rayrun SD20 PLC Master Slave Programmable LED Driver User Guide

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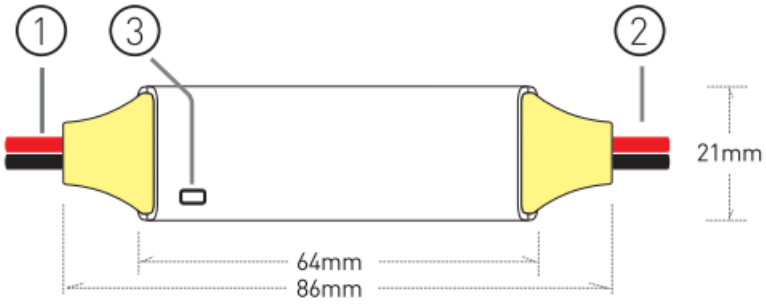
Introduction

SD20 is a LED driver powered by 48Vdc with power line communication commands. With the compatible master driver, it can drive LED lights in voltage range of 0-48V and current range of 0-700mA. With the digital PLC commands from master driver, the output current, gradient speed, current trimming functions are adjustable from the master driver. With the advanced full DC dimming scheme, it's 100% physically flicker-free in whole dimming range. It also has very good low brightness performance, to build elegant low brightness environment and on/off dimming experience.

Function & Size



Power supply input
Connect to master driver's 48Vdc output power, get power and PLC commands from master. Please make sure the polarity is correct.

PLC

Power Line Communication

Ultra Compact

100% Flicker free

Waterproof Option

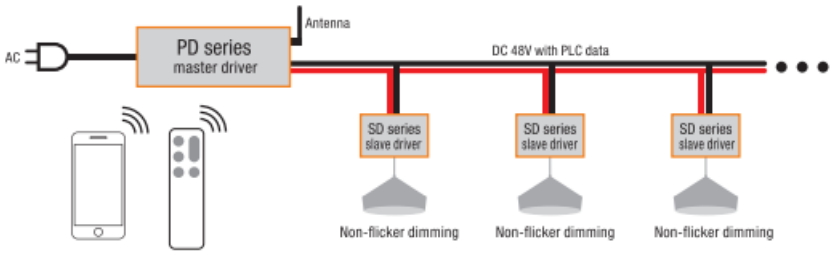
LED output

Connect to constant current driving LED lights. The output current is programmable from the master driver and the current range is from 0 to 700mA, the output voltage is from 0 to 48Vdc. Please make sure the lighting fixture's voltage and current is in this range.

Indicator

The indicator will light on when the LED driveris powered on. The input power will be fully cut off if the indicator is off.

INSTALLATION



Install steps

1. Only use the slave driver with compatible master driver, do not use with any other power supply.
2. Connect the slave drivers' output to LED light.
3. Connect the master driver's output cable to all slave drivers' power input. Please make sure the polarity is Correct.
4. Make sure the master driver's LED current setting is correct, then connect the master driver's AC power.

CAUTION: Do not short any cable to AC power! Do not connect the power input to any incompatible drivers!

Automatic LED adaption

The driver verifies the load character on each power on. It will run a load adaption process once the change of load is detected. During the adaption process, the lighting fixture will dim up and down for about 10 seconds. After this process, the driver will match the LED feature and maintain a 0-100% full range physical non-flickering DC dimming. Normally this adaption process happens on the power on moment once the lighting fixture is changed with the brightness of higher than 30%.

CAUTION: The adaption process CAN NOT detect the value of LED rated current, so the rated current MUST be set correctly from the master driver before connecting to lighting fixture. Otherwise the lighting fixture can be permanently damaged!

Advanced features

Output current option

The output current can be set from the master driver via power cable, the maximum current value is 700mA. Please refer to the master driver's instruction for detailed operation. The maximum output voltage and wattage is related to the output current setting, following table shows the relation between the current and the voltage/ wattage.

Rated current	200mA	350mA	500mA	700mA
Max output Volt.	48V	48V	40V	28.6V
Max output power	9.6W	16.8W	20W	20W

Output current trimming

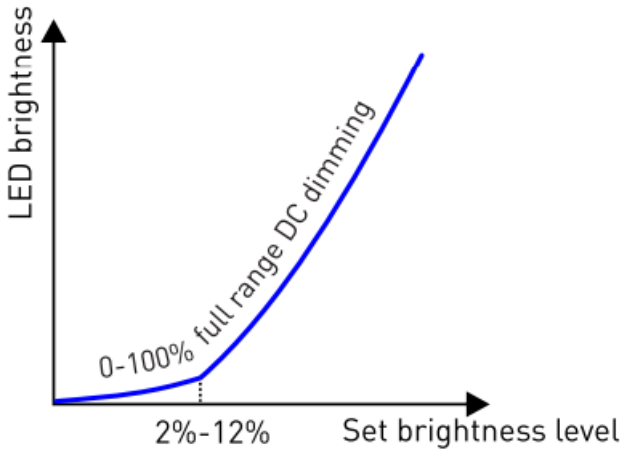
Besides the output current setting, the output current also can be trimmed down in a resolution of 1%. With this feature, the LED current and light luminance can be matched preciously. Please refer to the master driver's instruction for detailed operation.

Gradient speed adjust

The light on/off gradient speed is also adjustable from the master driver. Please refer to the master driver's instructions for detailed operation.

Working at low brightness

To extend the application at low brightness, the output brightness is designed to rather lower at low brightness levels. The output brightness will be nonlinear to the relevant brightness level below a certain point. This point will be around 2% to 12%, related to rated current and trim value ([refer to following curve). The driver will maintain linear DC driving mode at low brightness, no need to concern about PWM modulation issues.



Waterproof (-S version)

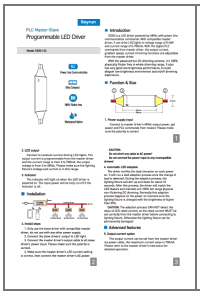
The IP-68 waterproof feature with glue injection finish is available on -S version. For overall waterproof

performance, the cables must be waterproof treated separately.

Specification

Model	SD20	SD20-S
Input voltage	48Vdc	
Output Voltage	0-48Vdc	
Rated output current	0-700mA	
Max output power	20W	
Communication mode	Digital Power Line Communication	
Dimming scheme	0-100% full DC dimming	
Working temperature (Ta)	-20°C~+55°C	
Waterproof	IP63	IP68
Dimension	86x21x8.5mm	

Documents / Resources

	rayrun SD20 PLC Master Slave Programmable LED Driver [pdf] User Guide SD20, PLC Master Slave Programmable LED Driver, SD20 PLC Master Slave Programmable LED Driver, Programmable LED Driver, LED Driver, Driver