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骊博监控
SIBO Monitoring & Control



上海骊博自动化有限公司
Shanghai SIBO Automation Co., Ltd.



Shanghai SIBO Automation Co. Ltd. (SIBO Automation) is the successor of Shanghai SIBO Monitor Technique Engineering Co. Ltd. (SIBO). Shanghai SIBO Monitor Technique Engineering Co. Ltd. was established in 1992. Since then, the firm mainly involves itself in designing and manufacturing automatic systems for ships and has provided products and services for over 1,300 vessels either domestic or international, which has built a good image and enjoyed an excellent reputation among our clients.

Since 1995, SIBO's monitoring and alarm equipments have been recommended by China Classification Society as design type approved.

Since 1997, SIBO has been officially recognized by Shanghai municipal government as Shanghai High and New Technology Enterprise.

In 1999, SIBO accomplished the authentication work for ISO9001 and gained the corresponding certificate.

In 2004, Shanghai Norris SIBO Automation Co. Ltd. was established as a joint venture by SIBO and German Norris Group.

Since 2006, SIBO's monitoring and alarm systems and its main engine remote control systems have been recommended as "Quality Branded Products" by Shanghai government.

In 2009, SIBO invested to establish Jiangsu SIBO Electrics Co. Ltd. and Shanghai SIBO Automation Co. Ltd. to meet the needs of its business's growth and expansion.

Jiangsu SIBO Electronics Co. Ltd. (SIBO Electrics), taking over 16.5 acre, is housed in Shanghai Yangpu Dafeng Industrial Plant, at Dafeng Jiangsu. Its main business is to design and manufacture main switchboards for marine use, aiming to gradually become the central base of production and assembly for SIBO products.

Shanghai SIBO Automation Co. Ltd. (SIBO Automation) takes over the existent business from Shanghai SIBO Monitor Technique Engineering Co. Ltd. (SIBO), together with its human resources, managerial systems and core technologies. Intended to function as a center of new and high technology research and development, system integration and a global service provider, SIBO Automation mainly involves itself in designing and manufacturing automatic equipments for shipping, aiming to gradually turn into a R&D and Sales center of SIBO products.

The main products of Shanghai SIBO Automation Co. Ltd. comprise micro-computer monitoring and alarm systems, main engine remote control systems, a main engine safety system, engine local monitoring cabinets, a main engine RPM meter, a shipping telegraph system, a shipping telegraph recording system, engine control consoles, navigation/signal lights controllers, foghorn controllers, an integrated engineer calling system, dredger control systems and etc., which have been classified by various main classification societies such as CCS, ABS, BV, LR, KR.

Our firm has set up a high-standard domestic team for customer service which is now expanded to Singapore and yet to be globalized to meet the needs of our clients both international and home-based.

With its advanced technology, quality products and excellent customer services, SIBO Automation makes every endeavor to serve its clients at a reasonable cost.





CSBJ Control Consoles

SIBO designs and manufactures integrated control consoles such as wheel house navigation consoles, engine room control consoles, wing control consoles, chart consoles, dredger control consoles and etc.. Those consoles are highly reliable and good looking, which can be tailored to our clients specific needs.





SB-NEA Navigation Equipment Alarm System

SB-NEA Navigation Equipment Alarm System is small and handy to install and use, whose high performance and reliability fulfils all regulations and requirements of main classification societies and satisfies the functional needs of a one-manned wheel house.

Functions:

- It receives passive contact digital alarm signals from various navigation equipments and gives out acoustic and visual alarms. (18 alarms points in total)
- There are acknowledgement buttons on the alarm control panel to turn off the sounds and the lights of the alarms.
- There is a digital output interface to transfer alarms to an outer system and a digital input interface to receive acknowledgement confirmations from an outer system.



SB-WA Watch Alarm System

Small and compact, SB-WA Watch Alarm System is handy to use with high reliability, which satisfies requirements from various main classification societies. From a functional point of view, the system meets the needs of the one-manned wheel house as a duty alarm facility.

Functions:

- Timed monitor and alarm
- Shortly before the preset time, the system gives out pre-alarm reminders to notify acknowledgement if the member on duty has not already pressed the acknowledgement button. At the set time, the alarm is extended to common areas or selected members on duty.
- Interface to navigation alarm equipments
- The system receives alarm signals from navigation facilities (passive contact signals) and extends to the wheel house, common areas and selected areas of duty members with acoustic and visual alarms.
- Engineers Calling Function
To call duty members by pressing the buttons on the panel.
- With continuous power supplies. When the main AC220V fails, the system automatically switches to the backup DC24V.



SB-WD Whistle Controller

Small and handy to install and use, SB-WD Whistle Controller can be widely used in all types of ships, as its high performance and reliability fulfils regulations and requirements of various main classification societies.

Functions:

- SB-WD Whistle Controller is a one-piece operating display panel (for double foghorns or a single foghorn) with an input/output (I/O) module.
- The operating display panel is embedded in consoles. There is a power indicating light, foghorn and fog-light indicating lights, foghorn and fog-light working mode turning knobs, a heating control button, a lamp test button, a manual/automatic mode switch button and an automatic whistling mode button. The working mode can be set either to manual or to automatic. Upon needs, the user can choose to activate 1# foghorn or 2# foghorn or both at one time.
- There are 5 modes of automatic whistling: 1 long and 2 shorts / 2 minutes, 2 longs / 2 minutes, 1 long / 2 minutes, 1 short, 1 long and 1 short / minute, and 1 long / minute.
- There is a dimmer knob on the operating display panel, which is used to tune those indicating lights.
- SB-WD I/O module is comprised of an interface module and a control module. All I/O signals are input from the terminal board of the interface module. Among them, input signals can be voltages (AC220V or DC24V), contact signals from exterior manually-controlled buttons; while output signals can be: 1# foghorn control contact signals, 2# foghorn control contact signals, heating control contact signals and fog-light control contact signals.

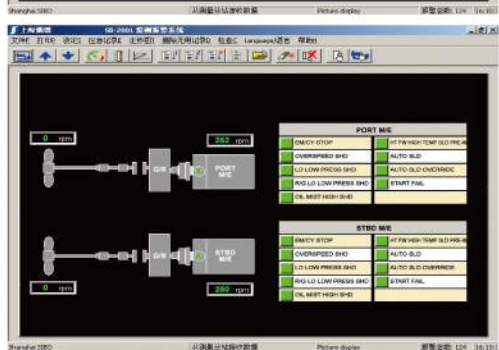
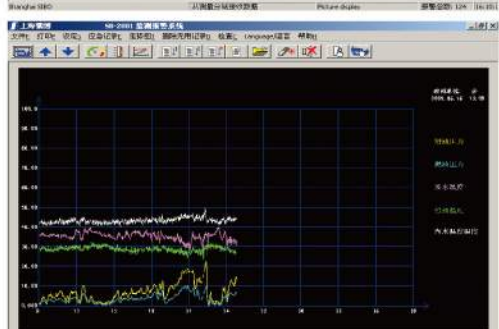
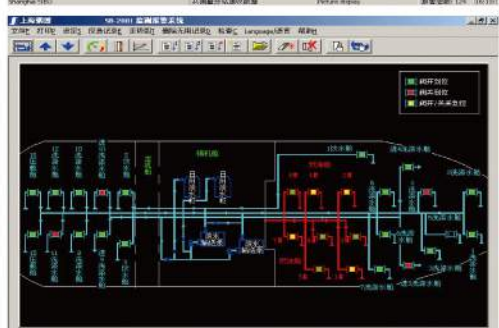
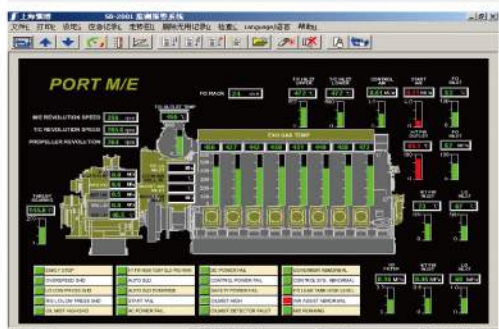
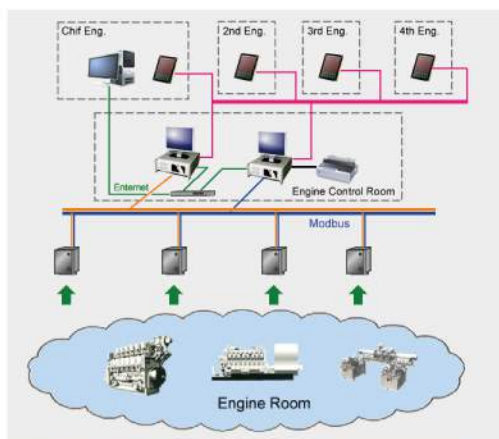
SB-3000 Monitoring and Alarm Unit

SB-3000 Monitoring and Alarm Unit is designed in compliance with related requirements of marine engine room automation, which is capable of working under extremely undesirable conditions. Being small and compact, the system fulfils all basic functions of a large monitoring and alarm system. This system can also be used independently as a diesel engine safety protection system. For small or medium sized ships and diesel engine manufacturer, this system is the best choice.

Its design and adaptability to environmental conditions meet the requirements of various main classification societies. It can be used in various ships, power stations, chemical and other industrial sectors, to monitor working processes and to provide users with swift and useful information.

Functions:

- Input signal types of measuring points:
 - binary signal;
 - 4~20mA current signal;
 - 1~5V or 2~10V voltage signal;
 - thermal resistance signal;
 - thermocouple signal;
 - frequency signal, etc.
- Acoustic and visual alarms;
- Display of measuring points' parameters;
- Alarm lock function;
- Extended alarms;
- Sensor self-checking when in fault;
- Parameters can be preset or modified;
- For analog alarm points, the way of alarm and alarm set value can be modified on-site;
- For binary signals, the way of alarms can be modified on-site;
- For measuring points, the property of alarm can be modified on-site;
- Time of alarm delays can be modified on-site if needed;
- Shutdown and shutdown pre-alarm;
- Slowdown and slowdown pre-alarm;
- Override when shutdown or slowdown;
- To output the alarm signals by relays, the number of output points ≤ 40 point (16 points for the basic, other 24 points are optional);
- To output the signals to drive secondary instrument (4~20mA), the number of output points ≤ 32 point (optional);
- Alarm LED boards (optional);
- Output to VDR by communication (optional);
- LCD extended display units (optional);
- To output the status of alarm points by RS422 communication;
- To output a contact signal of system failure;
- Switch display Chinese/English interface.



SB-2001 Monitoring & Alarm System

SB-2001 Monitoring & Alarm System is mainly used in the engine room to measure, calculate, display (in graphics), detect and track thermotechnical parameters, such as power sets, ballast water, the liquid level and etc. of the power plant.

The main computer of our system to control the process is an industry mainstream computer, whose software, programmed in VC++, runs under the environment of WIN2000/XP. Our system is highly effective, efficient and reliable in detecting and alarming, which fully satisfies the requirements of an unmanned engine room. The substation makes use of the specialized micro-system with its software written in the assembly language.

The main station communicates with all substations through a field bus.

Our system is flexible in adaptation and extension. It can be effortlessly connected to the LAN network of a vessel management system. Users, regardless of their professional knowledge or specific instruments, find our system easy to operate, thanks to the rich design of its display interface and the ease of its maneuver by the all-in-one track ball.

Display Interface:

- Color Simulations
- User-Defined Color Bar Graphs
- User-Defined Simulated Pointer Instrument
- User-Defined Color Trend Graphs
- List of Regular Parameters
- User-Defined Lists
- List of Alarms
- Recorded History of Alarms
- Quick Window of Alarms
(Pops up on alarms with current alarming contents)
- Chinese/English Changeover Display



Printing Record:

- Preset User-Defined Printing List
- Selected Printing List
- Real-Time Alarm Printing
- Today's Alarm Printing
- Selected Archive Alarm Printing

On-site Setting and Modification:

- Printing contents and style can be set and modified on-site;
- The alarming parameters can be modified on-site;
- The temporary alarm settings on exit;
- Color bar graphs, simulated pointer instruments, color trend graphs can be set and modified on-site;
- The quick alarm pop-up window can be turned on or off on-site.

Functional System Extension:

- To receive communication signals from other monitoring systems;
- To remote control the pumps and the valves for ballast water.

SB-NL/SB-SL

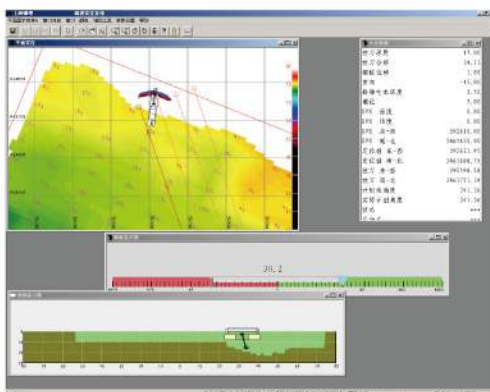
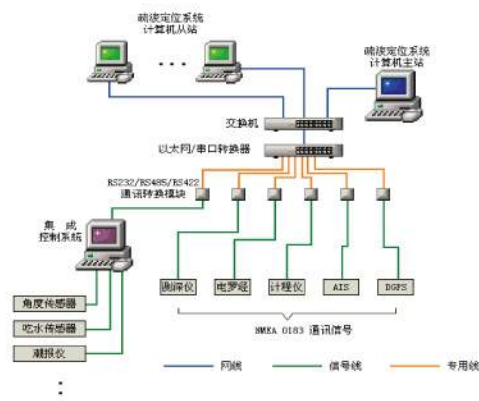
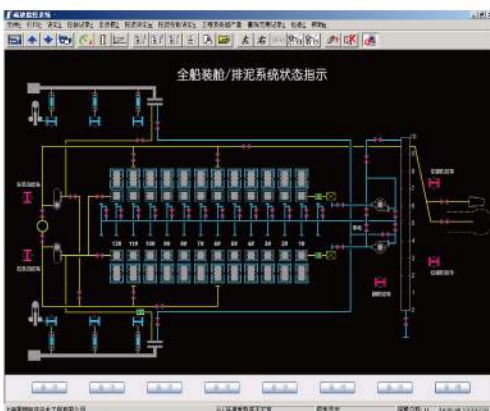
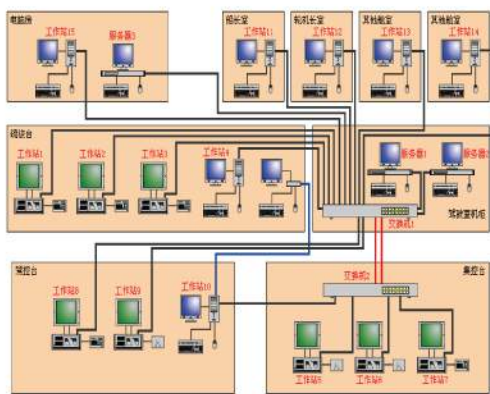
Navigation Lights/Signal Lights Controller

SB-NL Navigation Lights Controller and SB-SL Signal Lights Controller are small and compact, whose high performance and reliability makes it convenient to install and operate. Their technical specifications confirm to various main classification societies and can be widely used in all types of ships.

Functions:

- One controller can control up to 22 navigation lights and/or signal lights (both categorized as 'exterior lights' for short in the following text) through switches on the panel and displays the lights' status by the indication lamps beside the switches.
- Lamp test function.
- Dimmer function.
- Each exterior light has its own independent power supply with a separate fuse to protect its circuit.
- The power supply of any exterior lights can be set to DC24V or AC220V flexibly if needed.
- Cable faults check function.
- A fault of any exterior light activates an acoustic and visual alarm.
- An exterior light can also be controlled by a connected external switch (optional).
- The dimmer function can be applied individually to any exterior light (optional).
- The flash of any exterior light can be reflected on the panel by flashing the corresponding indication lamp, which is realized by means of exchange wiring (optional).
- The controllers support RS-485 standard communication ports of marine navigation and communication systems.
- Their bi-directional interface enables alarm signals to be sent to and back from an outside system.





SB-WCX-III

Integrated Monitoring And Control System for Dredgers

SB-WCX-III Integrated Monitoring and Control System for Dredgers consists of hardwares such as computers, PLCs, actuators, Ethernet, field bus networks, switches, sensors, transformation devices as well as various control consoles and/or cabinets.

The system is composed of several independent monitoring or operative sub-systems, such as an integrated dredging control system, a dredging orientation system, an engine monitoring and alarm system, a video monitoring system, a computer LAN network and so on.

The system combines all sub-systems to work organically by communicating and cooperating with each other, which further enhances the integrity of the whole system. Meanwhile, from the view of hardware and functions, every sub-system is relatively independent from each other, which realizes the wisdom of 'divide-and-conquer' with grouped maneuvering control. The system is suitable to monitor and control a cutter suction dredger or a drag suction dredger.

The functions of the integrated dredging control system:

- To measure and display dredging parameters such as water velocities, densities and pump pressures.
- To control and indicate the status of the valves, such as sluice valves, butterfly valves.
- To control and indicate the positions of the drag suction tube. (for a drag suction dredger)
- To indicate and calculate draft stowage and soil quantities. (for a drag suction dredger)
- To display the positions and the status of the cutter, steel pegs and platforms. (for a cutter suction dredger)
- To control the cutter, in particular its bridge, anchor and shell bolt.
- To control other machines or engines with displays and alarms.

There are various ways of control in our integrated dredging control system: independent, linked, semi-automatic and fully-automatic. Users can control and operate their work not only from the dredging console or the on-site control cabinet, but also through the computer, whichever way best suits their habits and needs.

Functions of the dredging orientation system:

- To orientate the dredger;
- To orientate the drag head and to display the positions of the drag suction tube (for a drag suction dredger);
- To orientate the cutter and to display section planes of the chamfer;
- With real-time display of the navigation route when dredging;
- With real-time display of soil depth;
- To display and record data of dredging routes, water levels, draft depth and etc;
- To generate electronic charts;
- To generate projected routes;
- With various visual windows;
- To be revised in the captain cabin or the chief engineer room through LAN.



SB-98K/SB-98K-D-I

Remote Control System for Diesel Engines

SB-98K-D-I is an automatic remote control system for the low-speed two-stroke engine or the medium-speed engine with fixed reversible propellers. Through this system, a crewmember can start, reverse, stop the main engine and set its speed by simply operating the engine telegraph lever on the bridge or in the engine control room.

SB-98K Remote Control System for Diesel Engines is designed for the main propulsion equipments of a medium speed, non-reversible engine with clutch gearboxes. A crewmember can control the disengagement, engagement of the gearbox and set the speed of the main engine directly by the remote control maneuvering lever on the bridge or from the engine control room.

The remote control system for the main engine is module structured, which can be customized as suitable remote control systems to meet different regulations and requirements of various main classification societies or tailored to the specific needs from our clients for different control objectives.

Functions:

- Logic controls for Stop, Reverse and Start
- Automatic speed regulating
- Programmed gradual speed increase and decrease
- Automatic avoidance of critical speeds
- Maximum speed limitation
- Accompanied by a safety system to realize automatic slowdown or shutdown when the main engine is in fault
- With a simulation panel to monitor faults of the equipments



SB-TE-M Telegraph System

SB-TE-M Telegraph System satisfies requirements of various main classification societies, which makes it widely applicable to all types of ships either as a communication telegraph or as an emergency telegraph. With a compact structure easy to maintain, it can be used in multiple composite modes.

1. The transmitter/receiver of the telegraph indicates every position.
 - 1) The telegraph system shows the current position and the command position directed from the bridge. If the command position from the bridge is different from the acknowledgement position directed from the engine control room, the system gives out an acoustic and visual alarm.
 - 2) The system shows the current position of the repeater.
 - 3) The system shows the status of its power supply and triggers an acoustic and visual alarm for power failure.
 - 4) The system gives out wrong way alarms.
 - 5) The system gives out alarms when itself is in fault.
2. The system gives out alarms when the main engine is running in a different direction from the order.
3. The system can output common alarm signals to the ship's general alarm system as a passive digital signal.
4. The system can output passive contact acoustic signals to the combination alarm device in the engine room.
5. The system outputs signals of 4-20mA to the telegraph order printer.
6. The system outputs RS-485 signals to a VDR through communication ports.
7. The system is equipped with power modules, which switch to the backup power supply (DC24V) upon any main power failure (AC220V).
8. The transmitter and the receiver communicate by RS485 protocol.



SB-TR Telegraph Automatic Recorder

SB-TR Telegraph Automatic Recorder is a computer-controlled intelligent and automatic recorder for telegraph orders and main engine RPMs, which is designed to fulfill different requirements of engine telegraphs of all types so as to replace manual logbooks. Telegraph orders and the recorded status of the main engine's RPM are important legal materials for marine arbitration in an average or a liability accident.

1. Excellent electromagnetic compatibility, with rigorous computer-designed measures for anti-disturbance.
2. With the electric clock showing date and time using the LED digital display, the system continues to work upon a power break and automatically resets itself (without manual revision) after the power comes back.
3. To print Date & time.
 - a) The printer automatically prints year, month, day at zero hour (00:00) every day.
 - b) When switched on, the printer prints out the recorded date and time of last time switch-off and the current date and time.
 - c) When the date is modified, the printer prints out the date and time before and after the adjustment.
4. Once the wheel house gives out a new order through the engine telegraph, the recorder will print out the contents of new engine order in compliance with the international telegraph standard symbols and the actual RPM plus the main engine's direction in 10 seconds, 30 seconds and 3 minutes (time adjustable).
5. Dimmer through combined keying from the computer.
6. With 256 digital channels and 8 analog channels, the printer can print 16 telegraph orders, RPM and directions of two main engines at one time. These settings can be tailored to clients' needs upon request.
7. To report faults of the printer or the telegraph, if any.
8. Suitable to engine telegraphs of all types.



SB-ZJ-I/II Monitoring and Alarm System

SB-ZJ-I/II Monitoring and Alarm System is designed in compliance with related requirements of marine engine room automation, which is capable of working under extremely undesirable conditions. Being small and compact, the system fulfils all basic functional requirements of an engine room monitoring and alarm system from various main classification societies, which makes it suitable to medium or small ships with manned engine control station/room.

Functions:

- Input signal types of measuring points:
binary signal; 4~20mA current signal;
resistor signal; thermocouple signal;
- Acoustic and visual alarms;
- The input digital alarm signals can be either a break-trigger or a contact-trigger;
- To display parameters of measuring points;
- The time of delay can be set upon needs for level alarm points;
- Faults scan function;
- Extended alarms can be grouped;
- Alarms can be locked;
- A self-check function;
- A fault indicating function;
- Switch alarm signals can be extended to the engine room signalization lighting cabinets;
- The type of alarms and alarming points' parameter values or ranges can be set on-site.



SB-98A Safety System

Specially designed to protect the diesel engines, SB-98A Safety System is a monitoring facility for diesel engines, which satisfies regulations and requirements of various main classification societies. Through solenoid valves and the diesel engines remote control system, SB-98A outputs signals to shut down or slow down the diesel engines when in fault, giving out warning signals as well.

Functions:

- Outputs control signals to shut down; Outputs control signals to slow down;
- Under special circumstances, the user may quickly cancel the alarms and the control outputs of a certain alarm point;
- Pre-alarms when shutdown or slowdown in fault;
- Automatically diagnoses and indicates faults of circuit boards;
- 6 display output signals, each can be extended;
- Drives RPM gauges either 0~7.5V, 0~10V or 0~±7.5V, 0~±10V;
- Locks some alarm points when the main engine is stopped;
- Indicates and alarms when the computer is in fault;
- When shutdown is activated, its output control signal cannot be cancelled, unless the system is manually reset.



SB-ZJ-III Local Monitoring Cabinet

Capable of working under extremely undesirable conditions, SB-ZJ-III Local Monitoring Cabinet is designed and manufactured in accordance with related requirements of marine engine room automation. It can be used with all types of diesel engines as engine local display and alarm equipments and the diesel engine protection facilities.

Functions:

- Input signal types of measuring points:
 - binary signal; 4~20mA current signal; resistor signal; thermocouple
- signal; frequency signal, etc.;
- Acoustic and visual alarms;
- Display of measuring points' parameters;
- Alarm lock function;
- Extended alarms (optional);
- Sensor self-checking when in fault;
- To give out alarms when CPU is in fault;
- Parameters can be preset or modified;

For analog alarm points, the type of alarms and their values or ranges can

- be modified on-site;
- For digital alarms, the way of alarms can be modified on-site;
- Time of alarm delays can be modified on-site if needed;
- To output signals to drive engine RPM gauges (4~20mA single direction);
- To output the status of alarm points by RS485 communication protocol;
- To output contact signals of the diesel engine's running status.



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