



# SOSEN LED Driver, Your Smart Choice

## Specifications

### SS-DMXRC RDM Decoder

Model: SS-DMXRC

Description: DMX/RDM  
Converter

Rev.: V01

Release Date: 2024-05-15

# SS-DMXRC RDM Decoder

**SOSEN**  
LED DRIVER



LED DRIVER

DMXRC



## Features:

- Support DMX512 and RDM protocols
- Decodes the DMX/RDM protocols and converts to a 0-10V dimming output signal
- 0-10V analog dimming signal conversion Support linear and logarithmic dimming
- 0-10V analog dimming signal Set two parameters: default output value and network disconnect retention value
- Support RDM address setting and DMX512 channel setting
- Support scene intelligent address allocation for fast installation and debugging
- 12V DC power supply is used for power supply of converter
- Support relay mode
- IP67
- Suitable for built-in use



## Description:

SS-DMXRC is a DMX/RDM to 0-10V dimming signal converter, which can control one or more LED drivers through DMX/RDM system. It is used as LED driver with dimming off, 12VDC auxiliary power supply and 0-10V dimming function.

## Environmental Requirements

Parameter	Min.	Typ.	Max.	Remark
Operating Temperature(Ta)	-40°C	25°C	+70°C	
Storage Temperature	-40°C	25°C	+70°C	
Operation Humidity	10%RH		90%RH	
Storage Humidity	5%RH		95%RH	
Altitude	-65m		3000m	

# SS-DMXRC RDM Decoder

## Input Characteristics:

Parameter	Min.	Typ.	Max.	Remark
Vaux	10.8V	12V	13.2V	The maximum output current of the driver can reach 100% Io
Iaux		36mA	200mA	200mA for communication and 36mA for standby
DATA+to DATA-	-12V		12V	
DMX communication rate		250kbps		
Input logic 0			-0.2V	DATA+to DATA-
Input logic 1	0.2V			DATA+to DATA-

## Dimming Overview:

Parameter	Min.	Typ.	Max.	Remark
Dim+ Voltage	0V	10V	11V	
Dim+ Current	0mA		5mA	

## Safety and EMI/EMS Standards:

Certification	Standard	Status	Remark
UL/cUL	UL8750	✓	
CE	EN IEC 55015:2019/A11:2020 EN 61547:2009	✓	

EMI/EMS	Criterion	Remark
Conduction Emission	FCC Part15: Subpart B ANSI 63.4:2014	Class B
Radiation Emission	FCC Part15: Subpart B ANSI 63.4:2014	Class B

### Note:

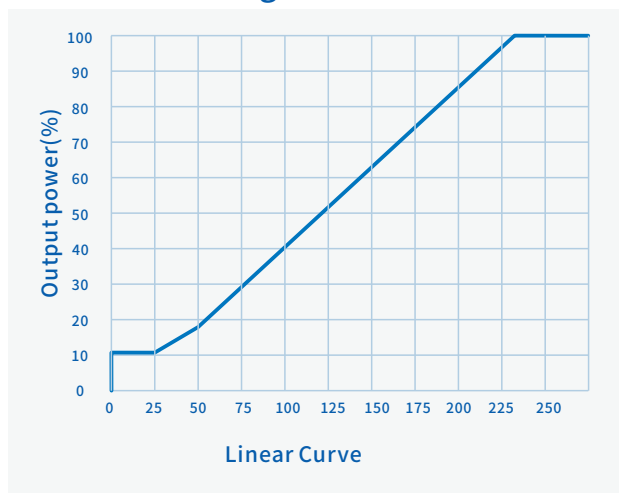
1. EMI/EMS test is conducted with Songsheng LED driver.
2. The assembly of DMXRC matched LED lamps will affect the EMC performance, and the terminal equipment manufacturer must reconfirm the EMC after the assembly. Related performance.

# SS-DMXRC RDM Decoder

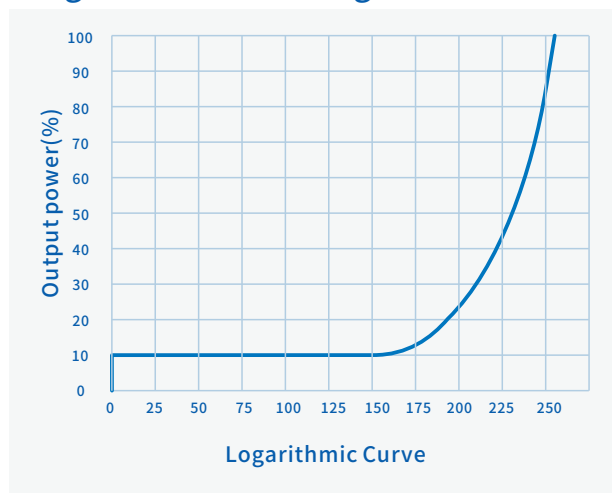
## Output Dimming Curve:

The converter integrates linear curve logarithmic curve

### Linear dimming curve



### Logarithmic dimming curve



## Interface Definition

Grouping	Name	Describe
DIM	Vaux+	Connected to LED driver auxiliary DC12V output
	DIM+	Connected to LED driver DIM+
	DIM-	Connect LED driver DIM-/AUX-
INPUT	DATA+	Connect to DMX master or up converter
	DATA-	Connect to DMX master or up converter
	GND	Connect to DMX shield wire
OUTPUT (Relay mode)	DATA+	Connect to the next converter (relay mode)
	DATA-	Connect to the next converter (relay mode)
	GND	Connect to DMX shield (relay mode)

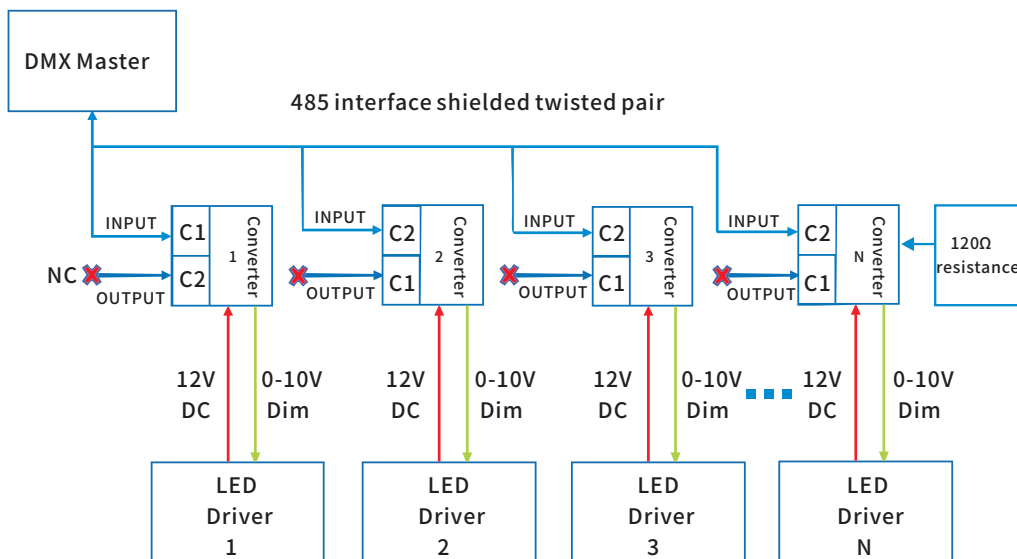
# SS-DMXRC RDM Decoder

## Field Connection:

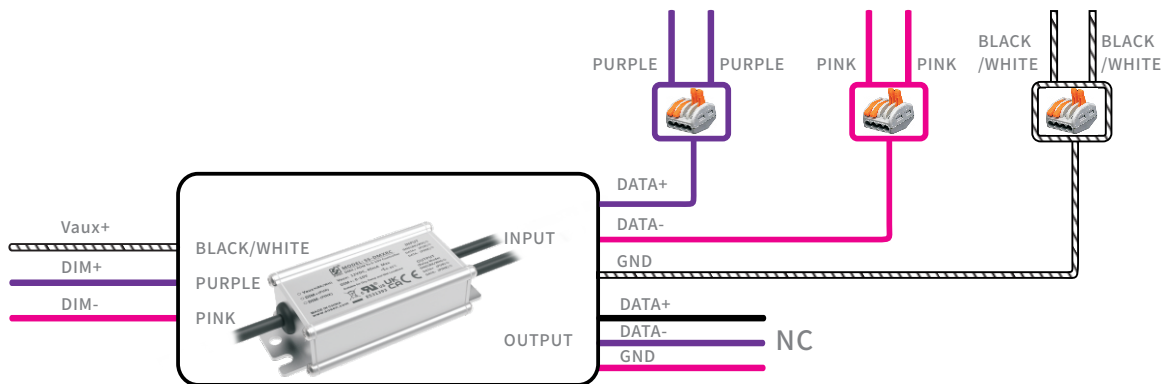
1. In bus mode, the idle interface OUTPUT of the end position converter needs to be unloaded, the number of converter accesses does not exceed 32, and the bus length does not exceed 800 meters, The line length between adjacent converters shall not exceed 100 meters, and a 120 ohm resistor shall be connected in series at the end (connected in parallel between DATA+ and DATA- of the last converter);
2. In relay mode, use the hand in hand mode to connect. The line length between adjacent converters shall not exceed 500 meters, and the number of converters connected shall not exceed 32;
3. In mixed mode, comply with the requirements of the bus and relay mode, and the total number of accesses shall not exceed 128.

### Bus Mode

#### Networking connection mode



#### Single converter connection in bus mode:

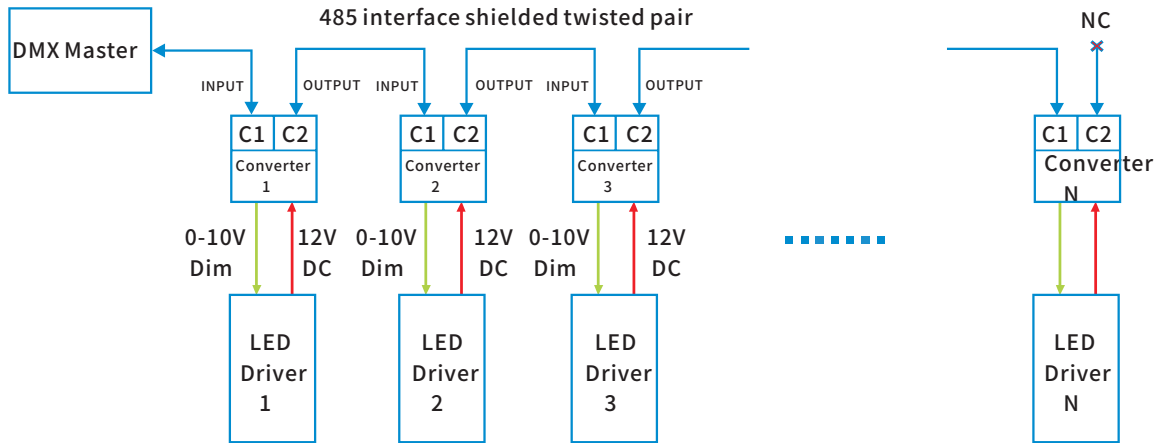


# SS-DMXRC RDM Decoder

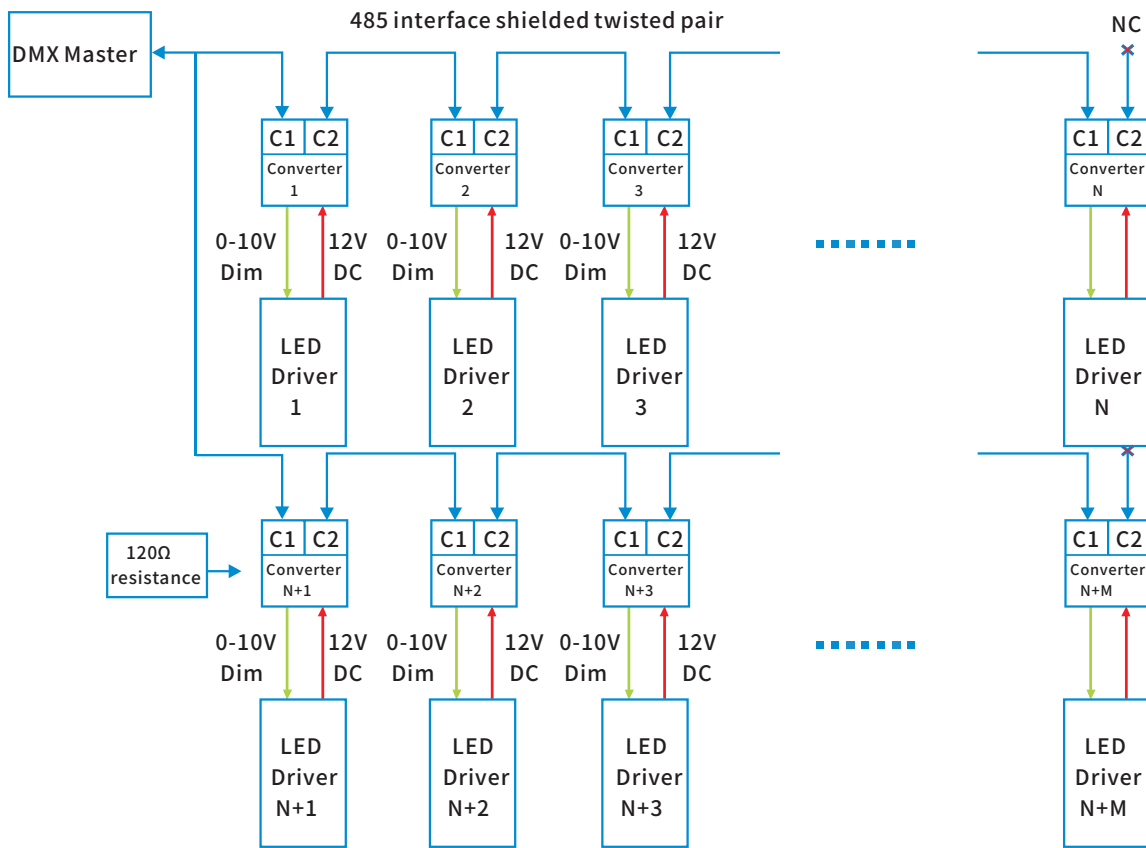
## Field connection:

Relay Mode:

Use mode of hand to hand connection in relay mode:

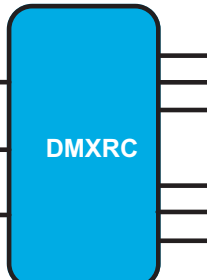


Mixed Mode



# SS-DMXRC RDM Decoder

## Mechanical Characteristics



VAUX+      DIM+      DIM-

DMXRC

INPUT  
GND  
DATA+  
DATA-

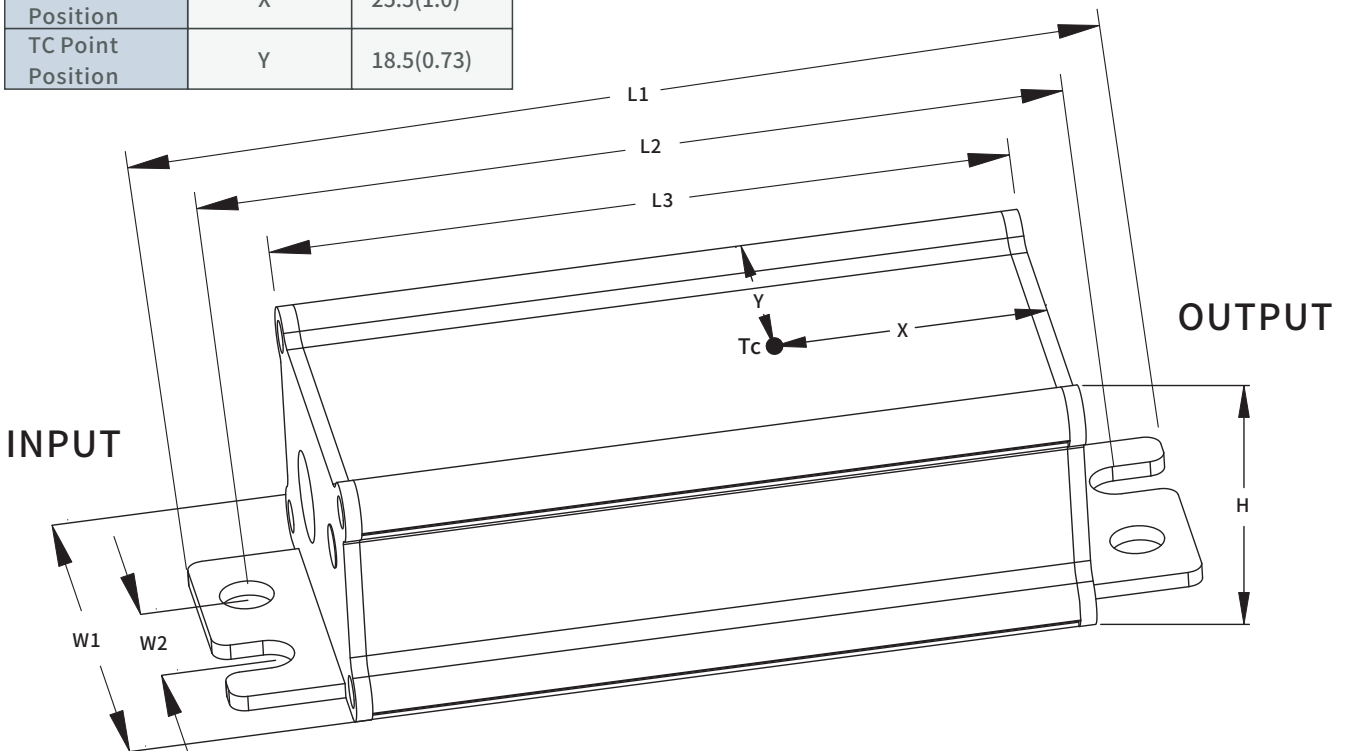
OUTPUT  
GND  
DATA+  
DATA-

**AC Input Cable(Exposed Length 220±10mm):**  
UL model: UL21996/22AWG, 4.9mm, Purple: DIM+, Pink: DIM-, Black/White: Vaux+

**DC O/P Cable(Exposed Length 220±10mm):**  
UL model: UL21996/22AWG, 4.9mm, Purple: DATA+, Pink: DATA-, Black/White: GND

**DMX O/P Cable(Exposed Length 220±10mm):**  
UL model: UL21996/22AWG, 4.9mm, Purple: DATA+, Pink: DATA-, Black/White: GND

Name Description	Standard Code	mm(In.)
Case Width	W1	38(1.5)
Case Height	H	24.5(0.96)
Overall Length	L1	90.5(3.56)
Mounting Hole Length	L2	80.5(3.17)
Case Length	L3	69.5(2.74)
Mounting Hole Width	W2	11(0.43)
TC Point Position	X	25.5(1.0)
TC Point Position	Y	18.5(0.73)



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## Package

- Outside carton dimension: L × W × H = 495mm × 385mm × 162mm;
- 64PCS/Carton;
- Net weight/Piece: 0.132kg; Gross weight/Carton: 10kg;
- Please refer to the product name, model number, manufacturer identification, QC PASS, manufacturing date on the package.

## Transportation

Packaging is designed suitable for transportation by trucks, vessels and flights. The products should be avoided direct sunlight and rain, loaded/unloaded with caution.

## Storage

The product storage meets the standard of the GB 3873—83.  
Products should be rechecked if stored for over 1 year before assembly.

## RoHS

Products comply with RoHS Directive (2011/65/EU) and amendment 2015/863/EU.



## Revision History

Version	Description of Update	Updated Date	Remark
V00	Original Release	2023/02/08	
V01	Update curve	2024/05/15	