

Opti Lite Installation and Operations Manual

rev 26.08.2024

Opti Lite Multifunction device

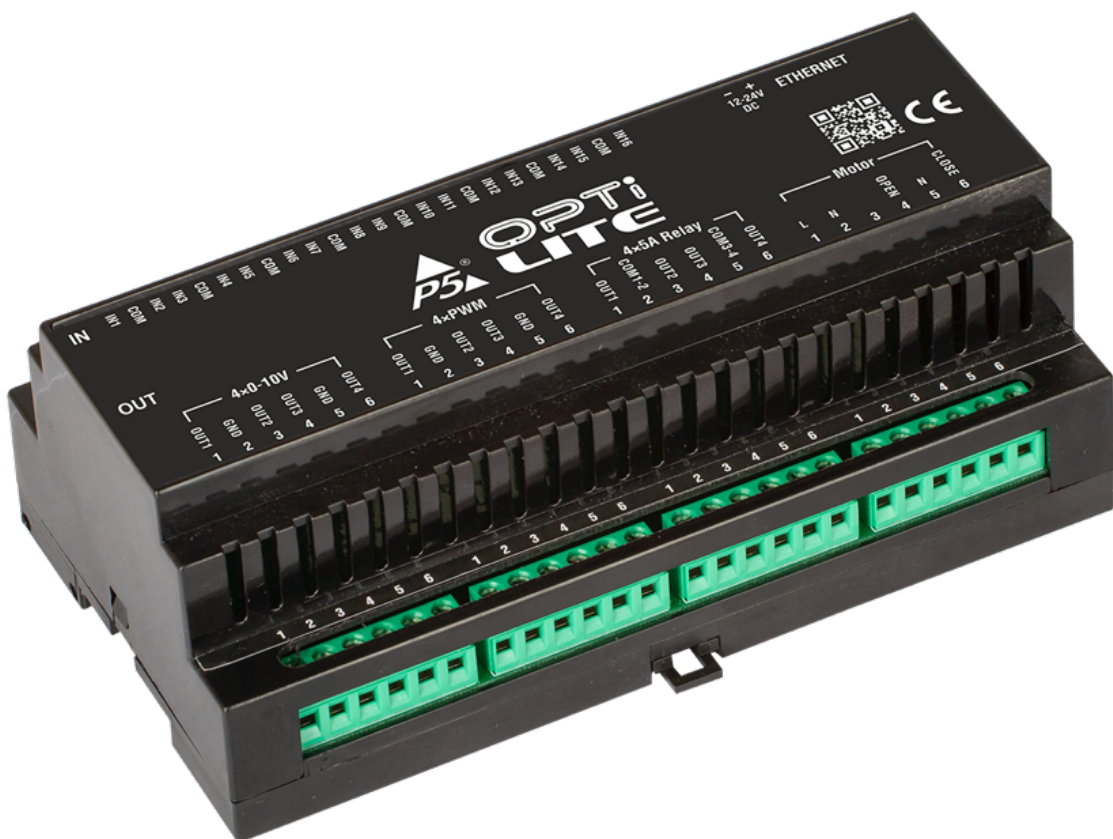


Figure 1. Opti Lite module

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OPTI Lite - Optimized for success

P5 Opti Lite has been developed with total flexibility and cost-effectiveness in mind and will revolutionize the way projects are managed.

The outputs of Opti Lite units are tailor-made. You no longer must pay for unused channels. Opti Light is the ultimate way to approach multi-dwelling unit projects.

OPTI Lite is basically a 4in1 FutureNow (the established product range by P5) with more power and resources. You no longer have to buy a different box for each function. You can combine four different functions using a single box. For example, you can use a single OPTI Lite unit to control a few on/off lights, RGB LED lighting, blind control and even have digital inputs for sensors/manual control

The OPTI Lite main board has 16 digital inputs and 4 slots for Output Boards.

INSTALLATION

WARNING!

This equipment shall be installed in a closed cabinet with no access to live parts. Only the top enclosure of the equipment (where the label is affixed) is allowed to be accessed by the operator.

Since the module is connected to mains/line voltage, it must be installed by a qualified electrician in accordance with local electrical codes.

Turn off power (main circuit breaker) before installation.

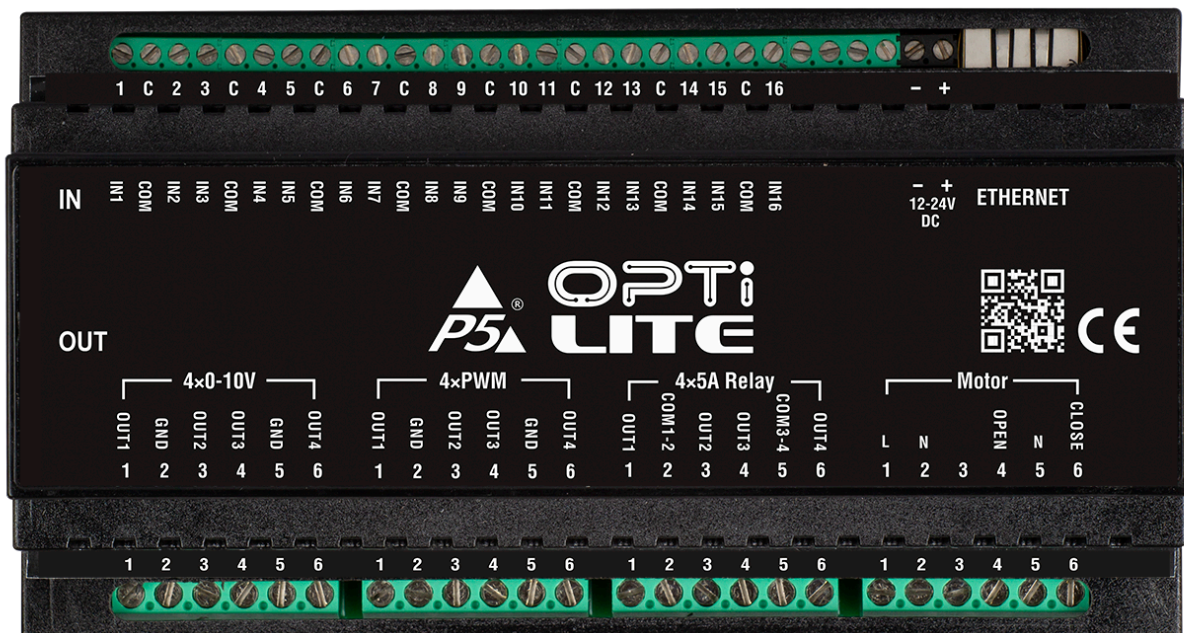
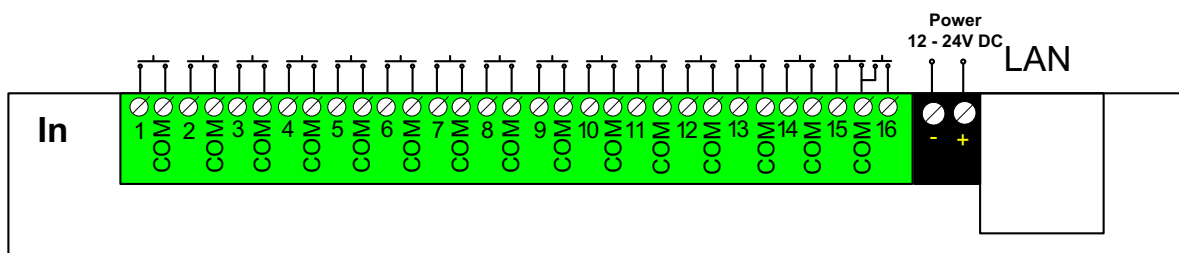


Figure 2. Opti Lite module

Input Wiring diagram



Inputs 16 and 15 in this example are connected to Common indicating how keypads with shared common can be used.

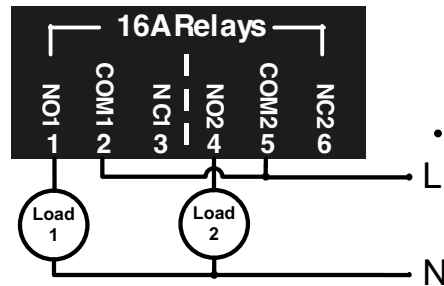
Recommended wire types

- Ethernet cable: Twisted pair, CAT5E or better.
- Outputs: According to the load attached to the outputs (current and voltage ratings).
- Inputs: A pair of low voltage cable.

Output modules

2x16A

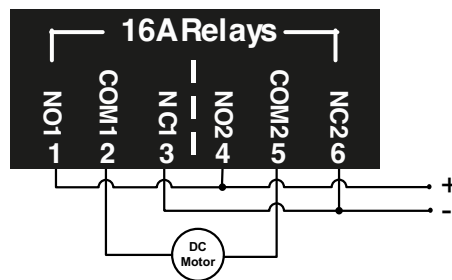
This output module has two independent NO/NC relays.



2x16A in DCM mode

This output module can control a DC motor with polarity change direction control.

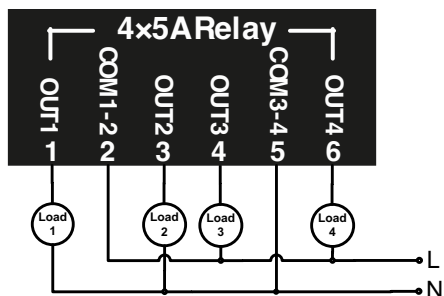
DCM mode should be selected on the System page.



4x5A relays

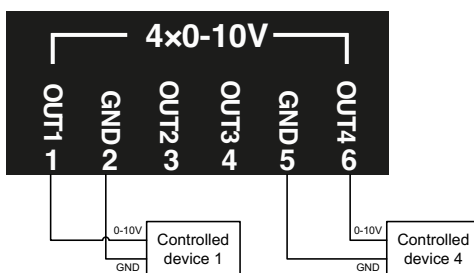
There are 4 relays on this output board.

Relay 1&2 share a common connector, while relays 3&4 have another one.



4x0-10V outputs

4 channel 0-10V voltage outputs





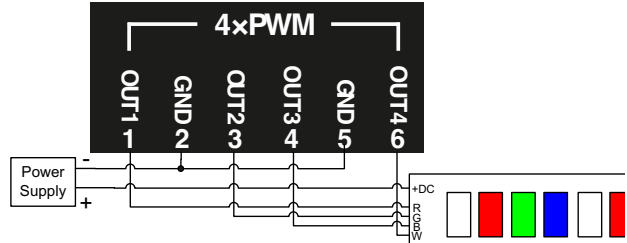
4xPWM outputs

4 channel PWM outputs for LED dimming.

Multiple Power supplies can be used (12V-48V)

Please note:

All external power supplies used to power the LEDs must be connected to the GND terminal of this output module.

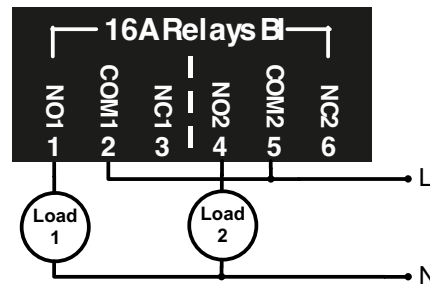


2x16A Bi-stable relays

2 Channel NO/NC relays

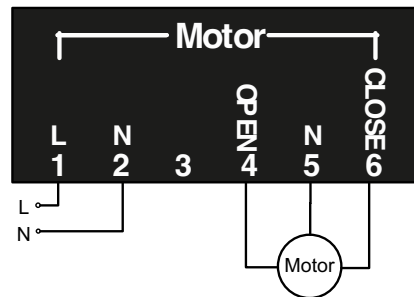
They are latched in both positions and only use power to switch over.

Similar to 2x16A module, but not suitable for DC Motor direction change



Motor controller

1 ch Motor controller for AC motors



The module has a built-in web server for setup and control.

Connecting to the module's web server

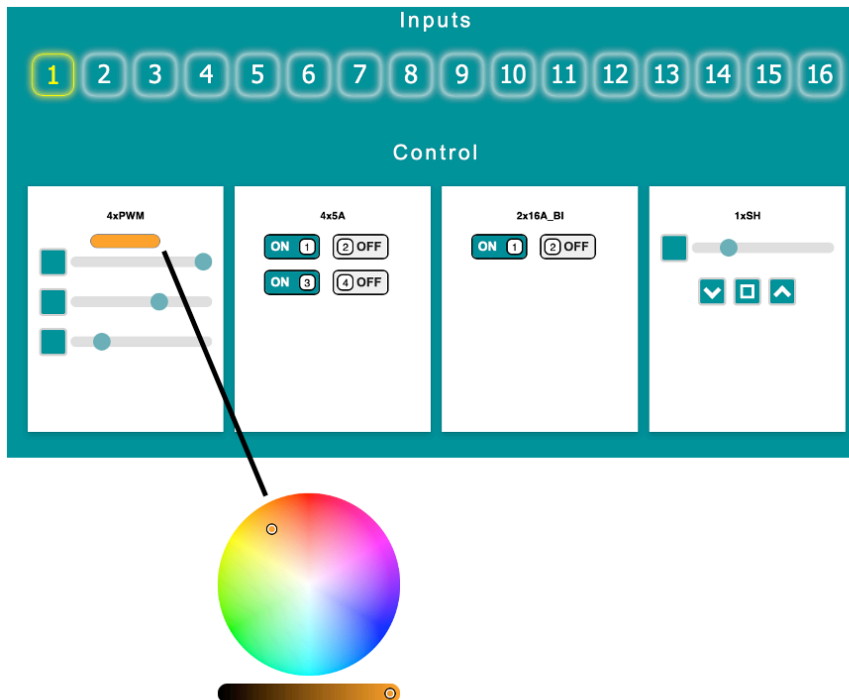
Download and run the Opti Discovery tool from P5automation.com

The Inputs section appears on all pages:



All input states are shown, clicking on an input the action defined on the Trigger page will be executed.

Control page:





System Page

Configuration of the Output modules

4xPWM

4xPWM

ON Gamma correction

ON RGBW calculation

Ramp rates

Channel 1 (RGB)	<input type="text" value="30"/>
Channel 2	<input type="text" value="1"/>
Channel 3	<input type="text" value="1"/>
Channel 4	<input type="text" value="1"/>

Gamma Correction: To equalize brightness change for human eyes in the range of control slider movement.

RGBW calculation: The module will calculate the brightness of the white LEDs based on the RGB values.

Ch1 Ramp rate is also the ramp rate for RGB commands initiated in the Color Picker.

1xSH

Timing

Shading Time	<input type="text" value="100"/>
Shading Start Delay	<input type="text" value="5"/>

Shading time is the running time for the motor between the two extreme positions. It must be set accurately as the position feedback is calculated based on it.

Motor start delay is the time it takes for the motor and mechanical assembly to start moving after power is applied to the motor.

2x16A

Clicking on the button sets the Output module to DCM mode.



System settings

Network settings

MAC Address:

Host Name:

Enable DHCP

IP Address:

Gateway:

Subnet Mask:

Primary DNS:

Secondary DNS:

ID of the module

Router által kiosztott (DHCP) IP cím használata

Firmware

Current version:
1.0.0 (Build: 1A930C)

Build date: Apr 24 2023 12:21:38

Clicking on this button starts to scan for new firmwares on P5 server



Trigger page

OPTI LIFE Control Triggers System

Input

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16

Trigger settings

Save to permanent storage Delete from permanent storage Add

#	Input event	Target Nano	Task	Target channel	Level	Ramp rate	
0	Channel 1 Close	1 - 4xPWM	Ramp to level	1	255	10 s	Remove
1	Channel 1 Release	1 - 4xPWM	STOP	1			Remove
2	Channel 2 Close	1 - 4xPWM	Ramp to level	2	255	10 s	Remove
3	Channel 2 Release	1 - 4xPWM	STOP	2			Remove
4	Channel 3 Close	1 - 4xPWM	Ramp to level RGB		0 0 0	0 s	Remove
5	Channel 5 Close	1 - 4xPWM	Ramp to level RGB		200 50 100	10 s	Remove
6	Channel 6 Close	1 - 4xPWM	Ramp to level RGB		100 100 100	15 s	Remove
7	Channel 7 Close	1 - 4xPWM	Ramp to level RGB		255 255 255	2 s	Remove

Trigger settings

- Triggers define the connection between the inputs and the outputs
- Any input can control any outputs
- Save to permanent storage must be used to save the changes

1. Input action 2. Output board 3. Channel & Action 4. Parameters

Input: Input 16 Choose...
 Input condition: Close
 Target output: Release
 Task: Choose...

Choose...
 ✓ 1 - 4xPWM
 2 - 4x5A
 3 - 2x16A
 4 - 1xSH

Choose...
 ON
 OFF
 Toggle
 Stop
 Ramp to level
 ✓ Ramp to level RGB
 STOP RGB ramping

Target output module: 1 - 4xPWM
 Task: Ramp to level RGB
 Levels: 120 80 5
 Ramprate: 10

Channel 16 Close 1 - 4xPWM Ramp to level RGB 120 80 5 10 s

1. Input action 2. Output board 3. Channel & Action

Choose...
 1 - 4xPWM
 ✓ 2 - 4x5A
 3 - 2x16A_BI
 4 - 1xSH

Choose...
 ✓ ON
 OFF
 Toggle

Choose...
 ✓ 1
 2
 3
 4

Channel 16 Close 2 - 4x5A ON 1



TECHNICAL SPECIFICATIONS

Power Requirements

12 – 24 VDC

Input parameters

Contact closure inputs

Maximum resistance < 10Ω

2x16A Output module

Type 2 x SPDT NO, NC, dry contacts

Max voltage within this Output module 250V

Load (AC) max. 16A for resistive (cos(fi)=1) load
max. 8A for inductive (cos(fi)=0.4) load

Load (DC) max 16A@24V

4x5A Output module

Type 4 x SPDT NO, dry contacts

Max voltage within this Output module 250V

Load (AC) max. 5A for resistive (cos(fi)=1) load
max. 2A for inductive (cos(fi)=0.4) load

Load (DC) max 5A@24V

0-10V Output module

Load max. 20mA/Channel

PWM Output module

Type PWM type LED dimmer outputs

Voltage 12 – 48 V DC

Load/Ch max 8A/channel

Load/board max 24A/board

2x16A.BI Output mod.

Type 2 x SPDT NO, NC, dry contacts

Max voltage within this Output module 250V

Load (AC) max. 16A for resistive (cos(fi)=1) load
max. 8A for inductive (cos(fi)=0.4) load

Load (DC) max 8A@24V



Motor controller mod.

Type	Open/Close relay outputs
Max voltage within this Output module	250V
Load	Max. 2A for inductive ($\cos(\phi)=0.4$) load

Communication

Control	TCP (simple ASCII TCP command) Built-in web server Local inputs
Interoperability	Drivers available for most systems

Connectors

Input Terminals	1.5mm ² screw terminals
Output Terminals	2.5mm ² screw terminals
LAN (100Mb/s)	RJ45 Ethernet Connector

Environmental

Operating Temperature	0 °C – 40 °C (32 °F – 104 °F)
Storage Temperature	-20 °C – 60 °C (-4 °F – 140 °F)
Humidity	Up to 93% (Non condensing)

Physical

Dimensions (H x W x D)	157 mm x 86 mm x 57 mm (9 DIN unit width)
Mass	Max 0.4Kg
Installation	Standard DIN Rail Mount

Approvals

CE

Package Content

Opti Lite
Quick Installation Guide

Warranty

2 years

REFERENCES

(Please email us at smarhome@tpmmedia.hu to request the Communication Protocol Description)

CONTACT DETAILS

smarhome@tpmmedia.hu