

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



Type-Approved Components

**Compact Units 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 machinery control room MCR)
- 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 an Colour Display (e.g. AHD 1015TC, AHD 1019) already applied in ship alarm and monitoring system can be used.

The Central Unit AHD 882 may 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 conditions (e.g. alarms) and status messages are assigned to alarm- resp. Indication groups (max. 15 groups) and transmitted to up to five Cabin Duty Alarm/Engineer Call Panel AHD 406-2 and 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. By operation of the appropriate switch „ECR on duty“ in front panel of the device, the operation status is selected for „Machinery Room Manned“ or „Machinery Room Unmanned“. With unmanned machinery room, also the personnel on duty must be assigned. If this is not performed within a pre-defined time period, the Engineer Call is released automatically on all Cabin Duty Alarm/Engineer Call Panels and on wheelhouse panel.

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

The Engineer Call can also be released manually on On-Duty/Engineer Call Panel AHD-PS 15B and , if applied, by 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 optic 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 (24 V DC)

- 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 Germanischer Lloyd
Lloyd's Register of Shipping
Bureau Veritas

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

On activation of the corresponding input, an individual LED and a separate buzzer is activated. The acoustic alarm of these buzzers differ 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 31 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 20 (front side)
IP 10 (rear side)

Req. Minimum Distance to Compass: Steering Magnetic Compass: 65 cm
Standard Magnetic Compass: 50 cm

- 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

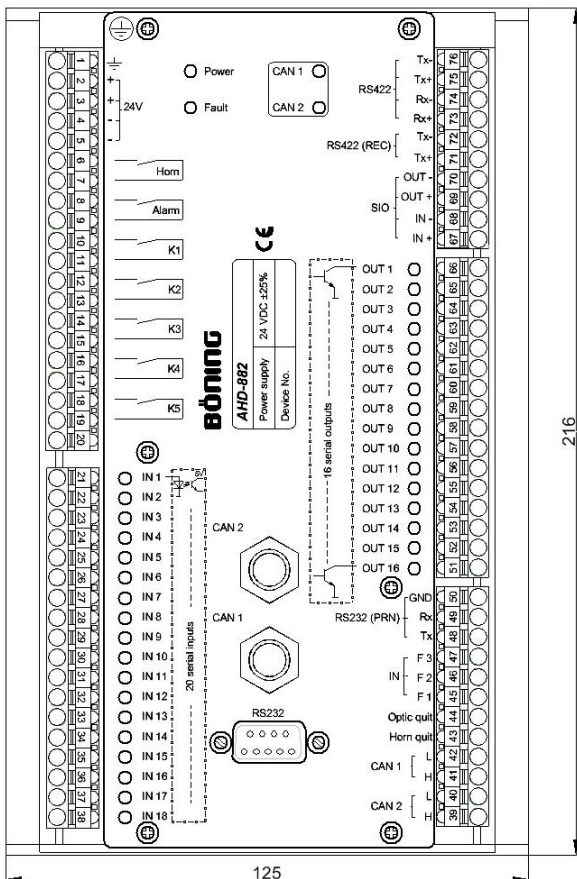
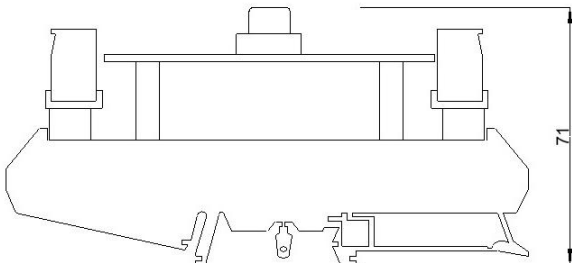
- Installation:**

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

- Approvals:**

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Central Unit AHD 882:



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: 75 cm
Standard Magnetic Compass: 65 cm

• 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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Scheme Duty Alarm / Engineer Call System: (Example)

