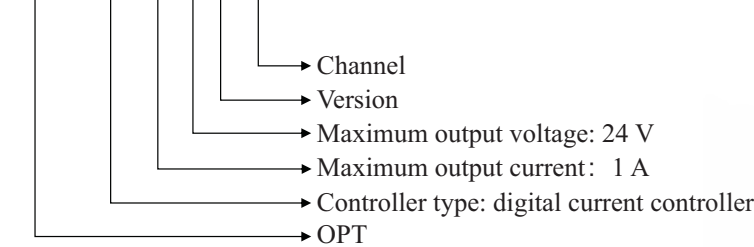


Digital Controller

Model No

OPT - DPA 10 24 E - 4



Item	P/N	Channel	Light type
1	OPT-DPA1024E-4	4	10mA-1A 24V light
2	OPT-DPA1024E-8	8	10mA-1A 24V light
3	OPT-DPA1024E-16	16	10mA-1A 24V light



Products Features

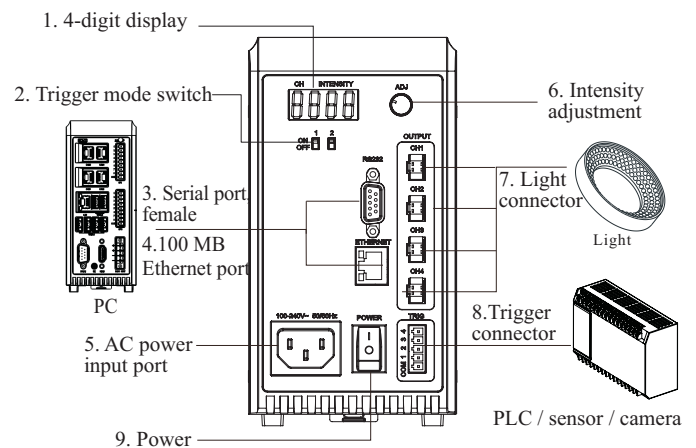
- 1 256 intensity level control.
- 2 Detects max. output current automatically.
- 3 Manual set up of max. output current.
- 4 Multiple channels can be controlled at the same time.
- 5 Trigger signal input: connect an external signal source (e.g. a camera trigger signal) for synchronized strobing of the illumination device.
- 6 Width of the trigger pulse can be defined
- 7 RS232 communication
- 8 100 Mb Ethernet communication.
- 9 Easy to install: screw mount or DIN rail are available

Device Overview

No.	Item	Description
1	4-digit display	The first number indicates the channel and the other 3 numbers show the intensity level
2	Trigger mode switch	Change the trigger mode, refer to the manual for details
3	Serial port, female	RS232 communication interface with the PC
4	100 Mb Ethernet port	Ethernet communication interface with the PC
5	AC power input	100 - 240 V AC, 50/60 Hz
6	Intensity adjustment	Adjusts the intensity and width of the trigger pulse
7	Light connector	In total, four lights can be controlled individually
8	Trigger connector	For connection with an external trigger source such as a PLC, sensor or camera
9	Power	Turns the controller on/off

Connection Setup

- Step 1: Refer to right drawing 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 100 - 240VAC power source and switch the controller on. The digital display is lit. If the intensity of 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 mode	ON	ON
Auto current test	ON	OFF
Normal trigger mode	OFF	ON
High power trigger mode	OFF	OFF

Parameter Description

Item	Parameter	Details
Input voltage	100-240 V AC	50/60Hz
Automatic detection of the max. output current	For 10mA - 1A, 24V lights	Automatic detection available via the DEMO software
Max. output current	10 mA to 1A	Set the max. output current by hand or via DEMO software
Light intensity	256 intensity levels	Adjust by the intensity adjust key or 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 triggering	256 levels	
High-intensity triggering	1 A per channel	
Width of normal trigger pulse	0.1 ms - 999 ms	Can be adjusted by the intensity adjustment key or via software
Width of high-Intensity trigger pulse	0.01 ms - 5.00 ms	Can be adjusted by the intensity adjustment key or via software
Trigger mode	level trigger	
Output power	20 W per channel	Max. total output power of DPA1024E-4/8: 48 W Max. total output power of DPA1024E-16: 180 W
Communication	RS232 or Ethernet	
Standby power consumption	DPA1024E-4	8 W
	DPA1024E-8	9.2 W
	DPA1024E-16	13.7 W
		Input 220 V
Overvoltage resistance	1500 V AC for 1 min	Leak current < 10 mA
Insulation resistance	500 V DC	Insulation resistance > 20 MΩ
Operating temperature	-5°C - 50°C	
Size [mm]	DPA1024E-4	91 x 134.41 x 17
	DPA1024E-8	108 x 132.5 x 166
	DPA1024E-16	140 x 132.5 x 160
Weight [kg]	DPA1024E-4	1
	DPA1024E-8	1.3
	DPA1024E-16	1.72



Trigger Port and Setup

The trigger mode of this type of controllers is level trigger, so the trigger mode can be achieved by high voltage trigger, low voltage trigger, rising edge trigger and falling edge trigger, and the connection COM port is the same in the controller. The high power trigger (input voltage range is 5V to 24V) and low power trigger (input voltage range is 0V-2V) is separated by the dual opto-couple inside. For the rising edge trigger and falling edge trigger, normally the delivered item is rising edge trigger, but it can be adjusted to falling edge trigger by the trigger switch key on the panel.

Normal trigger mode

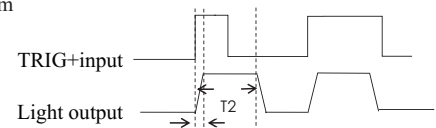
Set parameter 1 in DEMO software or turn connector 1 OFF and turn connector 2 ON, the controller turns to normal trigger mode and intensity can be adjusted from level 0 to 255, the wide of trigger pulse can be adjusted from 1 to 999ms and it can be set through DEMO software or intensity switch key.

High intensity trigger mode

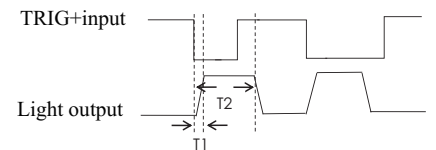
Set parameter 2 in DEMO software or turn connector 1 and 2 OFF at the same time, the controller turns to high intensity trigger mode and one channel delivers 1A. Trigger delay time can be adjusted from 0.01 to 5.00ms and it can be set through DEMO software or intensity switch key.

Sequence Diagram

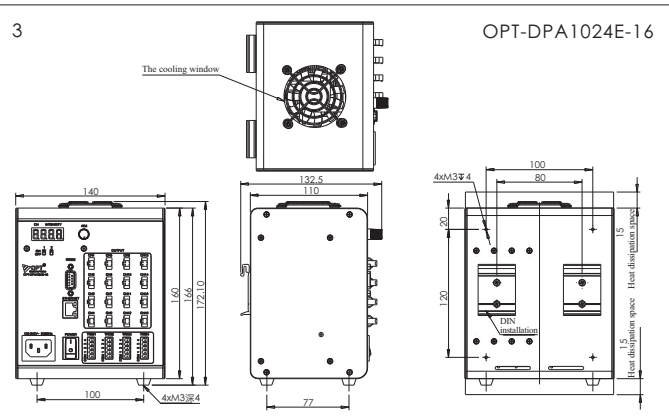
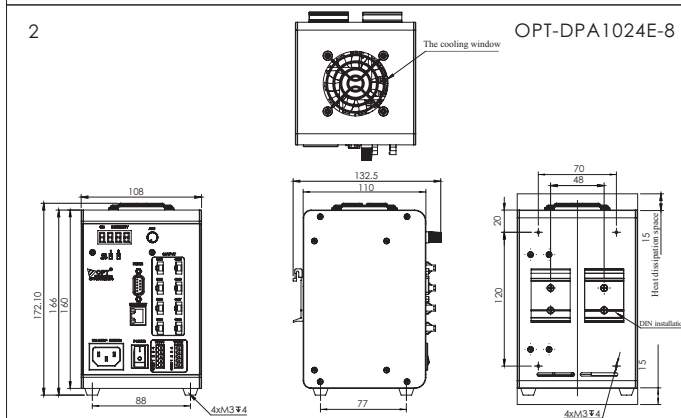
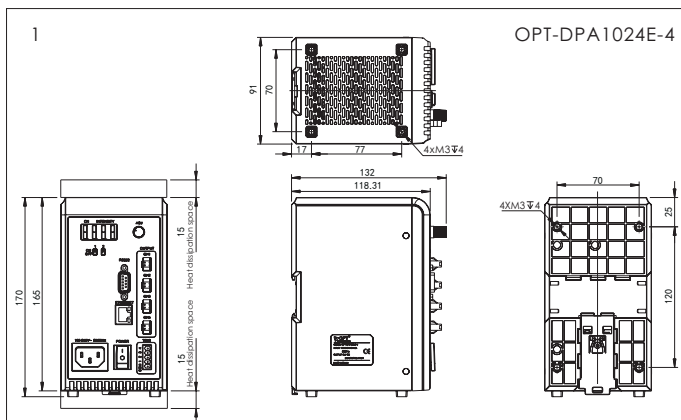
Rising edge



Falling edge



Dimensions [mm]



Description

T1 is the trigger delay time while T2 is the width of the 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

