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Delta DOP-107BV

Delta DOP-107BV HMI Touch Panel User Manual

Human Machine Interface

1. PRODUCT OVERVIEW

The Delta DOP-107BV is a 7-inch Human Machine Interface (HMI) touch panel designed for industrial automation applications. It provides a user-friendly interface for controlling and monitoring various processes.



Figure 1.1: Front view of the Delta DOP-107BV HMI Touch Panel, showing the 7-inch display and the Delta logo.



Figure 1.2: Angled view of the DOP-107BV, highlighting its slim profile and design.

2. PACKAGE CONTENTS

Upon unpacking, please verify that all items listed below are present and in good condition.

- Delta DOP-107BV HMI Touch Panel
- Mounting hardware (clips, screws)
- User Manual / Documentation
- Power connector

DOP-107BV

Package List



Figure 2.1: Overview of the package contents for the DOP-107BV HMI.



Figure 2.2: The DOP-107BV HMI securely packaged with its accompanying accessories.

3. SPECIFICATIONS

Detailed technical specifications for the Delta DOP-107BV HMI Touch Panel are provided below.

DOP-107BV

Parameters

Brand	Delta	Model	DOP-107BV	Display Size	7 inches
Display type	7" TFT LCD	Display Color	High color	Resolution Ratio	800*480
Processor	ARM Cortex-A8	Memory	Flash ROM	Input Mode	Touch screen input
Working temperature	0°C ~ 50 °C	Panel Protection class	IP65	Product Certification	CE

Figure 3.1: Key technical parameters of the DOP-107BV HMI.

Product Introduction

Specifications

7"(800*480) 65,536 Colors TFT

Cortex-A8 800MHz CPU

256 MB RAM

256 MB ROM

1 COM port / 1 extension COM port

USB Host

USB Client

CE / UL certified

Operation Temperature: 0°C ~ 50°C

Storage Temperature: -20°C ~ 60°C

Pressing times: >1,000K times

Figure 3.2: Comprehensive list of DOP-107BV HMI specifications.

Feature	Description
Model	DOP-107BV
Display Size	7 inches
Display Type	7" TFT LCD, 65,536 Colors
Resolution	800 x 480
Processor	ARM Cortex-A8 800MHz CPU
Memory	256 MB RAM, 256 MB ROM (Flash ROM)

Feature	Description
Input Mode	Touch screen input
Communication Ports	1 COM port, 1 extension COM port, USB Host, USB Client
Operating Temperature	0°C ~ 50°C (32°F ~ 122°F)
Storage Temperature	-20°C ~ 60°C (-4°F ~ 140°F)
Panel Protection Class	IP65
Certifications	CE / UL certified
Pressing Times	>1,000K times
Item Weight	2.7 pounds
Package Dimensions	11.5 x 8.5 x 4.5 inches

4. PHYSICAL DIMENSIONS

The following diagram illustrates the physical dimensions of the DOP-107BV HMI in millimeters and inches.

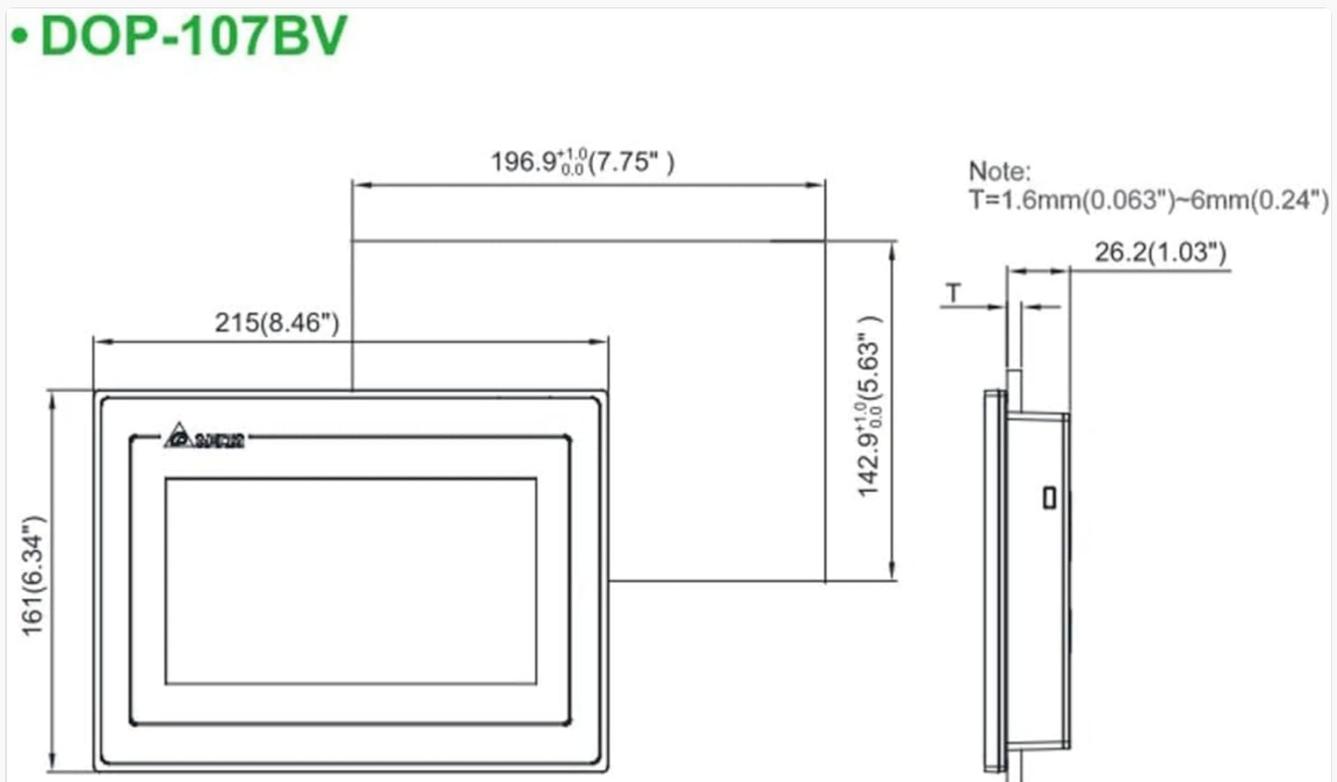


Figure 4.1: Dimensional drawing of the DOP-107BV HMI, showing height, width, and depth measurements.

5. SETUP AND INSTALLATION

5.1 Rear Panel and Connections

Familiarize yourself with the rear panel of the DOP-107BV, which houses all necessary connection ports.



Figure 5.1: Rear view of the DOP-107BV HMI, displaying the product label, USB ports, and COM port.



Figure 5.2: Close-up of the rear panel, indicating the USB Host, USB Slave, and COM1 ports, along with the power input area.

5.2 Power Connection

The DOP-107BV requires a DC 24V power input. Ensure the power supply meets the specified voltage and current requirements (24V DC, 370mA max). Connect the power cable to the designated terminal block on the rear panel. Observe polarity.

5.3 Communication Connections

- **USB Host:** For connecting USB devices such as flash drives for data transfer or firmware updates.
- **USB Slave:** For connecting the HMI to a PC for programming and configuration using Delta's software.
- **COM1 (RS-232/RS-485/RS-422):** This port is used for communication with PLCs or other industrial devices. Refer to the specific communication protocol documentation for wiring details.
- **Extension COM Port:** An additional communication port for expanded connectivity options.

5.4 Mounting

The DOP-107BV is designed for panel mounting. Cut an opening in the control panel according to the dimensions provided in Section 4. Secure the HMI using the provided mounting clips and screws. Ensure a tight fit to maintain the IP65 front panel protection rating.

6. OPERATING INSTRUCTIONS

6.1 Powering On/Off

To power on the HMI, connect the 24V DC power supply. The HMI will boot up automatically. To power off, disconnect the power supply. It is recommended to save any unsaved project data before powering off.

6.2 Touch Screen Operation

The DOP-107BV features a resistive touch screen. Use a finger or a non-sharp stylus for interaction. Avoid using sharp objects that could damage the screen surface.

6.3 Project Download and Upload

Project files are created using Delta's HMI software (e.g., DOPSoft). Projects can be downloaded to the HMI via the USB Slave port or a USB flash drive connected to the USB Host port. Consult the software manual for detailed instructions on project management.

6.4 System Settings

Access system settings to configure network parameters, display brightness, date/time, and other system-level functions. Refer to the comprehensive software manual for detailed navigation and configuration options.

7. MAINTENANCE

7.1 Cleaning the Display

To clean the touch screen, use a soft, lint-free cloth dampened with a mild, non-abrasive cleaner. Do not spray cleaner directly onto the screen. Avoid using harsh chemicals, solvents, or abrasive materials.

7.2 Environmental Considerations

Ensure the operating environment adheres to the specified temperature (0°C ~ 50°C) and humidity ranges. Avoid exposure to direct sunlight, excessive dust, moisture, or corrosive gases to prolong the life of the device.

7.3 Firmware Updates

Periodically check Delta's official website for firmware updates. Firmware updates can improve performance, add new features, or resolve known issues. Follow the instructions provided with the firmware package carefully.

8. TROUBLESHOOTING

Problem	Possible Cause	Solution
HMI does not power on.	No power supply; incorrect voltage; faulty power cable.	Check power connection and voltage (24V DC). Ensure power cable is securely connected.
Touch screen unresponsive.	Screen calibration issue; physical damage; software freeze.	Restart the HMI. If issue persists, attempt screen recalibration via system settings. Inspect for physical damage.
Communication error with PLC.	Incorrect wiring; wrong communication settings; incompatible protocol.	Verify wiring according to PLC and HMI manuals. Check communication parameters (baud rate, data bits, parity, stop bits). Ensure correct protocol is selected.
Project download fails.	Incorrect USB connection; software version mismatch; corrupted project file.	Ensure USB Slave port is used for PC connection. Verify HMI software compatibility. Try re-exporting the project file.

9. WARRANTY AND SUPPORT

9.1 Warranty Information

Delta products typically come with a standard manufacturer's warranty. For specific warranty terms and conditions, please refer to the warranty card included with your product or visit the official Delta Electronics website. Keep your purchase receipt as proof of purchase.

9.2 Technical Support

For technical assistance, product inquiries, or service requests, please contact Delta Electronics customer support or your local authorized distributor. You can find contact information on the official Delta website:

www.deltaww.com

When contacting support, please have your product model number (DOP-107BV) and serial number ready.