs / 2 outputs / 1 configuration port
Ethernet port	UDP / TCP Client / TCP server	—
Pulse Port	2 inputs and 2 outputs	1 inputs and 1 outputs
Input / Output formats	Industry standards: NMEA0183, ASCII, BINARY	Industry standards: NMEA0183, ASCII, BINARY
Baud rates	600 bauds to 1843.2 kbaud	600 bauds to 1843.2 kbaud
Data output rate	0.1 Hz to 1000 Hz	0.1 Hz to 1000 Hz
Power supply	27 VDC	27 VDC
Power consumption	15 W	15 W
Physical		
Dimensions (L x W x H)	157mm×146mm×136mm	139mm×139mm×70mm
Weight	<4.0kg	<2.0kg
Water proof	IP66	IP66
Material	Aluminum	Aluminum

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