SYSTEM HEALTHY

Bridge Navigational Watch Alarm System

Bridge Watch Mode

| WATCH ON | WATCH OFF |
| WATCH AUTO ON | WATCH STAND BY |

Watch Timer

12   minutes   0

remaining: 8.2 min

PW

Bridge Watch On Duty

| 1st Officer | 2nd Officer |
| 3rd Officer | 4th Officer |

| | RESET | EM CALL | PASS WORD | | |

PRAXIS
AUTOMATION TECHNOLOGY

Bridge Navigational Watch Alarm System

Bridge Navigational Watch Alarm System

Features

The purpose of the Mega-Guard Bridge Navigational Watch Alarm System (BNWAS) is to monitor bridge activity and detect operator disability which could lead to marine accidents. The BNWAS monitors the awareness of the officer on the bridge and automatically alerts an on duty officer in case the officer on the bridge becomes incapable of performing his duties. In case the officer on duty does not respond, the other officers and other crew members are alerted by the BNWAS.

The Mega-Guard BNWAS is operated through a user friendly 5,7" touchscreen for intuitive operation and monitoring. A NMEA-0183 serial output is available for connection to the VDR. The Mega-Guard BNWAS is powered by two 19~32VDC power supplies: one main supply and one back-up supply.

BNWAS Operator Panel

Mega-Guard BNWAS Operator Panel	
Touchscreen	5.7"
Pushbuttons	6
Front	metal or glass
Microprocessor	ARM
Ethernet ports	4
NMEA0183 ports	2

Mega-Guard BNWAS Controller	
Reset inputs	5 (potential free)
Alarm outputs	8 (active 24VDC)
Power supply	24VDC (-25% ~+30%) main and back-up

| BNWAS environmental and approvals	
Ambient temperature	25 ~ 70°C
IMO approval	✓
Class approval	LRS,DNV-GL, ABS RINA, BV, RMRS, CCS, NKK, PRS, KR

System lay-out and operation

The Mega-Guard BNWAS consists of the following items:

▸ **BNWAS Operator Panel** for flush panel mounting in bridge console
▸ **BNWAS Controller** for din-rail mounting inside bridge console
▸ **I/O Cable** connecting the BNWAS Operator Panel with BNWAS Controller
▸ **Reset and Audible Alarm** installed on bridge
▸ **Audible Alarm** installed on bridge, officer's cabins and other crew areas
▸ **PIR motion detector** installed on bridge for bulkhead mounting

The officer on bridge can select in between Watch On mode and Watch Auto On mode. In Watch On mode the BNWAS is always active and in Watch Auto On mode the BNWAS is active when the ship's heading or track control system is engaged. The BNWAS is in Watch Stand-by mode when the ship's heading or track control is disengaged; the BNWAS is not active in this case. The Master can turn of the BNWAS by selecting the Watch Off mode after entering of a personal code by use of the touchscreen on the BNWAS Operator Panel.

Normal operation

The BNWAS Operator Panel contains a watch timer adjustable from 3 till 12 minutes. The BNWAS is downcounting starting from the set-time. The remaining time is displayed on the BNWAS Operator Panel. The officer on the bridge has to reset the watch timer before the timer reaches zero to show his awareness. The reset of the timer can be done in two ways: by pressing the Reset pushbutton or by showing activity via a PIR motion detector. The BNWAS contains a Reset pushbutton and in bridges with large work area, additional illuminated Reset pushbuttons have to be installed.

BNWAS Controller
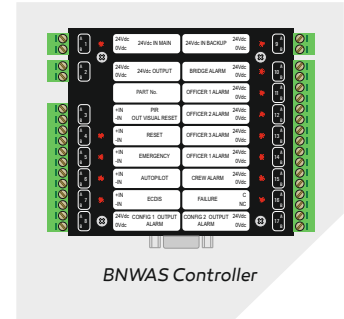
Alarm modes

In case the timer reaches zero, the BNWAS warns the officer on the bridge via a Visual Alarm on the Operator Panel. If the officer on the bridge does not reset the BNWAS within 15 seconds, the built-in bridge audible alarms are activated. The officer on the bridge is alerted and can reset the watch timer before the on duty officer alarm is activated.
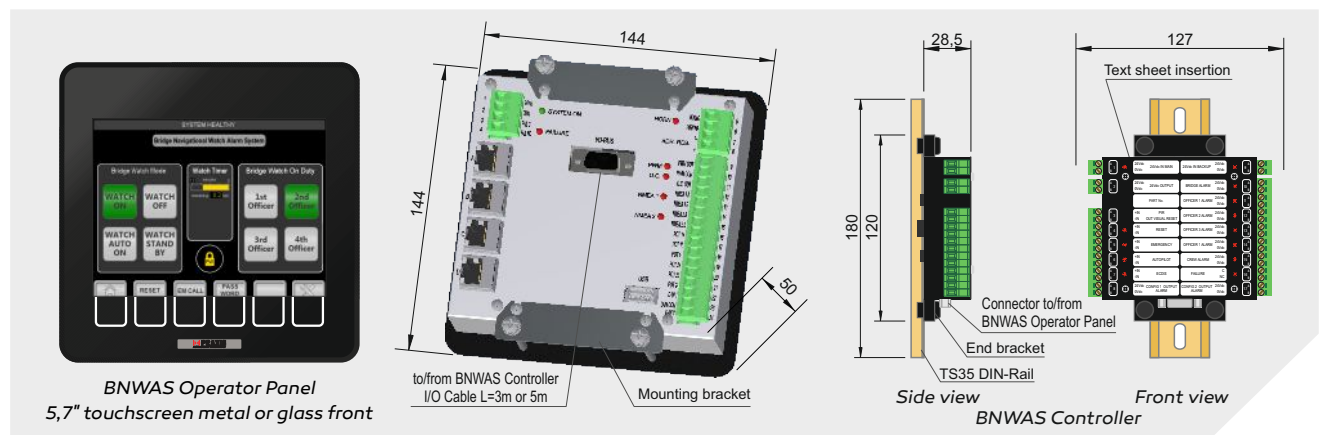
If the officer on the bridge does not reset the BNWAS within 15 seconds after the bridge audible alarm is activated, the audible alarm in the cabin of the selected on duty officer will be activated. The on duty officer can go to the bridge to overview the situation, cancel alarms and reset the watch timer.

Reset/audible alarm

If the on duty officer does not reset the BNWAS within 60-180 seconds (adjustable during installation) after the officer alarm is activated, the audible alarm in all other officer cabins and a crew audible alarm is activated as well. An officer or crew member can go to the bridge to overview the situation, cancel alarms and reset the watch timer.

When the Emergency Call button on bridge is pressed for 2 seconds, the audible alarm in the on duty officer cabin is activated according and followed by same protocal as described above.

Audible alarm

Mounting & dimensions

BNWAS Operator Panel
5,7" touchscreen metal or glass front

to/from BNWAS Controller
I/O Cable L=3m or 5m

Mounting bracket

Text sheet insertion

Connector to/from BNWAS Operator Panel

End bracket

TS35 DIN-Rail

Side view

Front view

BNWAS Controller

Vessel
Management System

Power
Management System

Fire
Alarm System

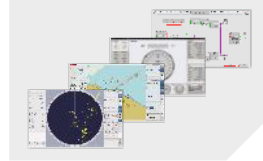CCTV
Video Distribution

Ship
Performance Monitor

Fleet
Management System

Integrated
Navigation System

Heading
Control System

Propulsion
Control System

Dynamic
Positioning System

BNWAS
Watch Alarm System

Navigation
Light Control

Wiper
Control System

Energy
Management System

Electric
Propulsion Motor
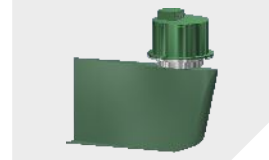
Electric
Steerable POD

High
Power Inverter

DC bus
Generator

Electric
Energy Storage

Electric Fin
Stabilizer

*Ship automation,
navigation and
electric propulsion*

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