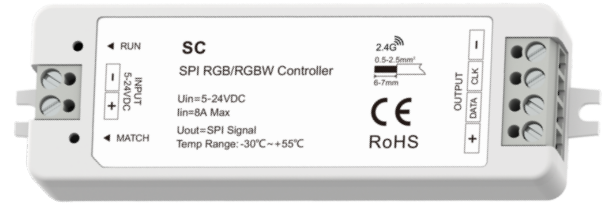


# SPI RGB/RGBW LED RF Controller

- Mini-style multi-pixel RGB RF LED controller with SPI output, match with RF 2.4G RGB/RGBW remote control.
- Compatible with 49 kinds of digital IC RGB or RGBW LED strip, IC type and R/G/B/W order can be set.  
Compatible ICs: TM1803, TM1804, TM1809, TM1812, UCS1903, UCS1909, UCS1912, SK6813, UCS2903, UCS2909, UCS2912, WS2811, WS2812, WS2813, WS2815, TM1829, TLS3001, TLS3002, GW6205, MBI6120, TM1814B(RGBW), SK6812(RGBW), WS2813(RGBW), WS2814(RGBW), UCS8904B(RGBW), LPD6803, LPD1101, D705, UCS6909, UCS6912, LPD8803, LPD8806, WS2801, WS2803, P9813, SK9822, TM1914A, GS8206, GS8208, UCS2904, SM16804, SM16825, SM16714(RGBW), UCS2603, UCS5603, SM16714D, SM16703P, UCS7604(RGBW), UCS7804(RGBW).
- 40 kinds dynamic mode, include horse-race, chase, flow, trail or gradual change style.

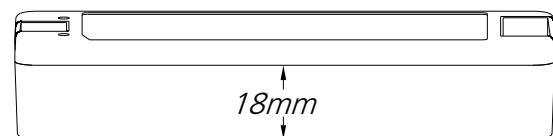
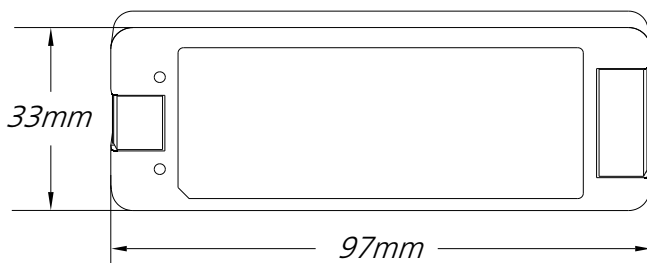


CE RoHS RED

## Technical Parameters

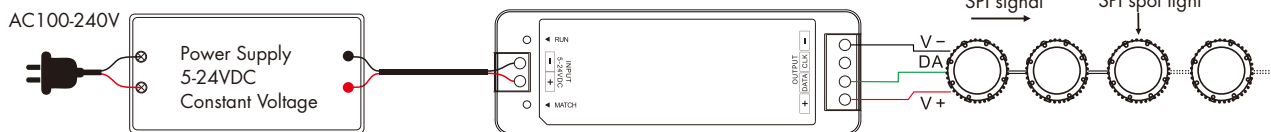
Input and Output		Environment		Safety and EMC	
Input voltage	5-24VDC	Operation temperature	Ta: -30°C ~ +55°C	EMC standard	EN 62479:2010 ETSI EN 301 489-1 V2.2.3 ETSI EN 301 489-17 V3.2.4
Input Current	8A	Case temperature(Max.)	Tc: +65°C	Safety standard	EN 61347-1:2015+A1:2021 EN 61347-2-13:2014+A1:2017
Power consumption	1W	IP rating	IP20	Radio Equipment	ETSI EN 300 328 V2.2.2
Input signal	RF 2.4GHz	Package		Certification	CE RED
Output signal	SPI(TTL)	Size	L114 x W38 x H26mm	Warranty and Protection	
Dynamic mode	40	Gross weight	0.049kg	Warranty	5 years
Control dots	Max 1024 pixels			Protection	Reverse Polarity

## Mechanical Structures and Installations

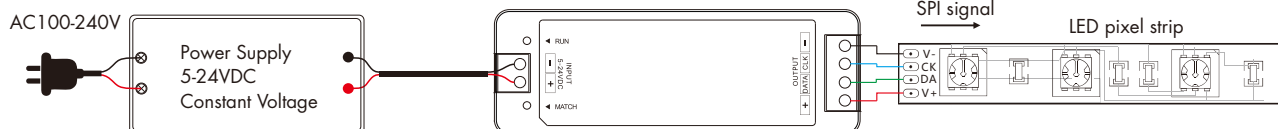


## Wiring Diagram

- SC connect with SPI spot light (TM1803)



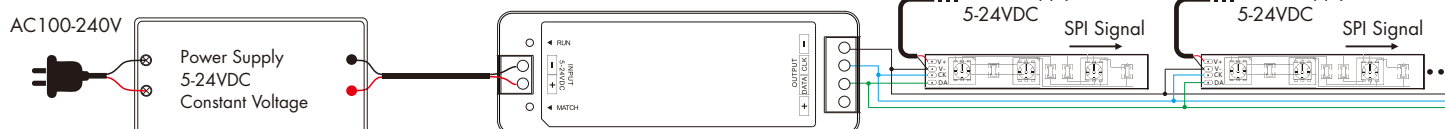
- SC connect with one SPI pixel strips (WS2801)



- SC connect with SPI Digital light tube (TM1809)



- SC connect with multiple SPI pixel strips (LED strip load over 8A)



- Note:
1. If the SPI LED strip is a single-wire control method, the DATA and CLK signal line outputs of the controller are same, and one controller can connect 2 LED strips.
  2. When the load exceeds 8A, the light strip needs to be powered by other power supplies.  
Only DATA/CLK and GND cables are connected between the controller and the light strip.
  3. The output power of the constant voltage power supply is at least 1.2 times that of the output load (light strip), otherwise the full power output of the load will easily cause the lights to flicker or shake automatically.

## Match Remote Control

Match: Short press match key, immediately press on/off key of the remote.

Delete: Press and hold match key for 5s to delete all match, The light blinks 5 times means all matched remotes were deleted.

## Compatible IC type

No.	IC type	Output signal
C11	TM1803	DATA
C12	TM1809, TM1804, TM1812, UCS1903, UCS1909, UCS1912, SK6813, UCS2903, UCS2909, UCS2912, WS2811, WS2812, WS2813, WS2815, SM16703P	DATA
C13	TM1829	DATA
C14	TLS3001, TLS3002	DATA
C15	GW6205	DATA
C16	MBI6120	DATA
C17	TM1814B(RGBW)	DATA
C18	SK6812(RGBW), WS2813(RGBW), WS2814(RGBW)	DATA
C19	UCS8904B(RGBW)	DATA
C21	LPD6803, LPD1101, D705, UCS6909, UCS6912	DATA, CLK
C22	LPD8803, LPD8806	DATA, CLK
C23	WS2801, WS2803	DATA, CLK
C24	P9813	DATA, CLK
C25	SK9822	DATA, CLK
C31	TM1914A	DATA
C32	GS8206, GS8208	DATA
C33	UCS2904	DATA
C34	SM16804	DATA
C35	SM16825	DATA
C36	SM16714(RGBW)	DATA
C37	UCS5603	DATA
C38	UCS2603	DATA
C39	SM16714D	DATA
C41	UCS7604(RGBW)	DATA
C42	UCS7804(RGBW)	DATA

## Use R9 remote set SPI digital LED strip

- Set LED strip length [Pixel number(8~1024)]. \* + 3 number + \* for example:
  - \*032\*, set pixel number to 32.
  - \*600\*, set pixel number to 600.
  - \*1024\*, set pixel number to 1024.
- Set LED strip chip type. \* + 2 number + \*
  - \*11\*: TM1803
  - \*12\*: TM1809,TM1804,TM1812,UCS1903,UCS1909,UCS1912,SK6813, UCS2903,UCS2909,UCS2912,WS2811,WS2812,WS2813,WS2815, SM16703P
  - \*13\*: TM1829
  - \*14\*: TLS3001,TLS3002
  - \*15\*: GW6205
  - \*16\*: MBI6120
  - \*17\*: TM1814B(RGBW)
  - \*18\*: SK6812(RGBW),WS2813(RGBW),WS2814(RGBW)
  - \*19\*: UCS8904B(RGBW)
  - \*21\*: LPD6803,LPD1101,D705,UCS6909,UCS6912
  - \*22\*: LPD8803,LPD8806
  - \*23\*: WS2801,WS2803
  - \*24\*: P9813
  - \*25\*: SK9822
  - \*31\*: TM1914A
  - \*32\*: GS8206,GS8208
  - \*33\*: UCS2904
  - \*34\*: SM16804
  - \*35\*: SM16825
  - \*36\*: SM16714(RGBW)
  - \*37\*: UCS5603
  - \*38\*: UCS2603
  - \*39\*: SM16714D
  - \*41\*: UCS7604(RGBW)
  - \*42\*: UCS7804(RGBW)
- Set LED strip RGB order. \* + 1 number + \*
  - \*1\*: RGB, \*2\*: RBG, \*3\*: GRB, \*4\*: GBR, \*5\*: BRG, \*6\*: BGR.
- Set RGBW LED strip RGB and W order.
  - \*7\*:W after RGB
  - \*9\*:W before RGB
  - Example: \*1\* + \*7\* set RGBW order, \*1\* + \*9\* set WRGB order.

## Dynamic mode list

No.	Name	No.	Name
P01	Red horse race white ground, forward	P21	Green float, forward
P02	Green horse race white ground, forward	P22	Blue float, forward
P03	Blue horse race white ground, forward	P23	Purple float, forward
P04	Yellow horse race blue ground, forward	P24	RGBW float, forward
P05	Cyan horse race blue ground, forward	P25	Red Yellow float, forward
P06	Purple horse race blue ground, forward	P26	Green Cyan float, forward
P07	7 color multi horse race, forward	P27	Blue Purple float, forward
P08	7 color horse race close + open	P28	Blue White float, forward
P09	7 color multi horse race close + open	P29	6 color float, forward
P10	7 color scan close + open	P30	6 color smooth sectionally, forward
P11	7 color multi-scan close + open	P31	7 color jump sectionally, forward
P12	Blue White chase, forward	P32	7 color strobe sectionally, forward
P13	Green Cyan chase, forward	P33	White horse race (RGB jump)
P14	RGB chase, forward	P34	White smooth horse race (RGB smooth)
P15	7 color chase, forward	P35	White starlight (RGB random jump)
P16	Blue meteor, backward	P36	White smooth starlight (RGB random smooth)
P17	Purple meteor, backward	P37	White flow, forward
P18	White meteor, backward	P38	White flow, forward on + backward off
P19	7 color meteor, backward	P39	White flow, forward on + backward on
P20	Red float, forward	P40	White float

**Note:**  
 P33-P40 dynamic modes are applicable to SPI type white light strip.  
 P33-P36 dynamic modes, if the color SPI strip is connected, the corresponding color effect will appear.