# RigSwitch

RigSwitch is a remote controlled power switching solution suitable for any size venue, utilising a broad portfolio of power management technologies.

RigSwitch can be delivered in 12 or 24 channel cabinet configurations with RCD or RCBO options with a choice of user control interfaces. With individual relays rated for up to 32A operation RigSwitch can cater for even the most power hungry user.

RigSwitch is ideal for switching power for today's modern entertainment lighting systems, including moving lights, LEDs, amplifiers, specials and video equipment.

Please read this manual before use, especially the Warnings & Safety section.

E&OE. Zero 88 reserves the right to make changes to the equipment and specification described in this manual without prior notice.

# Introduction

## Thank you

Thank you for choosing RigSwitch by Zero 88 to fulfil your lighting power needs. We sincerely hope that your new unit will bring you years of trouble free service. We make great efforts to build in reliability and serviceability at every stage of our development and production processes and include a three-year limited warranty - giving you peace of mind for your investment.

Our extensive dealer network can also provide you with technical service and sales support in your local language no matter where you are in the world. If you have any questions, comments or problems our contact details can be found at [zero88.com/support](https://zero88.com/support)
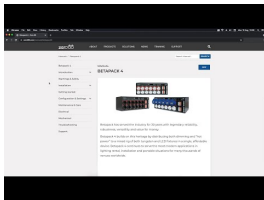
Once again, thank you for choosing Zero 88.

## This manual

This online manual describes the operation of RigSwitch remote controlled power switching cabinets.



https://youtu.be/gvNuwCChcrg
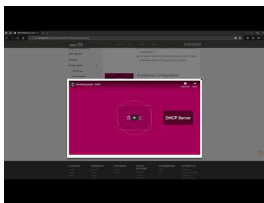
For an overview of the Zero 88 Online Manuals, take a look at this video.



https://youtu.be/Turfy1Ar_Kg

For detailed information on each function, the manual has been divided into chapters - one for each major area, which can be navigated using the menu on the left-hand side. You can also search the manual using the search bar top right.



https://youtu.be/7BZsxnBjcno
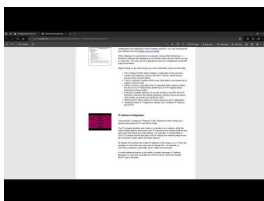
Each section or whole chapters can be exported to PDF by tapping "PDF", found just below the search bar. The whole manual can be exported as a PDF, by tapping "PDF" at the top page of the manual.

Zero 88 online manuals are updated regularly to ensure you have all the relevant information and useful tips. [Check out the Revisions section to see what has been added](#). If you see something that doesn't look right, or have suggestions, please send us an email to [support@zero88.com](mailto:support@zero88.com).

# Revisions

Jan 2021 - Manual created - ES

May 2021 - Standard Variants - ES

# Warnings & Safety

- Do not remove the covers without first completely disconnecting RigSwitch from the mains supply.
- This product must be earthed.
- This equipment is designed for professional stage lighting control and is unsuitable for any other purpose. It should be used by, or under the supervision of, an appropriately qualified or trained person.

# Installation

The unit should be installed in a dry ventilated location, where ambient temperature and humidity are within the operating range of the unit.
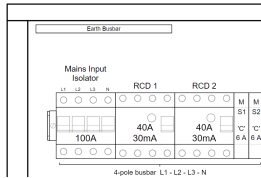
RigSwitch cabinets are provided with four fixing holes for wall mounting. The mounting holes can be accessed by undoing the screws on the front cover and removing it

Wall drilling positions are shown in the diagram below.

- RigSwitch 12 cabinets have a height of 450mm (max 18kg)
- RigSwitch 24 cabinets have a height of 600mm (max 20kg)
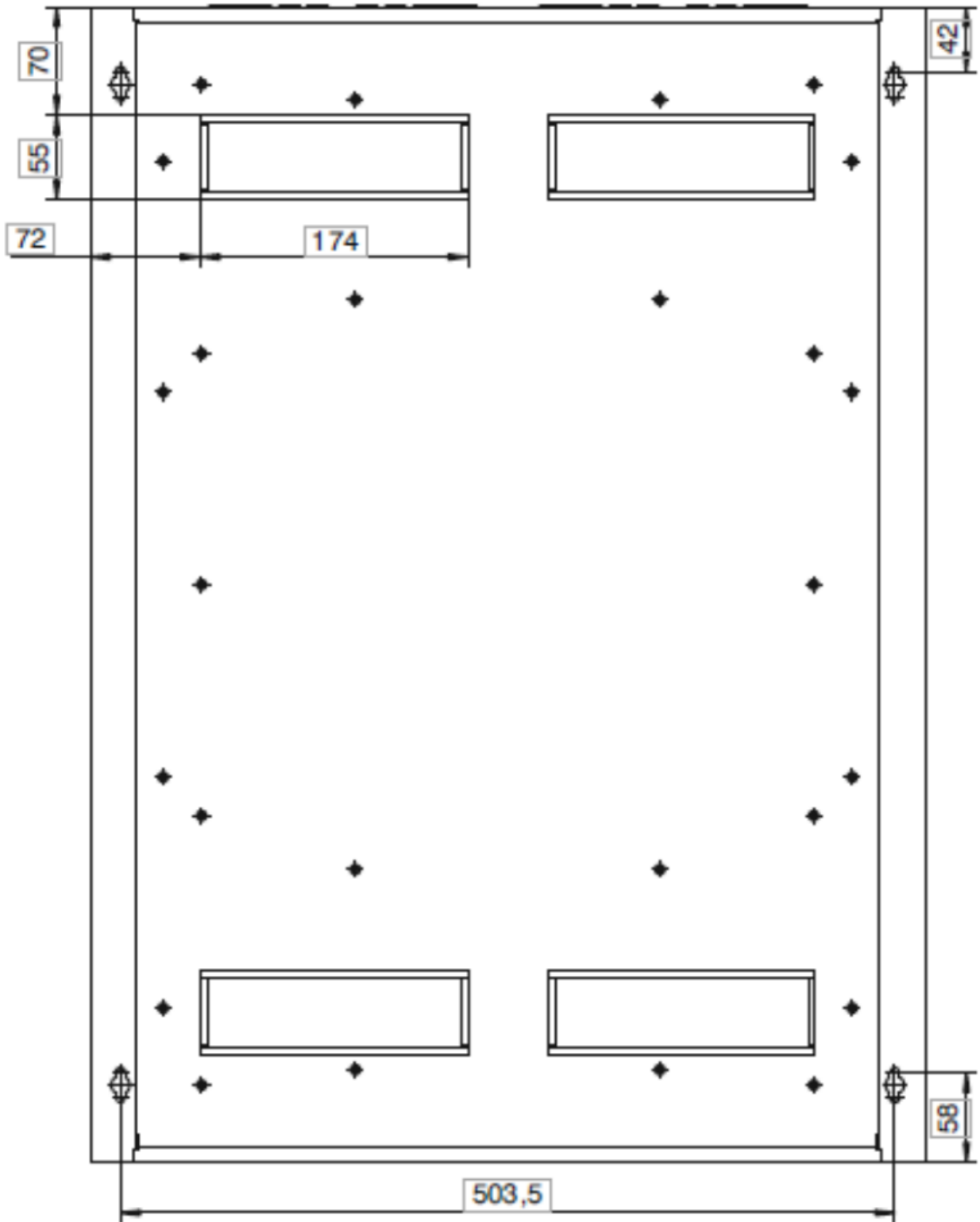
## Connecting the mains

To connect the mains to RigSwitch cabinets, bring in a suitable 3 phase supply at 100A per phase maximum, to the main isolator top left of the cabinet, and a secure mains earth to the Earth busbar at the top of the cabinet. RigSwitch will accept a maximum 35mm$^2$ input supply cable.
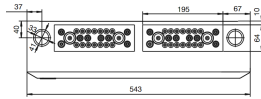


## Top Cable Entries

2x Flange:

- 14x ø11mm
- 8x ø15mm
- 2x ø28mm

Relief stamp:

- 2x M32/M40

# Connecting channel outputs
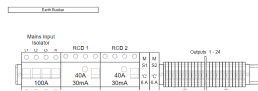


## Terminals

Double stacked load output terminals for live and neutral per channel are situated top right of the cabinet, and will accept a maximum 6mm$^2$ cable. Earths will share the main bus bar top left of the cabinet.

Each block of 12 channels is rated at a maximum of 192A load.
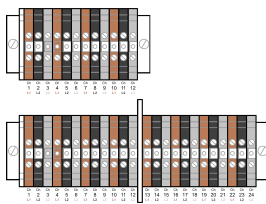


## Channel Phases

Phases are interlaced as follows:

- Phase 1 (brown*): Channels 1, 4, 7, 10, 13, 16, 19, 22
- Phase 2 (black*): Channels 2, 5, 8, 11, 14, 17, 20, 23
- Phase 3 (grey*): Channels 3, 6, 9, 12, 15, 18, 21, 24

*IEC Standard wiring colour codes
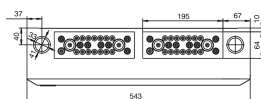
**Top Cable Entries**

2x Flange:

- 14x ø11mm
- 8x ø15mm
- 2x ø28mm

Relief stamp:

- 2x M32/M40

# Control

RigSwitch cabinets feature an SCMR1232 Relay Controller, which can be controlled with DMX, DALI or iCANnet. RigSwitch 12 include one of these, and RigSwitch 24 include two.

## Connecting and configuring the control methods...

- DMX Control
- DALI Control
- iCANnet Control



**Typical Connection Diagram**

## DMX Control

RigSwitch cabinets feature an SCMR1232 Relay Controller, which can be controlled with DMX. RigSwitch 12 include one of these, and RigSwitch 24 include two. To control with DMX, bring in a suitable DMX feed into the SCMR1232 RS485 terminals. If this SCMR1232 is the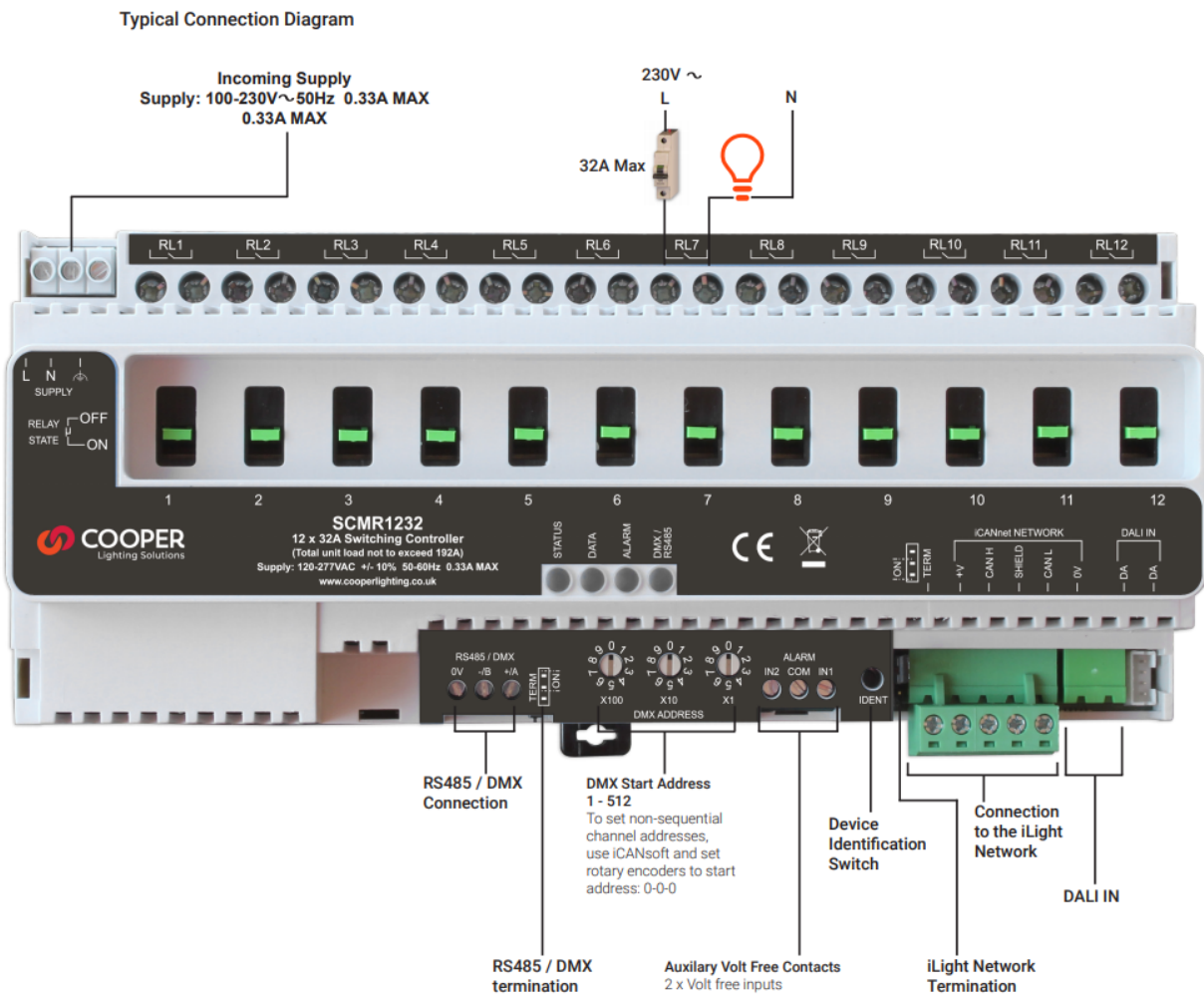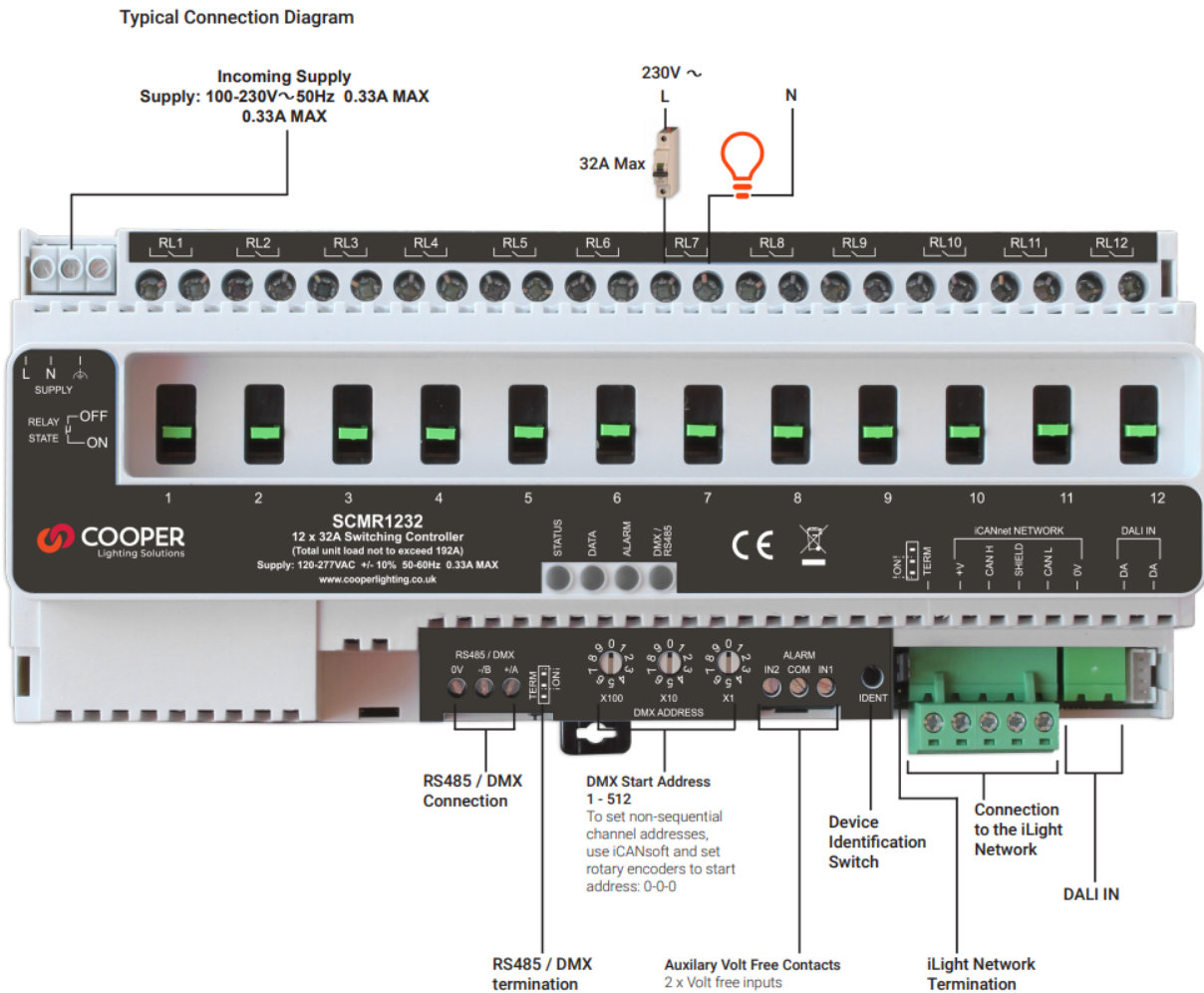 last device on the DMX line, terminate the DMX line with the termination switch. If the SCMR1232 is not the end of the DMX line, whether that be the DMX line continuing to another device, or to the other SCMR1232 in RigSwitch 24, continue the DMX the feed out of these terminals, and do not terminate.



The DMX start address of the SCMR1232 can be configured with the rotary encoders using a terminal screwdriver. The SCMR1232 is a 12 channel device, with the first relay channel being controlled by the start address, and each relay consuming a single sequential channel.

SCMR1232 will be defaulted to DMX address 1. The second SCMR1232 in RigSwitch 24 for channels 13-24, will be pre-addressed to DMX address 13.

If the SCMR1232 is connected to an iCANnet network with iCANsoft present, individual relay channels can be configured to individual DMX channels, rather than sequential blocks. To allow this functionality, configure the rotary DMX address encoders to 0-0-0.

When DMX is present, the DMX/RS485 indicator LED will flash green.


# DALI Control

RigSwitch cabinets feature an SCMR1232 relay controller, which can be controlled with DALI. RigSwitch 12 include one of these, and RigSwitch 24 include two. To control with DALI, bring in a suitable DALI line, and connect to the DALI DA terminals.

DALI may be daisy chained in a bus topology, or branches spurred off into SCMR1232. Therefore in RigSwitch 24, the DALI line can be daisy chained through both SCMR1232s and onwards, or it may be daisy chained in and out of the first SCMR1232, and a spur used to connect the second SCMR1232.

An SCMR1232 is a 12 address DALI end device.



Typical Connection Diagram
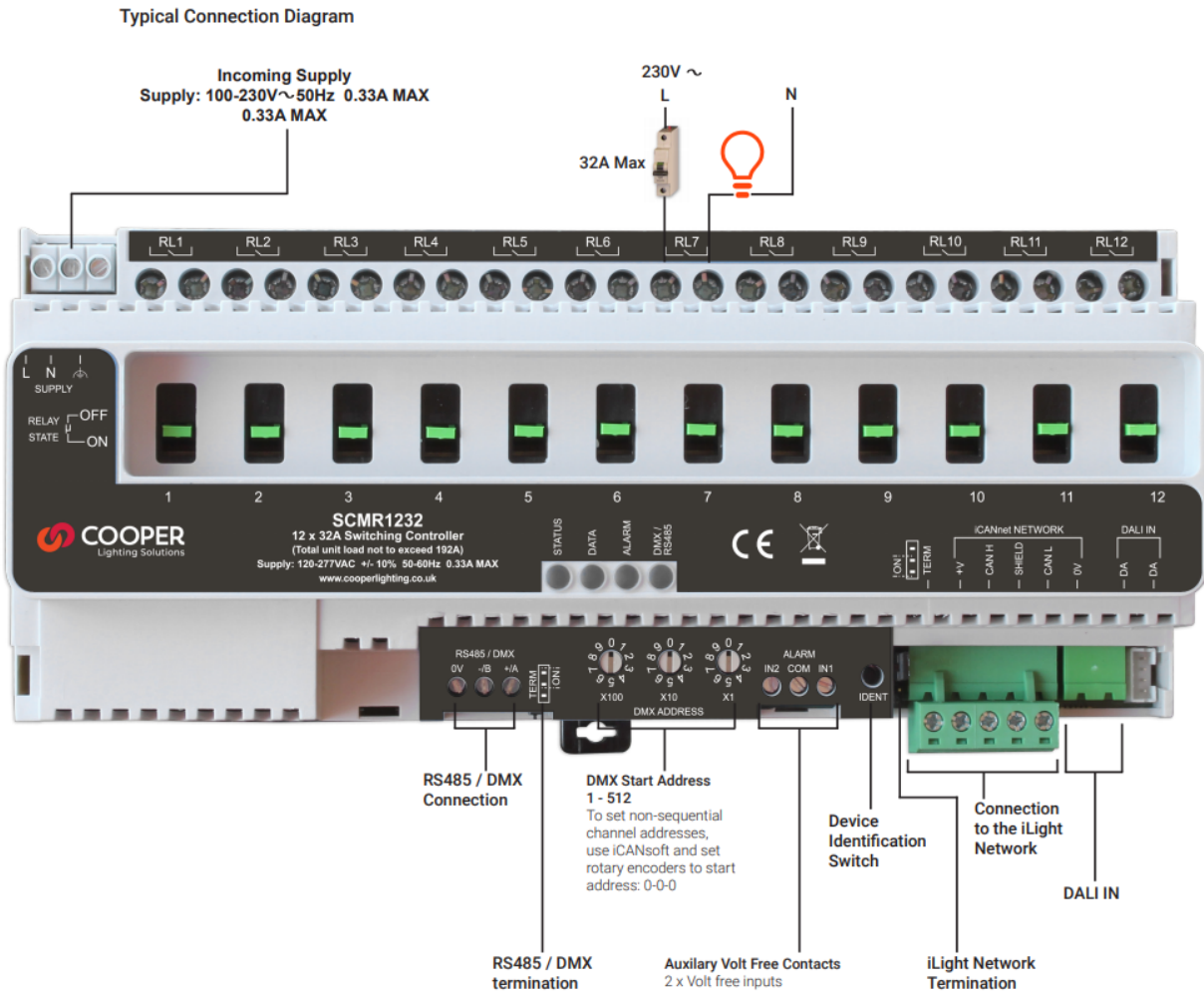
# iCANnet Control

RigSwitch cabinets feature an SCMR1232 relay controller, which can be controlled over iCANnet. RigSwitch 12 include one of these, and RigSwitch 24 include two. Controlling RigSwitch using iCANnet, allows for RigSwitch to be integrated into the wider iLight architectural control network, allowing for channels to be controlled with close contact switches, or dedicated button panels.

| Function | iCANnet Cable Colours |
|----------|----------------------|
| 0V | Black |
| CAN L | Blue |
| Shield | Silver |
| CAN H | White |
| +VDC | Red |

To control over iCANnet, connect to the iCANnet network using the SCMR1232 iCANnet Network terminals. If this SCMR1232 is the last device on the iCANnet, terminate the iCANnet with the termination switch. If the SCMR1232 is not the end of the iCANnet, whether that be the iCANnet continuing to another device, or to the other SCMR1232 in RigSwitch 24, continue the iCANnet feed out of these terminals, and do not terminate.

Maximum segment distance: 500m (1640 ft)

Devices per segment: 100 (without bridge or repeater)

Consult iLight for information on alternative cable types. Connecting a mains potential cable to the iCAN Network terminals will damage the unit and other devices connected, and invalidate warranty.



Typical Connection Diagram
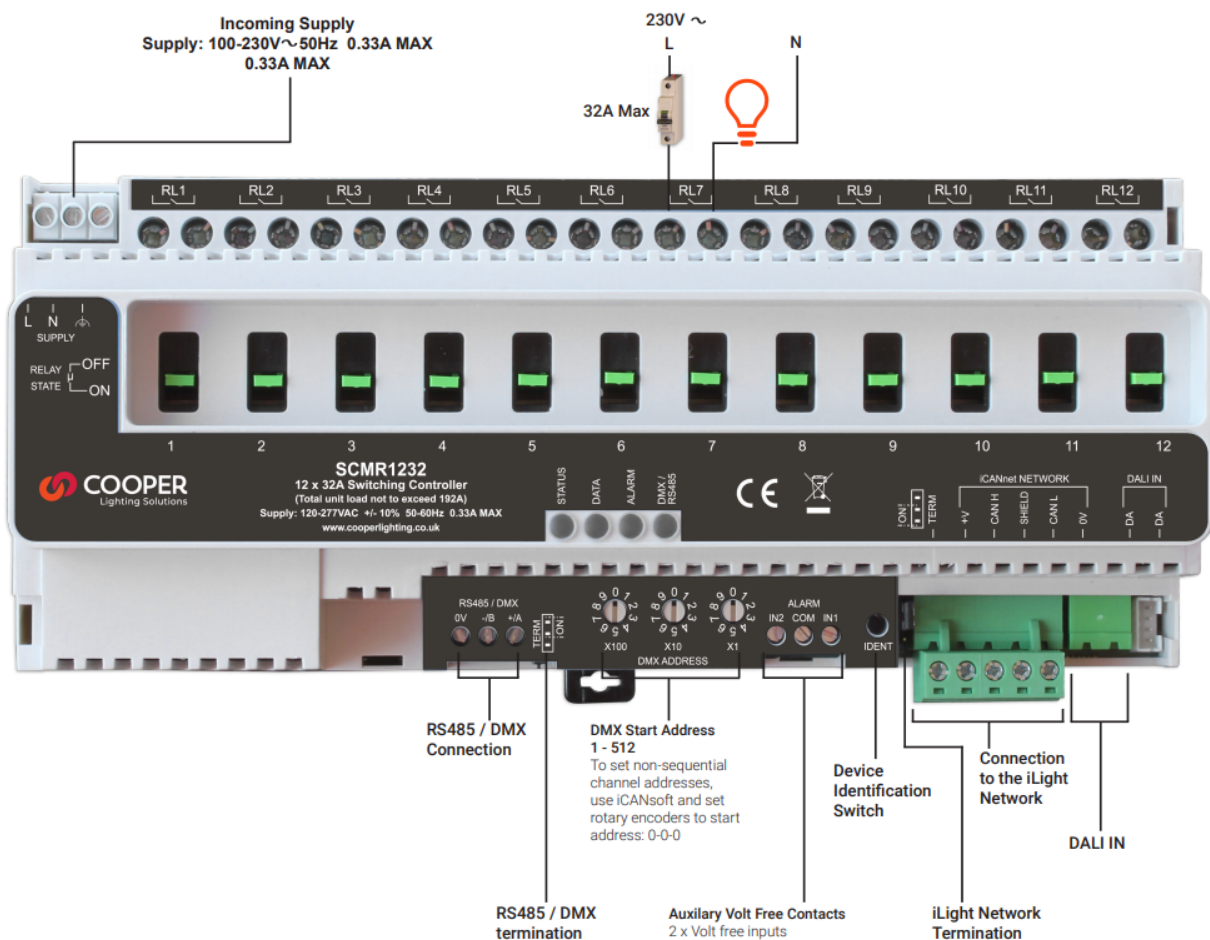
For programming and configuration of SCMR1232 on iCANnet, Device Editor V2.11.1 is required. (Packaged with iCANsoft V3.1.7 or later).

# Mixing Control Methods

It is possible to use a mixture of DMX and iCANnet control inputs to control RigSwitch.

The three control options are CAN only, DMX only and DMX if Present, which can be configured per channel. These are described as follows:

- When in CAN only mode, DMX input is ignored.
- When in DMX only mode, CAN is ignored.
- When in DMX If Present mode, DMX can take control of a channel, if the DMX level for that channel is taken up to match the current level currently controlled by CAN. DMX then takes control of the channel. DMX will remain in control of that channel until the DMX signal is lost.

If an Alarm input, or Alarm CAN message is received, this will override the DMX input.

If controlling with DALI and the SCMR1232 in RigSwitch is configured as a DALI end device, iCANnet and DMX control will be ignored.

# Alarm Input

RigSwitch cabinets include an SCMR1232 relay controller, which feature close-contact terminals. RigSwitch 12 include one SCMR1232, and RigSwitch 24 include two.

The pair of close contact terminals, marked IN1 and IN2, share a common terminal. They can be configured as an Alarm input. When configured as an alarm, by default when an alarm input is received all channels will be switched on. This can however be configured.

**Typical Connection Diagram**



Incoming Supply
Supply: 100-230V ∿ 50Hz  0.33A MAX
0.33A MAX

230V ∿
L     N

32A Max

RL1  RL2  RL3  RL4  RL5  RL6  RL7  RL8  RL9  RL10  RL11  RL12

L  N  ⏚
SUPPLY

RELAY ⌐OFF
STATE └ON

1    2    3    4    5    6    7    8    9    10   11   12

COOPER
Lighting Solutions

SCMR1232
12 x 32A Switching Controller
(Total unit load not to exceed 192A)
Supply: 120-277VAC +/- 10%  50-60Hz  0.33A MAX
www.cooperlighting.co.uk

STATUS  DATA  ALARM  DMX / RS485

CE

iCANnet NETWORK
+V  CAN H  SHIELD  CAN L  0V

DALI IN
DA  DA

!ON!  TERM

RS485 / DMX
0V  -/B  +/A

TERM
!ON!

X100  X10  X1
DMX ADDRESS

ALARM
IN2  COM  IN1

IDENT

RS485 / DMX
Connection

DMX Start Address
1 - 512
To set non-sequential
channel addresses,
use iCANsoft and set
rotary encoders to start
address: 0-0-0

Device
Identification
Switch

Connection
to the iLight
Network

DALI IN

RS485 / DMX
termination

Auxilary Volt Free Contacts
2 x Volt free inputs

iLight Network
Termination

# Mechanical

### RigSwitch 12

- Height: 450mm
- Width: 543mm
- Depth: 140mm
- Weight: 18kg (max)
- IP Rating: IP30 (indoor use only)
- Operating Temperature: 0 - 40°C
- Storage Temperature: -10 - 50°C
- Operating Relative Humidity (max) 80% non condensing

### RigSwitch 24

- Height: 600mm
- Width: 543mm
- Depth: 140mm
- Weight: 20kg (max)
- IP Rating: IP30 (indoor use only)
- Operating Temperature: 0 - 40°C
- Storage Temperature: -10 - 50°C
- Operating Relative Humidity (max) 80% non condensing

Always observe the operating environment information. If this environment is exceeded, it is likely that damage will occur to RigSwitch.

# Support

Support requests can be submitted via email to [support@zero88.com](mailto:support@zero88.com) or through our support forum at [zero88.com/forum](https://zero88.com/forum)

For more urgent requests, please contact Zero 88 by telephone on +44 (0)1633 838088 – 24 hour answer service available.