DK

Series Digital Dimmer

User Manual

（VER: 2.0）

Net.DO **LIGHTING CONTROL EQUIPMENT CO.,LTD**

1. Function

1.1 Function

Welcome to use the DK series dimmer. DK series with a console that generates DMX-512/1990 control signal; thereby they constitute a digital light dimming control system. Its EMI is very low. So greatly, it is used for light dimming in TV studios, theatres, troupes, etc.

Specifications:

TYPE	Channels	Max. current (per)	Total (Single-phase)	Total (Three-phase)
DK 626	6	26A	12KW	36KW
DK 1216	12	16A	16KW	48KW

- DMX512 digital signal inputs;
- magnetic ring with a high anti-jamming, excellent anti-jamming capability of audio video almost no interference;
- Switch insurance, with over-current automatic shutdown protection;
- When DMX signal is broken off, every channel's output can be hold;
- High precision zero-crossing sampling, the output consistency of channels is better;
- 9 dimming curves: Every channel is chosen independently;
- 20% PreHEAT adjustable to every channel.
- It can store 9 scenes that can be preset, manual dimming independently without any console.
- using the optimal thermal design of ventilation to ensure reliable operation of dimmer pack;
- Power-down data retention, boot soft start to prevent the boot transient output;
- Electrical automatically adapt the original frequency, range: 45 ~ 65Hz;
- LCD display;
- Power Supply: Three-phase five-wire AC 380V ± 10%, 45 ~ 65Hz;
  Single-phase AC 220V ± 10%, 45 ~ 65Hz;

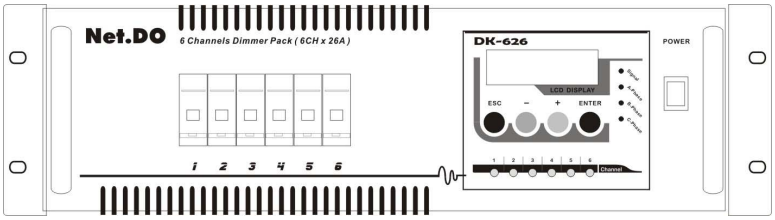
Size and weight:

TYPE	Size	Weight
DK 626	485mm x 485mm x 145mm	11Kg
DK 1216	485mm x 485mm x 145mm	14Kg

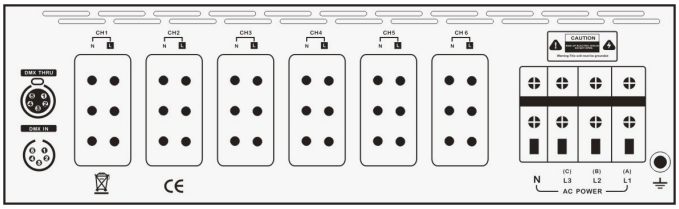
2. INSTALLATION AND CONNECTION

2.1 Front Panel and Rear Panel

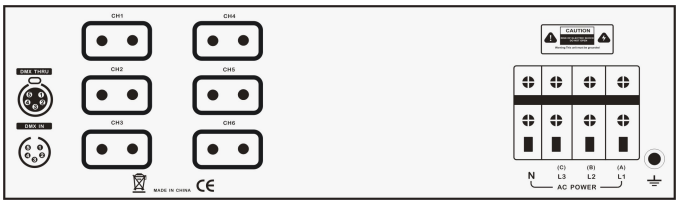
DK626 panel:



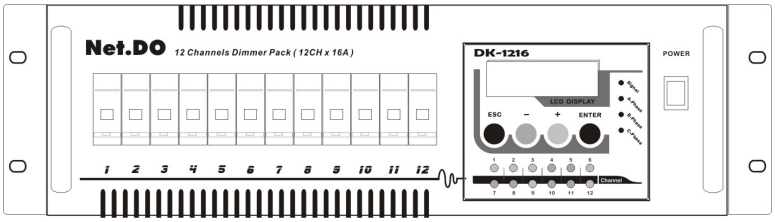
DK626 Rear plane (3x10A socket):



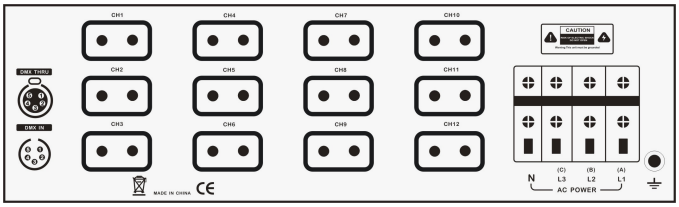
DK626 Rear plane (40A socket):



DK1216 panel:

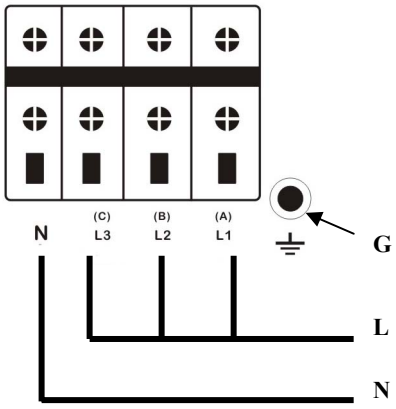


DK1216 Rear plane (40A socket):

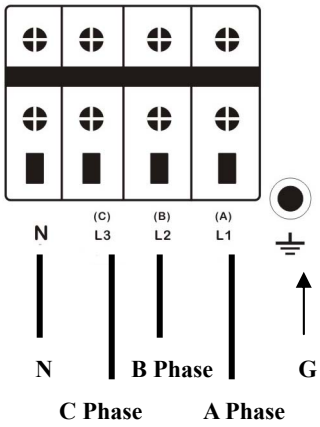


2.2 Mains supply Connecting

Power input socket L1 (A), L2 (B), L3 (C) the corresponding three-phase AC A, B, C phase, N corresponds to the neutral line. The following single-phase and three-phase connection diagram:



(Single phase connection)

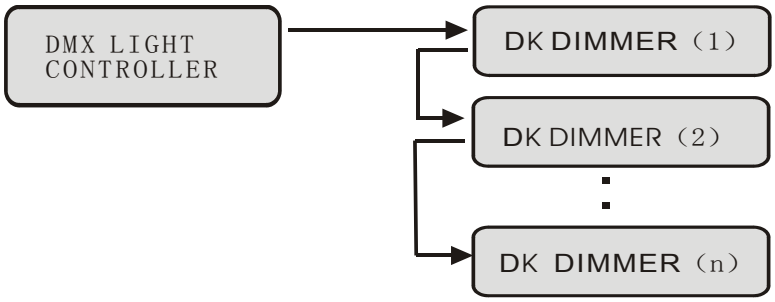


(Three phase connection)

Safety Warning:

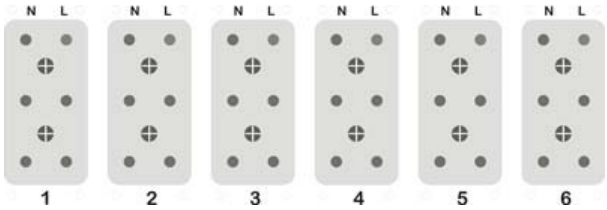
Ground terminal must be a good grounding cable ground, phase lines and the neutral line must be connected to the accuracy and reliability to ensure operational safety of personnel and equipment. Machine with a high voltage, do not arbitrarily open the casing, so as to avoid electric shock hazard!

2.3 Dimmers connecting with a controller

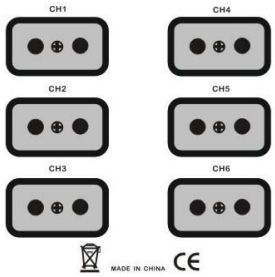


2.4 Loads Connecting

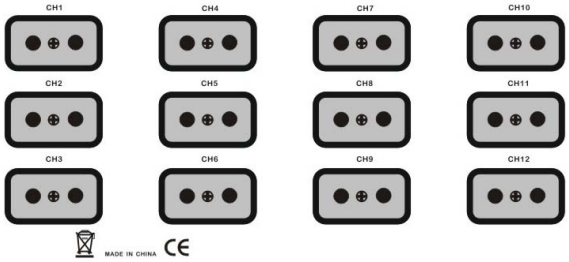
DK626 (3x10A socket):



DK626 (40A socket):



DK1216 (40A socket):

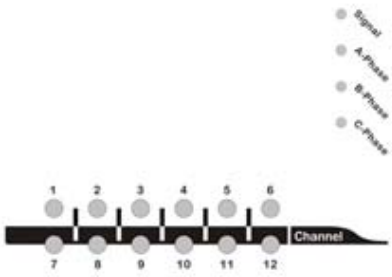


N is neutral-line, L for the phase, GND to ground.

***Note: Ensure that there is no short circuit before loading.**

3. OPERATION

3.1 Signal Indicator



- Power supply indicator ----- A / B / C-Phase (green)
  When the three-phase power input to normal,
  the three lights are bright;
- DMX signal indicator ----- DMX512-Address (blue)
  When a DMX signal input, the indicator light
  flashes;
- Channel value indicator
  When the channel has the output, the corresponding loop in the work of light which means that the bright.

3.2 Protection-Switch

Protection-Switch control and their pairs of numbers corresponding to the loop, that is, for the circuit switch, but also for the return pass flow or short-circuit protection switch.

3.3 Control signal input socket

- DMX THRU ----- DMX signal through the output socket;
- DMX IN ----- DMX signal input socket;

PIN	NAME
1	GND
2	DMX-
3	DMX+
4	NULL
5	NULL

DMX PORT

3.4 Power Switch

Power switch controls only part of the microcomputer power supply, power switch off, dimming silicon path is still working, do not open the device chassis, be careful of electric shock!

3.5 Equipment operation

Methods connected properly and according to the above settings are correct, turn on the dimmer, into the control signal to the Dimmer (DMX512 digital signals), Equipment running.

4. SET

4.1 Operation keys

Four key combination to achieve all the set up.

ESC —— Return last layer of menu until root;

+ **-** —— Increase and decrease the parameter;

ENT —— Accept or enter the next layer of menu;

4.2 SET

Menu until root, LCD display showed the DMX start address of the machine and the current menu, as shown below:

MENU： DMX add = 001 **1.manual**

Press the **+** or **-** choose 1~7 main menu:

MENU： DMX add = 001 **2.Scene — playback**	**MENU： DMX add = 001** **3.Scene — record**	**MENU： DMX add = 001** **4.Preheat**
MENU： DMX add = 001 **5.Curve**	**MENU： DMX add = 001** **6.dmx address**	**MENU： DMX add = 001** **7.initialize**

Choose one and press the **ENTER** key to enter the current main menu, press the **ESC** can return to the last layer of the menu.

Access to a main menu, press **+** or **-** select action items, press the **ENTER** once again, the current parameters of item.

The **[ ]** reveals the items, this time pressing the **+** or **–** to modify the parameter value, press the **ESC** to return to the last layer of the menu, and automatically save the modified parameters.

1) MANUAL

MENU： DMX add = 001 **1.manual**

Press the **ENTER** key to enter "MANUAL" main Menu:

MANUAL： **all = 48%**	**MANUAL：** **ch01 = 30%**

Press the [+] or [-] select the action items

"All" --- all the channel set the value of a unified, representative of the overall brightness of the parameters behind the percentages 0-100%;

"Ch01" for the first channel , **"ch02"** for the second channel, **"ch03"** for the third channel, and so on;

Selected the items which need to modify , press [**ENTER**] key to enter the selected parameters set with **"[ ]"** into the following diagram shows:

```
MANUAL：
      all  =  [ 48% ]
```

```
MANUAL：
      ch01 =  [ 30% ]
```

At this time press the [+] or [–], adjustable ranging from 0~100%. Press the [**ESC**] key is out of the current settings to automatically save the current settings.

2) Scene playback

```
MENU：    DMX add = 001
2.scene - playback
```

Press the [**ENTER**] key to enter the "scene playback" main menu;

```
SCENE  PLATBACK：
     scene - 01 #
```

Press the [+] or [–] select one scene (1~9). And then press the [**ENTER**] key, the selected scene is playback;

```
SCENE  PLATBACK：
          OK！
```

☆

☆ **Note: At this time manual dimming the value of each channel will be replaced by the value of the current scene.**

3) Scene Record

Record every channel present DMX value (from console or manual dimming) into a scene, it is available in the future.

```
MENU：    DMX add = 001
3.scene — record
```

Press the [**ENTER**] key to enter the "scene-record" main menu:

```
SCENE  RECORD：
   scene — 01 #
```

Press the [+] or [-] chosen the number which need to record (1~9), and then press the [**ENTER**] key, record the on show effects to the scene.

SCENE RECORD： **OK!**

4) Set Preheat

MENU： DMXadd = 001 **4. Preheat**

Press the **ENTER** key to enter the "Preheat" main menu, use **+** or **-** key to choose and to set up the appointed channel or all channels in same.

PREHEAT： **all = 18%**	**PREHEAT：** **ch01 = 20%**

Press the **ENTER** key to enter the setting items:

PREHEAT： **all = [18%]**	**PREHEAT：** **ch01 = [20%]**

Use **+** or **-**, the preheating value percentage of this channel or whole will be set. Press the **ESC** key is out of the current menu and automatically save the current settings.

5) SET CURVE MODE

MENU： DMXadd = 001 **4. curve**

Press the **ENTER** key to enter the "CURVE" main menu, use **+** or **-** key to choose and to set up the appointed channel or all channels in same.

CURVE： **all = line --**	**CURVE：** **ch01 = S - shape**

Press the **ENTER** key to enter the setting items:

CURVE： **all = [line --]**	**CURVE：** **ch01 = [S – shape]**

Use **+** or **-**, the curve of this channel or whole will be set., Press the **ESC** key is out of the current menu and automatically save the current settings.

Curve description:

Curve	Actual statements
Line --	Linear Curve
S - shape	S-shaped Curve
on - off	Switch (NO / PFF)
Later _ 1	Later curve 1
Later _ 2	Later curve 2
Later _ 3	Later curve 3
Early _ 1	Ahead of curve 1
Early _ 2	Ahead of curve 2
Early _ 3	Ahead of curve 3
Direct	Direct curve

6) DMX Address Set

```
MENU：  DMXadd = 001
6. dmx address
```

Press the **ENTER** key to enter the DMX address main menu;

```
MENU：  DMXadd = 001
6. dmx address
```

Set DMX address using **+** or **-** key.

7) Initialization

```
MENU：  DMXadd = 001
7.initialize
```

Press the **ENTER** key to enter the initialize main menu;

```
INITIALIZE:
Enter  to  init
```

```
INITIALIZE:
          OK!
```

At this time press the **ENTER** button to initialize, the LCD displays "OK", that is the completion of the initialization settings.