

Dual Digital Fiber Amplifier User's Manual FOACAMPG1



User's manual

Thank you for choosing L-com. Please read the manual carefully before using this product.

- The product should be applied by someone with a certain level of electrical knowledge.
- Please read and make sure that you understand how to operate the product before using it.
- Please keep this manual readily accessible for future reference when needed.

Warning

Please comply with the warnings indicated below for they are important.

- Please do not exceed maximum rated voltage during usage in order to prevent tester malfunction or fire.
- Please do not apply AC power supply to avoid breakage.
- Please do not subject the product to high temperature to avoid scalding.

Safety precautions

For your safety, please comply with the tips listed below.

- Please do not use it in flammable or explosive environments.
- Please do not use it in environments with water, oil, chemicals or steams.
- Please do not disassemble, repair or alter this product.
- Please do not exceed the rated voltage and current.
- Please do not exceed the rated environment.
- Please observe electrical polarity when making connections.
- Please connect load correctly.
- Please avoid short-circuiting the load.
- Please do not operate it, if the housing is broken.
- When disposing the tester, please treat it as an industrial waste.

What is inside

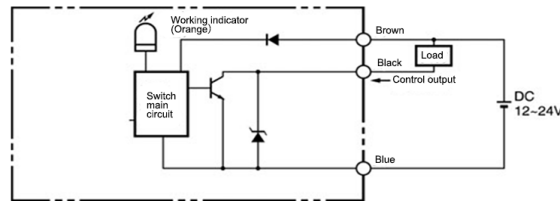
- 1 PCS Amplifier
- 1 PCS Manual
- 1 PCS Fiber clip

Specification

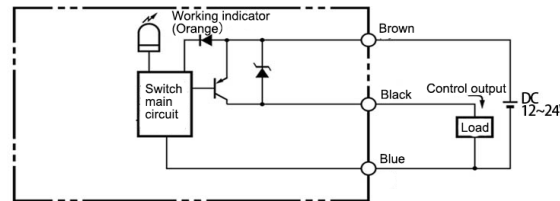
Model No.	FOACAMPG1N
Control output	Single output
Light source	Red, 4-element LED
Response time	SHP: 13μs FINE:30μs, SUPR:100μs MEGA:200μs
Output selection	LIGHT-ON/DARK-ON (short press MODE and select with UP/DOWN)
Display indicator	Operation indicator: Red LED, dual digital monitor: Dual 7-digit display, threshold (4-digit green LED indicator) and current value (4-digit red LED indicator) lit together. Current value range: 0-9999
Detection method	Light intensity (area detection is available for automatic sensitive tracking).
Delay function	1ms~9999ms
Control output	NPN/PNP open collector 24V, max. 100mA (only for main components, max. 20mA (residual voltage: 1V when expansion parts are connected))
Power supply	12 to 24VDC ± 10%, floating ratio (P-P): up to 10% Level 2
Working environment brightness	Incandescent lamp ≤ 20,000Lux, Sunlight ≤ 30,000 Lux
Power Consumption	Standard mode ≤ 300mW Max. voltage: 24V
Ambient temperature	-10 to +55 °C, no freeze
Vibration resistance	10 to 55 Hz, double amplitude: 1.5 mm, X, Y, Z three directions, 2 hours each

Circuit

NPN

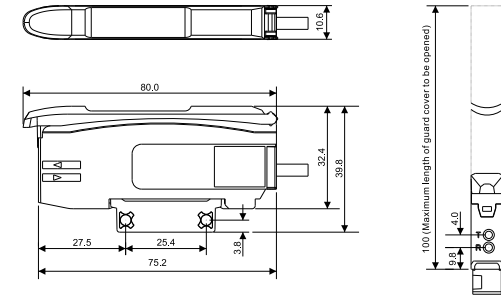


PNP



Dimensions

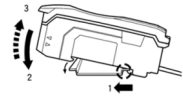
Unit:mm



Correct installation method

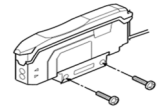
Mounted on a DIN rail

1. Align the card slot on the bottom of the main unit with the track. Push the main unit in the direction of arrow 1 while tilting it in the direction of arrow 2.
2. Remove the sensor by lifting the main unit in the direction of arrow 3 while pushing the main unit in the direction of arrow 1.



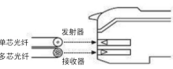
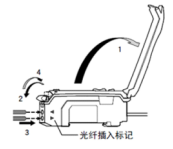
Mount to wall (only for main module)

Place the module on the optional mounting bracket, install it together, and secure with two M3 screws.



Connecting fiber optic modules

1. Open the dust cover in the direction indicated by arrow 1.
2. Move the fiber lock lever down in the direction indicated by arrow 2.
3. Insert the length marked on the fiber module mark into the fiber hole.
4. Move the fiber lock lever down in the direction indicated by arrow 4.
5. If you are using a thinner fiber optic module, you will need to use the adapter provided with it.
6. If the correct adapter is not connected, the thin fiber optic module will not detect the target correctly. (The adapter is supplied with the fiber module).
7. If a coaxial retroreflective fiber optic module is connected to the amplifier, a single-core fiber should be connected to the transmitter side and a multi-core fiber to the receiver side.



Basic setting operation

Keyboard lock function:

Use the keypad lock feature to stop all key functions

Press and hold the M and DOWN buttons for more than 3 seconds at the same time. The screen displays Lock. At this time, all the buttons will be locked. Press and hold the M and DOWN buttons simultaneously for more than 3 seconds. The screen displays the UnLK button lock function.

Initialization settings:

Press the SET button and the M button simultaneously in the display mode for more than 3 seconds. The screen displays: Init, initialization is complete.

Threshold setting

1. Two-point setting:

- (1) When the measured object is present, press the SET button once and the screen displays SET.
- (2) When the measured object leaves, press the SET button once, the green threshold value of the screen will flash twice, and the setting is completed.

2. Manual adjustment :

Press the UP and DOWN keys to the desired setting and release. The setting is completed.

Output mode selection :

Press the M key once in the display mode to enter the LON/DON display menu, and the screen displays Lon or don. Press the UP or DOWN button to select the light-on normally open or dark-on normally closed mode.

After selecting it, press the M key to confirm and return to the display interface.

* Functional mode description:

1、P0-P6 function

Mode	Description
SHP	13μs
FINE	30μs
SUPR	100μs
MEGA	200μs

2、ATT function

Note: When the detection is in saturation, reduce the illuminance by reducing the ATT data, and the attenuation of the adjustment signal can exit the signal saturation, which can greatly enhance the detection range. The ATT data is up to 100 and the minimum is 1.

3、Delay function description

Delay mode	Description
TOFF	Delayed off
SHOT	One-time output
ON-D	Pull-up delay
OFFD	Pull down delay

4、 DETC detection mode menu: STD standard mode and AREA regional mode

After the area mode is selected, the following display will appear under the display menu.

HI/threshold data signal value data

Short press the MODE button, then the following display will be displayed

LO/threshold data signal value data

Under the HI/Threshold Display menu, press the SET button to self-learn and get the HI threshold. The threshold that is also self-learned under the LO menu is the LO threshold.

Both the HI threshold and the LO threshold can be adjusted via the UP DOWN button.

5、FEC Menu

FEC function: When the amplifiers are used side by side, the F1F2F3F4 of the adjacent amplifier FEC is adjusted to different parameters, which can prevent mutual interference and eliminate the traditional host slave anti-interference mode.

Guarantee

When ordering the products of our company with reference to the product samples, the following warranty contents, disclaimers, and conditions suitable for the use are applicable when there are no special mentions in the quotation form, contract, specification, etc.

Please be sure to place an order after confirming the following.

1. Warranty

The warranty is 1 year from the date the product is sent to the place specified by the purchaser.

2. Guarantee range

In the event that the purchased product fails due to the company's responsibility during the above warranty period, the company is responsible for repairing the product free of charge.

However, if the fault is caused by the following reasons, it is not within the scope of the guarantee object:

- 1) Failure caused by use in cases other than the conditions, environment, and usage methods described in the company's product manual.
- 2) Failure caused by reasons other than the company
- 3) Failures caused by modifications and repairs performed by the company.
- 4) It is not used in accordance with the usage method described by the company.
- 5) After the goods are shipped, problems may arise due to unforeseen scientific levels.
- 6) Other failures caused by factors such as natural disasters and disasters that are not responsible for our company.

The above guarantees only refer to the products of the company, and the damage caused by the failure of the company's products is excluded from the guarantee.

3. Limitation of liability

- 1) The company does not assume any responsibility for special losses, indirect losses, and other related losses (equipment damage, loss of opportunity, loss of profits) caused by the company's products.
- 2) When using programmable devices, our company does not assume any responsibility for the programming that is not performed by our company personnel or the consequences thereof.

4. Suitable for use, conditions

- 1) The company's products are designed and manufactured for general-purpose products in the general industry. Therefore, our products must not be used in the following applications and are not suitable for their use. If you need to use the following items, please consult with our sales staff to confirm the product specifications, and select products with a certain amount of ratings and performance. At the same time, various safety measures should be considered, and even in the event of a malfunction, the safety circuit can be minimized.

a. Facilities that have a serious impact on life and property, such as atomic energy control equipment, incineration equipment, railways, aviation, vehicle equipment, medical equipment, entertainment equipment, safety equipment, and equipment that must comply with special regulations of the executive and individual industries.

b. Public utilities such as gas, water, electric power supply systems, 24-hour continuous operation systems, etc. require high reliability equipment.

c. Systems, equipment, and devices that may endanger personal property.

d. Outdoor use of similar conditions.

- 2) When users use our products for applications that are closely related to personal and property safety, the overall system hazard should be clarified. To ensure safety, special redundant design should be adopted, and the company's products should be used in the system. For the purpose of application, it is necessary to make matching power distribution and settings.

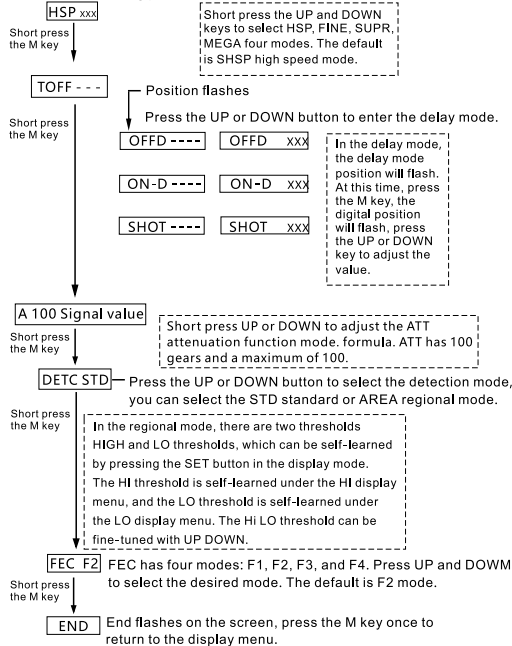
- 3) Be sure to follow the precautions and use prohibitions to avoid improper use and damage caused by third parties.

5. Service range

The price of our company's products does not include service fees such as dispatch fees for technicians. If there is such a demand, we can contact and negotiate.

Detailed setup steps

In the display mode, press and hold the M button for more than 3 seconds to enter the following process:



Precautions

To ensure your safety, please be sure to observe the following regulations when using:

1. This product is for the purpose of detecting the target. Do not use this product for the purpose of protecting the human body or body parts.
2. This product should not be used as an explosion-proof product. Do not use this product in hazardous locations and / or in potentially explosive atmospheres.
3. This product is a DC power sensor. Do not use AC power. Otherwise, it could cause an explosion or fire.
4. Do not wire the amplifier along the power cord or high voltage line, otherwise the sensor may malfunction or be damaged due to noise.
5. When using a commercial switching regulator, be sure to ground the chassis ground terminal and ground terminal.
6. Do not use it outdoors or where external light can directly enter the light receiving surface.