ELAC SONAR

A COHORT PLC COMPANY

LAZ 5400

NAVAL ECHO SOUNDER FOR SURFACE VESSELS

The LAZ 5400 Naval Echo Sounder is a military hardened navigation echo sounder for surface ships with two channels. It provides reliable depth information according to IMO performance standards and fulfils the environmental requirements according to military standards. LAZ 5400 is available as stand-alone system or a black box, fully integrated into a bridge system.

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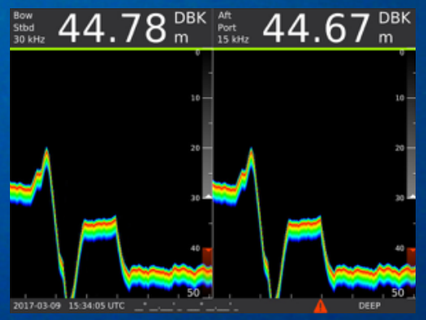
COMBINING IMO REQUIREMENTS AND MILITARY STANDARDS

All depth data is displayed on a 10.4" monitor as digital information and colored echograms (deep range scale diagrams). Due to the 10.4" size of the display, all requirements for the representation according to IMO Resolution A.224 are fulfilled even for two-frequency operation. The electronics of the LAZ 5400 is based on modern microprocessor architecture.

Bridge Alert Management (BAM) Support
On modern navy vessels, Bridge Alert Management (BAM) systems improve the handling of alerts. The presentation, classification, distribution and priority of alarms are harmonised, independently from the sensor or system. This makes it easier for the bridge crew to identify any alert situation. The LAZ 5400 is fully compliant to the requirements for alerts and interconnection with Bridge Alert Management Systems according to IMO MSC.302.

Open Interface for Complete IBS Integration
Modern Integrated Bridge Systems (IBS) reduce the workload of the bridge crew via their uniform user interface and thereby increase the navigational safety of the ship. The LAZ 5400 is designed for a complete integration into Integrated Bridge Systems.

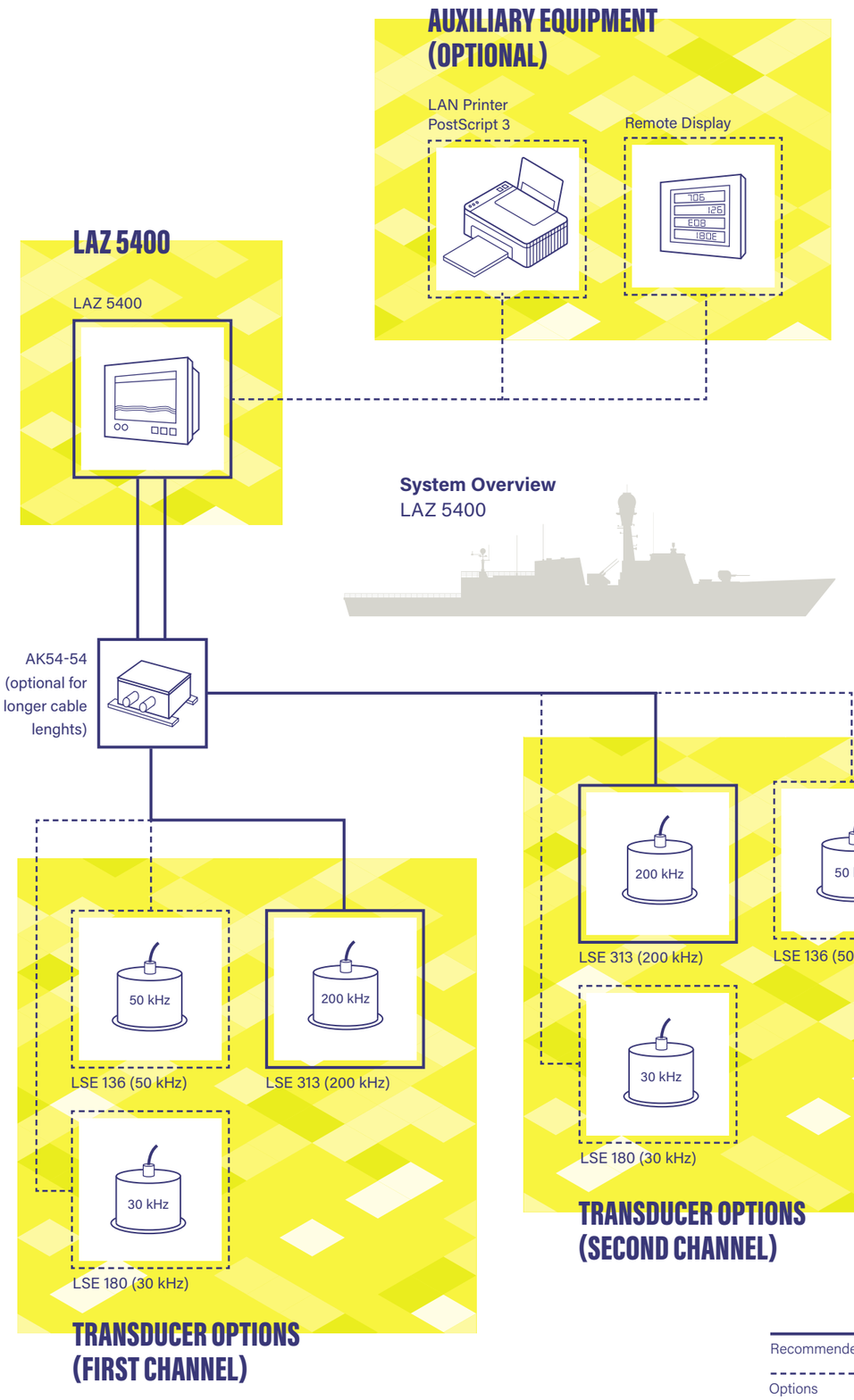
The LAZ 5400 includes an open system architecture based on DDS (Data Distribution Service). Thus, the system can be controlled externally and provides display data via Ethernet, to allow any kind of bridge suppliers or integrators to develop their own user interfaces. The Ethernet interface allows complete control of the echo sounder and provides the entire water column data for display as deep range scale diagrams on the multi-functional displays of the IBS. Thus, the complete echograms can be displayed on the IBS and not only a single depth line as before, fulfilling the IMO resolution A.224 requirements concerning display of data.



Example for Dual Channel Display

Key features

- **meets IMO requirements**
- **meets relevant military standards**
- **open-architecture-based DDS middleware for complete integration into bridge systems (IBS)**
- **lightweight Ethernet interface (LWE) according to IEC 61162-450**
- **designed according to MED 2014/90/EU**



TECHNICAL DATA

Performance Data

Operating frequencies	30 / 50 / 200 kHz
Measuring accuracy	± 0.5 % of scale range
Output power	up to 1,000 W RMS (depending on transducer type)
Interfaces	according to IEC 61162-450 AND IEC 61162-1
Remote control and display	open-architecture-based DDS middleware
Power supply	95 - 240 V AC, 50 - 60 Hz
Power consumption	approx. 35 W (average)

Environmental Qualifications

Electromagnetic compatibility (EMC)	MIL-STD-461
Temperature	MIL-STD 810
Vibration	MIL-STD 167
Shock	BV 0430

ELAC SONAR GmbH
Neufeldtsraße 10
24118 Kiel, Germany

Contact us
hello@elac-sonar.de
www.elac-sonar.de

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