

WMF-073

Multifunction display unit

User manual



User notice

► Disclaimer

Warning: Before using this product, please refer to the important safety information in the user manual and review all warnings, limitations and disclaimers.

This product is no substitute for proper training and careful seamanship. Proper installation and proper use of the equipment is the responsibility of the owner to avoid accidents, personal injury or property damage. The user of this product is solely responsible for compliance with maritime safety practices.

The owner is solely responsible for installing and using the equipment in a manner that will not cause accidents, personal injury or property damage. The user of this product is solely responsible for compliance with maritime safety navigation practices.

This document represents the product at the time of release. Ningbo SHANBEI Technology Co., Ltd. reserves the right to change product specifications at any time without prior notice. If you need any further assistance, please contact your nearest dealer.

► Governing language

This Statement, any instruction manuals, user guides and other Product-related information (documentation) may be or have been translated into another language (translation). If there is any conflict between any translated version of the document, the Chinese version of the document will be the official version of the document.

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► Cautions

- 1 Do not place the equipment at will without fixing it, so as to avoid serious damage when it is dropped due to turbulence or other factors during the voyage.
- 2 Do not use any power adapter that is not equipped with this product. Otherwise, the device may not work due to the different circuit design, or the performance may be affected or even damaged.
- 3 Do not disassemble the equipment. If the maintenance engineer is not authorized by the company to disassemble the equipment, the free warranty will be lost.
- 4 During use or cleaning, avoid any liquid or other objects falling into the equipment to avoid circuit damage or short circuit.
- 5 Do not place the device and its accessories in an environment prone to humidity or direct sunlight. Keep the device in a dry environment.
- 6 In case of hardware failure (such as damage to the machine shell or foreign matter falling into the machine, etc.), please stop using the machine immediately and contact the dealer in time.
- 7 The company shall not assume any legal or other liability for any maritime accident, monetary loss or loss of interests that occurs on vessels using this equipment.

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1 Introduction

1.1 Overview

The WMF-073 Multi-function display unit is the latest product launched by Scallop Technology Company to improve the man-machine interaction performance of ships. It is designed to achieve maximum speed and performance, and is an "all-in-one" type of maritime display equipment. The ultra-fast six-core processor improves rendering speed and page conversion speed, greatly reduces startup time, and improves your smooth operation experience. Super protective structure, super hydrophobic screen design, can be installed in any shipboard environment. The universal interface can be very convenient for you to realize the integration of the driver console, including automatic rudder, instrument display, electronic chart, sonar, radar, video surveillance, AIS display, etc., only need to install the corresponding APP.

- 1. Super wide viewing Angle, high light 7 inch screen display, maritime special;
- 2. Waterproof, salt spray proof, with backplane protection cover;
- 3. Touch screen, button, knob multiple control, to meet a variety of applications;
- 4. Six-core processor, excellent performance;
- 5. Long life LED backlight, visible under 1200 nits sunlight;
- 6. Open source platform, custom APP development.

1.2 Product appearance



Figure1.1

1.3 Product composition

Number	Name	Quantity
1	Multifunction display	1
2	Accessories such as power cables and supports	1
3	Certificate of conformity	1
4	Warranty card	1
5	Specification	1

Table 1.1

1 Introduction

1.4 Product size drawing

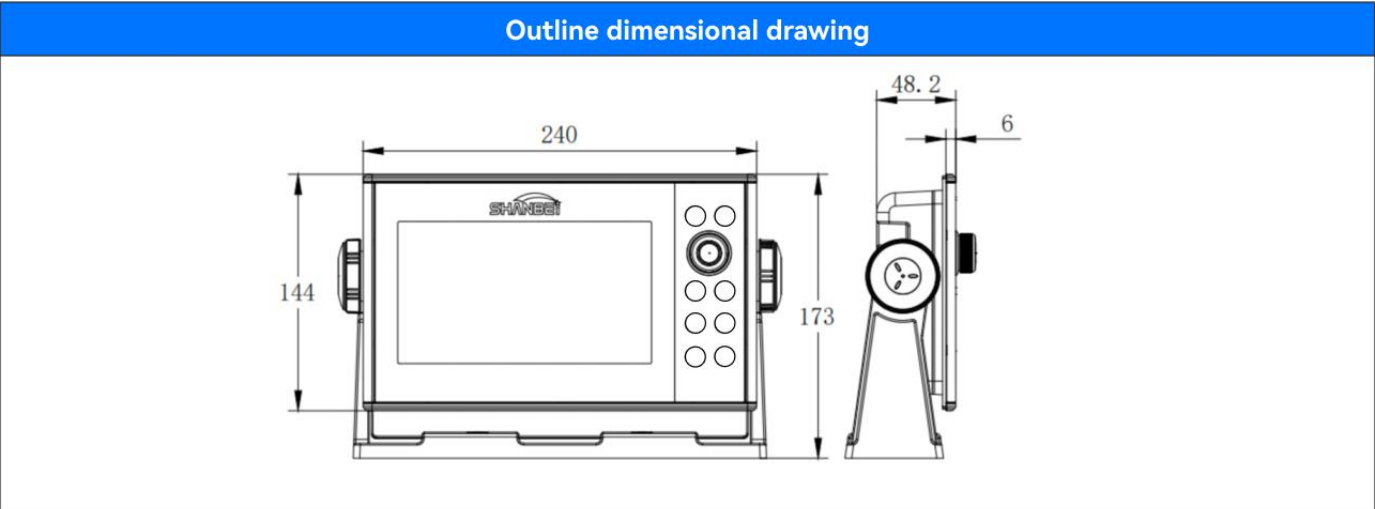


Figure 1.2

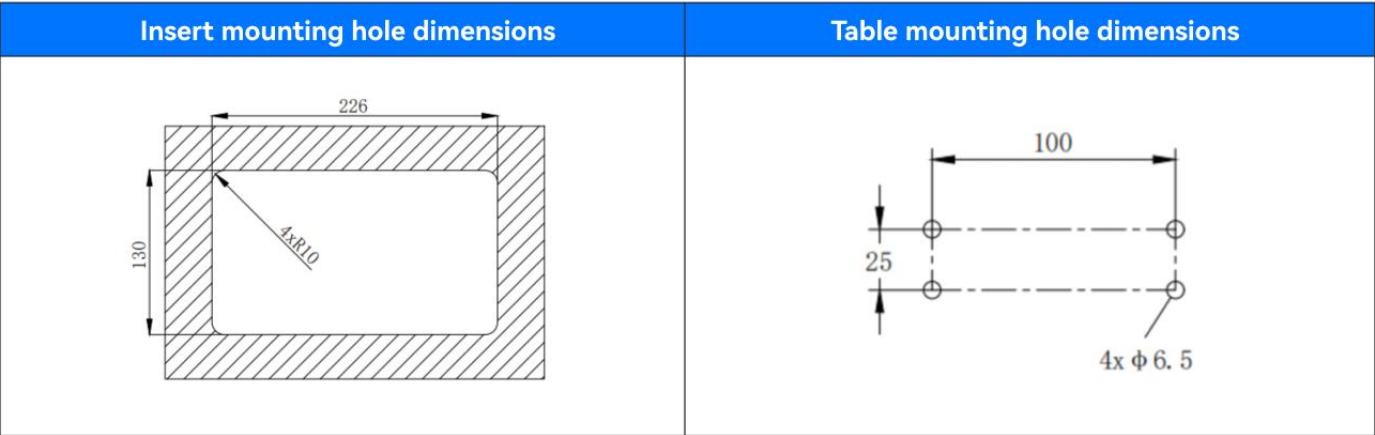


Figure 1.3

1.5 Product wiring diagram



Figure 1.4

1 Introduction

Port	Terminal	Identification	Function
NMEA0183	1	+24V	Power +
	2	-24V	Power -
	3	A	RS485-NMEA0183
	4	B	
NMEA2000	1	PGND	Ground connection
	2	L	CAN-NMEA2000
	3	H	
	4	+12V	Hang in the air
	5	-12V	Hang in the air
POWER	1	VCC	Power +
	2	VCC	Power +
	3	GND	Power -
	4	COM	Common interface
NETWORK	1	NETWORK	RJ45 Ethernet network port
USB	1	USB	USB interface

Table 1.2

2 Technical parameter

2.1 Product basic parameter

Supply voltage	
Specification	7 inches
Resolution	1024x600
Type	Hd IPS Optical Bonding TFT
Luminance	1200 nits
Touch screen	Full touch screen (multi-touch)
Viewing Angle	80° up/down, 80° Left/right (typical value when contrast =10)
Processor and memory	
CPU	ARM six-core 64-bit processor with up to 1.8GHz
GPU	ARM MP4 quad-core GPU, support OpenGL, etc
NPU	Onboard AI neural network acceleration chip, peak computing power up to 2.8Tops
Memory specification	2GB dual channel LPDDR4
Storage specification	8GB EMMC, SD card expansion
Ports and networks	
Power	1 channel, 4 cores (with external alarm output)
NMEA2000	1-way, 5-core, Micro-C, for internal connection
NMEA0183	1 way, 4 core, input only, for electronic compass
USB	1 channel, used for data storage and chart expansion
Ethernet port	1 channel for device communication
Power	
Supply voltage	10~31.2VDC
Power dissipation	20±4W (fully backlit)
Fuse rating	3A
External alarm	Can be connected to the external buzzer, the maximum drive 0.1A, 4.5A short-term load; External steering switch can be connected, maximum contact current 8mA
Master-slave control	Support
Environment	
Operating temperature	-15~55°C
Storage temperature	-20~60°C
Waterproof class	IPx6
Humidness	Relative humidity 95% (48 hours), IEC60945 hot and humid 66°C
Shock and vibration	100,000 cycles of 20G
Safe distance	50cm

Table 2.1

2 Technical parameter

Structure	
Dimension	240*144*48.2mm
Weight	860g
Install	Panel embedded installation, scaffolding installation
Material	Engineering plastics, tempered glass, aluminum alloy
color	Black
Reverse port	5 waterproof plugs
Backlit touch keys	1 multi-function knob with confirmation button and 8 other ordinary keys

Table 2.2

3 Installation instructions

3.1 Embedded installation

1. As shown in Figure 3.1, the multifunctional display unit is installed on the outside of the B mounting surface, and the A fixing component is installed on the inside.

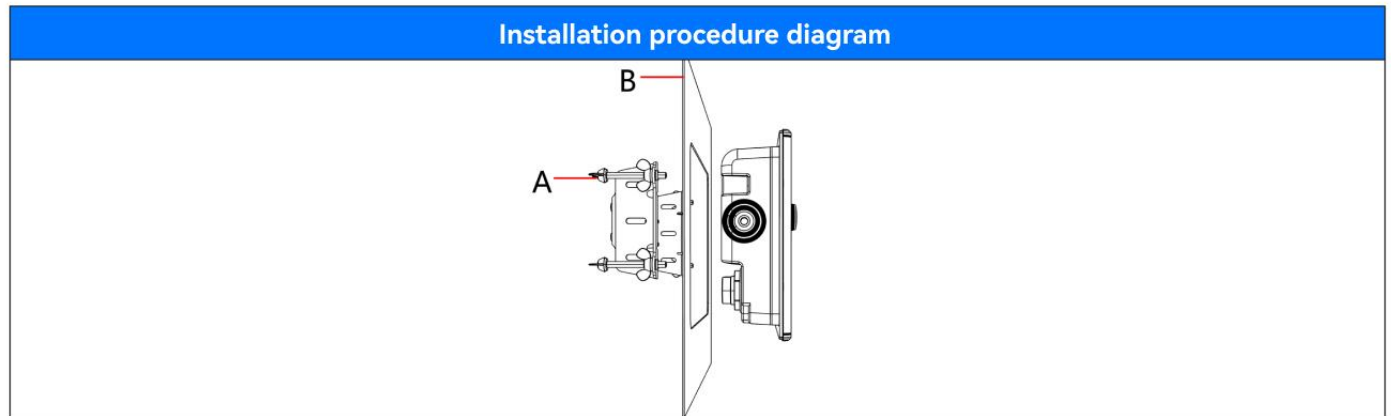


Figure 3.1

2. As shown in 3.2, install the A fixing component on the back of the multifunctional display unit and tighten the C screw.

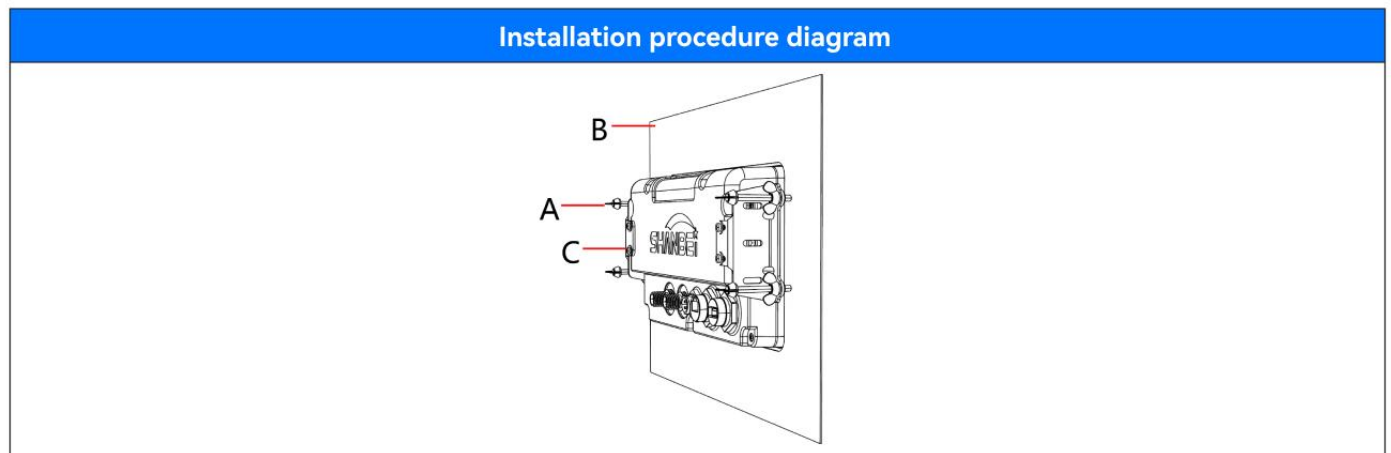


Figure 3.2

3.1 Countertop mounting

1. Install the screws in hole D as shown in Figure 3.3, and fix the multi-function display unit and bracket on the table.

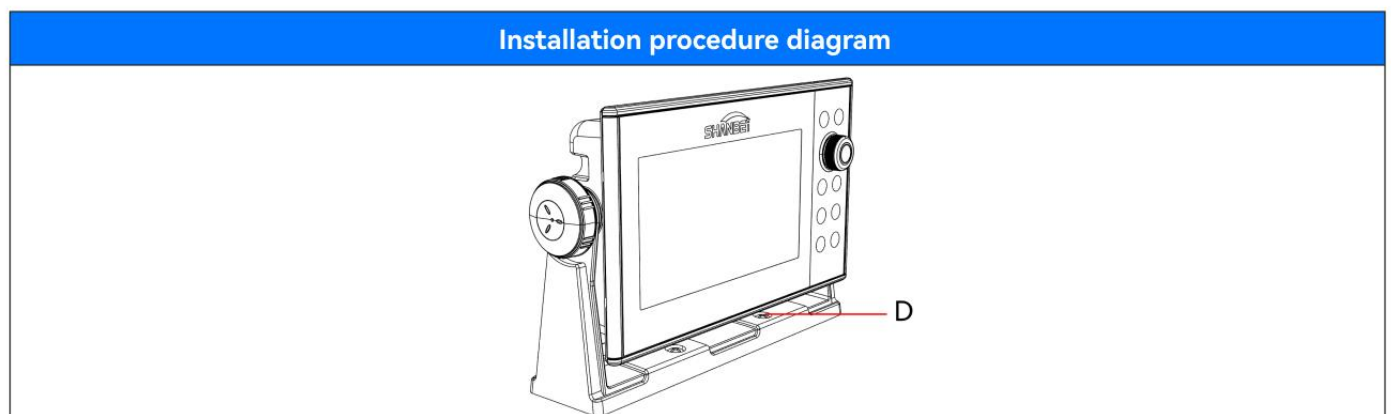


Figure 3.3

4 Instructions and precautions for use

4.1 Instructions for use

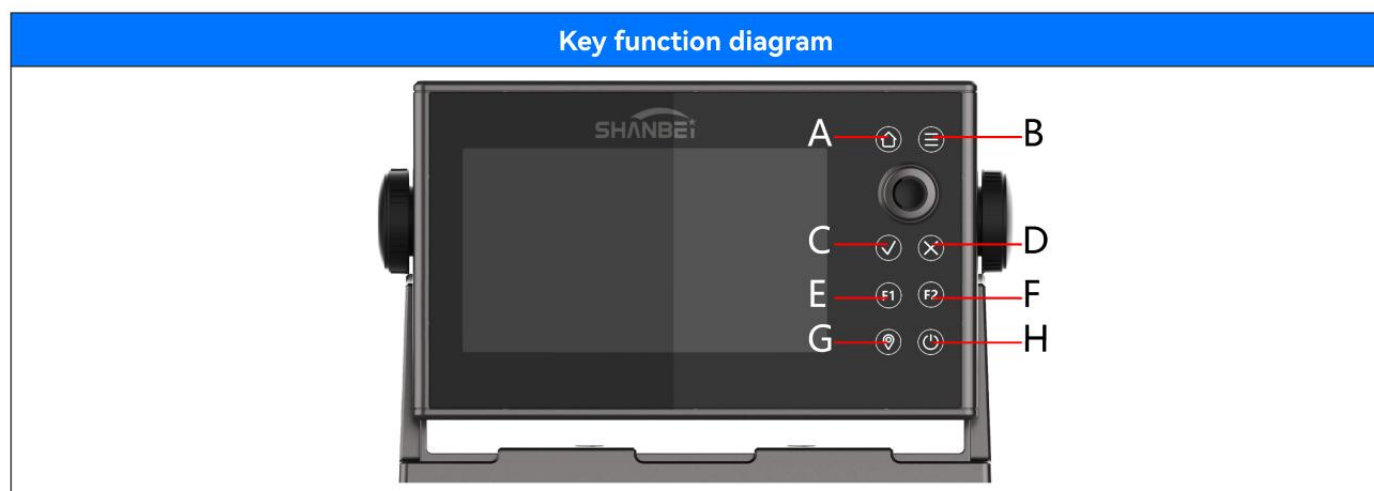


Figure 4.1

1. A-Home page: Return to the main page of the software
2. B-menu: capture screen, lock screen, night mode, brightness adjustment, standby and shutdown functions;
3. C-Confirm: Confirm the selection;
4. D-Cancel: Cancel the selection.
5. E-Custom F1: can choose the function to define;
6. F-Custom F2: You can choose the function to define;
7. G-positioning: positioning position;
8. H-power supply: switching power supply;
9. Knob: Rotate the selection of page components and press to confirm the selection.

5 Fault analysis and elimination

This product has been put into operation since the use, basically no fault, with our statistics, the after-sales problem is basically due to wiring errors, resulting in normal use, in addition, there is no technical fault. Customers in the use of the process, if you find technical problems, please promptly communicate with our technical personnel.

6 Safety protection and accident handling

6.1 Safety protection devices and precautions

1. In the important position of this product, the fastening seals have been processed before leaving the factory, and shall not be disassembled without permission. If the seals are damaged, any product quality problems will be borne by the buyer.
2. Once the product fails to operate normally, please stop using and disconnect the power supply immediately, and contact our after-sales service engineer for a solution.

6.2 Troubleshooting procedures and methods

1. In the process of use, there is an unsolvable fault problem, contact our after-sales service engineer.
2. During the warranty period, if the fault occurs due to the product itself, we will provide a complete replacement product and send it to the buyer for free replacement. And provide technical support; If the fault is not caused by the product itself, we can provide two options of complete replacement products and on-site services, which are selected by the buyer. All costs are borne by the recipient.
3. If the warranty period is exceeded and the fault occurs, we can provide two service options that can completely replace the product or replace some parts of the product, which are selected by the buyer. The required cost shall be borne by the purchaser.

7 Maintenance and repair

7.1 Daily maintenance and maintenance

In the daily non-use state, attention should be paid to the maintenance of this product. Through maintenance, maintenance can improve the service life of the product, the specific maintenance and maintenance methods are as follows:

1. Wipe the surface of the product regularly with a dry rag to ensure that the outside of the product is clean and tidy.

7.2 Operation precautions

1. Stop using the device when there is a problem with the multifunctional display unit. Contact our after-sales engineer.
2. Failure to operate in accordance with the regulations resulting in product failure or other major accidents shall be borne by the buyer.

7.3 Long-term maintenance and maintenance

Long-term placement, maintenance maintenance methods, and daily maintenance, maintenance methods are the same.

8 Transportation, storage and warranty

8.1 Transportation precautions

Physical damage to the product caused by violent shaking and collision should be avoided during transportation.

8.2 Storage precautions

Room temperature, dry, cool environment.

8.3 Warranty period

The warranty period of this product is 12 months from the date of receipt of the goods by the buyer. Based on the date of receipt of documents for express delivery or the date of receipt of invoice.

9 Other

9.1 Phone number of the after-sales engineer

Contact: Mr.Xu

Tel: 18067343163

9.2 Company information

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