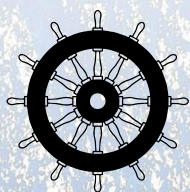




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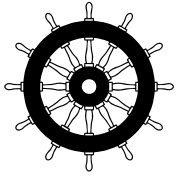
Navigation & Communication Solutions



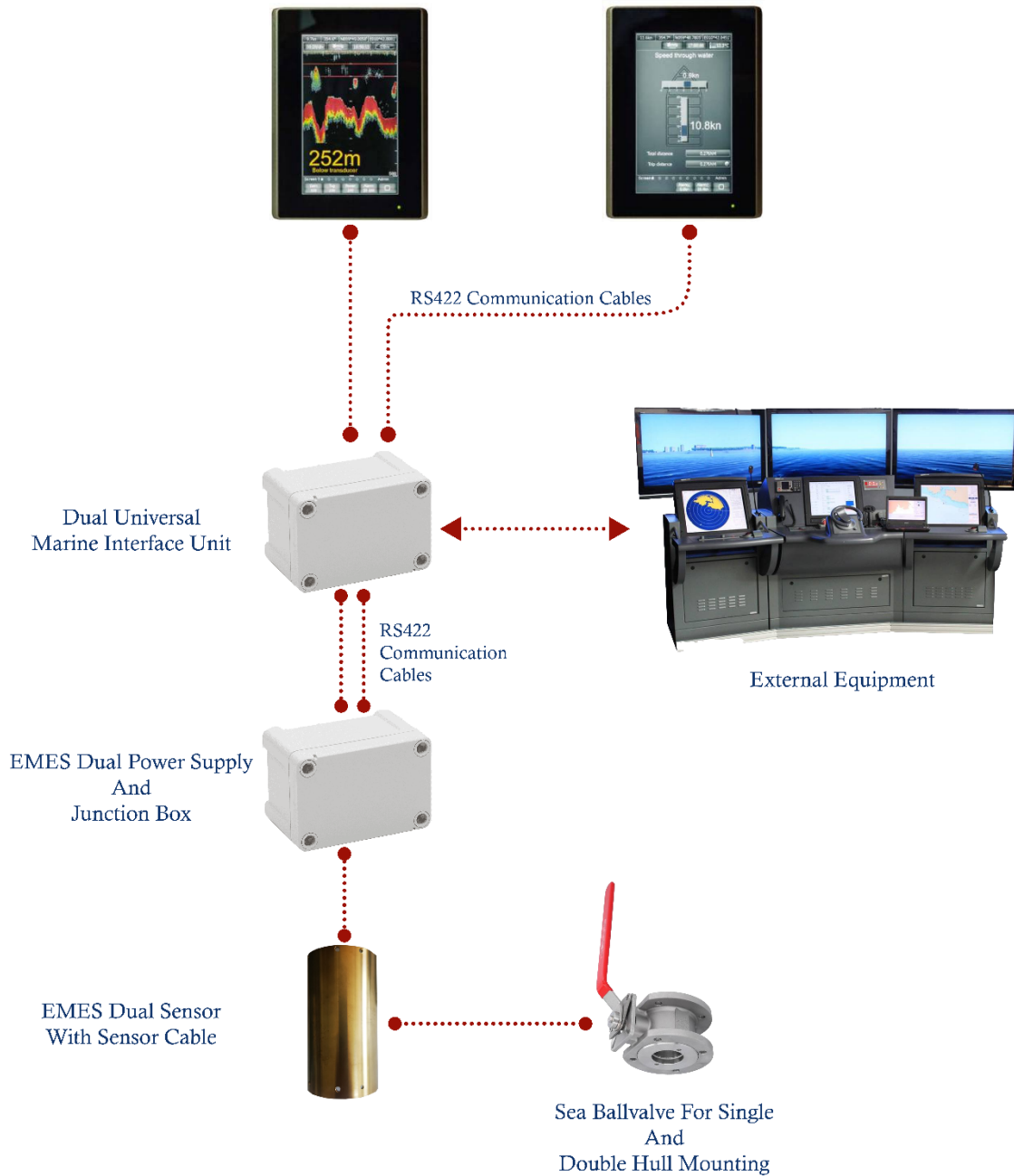
EMES60

ECHOSOUNDER&SPEEDLOG
DATASHEET





SYSTEM OVERVIEW



SYSTEM DESCRIPTION

Only one hull penetration, which increases safety of navigation.

Small overall diameter of the sensor (an therefore hull penetration), minimizing the risk of the mechanical damage.

Sophisticated analog and digital signal processing provides reliable output data at any navigation conditions.

All modern and legacy IO interfaces are supported, including IEC 61162-1/2 and IEC 61162-450 (Light Weight Ethernet).

Sound speed calibration based on the temperature provides accurate depth measurements in different conditions without manual adjustments.

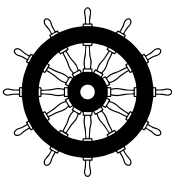
Optimized parameters of the electromagnetic log operation provides accurate speed through water measurements in different waters (sea water, river water, brackish water).

The system can be connected via LAN to the external computer or multifunctional station and provide control, speed and depth data presentation remotely.



SPECIFICATIONS

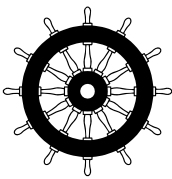
Display Unit (separate unit for each sub-system)	
Resolution	800x480, 7" WVGA
Operator interface	Touch screen, tap & swipe operation
Communication line	RS422, Optional RS232
Day/Night modes	Full range of backlight adjustment day/night color themes selection.
Software upgrade means	USB line, USB flash device, Ethernet
Supported languages	English, Norwegian, German, French, Spanish, Russian, Chinese
Calendar, clock	Real time clock support or GPS time reference.
Environmental	IP68, front panel only
Cutout dimensions	137x185mm, depth 36mm
Operating T°	-15 - +55° C (storage -20 -+60°C)
Weight	0.7kg
Compass safe distance	Standard : 65 cm, Steering 40cm
Interface Unit (separate PCB for each sub-system)	
External communication line	NMEA0183 rev4, /IEC 61162-1/ 3inputs/3 outputs,
Analog	1 output, 10Vpp or 4-20mA, fully programmable
Alarm relays	2 Mechanical relays, one dedicated system power failure alarm
General purpose Input	2 digital inputs (for synchronization, slave mode), fully programmable
General purpose Output	2 optocoupler outputs, fully programmable
Software upgrade means	USB line, USB flash device, Ethernet
Environmental	IP55
Operating T°	-15-+60°
Dimensions, mm	150x300x120
Weight	4kg
Dual Sensor with Cable	
Cable length	40m (optional 40m)
Communication link	IEC 61162-1/2
Environmental	IP68, 6 bar continuous immersion in water
Operating T°	-5-+60°
Sensor Dimensions	H = 124mm, D = 60.2mm
Weight (with cable)	7kg
Hull fitting unit (ball valve)	
Hull type	Single and double
Body material	Stainless steel
Pressure rating	10 bar
Operating T°	-5-+60°
Weight	18kg



SPECIFICATIONS

Performance Echosounder	
Accuracy	0.05m or 0.5% of depth, whatever is greater
Resolution digital out	0.01m
Resolution screen presentation	Depth < 100m : 0.1m Depth ≥100m : 1.0m
Range of measured values	0.7m-400m
Range	user adjustable: 0-10m to 0-500m, auto
Presentation units	meters, feet, fathoms
Alarms and limits	Shallow and deep alarms adjustable alarms

Performance Speedlog	
Accuracy	0.1kn or 1% of speed, whatever is greater
Resolution digital out	0.01knots
Resolution screen presentation	0.1knots
Range of measured values	+/- 60 knots on all axis, depending on the hull installation conditions
Temperature Accuracy	Temperature sensor accurate to 1° C
Range	-5 /+40 knots, +/-5 knots
Presentation units	knots, mi/h
Alarms and limits	Low and high speed limits





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