



OMRON

# Model F500-M10L LCD Monitor

## INSTRUCTION SHEET

Thank you for selecting OMRON product. This sheet primarily describes precautions required in installing and operating the product. Before operating the product, read the sheet thoroughly to acquire sufficient knowledge of the product. For your convenience, keep the sheet at your disposal.

### TRACEABILITY INFORMATION:

Representative in EU:  
Manufacturer:  
Omron Europe B.V.  
Wegalaan 67-69  
2132 JD Hoofddorp,  
The Netherlands  
Omron Corporation,  
Shiokoji Horikawa, Shimogyo-ku,  
Kyoto 600-8530 JAPAN  
Ayabe Factory  
3-2 Narutani, Nakayama-cho,  
Ayabe-shi, Kyoto 623-0105 JAPAN

The following notice applies only to products that carry the CE mark:  
Notice:  
This is a class A product. In residential areas it may cause radio interference, in which case the user may be required to take adequate measures to reduce interference.

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## PRECAUTIONS ON SAFETY

### ● Meaning of Alert Symbols

**WARNING** Indicates a potentially hazardous situation which, if not avoided, will result in minor or moderate injury, or may result in serious injury or death. Additionally there may be significant property damage.

### ● Warning

#### WARNING

Do not open cover. High voltage part inside may cause electric shock hazard.



Do not use the product in the place with suspected water (water-drops) entering. There is the danger of electric shock.



## PRECAUTIONS FOR SAFE USE

Be sure to respect following items for safety ;

### ■ Power source and wirings

- Use the product under the specified power source voltage in this instruction sheet.
- Use specified size pressure terminals.
- Do not connect only twisted wires with terminal block.
- Regarding power source, supply power by DC power supply with super low voltage circuit which is taken measures not to generate high voltage.
- Length of power supply line should be wired up as short as possible.

### ■ Installing circumstance

- Do not use the product in flammable and explosive gas atmosphere.
- Do not use the product in the open air and in locations which receive direct sunlight.
- Install housing main body not to block off the air well.
- In order to secure the safety of operation and maintenance, set the product apart from high voltage equipments and power instruments.

### ■ Others

- Acrid components are included in the inside materials of LCD panel. If LCD panel is broken and the inside matter in a liquid condition adheres on skin or gets into your eye, scrub your eye immediately by flowing water and consult with a doctor.
- LCD panel is a glass product. It is dangerous to hit or drop the product because of breakage. Require careful handling for LCD panel.
- Do not dare to resolve, crush or burn out the main body.
- If you feel the abnormality for the product, stop to use the product soon and turn off the power, and then contact our district branch or branch office.
- Dispose of F150-M10L components as industrial waste.

## PRECAUTIONS FOR CORRECT USE

- More distinct pictures are obtained by using S-VIDEO signal in comparison with composite signal. (In case of composite signal, the horizontal resolution will come down slightly)
- When model F150-M10L LCD monitor is used by connecting "Vision Sensor" of F150, F160, F180, F210, F250, F270 and F400 series, be aware of the following point ;
  - In case that "Window" is set out of the image indication area, the window-cursor or the part of window (upper 8 lines of the screen) is not displayed. But the measurement functions well.
- When model F150-M10L LCD monitor is used by connecting "Vision Sensor" of F500 series, be aware of the following point ;
  - In case that "Window" is set out of the image indication area, the window-cursor or the part of window (upper 36 lines and lower 28 lines of the screen) is not displayed. But the measurement functions well.
- A protective clear seal is affixed on the front screen of model F150-M10L LCD monitor. Please use the monitor by peeling off the seal in order to look the screen well.
- LCD panel is made by precise technologies, but there might be negligible faulty pixels. These faulty pixels are depend on the structure of LCD panel, and are not failure.
- Care for LCD monitor should be done after power off and confirming safe conditions. Soils of the product are wiped off lightly by a soft cloth, and dust on the display panel is cleared away by an air-brush. Do not use solvent such as benzene or thinner, etc.

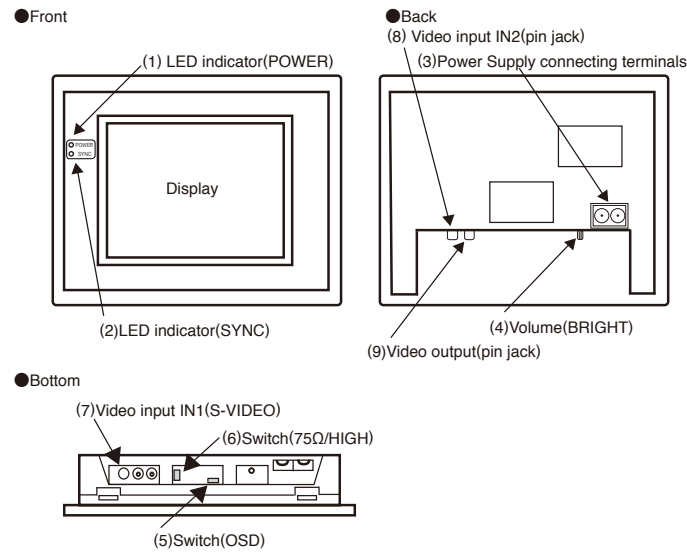
### 1. Confirmation of packed contents

Confirm if following goods are in a packing box ;

- LCD monitor ----- 1unit
- Instruction sheet (this sheet) ----- 1sheet
- Fixing bracket ----- 4pc
- Ferrite core (for video signal) ----- 1pc

We are prudential for packing, but if the deficiency is found, please contact our district branch or branch office.

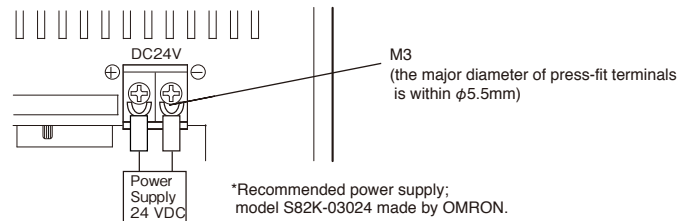
### 2. Part names



- (1) Green Light up greenly when power is supplied.
- (2) Orange Light up orange while video signal is inputted.
- (3) Hook up 24v DC power supply.
- (4) This volume is used to adjust the brightness of back-light. Rotating in a clockwise direction, the brightness is darkened and rotating in an anticlockwise direction, the brightness is lightened.
- (5) OSD (On Screen Display) switch. The operating method is referred to 4. OSD adjusting function.
- (6) Change-over switch (SW1) for video input terminating resistor (75Ω/HIGH). When a cable is not hooked up to video output terminal, put it 75Ω side. (SW2 is not used. SW2 is not hooked up anywhere)
- (7) This is a video input terminal. (S-VIDEO)
- (8) This is a video input terminal. (pin jack)
- (9) This is a video output terminal. (pin jack)  
Composite video output is not dealt with "buffering". When the composite video output of this product is used by hooking up to other device, SW1 of (6) is set to "HIGH" side or cut off the terminating resistance of the hooked up device.

### 3. Power Supply Connecting Terminals

Hooked up terminals of power source are located in the back face of this monitor. Hook up 24 VDC power supply.



- The length of power line should be wired as short as possible. (length: 10m or less)
- After wiring, replace the terminal cover for electrical shock stop.

### 4. OSD (On Screen Display) adjusting functions

The adjustment of indicating conditions for this product is performed by operating the adjusting menu which is displayed with OSD. The operation of OSD is performed by the operating switch (OSD) which is installed on the bottom face of this product.

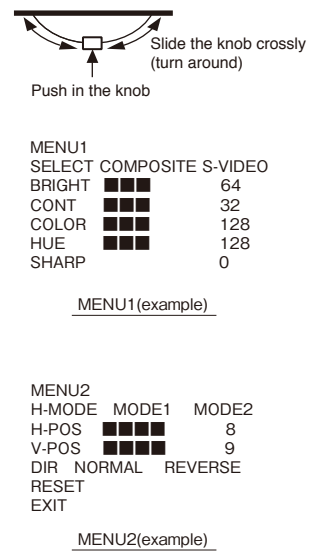
### ● Basic operation of OSD switch

There are 2 ways of operation for OSD switch at the bottom face. One is "push knob" and the other is "slide crossly (turn around)".

\*Note: in the slid condition the knob is not able to push in.

### ● Operating method of OSD

- (1) Boot up OSD  
Pushing in OSD switch once, "MENU1" of OSD is booted up.
- (2) Move among menu items  
Per push the switch, the menu item is moved from top to bottom in turn. Moving to the bottom item of MENU1, next is the top item of MENU2, and moving to the bottom item of MENU2, next is the top item of MENU1.
- (3) Change of adjusting (setting) value  
Slide the switch knob crossly.
- (4) End of OSD (EXIT)  
Select "EXIT" and slide the switch knob crossly. Then, OSD comes to an end.



### Reference:

Your setting values are saved in the product when OSD comes to an end, and it is possible to operate the product with your setting values since next power supply.

### ● Adjusting (setting) item

Adjusting items of this product are shown in below table.

Item	Setting Range	Functions	Factory Setting
SELECT	COMPOSITE / S-VIDEO	- Input change of COMPOSITE/S-VIDEO - Selecting priority when power is supplied. *Note1	COMPOSITE
BRIGHT	0~127	Adjust the brightness of LCD screen	64
CONT	0~63	Adjust the contrast of LCD screen.	32
COLOR	0~255	Adjust the color strength	128
HUE	0~255	Adjust the coloration.	128
SHARP	0~15	Correct the image outline.	0
H-MODE	MODE1/MODE2	Adjustment of horizontal display sampling clock.	MODE1 *Note 4
H-POS	0~15	Adjustment of horizontal display position.	8 *Note 4
V-POS	0~15	Adjustment of vertical display position.	9 *Note 4
DIR	NORMAL/REVERSE	Selection of the screen-display direction. *Note 2	NORMAL
RESET	-	Initialize the display setting. *Note 3	-
EXIT	-	End of OSD display.	-

Note1. When the power is supplied in condition of both signals inputted, the selected signal is displayed on the screen.

Note2. The change of the screen-display direction is reflected after re-supply of power.

Note3. When RESET is carried out, select "Yes(Execute)" or "No(Cancel)".

Note4. This item is set perfectly. Please use the product in factory setting.

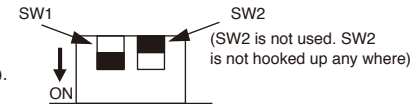
### 5. Change-over switch (SW1) of video input terminating resistor (75Ω/HIGH)

This is ON/OFF switch of video input (pin jack) terminating resistor (75Ω/HIGH).

• ON : 75Ω terminating resistor

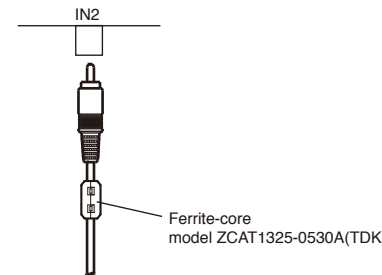
• OFF : high impedance (about 47kΩ)

The factory setting of SW1 is ON (75Ω).



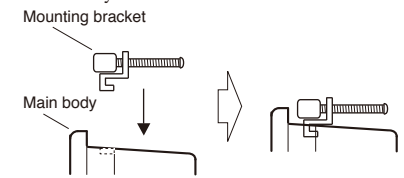
### 6. Video input cable IN2 (pin jack)

Please use the product by installing attached ferrite-core to video input cable (pin jack).

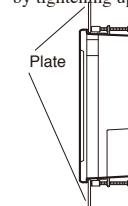


### 7. Mounting method

- ① Hook the boss of mounting bracket on holes for bracket at the top face and the bottom face of main body.



- ② Interleave the provided mounting plate and fix it by tightening up screws.



**Notice** Don't mount the product by using "VESA mount" at the back face. Mounted strength is not assured.

### 8. Specification

#### ● General specification

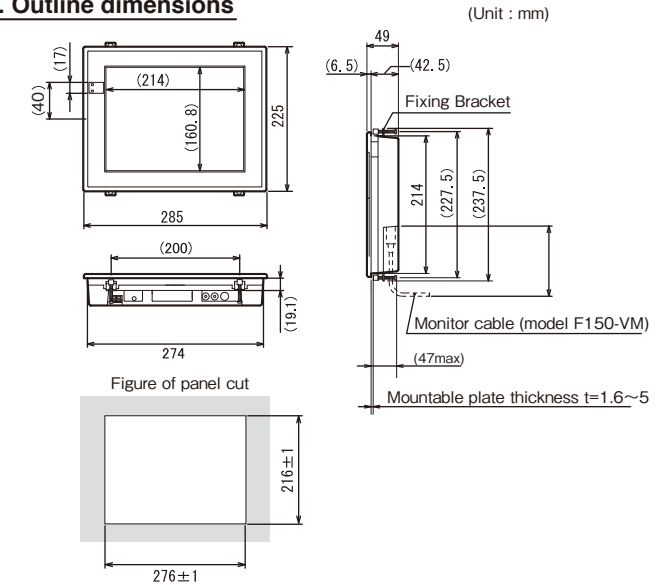
Item	Specification
Power source voltage	20.4 to 26.4 VDC
Current consumption	1.0A max.
Dielectric strength	840 VAC, 50/60Hz between whole DC external terminals and ground
Vibration resistance	10 to 150Hz, single amplitude; 0.1mm (max. acceleration; 15m/s <sup>2</sup> ), 10 times of X, Y & Z directions in each 8 minutes
Ambient temperature	0 to +50°C in operation, -20 to +65°C in storage
Ambient humidity	30 to 85%RH in operation and storage (no condensation)
Ambient atmosphere	No corrosive gases
Protection structure	IEC60529 standard; IP20
Materials	Case: ABS resin, Display surface: PMMA (Acrylic)
Weight	Approx. 1.8 Kg

#### ● Specification of using LCD panel

Item	Specification
Manufacturer	NEC
LCD type name	NL64488C33-46
Effective display area	211.2 (horizontal) x 158.4 (vertical) mm
Drive system	a-Si TFT active matrix method
Number of pixels	640x480
Filter arrangement	RGB vertical stripe
Pixel pitch	0.33 (horizontal) x 0.33 (vertical) mm
Contrast*1	85:1 (TYP.)
View spread (angle)	Right and left: each 70° Ups: 45° Downs: 55° (TYP. contrast ratio; 10:1 or more)
Screen brightness*1	350cd/m <sup>2</sup> (TYP.)
Backlight	Cold cathode bulb edge light type
Indicator colors	262,144 colors (pseudo full color)

\*1: Above is the specification of using LCD panel. As a protection cover is installed to this product, optical characteristics are slightly different from above specification.

### 9. Outline dimensions



### Suitability for Use

Omron Companies shall not be responsible for conformity with any standards, codes or regulations which apply to the combination of the Product in the Buyer's application or use of the Product. At Buyer's request, Omron will provide applicable third party certification documents identifying ratings and limitations of use which apply to the Product. This information by itself is not sufficient for a complete determination of the suitability of the Product in combination with the end product, machine, system, or other application or use. Buyer shall be solely responsible for determining appropriateness of the particular Product with respect to Buyer's application, product or system. Buyer shall take application responsibility in all cases.

NEVER USE THE PRODUCT FOR AN APPLICATION INVOLVING SERIOUS RISK TO LIFE OR PROPERTY WITHOUT ENSURING THAT THE SYSTEM AS A WHOLE HAS BEEN DESIGNED TO ADDRESS THE RISKS, AND THAT THE OMRON PRODUCT(S) IS PROPERLY RATED AND INSTALLED FOR THE INTENDED USE WITHIN THE OVERALL EQUIPMENT OR SYSTEM. See also Product catalog for Warranty and Limitation of Liability.

OMRON Corporation Industrial Automation Company  
Tokyo, JAPAN Contact: [www.ia.omron.com](http://www.ia.omron.com)

**Regional Headquarters**  
● OMRON EUROPE B.V.  
Sensor Business Unit  
Carl-Benz-Str. 4, D-71154 Nufringen, Germany  
Tel: (49) 7032-811-0/Fax: (49) 7032-811-199

● OMRON ELECTRONICS LLC  
One Commerce Drive Schaumburg,  
IL 60173-5302 U.S.A.  
Tel: (1) 847-843-7900/Fax: (1) 847-843-7787

● OMRON ASIA PACIFIC PTE. LTD.  
No. 438A Alexandra Road # 05-05/08 (Lobby 2),  
Alexandra Technopark,  
Singapore 119967  
Tel: (65) 6835-3011/Fax: (65) 6835-2711

● OMRON (CHINA) CO., LTD.  
Room 2211, Bank of China Tower,  
200 Yin Cheng Zhong Road,  
PuDong New Area, Shanghai, 200120, China  
Tel: (86) 21-5037-2222/Fax: (86) 21-5037-2200

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