GCE 光彩电器

GC WAS-01 驾驶室船舶值班报警系统说明书

GC WAS Navigational Watch Alarm System

Specification

GUANG CAI® ELECTRIC

河南光彩电器有限公司

China GCE Co.,Ltd

一、总述

驾驶台驾驶室船舶值班报警系统(Bridge Navigational Watch Alarm System)英文缩写为 BNWAS，主要功能是防止驾驶员在航行值班时不能履行值班职责而使船舶处于无人操纵的危险局面发生。当上述情况出现时。系统将产生一系列逐步延伸的报警直到引起相关人员的注意，确保值班驾驶员履行其值班职责。

一.Generalization

The main function of Bridge Navigational Watch Alarm System whose short name is BNWAS is toprevent ship from unmanned situation caused by the watcher is out of duty when watching. Whenthe above situation happens, the system will give series of stepwise extension alarm until draw therelevant person's attention and ensure the watcher is on duty.

本产品满足以下规范。

1、 IMO MSC 128(75)决议：驾驶室驾驶室船舶值班报警系统--BNWAS
2、 中国船级社电气电子产品型式认可试验指南(2006)
3、 C C S 通函关于执行 MSC.282(86)决议有关 SOLAS II-1 章修订内容(2011 年 1 月 1 日生效)的通知

This product meets the following specifications:

1. IMO MSC 128(75) Resolution: BNWAS
2. CCS Electric Product Type Approval Test Guideline (2006)
3. Notice on implement revising content for SOLAS II-1 Chapter of MSC.282(86) Resolution,which will be in force on January 1st,2011

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4、 型号命名方式
4. Naming method of model.

河南光彩驾驶台航行值班报警系统/模块命名规则

GC WAS - 01 - 01 / 01
1 2 3 4 5

1 ——— 厂商: 河南光彩电器有限公司
2 ——— 产品类型: 驾驶台航行值班报警系统
3 ——— 设计序列号为1
4 ——— 产品名称:
01 主控单元
02 输出接线单元
03 电源单元
04 报警延伸选择单元
05 驾驶室复位单元
06 值班官员延伸单元
07 左右翼复位单元（防水）
08 热释传感器自动复位单元

5 ——— 子模块:
与功能代号4 配合使用表示该单元的子模块
举例:GC WAS - 01 - 03 / 01
表示值班报警电源单元的电源接线模块

二、 技术参数 Technical Parameters:

1、工作电压：DC24V（±20%-30%）2A;
Working Voltage:DC24V（±20%-30%）2A;
2、工作环境：-10℃～+55℃;
Working Atmosphere:-10℃～+55℃;
3、相对湿度：≤RH95%(+40℃);
Relative Humidity: ≤RH95%(+40℃);
4、电磁兼容性能：设备中有严密的抗干扰措施，满足相关规范要求;
Electromagnetic Compatibility: with strict ant jamming measurement, meet the
requirements of relevant specifications.
5、设备具有防振及防潮湿、防盐雾、防霉菌的措施;
With measurements of anti-vibration, moisture, salt mist and mildew.
6、自动舵遥控启动输入（无源触点）
Autopilot remote starting input(passive contact) 7、导航自动复位信号输入通道数 3（无源触点）

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The channel number of navigation automatic reset signal input is 3 (passive
contact)

8、驾驶室复位输入输出通道数 3

The channel number of WH reset input/output is 3.

9、延伸输出到官员舱室报警通道数 4

The channel number of alarm on extending output to officer cabin is 4.

10、延伸输出到公共区域报警通道数 1

The channel number of alarm on extending output to public area is 1.

11、延伸到通用报警输出：无源触点；

Extending to general alarm output: passive contact

12、无源触点最大容量： DC36V/2A;

Maximum capacity of passive contact: DC36V/2A;

13、VDR 输出： RS485

VDR output RS485

14、防护等级：IP22；左右翼 IP56

Protection rate: IP22, two wings: IP56

15、定时精确度＜5%或 5 秒

Timing precision ＜5% or 5s

9、防护等级：IP22；左右翼 IP56

Protection rate:Ip22; two wings: IP56

10、定时精确度＜5%或 5 秒

Timing precision ＜5% or 5s

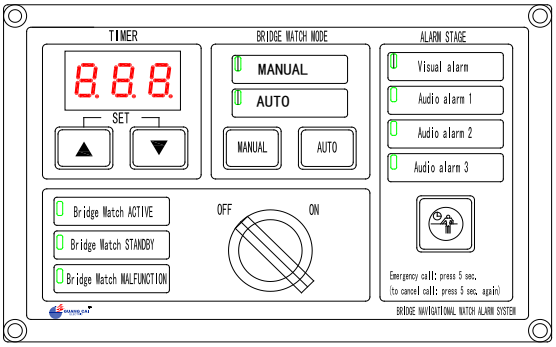
三、 GC WAS-01 驾驶室船舶值班报警系统组成 Composition

GC WAS-01 驾驶室船舶值班报警系统由以下组件组成：

BNWAS is composed by the following parts:

1、 主控单元（嵌入式）GC WAS-01-01

Main control unit which is plug-in type. GC WAS-01-01



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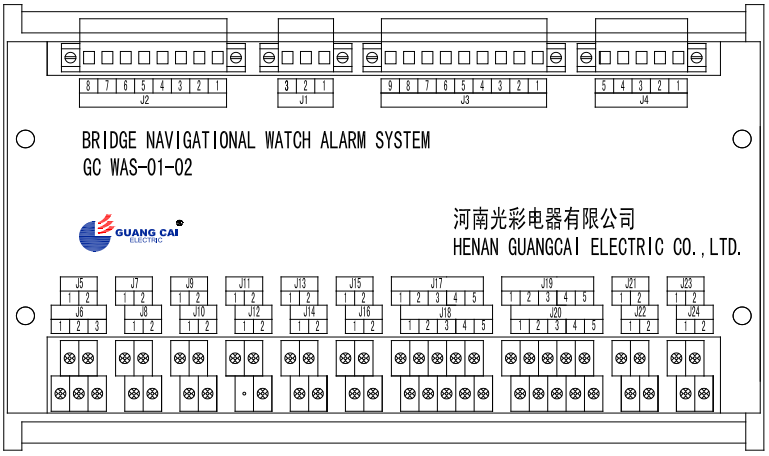
2、输出接线单元（导轨安装）GC WAS-01-02

Output connecting unit which is used for mounting rail. GC WAS-01-02



3.电源单元 GC WAS-01-03 Power supply unit

电源单元由两个部分组成

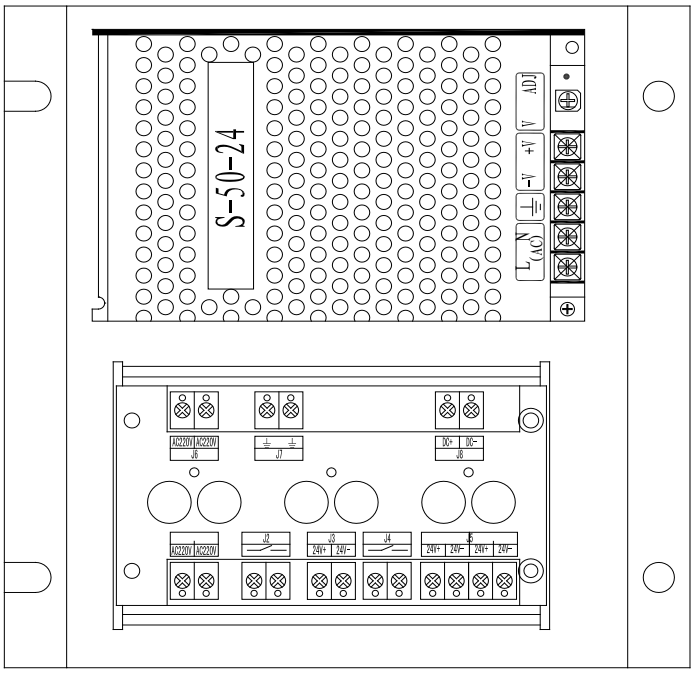
The power supply unit is composed by two parts:

1、 开关电源；

Switch power supply;

2、 接线模块 GC WAS-01-03/01；

Connecting module GC WAS-01-03/01



4、值班选择面板（嵌入式）GC WAS-01-04

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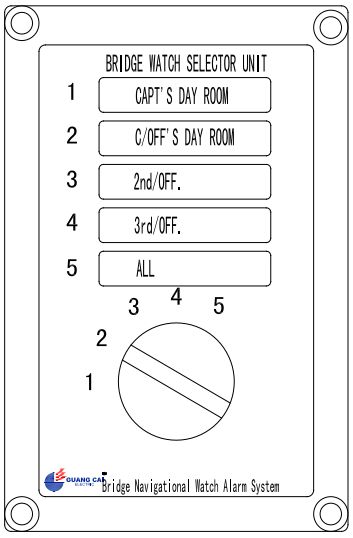
4 、 Watching selection panel which is plug-in type. GC WAS-01-04



该单元为可选单元，用于值班官员选择，可以通过选择开关选择延伸报警的官员房间。
This unit which is optional is used for selection; the extension alarm officer room can be selected through selection switch.

1.CAPT'S DAY ROOM： 船长；
2.C/OFF'S DAY ROOM： 大副；
3.2nd/OFF.： 二副；
4.3rd/OFF.： 三副；
5.4th/OFF. 四副；
5 、驾驶室复位按钮（嵌入式）GC WAS-01-05
5 、WH Reset Button which is plug-in type. GC WAS-01-05
安装在驾驶室驾控台上，用于报警和复位，本单元具有报警灯光显示和自动调光功
能当长时间按下超过 5 秒时系统将进入紧急呼叫状态，进入紧急呼叫状态后再按一下按 键紧急呼叫解除。
The button which is used for alarm and reset is installed on WHC. This unit has the functions of alarm light display and automatic

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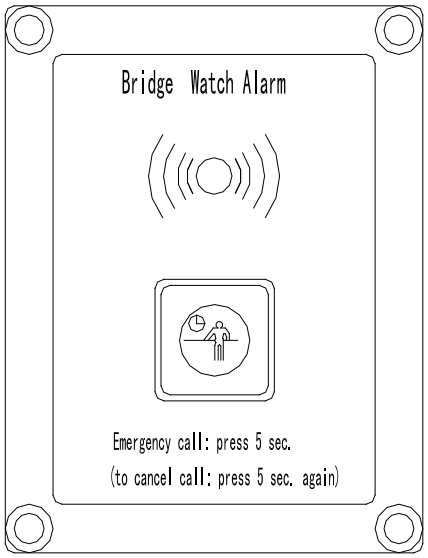
dimmer. When the button is pushed for long time, for example over 5 seconds, the system will reach the emergency calling condition, after which push the button again, the emergency calling will be released.



6 、值班官员延伸单元 （嵌入式）GC WAS-01-06

6 、On-duty officer extension unit which is plug-in type, GC WAS-01-06

该单元安装在值班官员舱室，进行报警声响和灯光显示，本单元没有复位功能，只有声光指示。

Being installed in on-duty officer room, this unit which is used for audible alarm and light indication doesn't have the reset function, only with audible and visual indication.

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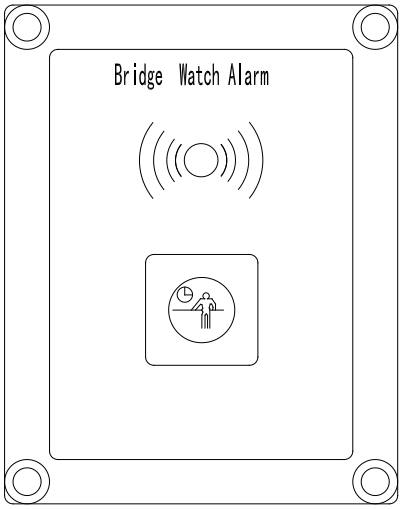
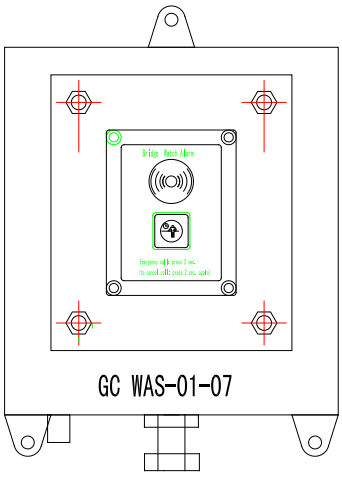


7、左右翼复位单元壁挂（防水）GC WAS-01-07

Wall type and water-proofing reset unit for both wings. GC WAS-01-07 装在船的左右翼，该单元为可选单元不是标准配置

Being installed on wings of both sides, the unit is optional unit not the standard set.



8、热释传感器自动复位单元 GC WAS-01-08

Automatic reset unit for heat-releasing sensor. GC WAS-01-08 安装在驾驶室合适位置，该单元自动感应人在驾驶室的活动，自动输出复位信号，减少人工复位的该单元为选配单元，由于该单元探测有角度限制，有些地方可能探测不到，这时应配合手动复位按钮使用。该单元不是标准配置。

Being installed at the suitable position in WH, this unit which is selected unit automatically senses people's activity in WH, then

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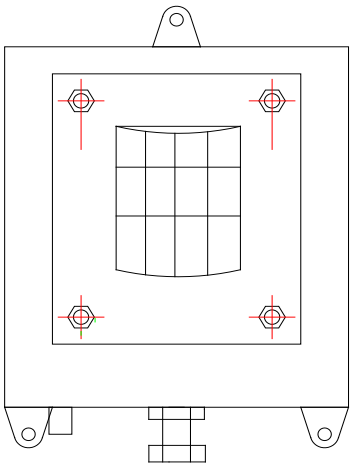
outputs reset signal automatically to reduce manual reset. Due to the limitation on detection angle, some positions can not be detected, at this time it can be used with manual reset button. This unit is not the standard set.



9、GC WAS-01 驾驶室船舶值班报警系统结构
GC WAS-01 BNWAS structure

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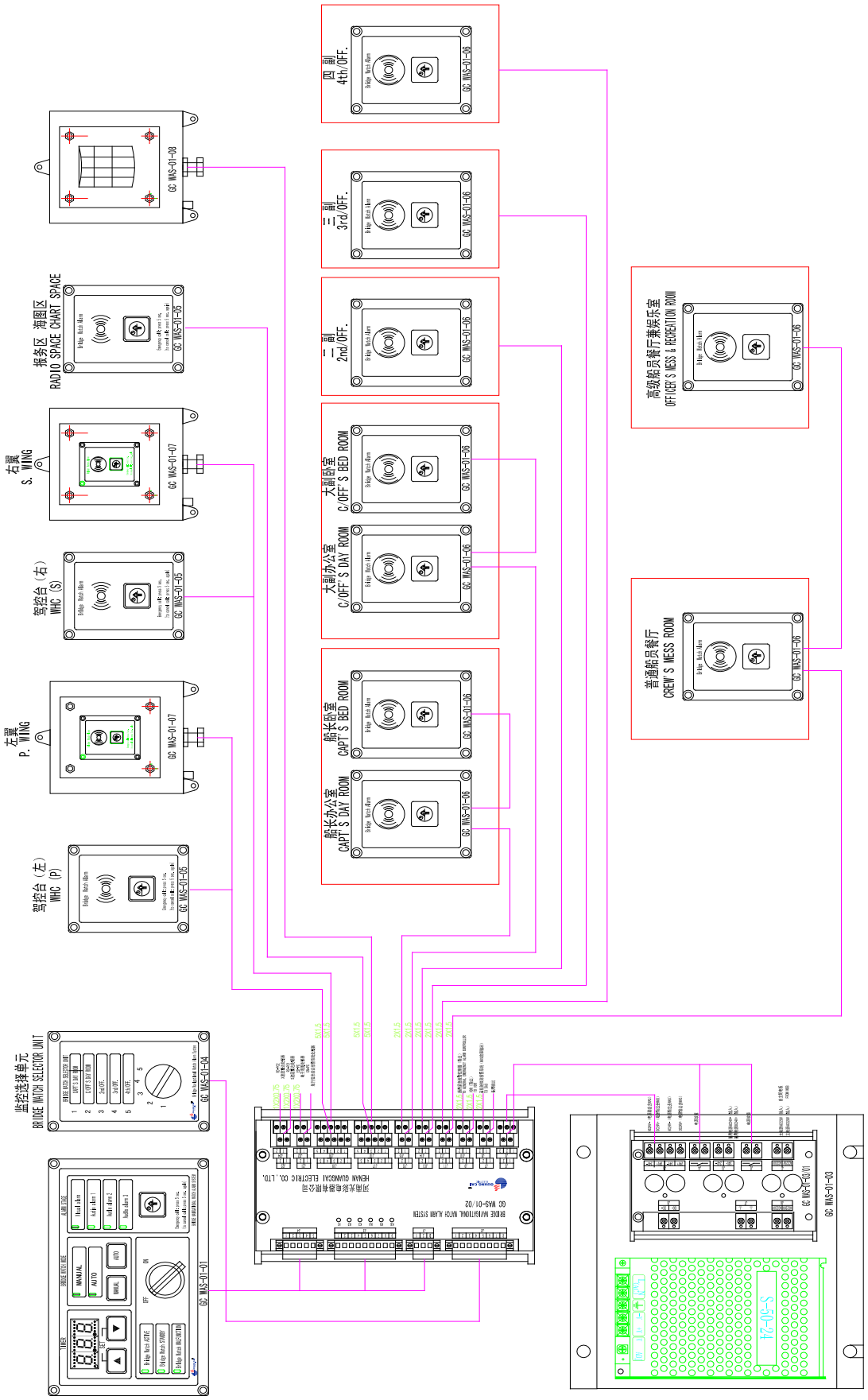

四、 GC

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WAS-01 驾驶室船舶值班报警系统主要功能

四、Main functions of GC WAS-01 BNWAS

1、GC WAS-01 驾驶室船舶值班报警系统功能

1、GC WAS-01 BNWAS functions

航行值班报警的作用是监视驾驶台值班，即在驾驶台控制单元设置一定的时间间隔(3-12 min)，系统开始倒计时，在设置好的时间间隔内。值班驾驶员必须按一下驾驶台里面的复位开关或者操作一下驾驶台内特定的设备，则系统重新开始倒计时。在设定的
时间间隔内如此反复操作。则系统就不断被复位，报警部分不会被触发，系统也不会发出声光报警。

Technical requirement: This system is used to monitor the watch on bridge, i.e. set a certain time interval, such as 3-12min, when begin to count down, on-duty officer should push the reset button or operate the specified equipment in bridge during the setting interval, then the system begin to count down again. Operating in this way again and again during the interval, the system will be reset continuously, the alarm will not be activated, and neither will the audible and visual alarm.

如果值班驾驶员没有在规定的时间间隔内对该系统进行复位，当到达预设时间 T1（可以设定，范围为 3-12 分钟）时，系统预报警，数码管变为闪烁倒计时， 同时桥楼上的复位按钮指示灯 1Hz 闪频;

If the on-duty officer doesn't reset during the specified interval, when reaching the pre-setting timeT1, i.e. alarm interval, the system gives pre-alarm, the data tube displays "0000" with flash, meanwhile, reset button indicator on bridge flashes, which can be set, such as 3-12min;the indicator flashes with 1 Hz frequency.

系统预报警后，如果在系统预报警设定时间 T2 内（可以设定，范围为 0-15S)，桥楼值班人员没有按下复位按钮，则操作面板及桥楼上的复位按钮盒会发出报警声响(第一阶段报警)，报警蜂鸣器和指示灯同步以 1HZ 音频和闪频;

After pre-alarming, if on-duty officer doesn't push the reset button during the pre-alarm setting time T2 which can be set, such as 15s, then the operating panel and reset button box on bridge will give

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audible alarm, i.e. the first stage alarm T3. The alarm buzzer will synchronize with the buzzer with 1HZ audible and flash frequency.
桥楼上的复位按钮盒发出 第一阶段报警后，如果在 T3 时间内（可以设定，范围为 0-15S）桥楼值班人员仍然没有按下复位按钮，则当 T3 时间到后，声光报警信号会延伸到备用当班船员房间（第二阶段报警），报警蜂鸣器和指示灯同步以 2HZ 音频和闪频；
After alarming of reset button box on bridge, i.e. the first alarm T3, if on-duty officer still doesn't push the reset button during T3 which can be set such as 0-15s, then after T3, the A/V alarm will extend to room of standby on-duty crew, i.e. reaches the second stage alarm. The alarm buzzer will synchronize with the indicator in 2HZ audible and flash frequency.
当备用当班船员房间发出声光报警后，如果 T4 时间内（可以设定，范围为 90-180S）桥楼上仍然没有人按下复位按钮，则当 T4 时间到后，所有值班位置和公共舱室报警盒都发出声光报警信号（第三阶段报警），报警蜂鸣器和指示灯同步以 3HZ 音频和闪频；提醒所有人员注意。在驾驶员房间或公共舱室内，不能取消报警，要想取消报警使系统复位，必须按驾驶台主控面板的按钮才行。
After the A/V alarm at the room of standby on-duty crew, if the reset button still hasn't been pushed during T4 which can be set between 90-180s, then over T4, alarm boxes of all watch positions and common cabins will give A/V alarm signal, i.e. the third stage alarm, the alarm buzzer will synchronize with indicator in 3HZ audible and flash frequency to warn all members. Alarm can not be canceled at navigator's room and common cabins. Only push the button on main control panel of bridge can cancel the alarm to reset the system.
2、装在驾驶室的单元具有调光功能；
Light adjusting function.
装在驾驶室面板上的显示单元可以通过时间显示窗口下的 ▲▼ 按键对显示面板亮度进行调节，面板亮度状态自动保存。
The display unit on WH panel can regulate the lightness of display panel through the two keys under time display window.
驾驶室复位单元具有自动调光功能，面板上装有感光传感器，控制单元会

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根据驾驶室光线的强弱自动调节面板指示灯的亮度，减少驾驶员的操作。
The display unit and reset unit installed on bridge panel have auto dimmer function. Light sensor is installed on panel, control unit can automatically adjust the brightness of panel indicator to reduce the operation of navigator according to the light strength of WH.
3.选择 GC WAS 静止持续时间的调整和保护手段
Select the regulation and protection for resting duration time of BNWAS.
规范规定的四个时间段可以根据船的大小单独进行调整，该功能受钥匙开关的限制，没有钥匙开关无法实现该功能。
The specified four periods can be separately regulated accordign to the ship dimension.This function is subjected to the key switch without which the function can not be performed.
4.选择 GC WAS 操作方式的保护手段
Select protection method for BNWAS operation manner.
该系统必须通过带钥匙的开关进行启动和停止和功能设置。
The system can be started, stopped and function set with key switch.
5、自动复位方式（可选不是标准配置）
5、Automatic reset manner which is optional but not standard set.
为了减少驾驶员的劳动强度，可以选择能检测到人活动的自动复位单元，该单元内部带有热释传感器及其透镜当检测到有人活动时自动输出复位信号。或者操作一下驾驶台内特定的设备让该设备输出一个复位信号。
Automatic reset unit which can detect the activity of man can be used to decrease the work intensity of navigator. This unit which equipped with heat-releasing sensor and lens can automatically output reset signal when detecting the activity. Or reset signal can be output by operating the specified equipment in WH

6、GC WAS 型值班报警系统的启动方式选择和设置
6、Selection and set for start manner of GC WAS watch alarm system.
GC WAS 型值班报警系统，可以选择和设置系统的启动方式，当设备在“MANUAL”模式表示驾驶室值班报警装置一旦钥匙开关转到“ON”启动系统连续运行；当设备在“AUTO” 模式表示此时系统可以通过设备遥控

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启动，例如从自动舵过来的自动导航信号。
The start manner of GC WAS type watch alarm system can be selected and set. When the equipment is in "MANUAL" mode, the starting system will continuously run once the key switch is switched to "ON"; When in "AUTO" mode, the system can be started by remote control, such as auto navigation signal from autopilot.
7、紧急呼叫功能 Emergency calling function
连续按驾驶室显示单元和复位单元的复位按钮超过 5 秒，值班报警系统将启动紧急呼叫功能，这时所有地方的报警单元全部声光报警。
7、Push the reset button of display and reset units in WH continuously over 5seconds, the system will start emergency calling function. At this time alarm units of all positions will give A/V alarm.
8、试验功能
8、Testing function
当值班报警系统的钥匙开关在 OFF 状态时同时按下“MANUAL”和“AUTO”键时，则显示面板进入试验状态，面板上的所有指示灯点亮。
When the key switch of system is in "OFF" condition, push "MANUAL" and "AUTO" keys synchronously, the display panel reaches testing condition, and all indicators on panel are lighted.
9、所有按键在需要操作时都有照明功能方便操作。
9、All keys have lighting function; it's easier to operate when needed.
五、 GC WAS-01 驾驶室船舶值班报警系统操作说明 Operation instruction
5.1、面板排布
Panel arrangement

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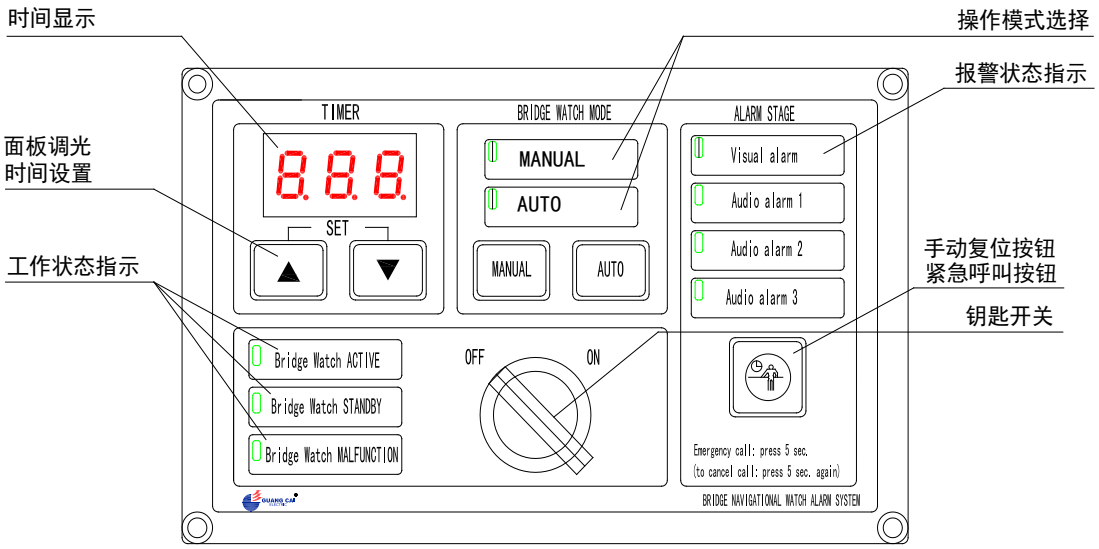
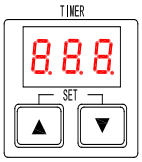


5.1.1 时间显示与设置



钥匙开关处于 OFF 状态时系统处于待机状态，数码管显示- - -，在待机状态时，同时按住 SET 指示的 ▲▼ 键超过 5 秒，则系统时间参数设置功能起动。这时数码管闪烁显示系统预报警 T1 时间，单位是秒，同时“Visual alarm”指示灯也同步闪烁， 此时可按 ▲▼ 修改时间，修改完毕后，必须把钥匙开关从 OFF 位置旋转到 ON 位置，所修改的时间参数才会被保存并生效。

When key switch is in "OFF" condition, system is in standby and data tube displays ---. Under standby condition, press both UP/DOWN buttons at the same time, the time parameter setting for system starts. Then the data tube displays the system pre-alarm T1 time whose unit is second with flash, meanwhile, "Visual alarm" indicating light is also flash, then change the time by pressing UP/DOWN button, after that, switch the key switch from OFF to ON, then the changed time parameter can be kept and effective.

当把钥匙开关再从 ON 位置旋转到 OFF 位置时，这时数码管闪烁显示第一阶段的报警 T2 时间，单位是秒，同时“Audio alarm 1”指示灯也同步闪烁，此时可按 修改时间，修改完毕后，必须把

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钥匙开关从 OFF 位置旋转到 ON 位置，所修改的时间参数才会被保存并生效。

When the key switch is switched from ON to OFF again, the data tube flashes and displays the first stage alarm time T2 whose unit is second. Meanwhile, indicating light for “Audio alarm 1” also flashes, then press the UP/DOWN button to change time, after that, switch the key switch from OFF to ON, then the changed time parameter can be kept and effective.

当把钥匙开关再从 ON 位置旋转到 OFF 位置时，这时数码管闪烁显示第一阶段的报警 T3 时间，单位是秒，同时“Audio alarm 2”指示灯也同步闪烁，此时可按 修改时间，修改完毕后，必须把钥匙开关从 OFF 位置旋转到ON位置，所修改的时间参数才会被保存并生效。

When switches the key switch from ON to OFF again, the data tube flashes and displays the first stage alarm time T3 whose unit is second, meanwhile, indicating lightof “Audio alarm 2” flashes synchronously. Then press UP/DOWN to change the time,after that, switch the key switch from OFF to ON, then the changed time parametercan be kept and effective.

当把钥匙开关再从 ON 位置旋转到 OFF 位置时，这时数码管闪烁显示第一阶段的报警 T4 时间，单位是秒，同时“Audio alarm 3”指示灯也同步闪烁，此时可按 修改时间，修改完毕后，必须把钥匙开关从 OFF 位置旋转到 ON 位置，所修改的时间参数才会被保存并生效。

When switches the key switch from ON to OFF, then the data tube flashes and displays the first stage alarm time T4 whose unit is second, meanwhile, indicating light of “Audio alarm 3” flashes synchronously, then press UP/DOWN to change time, after that, switch the key switch from OFF to ON, then the changed time parameter can be kept and effective.

当把钥匙开关再从 ON 位置旋转到 OFF 位置时，这时数码管闪烁显示“End”，此时可按 退出时间设置，重新回到待机状态。

When switches the key switch from ON to OFF again, then the

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data tube flashes and displays “End”, press UP/DOWN to leave the time setting, and back to standby condition again.
当把钥匙开关再从 ON 位置旋转到 OFF 位置时，这时数码管重新闪烁显示系统预报警 T1 时间，单位是秒，同时“Visual alarm”指示灯也同步闪烁，此时开始重复上面的步骤。
When switches the key switch from ON to OFF again, then the data tube re-flashes and redisplays the pre-alarm time T1 whose unit is second for the system. Meanwhile, indicating light of “Visual alarm” also flashes synchronously, then start to repeat the above steps.
当把钥匙开关在 OFF 位置时 ， 在 20 秒内如果 键没有被按下或钥匙开关没有被旋转，则系统自动退出时间设置， 重新回到待机状态。
When the key switch is in OFF position, if the UP/DOWN key is not pressed or the key switch is not switched within 20seconds, the system will leave time setting automatically, and back to standby condition again.
具体设置参数如下：
系统预报警 T1：3-12 分钟设定；（180—720 秒，以 60 秒为单位设置）
第一阶段的报警 T2：0-15 秒设定；（0—15 秒，以 1 秒为单位设置）
第二阶段的报警 T3：0-15 秒设定；（0—15 秒，以 1 秒为单位设置）
第三阶段的报警 T4：1.5-3 分钟设定；（90—180 秒，以 10 秒为单位设置）
Setting parameters details as following:
System pre-alarm T1: 3-12min setting; (180-720s, set unit based on 60 second)
First stage alarm T2: 0-15s setting; (0-15s, set unit based on 1 second)
Second stage alarm T3: 0-15s setting (0-15s, set unit based on 1 second)

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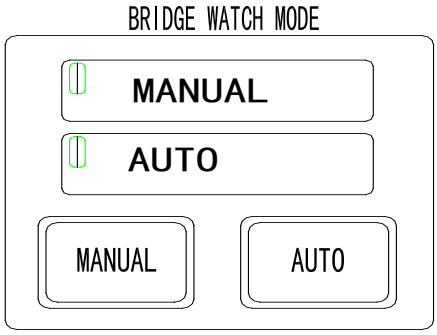
Third stage alarm T4:1.5-3min setting; (90-180s, set unit based on 10 second)

5.1.2 工作模式的显示与设置

Display and set of working mode



“MANUAL”模　式表示当钥匙开关从“OFF”位置转到“ON”位置时驾驶室值班报警系统立即运行并开始计时，并以剩余时间的形式显示在数码管上；

"MANUAL" mode means when key switch is in "ON" position, the BNWAS runs continuously and begins to count down, and the data tube displays the remaining time.

“AUTO” 模式表示当钥匙开关从“OFF”位置转到“ON”位置时驾驶室值班报警系统不立即运行，此时系统可以被设备遥控启动，例如从自动舵过来的自动导航信号等。

"AUTO" mode means when key switch is switched from OFF to ON ,the BNWAS doesn’t run immediately, then the system can be started by remote control, such as auto navigation signal from autopilot.

当钥匙开关处于 OFF 状态时，如果“MANUAL”灯亮，说明上次运行模式为“手动”模式，此时按下“AUTO”键，这时“MANUAL”灯灭，“AUTO” 指示灯闪烁表示要将工作模式设置到“自动”模式，把钥匙开关从“OFF” 到“ON”旋转一下；系统将存储记录该模式，同时“AUTO” 指示灯变为常亮状态。系统将进入“自动”模式。

When key switch is in OFF condition, if “MANUAL” light is lighted, that means last running mode was “manual”, then press “AUTO” key, the “MANUAL” light becomes black, ‘AUTO” indicating light flashes, which means the working

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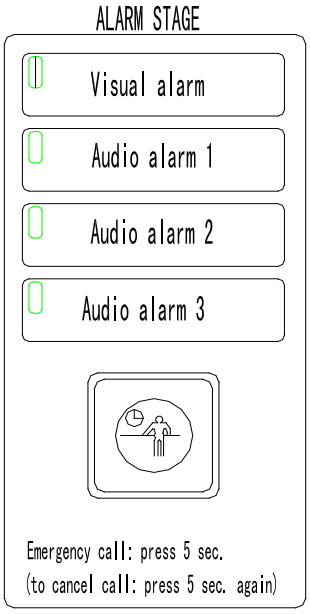
mode will be set to “AUTO”, switch the key switch from OFF to ON, the system will memorize and record this mode, meanwhile, “AUTO” indicating light becomes normal lighting condition, the system enters the “auto” mode
当钥匙开关处于 OFF 状态时，如果“AUTO”灯亮，说明上次运行模式为“自动”模式，此时按下“MANUAL”键，这时“AUTO”灯灭“MANUAL” 指示灯闪烁表示要将工作模式设置到“手动”模式，把钥匙开关从“OFF” 到“ON”旋转一下；系统将存储记录该模式，同时“MANUAL” 指示灯变为常亮状态。系统将进入“手动”模式。
When key switch is in OFF condition, if “AUTO” light is lighting, which means last running mode was “auto”, then press ‘MAUNAL” key, the “AUTO” light becomes black, “MANUAL” indicating light flashes, which means the working mode will be set to “manual”, switch the key switch from OFF to ON, the system will memorize and record this mode, mean while, ”MAUNAL” indicating light becomes normal lighting condition, the system enters “manual” mode.

5.1.3 报警状态显示及复位
Display and reset of alarm condition.



“Visual alarm” 指示灯点亮并闪烁表示预报警（T1）

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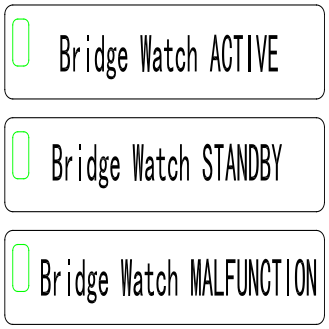
“Audio alarm 1” 指示灯点亮并闪烁表示第一阶段报警（T2）
“Audio alarm 2” 指示灯点亮并闪烁表示第二阶段报警（T3）
“Audio alarm 3” 指示灯点亮并闪烁表示第三阶段报警（T4）
“Visual alarm” indicator is lighting with flash means pre-alarm T1
“Audio alarm 1″ indicator is lighting with flash means the first stage alarm T2.
“Audio alarm 2″ indicator is lighting with flash means the second stage alarm T3
“Audio alarm 3″ indicator is lighting with flash means the third stage alarmT4

当 按 下 按 钮 系统将复位，当按下此按钮 超过 5 秒时系统将进入紧急呼叫状态，进入紧急呼叫状态后再按下此按钮超过 5 秒时紧急呼叫解除

When push the  button, the system will be reset. When push it over 5 seconds, it will reach emergency calling condition which can be released by pushing the key again over 5 seconds.

5.1.4 系统状态显示及故障指示

System condition display and failure indication



“Bridge Watch ACTIVE”指示灯点亮表示系统处于工作状态；
“Bridge Watch STANDBY”指示灯点亮表示系统处于待机状态；
“Bridge Watch MALFUNCTION”指示灯点亮并闪烁表示系统有故障；

“Bridge Watch ACTIVE″ indicator is lighting means system is inworking condition.
″Bridge Watch STANDBY″ indicator is lighting means system is

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in standby condition.
"Bridge Watch MALFUNCTION" indicator is lighting means system is in failure.

5.1.5 系统到 VDR 数据格式

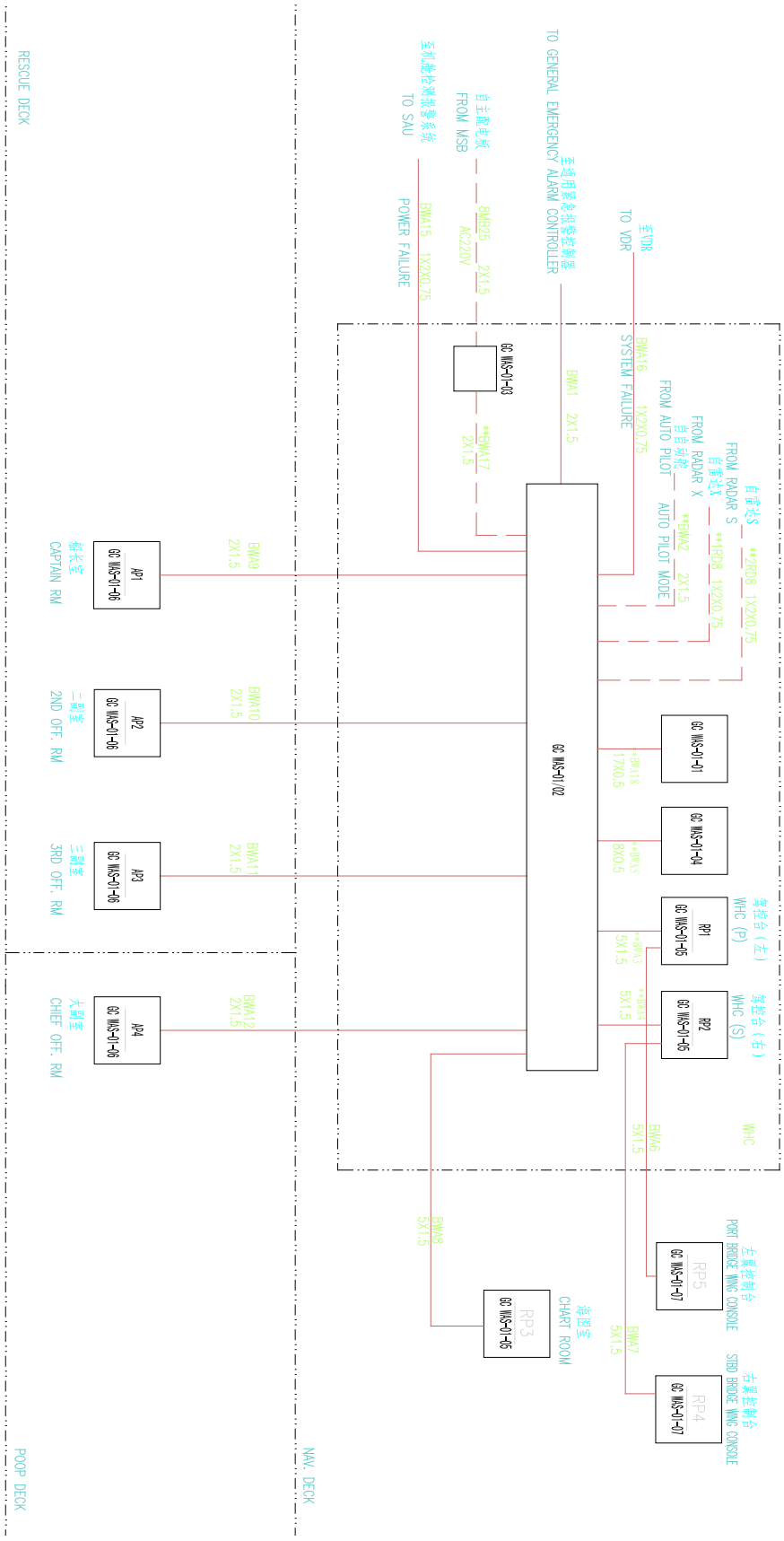
格式为标准 0813 协议，物理接口为 RS-485，波特率为 9 6 0 0， 8 位数据位， 1 位停止位，无校验位。

Format is the standard 0813 agreement, physical interface is RS-485, baud rate is 9600, 8 data bit, 1 stop bit, no check bit.

$AYXDR,A,XX,,c *hh<CR><LF>

1.$AYXDR,A 为头文件 stands for head document
2.XX 报警名称 XX is alarm name
3.c 为报警状态指示 “1”为报警状态，”0”为非报警状态
c stands for alarm condition indication “1” for alarm condition, “0”for non-alarm condition.
4.hh 为异或校验和 ASC 码
hh stands for XOR check and ASC code.
实际接受到的数据: actual receiving data:
$AYXDR,A,BRIDGE WATCH ACTIVE,,0*0D
$AYXDR,A,BRIDGE WATCH STANDBY,,1*07
$AYXDR,A,BRIDGE WATCH MALFUNCTION,,0*03
$AYXDR,A,MANUAL_MODE,,1*00
$AYXDR,A,AUTO_MODE,,0*04
$AYXDR,A,VISUAL ALARM,,1*01
$AYXDR,A,AUDIO ALARM 1,,1*02
$AYXDR,A,AUDIO ALARM 2,,1*01
$AYXDR,A,AUDIO ALARM 3,,1*00
$AYXDR,A,EMERGENCY CALL,,1*0D

六、 系统图 System drawing.



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