Description „Alarm System“

The decentralized alarm system monitors the condition of ship alarms and status messages. The whole system behavior (delay times, blockings, display texts etc.) can be defined by a PC-based configuration software auf PC-Basis. Therefore, only a PC/laptop with CAN-adapter is required.

Data acquisition

The Data station AHD-SAS 15 with CAN bus connection consists of 15 inputs for analog and binary sensors for connection of sensors with different signal types (current, voltage, resistance, contacts etc.). All inputs can be monitored for sensor faults. The connection of sensors is performed with pluggable cage-clamp terminal lists.

A binary data station AHD-PS 15 / 30 or 47 provides 15, 30 resp. 47 inputs for connection of potential-line contacts, contacts with single-sided ground connection or contacts switching voltage potentials. The inputs are acquired via optocoupler contacts and are converted into a serial output signal. Each input is provided with its own status LED, which is activated at closed input circuit. Each input channel can be checked for short to earth/ground by operating the integrated “Test” push button.

The central unit AHD 882 is a microprocessor-controlled device for serial data acquisition and freely programmable serial distribution of data. All available data supplied by connected stations are internally processed and the last 10,000 alterations (alarms, status messages) are stored. Data from serially connected binary data stations AHD-PS 15 / 30 resp. 47 are transmitted via CAN bus by AHD 882 central unit.

Display

The ship data are transmitted via CAN bus system from data stations and central unit to colour display AHD 651. The colour display presents all information of the ship alarm system in tabular or graphical form. On one presentation page either 10 text-oriented or 6 graphically visualized measuring values (i.e. tank contents) are displayed.

A separate alarm table is provided for indication of current alarm situation. The table is automatically displayed at occurrence of a new alarm. The device is provided with internal alarm buzzer, alarm acknowledgement push button as well as contact outputs for control of an external horn and common alarm message. The dimming of display backlight is performed automatically in dependence of ambient brightness.

Duty Alarm Engineer Call System

For periods, where the engine room is not manned, alarms have to be signaled as a group alarm into the cabin of the engineer on duty. Therefore, the corresponding cabins are provided with cabin alarm tableaus AHD 406-2. These are serially controlled by central unit AHD 882. The on-duty/engineer call panel AHD-PS 15B allows switching between modes engine room manned or unmanned. Also the engineer on duty is selected here for routing of alarms into appropriate cabin.

An engineer call alarm is automatically generated, if acknowledgement of an alarm is not performed within a configurable time period (standard approx. 5 min.) after occurrence. The alarm can only be acknowledged from engine room/engine control room, where also the alarm on cabin alarm tableau is acknowledged completely. Moreover, the engineer call alarm can be released manually on on-duty/engineer call panel AHD-PS 15B by the engineer on duty in case further assistance is required.

Installation

Instead of pre-tailored cables, shipyard may also install standard CAN bus capable cables.

Power supply 24VDC (+30%/-25%)