

# OMRON

## Model FLV-ATC□1024-□

Analog Lighting Controller

### 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:

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 2132 JD Hoofddorp,  
 The Netherlands

Manufacturer:  
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 Kyoto 600-8530 JAPAN

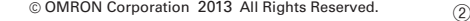
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 Ayabe-shi, Kyoto 623-0105 JAPAN

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

#### ● Meanings of Signal Words

**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.

**CAUTION** Indicates a potentially hazardous situation which, if not avoided, may result in minor or moderate injury or in property damage.

#### ● Alert Statements in This Sheet

##### WARNING

This product is not designed or rated for ensuring safety of persons either directly or indirectly. Do not use it for such purposes.



Do not disassemble the product. Doing so may cause electric shock due to the high voltage portion. Burn also may result due to high temperature. Do not attempt to disassemble, deform by pressure, incinerate, repair, or modify this product.



##### CAUTION

Do not use it exceeding the rated voltage. There is a possibility of failure and fire.



Looking into the LED light continuously may occasionally cause visual impairment. Do not look directly into the LED light.



Minor burns may occasionally occur. Do not touch the case as it is very hot while the unit is operating or immediately after turning OFF the power supply. Minor burns may occasionally occur.



### PRECAUTIONS FOR SAFE USE

Please observe the following precautions for safe use of the products.

#### 1. Installation Environment

- Do not use the product in environments where it can be exposed to inflammable/explosive gas.
- To secure the safety of operation and maintenance, do not install the product close to high-voltage devices and power devices.
- Do not touch the main unit with the conductive parts (metal parts) of peripheral devices.
- To use the main unit, keep it well away from those devices.

#### 2. Power Supply and Wiring

- Use a load that is equal to or less than the rating.
- High-Voltage lines and power lines must be wired separately from this product. Wiring them together or placing them in the same duct may cause induction, resulting in malfunction or damage.
- Take sufficient safety measures such as fail-safe circuit to use the product.
- Connect the Frame ground terminal to the ground completely.
- When wiring the terminal block, use an applicable cable (AWG 14 to 24, tip processing length: 7 mm).
- Always turn off the power of the main unit before taking the following actions. Not doing so may result in malfunction.
  - Connecting/disconnecting the lighting connecting connector
  - Inserting/removing the trigger input terminal block

#### 3. Others

- Do not use in safety circuits for atomic energy or that are critical for human life.
- Do not attempt to disassemble, deform by pressure, incinerate, repair, or modify this product.
- When disposing of the product, treat as industrial waste.
- Connect only an applicable lighting (FLV series). Use of other devices may result in fire, explosion, malfunction or failure.
- If you notice an abnormal condition such as a strange odor, extreme heating of the unit, or smoke, immediately stop using the product, turn off the power, and consult your dealer.
- Do not drop or impose excessive shock to the product. Doing so may result in damage to the product.
- This product might be heated to around 70°C in the room temperature environment. So, do not touch it directly before putting heatproof gloves.
- Ensure that all components which have locking mechanisms are locked before using the product.
- Be careful not to drop the product when opening the crate and carrying it.

#### 4. Regulations and standards

This lighting complied with the EN standard (EN61326) with a EMC directive (No.2004/108/EC).

### PRECAUTIONS FOR CORRECT USE

Observe the following to prevent failure, malfunctioning, and adverse effects on performance and the device.

#### 1. Installation site

- Do not install in the following locations:
  - Locations where the ambient temperature exceeds the rated temperature range.
  - Locations subject to sudden temperature changes (where condensation will form).
  - Locations where the relative humidity is below or above 35 to 85% RH.
  - Locations where there are corrosive or flammable gases.
  - Locations where there is dust, salt, or iron powder.
  - Locations where the device will be subject to direct vibration or shock.
  - Locations where there is strong scattered light (laser light, arc welding light, ultraviolet light, etc.)
  - Locations exposed to direct sunlight or next to a heater.
  - Locations where there is splashing or spraying of water, oil, or chemicals.
  - Locations where there is a strong electrical or magnetic field.

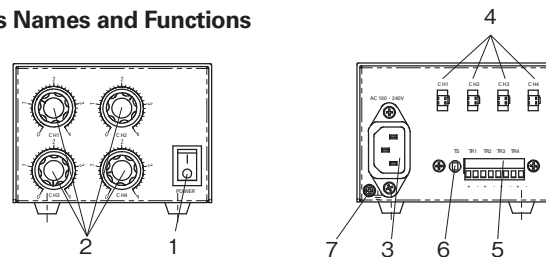
#### 2. Maintenance

- Do not install the product close to high-voltage devices and/or power devices in order to secure the safety of operations and maintenance.
  - When inserting or removing the unit or cables, be sure to turn OFF the power of the Controller first before operation.
  - Never use paint thinner, benzene, acetone, or kerosene to clean the product.
- #### 3. Power and cable connections
- If there are surges on your power line, connect a surge absorber as appropriate for your conditions of use.
  - Before turning on the power after the wiring is completed, verify that the power is correct, that there are no incorrect connections such as a shorted load circuit, and that the load current is suitable. Incorrect wiring may cause damage and failures.
  - For cable extension between the lighting and lighting controller, use an optional extension cable (FLV-XC□) or branching cable (FLV-XC□ S2). There are four types of cable length: 1m/2m/3m/5m. Only one extension cable can be used.
  - The bending radius for the wiring of lighting cable must be at least 20 mm.

#### 4. Warming Up

After turning on the power supply, allow the controller to stand for at least 30 minutes before use. As the circuit is unstable immediately after the power ON, brightness may gradually change.

### Parts Names and Functions



No.	Name	Description
1	Main power supply	Starts up the Controller when it is turned ON.
2	Lighting adjustment volume	Rotating the volume clockwise increases the emission intensity or counterclockwise decreases it.
3	AC power supply input connector	A terminal to supply AC power. Connect the provided AC input cable.
4	Lighting connector	Connects an LED lighting.
5	Terminal block for trigger input	A terminal block for lighting illumination trigger input from outside to each lighting.
6	Lighting mode switching button	<p>Illumination mode switch button is ON (The button is pushed.):</p> <p>Short-circuiting (+) and (-) of TR1 to TR4 respectively makes the trigger input status ON, turning the light ON.</p> <p>Releasing (+) and (-) makes the status OFF, turning the light OFF.</p> <p>Illumination mode switch button is OFF (The button is not pushed.):</p> <p>Short-circuiting (+) and (-) of TR1 to TR4 respectively makes the trigger input status OFF, turning the light OFF.</p> <p>Releasing (+) and (-) makes the status ON, turning the light ON.</p>
7	Frame ground terminal	A terminal for frame ground. Connect the ground line.

### Specifications

Item	Model	FLV-ATC21024-□	FLV-ATC41024-□
Number of connectable lightings		2	4
Applicable lighting		FLV series (However, FLV-EP series and FLV-LN series are excluded.)	
Power supply voltage *2		100 to 240 VAC 50/60Hz	
Current consumption		1A max.	
Electricity of connectable lighting		2ch total 40 W max. 30 W max. for 1ch	4ch total 40 W max. 30 W max. for 1ch
Drive method		Constant voltage method	
Lighting method		Trigger lighting, Continuous lighting	
Luminance control method		Voltage light adjustment: 14.0 to 24.0 V	
Trigger lighting		Lighting in synchronization with input from the trigger input terminal	
Trigger lighting delay time		Ton : 100 μs max.	
External interface		Trigger input terminal block	
Dielectric strength		AC1500V 50/60Hz 1min	
Insulation resistance		20 MΩ (500VDC)	
Ambient temperature		Operating: 0 to +50°C, Storage: -15 to +60°C (with no icing or condensation)	
Ambient humidity		Operating/storage: 35% to 85% (with no condensation)	
Degree of protection		IP20 (IEC60529)	
Vibration resistance (destructive)		10 to 150 Hz, (0.2mm double amplitude) 80 min each in X, Y, and Z directions	
Shock resistance (destructive)		150 m/s <sup>2</sup> 3 times each in 6 directions (up/down, left/right, forward/backward)	
Materials		Case : Aluminum	
Weight		Approx. 800g	
Accessories		Instruction sheet (this sheet), AC input cable *1	

\*1: The suffixed symbol of the model name means the plug shape of the accessory cable. A model name with no suffix means type A.

\*2: This product is the exclusive use for apparatus inclusion in the industrial machine field.

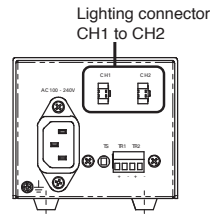
This product cannot be used for the connection to electric power equipment, such as a common residence, store, and small establishment, because of nonconformity with to Electrical Appliance and Material Safety Law (PSE).

## ■ Connection with Lighting

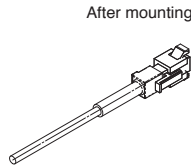
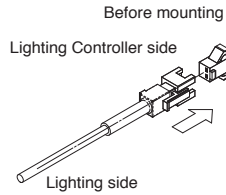
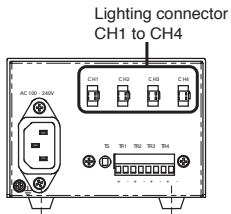
### ■ Mounting

Insert the connector at the applicable Lighting (FLV series) into the lighting connector until it clicks.

#### ● FLV-ATC21024-□

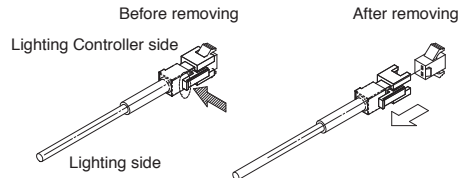


#### ● FLV-ATC41024-□



### ■ Removing

Hold the connector lock at the applicable lighting (FLV series) in the direction of the arrow pull out



### ■ Cable extension

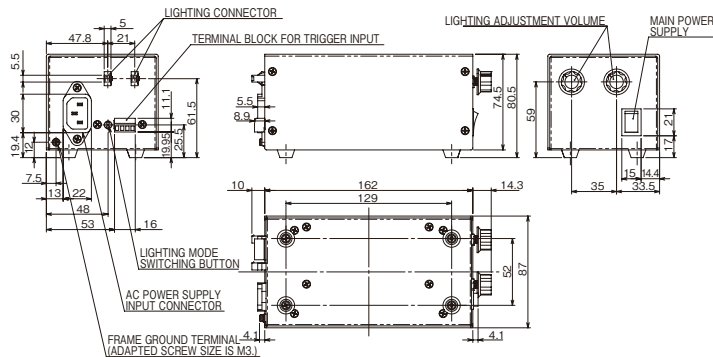
To extend the Lighting and Lighting Controller, be sure to use optional extension cable (FLV-XC□) or branch cable (FLV-XC□S2).

[Important] ·Make sure that excessive force is not imposed on the cable and connector.

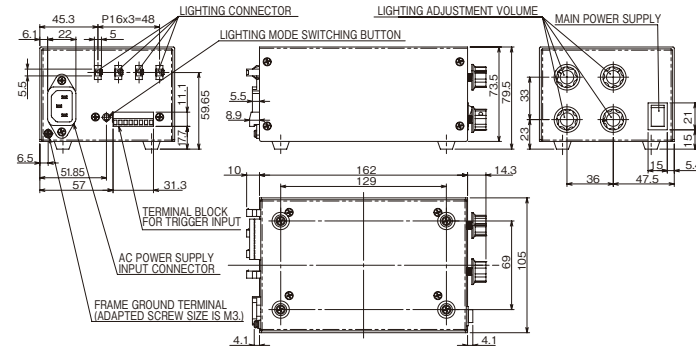
·Do not install the product in which loads are constantly applied to the connector such as the cable being under tension.

## ■ Dimensions (Unit:mm)

#### ● FLV-ATC21024-□



#### ● FLV-ATC41024-□



## ■ Connecting AC Input Cable

·The plug shape of the provided AC input cable differs depending on the symbol of the suffix of the model name. Choose the model according to your area where the product is used.

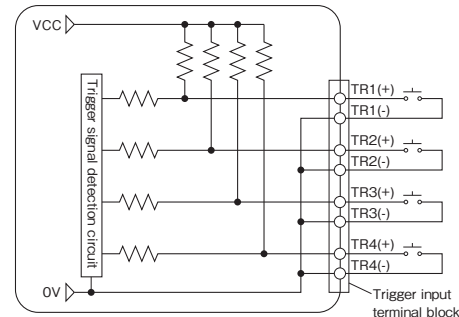
·Cable length is about 2m.

Model suffix	Plug type	Rated voltage	Certified Standards
(None)	A type	125V	PSE
-C	C type	240V	CEE
-B	B type	240V	-
-B3	B3 type	240V	-
-SE	SE type	240V	-
-BF	BF type	240V	-
-O	O type	240V	CCC

## ■ Connection with external trigger input terminal block

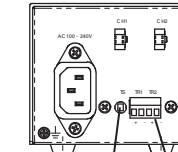
·Connection of this terminal block is not required if external lighting issuance trigger is not used.

<Connection of trigger input terminal block>



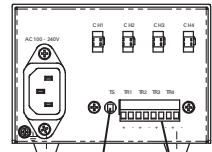
※Current flowing through the short circuit is less than 2mA.

#### ● FLV-ATC21024-□



Illumination mode switch button  
Trigger input terminal block CH 1 to CH 2

#### ● FLV-ATC41024-□



Illumination mode switch button  
Trigger input terminal block CH 1 to CH 4

Illumination mode switch button is ON (The button is pushed.)

Short-circuiting (+) and (-) of TR1 to TR4 respectively makes the trigger input status ON, turning the light ON.  
Releasing (+) and (-) makes the status OFF, turning the light OFF.

Illumination mode switch button is OFF (The button is not pushed.)

Short-circuiting (+) and (-) of TR1 to TR4 respectively makes the trigger input status OFF, turning the light OFF.  
Releasing (+) and (-) makes the status ON, turning the light ON.

[Important] ·Make sure that excessive force is not imposed on the wire and terminal block.

·Do not install the product in which loads are constantly applied to the terminal block such as the wire being under tension.

·When wiring the terminal block, use an applicable cable (AWG 14 to 24, tip processing length: 7 mm).

## 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.

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