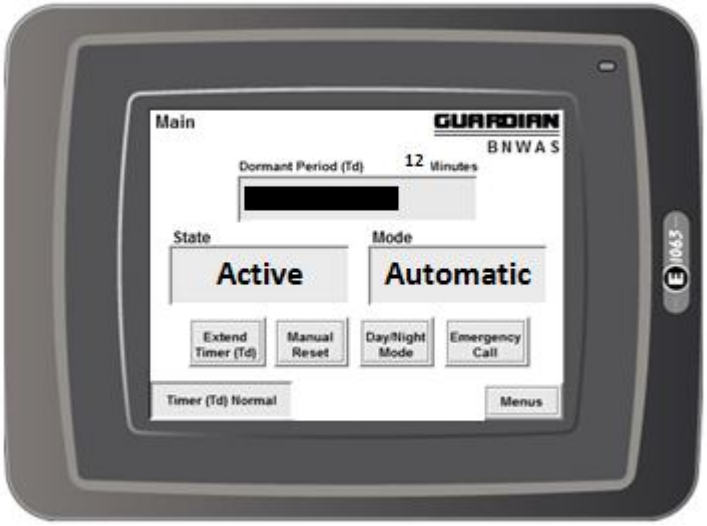
GUARDIAN
BNWAS

DATA SHEET



Complies to the following Performance Standards & International Approvals: -

MSC.128(75)

IEC 62616

IEC 60945

BNWAS systems are a requirement to help protect the Ship's Officers required to carry out one man bridge duties and also to ensure the bridge is never left unattended for prolonged periods.

GUARDIAN : BNWAS safety system is designed to automatically monitor bridge activity through Passive Infrared (PIR) movement sensors located strategically around the bridge area. The Master and other qualified navigating officers would be alerted should the bridge be left unattended or if the officer of the watch (OOW) becomes incapacitated.

The system first alerts the OOW through local audio/visual alarm indication on the bridge and, if he/she is not responding, alerts the Master and other qualified navigating officers, a message is also sent to a portable pager should the officers be outside the accommodation.

Staged Alarms:

Initial Alarm : Visual alarm – local only to the bridge

First Stage : Audible alarm – local only to the bridge

Second Stage : Audible & visual alarm at Navigators' accommodation area + paging transmission (individual cabins can selected i.e. duty OOW and/or Master…etc)

Third Stage : Audible & visual alarms at remaining Officer's areas around the ship (can be inhibited)

Dormant Period Reset Methods:

Manual

The dormant period can be reset and the staged alarms accepted from either the touch-screen operator display or any of the manual illuminated push buttons located at the - conning position, bridge wings and chart table.

Automatic – OOW Movement Detection

The dormant period is reset and the staged alarms accepted when movement of the OOW is detected by the PIRs as he/she carries out his/her duties – types available…

Directional PIRs : Covers the normal operational area of the OOW

BRIDGE NAVIGATION WATCH ALARM SYSTEM

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Company Registration No: 04407624 -:- VAT No: 804 6004 68 -:- ISO 9001 No: GB2001654

Warning Devices:

Initial Stage Alarm : Flashing red beacon with dimmer, can be observed from all navigation areas

First Stage Alarm : Selectable tone(32) alarm, audible from all navigation areas

Second Stage Alarm : Combined audible & visual alarm in the Navigators accommodation area + paging transmission – selectable for individual cabins.

Third Stage Alarm : As for second stage, in remaining Officer's areas – can be inhibited if required.

Automatic / Manual Operation:

Manual : Requires the Master to select 'Active' mode from the password protected Admin Menu to begin monitoring

Automatic : System will automatically switch to 'Active' mode when autopilot is selected or if the vessel exceeds 3kts

Operational Modes:

ACTIVE : Usual mode when vessel at sea on passage. Dormant time period - selectable between 3 – 12 minutes. Reset as described previously.

ANCHORED : It is still required to have a OOW on duty at anchor, however the dormant period can be stretched to 20 minutes to allow more flexible working

INACTIVE : System idle, no timer running or PIR active

IN PORT SECURE : System acts as a standard burglar alarm and will activate the alarms should any movement be detected on a secure and assumed empty bridge

MANUAL OFF : Does not operate under any circumstance – key switch operated (key can be removed in both positions).

TIMER (Td+) EXTENSION : For maximum protection the dormant timer should be set as low as practical. However, this does not allow the OOW a great deal of time for a comfort break. The EXTEND button sets the dormant period time to a pre-set figure of 3 - 12 minutes. Pre-set during commissioning to comply with ships agreed operating plan.

EMERGENCY CALL : The OOW may at any time press and hold an on screen button or any of the manual reset buttons to activate the 2nd and 3rd stage alarms should he/she require immediate assistance on the bridge. A paging transmission is also sent and repeated every 2 minutes till cancelled. Plus portable wireless "panic button" for added protection, especially in high risk piracy areas

Test Facility:

Periodic Testing : To ensure continued satisfactory operation of the system, key elements should be tested regularly (weekly)

PIRs : 'Walk' test indicates if the motion detector has registered your presence

BRIDGE STROBE : Tests bridge visual warning device

BRIDGE SOUNDER : Tests bridge audible warning device

CABIN SOUNDER : Tests cabin / accommodation audible & visual warning devices

PAGING SYSTEM : Sends a test paging transmission to the pocket pagers

Anti-Tamper & Fault Indication:

Anti-Tamper

PIRs : Fitted with an anti-tamper contact to detect any unauthorised removal of the lens cover

WARNING DEVICES : Covers secured with high security fasteners

SUPPLY FAILURE : If the incoming mains or 24V DC fails, or is deliberately interrupted a warning is displayed on the user display. This alarm is also transferred to the ship's central alarm system

Inputs & Outputs:

INPUTS

The following inputs are accepted by the PLC via a NMEA interface adapter

$HEHTDxxxx & $HEALARxxxx: NMEA sentence from the Autopilot (IEC 62116 format)

$GPVTGxxxx & $GPALRxxxx: NMEA sentence from GPS (IEC 62116 format)

$__ALRxxxx : NMEA sentence from nav equipment (unacknowledged alarm transfer)

4-32V DC / NO : Opto isolated from autopilot selector

4-32V DC / NO : Opto isolated alarm signal from unacknowledged Nav equipment alarm

N/O : Reset signal from other bridge equipment capable of providing this output

OUTPUTS

The following outputs are provided from the PLC via a NMEA interface adapter

$BNALRxxxx : NMEA sentence to VDR indicating any mode change, alarm activations and resets

N/O : Mains failure to central alarm system

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BRIDGE NAVIGATION WATCH ALARM SYSTEM

Specifications:

STANDARD SUPPLY	
TOUCHSCREEN USER DISPLAY	
SIZE	150MM X 200MM X 57MM
POWER	24V DC
CONNECTIVITY	RS422
CONTROL PANEL	
SIZE	300MM X 300MM X 210MM
POWER	SHIPS AC : 86 – 265V AC
	SHIPS DC : 24V DC
I/O	AS ABOVE
NORMAL / OFF & MANUAL RESET / CALL PANEL	
SIZE	160MM X 90MM X 50MM
POWER	24V DC
MANUAL RESET / CALL PANEL	
SIZE	120MM X 90MM X 50MM
POWER	24V DC
PAGING SYSTEM	
SIZE	138MM X 82MM X 42MM
POWER	12V DC
FREQUENCY	459.10MHZ
FORMAT	POCSAG
WARNING DEVICES	
BRIDGE BEACON	86MM X 86MM X 83MM
	24V DC
BRIDGE SOUNDER	86MM X 86MM X 65MM
	24V DC
ACCOMM SOUNDER	86MM X 86MM X 77MM
	24V DC
MOTION DETECTORS	
DIRECTIONAL PIR	84MM X 60MM X 38MM
	12V DC
OPTIONAL EXTRAS	
WIRELESS PANIC BUTTON	
433MHZ RECEIVER	135MM X 85MM X 45MM
	12V DC
433MHZ KEY FOB TX	65MM X 35MM X 15MM

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