

User's Manual



SD-C7300

3 Channels PWM/Audio Synchronized Color
LED Controller

User's Manual

Preliminary update

Version 1.0 – Dec. 02, 2009



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1 Introduction

1.1 Description

SD-C7300 is that one is simple and apt to operate general purpose RGB LED Controller. This controller besides can be regarded as a LED dimmer that supported IR-remote control interface, having offered and built-in six programs. In addition, the voice control of this control is different in market the common simple voice triggered control product. This controller has utilized the unique sound signal processing algorithm, causes the product function to present the value of market demand. On the hardware, we have used the high power switch driver for LED Control directly that caused the end user on the connected LED Module the conveniences.

In this series of products, we have offered support the standard DMX512-A console control function. By this DMX-512A interface, may let this product many functions are easier to go to link with the DMX512-A dimmer products in the market.

SD-C7300 includes the serial number of two kinds of products at present :

- **SD-C7300-Audio : A general purpose RGB LED Dimmer and voice controller ◦**
- **SD-C7300-Audio-DMX : A general purpose RGB LED Dimmer and voice controller, support standard DMX-512A console controller.**

1.2 Features

- Support IR-remote control interface ◦
- R 、 G 、 B brightness can be adjusted individually, and auto-save the setting ◦
- Built-in six LED dynamic programs; dynamic mode can be set Fade/Jump and changed the dynamic speed.
- Real Audio Synchronized color LED Control.
- Automatically control mode switched between Audio Synchronized modes with Silent color fade mode.
- Adjustable Sensitivity for audio synchronized mode (including Microphone and Line-in sources).
- Audio source option for Line-in or Microphone.
- Built-in high power switch driver, the LED driver capability : 150W/12V or 300W/24V ◦
- **Supported DMX512-A Console control interface, including 17 data slots of DMX-512A. ***
- **The Data slot of DMX512-A may include the data string of audio synchronized mode, can be used as a 16 steps Volume Unit meter in the DMX-512 Dimmers ◦ ***
- * **SD-C7300-Audio-DMX Supported only ◦**

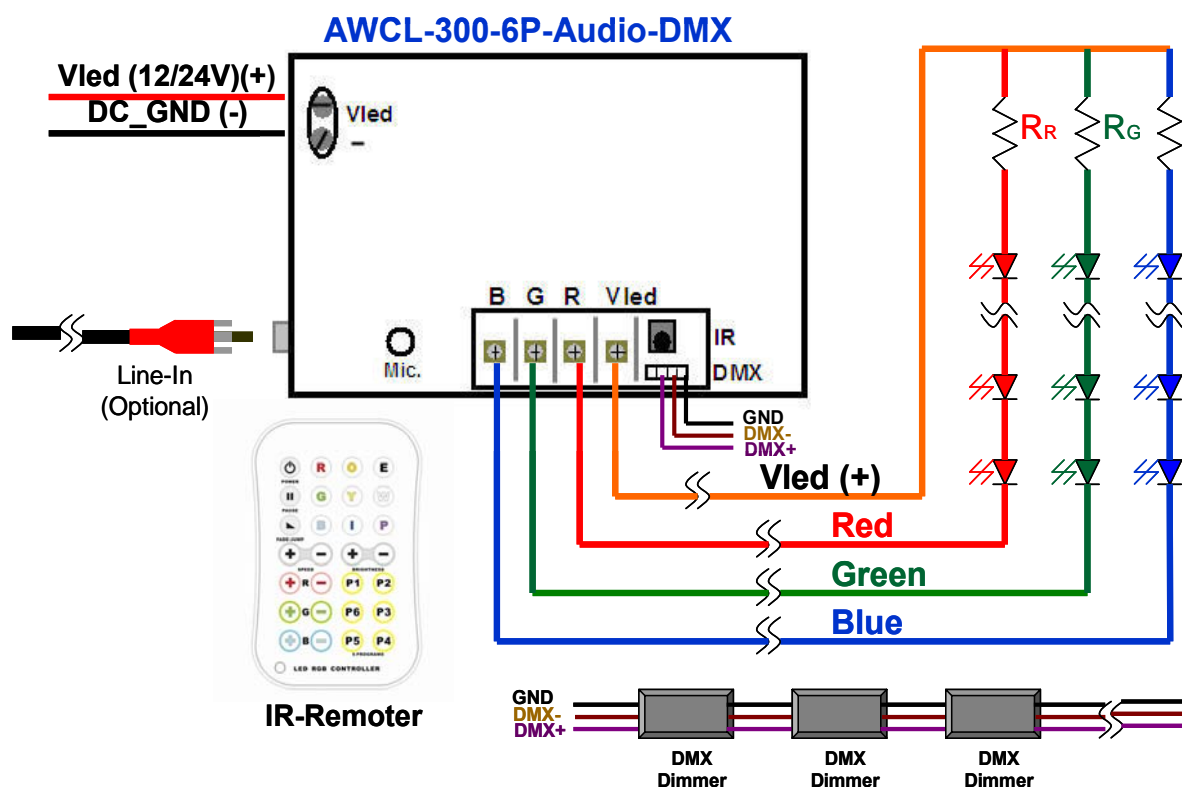
1.3 Specifications

Operation Voltage	DC12V~24V ◦	Power Consumption	< 20mA/12VDC
LED Output Power	150W/12V or 300W/24V	Weight	~ 300 g ◦
LED Module Type	Common anode / Constant Voltage	Size	L:65mmxW:38mmxH:22mm
Microphone sensitivity	-44± 2dB	Operation Temperature	0℃ ~ 70 ℃
Frequency response	100 ~ 20,000 Hz	Storage Temperature	-20℃ ~ 85 ℃

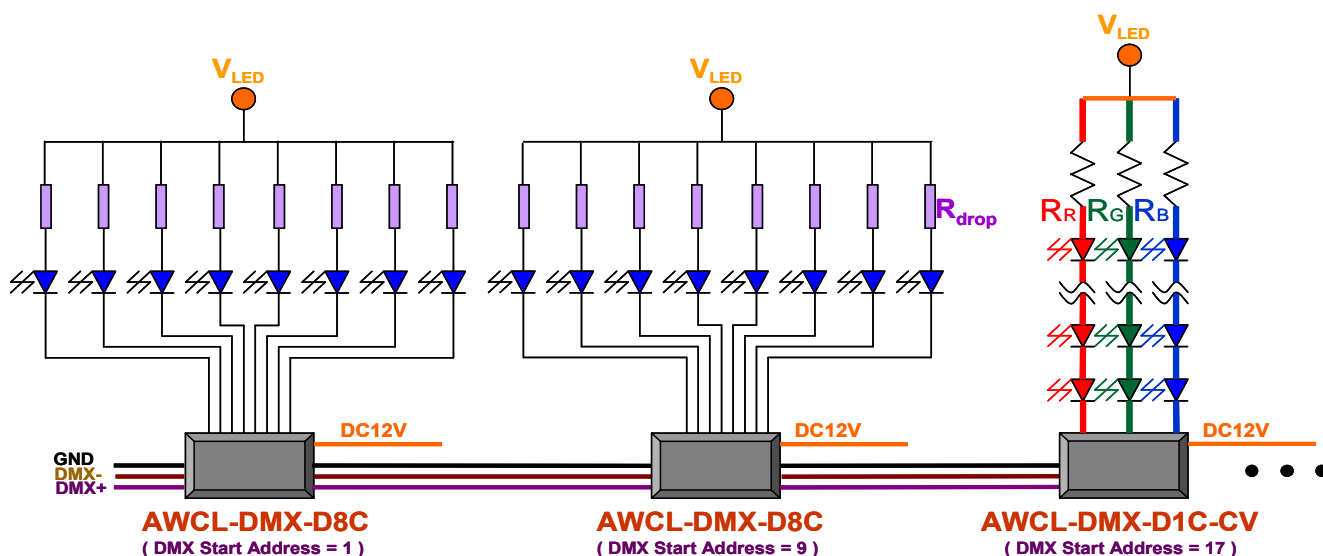
2 Introduction

2.1 Connection Diagram

- **SD-C7300-Audio-DMX** Connection diagram :

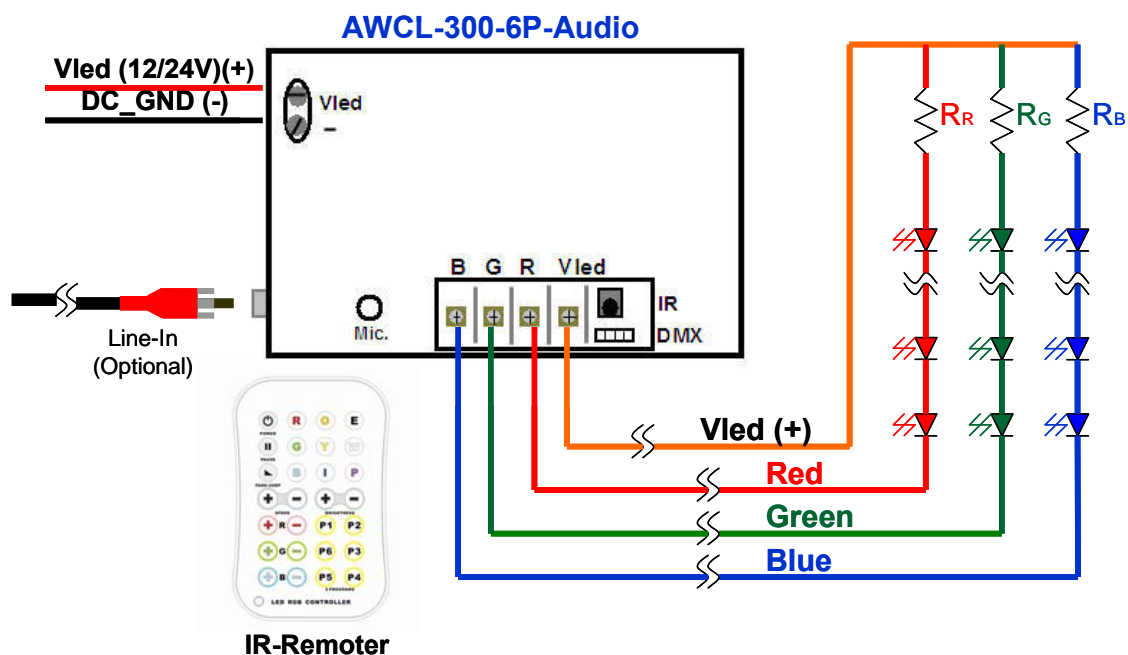


The connection diagram of minimum DMX dimmers requirement for **SD-C7300-Audio-DMX** :

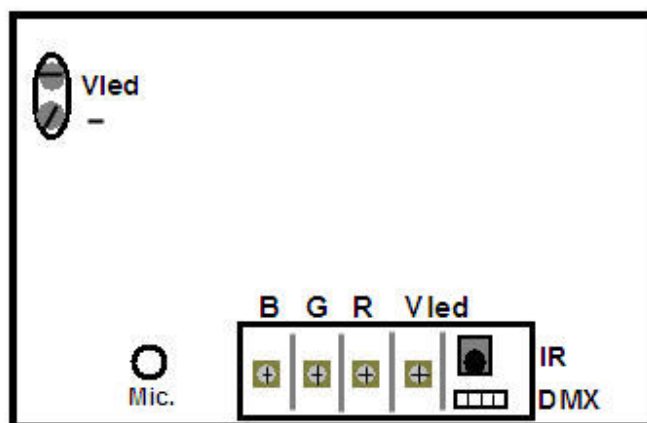


(Alike volume unit meter consist of two AWCL-DMX-8C, and the LED Control of AWCL-DMX-D1C-CV and SD-C7300-Audio-DMX synchronization ◦)

➤ **SD-C7300-Audio** Connection diagram :

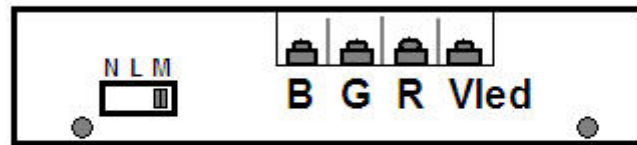


The Connector diagram of SD-C7300 :



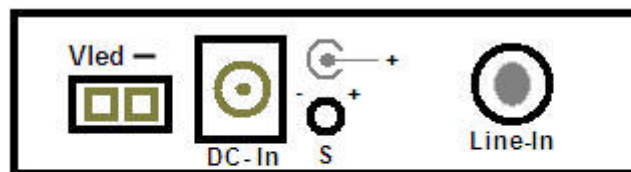
(Top View)

- **Vled** : The connector of LED's power supply which is based on the LED Module. (DC 12V/24V) °
- “ — ” : Ground of power supply °
- **B** : The connector of the Blue LED ° (cathode of Blue LED module)
- **G** : The connector of the Green LED ° (cathode of Green LED module)
- **R** : The connector of the Red LED ° (cathode of Red LED module)
- **IR** : The Receiver of IR Remote Controller °
- **DMX** : The Output connector of DMX ° (SD-C7300-Audio-DMX supported only)
- **Mic.** : The microphone °



(Side view)

- **Vled** : The connector of LED's power supply which is based on the LED Module. (DC 12V/24V) °
- **B** : The connector of the Blue LED ° (cathode of Blue LED module)
- **G** : The connector of the Green LED ° (cathode of Green LED module)
- **R** : The connector of the Red LED. ° (adopt a total of anode connection)
- **“N”** : Audio synchronized mode of the audio input selector switch; no audio input option.
- **“L”** : Audio synchronized mode of the audio input selector switch; sound line-in option.
- **“M”** : Audio synchronized mode of the audio input selector switch; microphone audio input option.

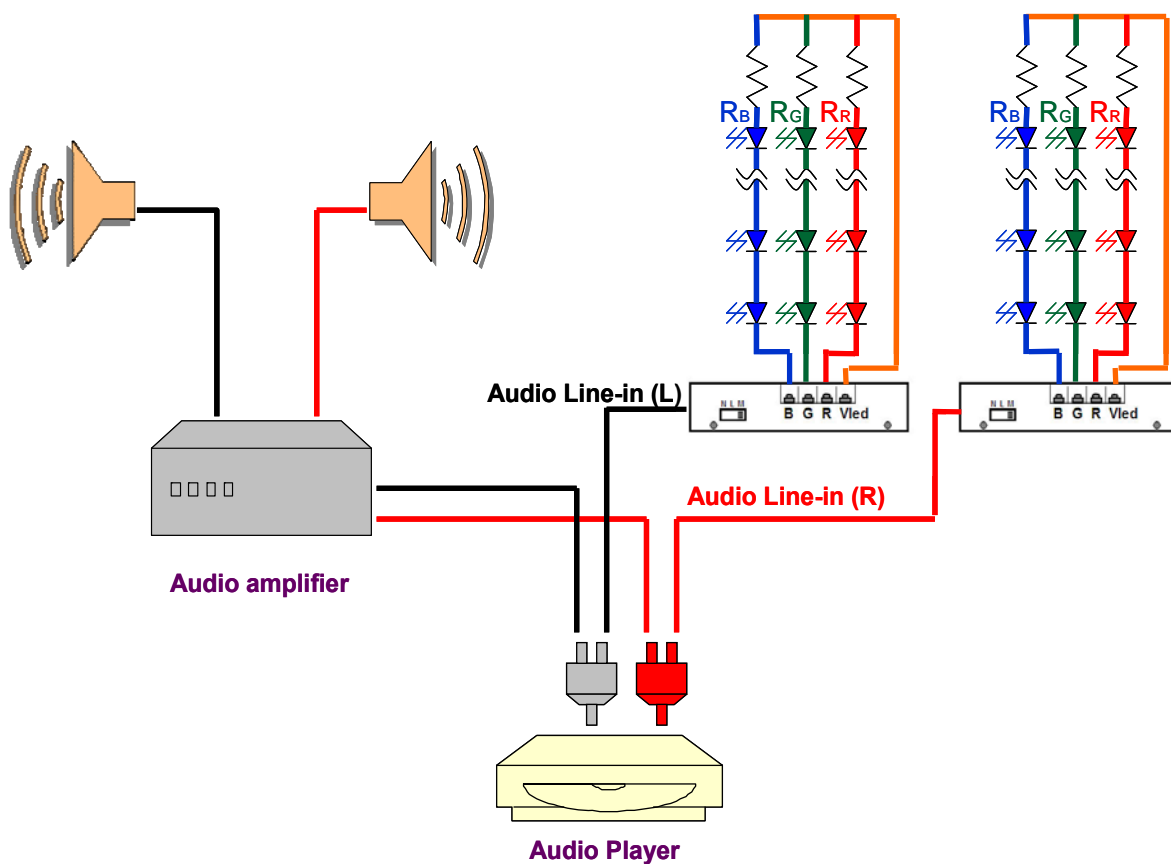


(Front View)

- **Vled** : Led power source connector. Based on LED light string decided, 12V/24V all can support. °
- **“ — ”** : Power ground connector.
- **DC-In** : SD-C7300 controller of the power supply input. Factory unofficially and led a total of access. 12V/24V all can support.
- **“S”** : In the audio synchronized mode, the sensitivity adjustment knob of the audio receiver. Clockwise to increase and vice versa to reduce.
- **Line-In** : The line-in cable's connector.

If you need the SD-C7300 series received a general audio devices, it is recommended as below: connect with the general speaker amplifier, the use of AV shunt terminal at the same time receiving audio multimedia player device. In this way, relatively easy to control the audio input of the magnification, it will not adjust the speaker of the volume, the impact on SD-C7300 of the audio input signals. This recommendation of the wiring diagram as shown below:

SD-C7300 is connected to audio equipment in general wiring diagram :



2.2 The IR Remote Control Instruction





POWER : Turn on/ turn off.



PAUSE : In the P1 ~ P6 program, the suspension of the function. Press once to pause, and then one for the restoration of the original action.



FADE/JUMP : In the P1 ~ P6 program, the switch changes or the color change of the mixed mode hopping. Press once to jump, and then once mixed variable, and so on.



SPEED : Under the P1 ~ P6 program, to adjust the LED color mixing of the speed of change or transition. A total of 24 speed levels to choose from.



BRIGHTNESS : Used to adjust the LED brightness adjustment. A total of 16 levels could be available. Note: when you have to make micro-adjustments to individual colors may be these levels would not be the whole number of 16; In addition, under the voice-activated mode, it can be used to adjust the digital sensitivity, also have 16 levels to adjust the sensitivity; settings to reduce brightness, which represents lower sensitivity. However, this setting does not automatically save function, if the constant need to adjust the sensitivity, I suggest please adjust the sensitivity on the hardware chassis adjustment knob!



R : Set a constant LED to be full bright red light.



G : Set a constant LED to be full bright green light.



B : Set a constant LED to be full bright blue light.



O : Set a constant LED to be full bright orange light. Red 100 %, green 50% ◦



Y : Set a constant LED to be full bright yellow light. Red 100 %, green 100% ◦



I : Set a constant LED to be full bright indigo light. Green 100 %, blue 100% ◦



E : Start the audio synchronized mode.



W : Set a constant LED to be full bright white light. Red100 %, green 100 %, blue 100% ◦



P : Set a constant LED to be full bright purple light. Red 100 %, blue 100% ◦



: Individual adjustments for the single red light brightness. There are 16 levels in total.



: Individual adjustments for the single green light brightness. There are 16 levels in total.



: Individual adjustments for the single blue light brightness. There are 16 levels in total.

P1

: Mixed transition or jump of the program 1. Red100 % → Red100 %+ Green100 % → Green100 %

→ Green100 %+ Blue100% → Blue100 % → Red100 %+ Blue100% → Red100 % ...

P2

: Mixed transition or jump of the program 2. Red100 % → Red100 %+ Green50 % → Red100 %+

Green100 % → Red 50 %+ Green100 % → Green100 % → Green100 %+ Blue50%

→ Green100 %+ Blue100% → Green50 %+ Blue100% → Blue100 % → Red50 %+ Blue100%

→ Red100 %+ Blue100% → Red100 %+ Blue50% → Red100 % ...

P3

: Mixed transition or jump of the program 3. Red100 % → Green100 % → Blue100 %

→ Green100 % → 紅 100 % ...

P4

: Mixed transition or jump of the program 4. Red100 % → Dark → Red100 %+ Green100 %

→ Dark → Green100 % → Dark → Green100 %+ Blue100% → Dark → Blue100 %

→ Dark → Red100 %+ Blue100% → Dark → Red100 % ...

P5

: Mixed transition or jump of the program 5. Red100 % → Red100 %+ Green100 % → Green100 %

→ Green100 %+ Blue100% → Red100 %+ Green100 %+ Blue100% → Blue100 % → Dark

→ Red100 %+ Blue100% → Red100 % ...

P6

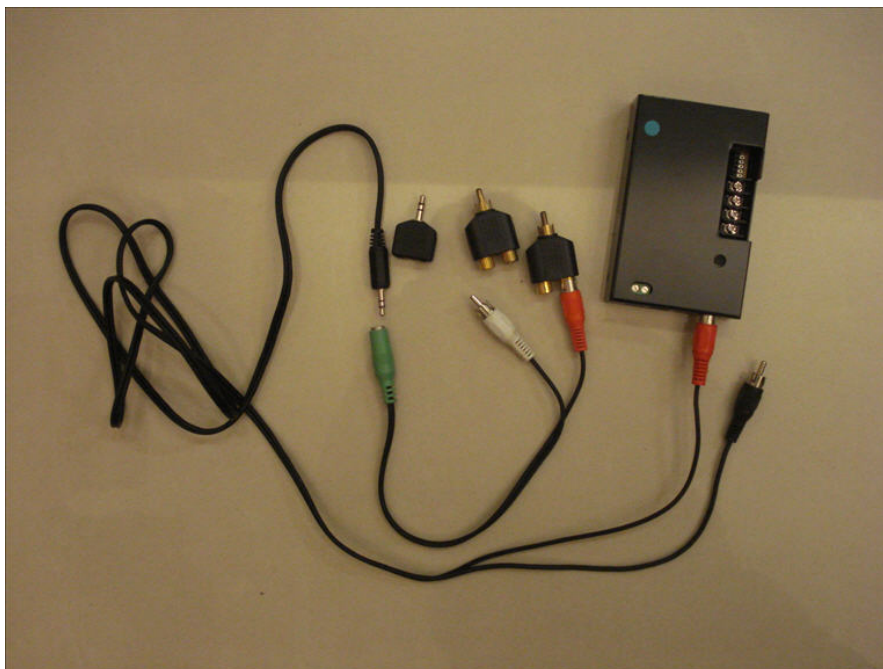
: Mixed transition or jump of the program 6. Red100 %+ Blue100% → Dark → Red100 %+

Green100 % → Dark → Green100 %+ Blue100% → Dark → Red100 %+ Blue100%

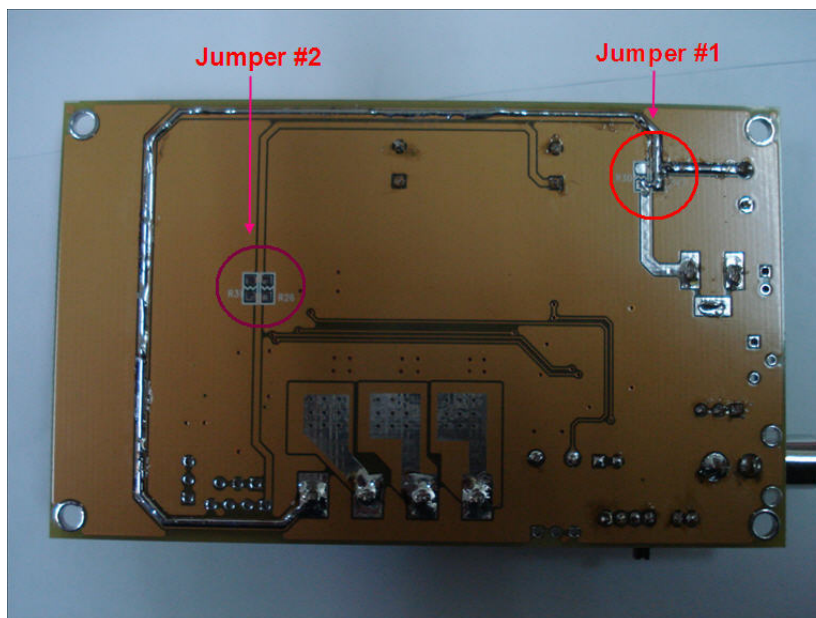


3 Appendix

3.1 Audio Line-in common peripheral wire of SD-C7300



3.2 System application notes of SD-C7300 :



Jumper #1 : The Vled and DC-in connection jumper, factory settings, in order to Vled with the DC-in short, on behalf of Vled shared with the DC-in circuit, input voltage range of 12VDC ~ 24VDC.

Jumper #2 : DMX output connectors for the fourth group of whether the DC-In is short-circuit. Factory setting for the N.C. (Non-Connection) °

Revision History

Revision	Date	By	Remark
V1,0	16/12/2009	Mr. Taiwanese	First edition