D4-L
DMX/RDM 4CH CV DECODER

FC CE RoHS warranty 5 years ISO9001:2008 SGS UKAS

D4-L with the standard RDM remote device management protocol, supports DMX512 signal bi-directional communication, achieves remote management of reading and writing DMX address (DMX master controller must recognize the RDM protocol). Equipped with DMX standard 3-pin XLR, RJ45, green terminal interface. Realize 0-100% dimming or different lighting effect; workable with single color, bi-color, RGB or RGBW LED lamps.
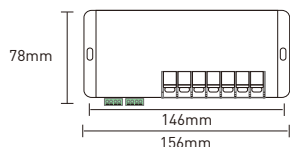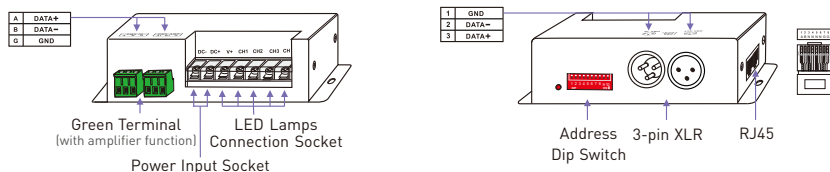
1. Product Parameter:

D4-L

Input Signal:	DMX512, RDM	Dimming Range:	0~100%
Input Voltage:	5~24Vdc	Protection:	Short circuit / Over current
Current Load:	6A × 4CH 8A × 3CH	Working Temp.:	-25℃~55℃
Output Power:	120W@5V 288W@12V 576W@24V	Dimensions:	L156 × W78 × H40(mm)
DMX512 Socket:	3-pin XLR, RJ45, Green Terminal	Package Size:	L180 × W82 × H48(mm)
		Weight (G.W.):	445g

2. Product Size:

78mm 146mm 156mm 40mm

3. Configuration Diagram:

A	DATA+
B	DATA−
G	GND

Green Terminal (with amplifier function) LED Lamps Connection Socket

Power Input Socket

1	GND
2	DATA−
3	DATA+

Address Dip Switch 3-pin XLR RJ45

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4. Dip Switch Operation:

RDM Mode: The dip switch 1-10 are OFF.

DMX Mode: FUN = OFF (the 10th dip switch = OFF) Setting DMX addresses with dip switch 1-9

Self-testing Mode: FUN = ON (the 10th dip switch = ON)
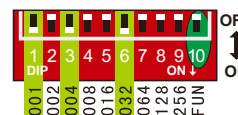
4.1 How to set DMX address via dip switch:

FUN = OFF (the 10th dip switch = OFF) **DMX Mode**

DMX address value = the total value of (1-9), to get the place value when in "on" position, otherwise will be 0.

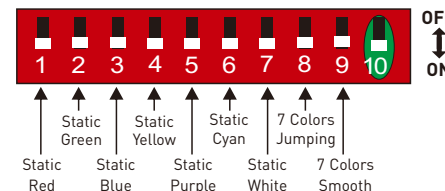E.g.1: Set Initial Address To 32. E.g.2: Set Initial Address To 37. E.g.3: Set Initial Address To 178.

001+004+032=37 002+016+032+128=178

4.2 Self-testing Mode:

FUN=ON (the 10th dip switch = ON) **Self-testing Mode**

Dip Switch	1-9=off	1=on	2=on	3=on	4=on	5=on	6=on	7=on	8=on	9=on
Self-test Function	Static Black	Static Red	Static Green	Static Blue	Static Yellow	Static Purple	Static Cyan	Static White	7 Colors Jumping	7 Colors Smooth

Static Red Static Green Static Blue Static Yellow Static Purple Static Cyan Static White 7 Colors Jumping 7 Colors Smooth

For changing effects (Dip Switch 8/9 = on): DIP switch 1-7 is used to realize 7 speed levels. (7 = on, the fastest level)

[Attn] When several dip switches are on, subjected to the highest switch value. As the figure above shows, the effect will be 7 colors smooth at 7 speed level.
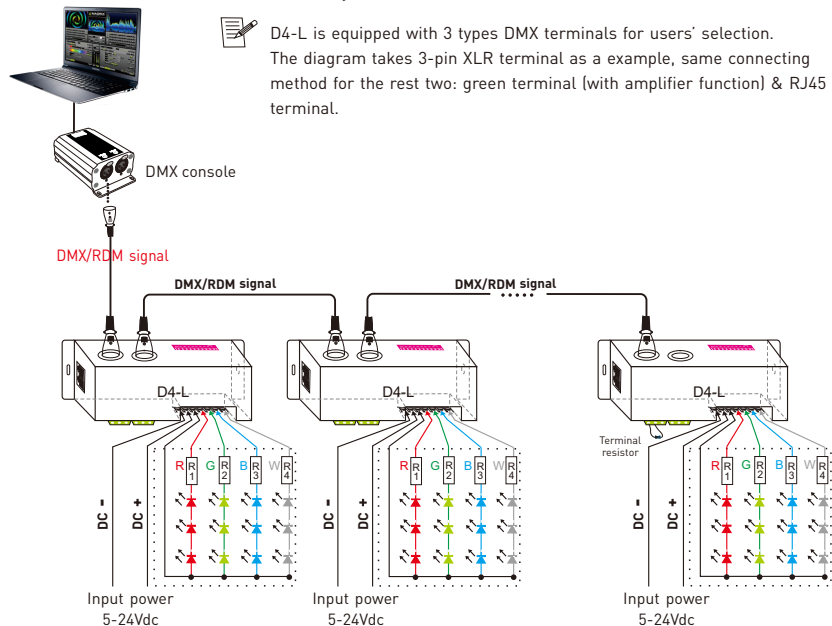
4.3 DMX Dimming Instruction:

Each D4-L DMX decoder occupied 4 DMX addresses when connecting the DMX console.

E.g., the defaulted initial address is 1, please find their corresponding relationships in the form.

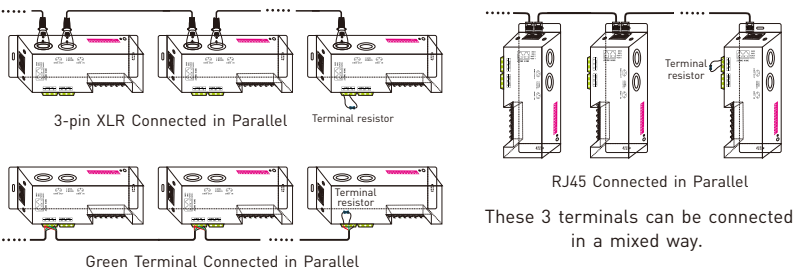| DMX Console	DMX Decoder
CH1 0-255	CH1 PWM 0-100% (LED R)
CH2 0-255	CH2 PWM 0-100% (LED G)
CH3 0-255	CH3 PWM 0-100% (LED B)
CH4 0-255	CH4 PWM 0-100% (LED W)

5. Wiring Diagram:

5.1 Decoder can be connected to a variety of standard DMX512 devices:

📝 D4-L is equipped with 3 types DMX terminals for users' selection.
The diagram takes 3-pin XLR terminal as a example, same connecting method for the rest two: green terminal (with amplifier function) & RJ45 terminal.

DMX console

DMX/RDM signal

DMX/RDM signal   DMX/RDM signal

D4-L   D4-L   D4-L

Terminal resistor

R R 1   G R 2   B R 3   W R 4

DC −   DC +

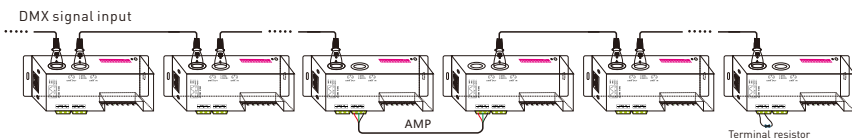Input power
5-24Vdc

Input power
5-24Vdc

Input power
5-24Vdc

✱ An amplifier is needed when more than 32 decoders are connected, signal amplification should not be more than 5 times continuously.

✱ If the recoil effect occurs because of longer signal line or bad line quality, please try to connect 0.25W 90-120Ω terminal resistor at the end of each line.

5.2 The connection diagram of three DMX terminals:

3-pin XLR Connected in Parallel   Terminal resistor

Green Terminal Connected in Parallel

Terminal resistor

RJ45 Connected in Parallel

These 3 terminals can be connected in a mixed way.

5.3 The connection diagram of AMP signal amplifier terminal:

DMX signal input

AMP

Terminal resistor

✱ Amplified the signal by AMP interface which connecting too many decoder and in overlong signal line, signal amplification should be no more than 5 times continuously.

6. Attention:

- This product must be installed and adjusted by a qualified professional.

- LTECH products are and not lightningproof non-waterproof (special models excepted). Please avoid the sun and rain. When installed outdoors, please ensure they are mounted in a water proof enclosure or in an area equipped with lightning protection devices .

- Good heat dissipation will prolong the working life of products. Please ensure good ventilation.

- Please check if the working voltage used complies with the parameter requirements of products.

- The diameter of wire used must be able to load the light fixtures you connect and ensure the firm wiring.

- Before you power on products, please make sure all the wiring is correct in case of incorrect connection that causes damage to light fixtures.

- If a fault occurs, please do not attempt to fix products by yourself. If you have any question, please contact your suppliers.

7. Warranty Agreement:

- 5 years warranty from the date of manufacture.
- Free repair or replacement services for quality problems are provided within warranty periods.

7.1 Warranty exclusions below:

Following conditions are not within the guarantee range of free repairing or replacement services:

- Beyond warranty periods.

- Any artificial damage caused by high voltage, overload, or improper operations.

- Products with severe physical damage.

- Damage caused by natural disasters and force majeure.

- Warranty labels and barcodes have been damaged.

- No any contract or invoice signed by LTECH .

7.2 Repair or replacement provided is the only remedy for customers. LTECH is not liable for any Incidental or consequential damage unless it is within the law.

7.3 LTECH has the right to amend or adjust the terms of this warranty. The warranty that issues in writting shall prevail.

★ This manual is subject to changes without further notice.Product functions depend on the goods. Please feel free to contact our distributors if you have any question.

D4- L
RDM/DMX恒压解码器

FC CE RoHS 质保5年 SGS ISO9001:2008 UKAS

D4-L加入标准的RDM远程设备管理协议，支持DMX512信号双向通讯， 可以实现远程读取/写入DMX地址等管理功能(DMX主控需支持RDM协议） 。提供3针XLR, RJ45, 绿色端子三种DMX信号接口选择，实现0-100%调光或各种变化效果; 可控制单色、双色、RGB、RGBW的LED灯具。
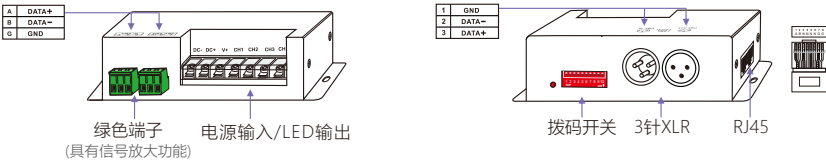
1、产品参数:

D4-L

输入信号 ：	DMX512, RDM	调光范围：	0~100%
输入电压 ：	5~24Vdc	保护：	短路、过流保护
负载电流 ：	6A×4CH 8A×3CH Max.24A	工作温度：	-25℃~55℃
最大负载功率：	120W@5V 288W@12V 576W@24V	产品尺寸：	L156×W78×H40(mm)
DMX512 插口：	3针XLR, RJ45, 绿色端子	包装尺寸：	L180×W82×H48(mm)
		重量(毛重):	445g

2、产品尺寸

78mm   146mm   156mm   40mm

3、结构图:

A DATA+ / B DATA- / G GND

1 GND / 2 DATA- / 3 DATA+

DC- DC+ V+ CH1 CH2 CH3 CH4

绿色端子 (具有信号放大功能)   电源输入/LED输出   拨码开关   3针XLR   RJ45

4、拨码开关的操作说明:

RDM模式: 拨码开关1-10全部拨向上时

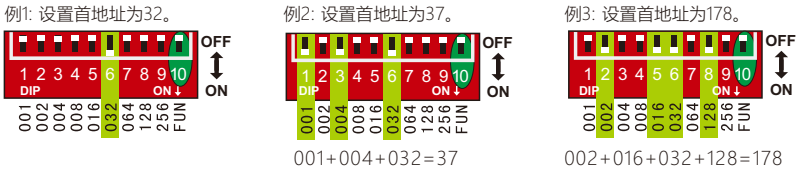**DMX模式:** FUN=OFF （第10位拨码开关拨向上时） 此时可通过1-9拨码开关设置DMX地址

自测模式: FUN=ON （第10位拨码开关拨向下时）

4.1 用拨码开关设置首地址:

FUN=OFF (第10位拨码开关=OFF) DMX模式

DMX512起始地址码=编码开关1-9位的位值总和, 将编码开关拨向下 （ON置"1"）, 可获得该位的位值; 编码开关拨向上 （置"0"）, 则该位的位值为0。

例1: 设置首地址为32。   例2: 设置首地址为37。   例3: 设置首地址为178。

001+004+032=37   002+016+032+128=178

4.2 自测功能:

FUN=ON (第10位拨码开关=ON) 自测模式

拨码开关	1-9=off	1=on	2=on	3=on	4=on	5=on	6=on	7=on	8=on	9=on
自测模式	静态黑色	静态红色	静态绿色	静态蓝色	静态黄色	静态紫色	静态青色	静态白色	7彩跳变	7彩渐变

静态红色 静态蓝色 静态紫色 静态白色 7彩渐变
静态绿色 静态黄色 静态青色 7彩跳变

拨码开关8/9=on时, 为动态效果:
拨码开关1-7 可用于调节速度(7=on, 为最快速度)。

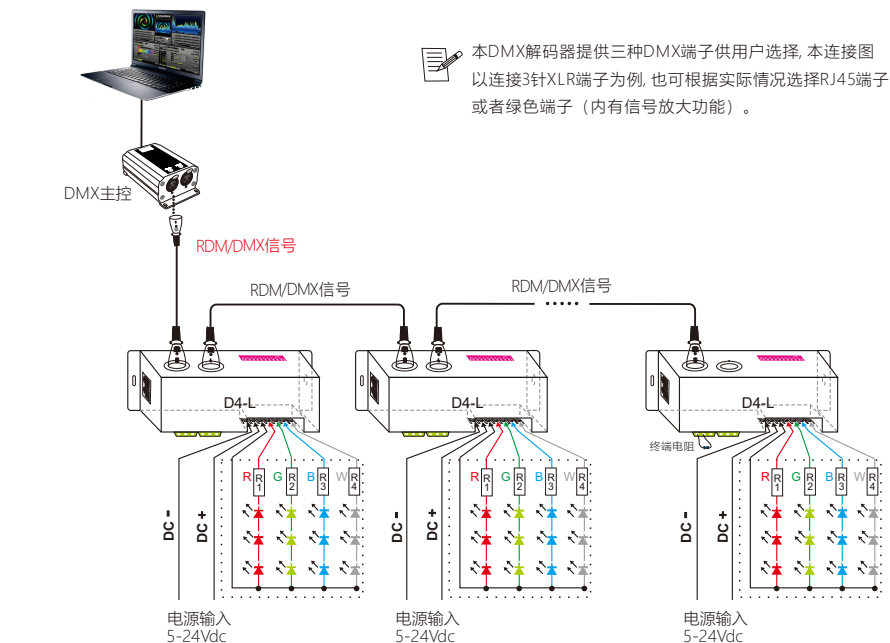[注] 当多位拨码开关为on时, 以高位为准（如上图所示, 表现为7级速度的7彩渐变） 。

4.3 DMX 调光示意:

DMX控台连接DMX解码器调光, 每台D4-L解码器占用4个DMX地址。

例如: DMX解码器默认首地址为1, 控台与解码器调光对应关系如表格。

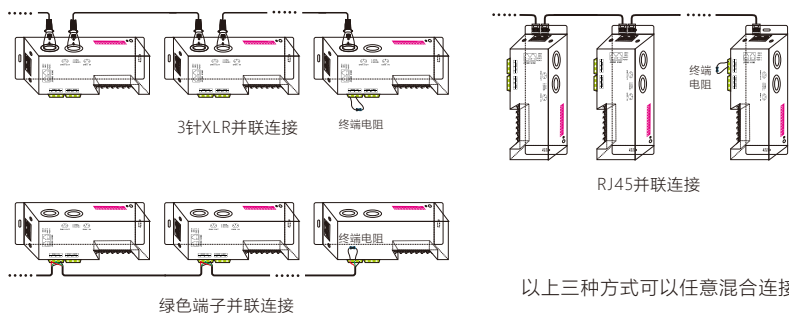| DMX控台通道	DMX解码器输出通道
CH1 0-255	CH1 PWM 0-100% (LED R)
CH2 0-255	CH2 PWM 0-100% (LED G)
CH3 0-255	CH3 PWM 0-100% (LED B)
CH4 0-255	Ch4 PWM 0-100% (LED W)

5、连接示意图:

5.1 解码器可以连接各种标准DMX512设备。

DMX主控

RDM/DMX信号

📝 本DMX解码器提供三种DMX端子供用户选择, 本连接图以连接3针XLR端子为例, 也可根据实际情况选择RJ45端子或者绿色端子（内有信号放大功能）。

RDM/DMX信号　　　　　　　RDM/DMX信号

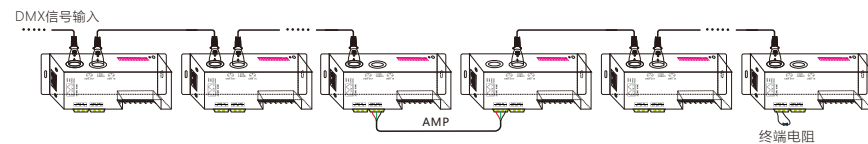D4-L　　　　D4-L　　　　D4-L
终端电阻

R R1 | G R2 | B R3 | W R4

DC -　DC +
电源输入
5-24Vdc

* 超过32台DMX解码器连接需加信号放大器，信号放大不能连续超过5次。

* 当信号线较长或者线材质量等原因造成信号反冲效应影响使用，可以尝试在每路信号线末端连接0.25W 90-120Ω终端电阻去解决。

5.2 三种DMX端口的连接示意图

3针XLR并联连接　　　终端电阻

RJ45并联连接

绿色端子并联连接

以上三种方式可以任意混合连接

5.3 AMP信号放大端子连接图

DMX信号输入

AMP　　　　　　　　终端电阻

* 当DMX解码器过多，或信号线过长，可用AMP接口放大信号，连续放大次数请勿超过5次

六 注意事项:

● 本产品请由具有专业资格的人员进行调试安装。

● 雷特产品 (专有型号除外) 不能防水防雷，需避免日晒雨淋，如安装在户外，请用防水箱和防雷装置。

● 良好的散热条件会延长产品的使用寿命，请把产品安装在通风良好的环境。

● 请检查使用的工作电压是否符合产品的参数要求。

● 使用的电线直径大小必须能足够负载连接的LED灯具，并确保接线牢固。

● 通电调试前，应确保所有接线正确，以避免因接线错误而导致灯具损坏。

● 如果发生故障，请勿私自维修；如果有疑问，请联系供应商。

七 保修协议:

● 自出厂之日起保修服务期为5年。

● 在保修服务期内出现产品质量问题雷特将给予免费修理或更换服务。

7.1 非保修条例:

属下列情况不在免费保修或更换服务范围之内:

● 已经超出保证服务期;

● 过高电压、超负载、操作不当等人为造成的损坏;

● 产品外形严重损坏或变形;

● 自然灾害以及人力不可抗拒原因造成的损坏;

● 产品保修标签和产品唯一条形码损坏。

● 无雷特签订的合同或发票凭证。

7.2. 修理或更换是雷特对客户的唯一补救措施。雷特不承担任何附带引起的损害赔偿责任，除非在适用法律范围之内。

7.3. 雷特享有修正或调整本保修条款的权利，并以书面形式发布认定为准。

★ 本说明书的内容如有变更，恕不另行通知。若内容与您使用的功能有所不同，则以实物为准。

如有疑问，欢迎向我司授权的经销商咨询。