SHANBEI
HID TECHNOLOGY

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# Product catalog

(English)

Version: V3.0

**Ningbo Shanbei Technology Co.,Ltd**

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Ningbo Shanbei Technology Co.,Ltd

# Ningbo Shanbei Technology Co.,Ltd

**Focus on the development of Marine automation electronic equipment and systems**

Ningbo Shanbei Technology Co., Ltd. was established in April 2020. It is a national high-tech enterprise founded by high-level talents in Ningbo. The company has passed the quality management system certification of China Classification Society and is a member unit of the China Shipbuilding and Marine Engineering Industry Data Alliance and the Zhejiang Electric Ship Industry Alliance. Since its establishment, the company has been focusing on the development of electronic equipment and systems for ship automation.

The company is mainly oriented to the intelligent and green needs of all kinds of ocean-going fishing vessels, bulk carriers and container ships, and provides one-stop solutions for ship supporting products. A number of products developed by the company have reached the domestic leading level, and have been widely used in all kinds of large and medium-sized ships at home and abroad, and have obtained high satisfaction from users.

The company has brought together a group of engineers with rich experience in the Marine electronics industry, and more than 50% of the developers, including senior talents engaged in communication, hardware, software and digital signal processing for a long time, with rich work experience, strong quality awareness, confidentiality awareness and rigorous and pragmatic work style. The company covers an area of about 1000 square meters, which is used for office, production and storage.

Customer achievement is our consistent insistence, through close cooperation with customers, to develop reliable products for actual needs, while improving our technical level. In the future, we will seize the historical opportunity of building a maritime power, adhere to the development strategy of innovation-driven, independent research and development, quality-oriented and value-oriented, and strive to become a leader in the field of smart ships.

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We have applied for 28 intellectual property rights, obtained 4 authorized invention patents and 12 software Copyrights, and received over 20 certificates of various honors.


# Content

# Control lever

# WLF-90 Propulsion control lever


## Product introduction

The WLF-90 main control lever is suitable for single and dual main engine control in the propulsion systems of medium and small-sized ships.

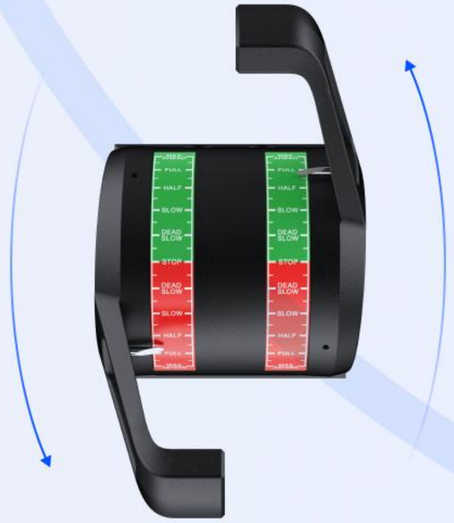
**The product is made of all-aluminum alloy, with a black powder-coated handle. The scale is backilluminated for indication. The control damping and gear feedback feel are adjustable. It meets the electromagnetic compatibility and vibration requirements of the IEC60945 standard and features a compact design, sturdy structure and high precision.**

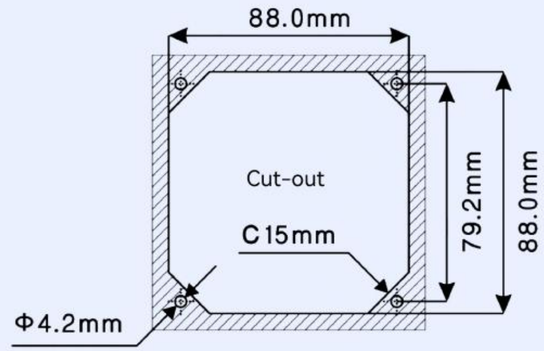
## Basic index

| Supply Power | Working temperature | Feedback accuracy | Protection level |
|---|---|---|---|
| **24VDC** | **5~55℃** | **≤0.5%** | **IP44** |



## Detail






## Appearance & function options

(Note: The first option is the default)

| | | | |
|---|---|---|---|
| **Handle type** | • Dual(90D) | • Left Single(90L) | • Right Single(90R) |
| **Scale** | • Percentage | • Chinese | • English |
| **Operating range** | • ±60° | • 0~60° | |
| **Tap feedback** | • Three-level feedback | • Neutral only | • Each position feedback |
| **Output signal** | • 5K potentiometer | • 4~20mA | • Switch |
| **Backlight adjustment** | • 0~24V | • Dimmer | |
| **Operation position** | • FWD | • AFT | |

## Dimensions

# WLF-100 Propulsion control lever


## Product introduction

The WLF-100 is main promoted control lever is suitable for single and dual main engine control of high-end ship propulsion systems such as new energy ships and yachts.

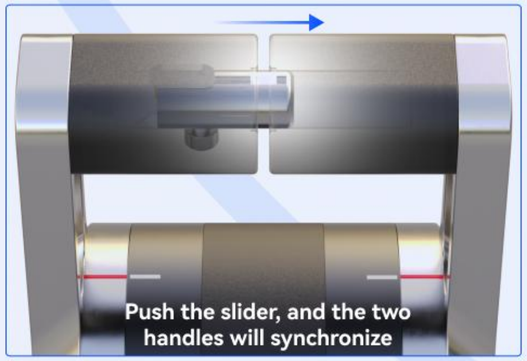
**The product features a chrome-plated appearance, with scale backlight indication. The control damping and gear feedback feel are adjustable. The dual handles can be synchronized through mechanical connecting rods. It meets the requirements of electromagnetic compatibility and vibration in the IEC60945 standard, and supports customized functions such as electric shaft synchronization. It has the advantages of a fashionable appearance and a good hand feel.**

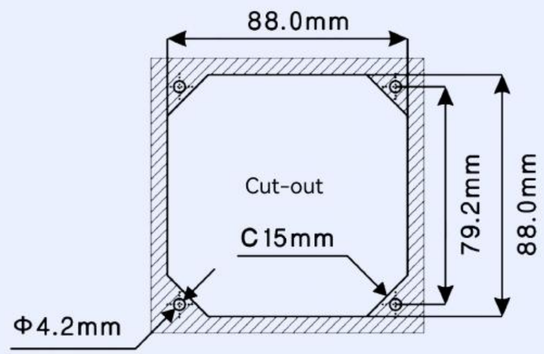
## Basic index

| Supply Power | Working temperature | Feedback accuracy | Protection level |
|---|---|---|---|
| **24VDC** | **5~55℃** | **≤0.5%** | **IP56** |



## Detail




## Appearance & function options

(Note: The first option is the default)

| | | | |
|---|---|---|---|
| **Handle style** | • Stainless steel chrome-plated | • Black powder coating | |
| **Handle type** | • Dual(100D) | • Left Single(100L) | • Right Single(100R) |
| **Scale** | • Percentage | • Chinese | • English |
| **Operating range** | • ±60° | • 0~60° | |
| **Tap feedback** | • Neutral only | • Three-level feedback | • Each position feedback |
| **Output signal** | • 5K potentiometer | • 4~20mA | • Switch |
| **Backlight adjustment** | • 0~24V | • Dimmer | |
| **Electric shaft synchronization** | • No | • Yes | |
| **Operation position** | • FWD | • AFT | |

## Dimensions

# WLF-180 Propulsion control lever



## Product introduction

The WLF-180 main control handle is suitable for single and dual main engine control in the propulsion systems of large and medium-sized ships.

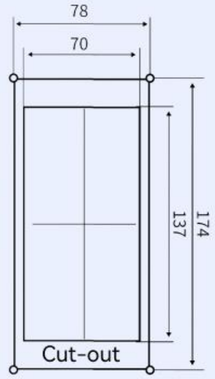
**The aluminum alloy shell allows each scale to light up separately according to the grip position. The control damping and rotation range can be fine-tuned, meeting the requirements of electromagnetic compatibility and vibration in the IEC60945 standard. It supports customized functions such as electric shaft synchronization and scale for each position, featuring a fashionable and elegant appearance.**

## Basic index

| Supply voltage | Working temperature | Feedback accuracy | Protection level |
|---|---|---|---|
| **24VDC** | **5~55℃** | **≤0.5%** | **IP56** |



## Detail

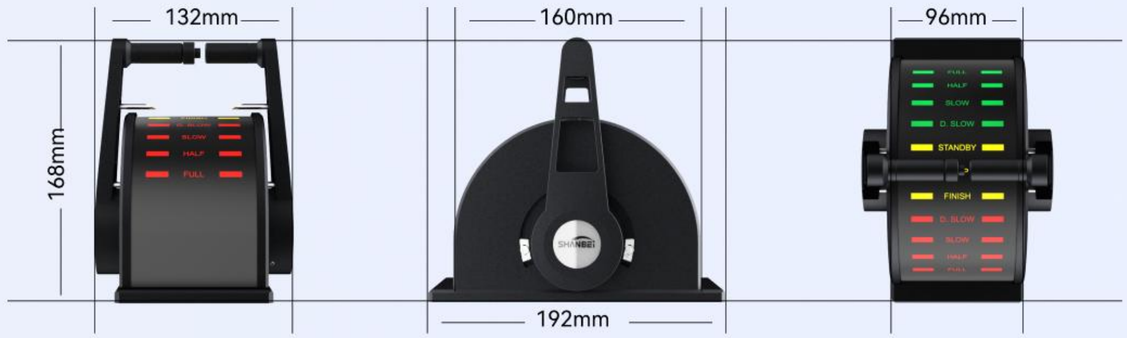


## Appearance & function options

(Note: The first option is the default)

| | |
|---|---|
| **Handle style** | • Stainless steel chrome-plated • Black powder coating |
| **Handle type** | • Dual（180D） • Left Single(180L) • Right Single(180R) |
| **Scale** | • Chinese • Percentage • English |
| **Operating range** | • ±60° • 0~60° |
| **Tap feedback** | • Each position feedback • Neutral only |
| **Output signal** | • 5K potentiometer • 4~20mA • Switch |
| **Backlight adjustment** | • 0~24V • Dimmer |
| **Electric shaft synchronization** | • No • Yes |
| **Operation position** | • FWD • AFT |

## Dimensions



# WLF-90C Thruster control lever

## Product introduction

The WLF-90C side push control handle is suitable for the operation of the bow and stern side thrusters.

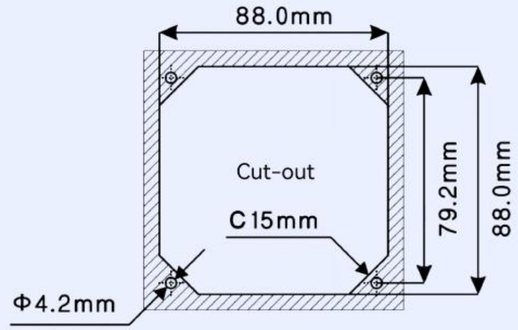
**Made of all-aluminum alloy, the handle is black and powder-coated. The scale is backilluminated for indication. The control damping and gear feedback feel are adjustable. It meets the electromagnetic compatibility and vibration requirements of IEC60945 standard. It has the advantages of compact design, sturdy structure and high precision.**

## Basic index

| Supply voltage | Working temperature | Feedback accuracy | Protection level |
|---|---|---|---|
| **24VDC** | **5~55℃** | **≤0.5%** | **IP44** |



## Detail




## Appearance & function options

(Note: The first option is the default)

| | | | |
|---|---|---|---|
| **Handle style** | • Standard style | • Short style | |
| **Handle type** | • Dual（C2） | • Up-Single(C1) | • Down-Single(C3) |
| **Scale** | • Percentage | | |
| **Operating range** | • ±60° | • 0~60° | |
| **Tap feedback** | • Neutral only | • Feedback for each position | |
| **Output signal** | • 5K potentiometer | • 4~20mA | |
| **Operation position** | • FWD | • AFT | |

## Dimensions

# WLF-100C Thruster control lever

## Product introduction

The WLF-100C side push control handle is suitable for the operation of the bow and stern side thrusters.

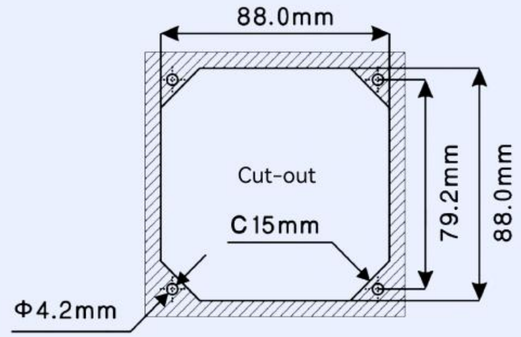
**The product features a chrome-plated appearance, with scale backlight indication. The control damping and gear feedback feel are adjustable. It meets the requirements of electromagnetic compatibility and vibration in the IEC60945 standard, and supports customized functions such as electric shaft synchronization. It has the advantages of fashionable appearance and good hand feel.**

## Basic index

| Supply voltage | Working temperature | Feedback accuracy | Protection level |
|---|---|---|---|
| **24VDC** | **5~55℃** | **≤0.5%** | **IP56** |



## Detail




## Appearance & function options

(Note: The first option is the default)

| | | |
|---|---|---|
| **Handle style** | • Stainless steel chrome-plated | • Black powder coating |
| **Handle type** | • Dual(C2) | • Up-Single(C1) • Down-Single(C3) |
| **Scale** | • Percentage | |
| **Operating range** | • ±60° | • 0~60° |
| **Tap feedback** | • Neutral only | • Feedback for each position |
| **Output signal** | • 5K potentiometer | • 4~20mA |
| **Backlight adjustment** | • 0~24V | • Dimmer |
| **Electric shaft synchronization** | • No | • Yes |
| **Operation position** | • FWD | • AFT |

## Dimensions

# Control lever

# WLF-70 Azimuth control lever

## Product introduction

The WLF-70 full-rotation control handle is used in various types of ships or test equipment where speed and orientation need to be adjusted simultaneously. It is generally placed on the electrical centralized control console to control the azimuth Angle, tilt Angle, thrust, speed, etc. of the thruster in a linked manner.

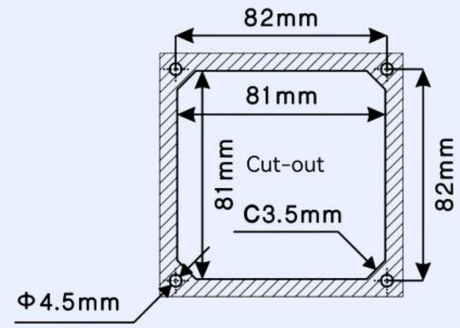
**Made of all-aluminum alloy, the handle is black and powder-coated. The scale is backilluminated. The control damping, rotation damping and gear feedback feel are adjustable. It meets the electromagnetic compatibility and vibration requirements of IEC60945 standard. It has the advantages of compact design, solid structure and high precision.**

## Basic index

| Supply voltage | Working temperature | Feedback accuracy | Protection level |
|---|---|---|---|
| **24VDC** | **5 ~ 55 ℃** | **≤0.5%** | **IP56** |



## Detail


## Appearance & function options

(Note: The first option is the default)

| | | |
|---|---|---|
| **Handle type** | • Left Single(70L) | • Right Single(70R) |
| **Operating range** | • ±60° | • 0~60° |
| **Rotation range** | • ±180° | |
| **Output signal** | • Propulsion/rotation: 4~20mA | |
| **Backlight adjustment** | • 0~24V | |
| **Operation position** | • FWD | • AFT |

## Dimensions

# WLF-72 Azimuth control lever

## Product introduction

The WLF-72 full-rotation control handle is used in various ships or test equipment where both speed and orientation need to be adjusted simultaneously. It is generally placed on an electrical centralized control console to control the azimuth Angle, tilt Angle, thrust, and speed of the thruster in a linked manner.

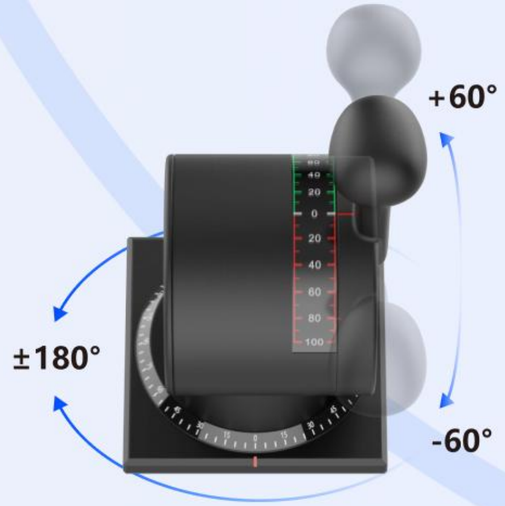
**Made of all-aluminum alloy, the handle is ergonomically designed for convenient long-term holding. The scale is backilluminated for indication, and the control damping, rotary damping, and gear feedback feel are adjustable. It meets the electromagnetic compatibility and vibration requirements of IEC60945 standards. The product supports multiple functional customizable features a compact design, sturdy structure, and high precision.**

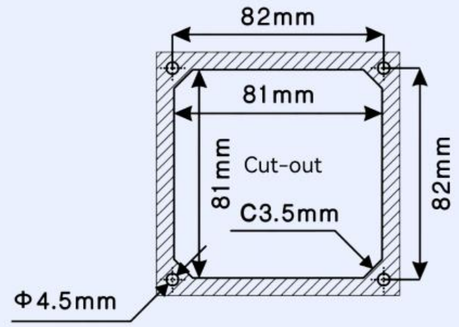
## Basic index

| Supply voltage | Working temperature | Feedback accuracy | Protection level |
|---|---|---|---|
| **24VDC** | **5 ~ 55 ℃** | **≤0.5%** | **IP56** |



## Detail




## Appearance & function options

(Note: The first option is the default)

| | | |
|---|---|---|
| **Style of handles** | • Ball head handle | • Finger grip handle |
| **Handle type** | • Left Single(72L) | • Right Single(72R) |
| **Operating range** | • ±60° | • 0~60° |
| **Rotation range** | • ±180° | |
| **Output signal** | • Propulsion/ rotation: 4~20mA | • Propulsion 5K/ rotation sincos |
| **Backlight adjustment** | • 0~24V | |
| **Operation position** | • FWD | • AFT |

## Dimensions

# WLF-80 Tugboat Azimuth control lever

## Product introduction

The WLF-80 full-rotation control handle is used in situations such as tugboats or test equipment where both speed and position need to be adjusted simultaneously. It is generally placed on an electrical centralized control console to control the azimuth Angle, tilt Angle, thrust, and speed of the thruster in a linked manner.

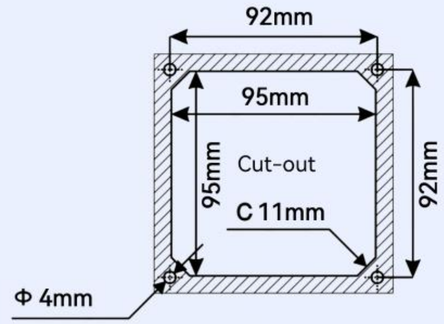
**Made of all-aluminum alloy, the handle is black and powder-coated. The scale is backilluminated. The control damping, rotation damping and gear feedback feel are adjustable. It meets the electromagnetic compatibility and vibration requirements of IEC60945 standard. It has the advantages of compact design, solid structure and high precision.**

## Basic index

| Supply voltage | Working temperature | Feedback accuracy | Protection level |
|---|---|---|---|
| **24VDC** | **5 ~ 55 ℃** | **≤0.5%** | **IP56** |



## Detail


## Appearance & function options

(Note: The first option is the default)

| | |
|---|---|
| **Operating range** | • 0~100° |
| **Rotation range** | • ±180° |
| **Output signal** | • Propulsion/rotation: 4~20mA |
| **Backlight adjustment** | • 0~24V |
| **Operation position** | • FWD • AFT |

## Dimensions

# WLF-150 Rudder control hand wheel


## Product introduction

The WLF-150 steering wheel is used for the follow-up steering control of various types of ships. Inside the steering wheel, there are luminous Pointers and backlit scale plates. The helmsman turns the steering wheel to send the steering order externally.

**Aluminum alloy panel, large scale display area, integrated backlight adjustment, and support for synchronous control of electric axes.**

## Basic index

| Supply voltage | Working temperature | Feedback accuracy | Protection level |
|---|---|---|---|
| **24VDC** | **5~55℃** | **≤0.5%** | **IP56** |

## Handwheel type

**Stainless**

**Plastic**

**Aluminium alloy**



## Detail

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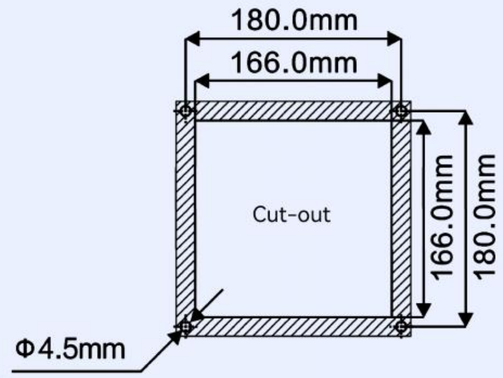
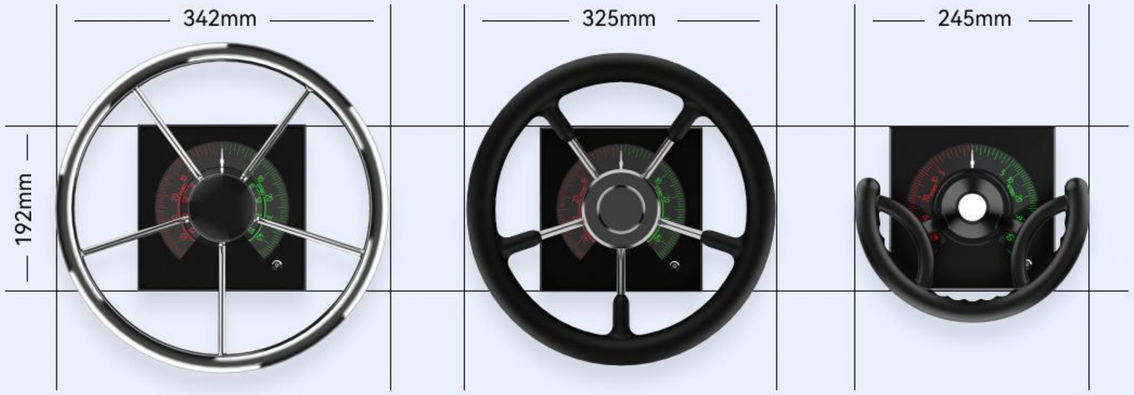



## Appearance & function options

(Note: The first option is the default)

| | | | |
|---|---|---|---|
| **Handwheel style** | • Aluminum alloy | • Plastic | • Stainless steel |
| **Rotation range** | • ±140° | • ±90° | • Others |
| **Output channel** | • Single channel | • Single-channel double-layer | • Dual-channel |
| **Output signal** | • 5K potentiometer | • 4~20mA | |
| **Electric shaft synchronization** | • No | • Yes | |

## Dimensions



# WLF-75M Mode Selector



## Product introduction

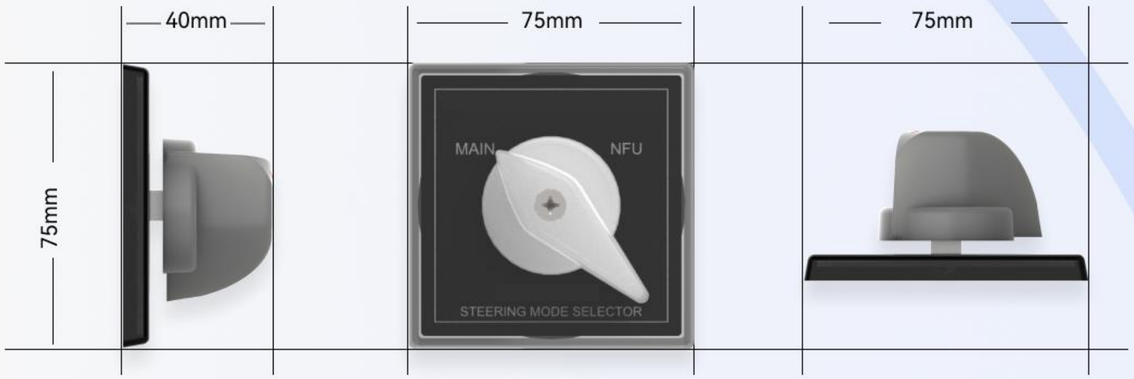
WLF-75M mode selection switch, used for circuit selection and switching of various control systems. The product adopts an engineering plastic shell that is beautiful and elegant, with long-life contact points, and can be customized for appearance, engraving, and contact points.

**Stable and reliable, with professional quality and high cost-effectiveness, it can be customized according to needs.**

## Basic index

| Mechanical lifespan | Working temperature | Number of positions | Working voltage |
|---|---|---|---|
| **> 300K cycle** | **5~55℃** | **various** | **≤500V** |

## Dimensions






# WLF-75A Non-follow-up handle



## Product introduction

WLF-75A non follow-up handle, also known as emergency rudder handle, is generally installed in the rudder compartment, driver's console, bridge wings, and other positions, used for servo operation in case of failure in automatic and follow-up steering modes. The product adopts an engineering plastic shell that is beautiful and elegant, with a spherical handle that is easy to grip, a long-life contact point, and a self resetting spring. When released, it can return to the center position and disconnect the output signal.

**Stable and reliable, with professional quality and high cost-effectiveness, it can be customized according to needs.**

## Basic index

| Mechanical lifespan | Working temperature | Operating range | Self reset |
|---|---|---|---|
| **> 100K cycle** | **5~55℃** | **-45~+45°** | **Yes** |

## Dimensions

# Compass

# WSS-H76 Heading sensor



## Product introduction

The WSS-H76 heading sensor is mainly used for real-time detection of ship heading values. Through the built-in 9-axis electronic compass and high-precision GPS module, stable heading values can be obtained and converted into standard NMEA0183 data protocol for output to devices such as autopilots, radars, AIS that require heading data. At the same time, it can also output longitude, latitude, and tilt data, which is stable, reliable, convenient to use, and compact in size. The product can also be used in conjunction with our company's turntable compass repeater and signal distributor for displaying, distributing, and outputting data. It can be widely applied to various types of ships.

**Low cost, customizable communication protocol, and fast positioning.**

## Basic index

| Heading accuracy | Tracking speed | Positioning time | Protection level |
|---|---|---|---|
| **1°** | **30°/s** | **< 3min** | **IP66** |



# WCU-0308 Heading distributor


## Product introduction

The WCU-0308 heading distributor is used to amplify and output the input NMEA0183 format digital heading signal to other devices, such as radar, AIS, repeater, autopilot, chart reader, etc. It can support electric compass, satellite compass, electronic compass magnetic compass sensor and other directional sources. The current input heading value can be displayed on the top of the heading distributor, with signal input and power indicator lights. It has four working modes, and the product is stable, reliable, and easy to install.

**Digital display, convenient to use, multi-source integration, and powerful functionality.**

## Basic index

| Supply voltage | Working temperature | Output port | Working modes |
|---|---|---|---|
| **18~26VDC** | **5~55℃** | **8 channels** | **4 types** |

## Dimensions




# WSI-H192A Compass repeater

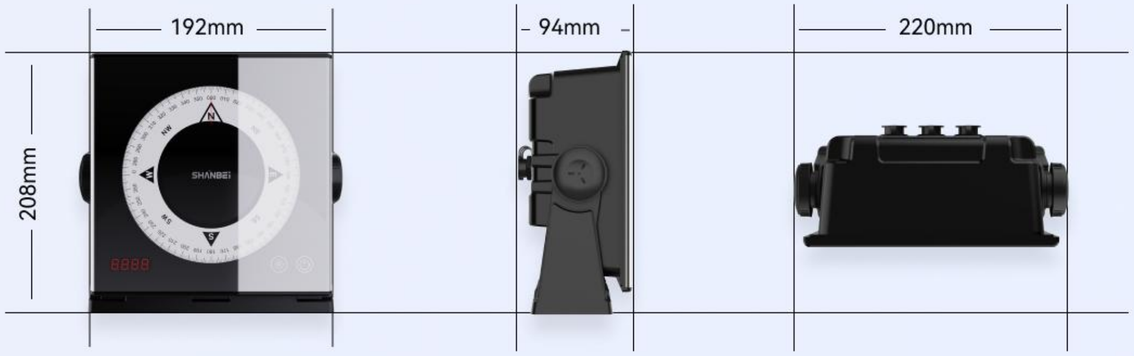
## Product introduction

The WSI-H192A compass repeater is a device that accurately and in real-time feeds back ship heading information to the control room. This product adopts standardized design in terms of size and can be freely selected for desktop or embedded installation according to actual situations.

## Basic index

| Supply voltage | Working temperature | Display accuracy | Protection level |
|---|---|---|---|
| **18~26VDC** | **5~55℃** | **0.1°** | **IP56** |

## Dimensions



# WSC-70 Satellite compass


## Product introduction

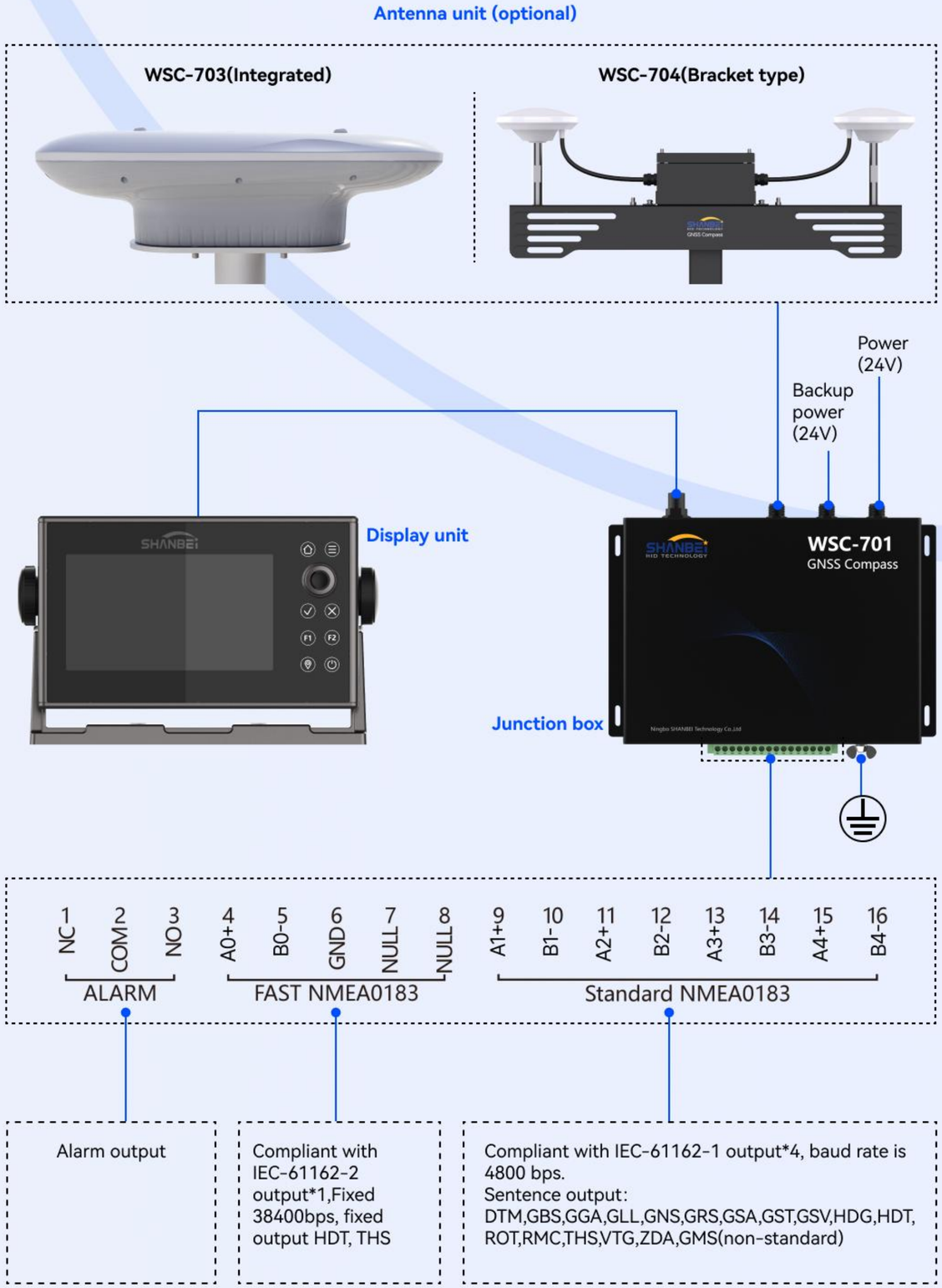
The WSC-70 satellite compass adopts advanced satellite navigation technology, which can provide high-precision positioning and heading data for various navigation equipment, such as radar, electronic nautical charts, AIS, autopilots, and other types of ship equipment and systems.

**Streamlined appearance, precise and stable data, with a heading accuracy of 0.2 ° RMS; Inertial navigation assisted positioning, easy to install, maintenance free, and calibration free.**

## Basic index

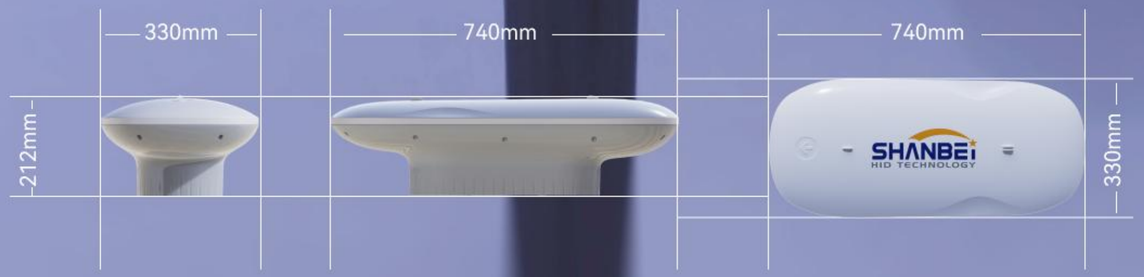
| Heading accuracy | Dynamic attitude accuracy | Positioning accuracy | Protection level |
|---|---|---|---|
| **0.2°** | **0.1°** | **1.5m** | **IP66** |

## System composition



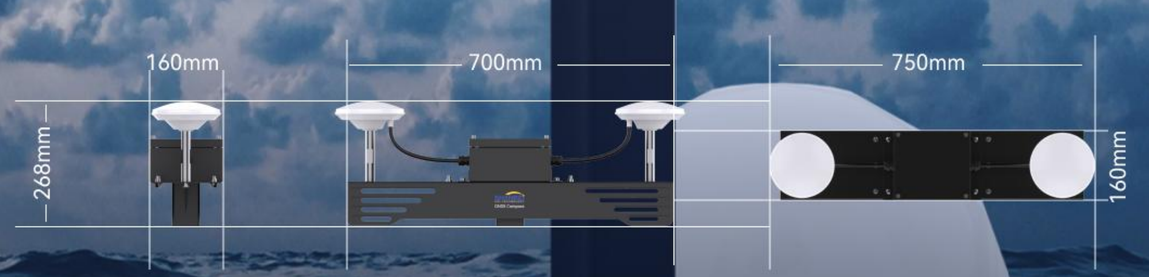
## Antenna unit (Integrated) WSC-703

## Dimensions



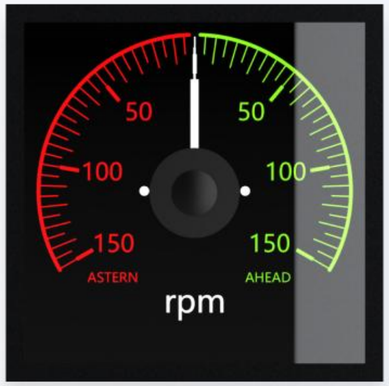



## Antenna unit (Bracket type) WSC-704

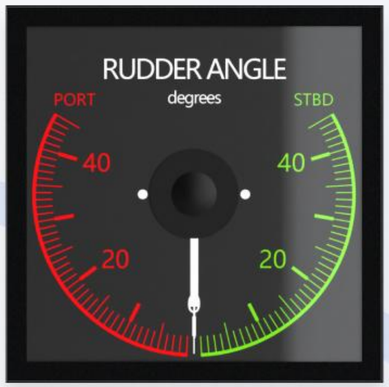


# Instrument & Sensor

# WEI & WSI Instruments









## Product introduction

The WEI&WSI series instruments are the latest digital instruments developed by the company, installed on the bridge control panel, used to display information such as speed, rudder angle, power, and orientation.

**High indication accuracy, stable data, reliable quality, and support for customized appearance functions.**

## Basic index

| Supply voltage | Working temperature | Indicating angle | Protection level |
|---|---|---|---|
| **18~26VDC** | **-5~55℃** | **240° or 360°** | **IP56** |



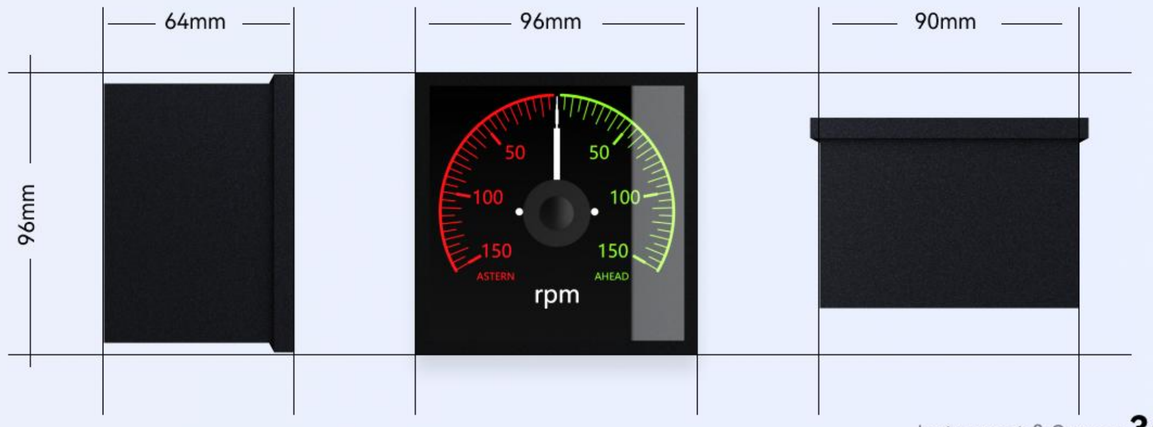
## Detail



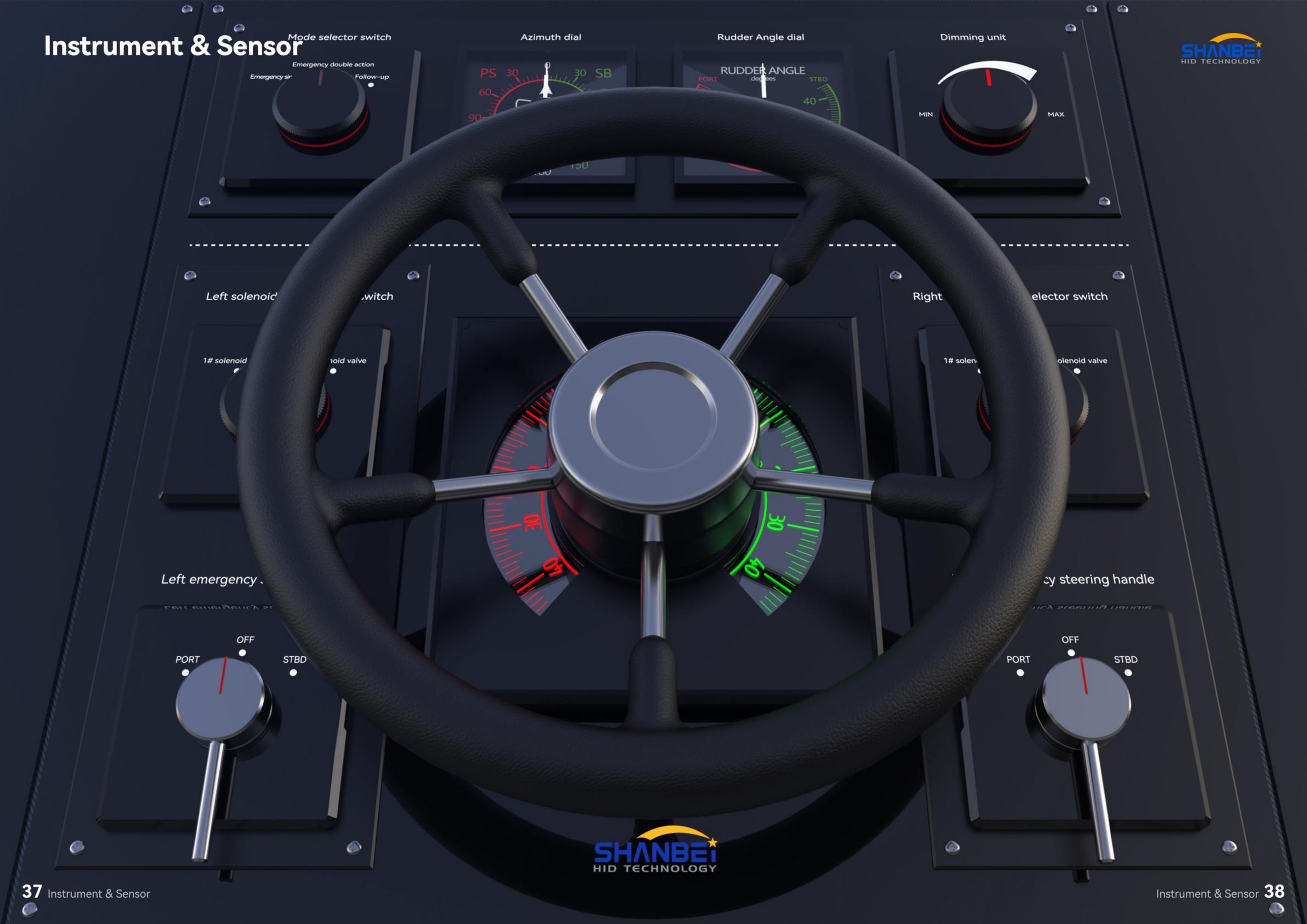

## Appearance & function options

| | |
|---|---|
| **Indicating accuracy** | • 1.5 level |
| **Protection** | • waterproof • anti salt spray • backplate protective shell |
| **Specifications** | • 72*72 • 96*96 • 144*144 |
| **Interface** | • 4~20mA • 0~10V |
| **Customization** | • Special specifications can be customized: dial size, input signal |

## Dimensions



# Instrument & Sensor



# WMF-073 Multi function display unit

## Product introduction

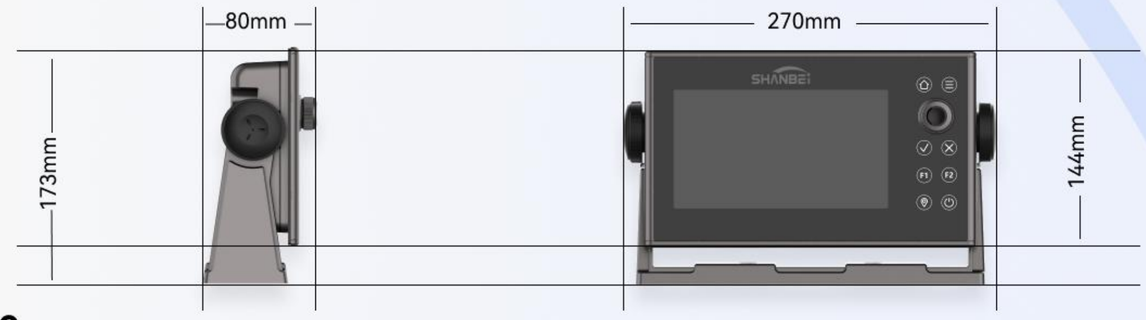
The WMF-073 multifunctional display unit is the latest product launched by Shanbei Technology Company to improve ship human-machine interaction performance. It is designed to achieve maximum speed and performance and is a "multi in one" maritime specific display device. The ultra fast six core processor improves rendering speed and page conversion speed, greatly reducing startup time and providing you with a smooth operating experience. Including NMEA2000, NMEA0183, Ethernet, USB and other interfaces to meet your various system application needs.

**High brightness display screen, dedicated for maritime use, with high protection level, open source platform, customized development.**

## Basic index

| Supply voltage | Working temperature | Screen size | Interface |
|---|---|---|---|
| **18~26VDC** | **5~55℃** | **7-inch touch screen** | **4 types** |

## Dimensions






# WCI-370 Rudder panoramic indicator


## Product introduction

The WCI-370 rudder panoramic indicator is installed on the ceiling of the cockpit to indicate the direction and angle of the ship's rudder angle. The product adopts a digital CAN bus interface, which has the advantages of long communication distance and strong anti-interference ability. The product adopts a long lifespan, LED light analog scale, with one LED light per degree angle, indicating an accuracy of 1 °. It uses a three digit digital tube to display the rudder angle value, with a display accuracy of 0.1 degrees.

**No moving rotating parts, simple and reliable, digital transmission, stable communication.**

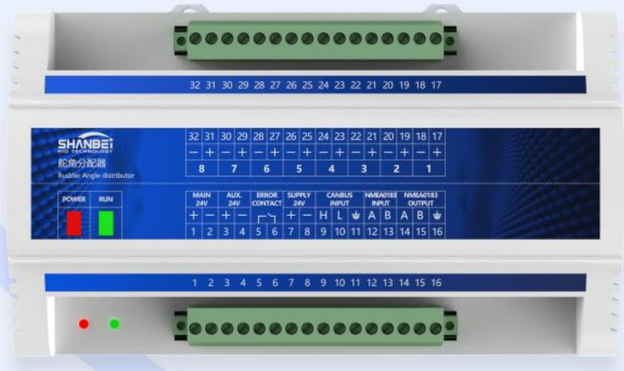
## Basic index

| Supply voltage | Working temperature | Indicating area | Protection level |
|---|---|---|---|
| **18~26VDC** | **5~55℃** | **3*70°** | **IP40** |

## Dimensions




# WDI-8AO Rudder angle distributor



## Product introduction

WDI-8AO rudder angle distributor is used to process rudder angle signals from rudder angle feedback devices or rudder angle transmitters, send them to various indicators, and simultaneously power the rudder angle feedback devices. It sends the actual rudder angle signals to VDR as NMEA0183 signals. The product adopts an engineering plastic shell, which is beautiful and elegant. It is installed on DIN35 guide rails, with dual power supply, 8 analog output channels, and a system fault alarm output.

**Rich interfaces, imported components, professional design, stable and reliable.**

## Basic index

| Feedback signal | Indicator signal | Number of channels | VDR output |
|---|---|---|---|
| **CAN or RS485** | **8-ch 4-20mA** (or ± 10V) | **8** | **Yes** |

## Dimensions

# WSS-R106 Single potentiometer type rudder angle feedback

## Product introduction

The WSS-R106 rudder angle feedback device, also known as a rudder angle sensor or transmitter, is installed in the rudder compartment and can convert the angle and direction of the rudder blades into electrical or digital signals to send to the receiver. It is an important component of the autopilot system or rudder angle indicator system, and the accuracy and stability of its angle acquisition have a significant impact on control.

## Basic index

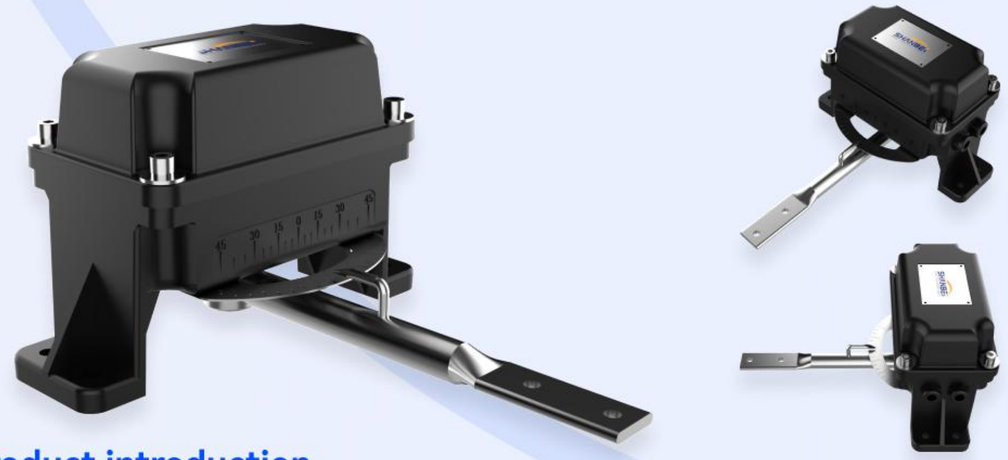
| Supply voltage | Steering range | Accuracy | Protection level |
|---|---|---|---|
| **18~26VDC** | **-45~+45°** | **0.5°** | **IP65** |

## Dimensions




# WSS-R270 Multi-potentiometer type rudder angle feedback

SHANBEI HID TECHNOLOGY



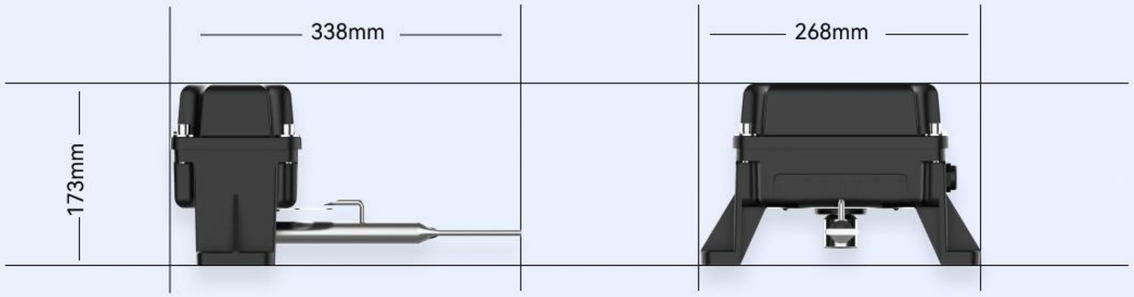
## Product introduction

The WSS-R270 rudder angle feedback device is installed in the rudder compartment and is used to convert the mechanical angle of the rudder into electrical or digital signals in real time, and transmit them to receiving modules such as rudder angle indicators, rudder angle distributors, etc. The product adopts standard potentiometer output or digital CAN bus output, which has the advantages of long communication distance and strong anti-interference ability. The product adopts a lever type transmission structure, ensuring the reliability of the servo transmission. The internal use of gear transmission and double support structure effectively eliminates external vibration of the servo, improves the working life of the sensor, and the multi potentiometer design improves the redundant reliability of the product.

## Basic index

| Supply voltage | Steering range | Maximum number of potentiometers | Protection level |
|---|---|---|---|
| **18~26VDC** | **-45~+45°** | **4** | **IP65** |

## Dimensions



# WSS-R68 Non-contact rudder angle feedback

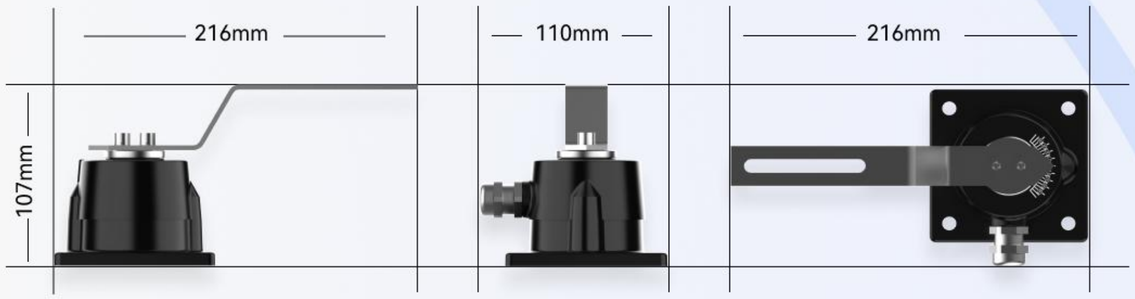
## Product introduction

The WSS-R68 rudder angle feedback device, also known as a rudder angle sensor or rudder angle transmitter, is installed in the rudder compartment and can convert the angle and direction of the rudder blades into electrical or digital signals to send to the receiver. It is an important component of the automatic rudder system or rudder angle indicator system, and the accuracy and stability of its angle acquisition have a significant impact on ship maneuvering. The product adopts non-contact magnetic induction technology, which has no mechanical wear and extends its service life. The sampling accuracy has reached 16 bits, ensuring optimal accuracy and performance.The shell is made of aluminum alloy, which is sturdy and durable.

## Basic index

| Supply voltage | Steering range | Accuracy | Protection level |
|---|---|---|---|
| **18~26VDC** | **-45~+45°** | **0.1°** | **IP65** |

## Dimensions






# WDM-96P Dimmer



## Product introduction

The WDM-96P series dimmer is used for individual dimming of backlit devices such as handles and instruments, and is generally installed in centralized control spaces, driver's consoles, and other locations. The product adopts knob dimming, potentiometer output, aluminum alloy panel processing, front spray molding, and back conductive oxidation with conductive sealing ring. The product has the advantages of being sturdy, reliable, and having good electromagnetic compatibility.

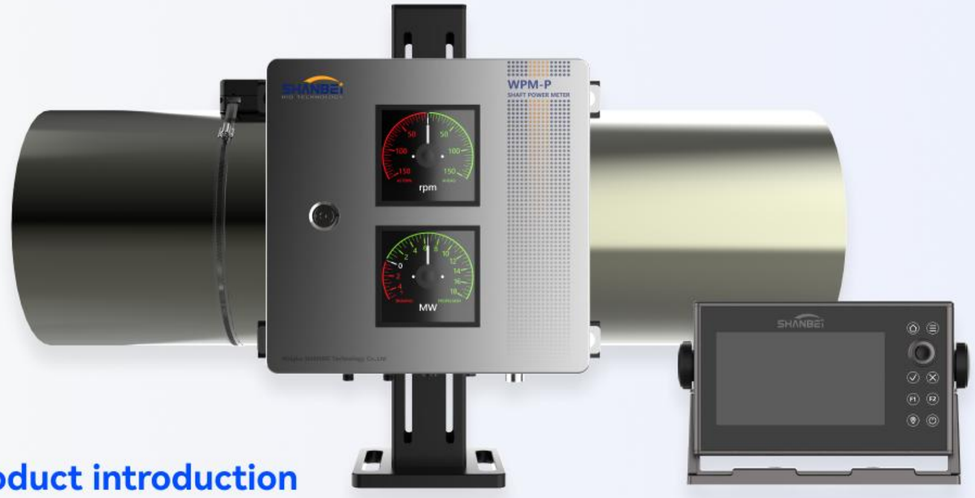
**One stop dimming solution, customized and developed according to needs.**

## Basic index

| Potentiometer resistance value | Working temperature | Rotation range | Protection level |
|---|---|---|---|
| **1~200K optional** | **5~55℃** | **0~300°** | **IP56** |

## Dimensions

# WPM-P Shaft power meter




## Product introduction

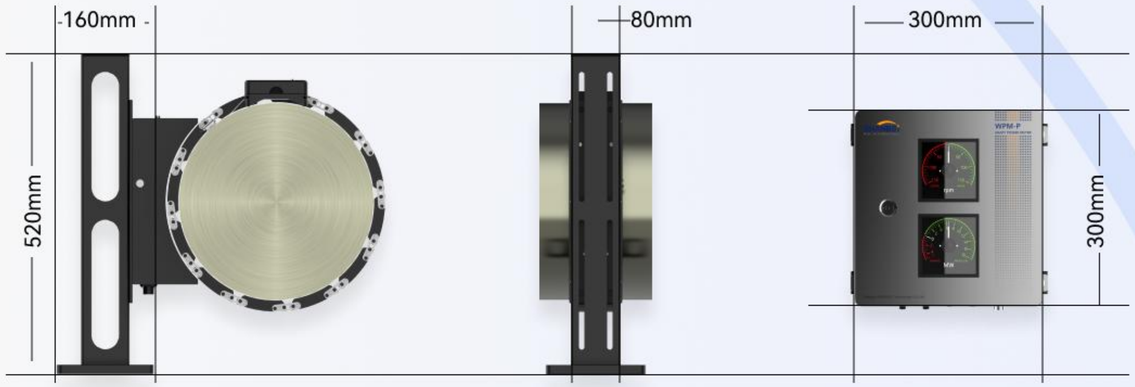
The WPM-P shaft power meter is an instrument used for long-term continuous measurement of speed, torque, power, and thrust (optional). It is designed according to maritime regulations and can be used for power monitoring of ship main engine shaft systems, thrusters, and generator shafts. It provides reliable and real-time data support for various power management systems and energy efficiency management systems.

**Non contact measurement, wireless induction power supply, strong adaptability, with a maximum data storage time of up to 5 years, applied to large-scale power and transmission devices such as marine diesel engines and gearboxes, mining machinery, and offshore wind turbines.**

## Basic index

| Supply voltage | Accuracy | Working temperature | Output signals |
|---|---|---|---|
| **AC220** | **0.1%** | **5~55℃** | **Analog and digital** |

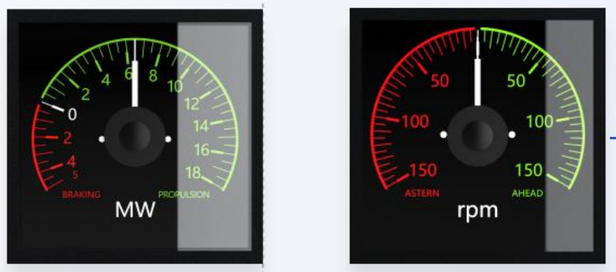
## Dimensions






## System composition

### Display instrument




Real time display of the main engine's speed and power.

### Control box


### Multi function display


Real time measurement of main engine shaft power, torque, thrust, and speed parameters, while achieving cumulative calculation of main engine shaft power and speed, with overload and stress protection functions, and can also generate corresponding test and navigation reports.

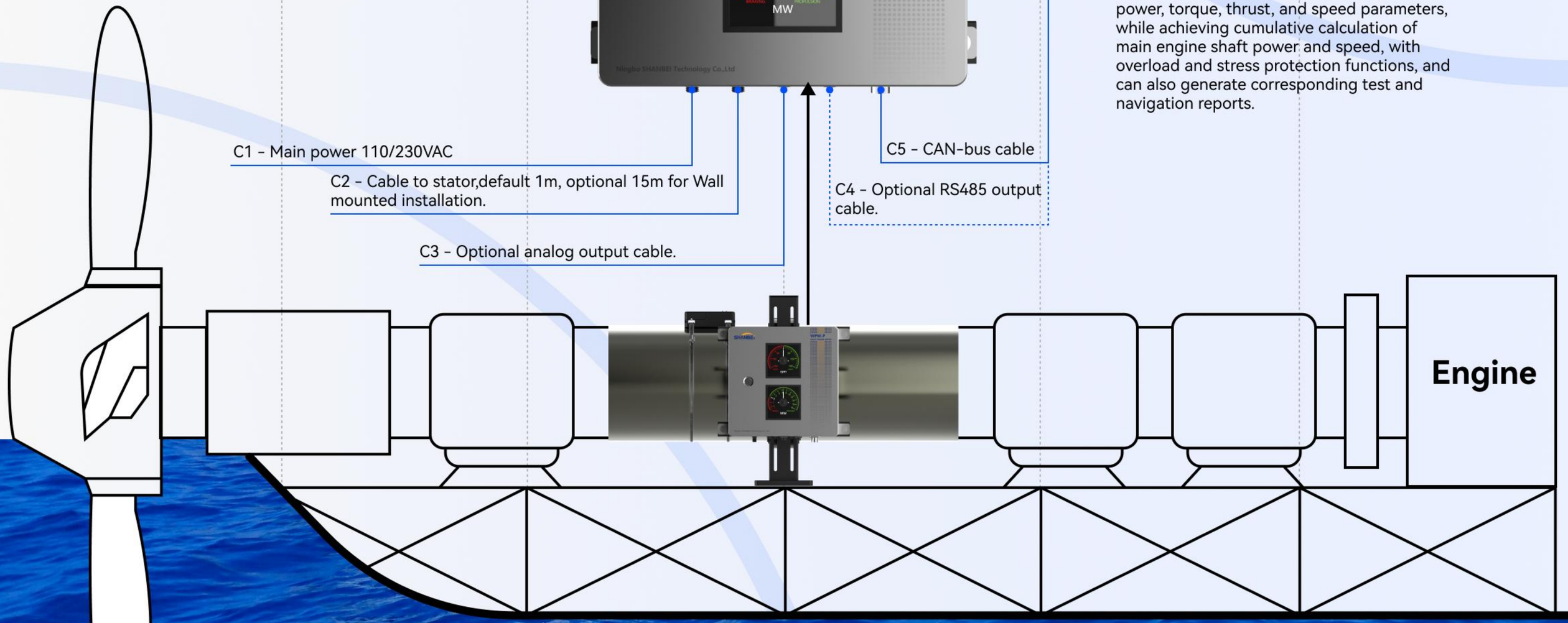
C1 - Main power 110/230VAC

C2 - Cable to stator,default 1m, optional 15m for Wall mounted installation.

C3 - Optional analog output cable.

C5 - CAN-bus cable

C4 - Optional RS485 output cable.

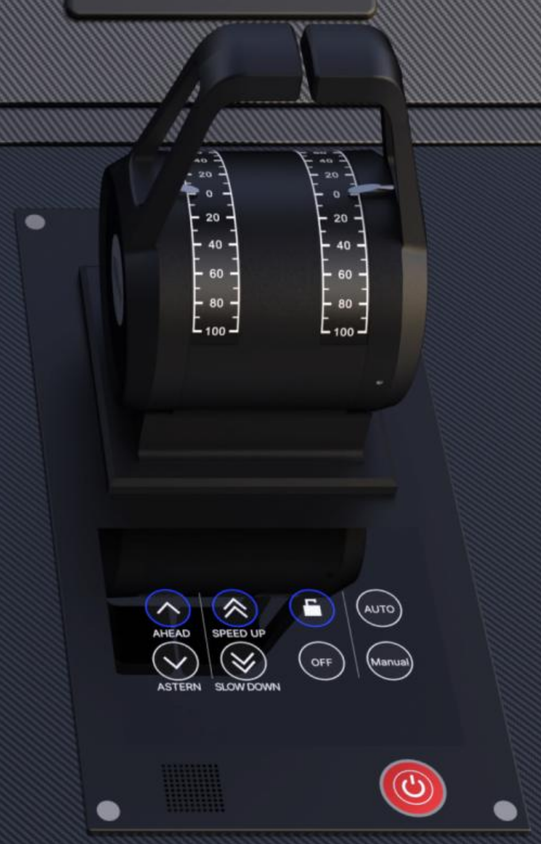


# Auto control









# WFU-500 Follow-up steering system


## Product introduction

The WFU-500 follow-up steering control system is used to transmit steering commands from the cab to the power equipment of the servo device. It consists of a follow-up steering wheel, a steering angle feedback device, a steering angle meter, a follow-up control unit, etc. When in use, the steering command is given by the follow-up steering wheel. The follow-up control unit compares the actual steering angle and outputs instructions to control the left and right solenoid valves, continuously adjusting the steering angle, and realizing the servo to follow the steering wheel command to rotate.

**Simple, reliable, high-precision, cost-effective, easy to operate, supporting dual rudder independent control.**

## Basic index

| Supply voltage | Steering range | Adapted hydraulic steering gear | Accuracy |
|---|---|---|---|
| **18~26VDC** | **-45~+45°** | **solenoid valve type** | **≤0.5°** |



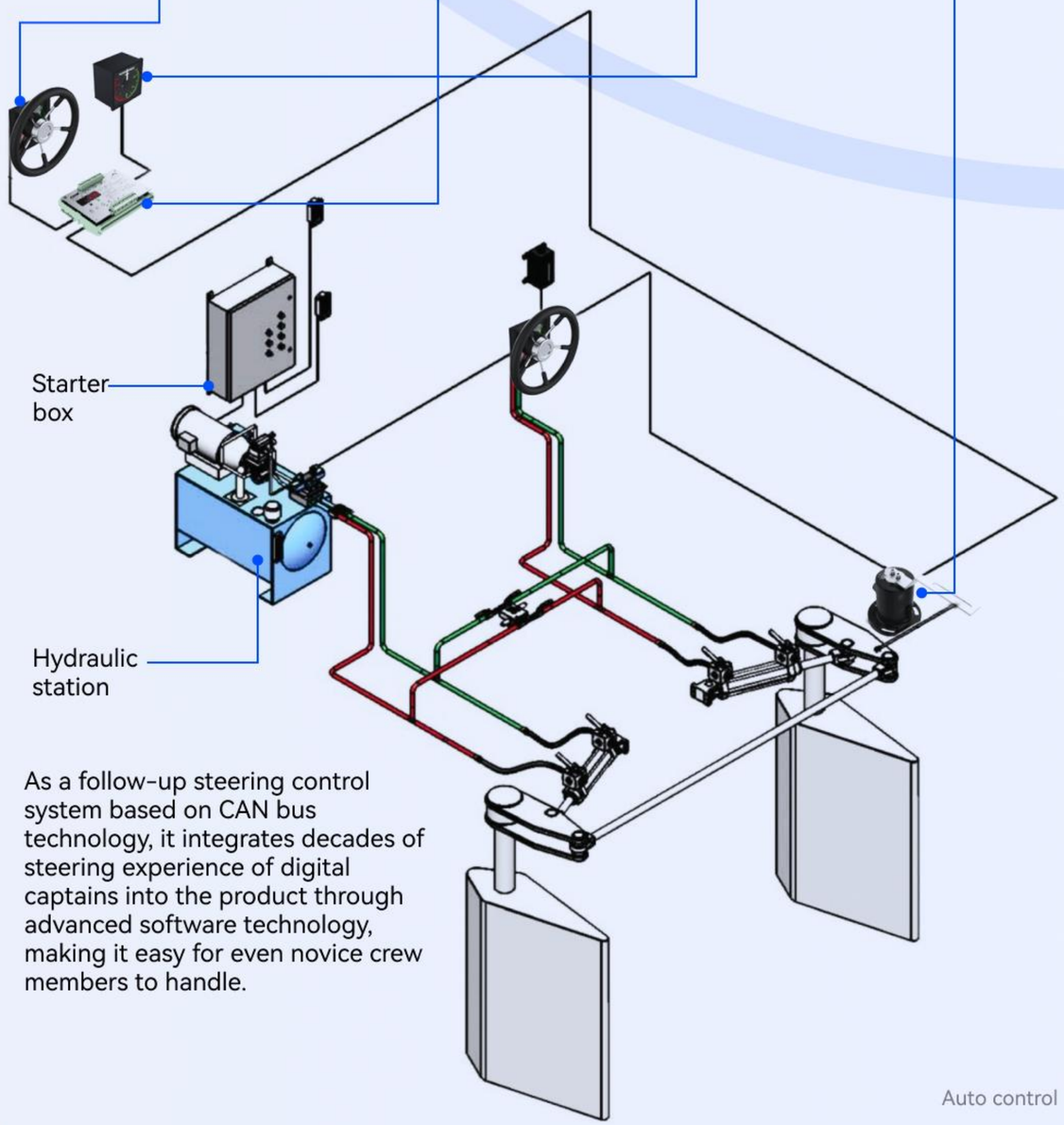
## System composition

FU hand wheel
WLF-150

FU steering unit
WCU-500


Rudder angle instrument
WEI-96R

Rudder angle feedback
WSS-R106




As a follow-up steering control system based on CAN bus technology, it integrates decades of steering experience of digital captains into the product through advanced software technology, making it easy for even novice crew members to handle.

# WET-200 Main engine electronic control system

## Product introduction

The WET-200 electric throttle control system is used for remote and precise adjustment of engine throttle opening, consisting of a control panel, main control unit, actuator, and related accessories. When in use, the throttle percentage opening is provided by the control handle, and the main control unit compares the command value with the actual value, continuously adjusting the length of the actuator extension, thereby achieving precise adjustment of the engine speed. The product has advantages such as high protection level, high adjustment accuracy, and simple use.

**Reliable protection, corrosion resistance, high cost-effectiveness, convenient operation and maintenance, applied in agricultural machinery, maritime vessels, engineering machinery, automation, etc.**

## Basic index

| Power supply voltage | Actuator stroke | Maximum speed | Internal protection |
|---|---|---|---|
| **18~26VDC** | **80mm** | **30mm/s** | **Triple protection** |



## System composition