

AHD-PS 15B, AHD 406-2, AHD 882 Duty Alarm/Engineer Call System



Type Approved Components

Compact Devices with minimum Installation Depth

Up to 15 Alarm- und Indication Groups configurable

Comfortable Integration into Alarm- and Monitoring System

General

The type-approved components of the Duty Alarm / Engineer Call System are used on board of vessels, classified for all or temporarily unmanned machinery room.

The system consists of:

- On-Duty/Engineer Call Panel AHD-PS 15B (installed e.g. in engine control room ECR)
- Cabin Duty Alarm/Engineer Call Panel AHD 406-2 (installed in cabins and accommodation areas (e.g. mess room) of personnel on duty).
- Central Unit AHD 882 (Configuration of Duty Alarm/Engineer Call System by means of configuration software tool, acquisition of incorrect operating conditions recorded by ship alarm and monitoring system and distribution of indication and alarms within the system)

Additionally, the indication of On-Duty status and the presentation of alarms of the Duty Alarm / Engineer Call System must be available also in wheelhouse area.

Therefore, a separate Alarm- and Indication System Kompakt EDA 47 or a Color Display can be used.

The Central Unit AHD 882 can process and manage the status data of up to 940 measuring points of the ship alarm and monitoring system, transmitted via two CAN Bus interfaces or via the max. 18 available serial inputs. Incorrect states (e.g. alarms) and status messages are assigned to alarm or indication groups (max. 15 groups) and transmitted to up to five Cabin Duty Alarm/Engineer Call Panels AHD 406-2 and the wheelhouse panel, which are individually connected to one of the 16 available serial outputs.

The On-Duty/Engineer Call Panel AHD-PS 15B is connected to a serial input of Central Unit AHD 882. With the appropriate switch "ECR on duty" in front panel of the device, the operation status is selected for "Engine Room Manned" or „Engine Room Unmanned“. With an unmanned engine room, also the personnel on duty must be assigned. If this is not performed within a pre-defined time, the Engineer Call is triggered automatically on all Cabin Duty Alarm/Engineer Call Panels and on the wheelhouse panel.

Automatic triggering of an Engineer Call is also performed, if a recorded new alarm is not acknowledged within a predefined time at the operation station of the ship alarm and monitoring system.

The Engineer Call can also be triggered manually on the On-Duty/Engineer Call Panel AHD-PS 15B and , if applied, with a corresponding switch in the wheelhouse (via binary input of AHD-PS 15B unit).

The alarm signaling on Cabin Duty Alarm/Engineer Call Panel AHD 406-2 is performed visually by activation of individual group-LED and acoustically by internal buzzer. The horn relay output is activated as well. The acoustic alarm may be acknowledged individually on each panel, but the optical alarm only at operation station of ship alarm and monitoring system.

On-Duty/Engineer Call Panel AHD-PS 15B:

Technical Data:

- Mechanical Data:**

Dimension W x H x D: 100 x 130 x 55 mm

Panel Cut-Out W x H: 82 x 114 mm

Weight: Ca. 1.0 kg

- Environmental Data:**

Operating Temperature: -30°C ... +70°C

Storage Temperature: -50°C ... +85°C

Degree of Protection: IP 20

- Electrical Data:**

Power Supply: 24 V DC (+30% -25%)

Current Consumption: Max. 65 mA (24VDC)

- Inputs:**

15 x Optocoupler inputs, actually 7 inputs for switches (front panel) plus 1 input for external switch (or switch on front panel, selectable).

- Outputs:**

3 x serial by Optocoupler S1: two-pole galvanically isolated
S2: plus-switching
S3: minus- switching

- Installation:**

Tableau for flush mounting into front panels of consoles, panels or cabinets

- Approvals:**

Classification Societies DNV, CRS, LR, RS

- Item Number:**

10883

The Cabin Duty Alarm/Engineer Call Panesl AHD 406-2 are also provided with separate 24VDC voltage inputs for Manual Engineer Call and, according to regulations, for visual and acoustical alarm signaling of fire alarms.

On activation of the corresponding input, an individual LED and a separate buzzer is activated. The acoustic alarm of these buzzers differs from internal buzzer for alarm groups of ship alarm and monitoring system.

Both inputs are directly controlled and supplied by appropriate external system (e.g.. the fire alarm system). An alarm can only be acknowledged completely at these systems.

Cabin Duty Alarm/Engineer Call Panel AHD 406-2:

Technical Data:

- Mechanical Data:**

Dimension W x H x D: 72 x 144 x 33.5 mm

Panel Cut-Out W x H: 61 x 131 mm, corners with 45° segment (length of the edge each 6 mm) for fixing screws

Weight: Appr. 0.5 kg

- Environmental Data:**

Operating Temperature: -30°C ... +70°C

Storage Temperature: -50°C ... +85°C

Degree of Protection: IP 54 (front side)
IP 10 (rear side)

Req. Minimum Distance to Compass: Steering magnetic compass: 0.50 m
Standard magnetic compass: 0.65 m

- Electrical Data:**

Power Supply: 24 V DC (+30% -25%)

Current Consumption: Max. 200 mA (24 V DC)

- Inputs:**

1 x serial input TTY-current loop, 1200 Baud (Optocoupler)

2 x voltage input 24 V DC 1 x Eng-Call manual (LED, buzzer)
1 x Fire Alarm (LED, buzzer)

- Outputs:**

1 x external Horn Relay, potential-free contact, contact load max. 50 V/0.5 A

- Installation:**

Tableau for flush mounting into front panels of consoles, panels or cabinets

- Approvals:**

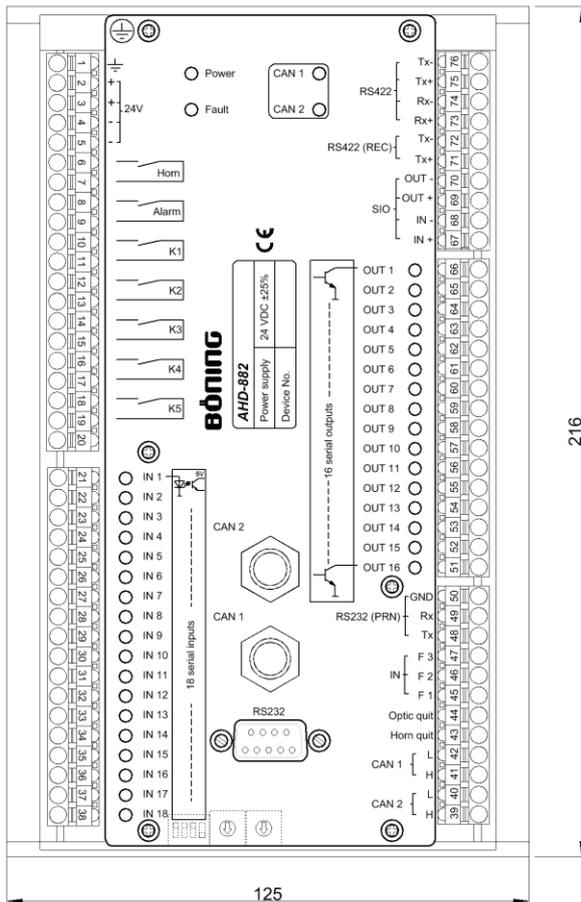
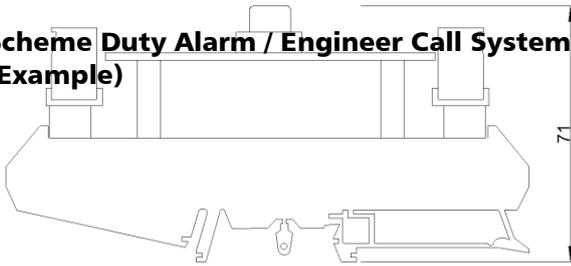
Classification Societies DNV, CRS, LR, RS

- Item Number**

8728

Central Unit AHD 882:

Scheme Duty Alarm / Engineer Call System: (Example)



Technical Data:

- Mechanical Data:**

Dimension W x H x D: 216 x 125 x 71 mm

Weight: Appr. 0.6 kg

- Environmental Data:**

Operating Temperature: -30°C ... +70°C

Storage Temperature: -50°C ... +85°C

Degree of Protection: IP 20

Req. Minimum Distance to Compass: Steering magnetic compass: 0.75 m
Standard magnetic compass: 0.65 m

- Electrical Data:**

Power Supply: 24 V DC (+30% -25%)

Current Consumption: Max. 130 mA (24 V DC)

- Interfaces:**

Serial Inputs: 18 x Serial In (Optocoupler, minus-switching)

Serial Outputs: 16 x Serial Out (Optocoupler, minus-switching)

Bus Interfaces: 2 x CAN-Bus (Option redundant), each with DeviceNet-plug connector and terminal list connection

Serial Interfaces: 1 x RS232 for alarm log printer, PC for configuration or alarm logging (9-pole Sub-D connector, female and terminal list connection or alternatively)
1 x RS422 output to VDR (terminal list connection)
1 x RS422/485 output optionally (terminal list connection)

Relay Outputs: 5 x Group relay (K1 – K5, configurable for NO or NC)
1 x Alarm relay (configurable as common alarm relay (NC), control relay for light calling column or group relay)
1 x Horn relay (NO)

Binary Inputs: 1 x Horn Quit (acoustical alarm acknowledgement)
1 x Optic Quit (optical alarm acknowledgement)
3 x Function input (F1 – F3, optionally)

- Installation:**

Profile module for direct installation on profile rails TS 32 or TS 35 in consoles, panels or cabinets

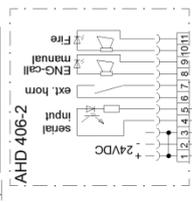
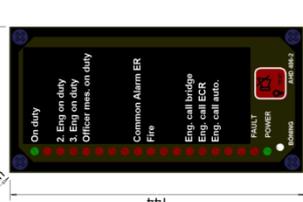
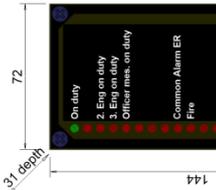
- Approvals:**

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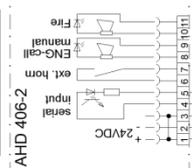
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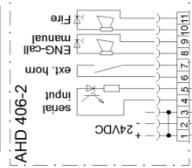
Cabin Duty Alarm/Engineer Call Panel AHD 406-2



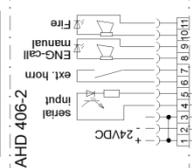
Cabin 1 (Chief Eng.)



Cabin 2 (2. Eng.)



Cabin 3 (3. Eng.)

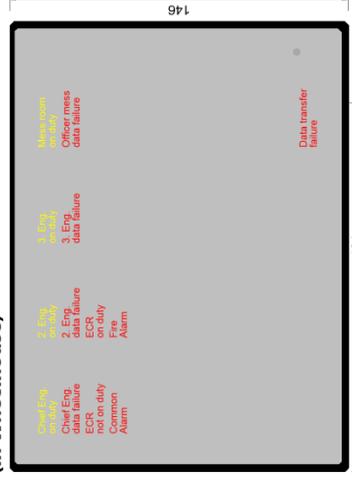
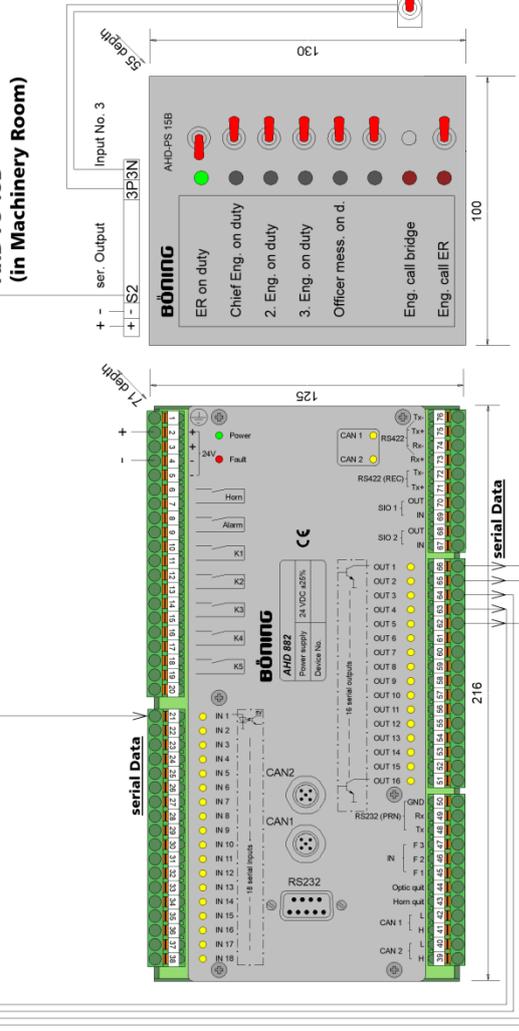


Accommodation 4 (Officer Mess Room)

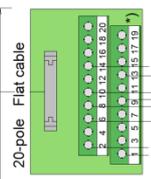
Central Unit AHD 882

On-Duty/Engineer Call Panel AHD-PS 15B (in Machinery Room)

Alarm- and Indication System Kompakt EDA 47 (in Wheelhouse)



Engineer Call (in Wheelhouse)



- *) Connection Module:
- 1-2: Power Supply
 - 6-8: Horn Quit
 - 6-9: Lamp Test
 - 6-10: Optic Quit.
 - 13-14: Serial Input No.1

Power Supply
24 V DC +30% - 25%