

## AHD 652 Display



- *Display of data of the ship alarm system and of engines*
- *Optically bonded anti-glare glass surface*
- *High luminosity of 850 cd/m<sup>2</sup> ensures good readability even in direct sunlight*
- *Automatic brightness adjustment*
- *Front with IP 67 allows installation on open bridges*
- *Complete integration into the Böning system*
- *Alarm signaling and acknowledgement*
- *Can be installed into existing Böning systems*

AHD 652 is a compact display for the presentation of all important data of the Böning ship alarm system and of MAN engines.

The monitored data can be displayed on several screen pages as numerical values and for examples as gauges.

Connecting a GPS receiver allows the display of the current cruising speed. If the vessel is equipped with MAN engines and MMDS-CLC 6.3 engine displays the fuel consumption and the remaining cruising range can be calculated and displayed.

The complete integration into the Böning ship alarm systems makes it possible to display for example also data of the navigation lights monitoring system AHD-DPSO2 and of the trim tabs control AHD-TCS.

The display is operated with its built-in buttons, for example to acknowledge alarms and for setting the screen brightness. Optionally, the display can be operated with the remote control AHD 650 R.

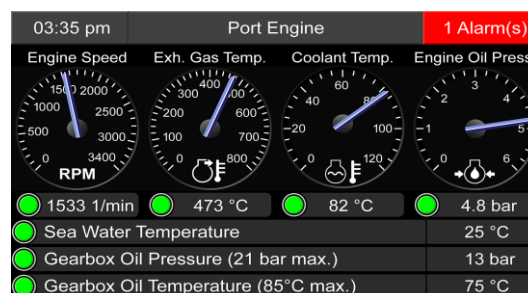
For optimal reading of data and status messages the visualization installed in the device is adapted to the ship's monitored system. This includes for example a schematic view of the ship on which the monitored measuring points are visualized.

Triggered alarms are signaled acoustically and optically and they are displayed on alarm pages stating the measuring point, its current value, the alarm type and the time of the alarm. Additionally, the values on digital instruments are highlighted with the alarm color.

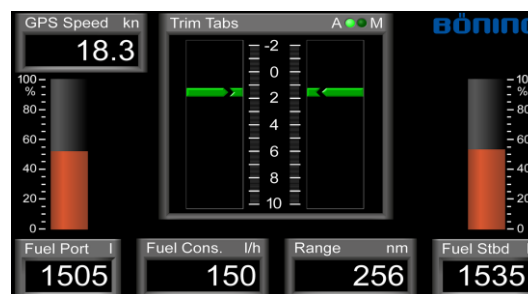
With the display's buttons, alarms can be acknowledged acoustically and optically. They continue to be shown on the alarms page until their cause is gone.

On a configuration page the clock can be set and the unit system and the language used by the display can be selected.

## Screenshots



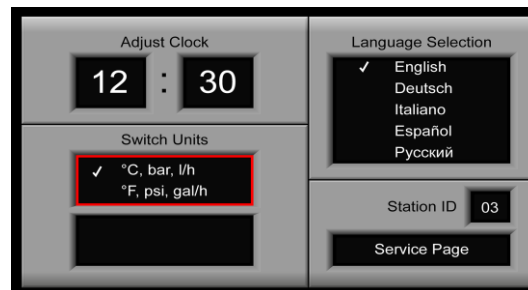
Page 1: Values and status indicators of an engine



Page 2: Trim flap angle, GPS speed, range, fuel consumption, tank levels

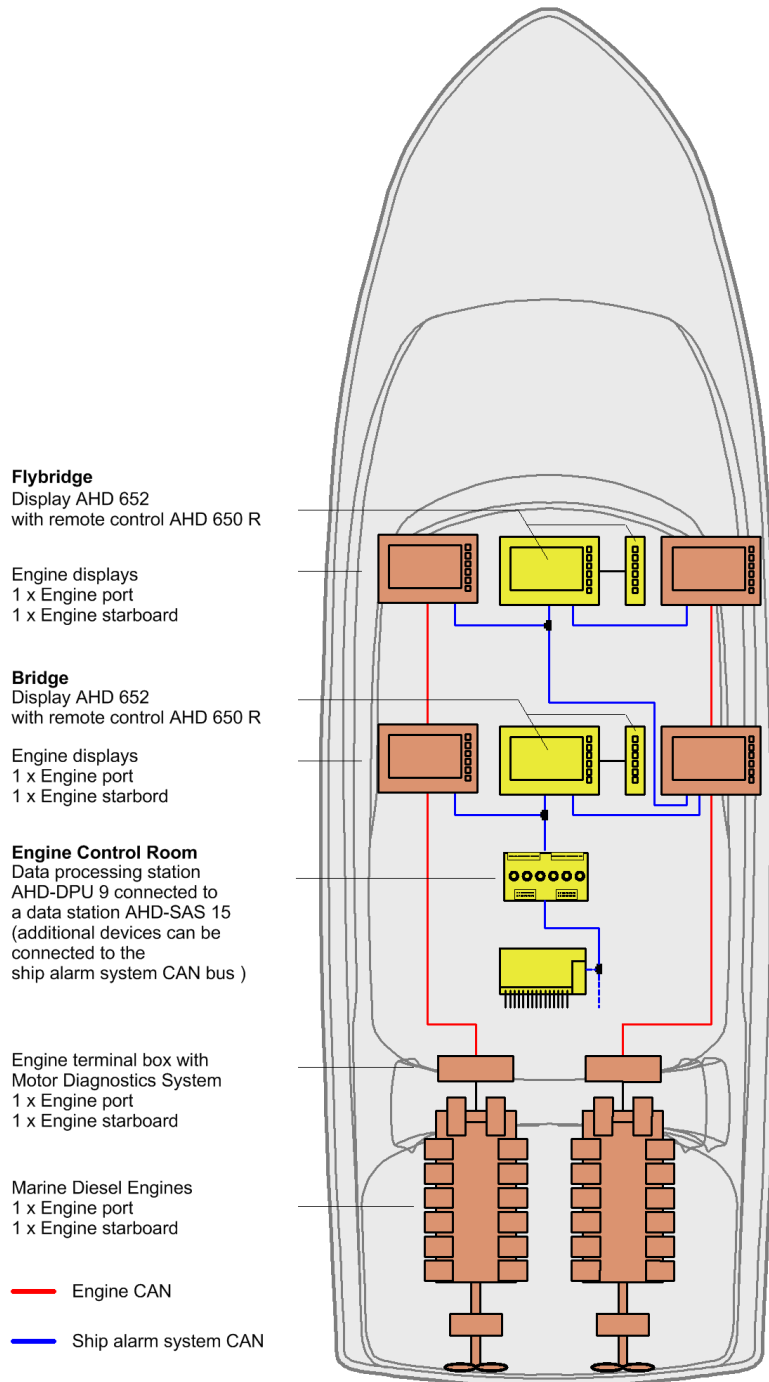
Channel	Value	Time	Date
Engine Room Door Open Aft	open	09:41	22.08.
Engine SB Coolant Temp.	▲ 118 °C	09:30	22.08.
Fuel Level Port Day Tank	▼ 350 ltr	09:18	22.08.

Alarm page: All alarms remain in the table until their cause is gone.



Configuration page: Clock adjustment, unit system, selection of the display language

## System Overview



AHD 652 can display for example the following data:

- Water and fuel tank levels
- Position of trim tabs and rudder and the optimal trim tab angle at the current speed
- Bilge level alarms and pump status
- Status of doors, hatches, ladders, sea water cooled exhaust systems and power supply systems
- With the navigation lights control system AHD-DPS02 the status of navigation lights
- With MAN engines and MMDS-CLC 6.3 engine displays fuel consumption and range

The data of the monitored analog and binary measuring points are captured by data stations such as AHD-SAS 15 and AHD-PS 47 and processed in a Data Processing Station AHD-DPU 9. Exceeded limits values are signaled as warnings or alarms; faulty sensors trigger a sensor failure alarm.

The devices are delivered configured and can be used after installation without further configuration work. If required, the shipyard can easily adjust texts and parameters during commissioning.

The variants AHD 652 and AHD 652 G2 have separate buttons for acoustical and optical alarm acknowledgement and can be used on classified ships. The design of AHD 652 G2 is adapted to MAN VNew engines.

The additionally available variant AHD 652 Reset has one single button for acoustical and optical alarm acknowledgement and a button for resetting alarms. It is suitable for use in engine monitoring systems.

## Technical Data

Power supply	24 V DC (+30% / -25%)
Current consumption	450 mA
Operating temperature	-30°C...+70°C
Storage temperature	-50°C...+85°C
Weight	1.5 kg
Protection class	IP 67 (Front) IP 55 (Rear)
Dimensions	210 x 130 x 84 mm
B x H x T	Minimum installation depth 135 mm
Panel cutout (mm)	190 x 118 mm
Display resolution	800 x 480 pixels
Visible area	6,5"; 144.0 x 78.24 mm
Color depth	15 Bit
Luminosity	850 cd/m <sup>2</sup>
Interfaces	2 x CAN (IN / OUT)
	1 x RS232
	1 x 8 pin plug for remote control
	AHD 650 R
Outputs	1 x potential free relay contact, NO, 40 V DC / 1 A
	1 x potential free relay contact, NC, 40 V DC / 1 A
Inputs	1 x binary (optocoupler)
	Minimum distance to magnetic compass
	Standard compass: 0.75 m Steering compass: 0.45 m
Approvals	In preparation

## Variants



Variant AHD 652, item no. 19901



Variant AHD 652 G2, MAN VNew design, item no. 19909



Variant AHD 652 Reset, item no. 19909

