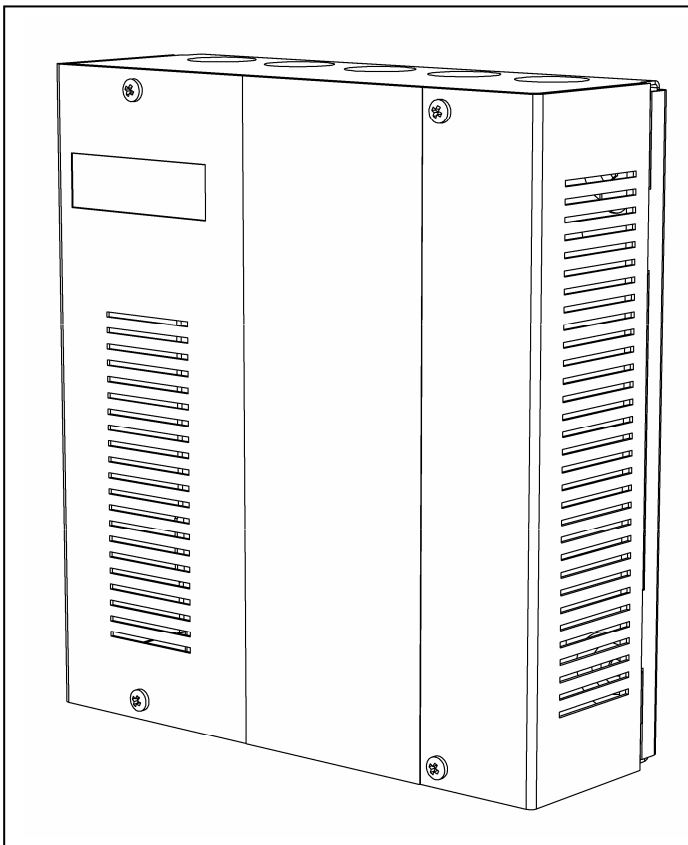


SCD24

Instruction Manual





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4. iCAN™ Network
6. Service Switches and LED's
7. RS485, RJ12 and Alarm Input
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 - i. Technical Specification


Read this document prior to installation

Warning

**WARNING HAZARDOUS VOLTAGES**
DISCONNECT FROM SUPPLY BEFORE REMOVING COVERS
NO USER SERVICEABLE PARTS INSIDE
SERVICE BY QUALIFIED PERSONNEL ONLY

WARNING

- To reduce the risk of fire or electric shock, DO NOT expose this device to rain or moisture.
- DO NOT energise unless the front cover is in place.
- This device MUST be earthed.
- Installation, programming and maintenance MUST be carried out by qualified personnel.
- ILight Ltd. cannot accept responsibility for repairs or modifications that are not competently executed and in accordance with service or upgrade information.



The source controllers comply with all relevant proposed and current National, European and International safety and technical standards for Electrical and Electronic dimming systems. These include compliance with the Electro Magnetic Compliance (EMC) directives EN50081-1 and EN50081-2, Low Voltage Directive EN60950 and RFI Suppression standard EN50014 ensuring full compliance with CE.



INTELLIGENT CONTROLS

Installation Instructions

Mounting the Unit

The unit is provided with four 6mm diameter fixing holes for wall mounting.

The mounting holes can be accessed by undoing the four screws on the front cover and removing it.

The unit should be installed in a dry ventilated location, where ambient temperature and humidity are within the operating temperature of the unit.

The unit has ventilation slots on its sides to allow convection cooling and under no circumstances should these be blocked.

Recommended minimum clearance around the unit is 100mm each side of the unit and 50mm above and below the unit if trunking with a depth greater than 50mm is used.

Connecting to the Mains

This unit requires a nominal 230V single phase supply (Live, Neutral and Earth) with 1A capability.

A separate isolator and secure mains earth are required.

All wiring should be completed in accordance with local wiring regulations.

The unit is supplied with a knockout for mains cable entry. An appropriate cable gland should be fitted to the knockout hole provided to protect the mains cable from damage.

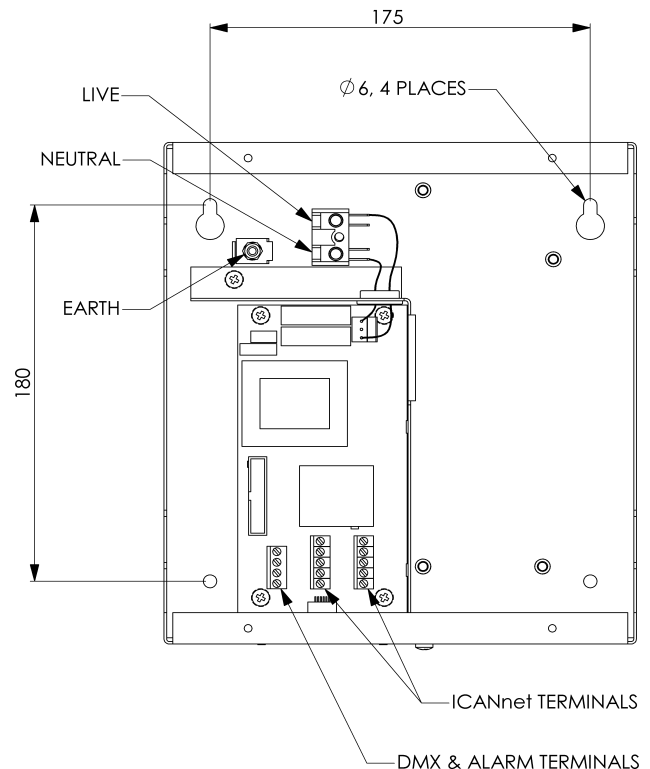
Ensure all mains connections are fully tightened and lock-washers used where supplied.

DMX Connections

The SCD24 has 24 channels of DMX that can be configured via ICANTools software.

Connections are made via the 4-way 2 part terminal block. Connections are:

RS485+
RS485-
0V



iCAN™ Network

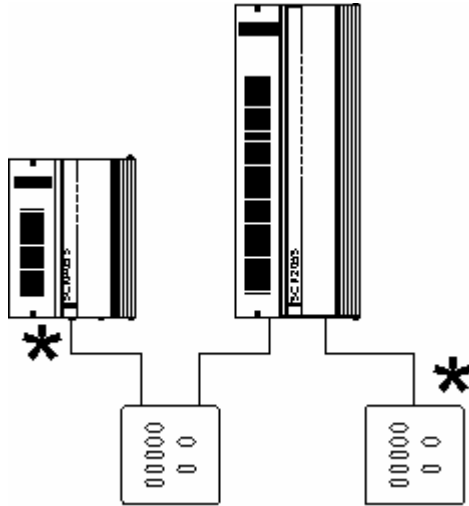
Two sets of terminals are provided for the connection of iCAN network cables. Both iCAN terminals on the board are connected in parallel.

The recommended cable to use for an iCAN network is: CAT5 FTP such as RS part numbers 196-331 for 305m or 298-0885 for 1000m.

The Control Board iCANnet terminals are labeled with the recommended colours of the pairs in CAT5 cable to use.

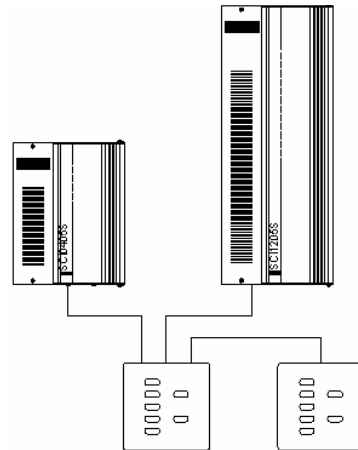
Orange/White pair	paralleled for +12V
Green/White pair	paralleled for OV
Blue/White pair	Blue for CAN-H
	White for CAN-L
Brown/White pair	paralleled for shield

The structure of an iCAN network is shown in the diagram below.



**Indicates where a termination resistor is required.*

All devices connected on the iCAN network must be wired in this manner. Spurs from the Network are not permitted and will result in communications problems. Devices on an iCAN network can be wired in any order



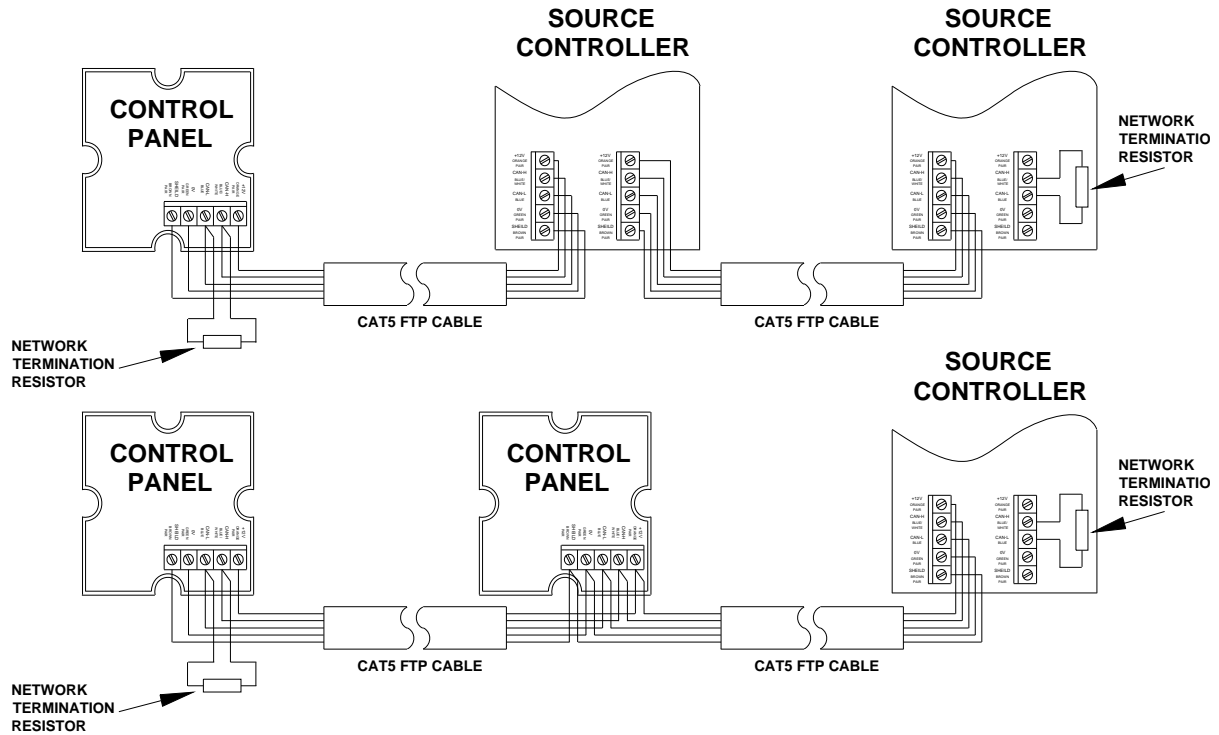
Incorrect method of wiring

At the two ends of an iCAN network, those indicated by a * in the diagram above, a Network Termination Resistor must be fitted. Network Termination Resistors should not be fitted anywhere else on the network other than at these points. A maximum of two Network Termination Resistors are required on a network, except where isolating bridge nodes are installed.

Every Source Controller is factory supplied with a termination resistor fitted to one of the 5 way iCANnet terminal blocks. The resistor is 120ohms 0.25watt. Remove this resistor from the terminal block when it is not required.

The resistor is fitted between the terminals labelled CAN H and CAN L – **do not connect the resistor between any other connections.**

iCAN™ Network



Commissioning

Please retain any job-specific drawings or schedules relating to load connections at the Source Controllers. The information is required by the commissioning engineer to assist in configuration of the equipment.

When first energised after installation all source controllers will default to all channels being at 100% output.

Source Controllers can be energised without network cables being terminated.

If iCANnet cables are terminated after Source Controllers have been energised, it should be noted that cables will be carrying low voltage signals and misconnection of these cables could result in damage to other devices on the network.

Service Switches and LEDs

These switches and LEDs are located at the base of the unit.

The two service switches on the source controllers are used for the following:

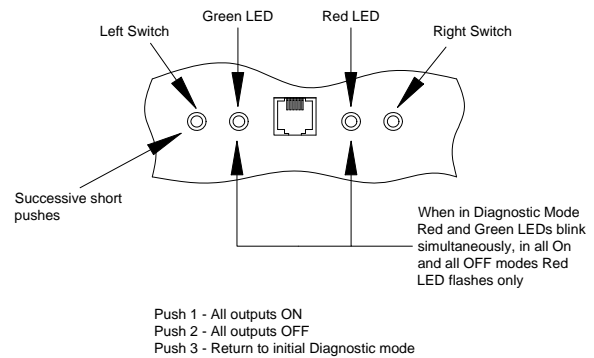
- Entering Diagnostic Mode,
- Putting the Source Controller in override mode
- Sending a message to identify the device on the network

The LEDs indicate the following:

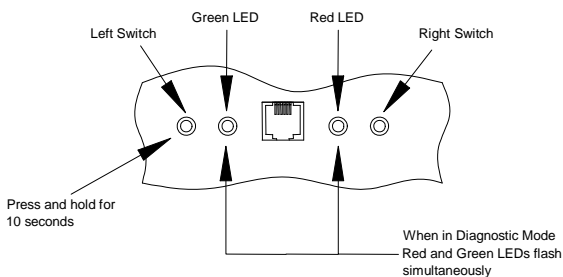
- Normal operation
- Message transmission and receipt
- Override status

iCANnet error status will occur when a Source Controller is not connected to an iCAN network for any reason. Once either connected to a network of one or more powered iCAN devices the error status will be removed. It is still possible to enter Diagnostic Mode if a source controller is in iCANnet error status.

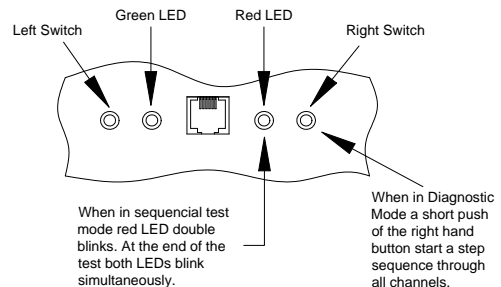
VERRIDE MODES



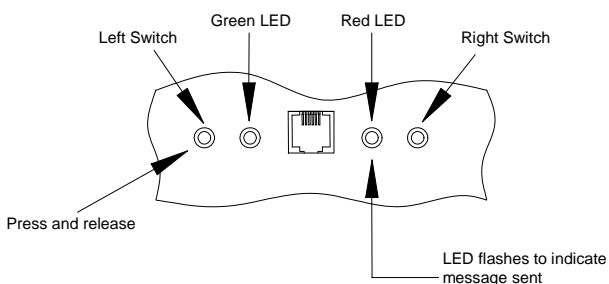
ENTERING DIAGNOSTIC MODE



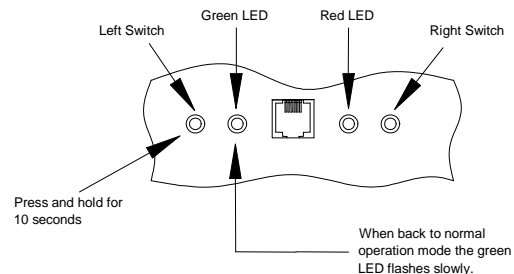
SEQUENTIAL TEST MODE



DEVICE IDENTIFICATION



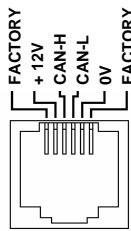
EXITING DIAGNOSTIC MODE



RJ12 and Alarm Input

RJ12 Connector

The Source Controller is fitted with an RJ12 socket to allow local connection of a handheld programmer or PC interface



No connection should be made to the factory pins of the connector.

Alarm Input

An alarm input, designed for connection to a fire alarm system, is available on the same 4 way terminal block as the DMX connections. The terminals to be used for an Alarm input are:

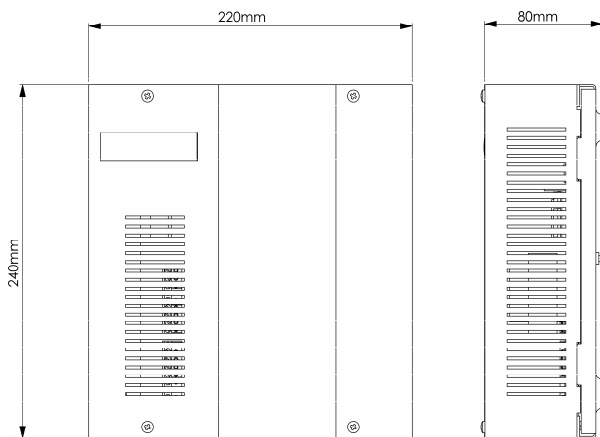
OV
AL

Any connection to this input **MUST** be volt free and have a cable length of less than 50 metres. Cabling for this input should be segregated from power wiring.

The default action that occurs when these terminals are linked is for every channel of the source controller to turn on to maximum output. It will then remain in this state, regardless of any other command received, until the link between the 0V and AL terminals is removed. Only when the alarm link is removed can levels be changed.

On an entire iCAN network only one fire alarm input is required.

Appendix 1: Technical Specification



SCD24 dimensions

Control Inputs:

Two sets of terminals for the iCANnet™ network – Suitable for CAT5 FTP

DMX Output:

24 channels

Electrical Data

Supply: 230V +/- 10% 50/60Hz 5A max

Protection: External protection required.
Internal electronics fuse only.

Terminal Sizes:

Incoming Supply	2 x 6mm ²
EARTH Connection	M5 Ring Tag
iCANnet™	5 x 1.5mm ²
DMX & Alarm:	4 x 1.5mm ²

Standards:

EMC:	EN 50081 –1:1992
Immunity:	EN 50082 –1:1997
LVD:	EN 60950 –1:1992

Memory:

Flash memory to be able to upgrade firmware
EEPROM for program and sequenced memory