

shadow-caster SCM-SZ-RGB Single Zone Lighting Controller



shadow-caster SCM-SZ-RGB Single Zone Lighting Controller Owner's Manual

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shadow-caster SCM-SZ-RGB Single Zone Lighting Controller



Product Usage Instructions

- In case of a fault, if the SC backlight flashes red, cycle power to the unit to clear the fault.
- Upon powering up, the controller cycles through colors starting from white and moving clockwise through the colors. One full cycle lasts about 1 minute. After the first cycle, the rate slows to one full cycle every 7 minutes. Click the push button to stop at the current color or multiple clicks to step to the next color on the chart.
- Connect various components as per the provided wiring diagram using a push-button switch to control color brightness and scroll.
- Refer to the pin chart and plug connections to correctly wire and operate the push-button switch for controlling the lighting controller.
- Follow the wiring schematic provided to use an on/off/momentary switch for controlling the lighting controller.
- Connect the components as per the provided schematic for using the on/off/momentary switch to control the lighting controller.

FAQ

- **Q:** What should I do if the SC backlight flashes red?
- **A:** Cycle power to the unit to clear the fault causing the red flashing SC backlight.
- **Q:** How long does one full cycle of the color index last?
- **A:** One full cycle of the color index lasts approximately 1 minute initially and slows down to one full cycle every 7 minutes after the first cycle.

DESCRIPTION

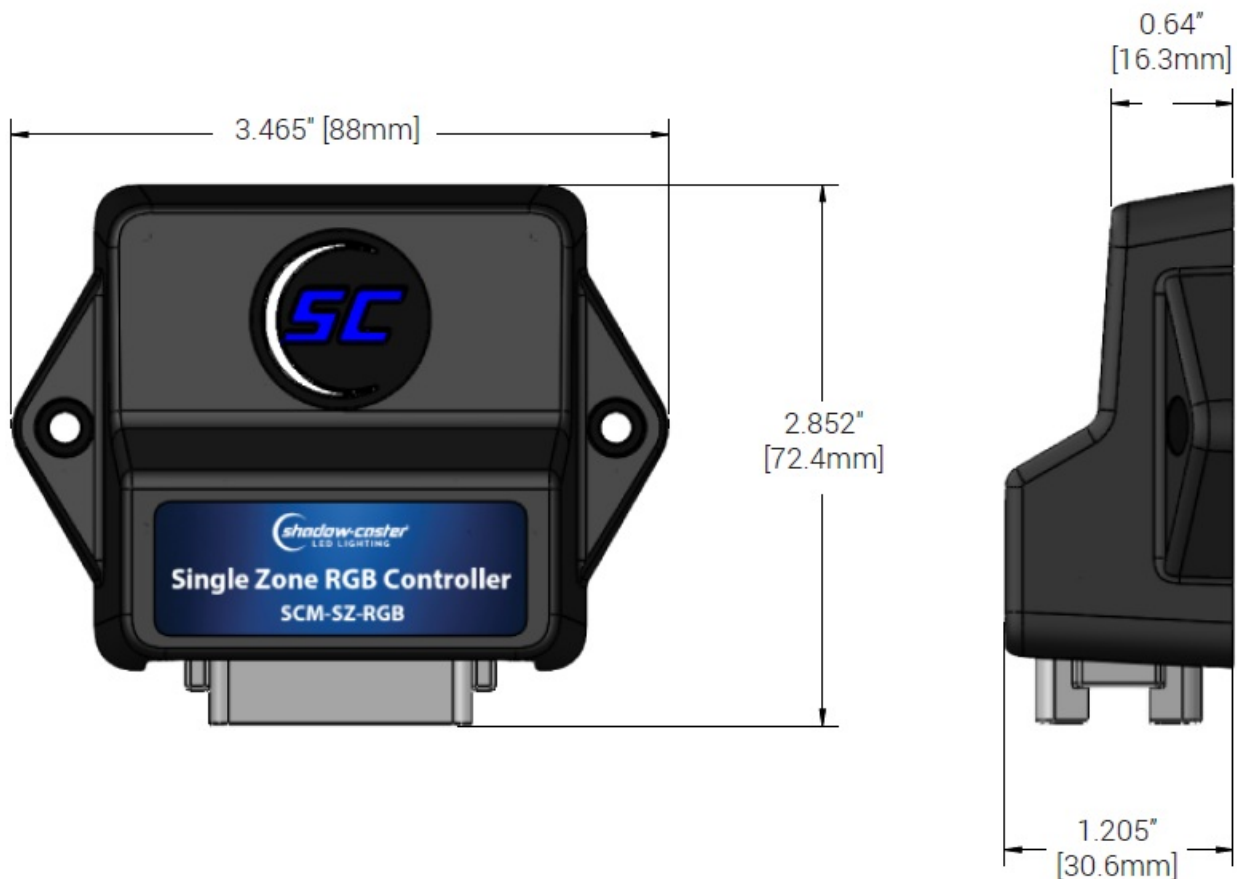
- The Shadow-Caster® Single Zone Lighting Control is a low-cost, marine-grade RGBW LED controller.
- Operate from either a standard momentary push button switch to set color brightness and color scroll or by using Shadow-Caster's on/off/momentary switch to add control over additional color fading modes.
- The Single Zone Controller also has a built-in Shadow-NET® interface, allowing the controller to synchronize color and brightness with other Shadow-NET® devices, for example; to make Shadow-Caster® underwater

lights match the color of interior RGBW lighting.

SPECIFICATIONS

- Supports up to 10A load
- IP67 housing and connector
- 12V/24V operation compatible
- 3.5" x 2.9" x 1.2" [88 x 72.4 x 30.6mm]

DIMENSIONS



THEORY OF OPERATION

The Shadow-Caster® Single Zone Lighting Controller is a compact IP67-rated lighting controller for marine and other off-road vehicles. It provides an easy and compact way to add RGBW lighting control for aftermarket and OEM applications. Depending on how the system is installed it can be controlled from a simple momentary push button switch, an on/off/ momentary switch, or to extend an existing Shadow-NET® installation adding additional RGBW zones or capacity.

WHITE CHANNEL CONFIGURATION

To auto-detect the white channel:

- Connect the SCM-SZ-RGB's pin 8 (blue and white wire) to a constant positive (+) DC lug,
- Apply power to the SCM-SZ-RGB (typically by holding down the push button, and turning on the main battery switch).
- The module will go into auto-detect mode.

- If a load is detected on the white channel, the SCM-SZ-RGB will enter RGBW mode.

Note: the minimum detection load is 40mA.

- The lights will flash green when auto-detect is complete.

FAULT DETECTION

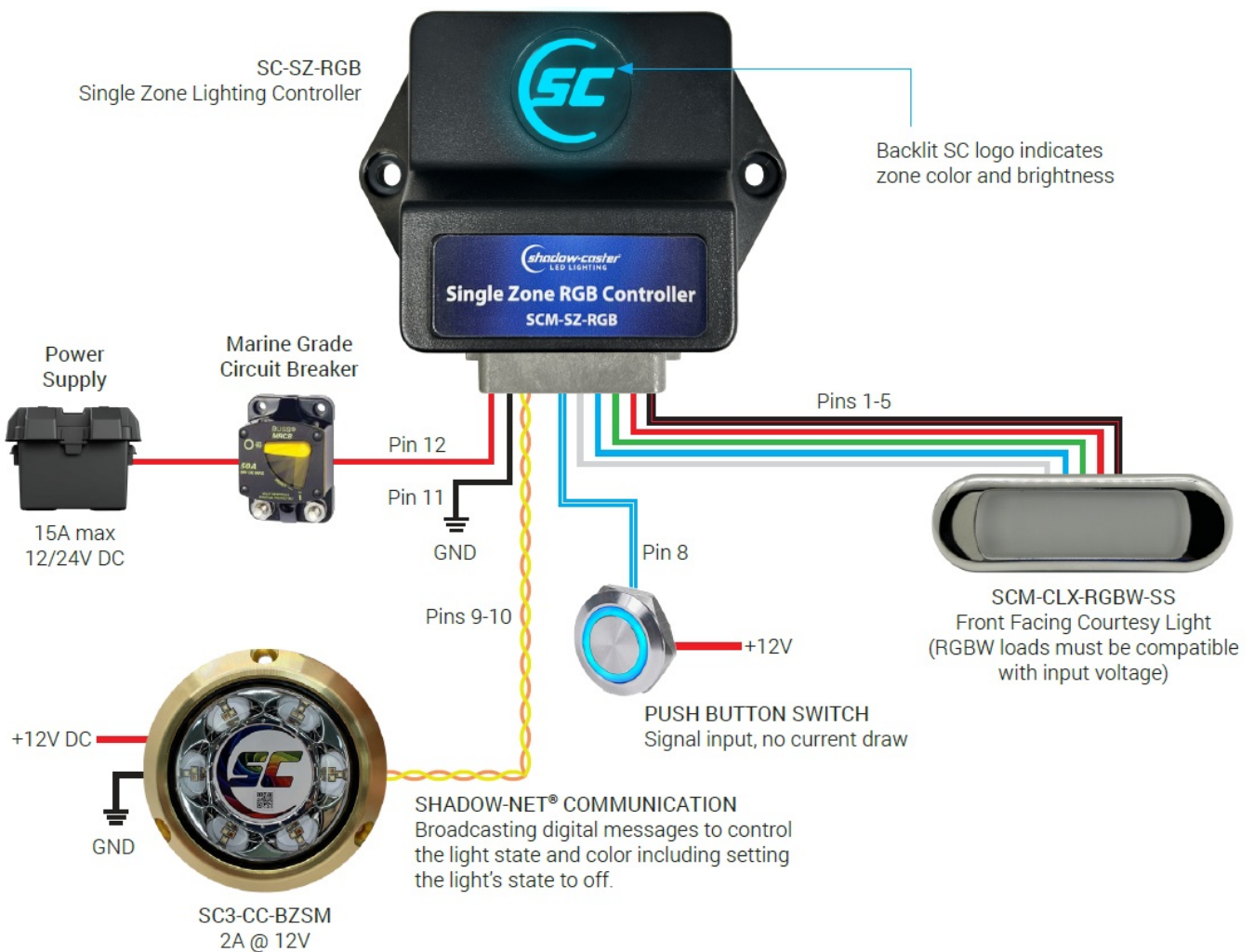
- The Shadow-Caster® Single Zone Lighting Controller is designed to protect itself in the event of an over-current or overtemperature condition.
- In the event a fault is detected, the SC back light on the unit will flash red, and the main output power will turn off.
- To clear the fault, cycle power to the unit.

SCM-SZ-RGB COLOR INDEX CYCLE

- When the SCM-SZ-RGB controller powers up, it will begin to cycle through the color index, starting on white color and moving clockwise through the colors, as shown on the color index diagram.
- One full cycle of the color index will be completed in approximately 1 minute.
- After the first cycle is complete the rate will slow to one full cycle every 7 minutes.
- At any time, a single click of the push button will stop at the current color.
- Multiple clicks will step to the next color on the chart.



WIRING & USE SCHEMATICS – PUSH BUTTON SWITCH ONLY



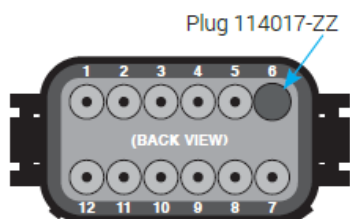
Note: Shadow-NET's current draw does not add to the 10A budget for the Single Zone Controller

OPERATION – PUSH BUTTON SWITCH

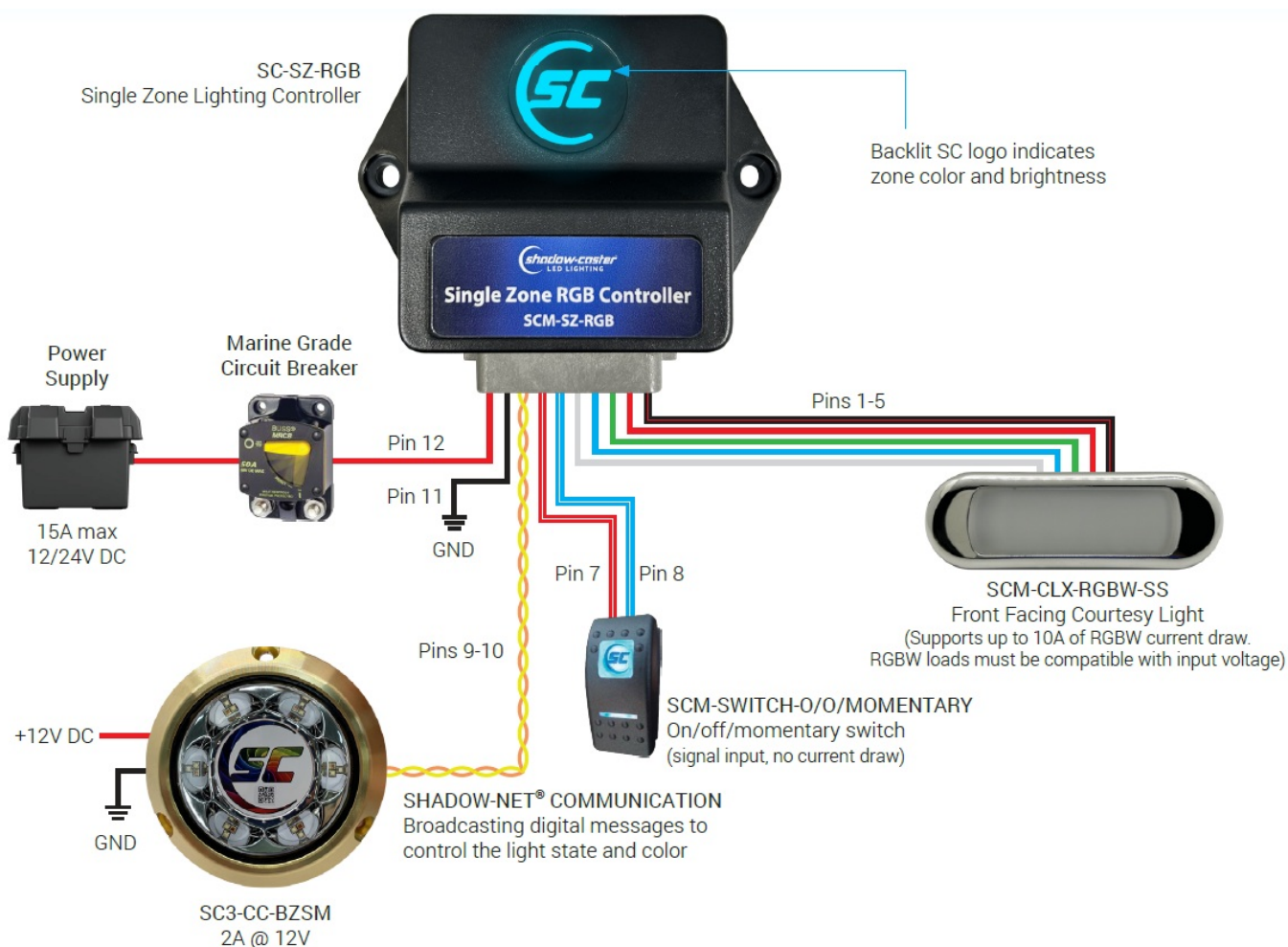
- Press once for lights to come on to full brightness and start rotating colors
- Press again to start and stop color rotation. Multiple clicks will step through colors
- Press and hold for brightness
- Press and hold to dim lights to off

PIN CHART

PIN	GAUGE	COLOR	LABEL	DESCRIPTION
Pin 1	16	BLACK/RED STRIPE	V-OUT	+V-OUT
Pin 2	16	RED	RED-CH	RED OUT
Pin 3	16	GREEN	GRN-CH	GREEN OUT
Pin 4	16	BLUE	BL-CH	BLUE OUT
Pin 5	16	WHITE	WH-CH	WHITE OUT
Pin 6	NOT USED	PLUGGED		
Pin 7	18	RED/WHITE STRIPE		NOT USED
Pin 8	18	BLUE/WHITE STRIPE	PB-IN	PUSH BUTTON I N
Pin 9	18	ORANGE	CAN-L	CAN LOW
Pin 10	18	YELLOW	CAN-H	CAN HIGH
Pin 11	16	BLACK	GND	GROUND
Pin 12	16	RED	+ IN	POWER IN

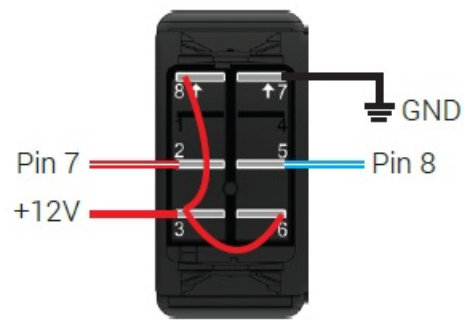


WIRING SCHEMATIC – ON/OFF/MOMENTARY SWITCH



Note: Shadow-NET's current draw does not add to the 10A budget for the Single Zone Controller

MOMENTARY SWITCH WIRING

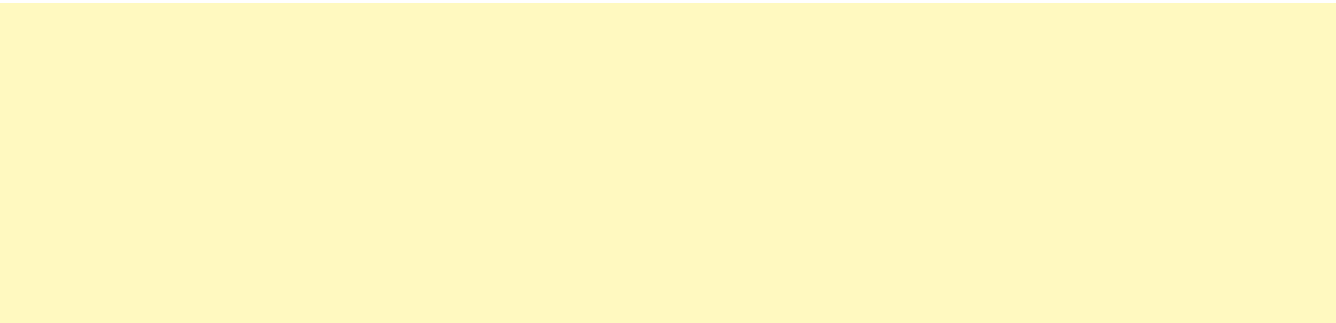


- Rear of Momentary Switch SCM-SWITCH-O/O/MOMENTARY

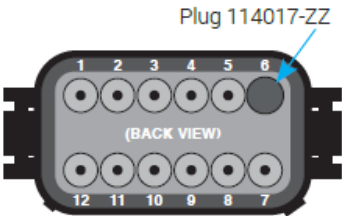
OPERATION – ON/OFF/MOMENTARY SWITCH

- Turn switch on: Lights will ramp up and start color rotation
- Click the push button switch to stop the rotation
- Click the push button repeatedly to step to the next color
- Press and hold the push button for brightness
- Toggle ON/OFF to change mode:
- Single color fade
- Multi-color fade
- Solid/rotate

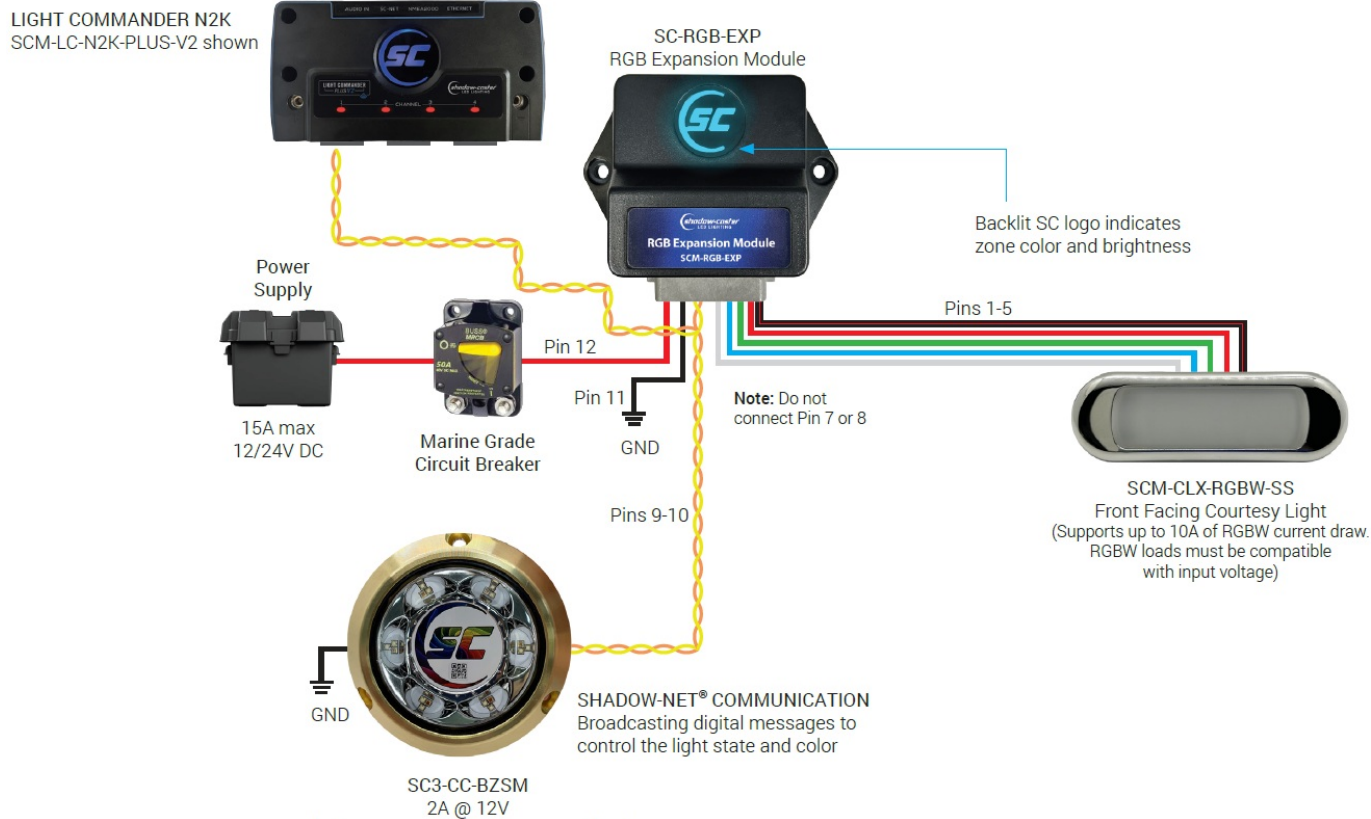
PIN CHART



PIN GAUGE COLOR LABEL DESCRIPTION

	Pin 1	16	BLACK/RED STRIPE	V-OUT	+V-OUT
	Pin 2	16	RED	RED-CH	RED OUT
	Pin 3	16	GREEN	GRN-CH	GREEN OUT
	Pin 4	16	BLUE	BL-CH	BLUE OUT
	Pin 5	16	WHITE	WH-CH	WHITE OUT
	Pin 6	NOT USED	PLUGGED	NOT USED	NOT USED
	Pin 7	18	RED/WHITE STRIPE	ON/OFF	ON/OFF
	Pin 8	18	BLUE/WHITE STRIPE	PB-IN	PUSH BUTTON IN
	Pin 9	18	ORANGE	CAN-L	CAN LOW
	Pin 10	18	YELLOW	CAN-H	CAN HIGH
	Pin 11	16	BLACK	GND	GROUND
	Pin 12	16	RED	+ IN	POWER IN

WIRING & USE SCHEMATICS – LIGHT COMMANDER N2K



OPERATION – LIGHT COMMANDER N2K

- The SCM-RGB-EXP module will follow messages that it receives on the bus.
- For installation with a Light Commander, you will need to identify the device on the bus and assign it to a zone.

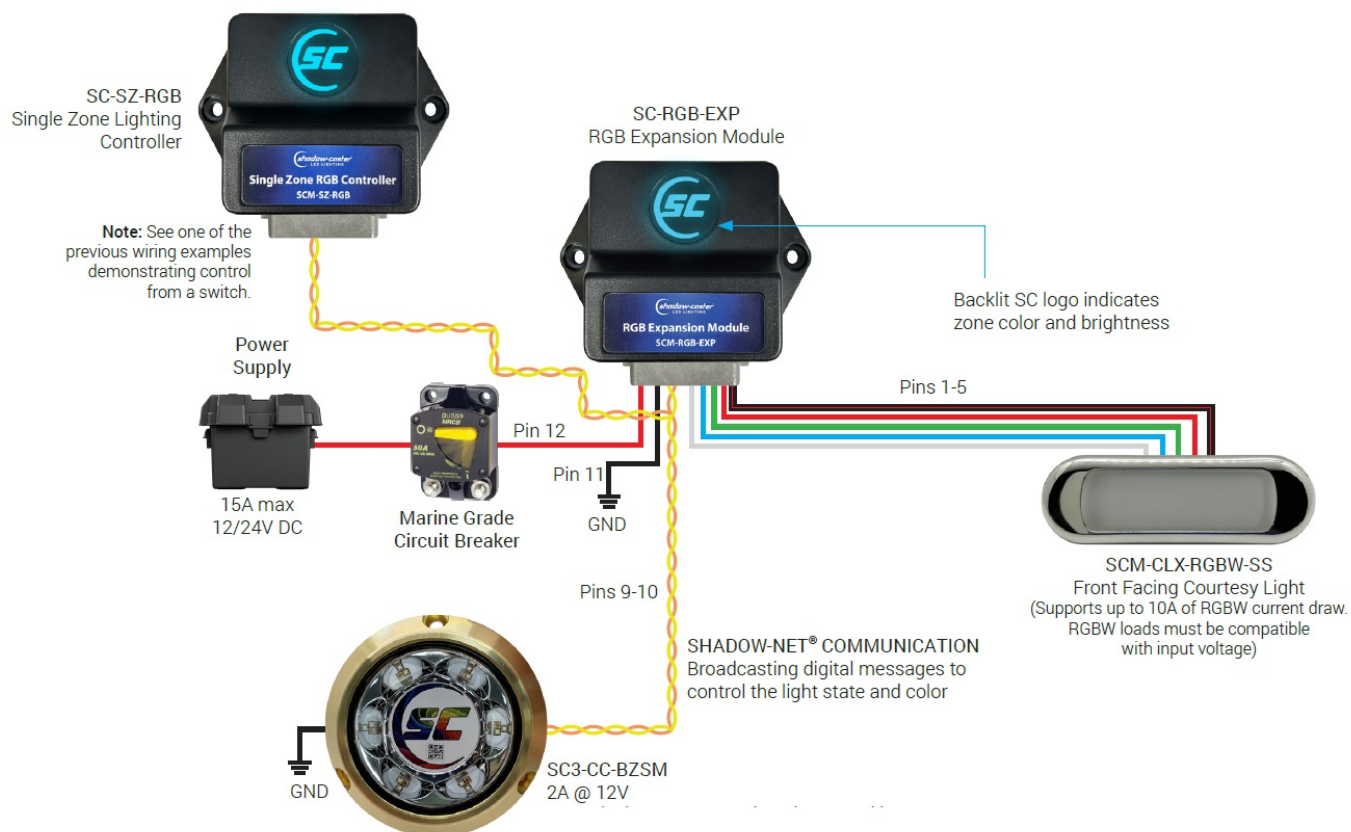
PIN CHART

PIN GAUGE COLOR LABEL DESCRIPTION

<p>Plug 114017-ZZ</p> <p>(BACK VIEW)</p>	Pin 1	16	BLACK/RED STRIPE	V-OUT	+V-OUT
	Pin 2	16	RED	RED-CH	RED OUT
	Pin 3	16	GREEN	GRN-CH	GREEN OUT
	Pin 4	16	BLUE	BL-CH	BLUE OUT
	Pin 5	16	WHITE	WH-CH	WHITE OUT
	Pin 6	NOT USED	PLUGGED		
	Pin 7	18	RED/WHITE STRIPE	ON/OFF	NOT USED
	Pin 8	18	BLUE/WHITE STRIPE	PB-IN	NOT USED
	Pin 9	18	ORANGE	CAN-L	CAN LOW
	Pin 10	18	YELLOW	CAN-H	CAN HIGH
	Pin 11	16	BLACK	GND	GROUND
	Pin 12	16	RED	+ IN	POWER IN

WIRING & USE SCHEMATICS – SCM-SZ-RGB & SCM-RGB-EXP

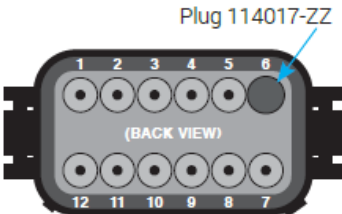
Use an SCM-RGB-EXP expansion module to add more capacity to your single-zone system.



Note: Shadow-NET's current draw does not add to the 10A budget for the Single Zone controller

OPERATION – SCM-SZ-RGB & SCM-RGB-EXP

- The SCM-RGB-EXP will simply follow whatever colors the main LED module is doing.
- An additional 10A amps of current capacity will be added per SCM-RGB-EXP

PIN CHART					
PIN	GAUGE	COLOR	LABEL	DESCRIPTION	
	Pin 1	16	BLACK/RED STRIPE	V-OUT	+V-OUT
	Pin 2	16	RED	RED-CH	RED OUT
	Pin 3	16	GREEN	GRN-CH	GREEN OUT
	Pin 4	16	BLUE	BL-CH	BLUE OUT
	Pin 5	16	WHITE	WH-CH	WHITE OUT
	Pin 6	NOT USED	PLUGGED		
	Pin 7	18	RED/WHITE STRIPE	ON/OFF	NOT USED
	Pin 8	18	BLUE/WHITE STRIPE	PB-IN	PUSH BUTTON I N
	Pin 9	18	ORANGE	CAN-L	CAN LOW
	Pin 10	18	YELLOW	CAN-H	CAN HIGH
	Pin 11	16	BLACK	GND	GROUND
	Pin 12	16	RED	+ IN	POWER IN

MOUNTING INSTRUCTIONS

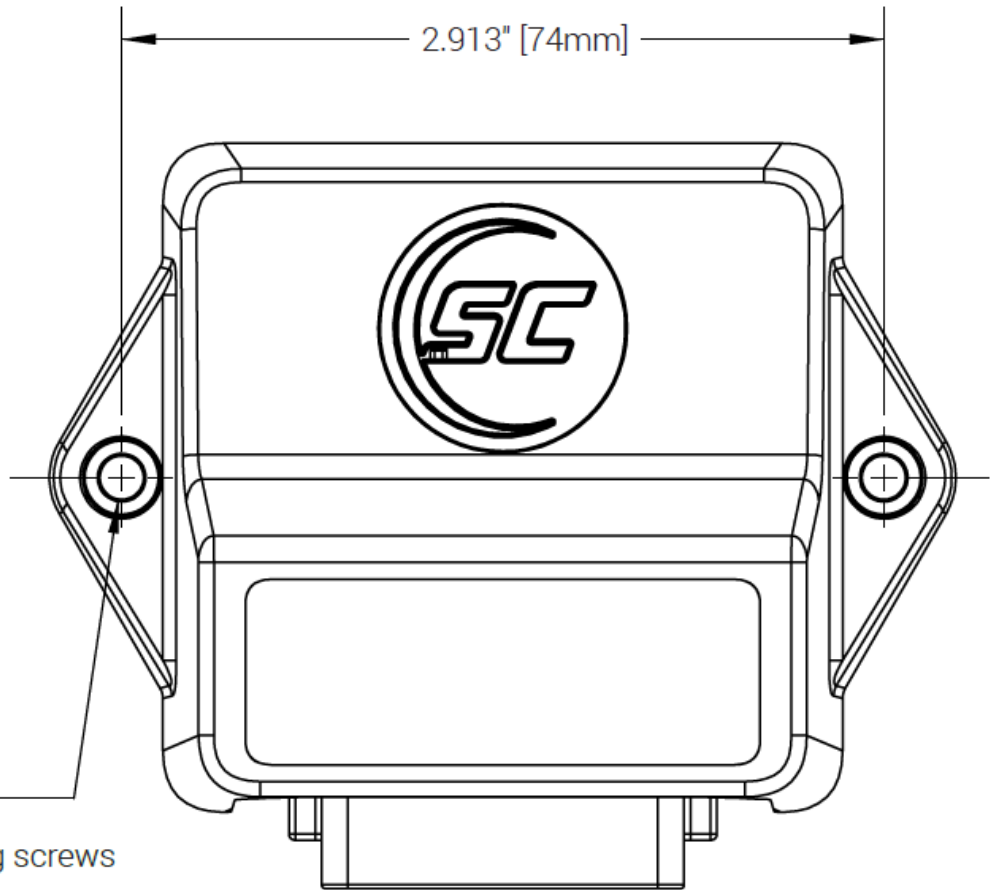
1. Find a flat spot to mount the SCM-SZ-RGB Single Zone Controller or SCM-RGB-EXP Expansion unit.
2. Print the mounting template below and tape it to your preferred mounting location.
3. Drill the pilot holes and center holes.
4. Use a marine sealant around the base and mounting hardware.
5. Use Perma-Seal connectors for the wiring.

MOUNTING TEMPLATE

IMPORTANT!

When printing installation templates, please ensure your printer is set to print at 'Actual Size' and double-check check all printed dimensions exactly match the specified dimensions.

SCALE 1:1



2 X Pilot holes
Ø 0.116" [2.9mm]

Use included mounting screws
316 Stainless Steel
#8 X 0.75" [9.1mm]

CONTACT

- Shadow-Caster® LED Lighting | 2060 Calumet Street | Clearwater, FL 33765
- p: +1 727.474.2877 e: info@shadow-caster.com w: shadow-caster.com

Documents / Resources



[shadow-caster SCM-SZ-RGB Single Zone Lighting Controller](#) [pdf] Owner's Manual
SCM-SZ-RGB Single Zone Lighting Controller, SCM-SZ-RGB, Single Zone Lighting Controller, Z
one Lighting Controller, Lighting Controller, Controller

References

- [User Manual](#)

[Manuals+](#), [Privacy Policy](#)

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