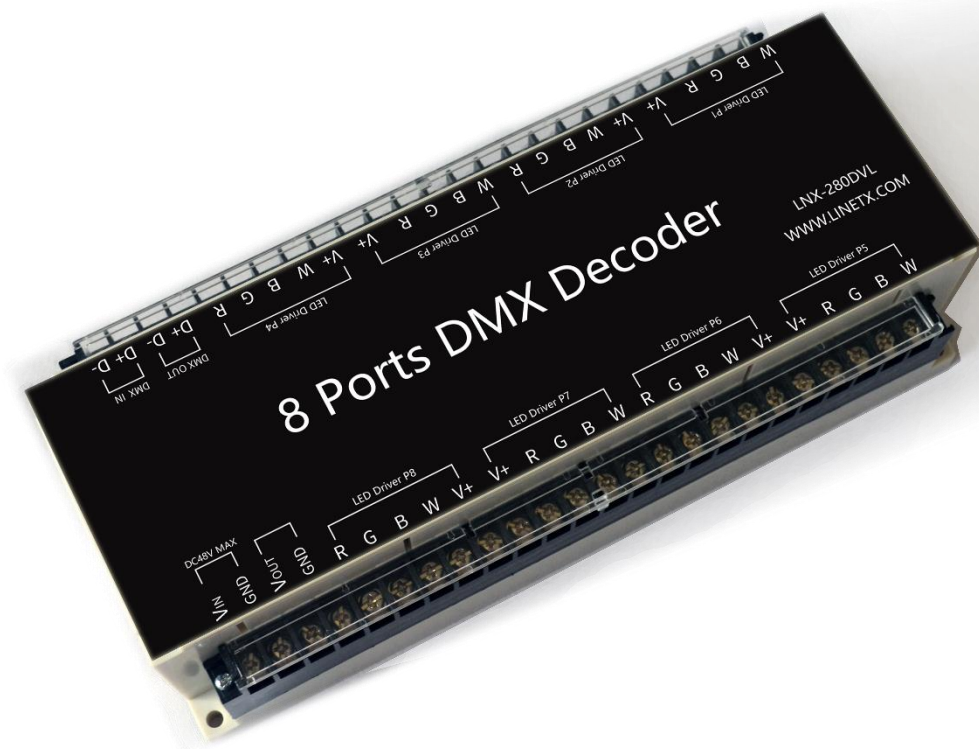


LNX-280DVL 8 Ports (32 CH) DMX Decoder Manual

Ver 2.01



LINETX Technology Co., Ltd.

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This manual is the technical manual of LNX-280DVL LED controller, applicable to LNX-280DVL series sub-models, the software version is V2.01 and above compatible software version.

LNX-900M sub-models are shown in the table below.

Type	Sub-type	Software Version	Hardware Version
LNX-280DVL	LNX-280DVL	V2.02	V202

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The follow-up upgrade of related products may be slightly different from this manual, and the upgrade of the manual may not inform you in time. Please pay attention to the discrepancies between the actual product and the description in this manual.

For more product information, please visit: www.linetc.com

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Content

1. LNX-280DVL.....	4
1.1. INTRODUCTION.....	4
2. LNX-280DVL DECODER INSTALLATION.....	6
2.1. LNX-280DVL DECODER INSTALLATION DIAGRAM.....	6
2.2. LNX-280DVL DECODER INSTALLATION INSTRUCTIONS.....	7
3. CONFIGURATION OF LNX-280DVL DECODER.....	9
3.1. CONFIGURATION OF LNX-280DVL DECODER.....	9
3.2. CONFIGURE THE ADDRESS CODE OF THE DECODER (START ADDRESS)	9
3.3. CONFIGURE THE PERSONALITY OF THE DECODER	10
3.4. CONFIGURE THE STARTUP MODE OF THE DECODER.....	11

1. LNX-280DVL

1.1. Introduction

LNX-280DVL is a constant voltage, multi-drive port, port can be aggregated, and supports RDM centralized control management DMX decoder driver developed by Ling En Technology.

LNX-280DVL has 8 PWM drive ports for constant voltage lamps, each port has 5 terminals: V+/R/G/B/W, among which W white light can be configured in different working modes through RDM

LNX-280DVL provides a wide voltage working range of 5-48V, and the maximum current of each dimming channel is 4A, that is, the total current of the dimming port of each RGBW lamp is 16A, and the maximum current of the whole device is 128A. The decoder can be connected to a 12V / 24V / 48V constant voltage light bar or lamp, and the decoder has a power supply anti-reverse function and anti-overshoot function

LNX-280DVL can remotely configure the aggregation mode of each port through RDM: 2-port aggregation, 4-port aggregation or 8-port aggregation can be configured. By driving the port aggregation, it can realize the dimming of higher power lamps in a DMX channel. , Or realize the installation of some special application scenarios.

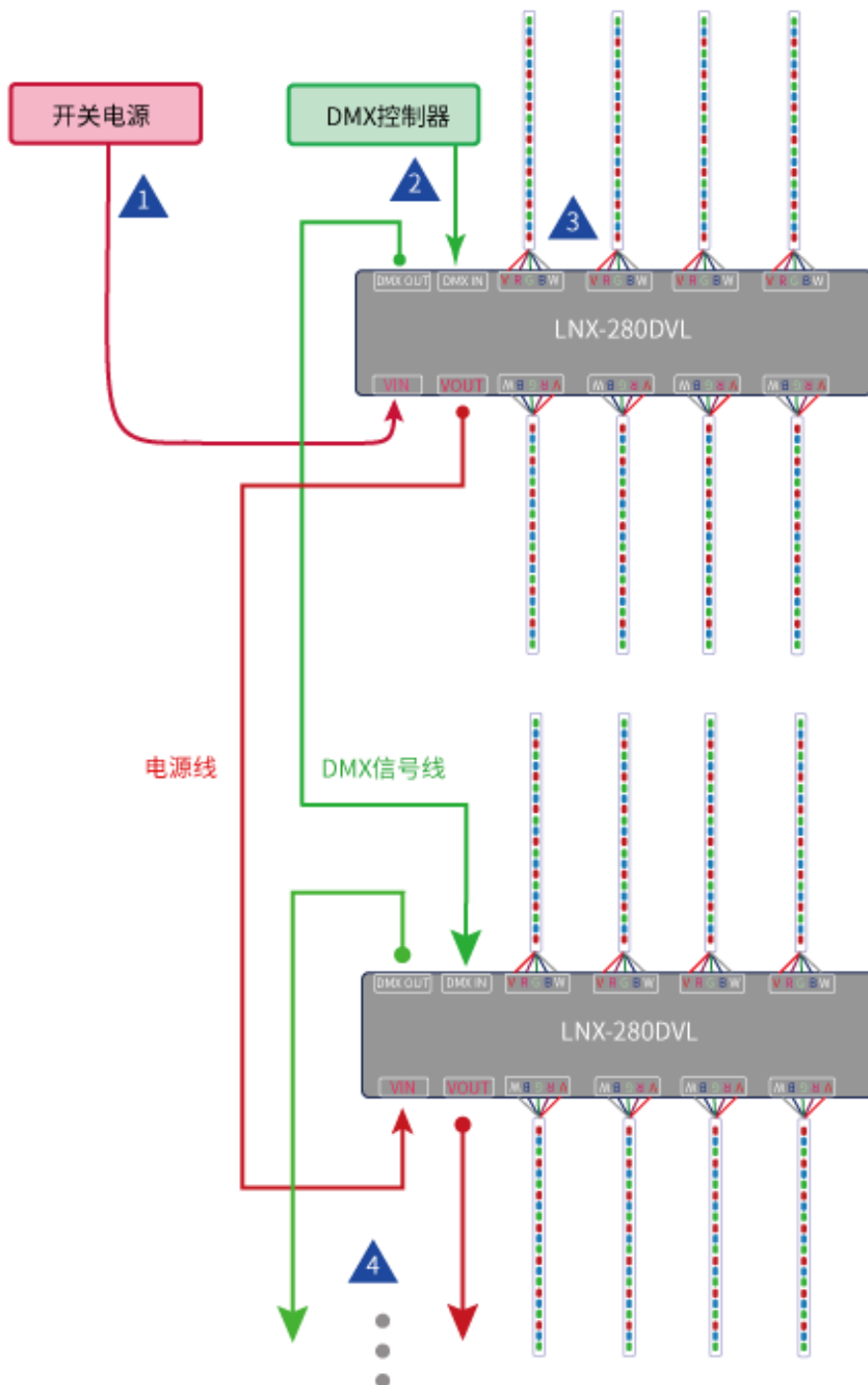
The DMX interface of LNX-280DVL is an isolated interface. The isolated DMX interface can ensure the stable operation of the equipment in more complex work scenarios, and is more secure and stable. The DMX interface is also equipped with protection circuits such as anti-overcurrent and anti-overshoot, which effectively protects the equipment from stable and long-term safe operation

LNX-280DVL has a 35mm standard DIN rail buckle, which is convenient for centralized installation

in various control cabinets

2. LNX-280DVL Decoder installation

2.1. LNX-280DVL decoder installation diagram



2.2. LNX-280DVL decoder installation instructions

- 1** The operating voltage range of LNX-280DVL is DC9-48V. Just connect the input voltage of the switching power supply to the Vin and GND terminals. The decoder has a power supply anti-reverse function, so the decoder will not work normally when the input voltage is reversed. , But don' t worry about burning the decoder.
- 2** The DMX signal input terminal of LNX-280DVL is used to connect to DMX bus signal. The decoder has DMX IN input terminal and DMX OUT output terminal, which is convenient for hand-in-hand wiring during construction. Since the LNX-280DVL has an isolated DMX circuit inside, it only needs to be connected to the D+/D- two lines of the DMX, and there is no need to connect to the GND line.
- 3** LNX-280DVL is a constant voltage PWM decoding drive device with 8 independent LED lamp drive ports. The lamp connection line for each port is: V+, R, G, B, W and other 5 wires, of which the voltage of V+ Same as the input voltage of the decoder, R/G/B/W are 4 PWM dimming signal lines, which can be connected to the RGBW terminal of the lamp/light bar. If the lamp does not have a separate white light dimming signal, you can ignore the W signal and set the decoder to work without W (for specific settings, please refer to section 3.3 below).

Another feature of LNX-280DVL is that the drive ports of these 8 LED lamps can be aggregated. The so-called port aggregation means that multiple physical ports can be bound into one logical port, for example, 4 drive ports can be aggregated into one logical port. Port, these 4 ports will drive the connected lamps with the same DMX channel value, which looks like a port driver, so the driving power of the logical port is increased by 4 times (for specific settings, please refer to section 3.3 below).

- 4** The power and signal parts of the LNX-280DVL are equipped with hand-in-hand output terminals,

so when installing multiple devices, the power and signal lines can be directly obtained from the previous device, but the power and signal attenuation should be considered. Problem, switch power supply and DMX signal amplifier should be added to the appropriate decoder node

3. Configuration of LNX-280DVL decoder

3.1. Configuration of LNX-280DVL decoder

Since the LNX-280DVL decoder has many features, there are more configuration items to choose from. Generally, the default configuration of the decoder can be selected. You only need to set the start address of the decoder to meet most of the requirements. Engineering requirements

LNX-280DVL can be set up one-to-one by using Lingen Technology's LNX-100C encoder, or can be centralized remote configuration management using RDM (remote device management)

When using the LNX-100C encoder from Lingen Technology, it is generally necessary to connect one-to-one and set the required parameters to the decoder and save it before the decoder is installed. After the decoder is installed, if you need to change the configuration, you need to remove it again and set it up

The RDM configuration is more convenient and convenient. At any time, whether it is before or after installation, you can use the RDM master control device to search for all decoder devices on the DMX bus in real time online, and separate these devices. Make various settings. The RDM main control device can choose the LNX-378SD multifunctional main control of Lingen Technology. The main control fully supports various RDM search management functions. It can search all RDM devices on the WEB with one key, and remotely configure the DMX bus All decoders that support RDM

3.2. Configure the address code of the decoder (Start Address)

The address code of the decoder refers to the starting position of the decoder in the DMX channel, and is the most important configuration parameter of the decoder. The value can be configured directly

through RDM or LNX-100C. Please refer to the manual of LNX-378SD or LNX-100C for specific configuration method.

3.3. Configure the Personality of the decoder

The working characteristics of the decoder determine whether the 8 ports of the decoder are aggregated, how to aggregate, whether W participates in dimming and how to participate in various characteristics such as dimming.

LNX-280DVL has 12 working characteristic values to choose from. Different characteristic values determine the different working methods of the decoder. 1-4 working characteristics, white light W does not participate in dimming, 5-8 working characteristics, white light W When RGB is equal, it participates in dimming and RGB is turned off; the working characteristic of 9-12 is that white light W participates in dimming and occupies a DMX channel value. Please refer to the following table for specific working characteristic values::

Table 3-1 Work feature configuration items

Parameter	Value	配置值描述
Personality 1	1	The 8 ports of the device are not aggregated, each port participates in dimming alone, and W does not participate in dimming. Each port occupies 3 DMX channels, and the entire device occupies a total of $3 * 8 = 24$ DMX channels (footprint).
Personality 2	2	The 8 ports of the device, every 2 adjacent ports are aggregated into 1 port, at this time the decoder has 4 logical ports. W does not participate in dimming. Each logical port occupies 3 DMX channels, and the entire device occupies a total of $3 * 4 = 12$ DMX channels (footprint).
Personality 3	3	The 8 ports of the device are aggregated into 1 port every 4 adjacent ports, and the decoder has 2 logical ports at this time. W does not participate in dimming. Each logical port occupies 3 DMX channels, and the entire device occupies a total of $3 * 2 = 6$ DMX channels (footprint).
Personality 4	4	All 8 ports of the device are aggregated into one port, and the decoder has only one logical port at this time. W does not participate in dimming. Each logical port occupies 3 DMX channels, and the entire device occupies a total

		of $3 * 1 = 3$ DMX channels (footprint).
Personality 5	5	The 8 ports of the device are not aggregated, and each port participates in dimming separately. When the three colors of RGB are equal, the three colors of RGB are closed, and W separately participates in dimming. Each port occupies 3 DMX channels, and the entire device occupies a total of $3 * 8 = 24$ DMX channels (footprint).
Personality 6	6	There are 8 ports of the device, and every 2 adjacent ports are aggregated into 1 port. When the three colors of RGB are equal, the three colors of RGB are closed, and W participates in dimming alone. Each logical port occupies 3 DMX channels, and the entire device occupies a total of $3 * 4 = 12$ DMX channels (footprint).
Personality 7	7	There are 8 ports of the device, and every 4 adjacent ports are aggregated into 1 port. When the three colors of RGB are equal, the three colors of RGB are turned off, and W individually participates in dimming. Each port occupies 3 DMX channels, and the entire device occupies a total of $3 * 2 = 6$ DMX channels (footprint).
Personality 8	8	The 8 ports of the device are all aggregated into one port. When the three colors of RGB are equal, the three colors of RGB are closed but W separately participates in dimming. Each port occupies 3 DMX channels, and the entire device occupies a total of $3 * 1 = 3$ DMX channels (footprint).
Personality 9	9	The 8 ports of the device are not aggregated, each port participates in dimming separately, and W participates in dimming. Each port occupies 4 DMX channels, and the entire device occupies a total of $4 * 8 = 32$ DMX channels (footprint).
Personality 10	10	8 ports of the device, every 2 adjacent ports are aggregated into 1 port, W participates in dimming. At this time, the decoder has 4 logical ports, each of which occupies 4 DMX channels, and the entire device occupies a total of $4 * 4 = 16$ DMX channels (footprint).
Personality 11	11	The 8 ports of the device are aggregated into 1 port for every 4 adjacent ports. W participates in dimming. At this time, the decoder has 2 logical ports, each logical port occupies 4 DMX channels, and the entire device occupies a total of $4 * 2 = 8$ DMX channels (footprint).
Personality 12	12	All 8 ports of the device are aggregated into one port. W participates in dimming. At this time, the decoder has 1 logical port, each logical port occupies 4 DMX channels, and the entire device occupies a total of $4 * 1 = 4$ DMX channels (footprint).

3.4. Configure the Startup Mode of the decoder

The power-on mode of the decoder defines the independent dimming style of the decoder when

there is no DMX dimming signal after the decoder is turned on. LNX-280DVL has 9 different power-on modes. Please refer to the table below for specific definitions:

Boot mode configuration entry

Parameters	Value	Configuration value description
Startup Mode 1	1	When the decoder has no DMX dimming signal, the decoder dimming color presents a smooth and gradual change effect.
Startup Mode 2	2	When the decoder has no DMX dimming signal, the dimming color of the decoder presents a color flicker effect.
Startup Mode 3	3	When the decoder has no DMX dimming signal, the dimming color of the decoder presents a color mutation effect.
Startup Mode 4	4	When the decoder has no DMX dimming signal, the dimming color of the decoder is a static red effect.
Startup Mode 5	5	When the decoder has no DMX dimming signal, the decoder dimming color presents a static green effect.
Startup Mode 6	6	When the decoder has no DMX dimming signal, the decoder dimming color presents a static blue effect.
Startup Mode 7	7	When the decoder has no DMX dimming signal, the color of the decoder's dimming color is static white.
Startup Mode 8	8	When the decoder has no DMX dimming signal, all channels of the decoder turn off dimming, that is, the black effect.
Startup Mode 9	9	When the decoder has no DMX dimming signal, the decoder dimming maintains the effect of the final DMX dimming signal.



After setting the parameters of the decoder, the decoder will automatically save the parameters. Within 5 seconds of saving the parameters, please do not turn off the power of the decoder, otherwise it may damage the decoder and cause it to not work normally!
