

# OPTOTRONIC<sup>®</sup>

## OT 240/220-240/24 DIM P

Dimmable Constant Voltage LED Power supply for 24V LED - Modules

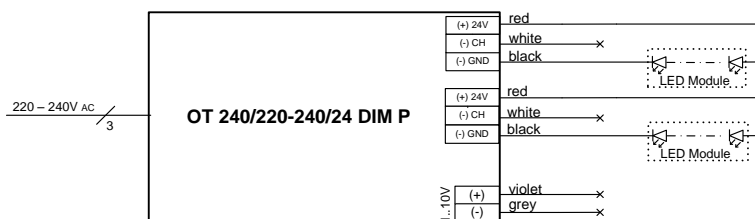
### 1. Technical Data

Nominal Voltage	220 – 240 Vac
Input Voltage	198 – 264 Vac
Line Current, nominal	1,1A @230 Vac
Mains Frequency	50 / 60 Hz
Power Factor	0.95 @ 230 Vac
Interface	1...10V insulated
IP Rating	IP 67
Max Output Power	240 Watt

Output Voltage	24 Vdc (-0,5 V/+0,9 V)
Efficiency	92% @ 230 Vac
Ambient Temperature	-25°C to +55°C
Max. Case Temperature at tc	+ 80°C
Max. Cable Length	10m
Max load per circuit breaker B10	5
Max load per circuit breaker B16	8
Max load per circuit breaker C10	7

### 2. Connection schemes

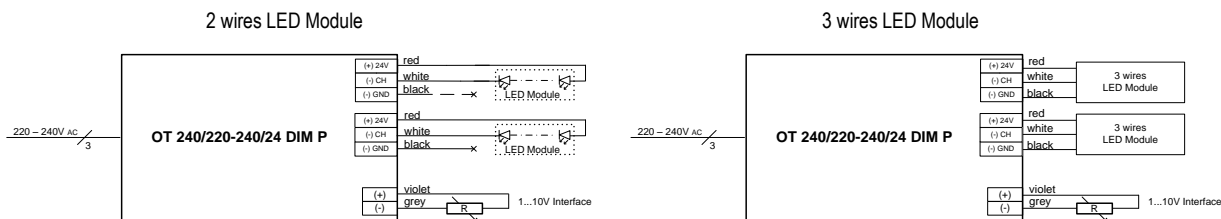
#### a. Non – Dim operation:



- Ensure proper insulation of not connected wire terminals.
- 2 Output channels for optional splitting of the load (1 channel use also possible)
- Ensure that the complete Load is not connected to one channel. Maximum output current is limited by the cross section of the cable (7.5A per channel – 180 Watt). It is possible to join the two output cables together, in parallel, to drive one module at max power.

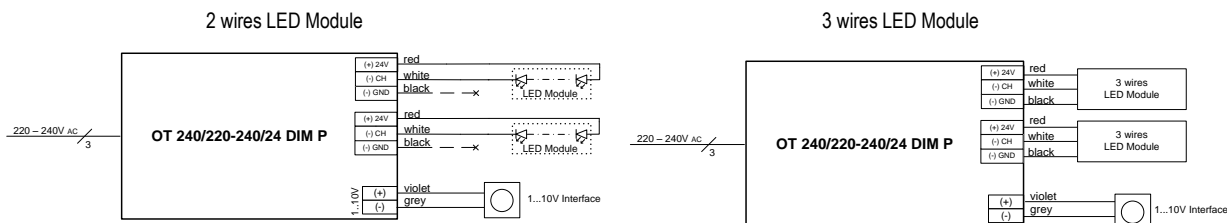
#### b. Dim operation

##### i. Control via Potentiometer:

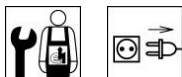


- Ensure proper insulation of not connected wire terminals.
- The maximum input capacitance of all connected LED modules (dimnable) should be less the 400nF.
- Required type of Potentiometer for use = **47kOhm**.
- 2 Output channels for optional splitting of the load (1 channel use also possible)
- Ensure that the complete Load is not connected to one channel. Maximum output current is limited by the cross section of the cable (7.5A per channel – 180 Watt). It is possible to join the two output cables together, in parallel, to drive one module at max power.

##### ii. Control via 1...10V Dimmer:



- Ensure proper insulation of not connected terminal wires.
- The maximum input capacitance of all connected LED modules (dimnable) should be less the 400nF.
- 2 Output channels for optional splitting of the load (1 channel use also possible)
- Ensure that the complete Load is not connected to one channel. Maximum output current is limited by the cross section of the cable (7.5A per channel – 180 Watt). It is possible to join the two output cables together, in parallel, to drive one module at max power.



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2013-03-13

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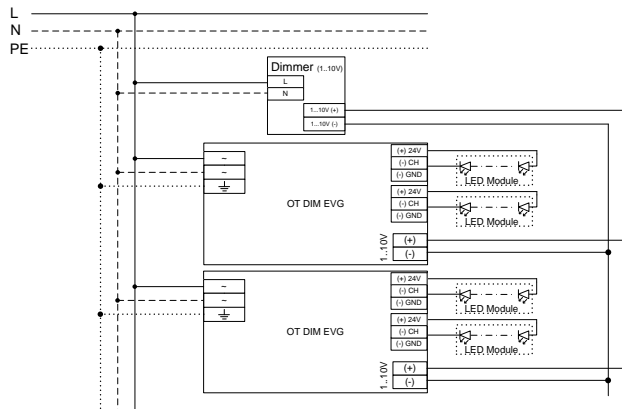
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 528000 Foshan Guangdong, P.R. China

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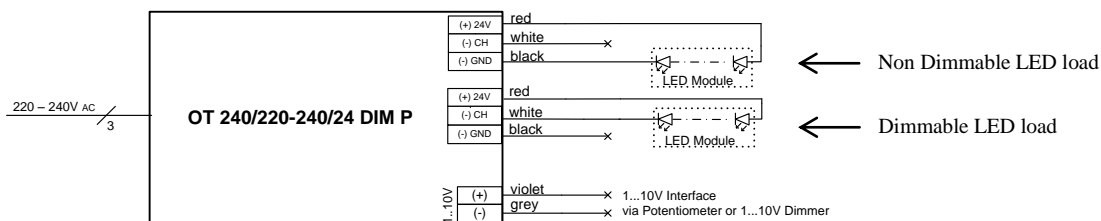
### iii. Single control of more power supplies



- a) Control of more OT 240/220-240/24 DIM P via one external Dimmer/Potentiometer. Thanks to the fully isolated 1...10V interface, two different kind of dimming devices are possible

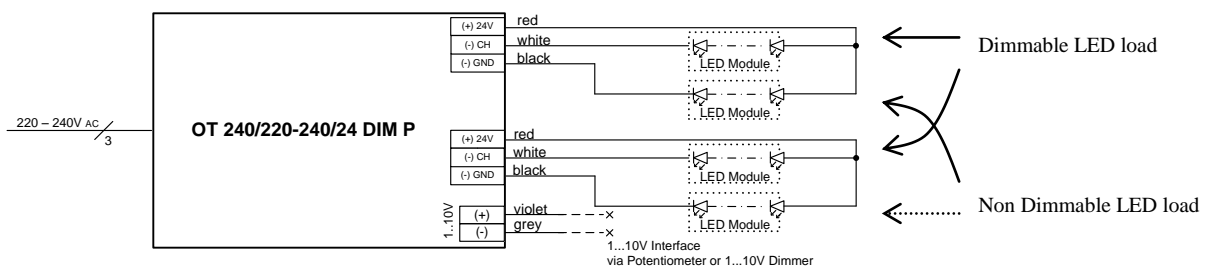
- 1) Potentiometer, the value will be  $47K \text{ Ohm} / n$  where  $n$  is the number of Power supplies to be controlled
- 2) Active Dimmer - Dimmer is connected to mains

### iv. Combination “dimmable” and “non dimmable” LED Modules - 1

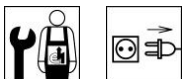


- a) Ensure proper insulation of not connected terminal wires.
- b) The maximum input capacitance of all connected LED modules (dimmable) should be less the 400nF.
- c) 2 Output channels for optional splitting of the load (1 channel use also possible)
- d) Ensure that the whole Load is not connected to one channel. Maximum output current is limited by the cross section of the cable (7.5A per channel – 180 Watt). It is possible to join the two output cables together, in parallel, to drive one module at max power.

### v. Combination of “dimmable” and “non dimmable” LED Modules - 2



- a) The maximum input capacitance of all connected LED modules (dimmable) should be less the 400nF.
- b) 2 Output channels for optional splitting of the load (1 channel use also possible)
- c) Ensure that the complete Load is not connected to one channel. Maximum output current is limited by the cross section of the cable (7.5A per channel – 180 Watt). It is possible to join the two output cables together, in parallel, to drive one module at max power.



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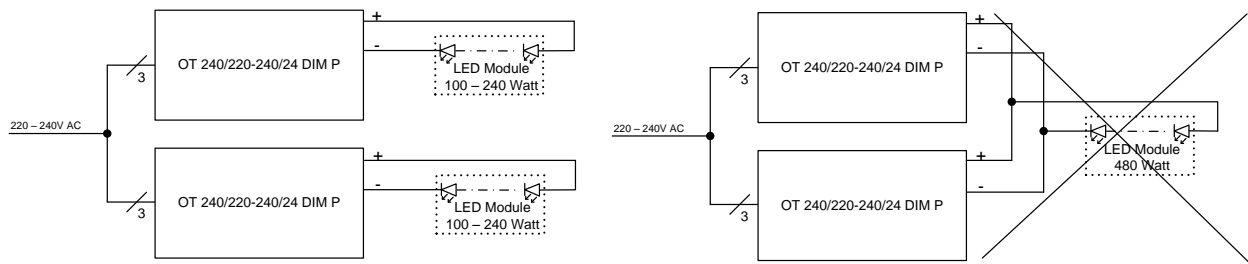


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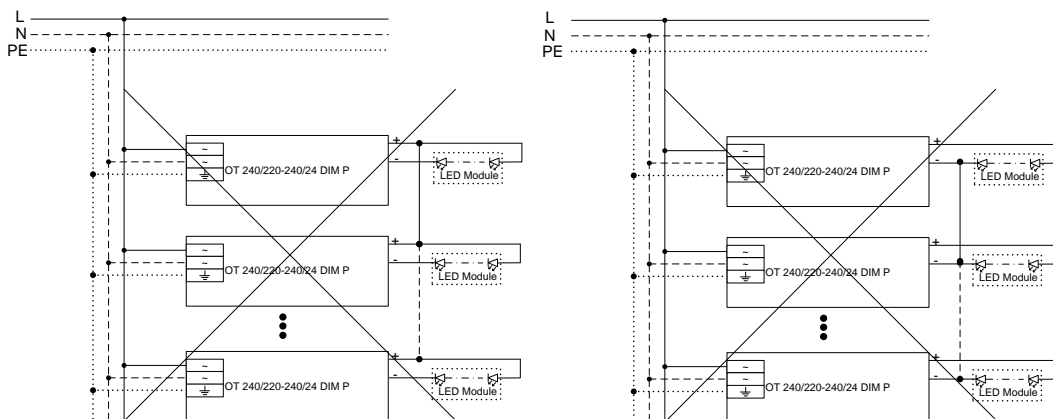
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### 3. Safety



Power supplies can be connected in parallel on the primary side, but not on the secondary side



- a) The installation of two or more OPTOTRONIC® OT 240/220-240/24 DIM P Power supplies with common “-” or “+” wiring is forbidden.

#### Wiring and Connection

- Ensure that the LED module load is within the range of rated voltage, current and power (see Technical data)
- Maximum output cable length is limited by EMI and cross diameter
- Use output cable sections adequate to the load demand
- The luminaire manufacturer is responsible for providing the required clearances and creepage distances and also for protection against electrical shock, especially for the line and load wires
- Please avoid direct exposure of sunlight and in case of exposure to UV rays, protect the cables with suitable silicone sheath.
- Not used output cables have to be insulated separately

#### Earth Connection

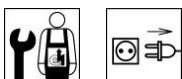
- Protective earth connection of OT 240/24 DIM P is mandatory for safety and EMI reasons
- The ground connection has to be done via input cable

#### Mounting and Environmental protection

- The control gear is a built -in type for luminaire integration
- Maximum permissible ambient temperature must not be exceeded. Make sure there is adequate space to avoid a build-up of heat. In critical installations the temperature at  $t_c$  has to be controlled

#### General Note

- Power supplies must be installed by a qualified electrician
- Disconnected from mains supplies before wiring work
- For further information see also “OPTOTRONIC – Technical guide” at [www.osram.com](http://www.osram.com)



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