

SHARP®

Version 1.0
Produced in Jan. 2004

Instruction Manual

LCD monitor **IV-08MP**

Thank you for purchasing the SHARP IV-08MP LCD monitor. Read this introductory instruction manual carefully to thoroughly familiarize yourself with the functions and proper procedures for operation.

Notes

- This manual was written with the utmost care. However, if you have any question or inquiries concerning the product, please feel free to contact our dealers or service agents.
- Copying all or part of this booklet is prohibited.
- The contents of this manual may be revised or modified for improvement without prior notice.


Components of IV-08MP


The components of IV-08MP are as follows.

One(1) LCD monitor IV-08MP	
Accessories	<ul style="list-style-type: none">• Four (4) Main housing angle brackets• Two (2) Controller angle brackets• Two (2) Securing screws• One (1) Stylus pen• One (1) Instruction manual



Safety Precautions

Read this instruction manual and the attached documents carefully before installing, operating, or performing any maintenance, in order to keep the machine working correctly. Make sure you understand all of the equipment details, safety information, and cautions before using this machine. In this user's manual, the safety precautions are categorized as "Caution".

 **Caution**: Improper handling may cause dangerous situation, moderate or light injury, or damage to equipment.

Even when  is given, serious results may occur depending on the circumstances. Be sure to follow the advice given.

The following symbols are used to prohibit action.

 : This means do not do what is described. For example, prohibited disassembly is shown as .

(1) Installation

Caution

- Use only in the environments specified in the catalog and instruction manual.
Electric shock, fire or malfunction may result if used in the environment with high temperature, high humidity, dust, corrosive gas, excessive vibration or impact.
- Install the equipment only as described in the manual.
An improper installation may cause the equipment to fall off, breakdown, or malfunction.
- Never leave debris from wire cutting or any other foreign matter in the equipment.
It may cause a fire, breakdown or malfunction.

(2) Wiring

Caution

- Connect only to the specified power source.
Connection to the wrong power source may cause a fire.
- Wiring should be performed by a qualified electrician.
Improper wiring may lead to a fire, machine failure or electric shock.

(3) Maintenance

Prohibit

- Do not disassemble or modify the camera.
It may cause a fire, breakdown, or malfunction.

1. Outline/ Features

This touch panel type 8.4-inch TFT color LCD monitor, the IV-08MP, realizes power saving, automation and cost saving in inspection/measurement processes as the monitor for image sensor in various arenas. Using LCD with high-brightness and wide viewing angle, this monitor which is thinner and smaller than CRT can be easily mounted to the equipment. The touch panel provides a function to enter various settings to the controller (IV-S51M) by simply touching the screen. Also, since the IV-S51M can be connected directly to the backside of the IV-08MP to be used as one unit, the space required to install the unit will be smaller.

■ Features

● **Thin and light weight. Direct connection to the IV-S51M.**

The low-profile monitor with approx.46mm in depth is designed to provide easy installation to the equipment or the wall panel. Since the IV-S51M can be connected directly to the backside of the IV-08MP to be used as one unit, the space which would be required for wiring cables to the controller will be saved.

● **High-brightness and wide viewing angle for better viewing experience. TFT color LCD.**

Using the high-brightness (more than 400cd/m²) TFT color LCD, this monitor can be used in the bright environment. The wide viewing angle provides the wider range with up/down: 40°/60°, and left/right: 65°.

● **IV-S51M settings can be entered from the touch panel.**

By simply touching the screen, measurement program or setting of various parameters for the image sensor camera, IV-S51M, can be easily entered.

2. Precautions for Use

Pay attention to the points below when handling the IV-08MP.

(1) Installed location and environment

- Use the equipment in the environment where the ambient temperature is 0~40°C and the relative humidity is less than 90% RH. If the ambient temperature is out of the above range, install a forced fan or an air conditioner to keep the temperature within the required range.
- When this equipment and the controller (IV-S51M) are directly connected and used as one unit, make sure that the ambient temperature at this equipment side is within 0 to 40°C.
- Avoid installing this equipment in the place where the temperature would change drastically causing condensation.
- Avoid installing this equipment in the place where it would be exposed to the direct sunlight.
- Do not install this equipment in the place where excessive vibration or impact would directly affect the equipment.
- Avoid installing this equipment in the place where it would be exposed to water, corrosive gasses, combustible gasses, solutions, or grinding oil. Do not install the equipment in the place with too much dust, salt, or iron.

(2) Mounting

- Provide enough space for ventilation. If the ventilation is blocked, the internal temperature of the equipment may rise resulting in a fire.
- Avoid mounting this equipment onto the panel where high-tension equipment is installed. Keep this equipment away from high-tension cable or electric motor cable by at least 200mm when the equipment is mounted.

(3) Use

- Do not use the power supply of this equipment to power other equipment. Do not use any power supply other than 24V DC.
- Discontinue the use of this equipment promptly when any abnormality (over heat, odor, smoke, etc.) or failure is observed, and contact our dealers or service agents.
- Do not drop or give a strong impact to this equipment. It may damage the glass of display part.
- In dry environment, a human body may charge excessive static electricity. Static electricity may cause a damage to the components built inside of this equipment (base plate). Discharge the electricity first by touching the grounded metal before touching this equipment.

(4) Maintenance

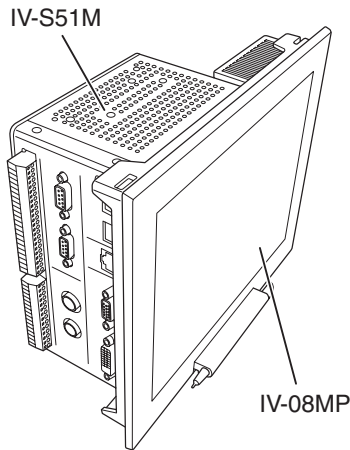
- Except for a service representative, do not take off the back cover or the mounting frame of this equipment.
Touching high-voltage parts inside of the equipment may cause electric shock or machine failure.
- Clean this equipment with soft dry cloth while the power supply is OFF. The use of thinner or other solutions may cause deformation or discoloration of the equipment. The use of hard cloth may cause scratches on the screen and other damages.

3. System Configuration

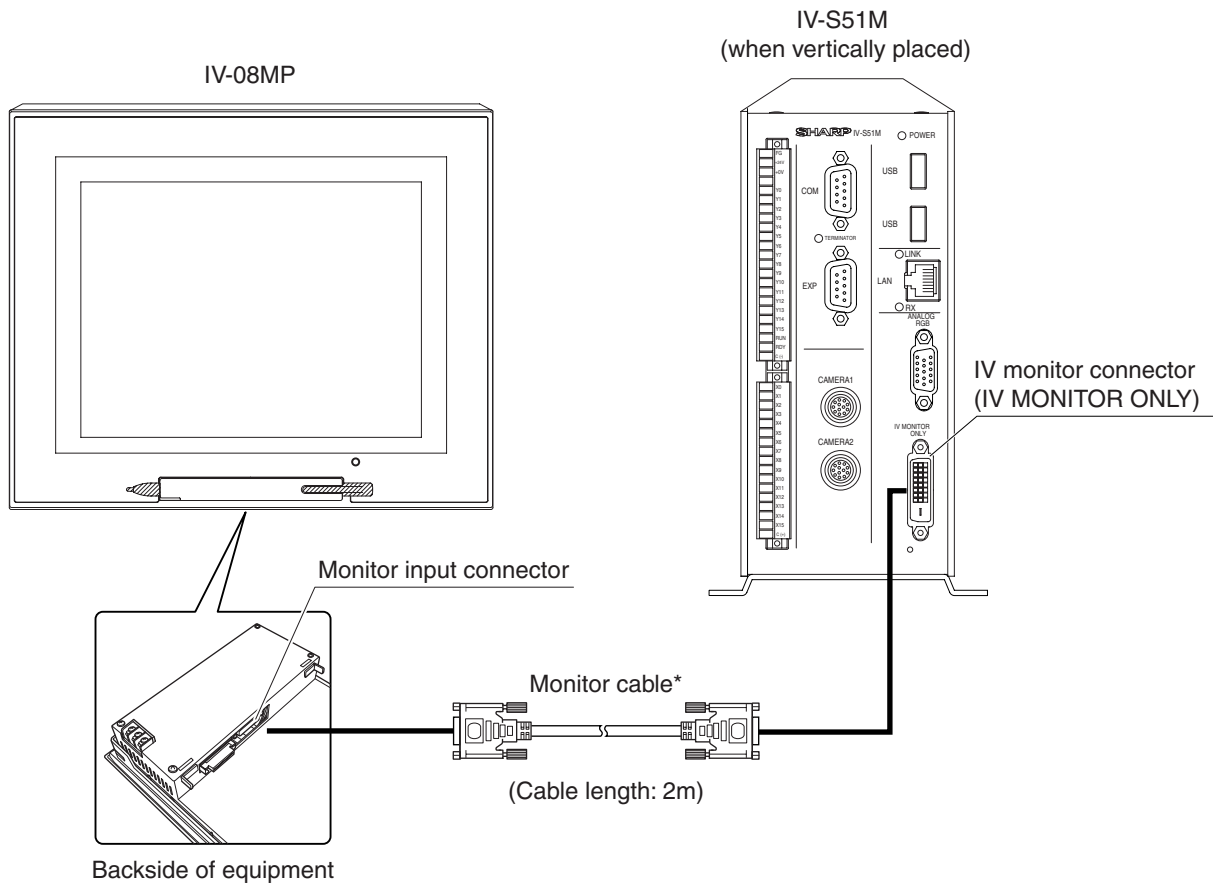
IV-S50 series controller can be directly connected to the backside of the IV-08MP monitor and used as one unit.

IV-08MP can also be connected to the controller using the monitor cable.

● Direct connection

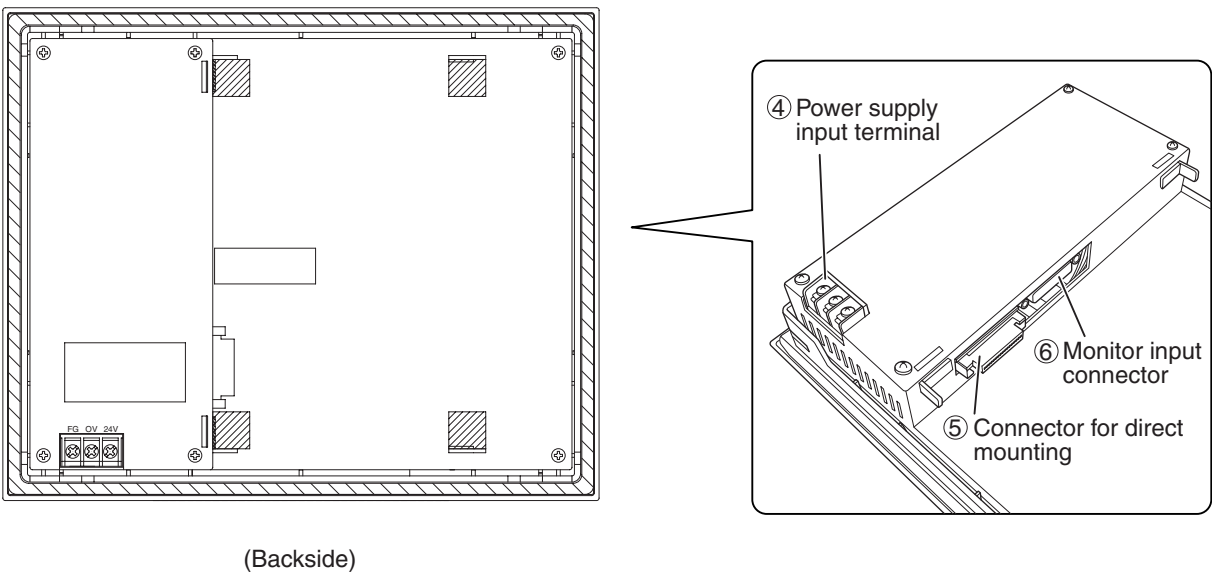
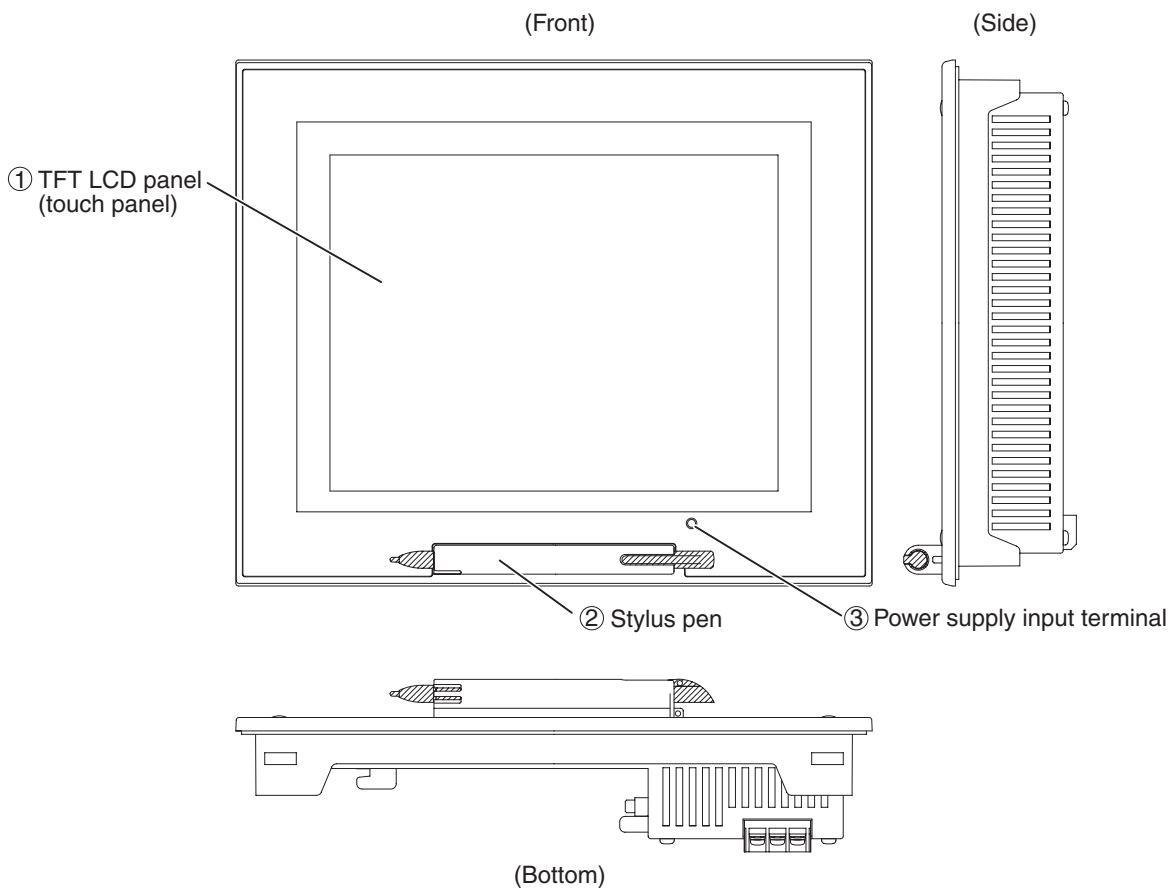


● Connection using monitor cable



* Monitor cable IV-S50MC2 is sold separately. The monitor cable needs to be purchased, when the monitor cable is used to connect the equipment and the controller.

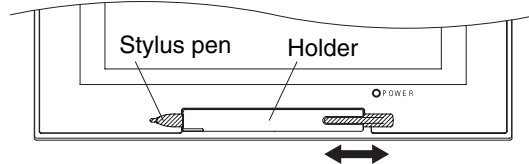
4. Part Names and Functions



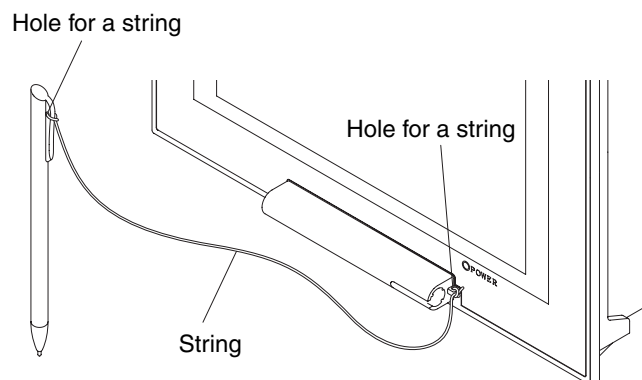
	Name	Function
①	TFT LCD panel (Touch panel)	LCD panel with 800×600 dots display. The stylus pen or a finger is used to enter the operation by directly touching the screen.
②	Stylus pen	This pen is used to enter the operation by touching the touch panel.
③	Power lamp	When the equipment is energized, it will be lit.
④	Power supply input terminal	Commercially available constant-voltage power supply (24V DC±10%) is connected here.
⑤	Connector for direct monitoring	This connector is connected to the connector of the controller when directly connect the IV-08MP to the controller (IV-S51M).
⑥	Monitor input connector	This connector is connected to the monitor output connector of the controller with the monitor cable IV-S50MC2 when connect the IV-08MP to the controller (IV-S51M) using the monitor cable.

● How to use the stylus pen

The stylus pen is inserted into the holder at the lower part of the main housing. Pull out the pen to the right before use. After each use, return the pen into the holder.



Put a string through the hole of the pen and the other end of the string through the hole of the holder to tie them to prevent the pen from falling off.



(Note)

Use the stylus pen (provided with the equipment) or the USB connected mouse (not provided with the equipment). Never use the sharp-pointed object such as a pencil or a mechanical pencil which will damage the display.

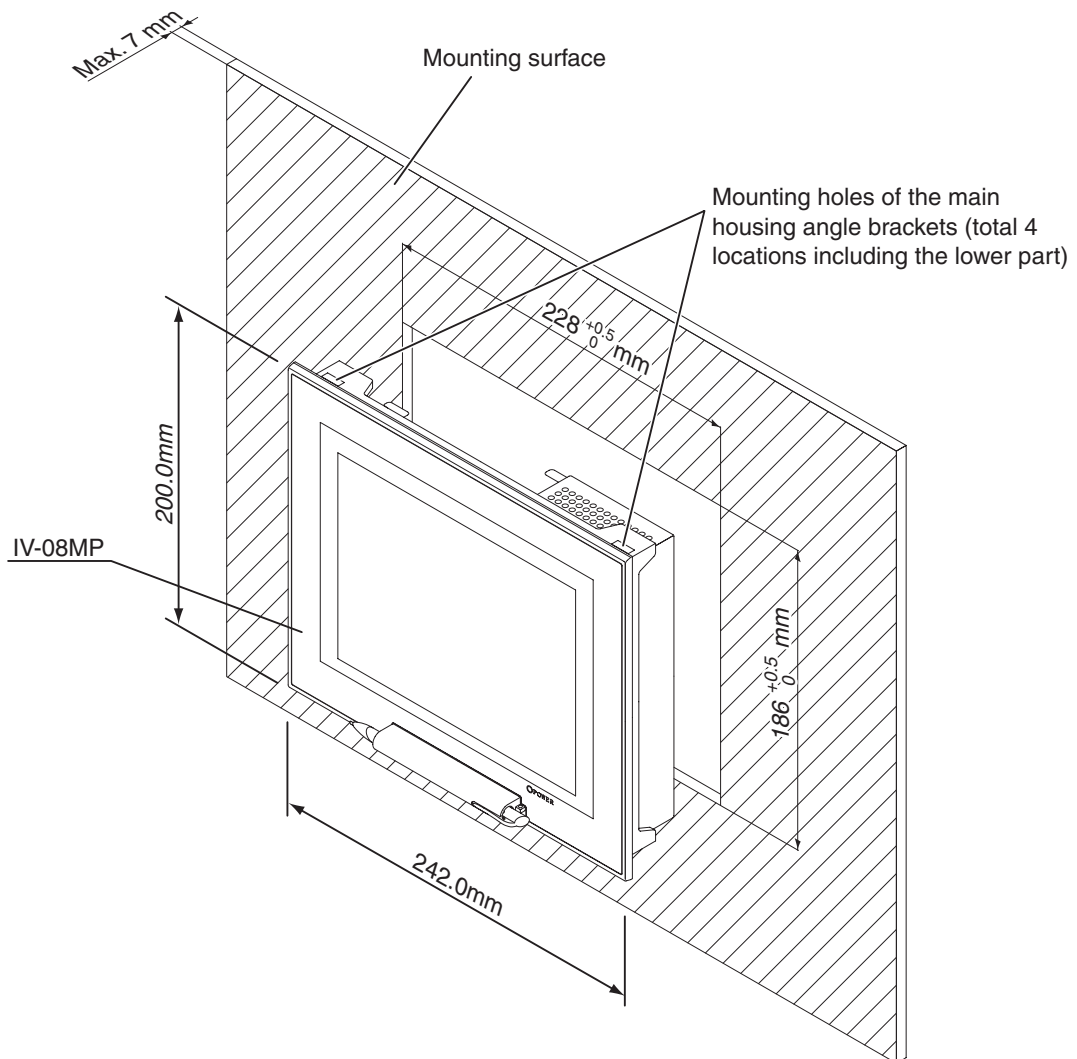
5. Installation Method

[1] Installation of IV-08MP

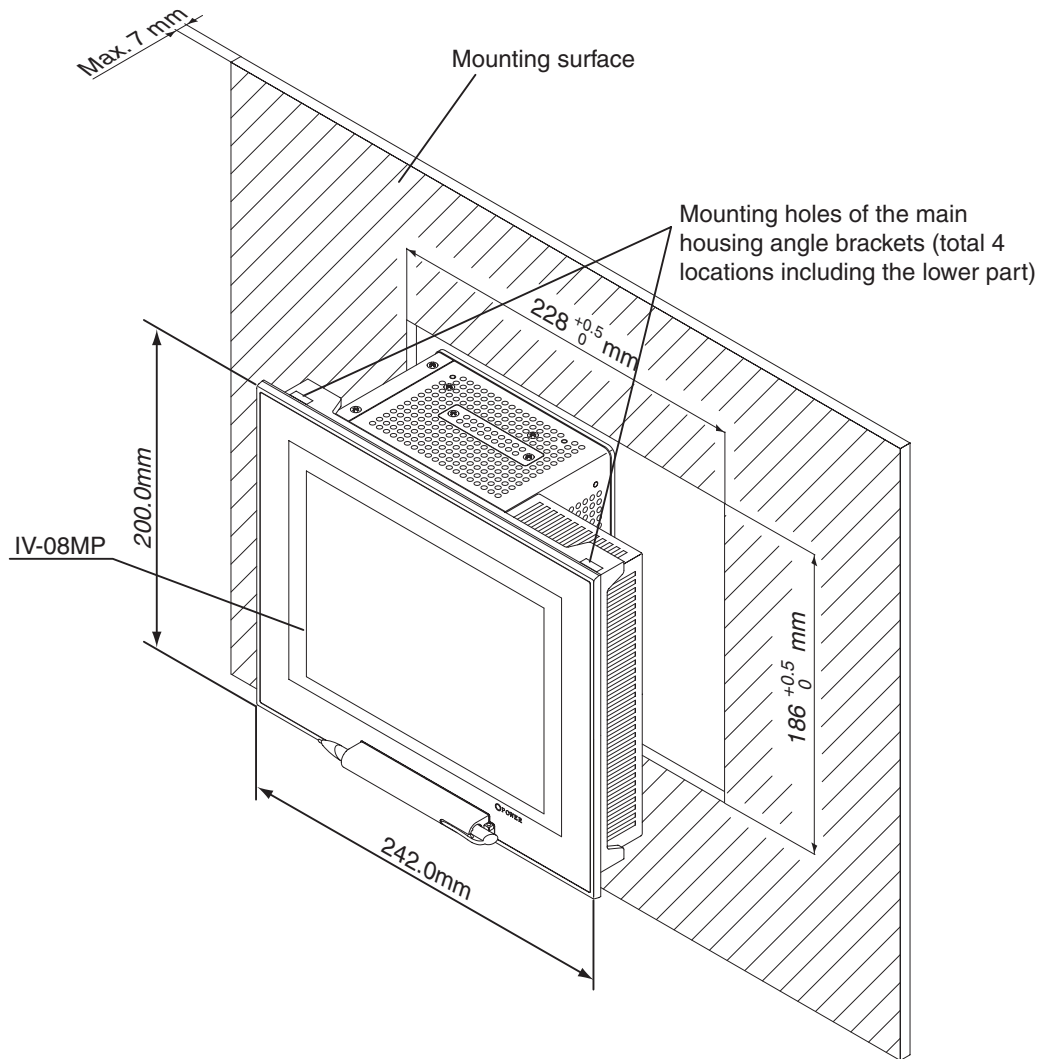
Secure the IV-08MP using four (4) mounting holes of the main housing angle brackets (four (4): provided with the equipment).

- ① Cut out the panel ($228.0^{+0.5}_0 \times 186.0^{+0.5}_0$ mm) of the mounting surface (thickness: max.7 mm) to fit the IV-08MP into the surface.

(When mounting the main unit only)

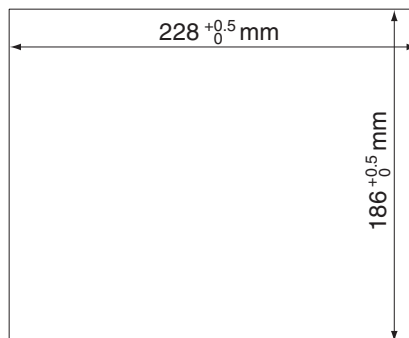


(When directly connected to the controller)

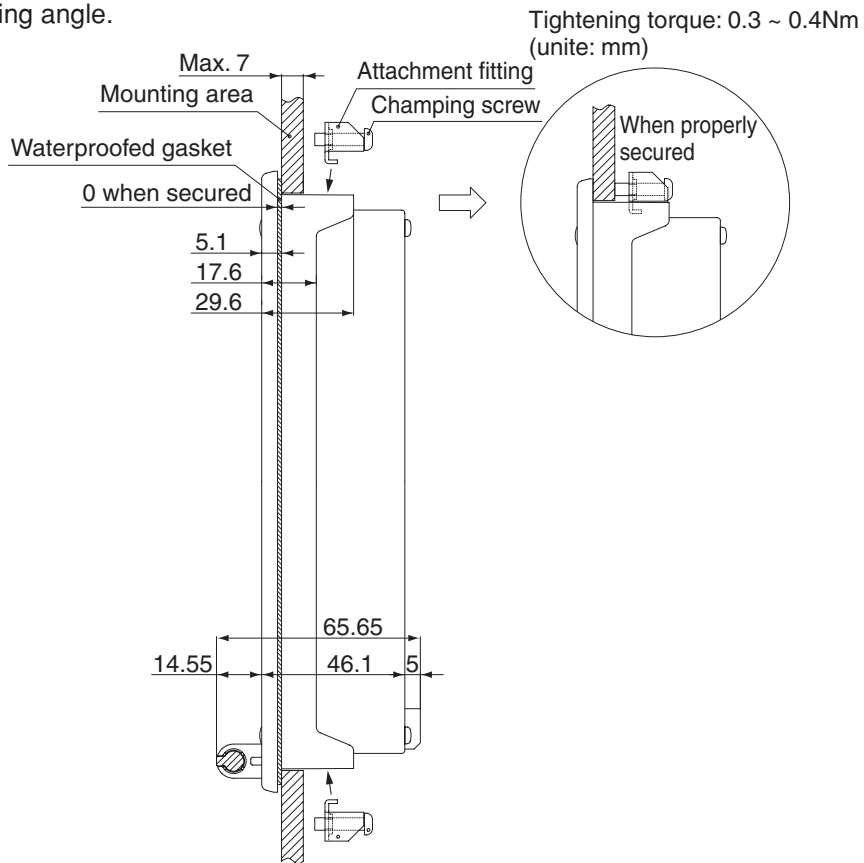


● **Dimensions of the cut panel**

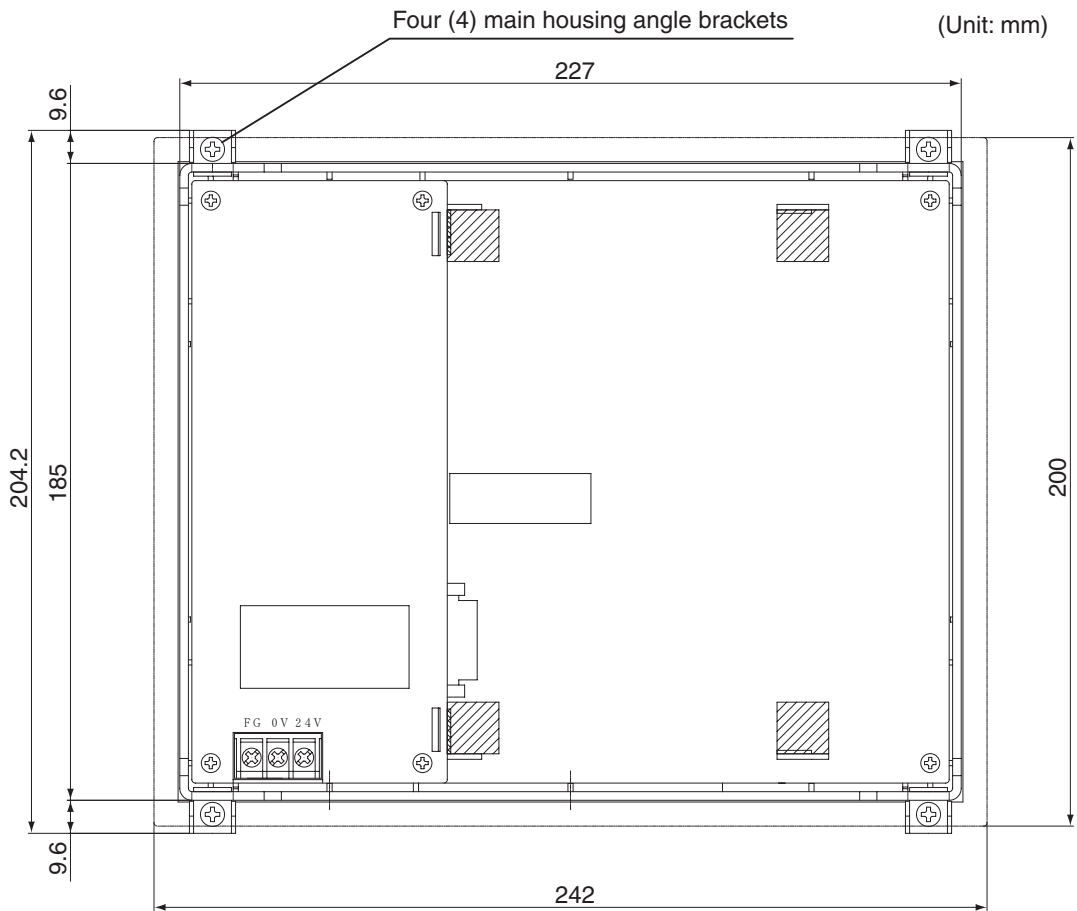
The dimensions of the cut panel will be the same in either case where only the main unit is mounted or directly connected to the controller.



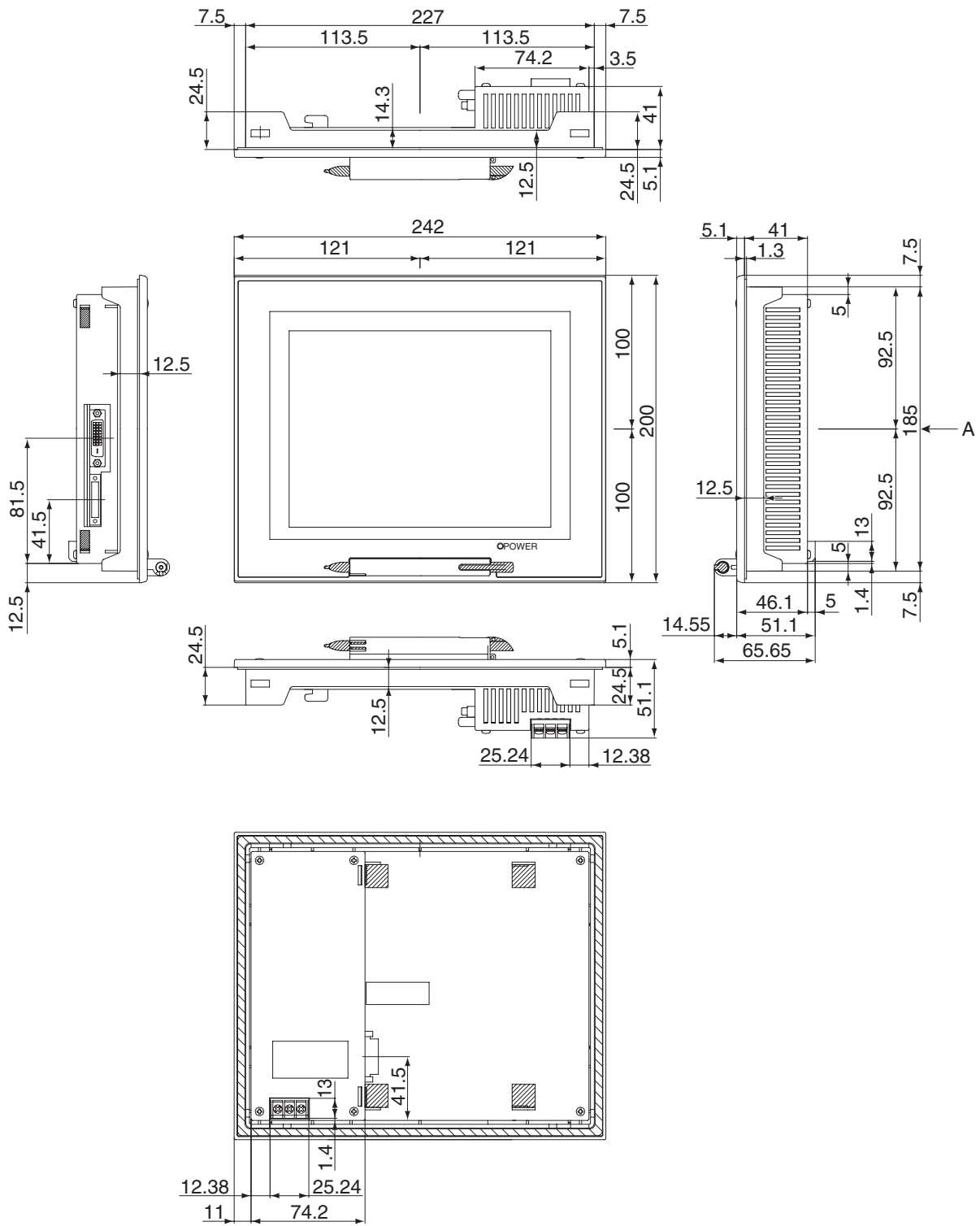
- ② Insert four (4) main housing angle brackets (2 each at upper and lower) into the mounting holes of the IV-08MP, and secure the IV-08MP to the mounting area with champing screws of the main housing angle.



[Backside view when secured with the main housing angle brackets]

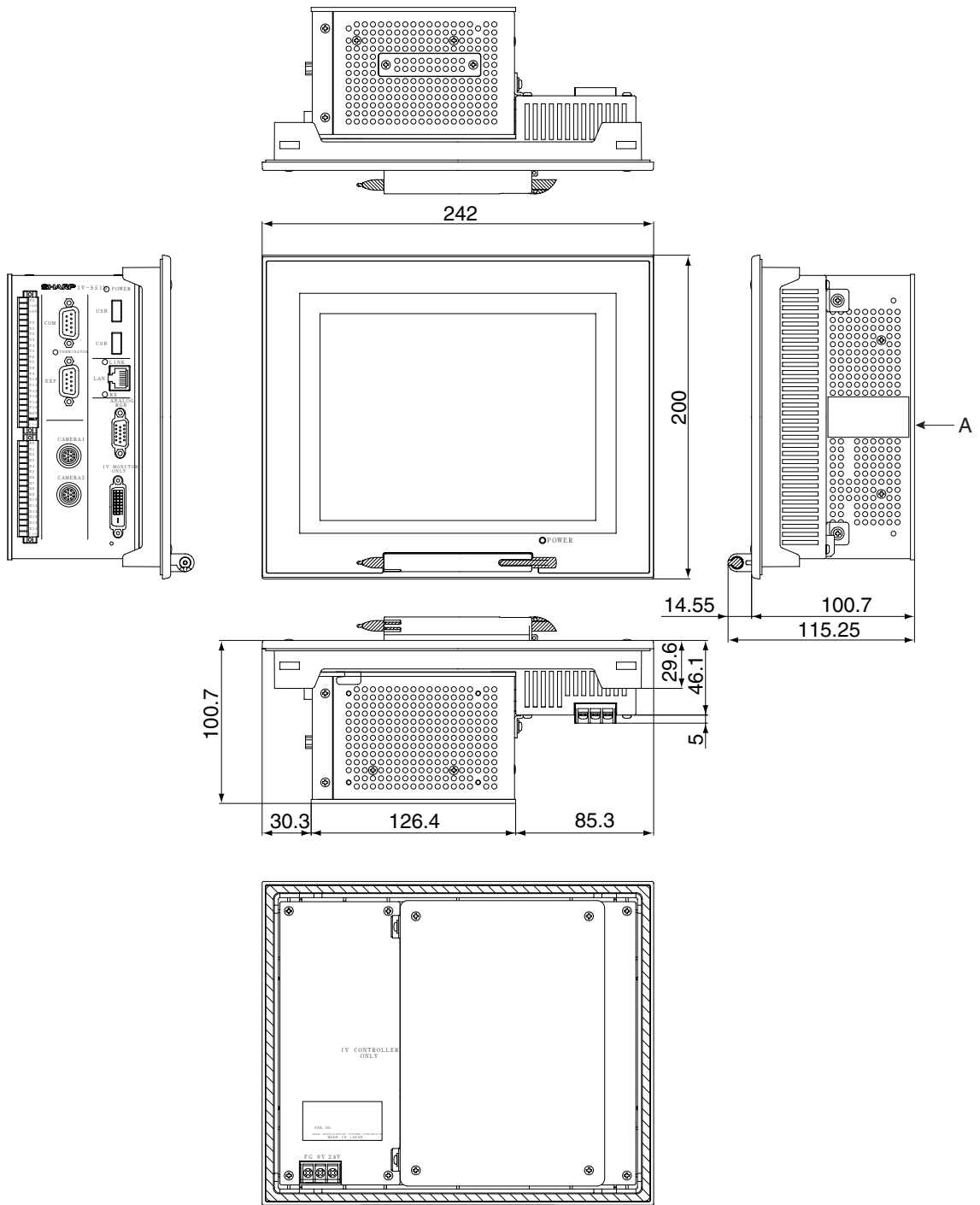


● External dimensions (main housing)



(A view on arrow)

● External dimensions (When directly connected to the controller)



(A view on arrow)

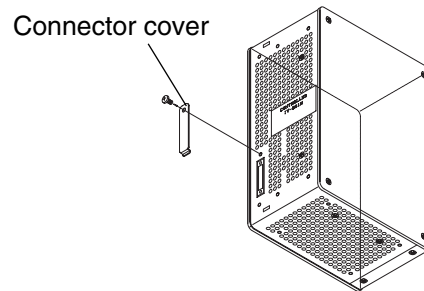
6. Connection Method

[1] Connecting to the controller (IV-S51M)

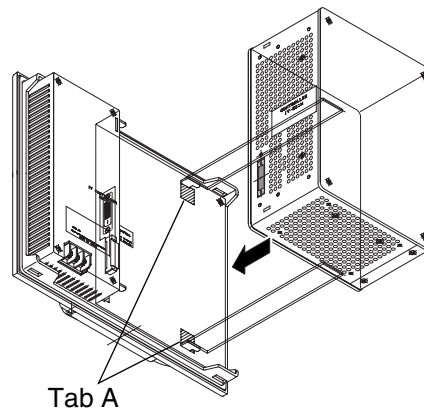
When the controller (IV-S51M) is directly connected, follow the instruction below to connect the controller to the IV-08MP.

(1) When directly connected

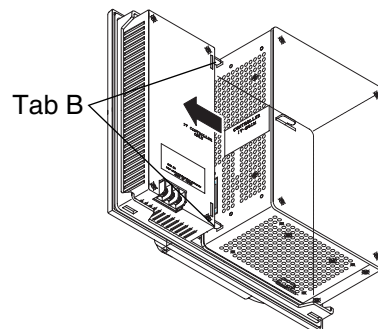
- ① Remove the connector cover from the main housing of IV-S51M.



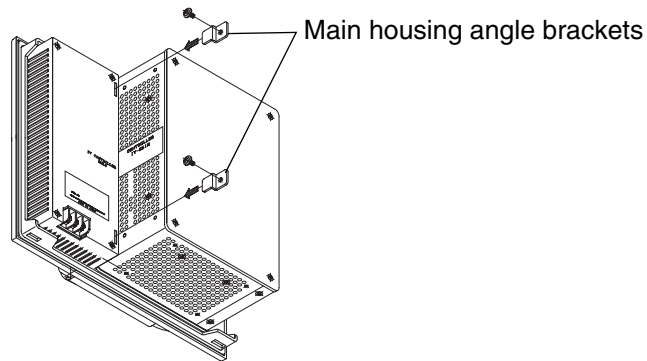
- ② Fit the tab A of the IV-08MP in the notch part of the IV-S51M.



- ③ To connect them, press the IV-S51M in place in the direction of the arrow so that the tab B is fit into the notch part. Make sure that the connectors of both units are firmly connected.

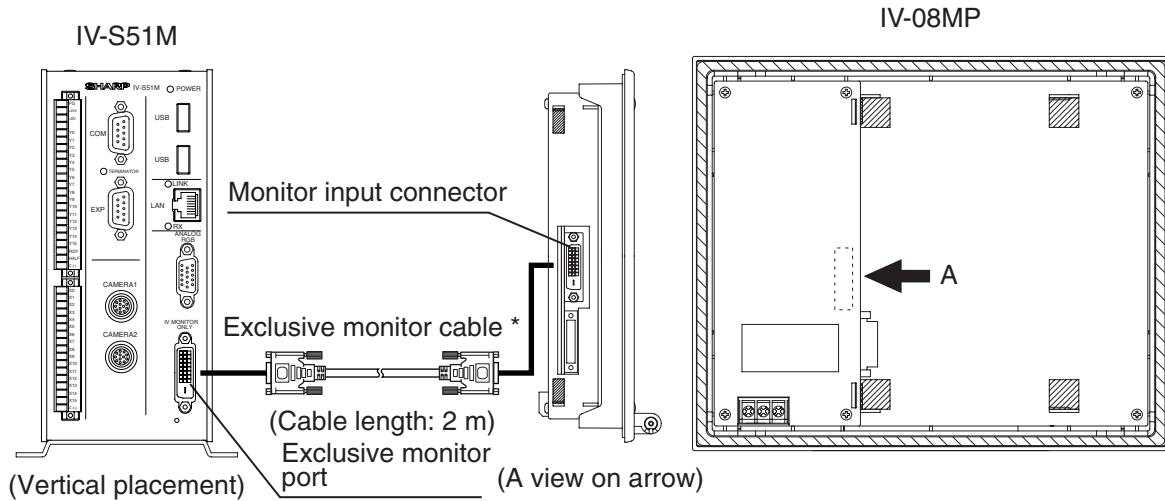


- ④ Insert two (2) main housing angle brackets (supplied with IV-08MP) as indicated below and secure them with two (2) securing screws (supplied with IV-08MP).



(2) When IV-08MP is connected to the controller using the monitor cable

Connect the monitor output connector of the IV-S51M and the monitor input connector of the IV-08MP using the IV monitor cable (IV-S50MC2).

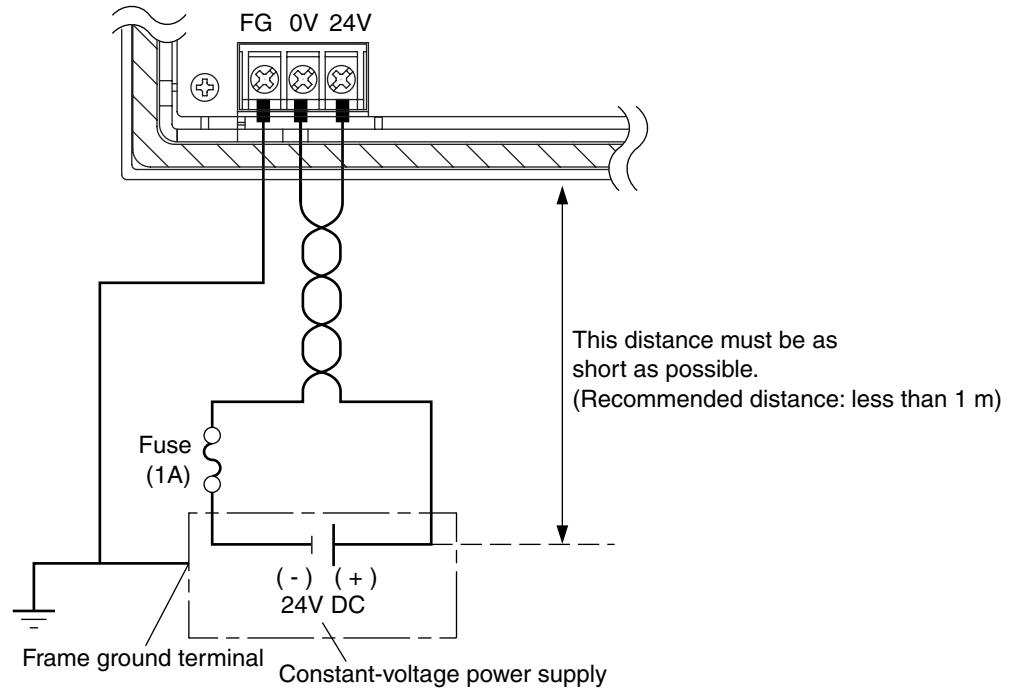


* Exclusive monitor cable (IV-S50MC2) is sold separately. The monitor cable needs to be purchased, when the monitor cable is used to connect the equipment and the controller.

[2] Connecting to a power supply

Connecting a commercially available constant-voltage power supply to the power terminal (POWER: +24V, 0 V) on the IV-08MP. Use a 24V DC \pm 10%, 800mA or more constant-voltage power supply.

- Use an individual power supply to supply power to the IV-08MP.
- Check the polarity of the power supply terminals, +24 V and 0 V. If power is supplied with the polarity inverted, the failure of the IV-08MP may occur.



7. Specifications

(1) General specifications

Item	Specifications
Power supply	24V DC, $\pm 10\%$
Power consumption	12W
Storage ambient temperature	-20 to 60°C
Operation ambient temperature	0 to 40°C
Operation ambient humidity	35 to 95% RH (no condensation)
Atmosphere	No corrosive gasses
Vibration resistance	JIS B 3502 or equivalent Vibration and acceleration: 0.15mm (10 ~ 58Hz), 9.8m/s ² (58 ~ 150Hz) Vibration frequency: 10 ~ 150 ~ 10Hz (1oct/min.) Frequency sweep time: 2 hours each in X, Y, and Z directions (number of sweeps: 15 times)
Shock resistance	JIS B 3502 or equivalent 147 m/s ² (in the direction of X, Y, and Z each 3 times)
Noise resistance	500Vp-p, 1ms width impulse by noise simulator
Protective structure	IEC standard, equivalent to IP65 (When mounting the main unit, when waterproof gaskets are used)
Outside dimension (mm)	242 (W) × 200 (H) × 42 (D)
Dimension of cut panel	228 ^{+0.5} ₀ × 186.0 ^{+0.5} ₀ mm
Weight	Approx. 1.0 kg

* The operation ambient temperature means the ambient temperature at not only the panel mounting side but at all around the IV-08MP.

(2) Performance specifications

Item	Specifications
Display device	TFT LCD module
Display color	Camera image gray scale 64 level, HMI image 65,000 color display
Screen size	8.4-inch SVGA
Video input	LVDS type
Touch panel	Resistance membrane type Resolution 1024×1024
Duration life of back light	50,000 hours (in the environment of 25°C and 65RH)

* The duration life is the time expended until the brightness of the back light reaches 50 % of the initial value or it starts blinking under the condition of 25±5°C and dimmer in "standard mode".