



- *elitedali for Niagara AX*[®]

www.elitedali.com

elitedali Multidrop Connectivity Kit Datasheet

“Lighting is the most visible sign of how well you are running your business and your business’s attitude towards the environment. In an instant it says more than any words can.”

In the majority of commercial buildings **lighting accounts for up to 50% of the electricity** used. With an intelligent lighting control system light levels can be automatically regulated or adapted to suit natural light levels. Occupancy control provides for automated lights on, off and dimming when the room is either entered or vacated. This can **save as much as 60% of the energy** consumed by lighting in addition to prolonged lamp life and better asset management seamlessly tied into client business applications.





In order to create such benefits requires the installation of intelligent lighting products. The fastest global growing intelligent lighting technology is DALI[®] (Digital Addressable Lighting Interface). DALI is an Open standard created by the worlds leading lamp product manufacturers.

elitedali Multidrop for Niagara AX[®] offers all the functionality necessary to allow (from within the Web environment of Tridium’s Niagara AX Framework) commissioning, control, management and monitoring of DALI lighting networks just as for BMS and other systems.

Tridium’s Niagara AX Framework[®] is a global convergent Open technology platform that seamlessly enables the commissioning, control, management and visualisation of disparate networked control devices in a web environment.

A JACE™ (Java Application Control Engine) is Tridium’s hardware component for the Niagara AX Framework. This is an embedded controller that allows a System Integrator to connect many different types of automation and control technologies inside one hardware platform.

CNS’s elitedali Multidrop Connectivity Kit is part of CNS’s Niagara AX[®] DALI[®] lighting commissioning, control, maintenance and management products and solutions which comprises:-

-  **Licensed elitedali Multidrop Connectivity Kit for Niagara AX[®]**, (for details read on)
-  **Compatible DALI[®] control hardware**, (Cost option, for details see separate datasheet)
-  **DALI Power Supply**, (Cost option, for details see separate data sheet)
-  **Niagara AX Special Software Lighting Control Components and Applications** for upgrade or additional functionality, (optional extras, for details see separate datasheet)




For more details upon the entire product suite please visit www.elitedali.com.

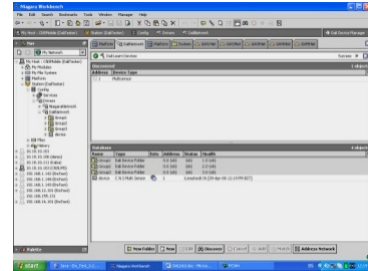
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elitedali Multidrop Connectivity Kit


The elitedali Multidrop Connectivity kit connects DALI[®] networks directly to a suitable Niagara AX[™] platform such as a **JACE[™]** via its RS-485 serial port and comprises:-

CNS's Licensed elitedali Software*

-  DALI[®] Serial driver and Commissioning Tools
-  DALI Open standard device Objects
-  elitedali software Control Components, Standard and Professional Options available



CNS's elitedali Multidrop Interface Module (eDIM[™])








-  Niagara AX[™] platform Serial interface to Open Standard DALI[®] devices



*All **elitedali** software conforms to the current published DALI[®] Open standard

Features

Each licensed **elitedali Multidrop Connectivity Kit** enables -

-  The connection of a single DALI channel, circuit or network of up to 64 DALI[®] devices
-  Seamless connectivity between Niagara AX and DALI
-  Full Commissioning, Control, Maintenance and Management of DALI networks and devices that conform to the Open DALI standard from within Niagara AX.
-  Up to **4 elitedali Multidrop Connectivity Kits** can be connected per single RS-485 JACE serial port*
-  Up to **20 DALI networks** can be physically connected to a single JACE*
-  Potential maximum of **1,280** open standard DALI[®] devices manageable by a single JACE*
-  Expandable across multiple JACES for large DALI lighting networks

*NB: Subject to computing resources available on the Niagara AX[™] platform

WARNING: elitedali must only be installed and commissioned by suitably qualified Engineers and Technicians for more information on how to become a Certified elitedali Partner at www.elitedali.com.



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Benefits

Lower cost of installation	- Less hardware, better utilisation
Simpler network architecture	- Less cables, less network protocol, less to go wrong
Easier & faster to commission	- Familiar environment, increasing automation, only one commissioning tool, easier to support and maintain
Future Proof	- Full exploitation of Open standards on a platform that is understood and supported globally
Total Integration	- Seamless integration with all other systems connected to Niagara Framework offering better user experience, lower energy costs and manages assets more effectively when used in conjunction with CNS's elitedali MultiSensors*

*To extract the maximum benefit from an intelligent lighting management system such as DALI offers requires MultiSensors to be included for each network. These are devices which detect presence, absence and measure light levels. This information is utilised within CNS's elitedali lighting software control components to create the sophisticated and automated lighting control strategies that will adjust lamp output to maximise energy saving, lamp life and user experience. MultiSensors can be connected to CNS's elitedali solution via Niagara Direct I/O or an Open control network standard such as EIB/KNX® or LonWorks®.

At this time there is no published standard for such control DALI devices so there is no interoperability between different DALI manufacturers MultiSensor and Switch products. The DALI and NEMA Standards Organisation are working to address this. To solve this issue, CNS has worked with world's largest DALI® device manufacturer, Tridonic AG and their DALI MSensor range, to enable CNS to supply devices that connect directly into a DALI network and can be commissioned and managed from within Niagara AX as part of our elitedali for Niagara AX® solution. CNS is in discussion with other DALI control product manufacturers to increase the range and choice of such DALI products for System Integrators.

For data on CNS's elitedali MultiSensor [click here](#), to see separate datasheet.

Description

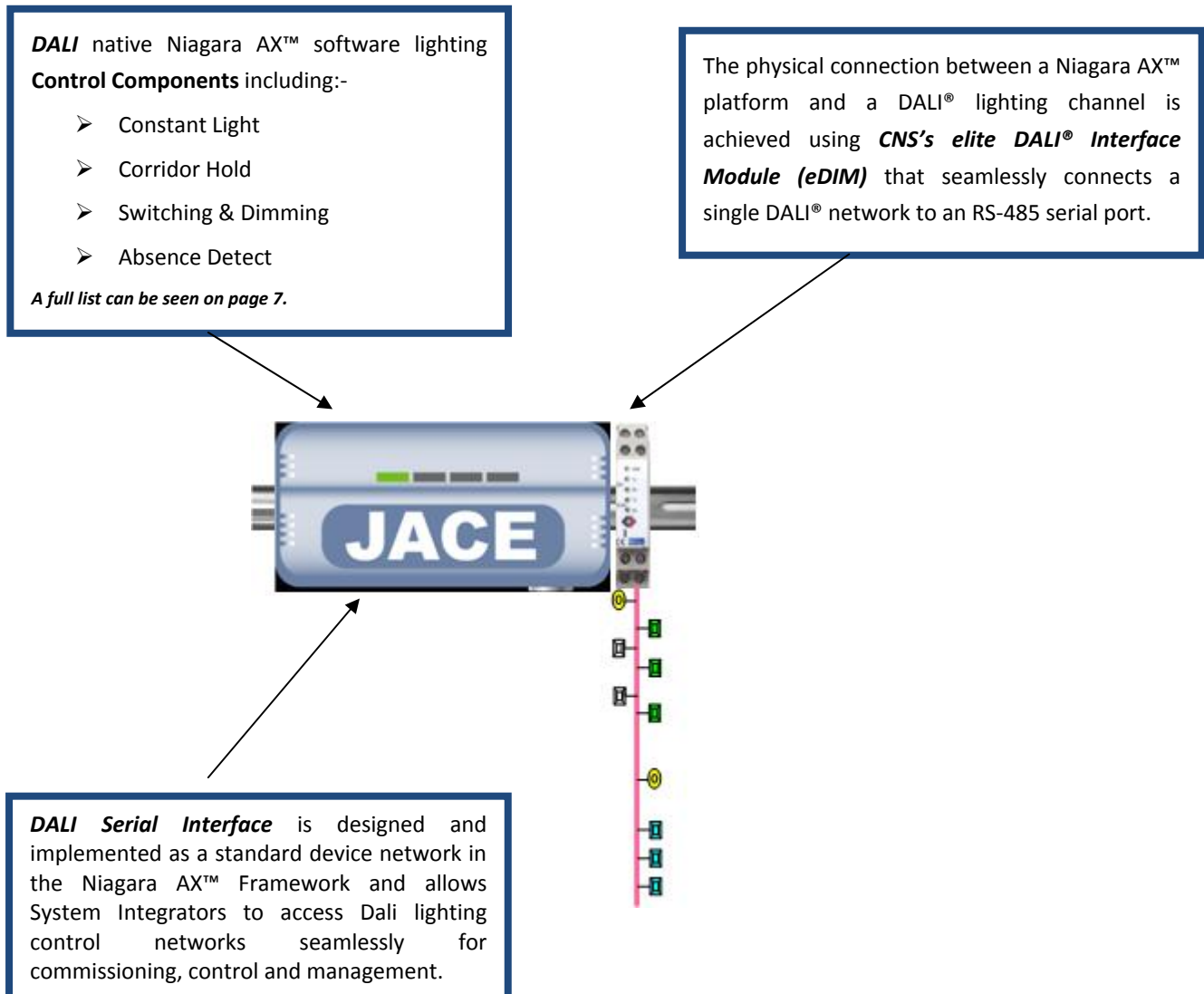
The elitedali Multidrop Connectivity Kit provides all the software and hardware you require to commission, control, maintain and manage a single open standard's DALI lighting network from within Niagara AX.

Furthermore it may be added to existing installed Niagara AX platforms which are integrating other systems (HVAC, Access, Security, Energy etc) in order to maximise the utilisation and return on investment of each installed Niagara AX platform.

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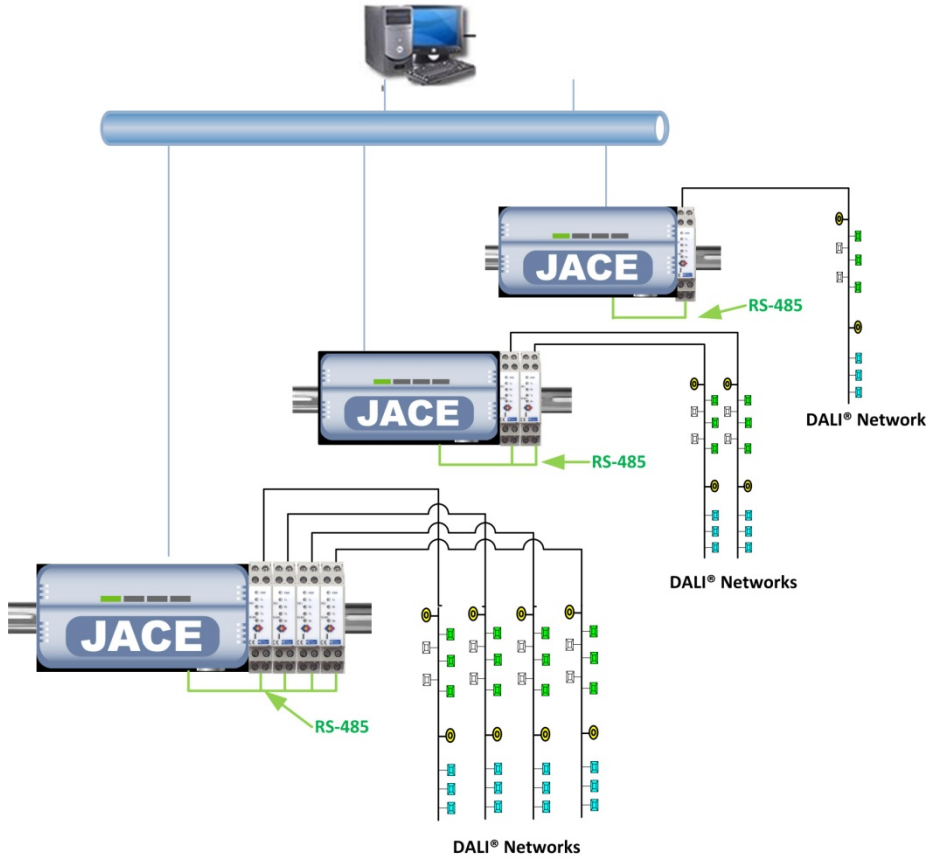
elitedali Multidrop Connectivity Kit comprises:-

All the basic components required to commission, control, maintain and manage a single 64 device Open standard DALI network connected to a Niagara AX platform or BMS controller.

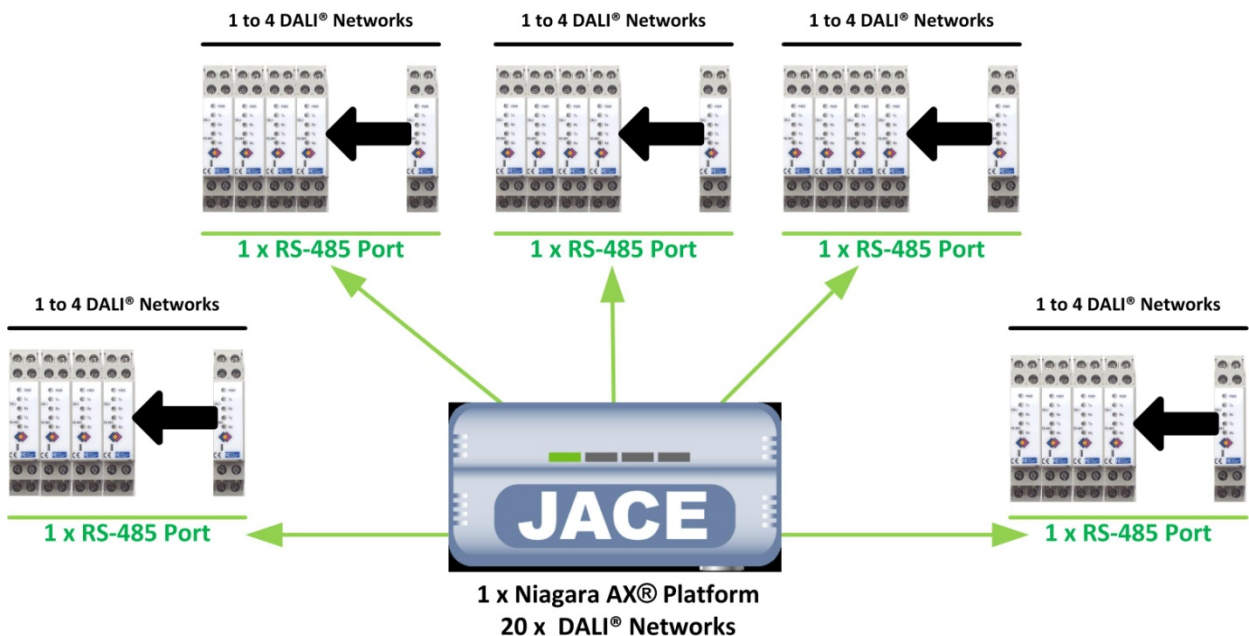


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JACE + 1 x RS-485 Port and *elitedali*[™] Multidrop DALI[®] networks

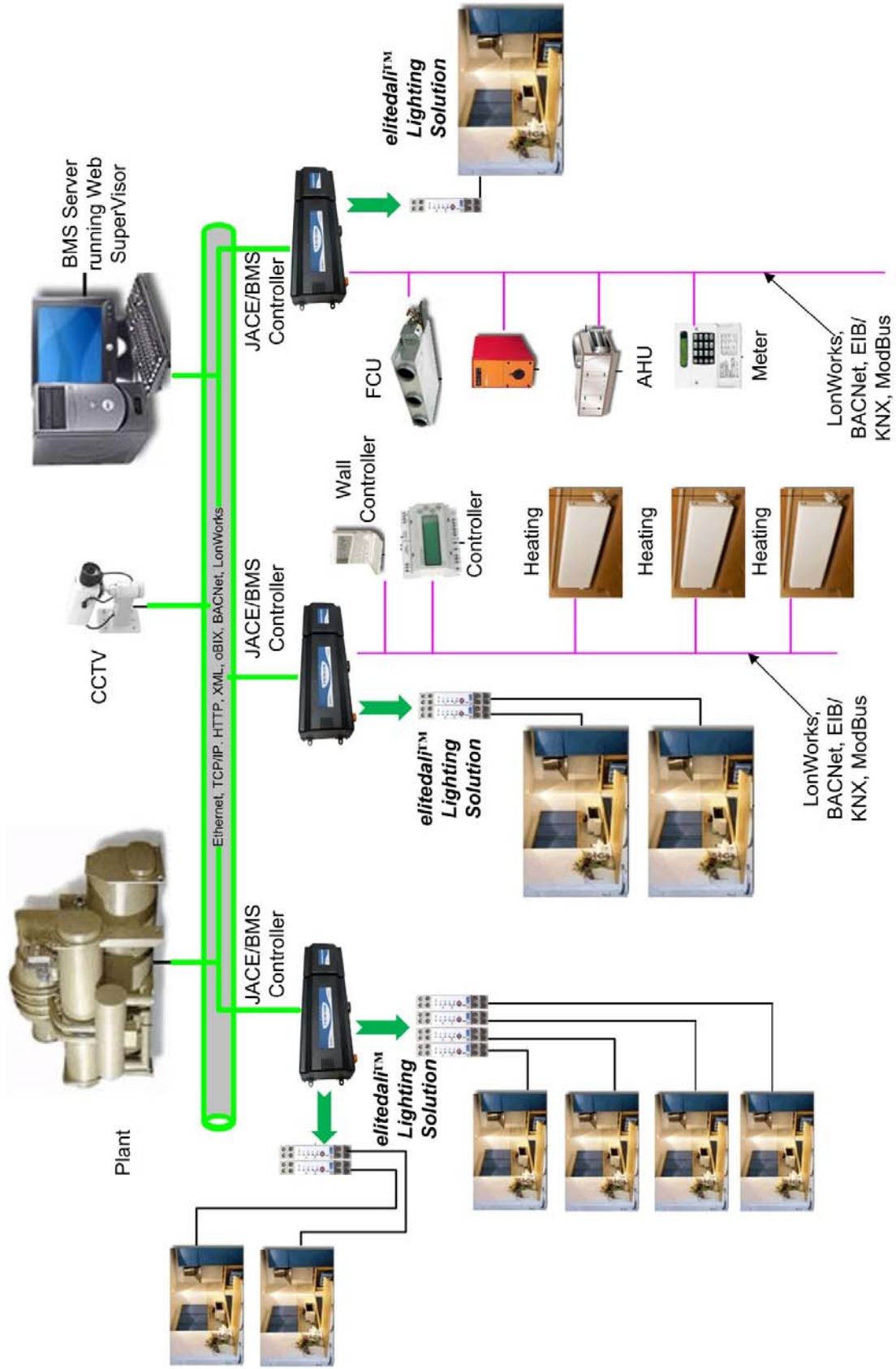


JACE + 5 x RS-485 Port and *elitedali*[™] Multidrop DALI[®] networks



elitedali[™] Multidrop Connectivity Kit Datasheet

elitedali[™] deployed within a typical Niagara AX BMS





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elitedali™ DALI® Driver Software













The Dali Driver Software is a native driver, developed using the Driver Development Framework provided as part of the Niagara AX Framework. System Integrators already familiar with the standard device driver interface will feel at ease with the **elitedali** User Interface. Standard functions such as creating new devices, adding devices, device discovery and matching devices are all included. Further enhanced functionality has been included specifically for the management of DALI Networks. This includes addressing and configuring DALI devices according to the DALI standard. This Dali Driver will support a full 64 Open Standard Dali devices on a single Dali network. All product and user information is fully documented and supplied with the licensed software, as part of the Connectivity Kit

elitedali™ Lighting Control Component Software

Included with **elitedali Connectivity Kit** is the capability to create simple and complex control strategies for a DALI lighting system. A library of software control components are included allowing a System Integrator quickly, simply and reliably to create control strategies that reduce energy usage and create a modern comfortable environment. There are two Options to choose as part of your Connectivity Kit as follows:

Standard - Option

This option offers a basic package of software lighting control components to create a simple yet sophisticated lighting control solution for a single DALI network.

Control Component Name	Number of Licensed Components
 Constant Light Controller with Enable	x 8
 Constant Light Controller with Override	x 8
 Corridor Controller with Boolean Inputs	x 2
 Corridor Controller with Enumerated Inputs	x 2
 Dimmer Controller	x 1
 Absence Detect Controller with Dimming	x 2
 Meeting Room Constant Light Controller	x 1
 4 Channel Scene Selector	x 1
 Absence Detect Controller with Switching	x 1
 Switch Input Decay Timer Controller	x 1
 Switch Input Dimming Controller	x 1
 Trigger Step Dimmer	x 64















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Professional - Option

This option, in practice, offers almost “limitless” combinations of control and management.

Professional - more than doubles the granularity of control available in the **Standard** option for optimum utilisation of lamps and natural light for even more energy savings and improved user experience.

Control Component Name	Number of Licensed Components
 Constant Light Controller with Enable	x 16
 Constant Light Controller with Override	x 16
 Corridor Controller with Boolean Inputs	x 8
 Corridor Controller with Enumerated Inputs	x 8
 Dimmer Controller	x 8
 Absence Detect Controller with Dimming	x 16
 Meeting Room Constant Light Controller	x 8
 4 Channel Scene Selector	x 8
 Absence Detect Controller with Switching	x 16
 Switch Input Decay Timer Controller	x 8
 Switch Input Dimming Controller	x 8
 Trigger Step Dimmer	x 64

With these components the System Integrator can build complex highly granular control strategies quickly and simply enabling Estate Managers, Building Supervisors, Facilities Managers, Clients and Users to manage their own environment both locally and remotely.

To Upgrade from **Standard** to **Professional** you simply advise CNS, pay the difference in cost and CNS will re-issue licences accordingly. You can also purchase additional licenses to further add more software control components separately where more complex lighting systems are to be controlled. Contact CNS for details.

All detailed product and user information is included with each licensed **elitedali Multidrop Connectivity Kit**.

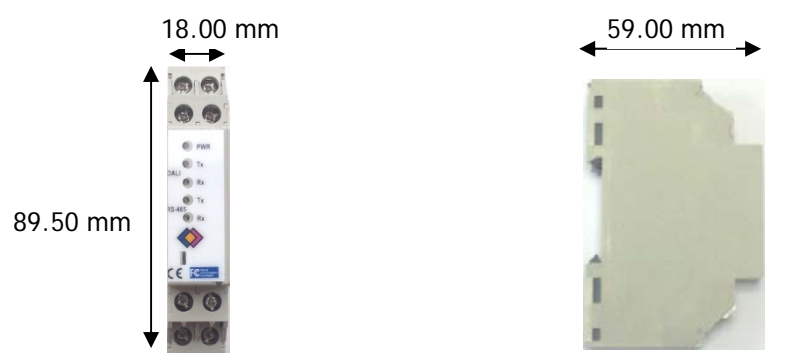
CNS and its **Certified elitedali Partners (CeP)** are continuously developing new software control components, which will be added to the core library above. If you need something specific please contact CNS to discuss our developing a component for your application. CNS will keep all active **Certified elitedali Partners** up to date with latest release information, please make sure you and any colleagues have registered on our website, who need to be kept up to date.

elitedali Multidrop Connectivity Kit Hardware Specifications

elitedali DALI[®] Interface Module (eDIM)

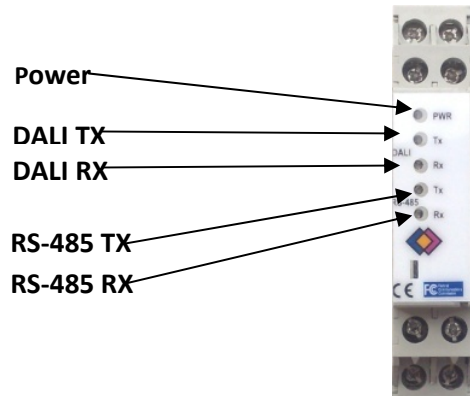
Technical Data –Electrical	
Supply Voltage	24V AC/ DC, ±10%
Isolation	3KV
Power consumption	40mA maximum @ 24VDC
DALI network must be operating via an independent suitable DALI power supply source	9.5 V to 22V DC
Serial Connection	Standard 3- Wire RS-485
Serial Network Termination	Available Option on Request
Technical Data –Environmental	
Operating temperature range	0..+50 °C
Storage temperature range	-20...+85 °C
Relative humidity	5...90 % rel. annual average (non-condensing) (pollution degree1)
Environmental protection	*IP 54 (housing)
Technical Data –Mechanical	
Mounting	DIN rail, type NS35/17.5 (35mm x 17.5mm)
Serial network connection	3 x Polarity dependent Screw Terminals 0.2...2.5 mm ² (stranded), 0.2...4.0 mm ² (solid)
DALI Network connection	2 x Polarity independent screw terminals, 0.2...2.5 mm ² (stranded), 0.2...4.0 mm ² (solid)
24V AC/DC module power connection	2 x Polarity independent screw terminals, 0.2...2.5 mm ² (stranded), 0.2...4.0 mm ² (solid)
Conformity & Standards	
CE	
FCC	

NB: If the Front label is pierced in order to operate Terminator Switch this IP rating will be compromised unless a sticker is re- fitted over the Terminator Switch hole.

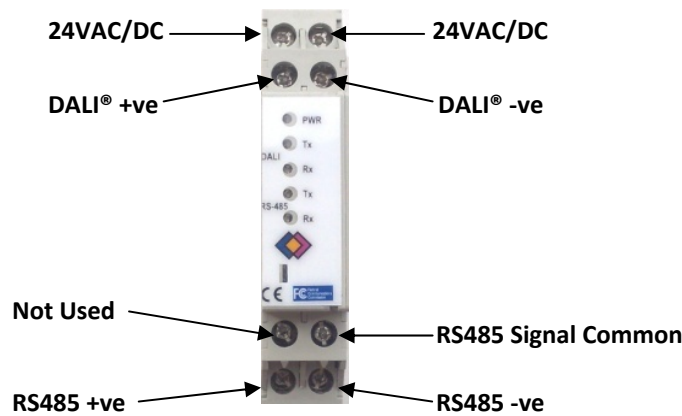
eDIM Dimensions	
 <p>18.00 mm</p> <p>89.50 mm</p> <p>59.00 mm</p>	

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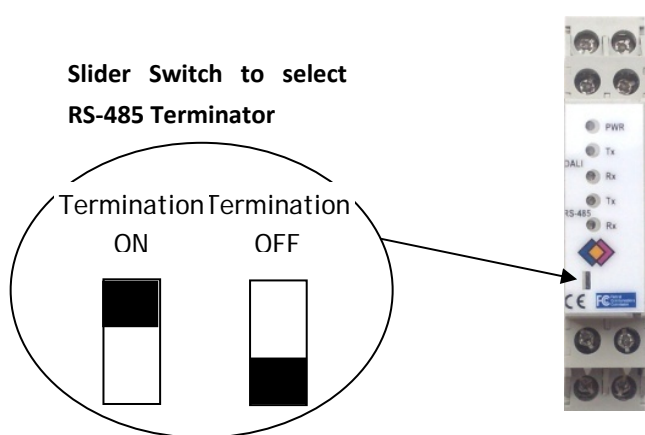
eDIM Front Panel LED Indicators



eDIM Connections



eDIM Terminator Switch



IMPORTANT –

This feature is only available for elitedali connectivity kits ordered with the Termination capability enabled. In most cases no termination is required please refer to elitedali User documentation.

NB: Warning it is recommended that a non conducting instrument only is used to operate the RS-485 network Terminator slider switch!



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Order Details

Description: elitedali Multidrop Connectivity Kit

Part No:

-  Standard option = elitedali-DCK/M
-  Professional option = elitedali-DCK/M/Pro
-  Post Pro Licensed software Control Component Upgrade per Pack = elitedali.LUP/M

CNS can also supply *elite DALI® Solutions* and DALI® compatible Presence, Light level and Power Supply products as follows –

-  elitedali MultiSensor – Presence and light level, multiple form factors, [click here](#)
-  elitedali MultiSensor2 – Presence and light level, single form factor, [click here](#)
-  elitedali Power Supply – 250mA, 22VDC output, [click here](#)
-  elitedali 3 Channel Relay – Control of non intelligent loads, [click here](#)

Contact Details

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