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Xiaodi Series MCTC-HCB-T6068/S 6.8-inch TFT Side Display

User Guide

Industrial Automation
Intelligent Elevator
New Energy Vehicle
Industrial Robot
Rail Transit

Data code PS00021700A00

Legal Information

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Due to continuous updates and improvements of products and technologies, the content of this documentation may not fully match the actual products. In the event of any discrepancies, the actual products shall prevail.

The contents are subject to change without notice due to product upgrade.

Waste Disposal

The storage, use, and disposal of this product (including optional accessories) must comply with local laws and regulations.

Qualified Personnel

The product/system described in this documentation may be operated only by personnel qualified for the specific task in accordance with the relevant documentation, in particular its warning notices and safety instructions. Qualified personnel can identify the risks of the product/system and prevent possible dangers.

Proper Use of the Product

Proper transportation, storage, assembly, installation, commissioning, operation, and maintenance are required to ensure the safe operation of the product without any problems. The required ambient conditions must be met. All operations must follow the guidelines provided in this documentation.

Preface

Overview

This product is a 6.8-inch LCD side display for elevators (hereinafter also referred to as "the device"). Designed for installation on the side wall next to the car door, it provides real-time updates on the elevator's running direction, estimated arrival floor, and registered floors. It is well-suited to high-end office buildings and large-scale architectural complexes. This guide describes the basic information, installation, commissioning, and troubleshooting of the product.

Revision History

Date of revision	Version	Description
December 2025	A00	First issue

Access to the Guide

This guide is not in the scope of delivery. If necessary, you can download the PDF file at http://www.inovance.com.

- Visit *www.inovance.com*, go to "Service & Support > Support > Documentation Download" and enter a keyword to search.
- Scan the **QR code** on the product with your smartphone.
- Scan the QR code below to install the application **My Inovance**, where you can search for and download the guide.

Warranty Instructions

If your product becomes defective under normal use conditions, we will offer guaranteed repair services within the warranty period. Charges will be paid beyond the warranty listed in the purchase order.

The warranty does not cover any defect caused by:

- failure to operate the product in accordance with the user guide
- events beyond control, such as fire, flood and abnormal voltage
- function misuse
- out-of-range application

- other events of force majeure, including but not limited to lightning, earthquake and other extreme weather events

The maintenance fee is charged according to the latest Price List of Inovance. If otherwise agreed upon, the agreed terms and conditions shall prevail.

For details, see Product Warranty Card.

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1 Fundamental Safety Instructions

1.1 Safety Instructions

Safety Disclaimer

- To ensure the safety of humans and equipment, follow the signs on the product and all the safety instructions in this guide.
- To ensure the safety of humans and equipment, follow the signs on the product and all the safety instructions in this guide.
- The "CAUTION", "WARNING", and "DANGER" are only supplements to the safety instructions.
- Use this product according to the designated environmental requirements. Functional abnormalities or component damages caused by improper usage are not covered by warranty.
- Inovance shall take no responsibility for any personal injuries or property damage caused by improper usage.

Safety Levels and Definitions



Indicates that failure to comply with the notice will result in severe personal injuries or even death.



Indicates that failure to comply with the notice may result in severe personal injuries or even death.



Indicates that failure to comply with the notice may result in minor or moderate personal injuries or damage. Keep the guide properly for future reference and deliver it to the end user.

Installation
 • Avoid excessive vibration (Vibration < 0.98 g). • Free from greasy dirt and dust (IP55 models are an exception for dust). • Avoid installing in areas with humidity exceeding 93% or where water droplets are present; however, outdoor locations subject to water splashing can be suitable if the equipment has an IP55 rating. • Avoid installing in areas where corrosive, flammable, or explosive gases are present; however, environments with a certain level of corrosive gases can be suitable if the equipment has an IP55 rating.

Wiring



- Ensure that all power sources are disconnected before performing installation and wiring operations; avoid working on live circuits or plugging/unplugging cables to prevent electric shock or circuit damage.
- Connect the wiring for the DC power supply to the dedicated terminals as described in the guide.
- When drilling screw holes and wiring, ensure no metal shavings or wire clippings fall into the product to avoid malfunction, electronic component damage, or fire.
- After completing the wiring, carefully check to ensure the operating voltage and terminal positions are correct to avoid fire or accidents.



- To avoid electric shock, disconnect the power source before connecting the power to this product.
- The rated input power supply for this product is 24 VDC (allowable fluctuation range: 18 VDC to 36 VDC). If the input voltage is outside this range, severe damage to this product may occur. Therefore, please regularly check whether the DC power provided by the switched-mode power supply is stable.



- The protective grounding conductor must use yellow-green copper core cable.
- The grounding terminal must be reliably grounded (The resistance of the grounding cable should be less than or equal to 0.1 Ω). Failure to do so can lead to abnormal operation of the equipment or even damage.
- It is recommended to install the equipment on the conductive metal surface. Ensure that the entire conductive bottom of the equipment has good contact with the installation surface.
- Tighten the grounding screws to the correct tightening torque (9 N·m to 11 N·m) so that the PE conductor will not come loose or too tight.

Operation and Maintenance



- During use, take care to protect the display panel; perform touch operations with your hand instead of tools to avoid damage. Users are responsible for any damage caused by excessive force exerted.
- Display screens, capacitors, and other components may contain substances harmful to health and the environment. Treat the product as industrial waste.

Disposal



- Treat as industrial waste.

1.2 Industrial Information Security

This product provides an interface to connect to the network and transmit data through the network interface. To protect factories, systems, machines, and networks from cyber attacks, appropriate industrial information security protection mechanisms need to be implemented to ensure the safe operation of factories, systems, machines, and networks.

The customer is responsible for providing and continuously ensuring a secure connection between the product and the customer's network or any other network, to prevent unauthorized access to their factory, systems, machines, and networks. The system or machine may only be connected to the corporate network or the Internet when a secure connection is established and proper security measures are in place (for example, using antivirus software and installing firewalls).

INOVANCE continuously develops and improves its products and solutions to enhance safety. It is strongly recommended that you update your products promptly and always use the latest product versions.



Malware (such as viruses, Trojans, and worms) can bring the device into an unsafe operating state, resulting in death, serious injury, and property damage. Observe the following precautions strictly:

- Always use the latest software version. If the product version is no longer supported or the latest program version is not applied, customers are at increased risk of cyberattacks.
- Implement and maintain appropriate security measures (including but not limited to deploying anti-virus software, firewall, WAF, IPS/IDS, situational awareness system, ID verification, and data encryption) to prevent files in the removable storage device from being damaged by malware and to protect products, networks, systems, and interfaces from unauthorized access, disruption, intrusion, data leakage, or information theft.
- Check all safety-related interfaces and settings after commissioning.

2 Product Information

2.1 Technical Specifications

Param.	Description
Screen size	6.8 inches
Resolution	480 px x 1280 px
Product view directions	θL-θR-θT-θB
	85-85-85-85
LCD brightness	360 cd/m^2
Display area	60.22 mm (W) x 160.59 mm (H)
LCD type	RGB
Power supply voltage	18 VDC to 36 VDC
Rated/Maximum power consumption	1.8 W/3 W
Rated/Maximum current (24 V)	75 mA/125 mA
Nominal capacity	• Drive 1: 10 MB • Drive 2: 120 MB
Operating environment	• Temperature: -20°C to +70°C • Humidity: 10% RH to 90% RH
Storage environment	• Temperature: -30°C to +80°C • Humidity: 10% RH to 90% RH

2.2 Product Dimensions

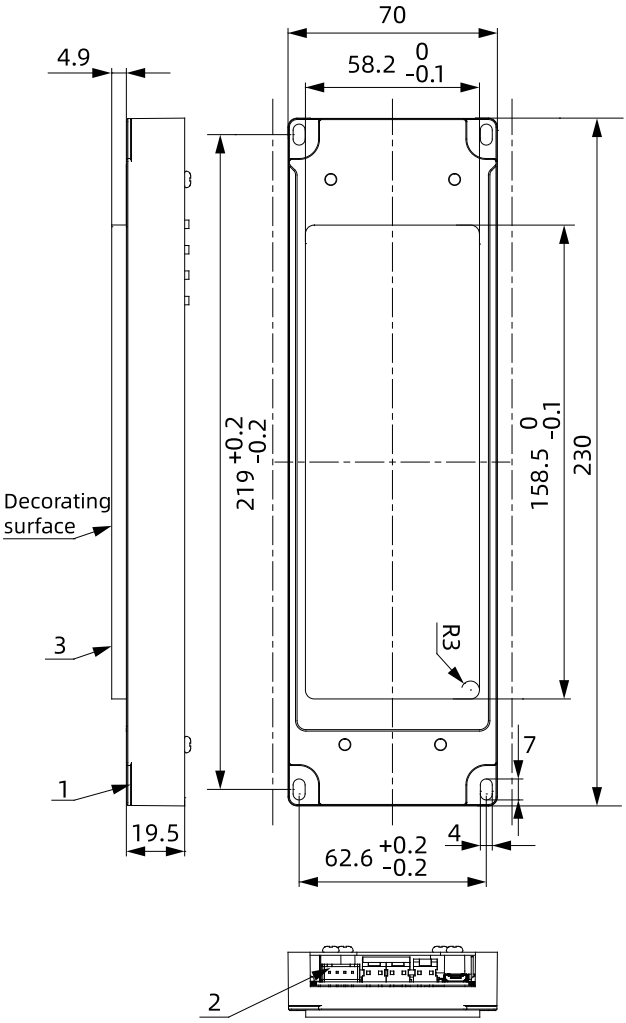


Figure 2-1 Product dimensions (unit: mm)

2.3 Appearance



Figure 2-2 Appearance

2.4 System Connection

The figure is only for illustration. See the actual product for specifics.

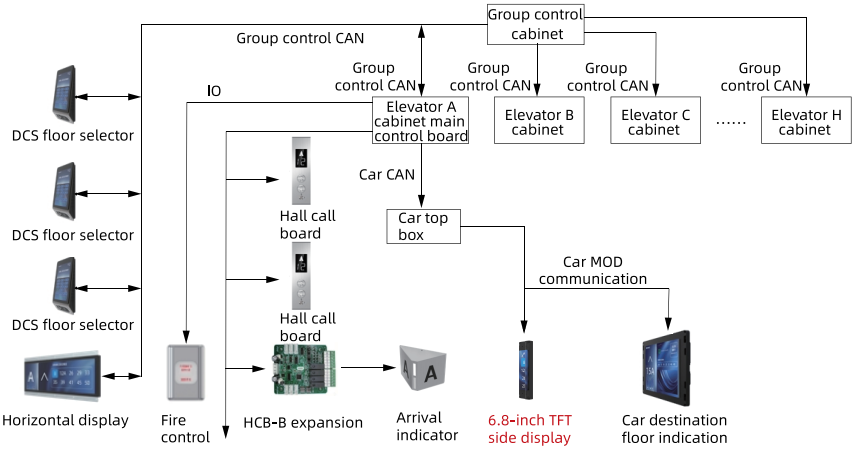


Figure 2-3 System Connection

3 Preparations Before Installation

3.1 Installation Personnel Requirements

- Installation must be performed by only experienced personnel who have been trained with necessary electrical information.
- Read and comply with the safety information provided this manual.

CAUTION

Inovance is not responsible for equipment damage and casualties due to failure to comply with the safety instructions or operation by unqualified personnel.

3.2 Installation Environment Requirements

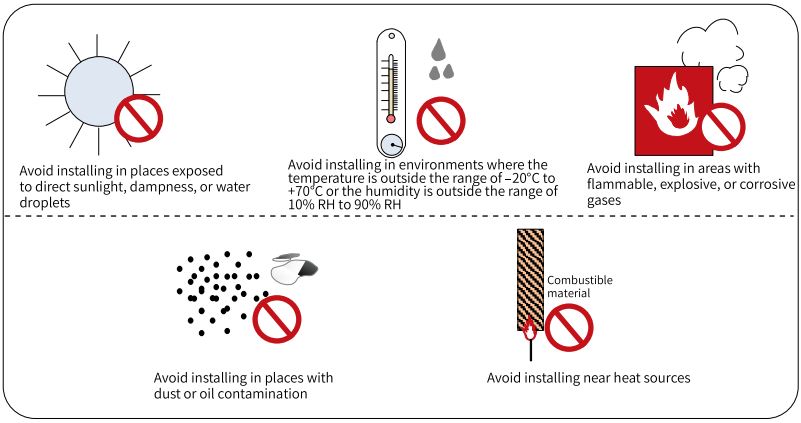


Figure 3-1 Installation environment requirements

3.3 Installation Tools Requirements

Please check the installation tools listed in the following table before installation. Tools not included with the scope of delivery must be provided by the customer.

Table 3–1 Installation tools

Tool	Description
Glove	Prevents static electricity during mechanical installation.
M3 x 25 weld screw (4 PCS)	Fix the product to the mounting surface.
Four M3 flange nuts	
M3 Phillips screwdriver	Tightens the screws.
5.5 mm open-end wrench or socket wrench	

4 Unpacking and Handling

Upon unpacking, check:

No.	Item	Description	Tick
1	Whether the product model is consistent with your order.	Check the model and specifications of the device for consistency with the order.	□
2	Whether the product is damaged.	Check whether the product enclosure is damaged during transportation. If there is any part missing or damaged, contact Inovance or your supplier immediately.	□

5 Installation Instructions

5.1 Port Layout and Description

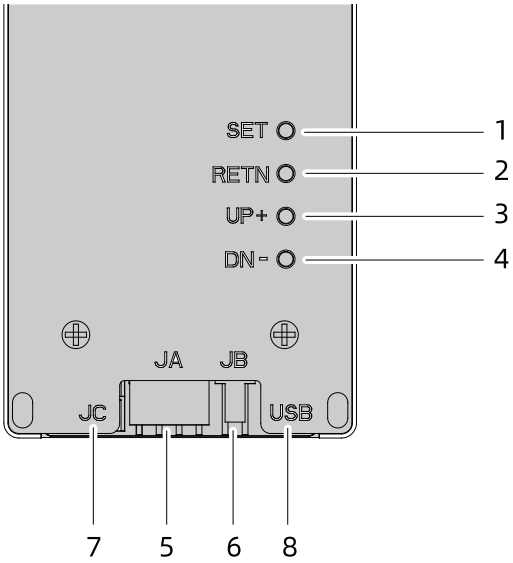


Figure 5-1 Port layout

Table 5–1 Description

No.	Port	Description
1	SET	• Enters the setup menu interface • Enters the next-level menu • Enters the menu editing mode
2	RETN	• Exits the setup menu interface • Returns to the previous-level menu • Exits the menu editing mode
3	UP +	• Moves up through menu items • Increases the value of a menu item (holding down increases speed)
4	DN -	• Moves down through menu items • Decreases the value of a menu item (holding down increases speed)
5	JA	RS485 loop-through interface
6	JB	Power supply
7	JC	RS485 input interface
8	USB	USB upgrade interface

5.2 Installation Procedure

Please install the device according to the following steps.

Note

The images in this chapter are for installation reference only. Please refer to the actual product for appearance.

1. Cut out a square area on the car wall panel and install weld screws according to the hole positions.

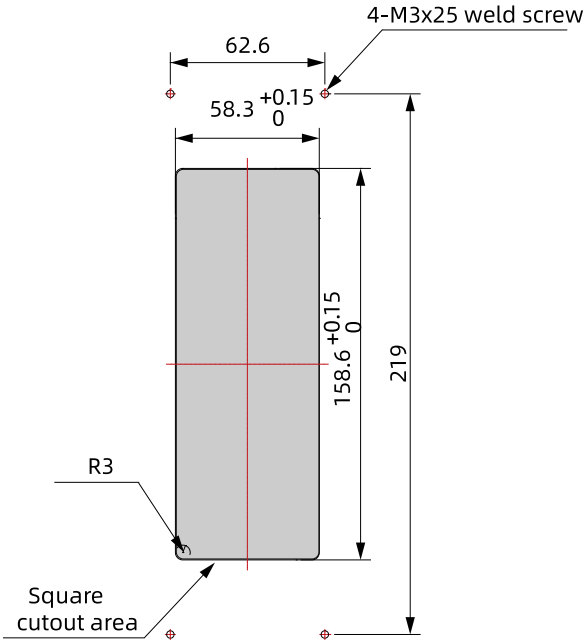


Figure 5-2 Hole dimensions for flush-mounting (unit: mm)

2. Secure the device to the panel with four M3 flange nuts.

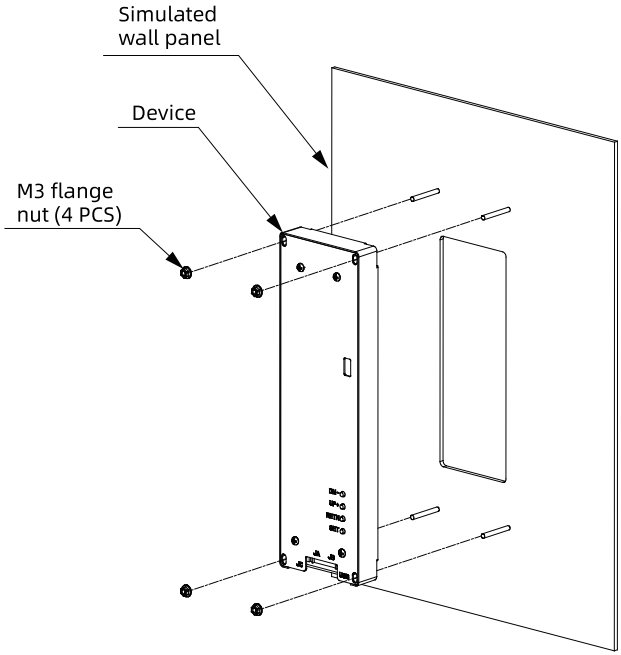


Figure 5-3 Securing the device to the car wall panel

3. Check the installation effect.

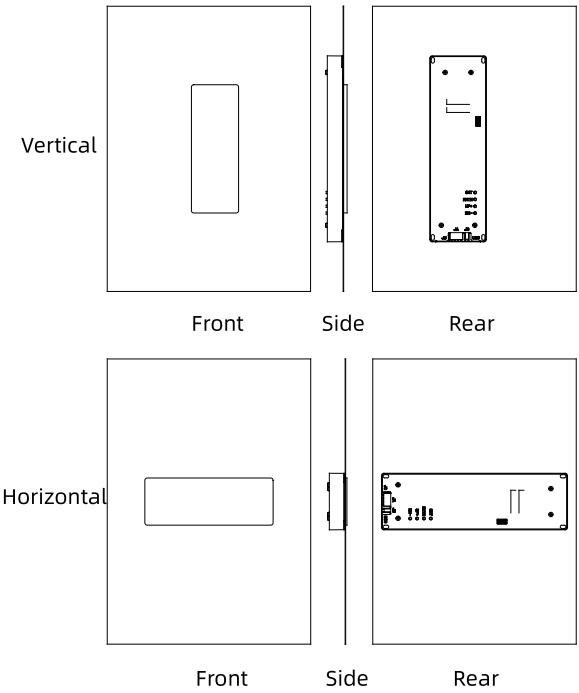


Figure 5-4 Checking the installation effect

CAUTION

The display has a grounding sign and must be grounded properly.

6 Commissioning and Operation

This chapter introduces basic commissioning procedure for the device. By following the instructions, you can perform basic commissioning to ensure that its basic functions can be used normally.

6.1 Inspection Before Commissioning

The operator is responsible for performing checks including but not limited to those listed in the following table in accordance with the recognized technical rules in the country of installation and with applicable regional guidelines. Tick after each check of the item.

No.	Item	Tick
1	Ensure that the power input terminals are securely connected with no loose or poor connections.	□
2	Before powering on the device, ensure that the power port wiring sequence is correct and that the voltage meets the standard 24 VDC (allowable range: 18 VDC to 36 VDC). If the measured value exceeds this range, disconnect the power supply immediately	□

6.2 Function Commissioning

Table 6–1 Function commissioning

Function		Description
Level I menu	Level II menu	
Floor setup	Bottom floor	Sets the lowest floor in auto demo mode, ranging from 1 (default value) to 50.
	Top floor	Sets the highest floor in auto demo mode, ranging from 1 to 50 (default value).
	Floor address	Range of 0 to 56, D2, D3, D4, and DH with default value 0.
Display setup	Display brightness	Sets the normal operating brightness of the screen, ranging from 10 to 100 (default value of 80).
	Sleep brightness	Sets the sleep brightness of the screen, ranging from 10 to 100 (default value of 20). When the device does not receive the elevator operation signal within the sleep time, it automatically enters the sleep mode. The brightness will drop to this value. If the elevator control cabinet supports energy-saving mode, after the elevator enters this mode, the device will also automatically enter the sleep state.
	Sleep time	Sets the time (in minutes) after which the device will automatically enter the sleep mode, ranging from 0 to 120 minutes, with a default value of 15 minute. If set to 0, it indicates that the sleep mode will never be applied.
	Welcome message	Switch for displaying the welcome message, which is enabled by default.
	Logo	Switch for displaying the logo, which is enabled by default.
System settings	Language	Sets the language, supporting switching between multiple languages, with Chinese as the default.
	Operation mode	Sets the operating mode, supporting auto demo mode and normal mode, with normal mode as the default.

7 Background Image Replacement

Please prepare a Type-C USB cable and a computer.



Figure 7-1 Type-C USB cable

1. Power off the device and connect it to the computer's USB port using the cable.
2. After connecting, power on the device. Once the device has started up, it will display **"usb device is connecting…"**.
3. The computer will recognize two drives. Open the drive with the larger memory capacity.
4. Prepare new images according to the requirements.

Note

- The image must be in PNG format, with a resolution of 480 x 1280 and 32-bit color depth.
- Ensure the new image matches the original one in **display orientation**, **name**, **and format**.
- Image information can be viewed by right-clicking and selecting **"Properties> Details"**.

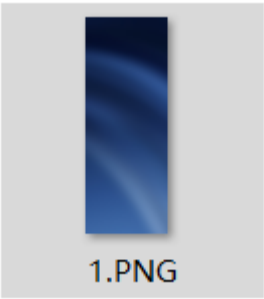


Figure 7-2 Default theme

5. Open the **"TGUS_TF"** folder on the drive and replace the old image with the new one.

6. After the replacement is complete, eject the drive from the computer. Wait until the device displays **"···finished···"**, indicating the update is complete, then disconnect the USB cable.
7. Manually restart the device and check the display effect.

Note

- If the image is displayed in the wrong orientation, check whether the image needs to be rotated.
- If the image fails to be displayed, check whether the image filename and format are correct and consistent with the image being replaced.

8 Interface Upgrade

Please prepare a Type-C USB cable and a computer.



Figure 8-1 Type-C USB cable

1. Power off the device and connect it to the computer's USB port using the cable.
2. Restart the device. Once it has started up, it will display **"usb device is connecting…"**.
3. The computer will recognize two drives. Open the drive with the larger memory capacity.
4. Place the new **"TGUS_TF"** interface resource file into this drive, replacing the old one.

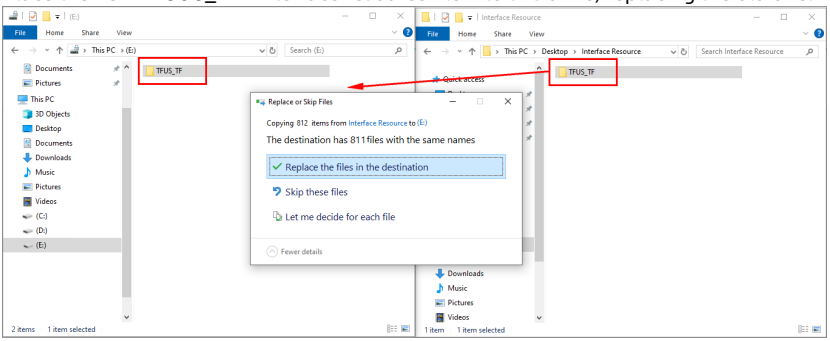


Figure 8-2 Replacing the old interface file

5. After the replacement is complete, eject the drive from the computer. Wait until the device displays **"******finished"** or **"******successful"**, indicating the update is complete, then disconnect the USB cable.

Note

If **"errfile= *** FAIL"** is displayed (where * represents a specific file), the upgrade has failed. Please power cycle the device and try upgrading again.

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6. Manually restart the device and check the display effect.

Note

If a display error occurs, check whether the name and path of the new interface file is correct, and ensure it is consistent with the old interface file being replaced.

9 Maintenance

9.1 Daily Maintenance Items

- Do not expose this product to rain or place it near water. If water stains appear on the surface, which can cause touch distortion, wipe it dry with a dry cloth or paper towel before resuming normal use.
- Do not install the product in unstable positions, such as on wobbling mounting brackets or on inclined surfaces.
- Do not drop the product or subject it to shocks.
- The touch surface of this product requires regular cleaning to ensure it remains clean and tidy.
- Do not hit the surface with force.
- Do not pry or force the edges of the frame open.

9.2 Daily Inspection and Cleaning Items

The operator is responsible for performing checks including but not limited to those listed in the following table in accordance with the recognized technical rules in the country of installation and with applicable regional guidelines. Tick after each check of the item.

Table 9–1 Daily inspection items

No.	Item	Tick
1	Ensure that the installation environment does not change.	☐
2	The device has normal operation and display.	☐
3	The wiring does not come loose.	☐
4	The screws on the external frame are secure.	☐

Table 9–2 Daily cleaning item

No.	Item	Tick
1	Clean dust and moist off the device surface periodically.	☐

10 Common Fault Troubleshooting

Table 10–1 Common fault troubleshooting

Name	Cause	Diagnosis	Troubleshooting
Device black screen.	Power supply requirements are not met.	Check whether the power supply voltage and power match the device specifications. • Power supply voltage: 18 VDC to 36 VDC. • Rated/Maximum power: 9.6 W/22 W.	Replace the power source with one that meets the required specifications.
	Poor power cable connection.	Check whether the power supply polarity connection is correct.	Ensure that the power connections are correct and secure.
	Device damage.	Check whether the indicators light up when the device is powered on; if all indicators are off, the device might be damaged.	Contact the device supplier.
During installation and commissioning, floors and arrows are not displayed.	RS485 impedance matching error.	Check the number and distance of connected devices on the bus to determine if termination resistors are needed.	Configure the RS485 termination resistor status through DIP switches.
	The wiring is incorrect or the cable is connected improperly.	• Check whether all connection lines match the defined sequence of the device. • Check whether the CTB wiring is wrong.	Check whether the communication lines are incorrectly wired (reversed or incorrect sequence). If so, reconnect the lines correctly. If problems persist, connect the device to another normally operating elevator control cabinet and check whether the fault is displayed. If the display is normal, check the original control cabinet to ensure that it can operate properly.
The display freezes or there is no display after the multimedia image is updated.	The newly imported multimedia image format or specification do not meet the requirements.	Check the image against the specified requirements.	Modify the image format or specification, delete incorrect image, and re-import.
	The newly imported multimedia image name does not meet the requirements.	Check whether the name of the newly imported image matches the name of the replaced image.	Change the image name to match the name of the image being replaced, delete the incorrect image, and then re-import the image.
Elevator call failed.	The baud rate is set incorrectly.	Check whether the baud rate is 38400 using the Monarch App.	Modify the baud rate to 38400 using the Monarch App.

11 Service and Support

Should you encounter a safety accident during the use or operation of the product, or face challenges in operating and maintaining the equipment, which remain unresolved after the relevant documentation is consulted, we provide multiple channels to ensure prompt resolution:

- Channel #1: Contact service@inovance.com.
- Channel #2: Visit https://www.inovance.com/global to access document downloads, after-sales support, spare parts ordering, repair applications, and authenticity verification services.
- Channel #3: Download My Inovance app (https://zshc-eu.inovance.com/download-pc/) where you can access products info and documentation, and query product parameters.

We are committed to providing you with quick and professional technical support, and we look forward to your satisfaction and trust.

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