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POWER SIGNAL AMPLIFIER
for LED lighting

LED-AMP-1D

WARRANTY. The F&F products are covered by a warranty of the 24 months from the date of purchase. Effective only with proof of purchase. Contact your dealer or directly with us. More information how to make a complaint can be found on the website: www.fif.com.pl/reklamacje



Do not dispose of this device in the trash along with other waste! According to the Law on Waste, electro coming from households free of charge and can give any amount to up to that end point of collection, as well as to store the occasion of the purchase of new equipment (in accordance with the principle of old-for-new, regardless of brand). Electro thrown in the trash or abandoned in nature, pose a threat to the environment and human health.

Purpose

The LED-AMP-1P controller is a signal amplifier for LED 12/24 V DC lighting. The principle of operation is the reproduction of the PWM control signal connected to the input of the system at the output of the amplifier. The energy to power the next lighting segment is drawn from the power supply connected to the amplifier. Galvanic isolation between the input and output of the amplifier allows for unlimited expansion of the lighting chain, without the risk of problems with power supply from different phases or long ground loops.

Functioning

LED-AMP-1D records the PWM signal that powers the previous lighting segment and plays it on the output with the full power of the connected power supply. The level of the input signal is indicated by a yellow LED on the controller casing.

The amplifier is equipped with thermal protection that prevents exceeding the temperature within the enclosure if the connected load is too high. In this case, the lighting will be disconnected until the temperature of the device drops to a safe level. Exceeding the temperature is additionally indicated by a red LED located on the casing of the controller.

Assembly

1. Turn off the power supply of the switch box.
2. Mount the amplifier on a DIN rail located in the box. If possible, make sure that the amplifier and adjacent devices on the rail are separated from each other to improve the efficiency of heat dissipation.
3. Connect the system according to the diagram below.
 - a) Terminals 1 and 3 should be connected in parallel to previous LED lamps.
 - b) The power supply should be connected to terminals 10 and 12.
 - c) Connect the controlled lighting between „+” of the power supply and terminal 11.

Warning!

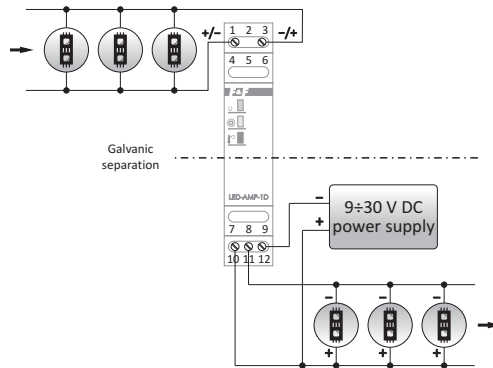
If the lamps have „+” and „-” inputs highlighted, they must be connected exactly as in the diagram: „+” of the lamp to „+” of the power supply, „-” of the lamp to lead 11 of the amplifier.

4. Turn on the power supply.



The amplifier is not designed to be powered by AC voltage. Use a power supply with current efficiency adapted to the connected light sources.

Connection diagram



Description of leads

1 2 3	1	„+/-” control
4 5 6	3	„-/+” control
7 8 9		
10 11 12		
		power supply indication
		brightness level
		temperature exceeding
LED-AMP-1D	10	„+” power supply
	11	output
	12	„-” power supply

Technical data

power supply input	9÷30 V DC
voltage	6÷30 V DC
current	5 mA
control signal	PWM
output	
voltage	as the power supply voltage
current [max]	16 A
actuator	transistor
separation between the output and the input	
type	galvanic
level	2.5 kV
power consumption	
I _{out} = 0 A	<0.05 W
I _{out} = 16 A	<1.2 W
working temperature (without condensation)	-15÷50°C
temperature protection	65°C
indication	power supply, brightness level, exceeding the temperature
terminal	2.5 mm ² screw terminals
tightening torque	0.4 Nm
mounting	on the TH-35 rail
dimensions	1 module (18 mm)
protection level	IP20

CE declaration

A copy of the CE declaration is available to download from the website: www.fif.com.pl from product subpage.