Model No.

OPT - DPA 04 05 B - 4

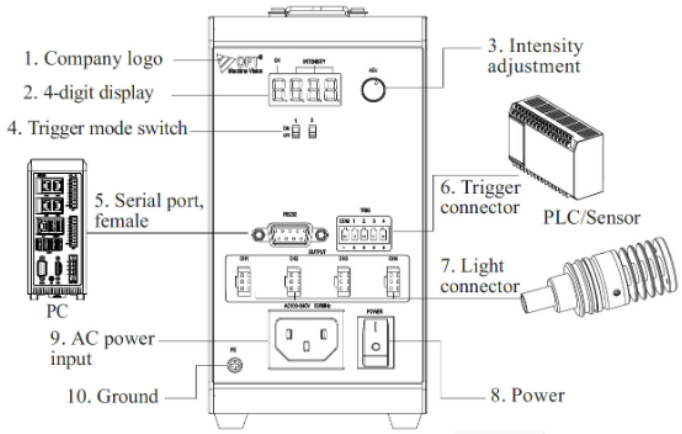
- Channel
- Version
- Output voltage: 5 V
- Output current: 0.4 A
- Controller type: digital, current
- OPT

Product Features

1. 256 intensity levels
2. Trigger signal input: connect an external signal source (e.g. a camera trigger signal) for synchronized strobing of the illumination device.
3. Trigger pulse width can be adjusted
4. RS232 communication
5. Easy to install: screw and DIN rail mounting available

Device Overview

No.	Item	Description
1	Company logo	OPT brand
2	4-digit display	The first number indicates the channel and the other 3 numbers show intensity value or trigger pulse width value
3	Intensity adjustment	To adjust the intensity and width of the trigger pulse
4	Trigger mode switch	see "Trigger mode set" below for details
5	Serial port, female	RS232 communication interface with the PC
6	Trigger connector	For connection with an external trigger source such as a PLC, sensor or camera
7	Light connector	In total, four lights can be controlled individually
8	Power	To turn the controller on/off
9	AC power input	100 – 240 V AC, 50/60 Hz
10	PE Ground	Ground protection



Connection Setup

Step 1: Refer to drawing above on how to connect the light with the controller.

Step 2: For external triggering, connect the external trigger source with the trigger port.

Step 3: Connect the controller with an 100 - 240 V AC power source and of switch the controller on.

The digital display is lit. If the intensity the light shall be controlled via PC, you need to connect the PC with an RS232 cable or Ethernet cable before the controller is switched on. Use the provided software or your own application to communicate with the controller. You can adjust the settings via the PC or manually.

Trigger mode set

Mode	Ts1	Ts2
Continuous lighting mode	ON	ON
Continuous lighting mode	ON	OFF
Normal trigger mode	OFF	ON
High intensity trigger mode	OFF	OFF

Remark: Ts1 is trigger mode switch 1; Ts2 is trigger mode switch 2

Parameter Description

Item	Parameter	Instruction
Input voltage	100-240 V AC	50/60Hz
Output current	0 - 0.4 A	For 5V Light
Intensity control	256 levels	Adjustable by intensity adjustment key or adjust via DEMO software
Short circuit protection	Yes	Protection shuts down the related channel and "ER2" appears on the display
Over current protection	Yes	When the current is over 10% of set value the related channel is shut down and "ER1" appears on the display
Normal trigger	255 levels	Change by two trigger switches in panel
High intensity trigger	256 levels	Change by two trigger switches in panel
Width of normal trigger pulse	0.1ms-99.9ms	Adjustable by intensity adjustment key or via DEMO software
Width of high intensity trigger pulse	0.01ms-5.00ms	Adjustable by intensity adjustment key or via DEMO software
Output power	2 W per channel, 8 W per 4 channels	For 0.4A/5V spot lights
Communication	RS232	
Standby power consumption	≤ 3W	
Hi-Pot test	1500 V AC, max. 1 min	Leak current < 10 mA
Insulation resistance	500 V DC	>20 MΩ
Working temperature	-5°C ~ 50°C	
Size [mm]	88*136.2*170.1	
Weight [mm]	1.03kg	

Remark: OPT-DPA0405B-4 controller can't detect the rated current of light automatically.

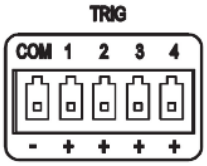
Trigger Port and Setup

The trigger mode of this type controller is level trigger, so the trigger mode can be achieved by rising edge trigger and falling edge trigger. There a re 4

trigger channels: 4 connectors for Trigger +, and "COM" is the common interface of Trigger -.

The high voltage level (input voltage range is 5V to 24V) and low voltage level (input voltage range is 0V-2V) is seperated by the dual optocouple r inside.

Default trigger mode is rising edge trigger, but it can be adjusted to falling edge trigger by the trigger switch key on the panel.



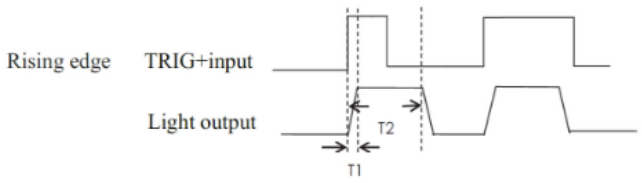
Normal trigger mode

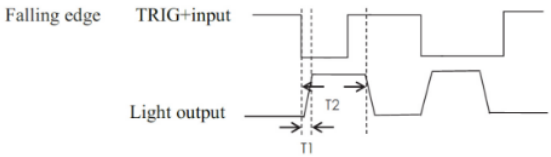
Turn Ts1 into OFF and turn Ts2 into ON, the controller turns to normal trigger mode and intensity can be adjusted from 0 to 255 level.
The width of trigger pulse can be adjusted from 1 to 99.9ms and it can be set through DEMO software or intensity adjustment key.

High intensity trigger mode

Turn Ts1 and Ts2 into OFF at the same time, the controller turns to high intensity trigger mode and one channel outputs 1A.
The width of trigger pulse can be adjusted from 0.01 to 5.00ms and it can be set through DEMO software or intensity switch key.

Sequence diagram

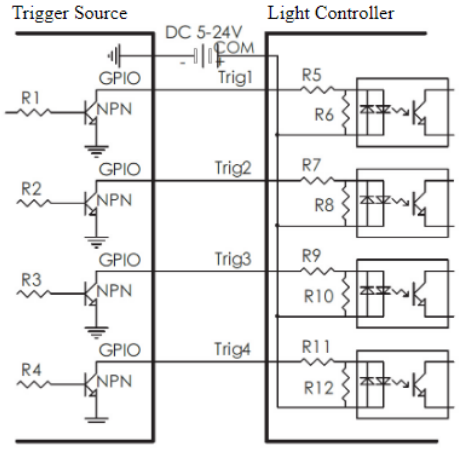




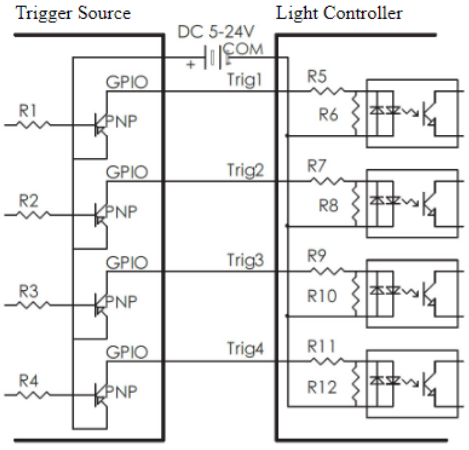
Description

T1 is the trigger delay time while T2 is the width of trigger pulse.
Normal trigger mode: T1≤80 μs; T2 can be set from 1 to 999 ms.
High-intensity trigger mode: T1≤80 μs; T2 can be set from 0.01 to 5.00 ms.

Wiring Diagram of two Use Cases

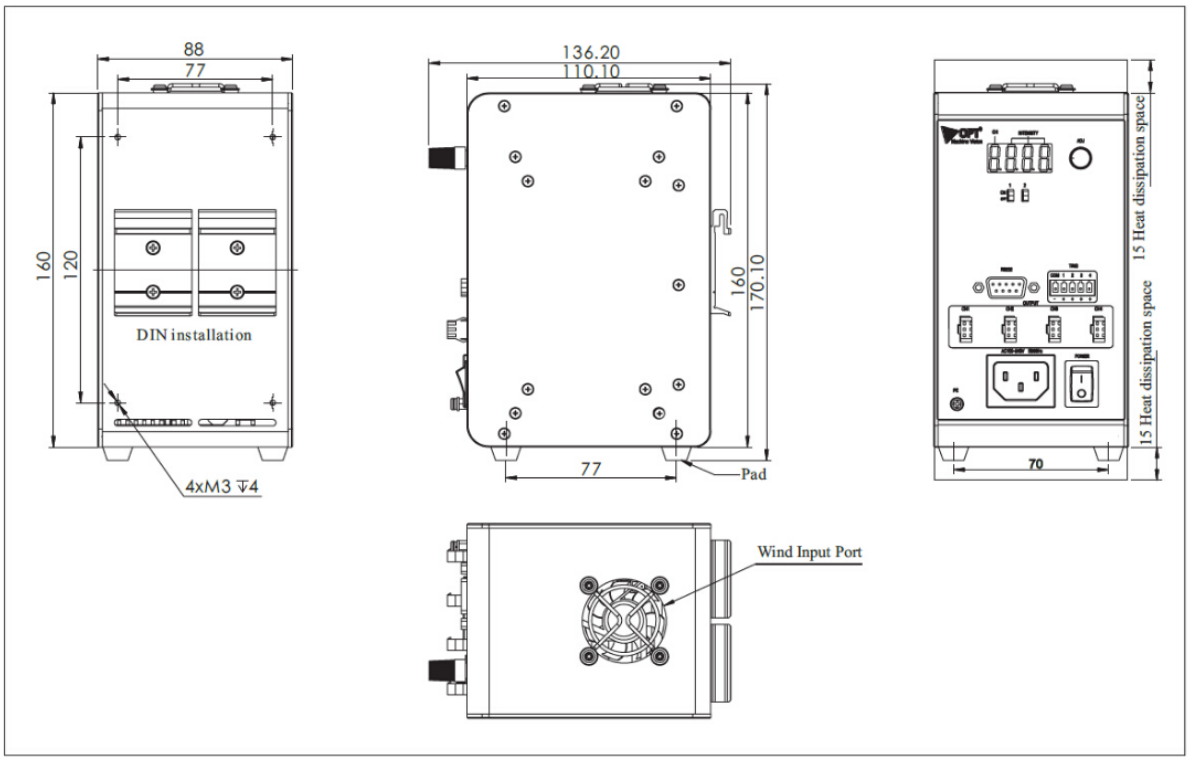


Trigger Input Circuit for NPN Type Trigger



Trigger Input Circuit for PNP Type Trigger

Dimensions [mm]



D-A-CH
Laser 2000 GmbH
82234 Wessling
Tel. +49 8153 405-0
info@laser2000.de
www.laser2000.de

FRANCE
Laser 2000 SAS
33600 Pessac
Tel. +33 5 57 10 92 80
info@laser2000.fr
www.laser2000.fr

IBERIA
Laser 2000 SAS
28034 Madrid
Tel. +34 617 308 236
info@laser2000.es
www.laser2000.es

NORDICS
Laser 2000 GmbH
11251 Stockholm
Tel. +46 8 555 36 235
info@laser2000.se
www.laser2000.se