



SURF-200

Attitude and Heading Reference System (AHRS)
and Inertial Navigation System (INS)



Performance

- High accuracy
- Low settling time
- High reliability
- Calibration free

High level applications at sea for:

Military Vessels and Ships

Submarines

Based on closed-loop, strap-down Fiber Optic Gyroscope technology to offer a cost effective, highly reliable solution.

AHRS General Features

Full accuracy settling time	< 5 min. (dockside) < 15 min. (all sea conditions)
Operation speed range	- 20 kn < V < 70 kn

AHRS Accuracies

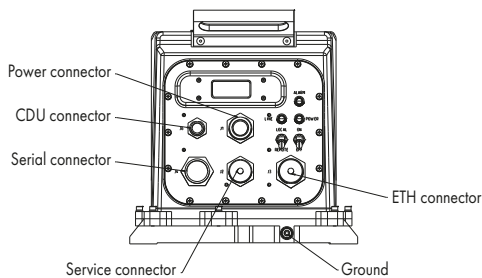
Heading	≤ 0.01° sec (lat) RMS no GPS aiding
Roll / Pitch	< 0.01° RMS

AHRS Range

Heading/Roll/Pitch	0 ÷ 360° / ± 180° / ± 90°
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INS Accuracy - No aiding

Position	< 1Nm/72h CEP
Heave	0.05 m or 5% (whatever is bigger) RMS
Velocity	< 0.4 kt rms



Interfaces

Output serial	6 serial lines
Input serial	5 serial lines
Protocol	NMEA 0183, binary, ASCII
USB	2 USB 2.0 Host
Wireless (optional)	USB dongle for Wi-Fi, Bluetooth, modem HSDPA
Ethernet LAN	N. 4 available 100 Mb (UDP/TCP client/TCP server)
Pulse port	4 Input / 2 Output
Sensors supported	GPS, DVL, Depth, CTD/SVP, EM LOG Acoustic, USBL, LBL
Baud rate	600 baud to 115.2 Kbaud
Data Output rate	0.1 Hz to 200 Hz

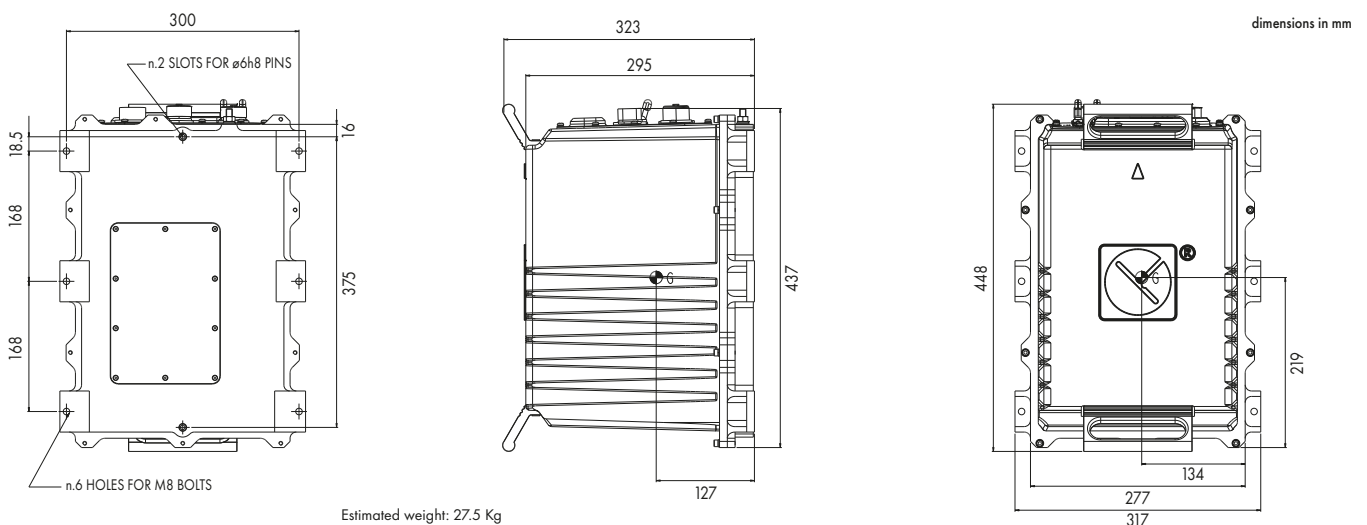
Environmental Features

Operating temperature	0° C ÷ 55° C
Storage temperature	-40° C ÷ 70° C
Humidity	95% (relative)
Vibrations	MIL-STD-167-1 (equipment)
Shock	MIL-STD-810 / MIL-STD-901-D
Waterproof	in accordance with IP66 standard
EMI/RFI	MIL-STD-461-F
Magnetic Immunity	Up to 5 Gauss operation Up to 30 Gauss storage
MTBF	100000 hours

Power Supply

Voltage	24 Vdc
Power absorption	< 20 W
Protection	against over-voltage, low voltage and inversion of polarity

The installation is possible also in a different position respect the central line of the vessel.



Surveillance & Security

Guidance, Navigation & Positioning

Military & Defence

Marine Electronics

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