

LED Controller

CV-DPS-DD-72-1

Operation Manual

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1. Safety and preventive measure

Read this operation manual carefully in order to use the product safely. Keep this operation manual safe while using all products. Please retain this manual for future reference.

Meaning of warning markings		The following warning indications are shown in this manual. Be sure to understand meaning of these warning markings.
	WARNING	This symbol indicates that potential risk exists. If by any chance the product is not operated in accordance with requirements in this manual, it may cause either injury of operator or malfunction of the product.

1.1. Notes to use the product correctly

	WARNING	Use this product under full understanding of the following notes.
• Be sure to confirm compatibility / feasibility (especially electrical insulation requirement) by the customer when the product is to be used with other equipment. • Be sure to confirm the criteria, law requirement and regulation by the customer for the equipment used with this product. • Be sure to confirm that assembling, electrical connection and operation meet the requirement criteria of this product (based on the criteria shown in this manual) and the equipment to be used with as the entire system when this product is used with the other equipment. • Do not use the products without enough measures to avoid huge risk for human and assets when safety measure in the case when safety criteria as the entire system does not take place. • Do not connect the products directly to switchboard. • Install the products correctly to avoid water entering the products. • Wipe off the surface of the product if foreign material or dirt is found. • The replacement or maintenance is recommended by periodical inspection of the product. • Contact MORITEX sales representative for the products failure. Do not repair the products by the customers.		

Other notes

- In the case of the disposal of the product, it is important to dispose it as industrial waste in accordance with the local regulation in your area.
- Secure 10mm space out of the products to avoid the temperature increase of the products. Over-heat may cause the degradation of the parts or deformation of the case.
- Moderate temperature burn may occur if the products contact the skin. Use the products firmly installed onto the fixture or rails.
- External dimension and weight information is for reference only.
- Be noted that the product criteria (or parts / option parts) are subjected to change without any advance notice to optimize or other reasons.
- Contact MORITEX sales representatives if you have any further questions.

1.2. Warranty

Warranty period

Warranty period of the product is 2 years after the date the product is delivered. MORITEX will repair or replace the defective unit without charge within 2 years after the purchase, only if failure occurs under proper handling in accordance with the operation manual.

Warranty coverage

The defected part of the products will be repaired or replaced at free of charge if the failure occurs due to our responsibility against the products within warranty period.

However, the incident showing follows are exemption.

- The case caused by unexpected technical trouble during shipment.
- The caused by the reason which is not the product.
- The case which is caused by the person who is not MORITEX employee.
- The case caused by originally considered purpose and application.
- The case caused by incorrect operation, such as drop or impact.
- The case of on-site repair.
- The case caused by the accidents in which MORITEX is not responsible for, Such as natural disaster, environmental pollution etc.)
- Cause of failure or trouble which cannot be decidable by MORITEX.

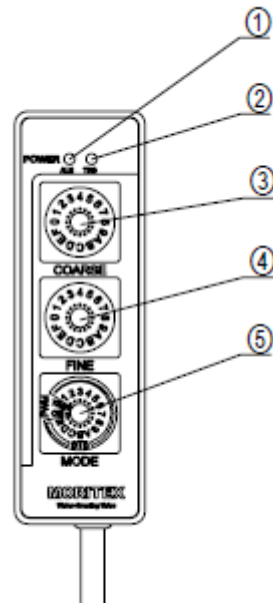
MORITEX is not responsible for the loss directly or indirectly related to this product. Liability of MORITEX will not exceed the price of the product.

2. Product criteria and function

2.1. Main function and features

- Maximum output
Maximum output voltage : 24V, Maximum output current : 3A
- PWM pulse modulation dimming
Output light intensity is adjustable with 256 steps.
0 (turn off) – 255 (Max. DC CW lighting)
- 3 operation mode as Always-on, Trigger, STB
 - Always-on : LED always lit
 - Trigger : LED lit in conjunction with Trigger signal
 - STB : LED lit in specified duration, harmonized with rise-up timing of trigger signal.
- STB operation
LED starts to lit at the rise-up timing of trigger signal, and lit off after settled duration from 10us to 500ms. Adjustable time can be chosen from 14 types.
- LED lighting operation by trigger signal
LED lighting can be controlled by trigger-ON voltage 24V – 5V, Trigger OFF voltage 0V.
- Protection function
OCP (Over Current Protection) : Overcurrent is terminated by automatic recovery fuse.
- DIN rail fixture
One-touch installation can be done by DIN rail.
- Compatible lightings
This product is compatible with CompaVis series / lightings operated by DC24V in our products line.

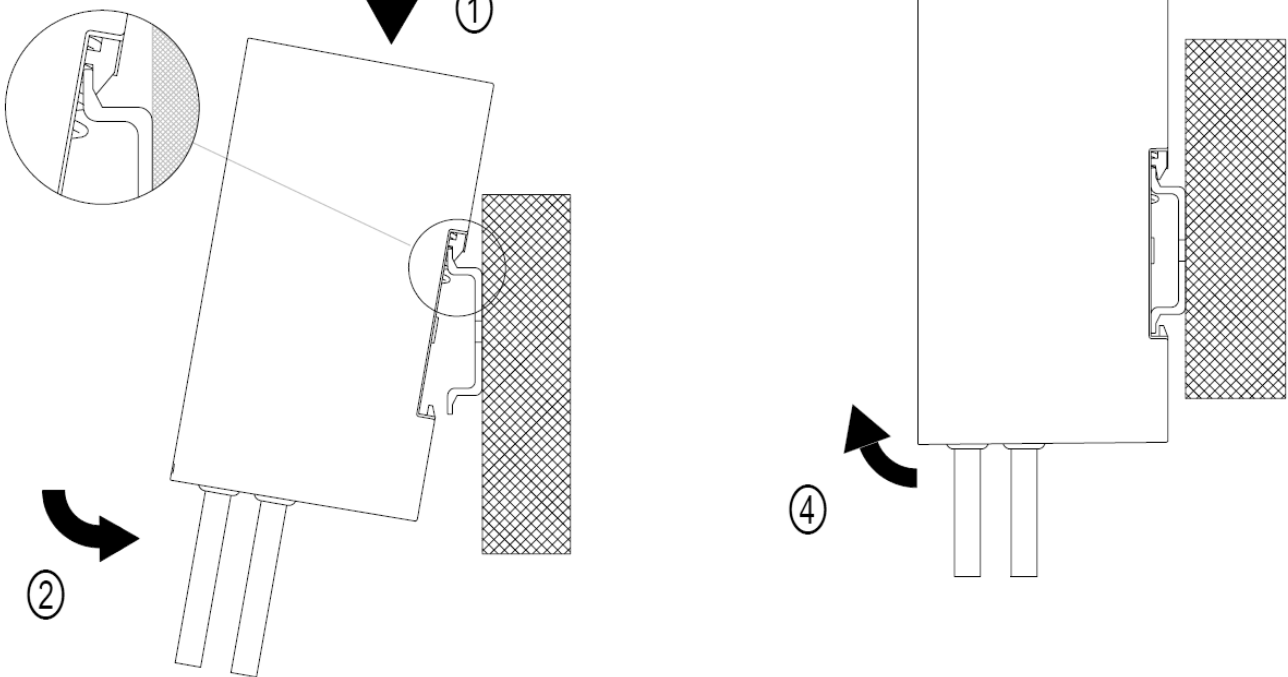
2.2. Front panel



①	Power / ALM LED	Green light for regular operation. Red light for output protection ※Reboot the power supply to release the protection
②	Trigger signal LED	This indicator lit in Orange color when trigger ON signal is detected.
③	Light intensity coarse adjustment encoder	LED light intensity can be adjusted in larger variation.
④	Light intensity fine adjustment encoder	LED light intensity can be adjusted in smaller variation.
⑤	Mode settlement encoder	LED lighting mode and STB time can be adjusted,

2.3 Installation method

Close-up image



DIN installation	
①	Hang the upper tab to DIN rail.
②	Press the controller to arrow direction while pressing downward.

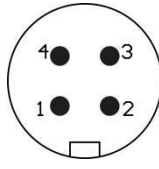
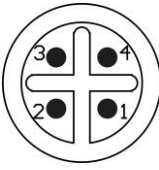
※M3 screws on backside is also applicable for installation.

※Secure 10mm space out of the products except its back-side.

Removal from DIN rail	
③	Press the controller downward.
④	Remove the controller by holding the bottom upward as arrow.

3. Operation method

3.1. Wiring definition

	WARNING	Please connect the corresponding wires according to the definition. The wrong wiring will make the controller not work properly and even irreversible damage to the controller.
• YG-12-A-4B		
Pin	Name	Explanation
1	+24V	Power +
2	TRIG-	Trigger input -
3	GND	GND
4	TRIG+	Trigger input +
		
• YG-12-A-4A		
Pin	Name	Explanation
1	LED+	Controller output +
2	NC	NC
3	LED-	Controller output -
4	NC	NC
		

3.2. Brightness adjustment encoder

COARSE (larger variation):

Encoder indication	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Intensity dimming value	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240

FINE (smaller variation):

Encoder indication	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
Intensity dimming value	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

Note: The brightness level can be adjusted from 0 to 255. The controller output brightness level can be adjusted by COARSE and FINE.

3.3. Mode settlement

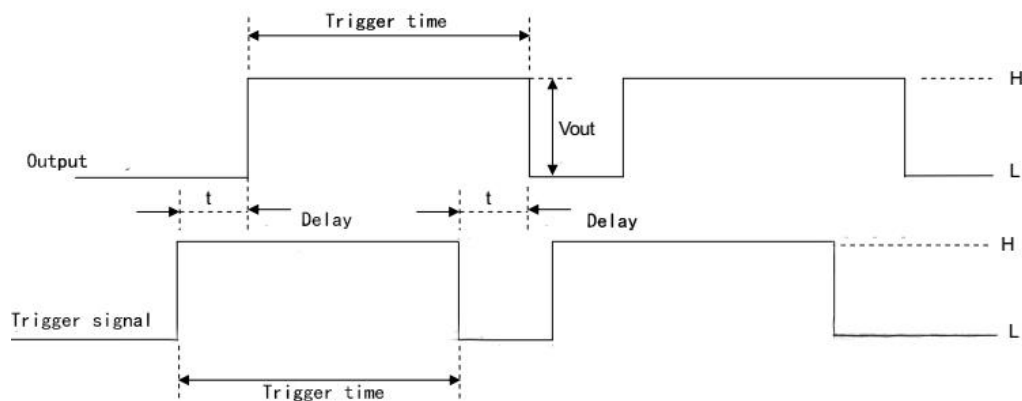
Encoder indication	CW	TRG	1	2	3	4	5	6
Mode STB time	INT	EXT	10us	20us	50us	100us	250us	500us
Encoder indication	7	8	9	A	B	C	D	E
STB time	1ms	4ms	10ms	20ms	40ms	100ms	200ms	500ms

Note :

- CW: Constant light mode, in which the controller will maintain power output.
- TRG: Trigger mode, in which the controller will follow the external trigger signal output.
- 1-E: STB mode, in this mode, the controller will output the settled time and then turn off the output after receiving the rising edge of the trigger signal.

3.4. Trigger signal

Trigger mode:



H : ON level

L : OFF level

Vout : Controller output voltage

Delay : Trigger delay

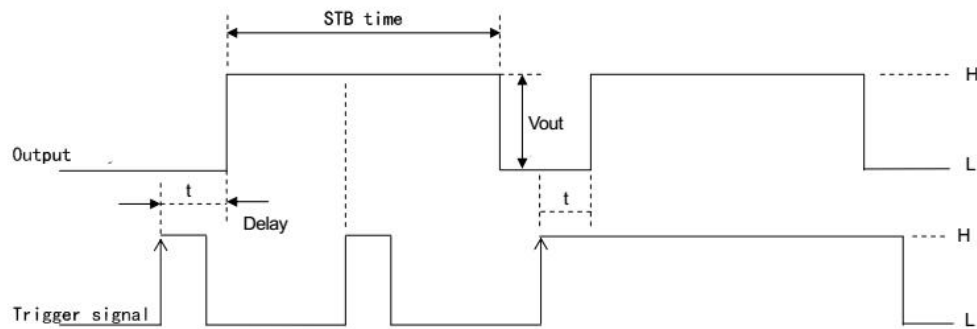
Trigger signal : Trigger signal

Output : Controller output

Trigger signal : Trigger signal t : Trigger delay time(10us or less)

In this mode, the controller output will follow the input trigger signal. When the trigger signal is high, the controller will operate as delay output. After the trigger signal returns to "Low", the controller will stop output after this delay.

STB MOD:



H : ON level L : OFF level Vout : Controller output voltage
 Delay : Trigger delay STB time : STB mode output time Output : Controller output
 Trigger signal : Trigger signal t : Trigger delay time(10us or less)

In this mode, after receiving the trigger signal, the controller will output the STB set time after the delay time. The controller will not respond to the input signal until the output is completed and the controller completes an output process, and the output time is not dependent of the pulse width of the trigger signal.

4. Specification

4.1. Specification

Item	Specification
Maximum Input voltage	24V DC
Maximum input current	3.5A
Number of channels	1CH
Maximum output voltage	24V
Maximum output current	3A*1
Maximum electric power consumption	72W*1*2
Dimming method	PWM pulse modulation
Light intensity range	0 ~ 255
PWM frequency	100 kHz
Front panel control	2 intensity control encoder / 1 mode control encoder
External control	1 External trigger input
External control voltage	Trigger ON : 5V ~ 24V, Trigger OFF : <2V ※Do not exceed 24V
Trigger delay	<10us
Operating temperature / Humidity	temperature : 0~45℃ Humidity: 20%~80% RH (no condensation)
Storage temperature / Humidity	temperature : -25~80℃ Humidity: 20%~85% RH (no condensation)
Outside dimensions	W30mm X H95mm X D53mm (Excluding protrusion)
Weight	150g
CE Marking*3	EMC : 2014/30/EU RoHS : 2011/65/EU, 2015/863

*1 It depends on the input power supply.

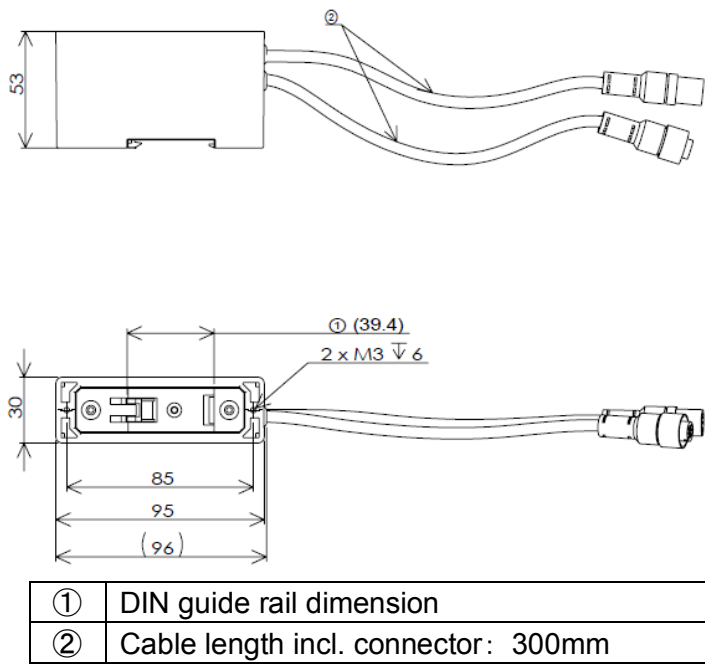
*2 Use power supply enough working for illumination electricity consumption when using with our CompaVis series. However, minimum requirement for power supply is 2W.

*3 Extension or branch cables up to 10 m long may be used to connect CompaVis illumination to the controller.

4.2. Package contents of controller

Items	Qty	Unit	Remark
Controller	1	Pc.	-
Quick guide	1	Copy	-

4.3. Outside Dimensions



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LED 控制器

CV-DPS-DD-72-1

操作说明书

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1. 前言

在开始操作前，请仔细阅读本使用说明书。在整个产品终生都要保存本使用说明书，并将其存放在容易取用的地方。

警告符号的含义		本使用说明书中使用了下列警告符号。务必完全理解其警告内容。
	警告	此警告符号表示潜在危害情况。若不遵守本使用说明书要求操作，可导致操作人员受伤或设备损坏。

1.1. 正确使用注意事项

	警告	仅在理解以下内容后方可使用本产品。
• 如果本产品与其它器械配合使用，请确定其与这些外部器械连接的正确性/兼容性。 • 如果本产品与其它器械配合使用，请确定存在适用于该器械组合的标准、规范或规则。 • 如果本产品与其它器械配合使用，请确定整个系统范围内的安装、连接与使用操作都符合本产品的规范要求（按照本使用说明书规定）以及所有其它器械的规范要求。 • 如果整个系统未配备符合相关安全级别的适当安全措施，禁止在对人身或财产存在严重风险的情况下使用该产品。 • 请不要将本产品直接连接到配电盘。 • 请正确安装本产品，避免水份进入产品内部。 • 如果发现本产品上粘附有某些物质/污物，请用干布将其完全擦除。 • 本产品需要定期进行检查，并更换维护零部件。 • 当故障发生时，请向茱丽特请求维修服务，且，禁止私自拆开本产品。		

其它注意事项

- 客户在对本产品进行废弃处理时，请按照客户所在地区的法律法规规定，作为工业废物进行报废处理。
- 为了防止产品过热，在本产品周围留 10mm 的空间。产品过热会导致零部件性能劣化及外壳变形。
- 与本产品长时间接触可能会导致低温烫伤，所以一定要固定在支撑台或导轨上使用，请勿长时间接触。
- 外形尺寸与重量仅供参考。
- 本产品（或配件或选配件）规格可能因产品优化及其它原因随时进行改变，恕不另行通知。
- 若有任何疑问，请咨询茱丽特。

1.2. 产品保修政策

保証期間

本产品的保修期为二年，从购买之日起开始计算。如果产品在从购买之日起二年内发生故障，并确定该产品是按照本使用说明书正确使用的，那么该设备可获得免费维修。

保証範圍

如果产品在保修期内由于我们的责任而导致故障的，该故障部件将得到免费更换或维修。
如果故障由下列原因引起，那么将免除保修责任。

- 故障由在运输时无法预见的技术性原因引起。
- 故障并非因产品本身导致。
- 故障由非茱丽特工作人员进行的改装或维修引起。
- 故障由与本使用说明书不符的非授权应用引起。
- 故障由不适当操作（如坠落或振动）引起。
- 故障经过茱丽特现场服务人员维修。
- 故障原因条件不在我们的责任范围内（如自然灾害或环境污染）。
- 故障原因无法被茱丽特识别。

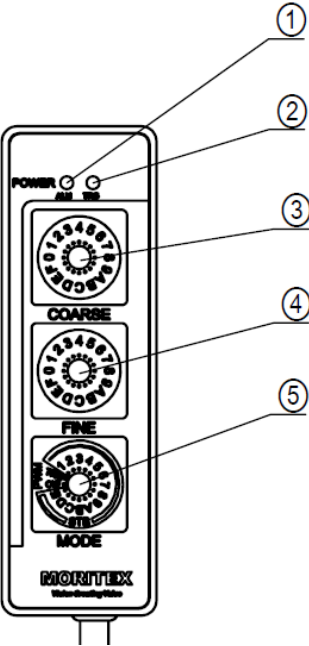
肖特茱丽特对与本产品相关的间接或后果性损失不承担负责。肖特茱丽特的赔偿责任应不超过本产品本身的价格。

2. 产品规格与功能

2.1. 主要功能与特征

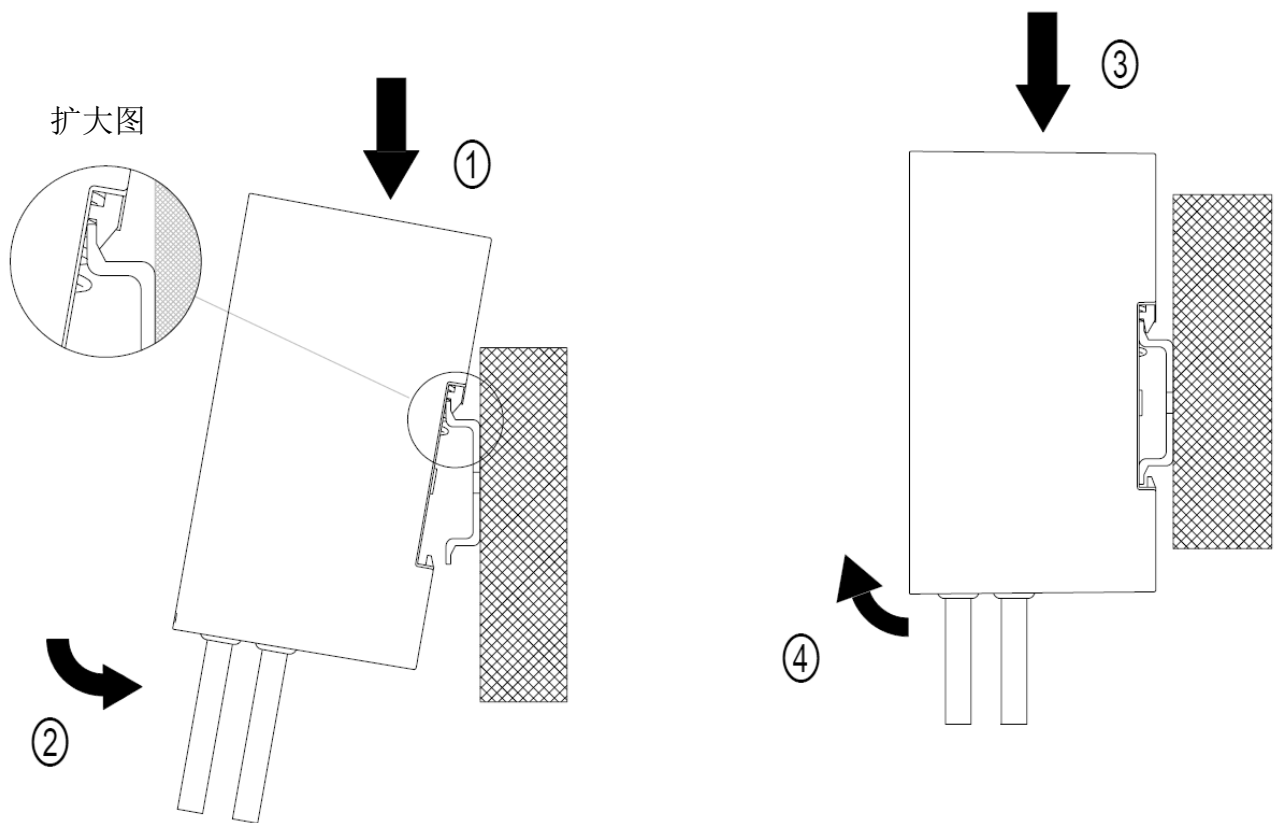
- **最大输出**
最大输出电压 24V、最大输出电流 3A
- **PWM 脉宽调制调光**
调光值可调整为 256 个等级。
0（熄灭）-255(MAX. DC 连续点亮)
- **常亮、触发、STB 的 3 个亮灯模式**
常亮：LED 灯一直常亮。
触发：联动触发信号，点亮 LED 灯。
STB：当检测到触发信号的上升沿时，让 LED 点亮指定的时间。
- **STB 点亮**
当检测到触发信号的上升沿时，开始点亮 LED 灯，点亮 10 μ s~500ms 的设定时间后，LED 灯会熄灭。
设定时间可以从 14 个类型中选择。
- **通过触发信号控制 LED 开关**
触发电压 5V~24V 点亮 LED，触发电压 0V 关断 LED。
- **过电流保护功能**
OCP(输出过流保护)：利用自动复归保险丝，关断输出。
- **DIN 轨道固定**
可以在 DIN 轨道上一次操作安装(One-touch 固定)。
- **支持光源**
该产品可以支持本公司生产和销售的 CompaVis 系列/ 专为 DC24V 的光源灯具。

2.2. 前面板



①	电源 / ALM 指示灯	通常动作时：绿灯点亮 输出保护时：红灯闪烁 ※如果要解除输出保护，需要关断电源输出后，重新投入电源。
②	触发信号指示灯	触发 ON 信号输入后，橙色点亮。
③	亮度粗调编码器	以较大的变化量来调整 LED 亮度。
④	亮度微调编码器	以较小的变化量来调整 LED 亮度。
⑤	模式调整编码器	设置 LED 亮灯模式和 STB 时间。

2.3. 设置方法



DIN 轨道安装方法	
①	先把机台上部的卡爪卡在 DIN 轨道上。
②	然后把机台往下面按压的同时再往箭头方向按下去。 ※本产品也可以使用背面的 M3 螺丝孔固定。 ※在本产品背面以外的周围要留出 10mm 的空间。

DIN 轨道拆卸方法	
③	先把机台往下面按下。
④	再把机台的下部按箭头方向抬起来之后，取下来。

3. 操作方法

3.1. 配线的定义

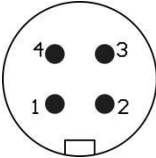


警告

根据下面的定义来进行电缆配线。配线错误不仅导致控制器的误动作，还有可能导致重大的故障。

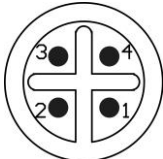
• 工业用 M12 公头 4 针连接器

针	名称	内容
1	+24V	DC 电源+24V 输入
2	TRIG-	外部触发－输入
3	GND	DC 电源 0 V(GND)输入
4	TRIG+	外部触发＋输入



• 工业用 M12 母头 4 针连接器

针	名称	内容
1	LED+	控制器输出＋
2	NC	NC
3	LED-	控制器输出－
4	NC	NC



3.2. 亮度调整编码器

COARSE（粗调）：

编码器指示	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
亮度调节灰度值	0	16	32	48	64	80	96	112	128	144	160	176	192	208	224	240

FINE（微调）：

编码器指示	0	1	2	3	4	5	6	7	8	9	A	B	C	D	E	F
亮度调节灰度值	0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15

注解：亮度等级在 0～255 的范围内可进行调整。控制器输出亮度等级可以用 COARSE 和 FINE 进行调节。

3.3. 模式调节

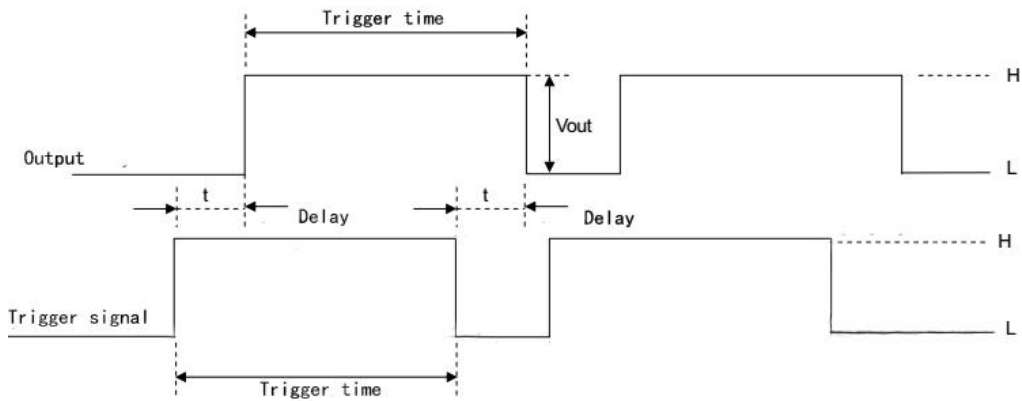
编码器指示	CW	TRG	1	2	3	4	5	6
模式 STB 时间	INT	EXT	10us	20us	50us	100us	250us	500us
编码器指示	7	8	9	A	B	C	D	E
STB 时间	1ms	4ms	10ms	20ms	40ms	100ms	200ms	500ms

注

- 编码器指示 CW：常亮模式：在此模式下，控制器会一直保持输出状态。
- 编码器指示 TRG：触发模式：在此模式下，控制器根据出触发信号进行输出。
- 编码器指示 1-E：STB 模式：在此模式下，当检测到触发信号的上升沿之后，控制器将输出完指定时间后再停止输出。

3.4. 触发信号

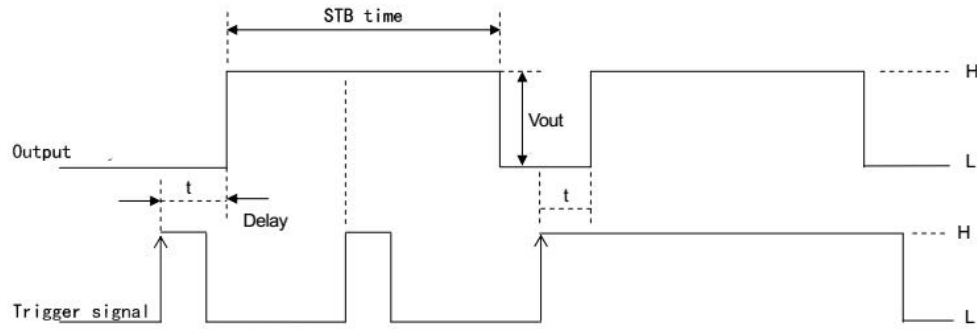
触发模式：



H:ON 电平 L:OFF 电平 Vout:控制器输出电压
Delay:触发延迟 Trigger signal:触发信号 Outoput:控制器输出
Trigger signal:触发信号 t:触发延迟时间(10us 以下)

在此模式下，控制器根据输入触发信号来进行输出。当触发信号处于 High 状态时，控制器将进行生成延迟的输出。当触发信号回到”Low”状态时，控制器经过所设定的延迟时间后再停止输出。

STB MOD:



H:ON 电平

Delay:触发延迟

Trigger signal:触发信号

L:OFF 电平

STB time:STB 模式输出时间

t:触发延迟时间(10us 以下)

Vout:控制器输出电压

Output:控制器输出

在此模式下，当接到触发信号后，控制器经过所设定延迟时间后再进行 STB 设定时间的输出。控制器在 STB 设定时间的输出过程中不会接受其他触发信号。所以，控制器输出时间并不依赖于触发信号的脉冲幅度。

4. 规格

4.1. 规格

项目	规格
最大输入电压	24V DC
最大输入电流	3.5A
通道数	1CH
最大输出电压	24V
最大输出电流值	3A*1
最大功耗	72W*1*2
调光方式	PWM 脉宽调制调光
亮度可调等级	0~255
PWM 频率	100KHz
前面板控制	2 个亮度调节编码器、 1 个模式调节编码器
外部控制	外部触发输入 1 系统
外部控制电压	触发 ON: 5V~24V 触发 OFF: 2V 以下 ※不能超过 24V
触发延迟	10us 以下
动作温度/湿度	温度 :0℃~+45℃ 湿度:20%~80% RH (不能产生水滴)
保存温度 / 湿度	温度 :-25℃~+80℃ 湿度:20%~85% RH (不能产生水滴)
外观尺寸	W30mm × H95mm × D53mm (突出部除外)
重量	150g
欧洲指令*3	EMC 指令: 2014/30/EU RoHS 指令:2011/65/EU、2015/863

*1 取决于输入电源

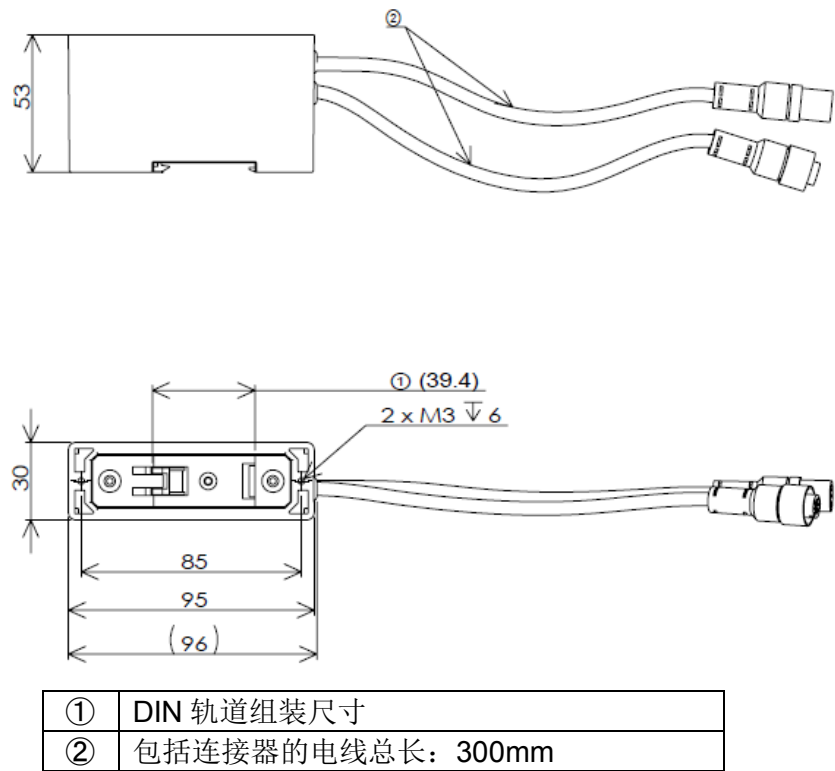
*2 使用本公司 CompaVis 系列时, 请准备大于光源消耗功率的电源。
但, 需要最低 2W 的电源。

*3 CompaVis 光源延长线及分支线最长可达 10 米

4.1. 包装内容的确认

产品名	数量	单位	备考
控制器	1	台	-
简易操作说明书	1	份	-

4.2. 外观尺寸



咨询:

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