

# SHADOW-CASTER™ MARINE LIGHTING

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COMPANY PRESENTATION 2023



[WWW.SHADOW-CASTER.COM](http://WWW.SHADOW-CASTER.COM)

# ABOUT SHADOW-CASTER

- Founded in 2008 by Brian Rogers, Electrical Engineer and Jeff Pound, Mechanical Engineer
- Realized there were problems with marine lights on the market
  - High cost
  - Large hole needed to be cut for installation
  - Most lights at the time required external electronics
- Confident that a better product could be designed



# WHY SHADOW-CASTER?

Our Value Proposition

MADE IN THE USA WITH A SUPERIOR WARRANTY



# WHY SHADOW-CASTER?

## Our Value Proposition

### VERTICAL INTEGRATION

Engineering  
Mechanical, Electrical  
& Software



Machining



Surface Mount  
Operations



Soldering &  
Assembly



Assembly, Testing  
and Packing



#### Why is this important?

- On time deliveries
- More control to meet customer demands
- Ability for customization

# WHY SHADOW-CASTER?

Our Value Proposition

## QUALITY CONTROL & PROCESS L.E.E.O. TESTING

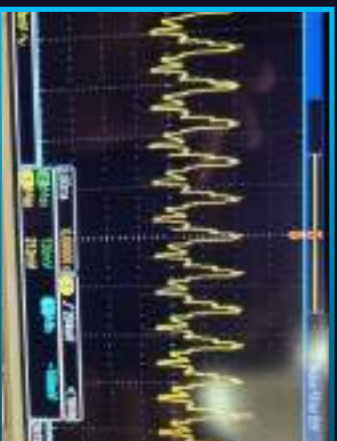
### LIFETIME

- Product Lifetime Testing
- Continuous Quality Inspection



### ELECTRICAL

- EMI and Noise
- Electrical Surge and Reverse Polarity



### ENVIRONMENTAL

- Environmental Salt Spray
- Corrosion
- UV Resistance



### OPTICAL

- Optical Beam Output and Spectral Analysis



# WHY SHADOW-CASTER?

## Our Value Proposition

### LEADERSHIP IN NMEA 2000 LIGHTING CONTROLS

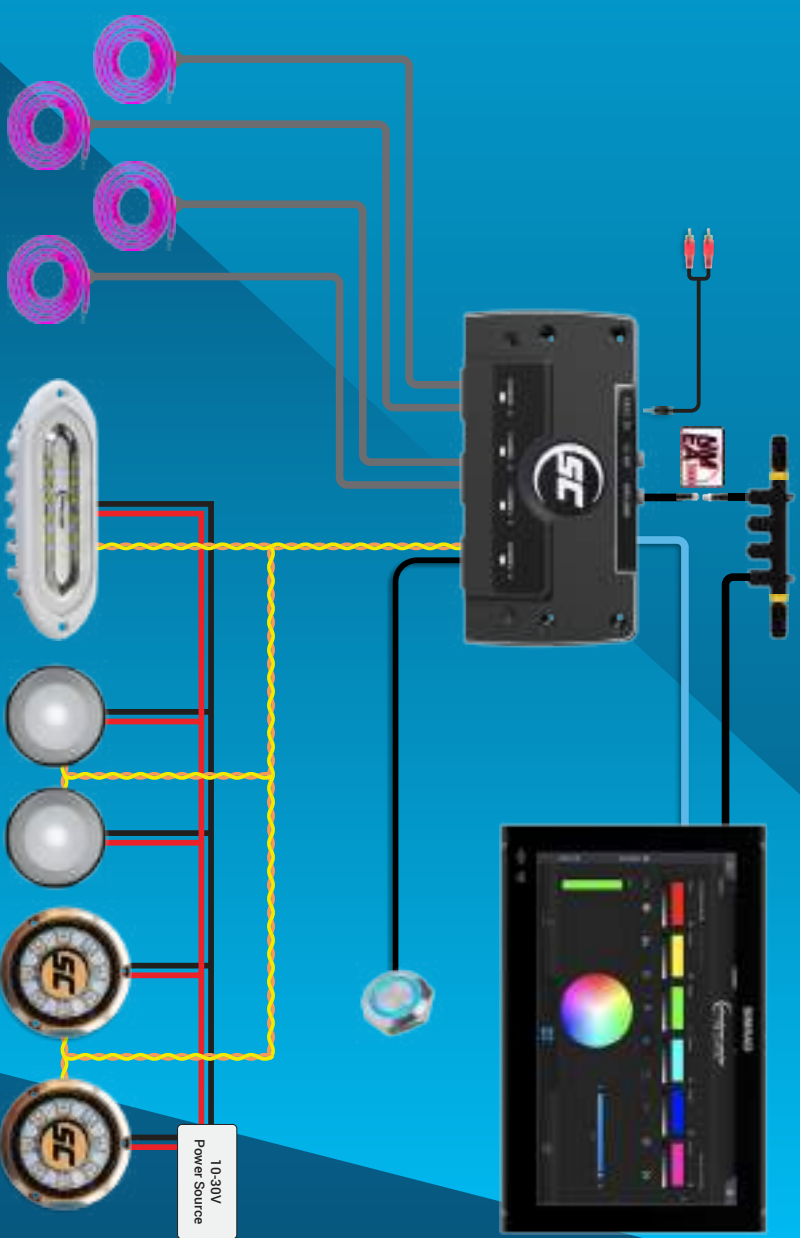
- Chairperson for NMEA 2000 Lighting Standard
- Developing CAN (Control Area Network) Lighting products for over 12yrs
- Lighting control PGNs became official part of NMEA 2000 standard in September 2021
- Working with Multi Function Display (MFD) and Digital switching manufacturers to standardize lighting control for the Marine industry.
- Current Integration relationships with Garmin, Raymarine, Navico (Simrad, Lowrance, B&G), Furuno and Humminbird



CONTROLLER TECHNOLOGY

# DEVELOPMENT OF NMEA 2000 LIGHTING STANDARD

- Release of standard September 2021
- Navico implementation is available across all platforms Simrad, Lowrance and B&G
- Other MFD and digital switching manufacturers are adopting their implementations
- Paves the way for further integration in marine lighting, (multiple systems can access the same lighting control)
- Allows lower cost implementation of lighting control (no additional interface bridge required)



# SHADOW-CASTER™ PRODUCT RANGE



CONTROL SYSTEMS

UNDERWATER LIGHTS

ABOVE WATER LIGHTS

POWER ACCESSORIES

**Shadow-caster™**  
LED LIGHTING

[WWW.SHADOW-CASTER.COM](http://WWW.SHADOW-CASTER.COM)



# CONTROL SYSTEMS

## LIGHT COMMANDER N2K PLUS

### SCM-LC-PLUS

NMEA 2000 'PLUS' Built-in Connectivity to Ethernet Systems



## LIGHT COMMANDER N2K

### SCM-LC-N2K

NMEA 2000 Light Controller and Expansion Module



## SCM-ZC-KIT

Multi-Zone Lighting Control  
from a Keypad



## SCM-SNLC & SWITCH

Single Zone Lighting Control  
from a Switch



## SCM-SWITCH

Simple Control from a Switch



# SHADOW-CASTER™ CONTROLLER TECHNOLOGY



Shadow-NET™ is a multi-channel communications platform created by Shadow-Caster™ to allow seamless integration and control of all of your boat's lighting.

Shadow-NET™ utilizes CAN bus (Control area Network) to communicate directly to a network of lighting devices

Shadow-NET™ individually addresses and controls the color and intensity of each Shadow-Caster™ light

Shadow-NET™ is a complete protocol of lighting control, and forms the basis of what is now the NMEA2000 lighting standard



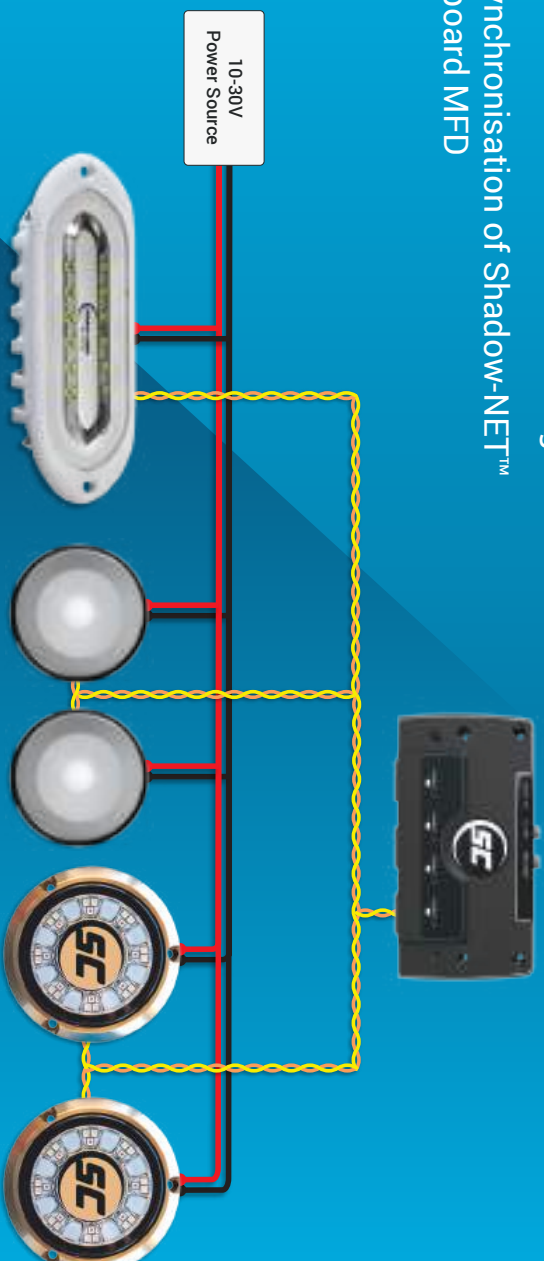
[WWW.SHADOW-CASTER.COM](http://WWW.SHADOW-CASTER.COM)

# WHAT IS SHADOW-NET™?

- Proprietary CANbus communication protocol used by Shadow-caster to communicate with Shadow-NET™ enabled lights
- Fully integrated control of up to 6 channels (zones)
- Small gauge twisted pair communication cable for easy routing and simplified wiring
- Shadow-NET™ individually addresses and controls the colour and intensity of each Shadow-NET™ enabled light
- Enhanced control and synchronisation of Shadow-NET™ enabled lights via an onboard MFD

## Shadow-NET™ modes include:

- Unlimited colours and fading transitions
- Dimming
- Strobe rate
- Music sync
- Custom scenes



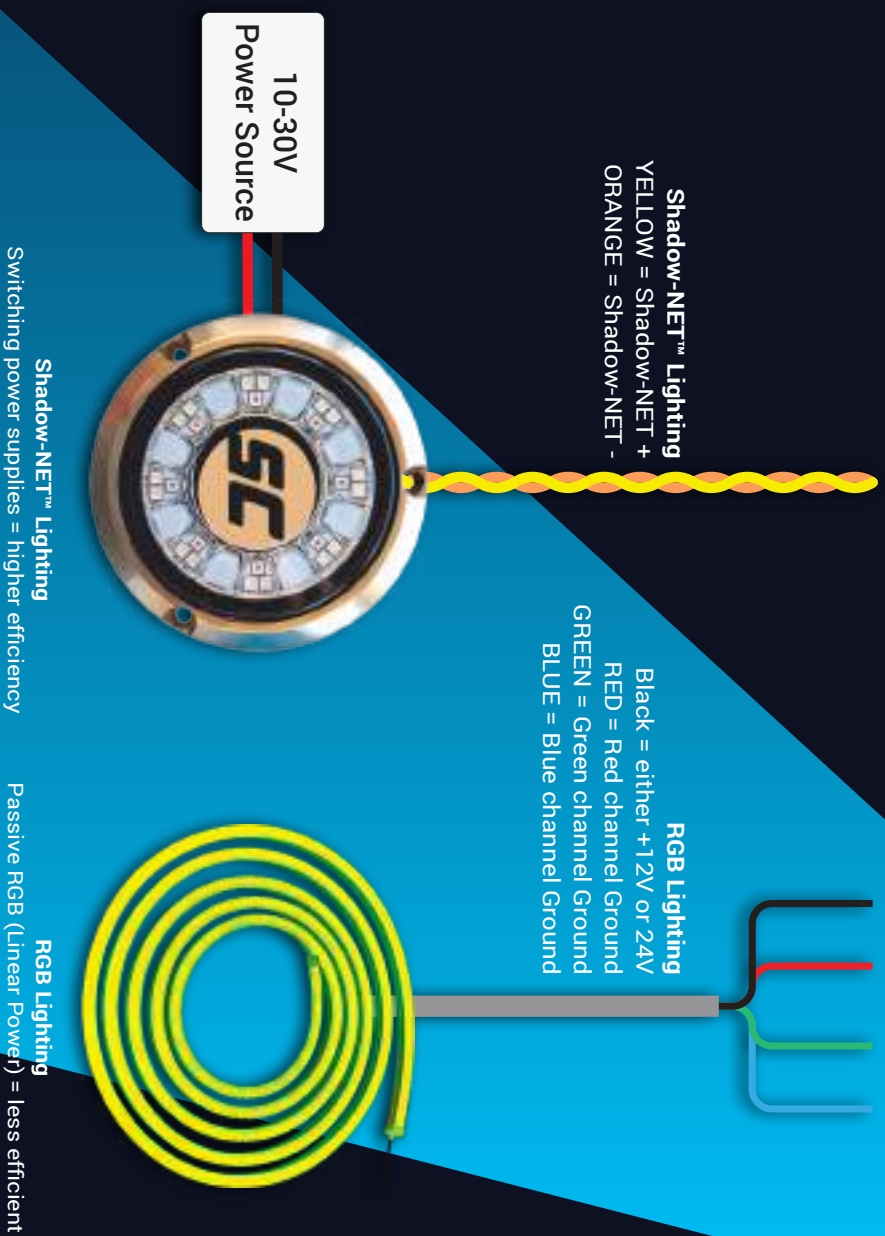
# SHADOW-NET™™ VS RGB CONTROL

## Shadow-NET™ Advantages

- Provides direct digital communications with light fixtures
- 6 channels of real time data
- Dynamic configurability

## RGB Advantages

- Very common and supported by many manufacturers



CONTROL SYSTEMS

# LIGHT COMMANDER N2K PLUS SCM-LC-PLUS

NMEA 2000 'PLUS' MULTI-ZONE LIGHTING CONTROLLER  
WITH BUILT-IN CONNECTIVITY TO ETHERNET SYSTEMS

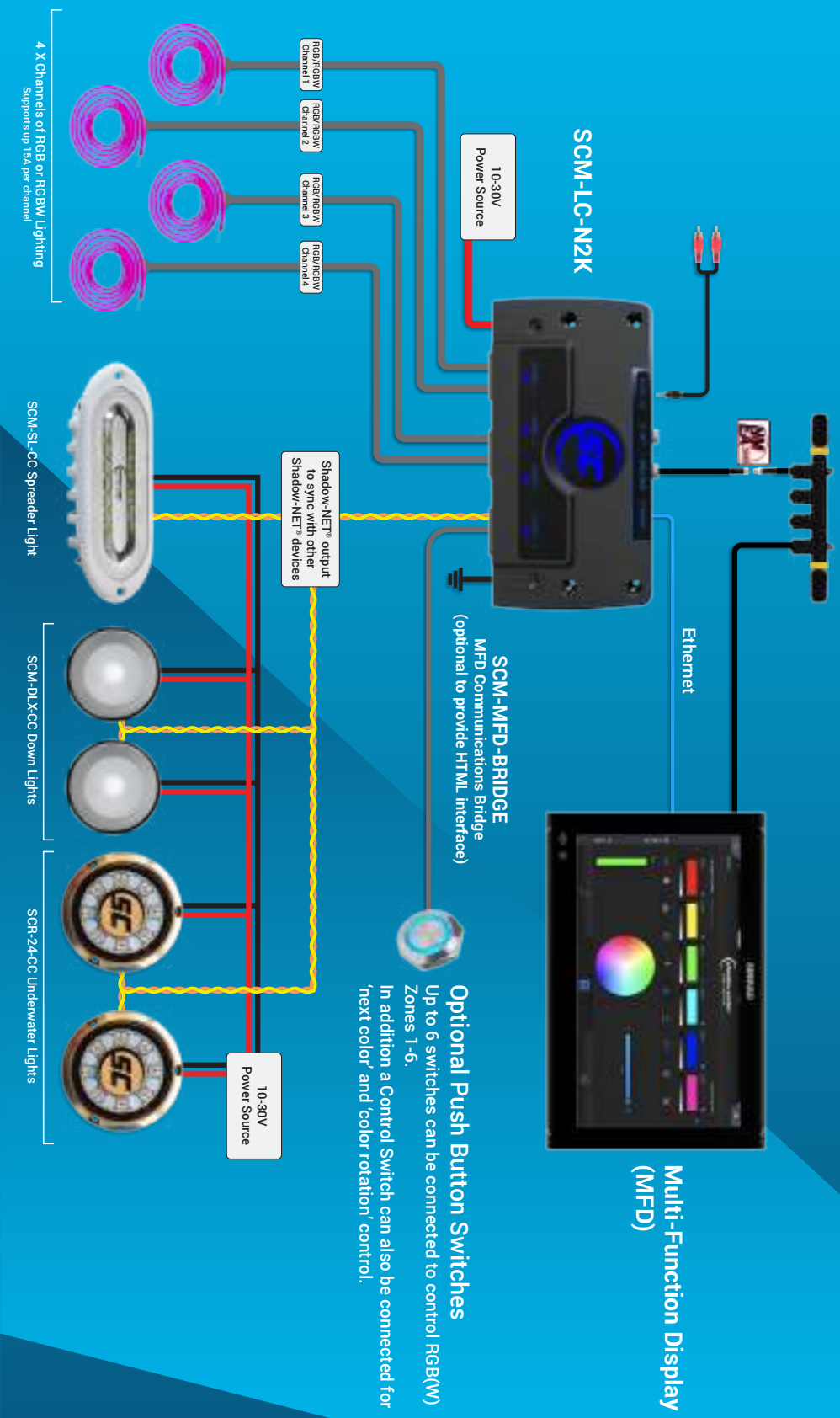
- All in one design - no need for a separate MFD communication bridge
- One module supports 6 zones of lighting (expandable to 18)
- 6 zones of switch support for use with traditional momentary switches or triggering from digital switch modules
- NMEA 2000 direct interface
- Shadow-NET™ interface for expandability



## CONTROL SYSTEMS

# LIGHT COMMANDER N2K PLUS - TYPICAL WIRING

## NMEA 2000 'PLUS' MULTI-ZONE LIGHTING CONTROLLER WITH BUILT-IN CONNECTIVITY TO ETHERNET SYSTEMS



## CONTROL SYSTEMS

# LIGHT COMMANDER N2K SCM-LC-N2K NMEA 2000 MULTI-ZONE LIGHTING CONTROLLER

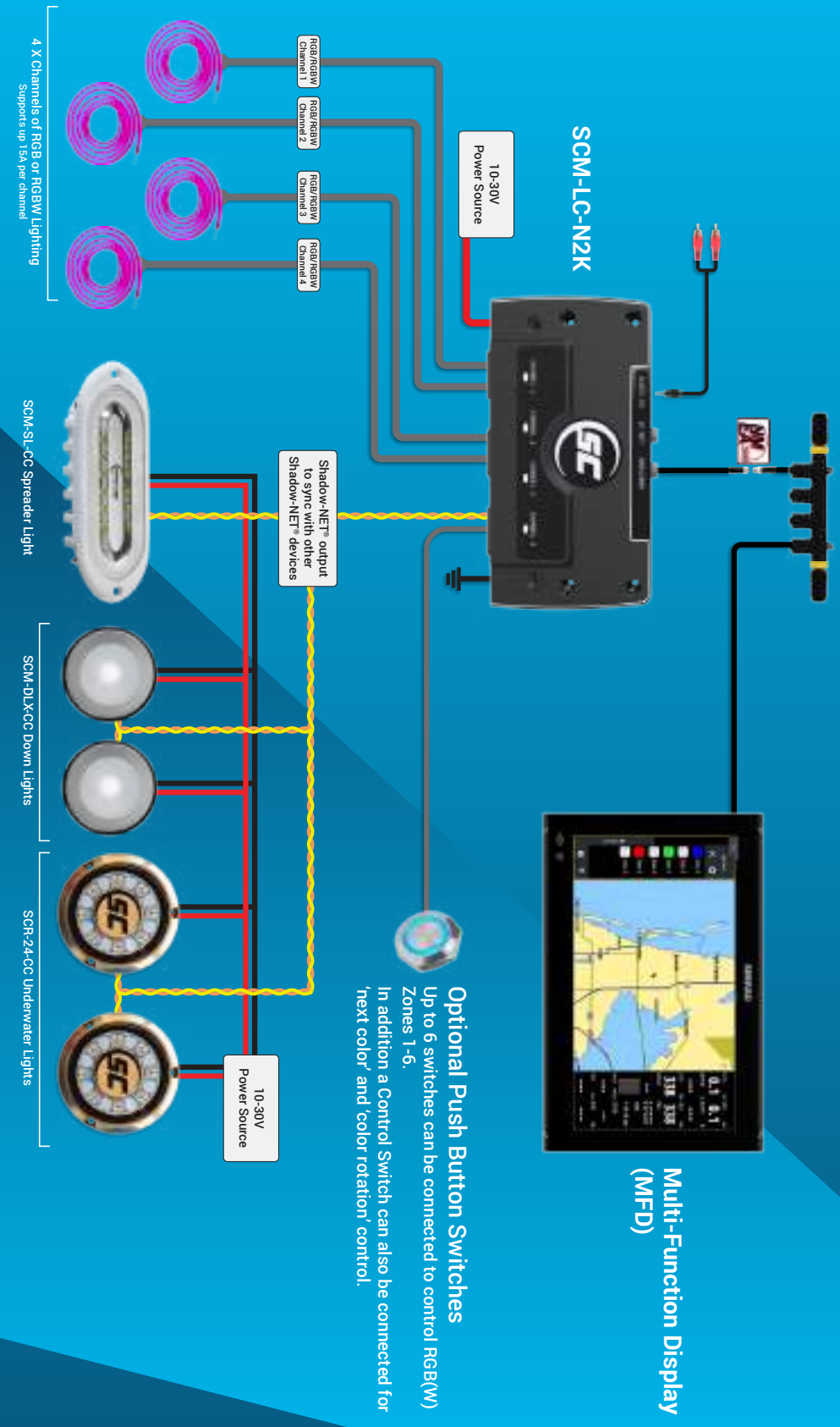
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CONTROL SYSTEMS

# LIGHT COMMANDER N2K - TYPICAL WIRING

NMEA 2000 MULTI-ZONE LIGHTING CONTROLLER



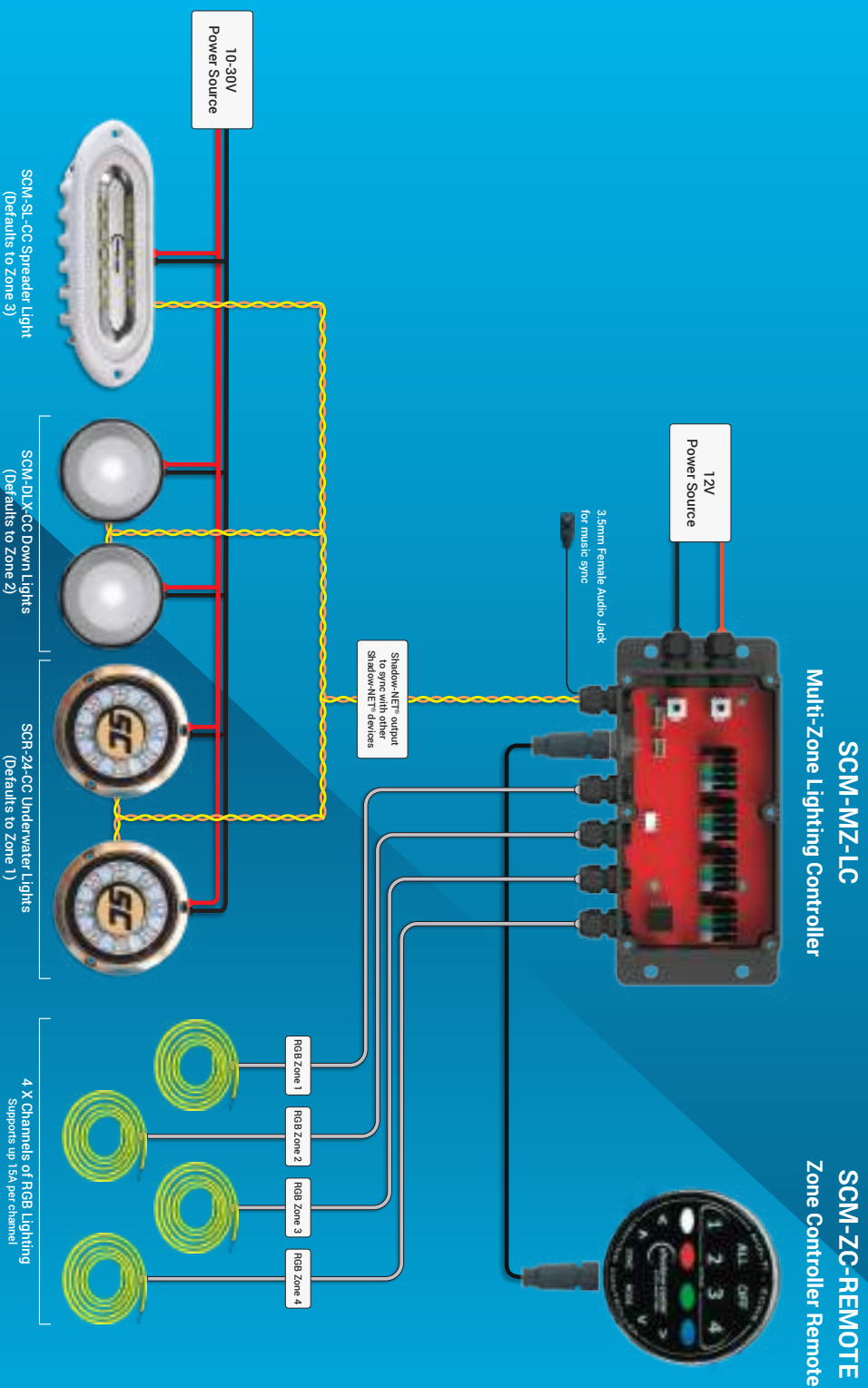
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CONTROL SYSTEMS

# ZC MULTI-ZONE LIGHTING CONTROL - TYPICAL WIRING

MULTI-ZONE LIGHTING CONTROL KIT



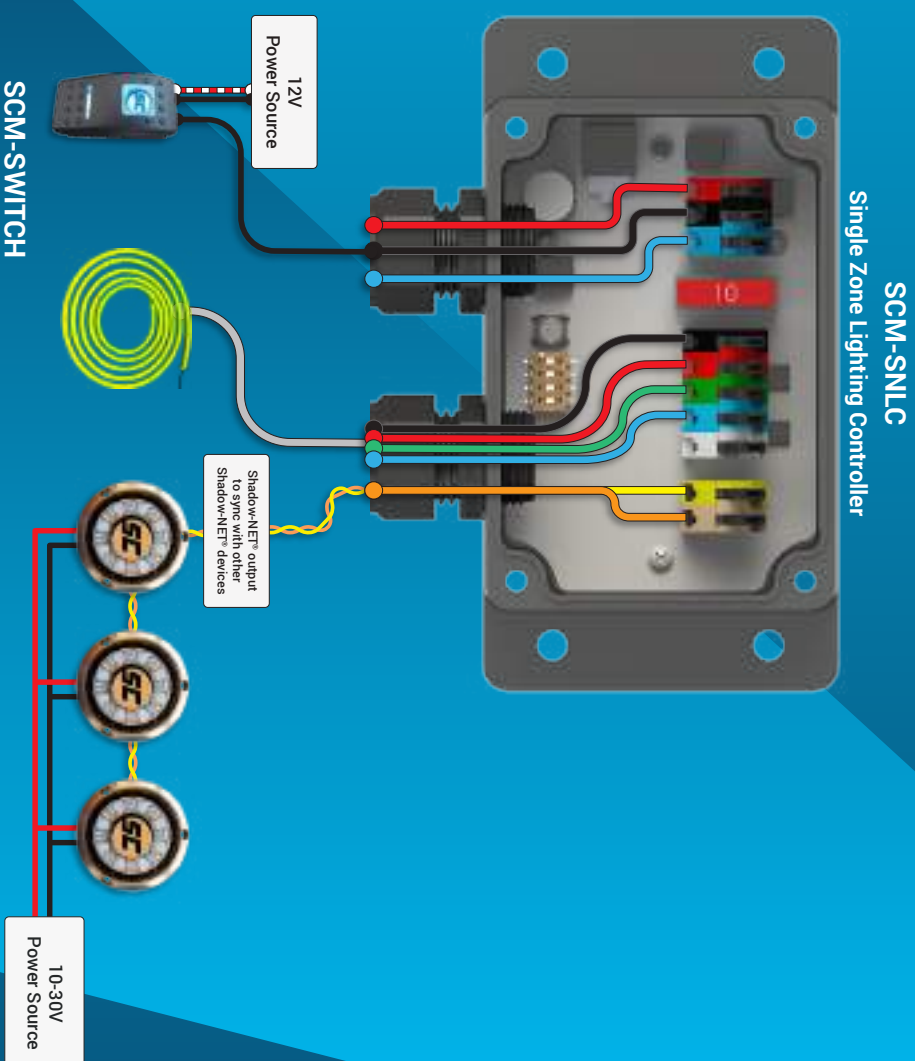
## CONTROL SYSTEMS

# SCM-SNLC & SWITCH - TYPICAL WIRING

## SINGLE ZONE LIGHTING CONTROL & SWITCH

Provides a simple form of control to combine RGB and Shadow-NET™ products

- Recommended for a simple, single zone RGB control system,
- Will also broadcast control of a single zone of Shadow-NET™ messages to coordinate underwater Lights
- Can also be used to add a zone of RGB lighting to a multi-zone system (listen mode)



CONTROL SYSTEMS

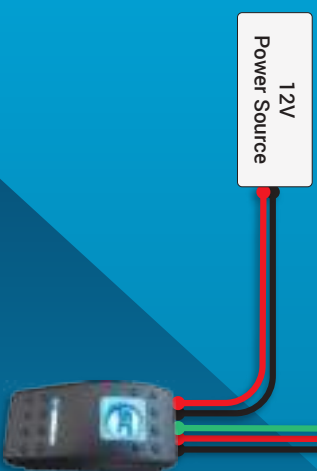
# SCM-SWITCH-0/0/MOMENTARY - TYPICAL WIRING

THREE POSITION MARINE LED LIGHTING SWITCH



SCR Series Underwater Light

Green wire is the momentary control wire to access lighting modes



SCM-SWITCH-0/0/MOMENTARY

# UNDERWATER LIGHTS

SCM SERIES



SC3 SERIES



SCR SERIES



- Ideal for trailer or lift kept boats
- Low profile design to allow many mounting locations

- 3" economical cost option

- Ideal for 'Live In The Water' boats

UNDERWATER LIGHTS

# SCM SERIES

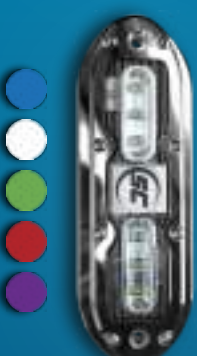
SCM-10-EXT-CC



SCM-10



SCM-6



SCM-4



## Key Features

- Ideal for trailer or lift kept boats
- Low profile design to allow many mounting locations
- Proprietary clear-gel-filled design
- Tough, Polycarbonate lens
- Corrosion resistant passivated Stainless Steel 316 housing
- Up to 3,750 lumens (SCM-10-EXT-CC)
- IP68 fully submersible waterproof design
- Transient surge and reverse polarity protection
- Thermal throttling technology



UNDERWATER LIGHTS

# SC3 SERIES



## Key Features

- Economical cost option
- Thru-bolt and surface mount version
- Passive RGB design
- 3" Diameter
- 3A current draw (white)
- Glass lens
- 3000 lumens



UNDERWATER LIGHTS

# SCR SERIES



SCR-24



SCR-16



## Key Features

- Ideal for 'Live In The Water' boats
- Proprietary clear-gel-filled design
- Scratch resistant, tempered glass lens
- Bronze housing
- 4" Diameter
- Up to 7,500 lumens (SCR-24)
- IP68 fully submersible waterproof design
- Transient surge and reverse polarity protection
- Thermal throttling technology



# ABOVE WATER LIGHTS

COURTESY LIGHTS



DOWN LIGHTS



SPREADER LIGHTS



LIGHTING STRIPS



LARGE ROUND ACCENT LIGHT



SMALL ROUND ACCENT LIGHT





# UNDERWATER LIGHT POWER ACCESSORIES

## SCM-PD4CH

4 Position Power Distribution Module



- Power distribution only
- Compact remote power control box
- Recommended when installing two or more underwater lights
- Individual digital overcurrent protection for each channel
- IP67 Deutsch connections

## SCM-PWR6

6 channel digital Switch Module

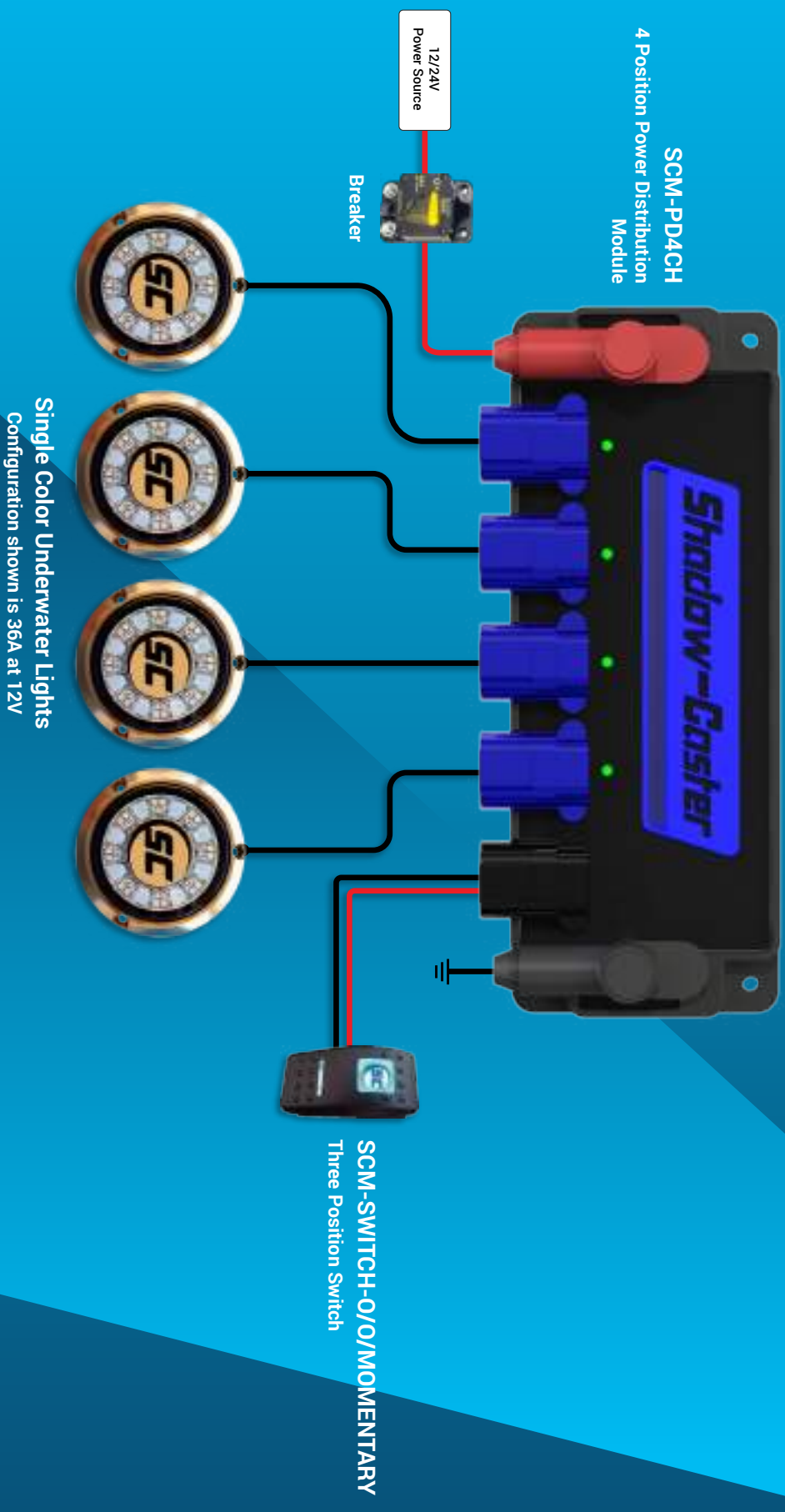


- 6 independent digital switches
- Control 3rd party lighting
- Digital over current protection
- Manual switch override
- Full integration with Shadow-NET™ interface

UNDERWATER LIGHT POWER ACCESSORIES

# SCM-PD4CH - TYPICAL WIRING

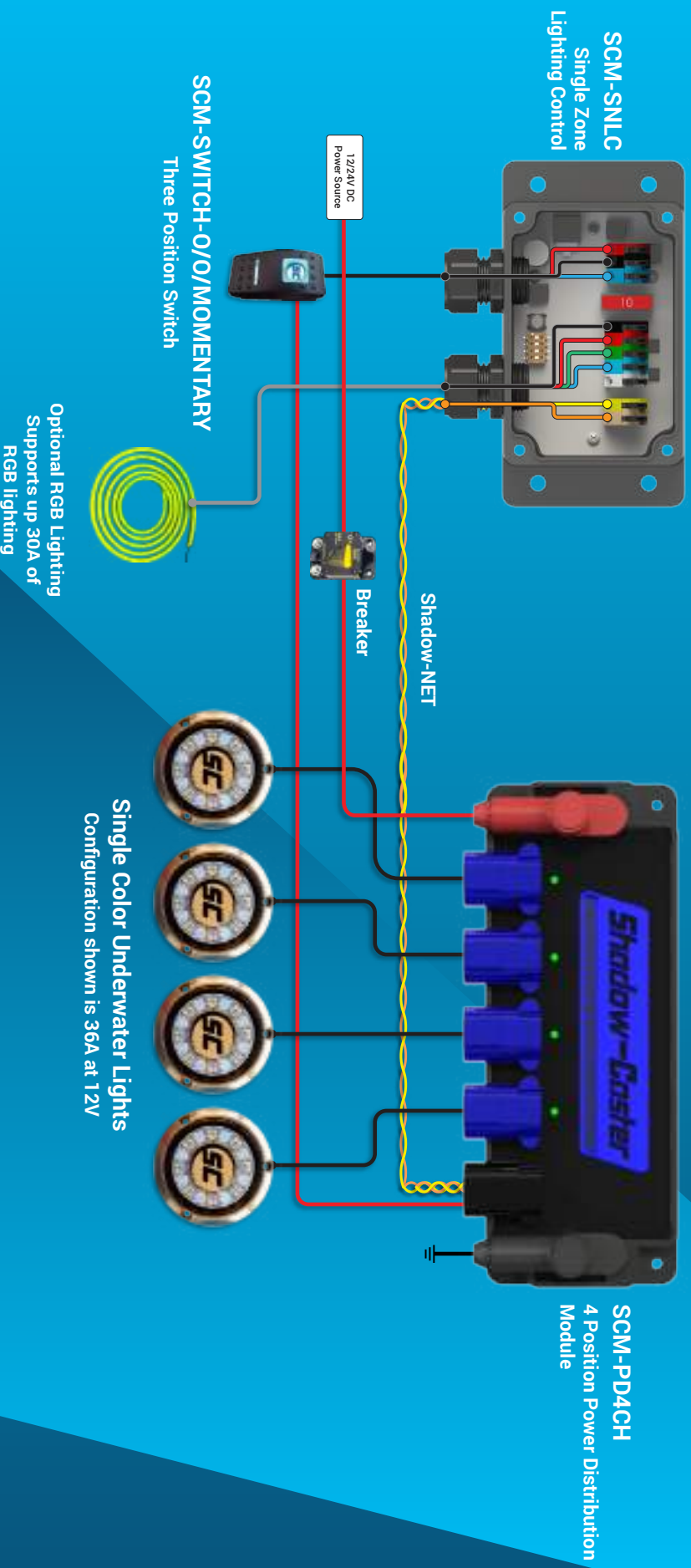
## 4 POSITION POWER DISTRIBUTION MODULE



UNDERWATER LIGHT POWER ACCESSORIES

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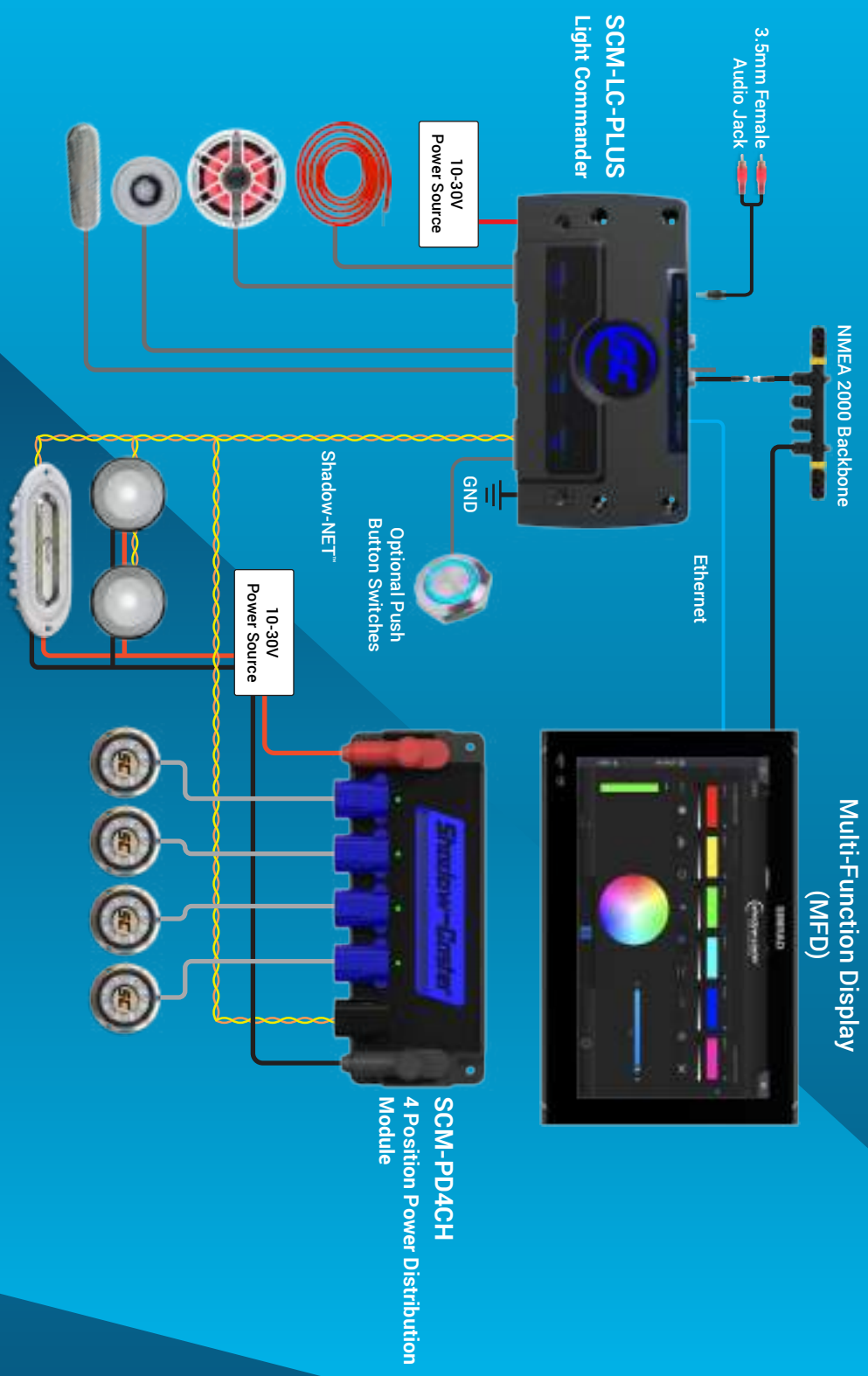
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UNDERWATER LIGHT POWER ACCESSORIES

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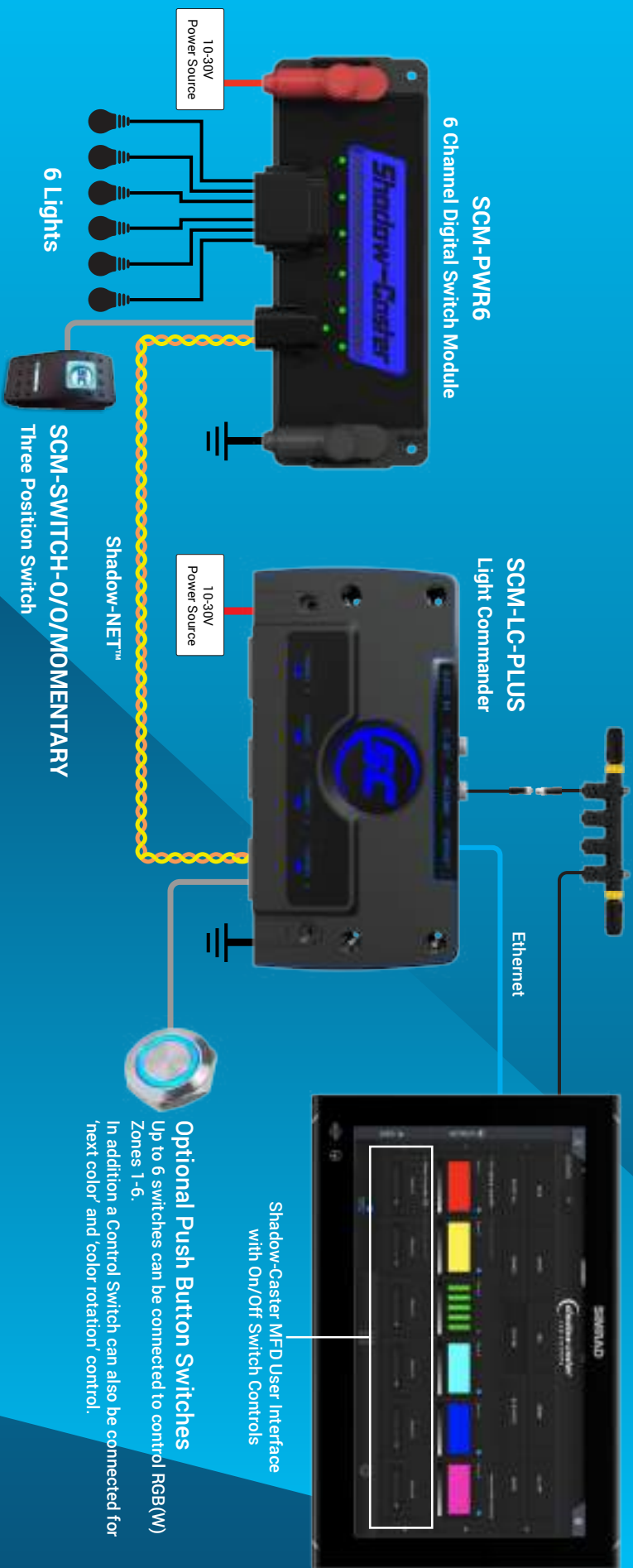
## 4 POSITION POWER DISTRIBUTION MODULE



## UNDERWATER LIGHT POWER ACCESSORIES

# SCM-PWR6 - TYPICAL WIRING

## 6 CHANNEL DIGITAL SWITCH MODULE



# SHADOW-CASTER™ MARINE LIGHTING

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