

# iSMA-D-PD

User Manual

## Industrial LCD Panel



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# 1 Introduction

The iSMA-D-PD10C-B1 is 10.1" is an industrial LCD panel, which has been designed to simplify the use of MAC36 controllers, iSMA-B-MAC36NL and iSMA-B-MAC36PRO.

The LCD panel is equipped with multiple interfaces to accelerate the connection with the master controller. The applied RJ45 interface provides transmitting touch commands (RJ45-USB).

The 16:9 aspect ratio with 1366x768 resolution allows for displaying graphics clearly.

The panel is VESA compliant and can be wall-mounted. It has an extensive menu in 7 languages.

Available with EU, UK, and US power supply.

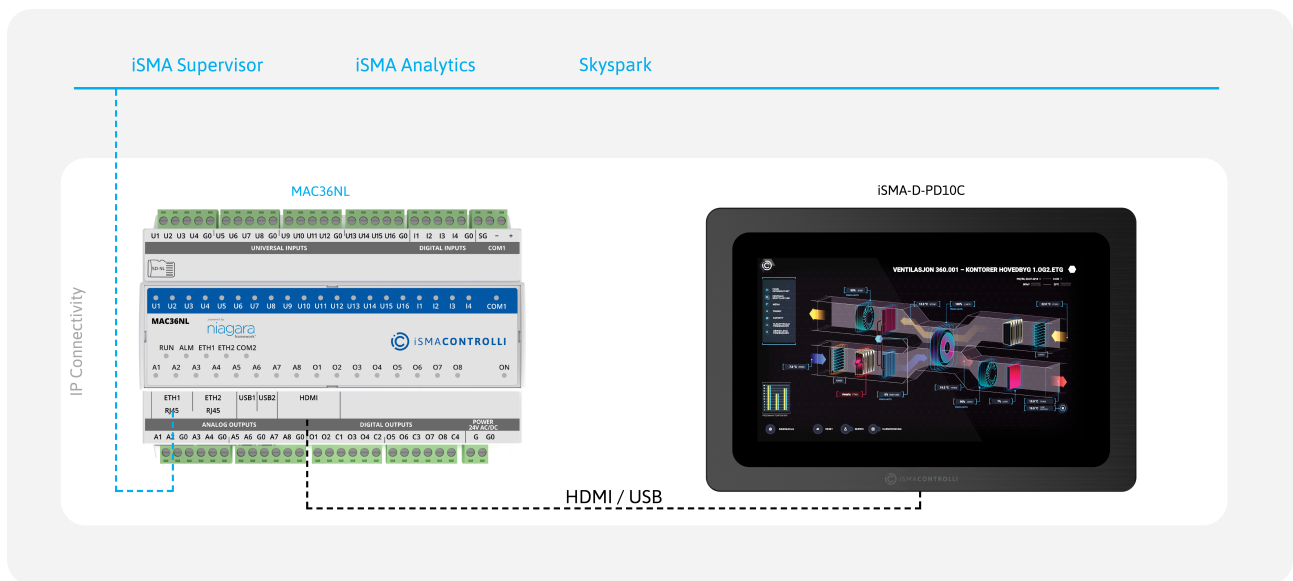


Figure 1. iSMA-D-PD10C-B1 panel connected to the iSMA-B-MAC36NL controller

## 1.1 Revision History

Rev.	Date	Description
1.3	10 Nov 2023	iSMA-B-MAC36PRO references
1.2	25 May 2022	Rebranded
1.1	31 Mar 2020	Company data update
1.0	28 Aug 2015	First edition

Table 1. Revision history

## 2 Safety Rules

- Improper wiring of the product can damage it and lead to other hazards. Make sure that the product has been correctly wired before turning the power on.
- Before wiring or removing/mounting the product, make sure to turn the power off. Failure to do so might cause an electric shock.
- Do not touch electrically charged parts such as power terminals. Doing so might cause an electric shock.
- Do not disassemble the product. Doing so might cause an electric shock or faulty operation.
- Use the product only within the operating ranges recommended in the specification (temperature, humidity, voltage, shock, mounting direction, atmosphere, etc.). Failure to do so might cause a fire or faulty operation.
- Firmly tighten the wires to the terminal. Failure to do so might cause a fire.
- Avoid installing the product in close proximity to high-power electrical devices and cables, inductive loads, and switching devices. Proximity of such objects may cause an uncontrolled interference, resulting in an instable operation of the product.
- Proper arrangement of the power and signal cabling affects the operation of the entire control system. Avoid laying the power and signal wiring in parallel cable trays. It can cause interferences in monitored and control signals.
- It is recommended to power controllers/modules with AC/DC power suppliers. They provide better and more stable insulation for devices compared to AC/AC transformer systems, which transmit disturbances and transient phenomena like surges and bursts to devices. They also isolate products from inductive phenomena from other transformers and loads.
- Power supply systems for the product should be protected by external devices limiting overvoltage and effects of lightning discharges.
- Avoid powering the product and its controlled/monitored devices, especially high power and inductive loads, from a single power source. Powering devices from a single power source causes a risk of introducing disturbances from the loads to the control devices.
- If an AC/AC transformer is used to supply control devices, it is strongly recommended to use a maximum 100 VA Class 2 transformer to avoid unwanted inductive effects, which are dangerous for devices.
- Long monitoring and control lines may cause loops in connection with the shared power supply, causing disturbances in the operation of devices, including external communication. It is recommended to use galvanic separators.
- To protect signal and communication lines against external electromagnetic interferences, use properly grounded shielded cables and ferrite beads.
- Switching the digital output relays of large (exceeding specification) inductive loads can cause interference pulses to the electronics installed inside the product. Therefore, it is recommended to use external relays/contactors, etc. to switch such loads. The use of controllers with triac outputs also limits similar overvoltage phenomena.
- Many cases of disturbances and overvoltage in control systems are generated by switched, inductive loads supplied by alternating mains voltage (AC 120/230 V). If they do not have appropriate built-in noise reduction circuits, it is recommended to use external circuits such as snubbers, varistors, or protection diodes to limit these effects.

### 3 Technical Specification

Panel Type	HD industrial TFT LCD	
Screen Type	LED; backlight lifetime $\geq 50000$ h,	
Size	10.1"	
Aspect Ratio	16:9	
Luminance	300 nit, up to 800 nit	
Contrast	800:1	
Active Area	222.7x125.2 mm	
Display Color	16.7 M	
Point Distance	0.264 mm	
View Angle	75/75/75/75	
Response Time	$\leq 5$ ms	
Installation	Compatible with VESA, for embedding, wall mount	
Menu Languages	English, French, German, Spanish, Chinese, Italian, Russian	
Touch Type	10-point capacitive touch screen	
Material	Metal/aluminum alloy	
Signal Port	VGA, HDMI, DVI	
Power Port	12 V- 24 V DC	
Audio Port	Audio I/O	
Touch Port	RJ45 (customized USB)	
Anti-interference	Anti-interference electromagnetic compatibility; electromagnetic interference	
Anti-Vibration	5-19 HZ/1.0 mm amplitude; 19-200 HZ/1.0 g accelerated speed	
Temperature	Operating temperature: -10°C to 60°C (14°F to 140°F)	Storage temperature: -10°C to 60°C (14°F to 140°F)

Humidity	Operation humidity: 10% to 80%	Storage humidity: 10% to 90%
Anti-static	4 KV-8 KV; (customized MAX 16 KV)	
Rated Voltage	100 V AC ~ 240 V to 12 V-24 V DC	
Rated Frequency	50 Hz/60 Hz	
Power Supply	110-240 V AC, 50/60 Hz	
Power	Power consumption $\leq 30$ W	Power standby $\leq 1.5$ W
Dimension	293.6x193.6x48.5 mm (11.560x7.622x1.909 in)	
IP	IP65 – for front panel	

Table 2. Technical specification

## 4 Standards and Norms

### EN 55032:2015

Electromagnetic compatibility of multimedia equipment. Emission Requirements.

### EN 61000-3-2:2014

Electromagnetic compatibility (EMC). Limits for harmonic current emissions for equipment input current  $\leq 16$  A per phase).

### EN 61000-3-3:2013

Electromagnetic compatibility (EMC). Limits for voltage changes, voltage fluctuations and flicker in public low-voltage supply systems, for equipment with rated current  $\leq 16$  A per phase.

### EN 55024:2010 + A1:2015

Information technology equipment. Immunity characteristics. Limits and methods of measurement.

### EN 60950-1:2006 + A11:2002 + A1:2010 + A12:2011 + A2:2013

Information technology equipment. Safety General requirements specifies requirements intended to reduce risks of fire, electric shock or injury for the OPERATOR and layman who may come into contact with the equipment and, where specifically stated, for a SERVICE PERSON.

## 5 Dimensions

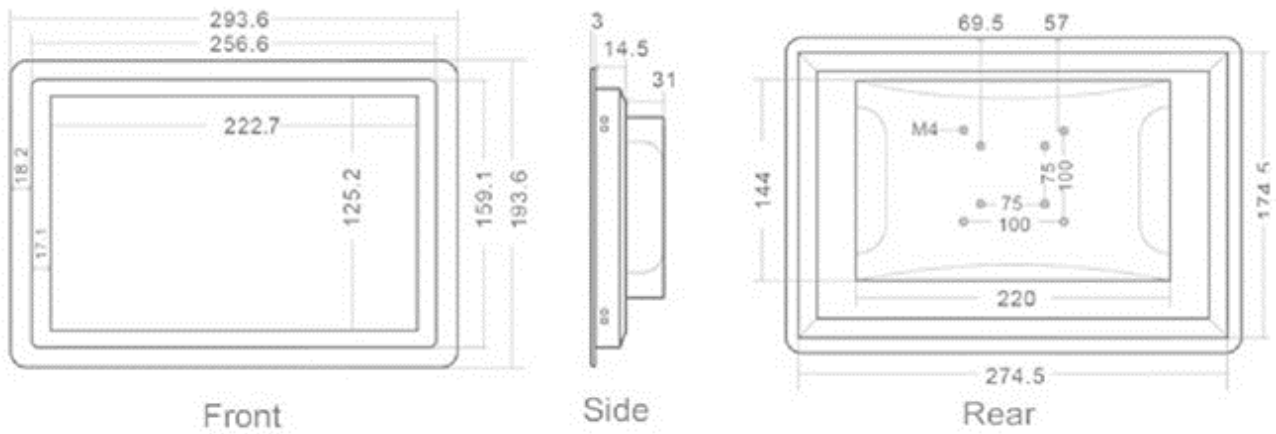


Figure 2. Dimensions of iSMA-D-PD10C-B1



## 6 Interfaces

The monitor recognizes and selects the signal automatically.

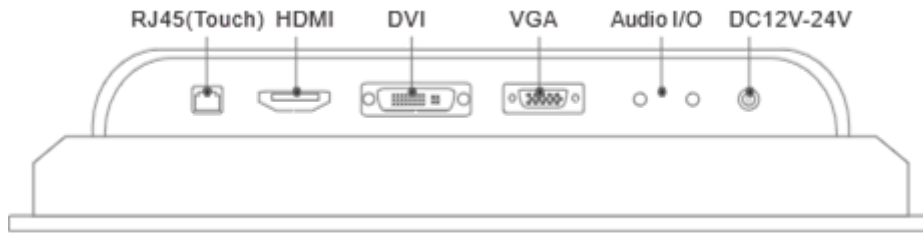


Figure 3. Interface details

## 7 Operation Guide

### 7.1 Rear Navigation Buttons

The rear navigation buttons are used to turn the device on and off. Brightness +/- buttons are prepared for future development:

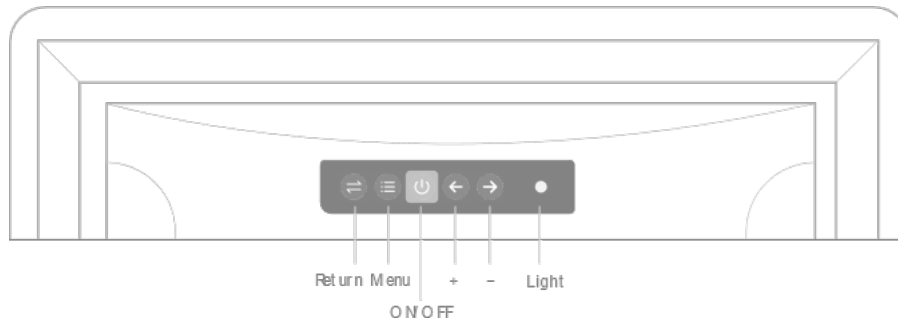


Figure 4. Rear navigation buttons

Symbol	Name	Instruction
Left	Choose +	Choosing different submenus, the function of this button is the change of data quantity.
Right	Choose -	
ON/OFF	On / off button	Start-up/Shut down the monitor.
Return	Back button	Return to the up level menu.
Menu	Main menu	First time this button is pressed, OSD will pop-up.

Table 3. Operating of rear navigation buttons

### 7.2 OSD Options - Adjustment

OSD menu's basic functions:

- Screen display effect adjustment;
- Brightness adjustment;
- Contrast ratio adjustment;
- Color adjustment;
- etc.

If order to enter the OSD menu interface, go into trial testing of below parameters by clicking main MENU options.

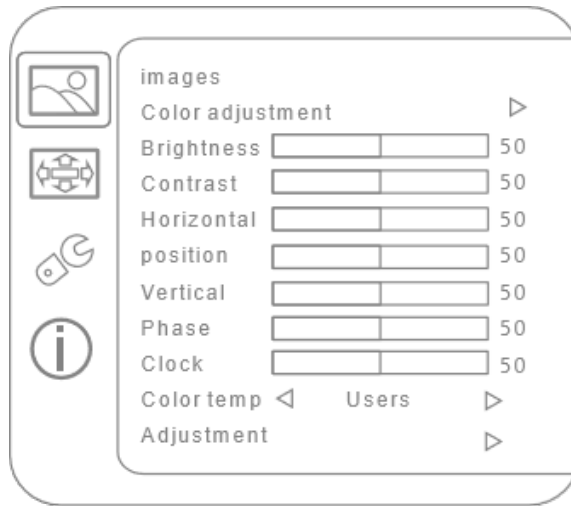


Figure 5. Images adjustment

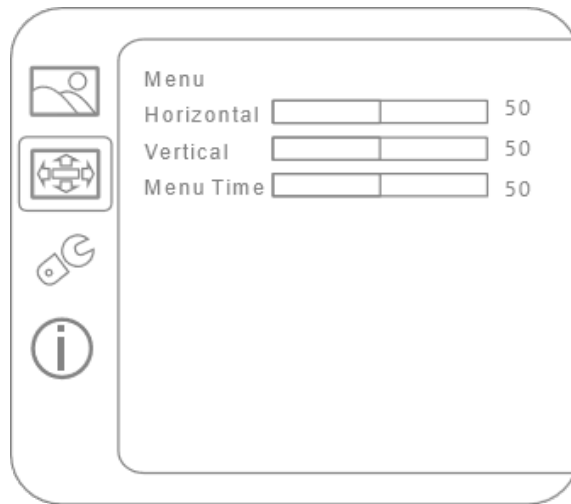


Figure 6. Menu adjustment

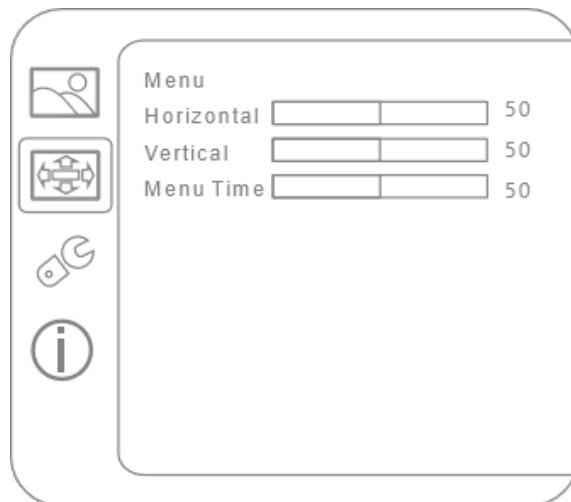


Figure 7. Settings adjustment

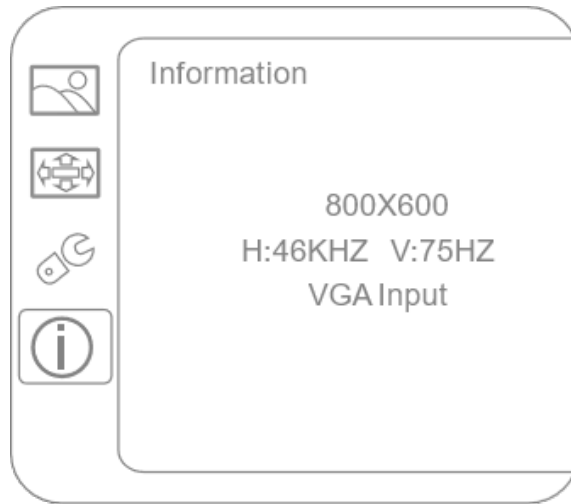


Figure 8. Information menu

## 8 Installation

- Do not place the monitor next to the radiator or heat source.
- Do not let any objects press or twine around the power cable or VGA cable.
- Do not place the monitor near to water source or humid places.
- Do not block off the back vents which can dissipate heat generated inside it to prevent damage of components.

### 8.1 Snap Joint Installation

Follow the below steps to install the monitor with four snap joints buckle hole:

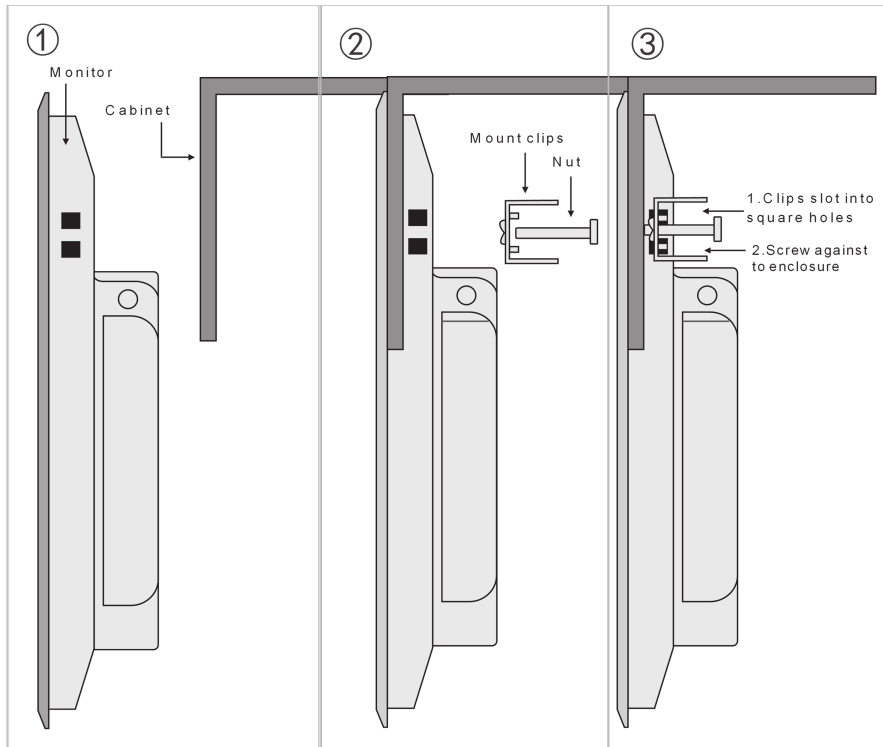


Figure 9. Snap joint installation

### 8.2 Wall Mount Installation

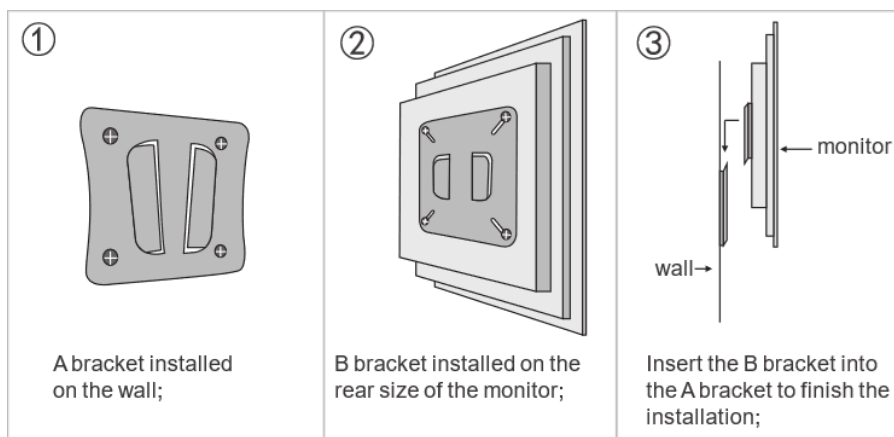


Figure 10. Wall mount installation