

## AC Triac RF Dimmer Kit

Model No.: S1-B+R1

RF dimming/Leading edge or trailing edge/Min brightness settable/ Push Dim/Wall box inserted



### Features

- RF + Push AC phase-cut dimmer, 1 channel output.
- To dim and switch single color dimmable LED lamps, traditional incandescent and halogen lights.
- Leading edge dimming or trailing edge dimming set by dip switch.
- Min brightness can be set by key.
- Compatibility with RF 2.4G dimming remote control.
- Light on/off fade time 3s selectable.
- Connect with external push switch to achieve on/off and dimming function.
- Easy to be inserted into standard 86\*86mm wall box.

CE RoHS EMC LVD

### Technical Parameters

#### Triac Dimmer's Input and Output

|                |            |
|----------------|------------|
| Input voltage  | AC100-240V |
| Output voltage | AC100-240V |
| Output current | Max 1.5A   |
| Output power   | 150-360W   |

#### Dimming data

|                     |                      |
|---------------------|----------------------|
| Input signal        | RF 2.4GHz + Push Dim |
| RF Control distance | 30m                  |
| Dimming level       | 256 levels           |
| Dimming range       | 0-100%               |

#### Environment

|                         |                   |
|-------------------------|-------------------|
| Operation temperature   | Ta: -20°C ~ +55°C |
| Case temperature (Max.) | Tc: +85°C         |
| IP rating               | IP20              |

#### LED Remote's Input and Output

|                 |              |
|-----------------|--------------|
| Output signal   | RF(2.4GHz)   |
| Working voltage | 3VDC(CR2032) |
| Working current | <5mA         |
| Standby current | <2μA         |
| Standby time    | 2 years      |
| Remote distance | 30m          |

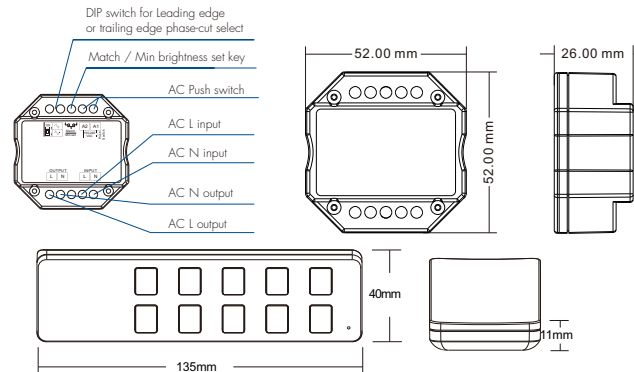
#### Safety and EMC

|                      |                                                       |
|----------------------|-------------------------------------------------------|
| EMC standard (EMC)   | ETSI EN 301 489-1 V2.2.3<br>ETSI EN 301 489-17 V3.2.4 |
| Safety standard(LVD) | EN 62368-1:2020+A11:2020                              |
| Radio Equipment(RED) | ETSI EN 300 328 V2.2.2                                |
| Certification        | CE, EMC, LVD, RED                                     |

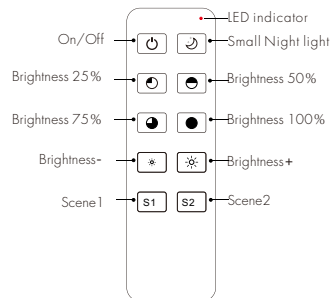
#### Warranty and Protection

|          |         |
|----------|---------|
| Warranty | 5 years |
|----------|---------|

### Mechanical Structures and Installations



### Remote function



**Brightness+/-:**  
Short press 10 levels,  
long press 1-0s for continuous 256 levels adjustment.

**Scene 1/2:**  
Brightness memory.  
Short press recall the scene,  
long press 2s save the current brightness into the scene.

### Compatible Load Types

| Load type                               | Maximum load               | Remarks                                                                                                                                            |
|-----------------------------------------|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| Dimmable LED lamps                      | 200W @ 220V<br>100W @ 110V | Due to variety of LED lamp designs, maximum number of LED lamps is further dependent on power factor result when connected to dimmer.              |
| Triac dimmable LED drivers              | 200W @ 220V<br>100W @ 110V | Maximum permitted number of drivers is 200W divided by driver nameplate power rating, and make sure the surge current is no more than 2 times CSA. |
| Incandescent lighting, HV halogen lamps | 400W @ 220V<br>200W @ 110V |                                                                                                                                                    |

Because different manufacturers triac dimmable LED driver nameplate power rating is different, you can refer to the formula to calculate the max. number of LED driver. Formula:  $D = 200W / RP$ , at the same time need to meet the sum of the surge current ( $I_{surge}$ ) does not exceed 130A.

For example: triac dimmable LED driver nameplate power rating ( $RP$ ) = 15.4W, surge current = 10A/230VAC, Then  $D_{max} = 200 / 15.4 = 13$ (pcs),  $I_{surge} = 13 * 10 = 130A$ , the max. number of triac dimmable LED driver is 13.

### Recommended number of load connection

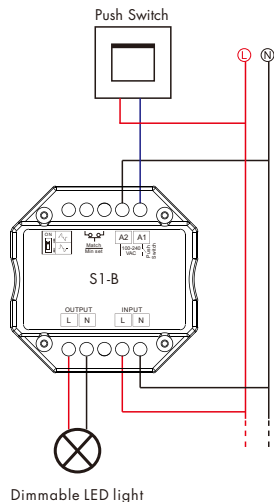
| Load type                 | Output power per load | Quantity |
|---------------------------|-----------------------|----------|
| Dimmable downlight        | 5.5W @ 220V-240V      | 20       |
| Triac dimmable LED driver | 12W @ 200V-240V       | 15       |
| Triac dimmable LED driver | 36W @ 200V-240V       | 4        |
| Triac dimmable LED driver | 75W @ 200V-240V       | 2        |

## Wiring diagram

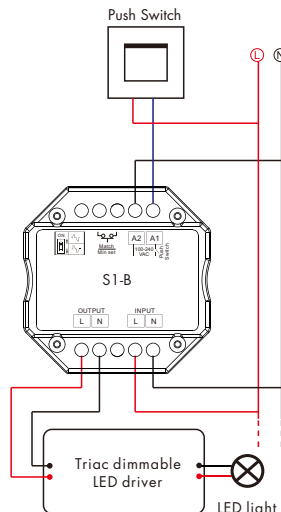
S1-B+R1 AC Triac RF Dimmer Kit

**⚠ Caution:** Please carefully ensure all wire connections and polarities are correct and secure before applying power, otherwise this controller will be damaged.

Connect with dimmable LED light:



Connect with Triac dimmable LED driver:

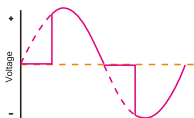


## Leading edge or trailing edge dimming setting

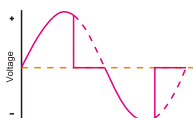
Select leading edge(forward-phase) dimmer or trailing edge(reverse-phase) dimmer according to dimmable LED light or driver.



Forward-phase control dimmer(TRIAC)



Reverse-phase control dimmer



Caution: before power on, you must confirm the selection of dip switch.

## Min brightness setting

Long press Min set key for 2s, the light blink 2 times, ready for min brightness set, then short press Min set key 1-6 times, to get 6 min brightness: 5%, 10%, 15%, 20%, 25% or 30%, the light will output the current min brightness immediately, Long press Min set key for 2s or wait 8s, quit min brightness set, the light will output 100% brightness automatically.

## Light on/off fade time

Long press Match key 5s, then short press Match key 3 times, the light on/off time will be set to 3s, the indicator light blink 3 times.

## Factory default (long press Match key 10s)

Min light brightness is 5%, on/off fade time is 0.5s.

## Push-dim

The provided Push-Dim interface allows for a simple dimming method using commercially available non-latching (momentary) wall switches.

- **Short press:** Turn on or off light.
- **Long press (1-6s):** Press and hold to stepless dimming, with every other long press, the light level goes to the opposite direction.
- **Dimming memory:** Light returns to the previous dimming level when switched off and on again, even at power failure.

## Match Remote Control (two match ways)

End user can choose the suitable match/delete ways. Two options are offered for selection:

### Use the controller's Match key

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.

### Use Power Restart

Match:

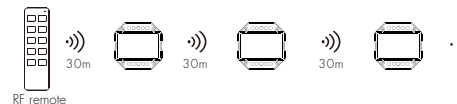
Switch off the power, then switch on power, repeat again. Immediately short press on/off key 3 times on the remote. The light blinks 3 times means match is successful.

Delete:

Switch off the power, then switch on power, repeat again. Immediately short press on/off key 5 times on the remote. The light blinks 5 times means all matched remotes were deleted.

## Application notes

All the receivers are matched with one RF remote.



**Auto-transmitting:** One receiver can transmit the signals from the remote to another receiver within 30m, as long as there is a receiver within 30m, the remote control distance can be extended.

**Auto-synchronization:** Multiple receivers within 30m distance can work synchronously when they are controlled by the same remote.

Receiver placement may offer up to 30m communication distance. However, we recommend for indoor applications that receiver placements should be no further apart than 1.5m.