CP Electronics | ENCELIUM |

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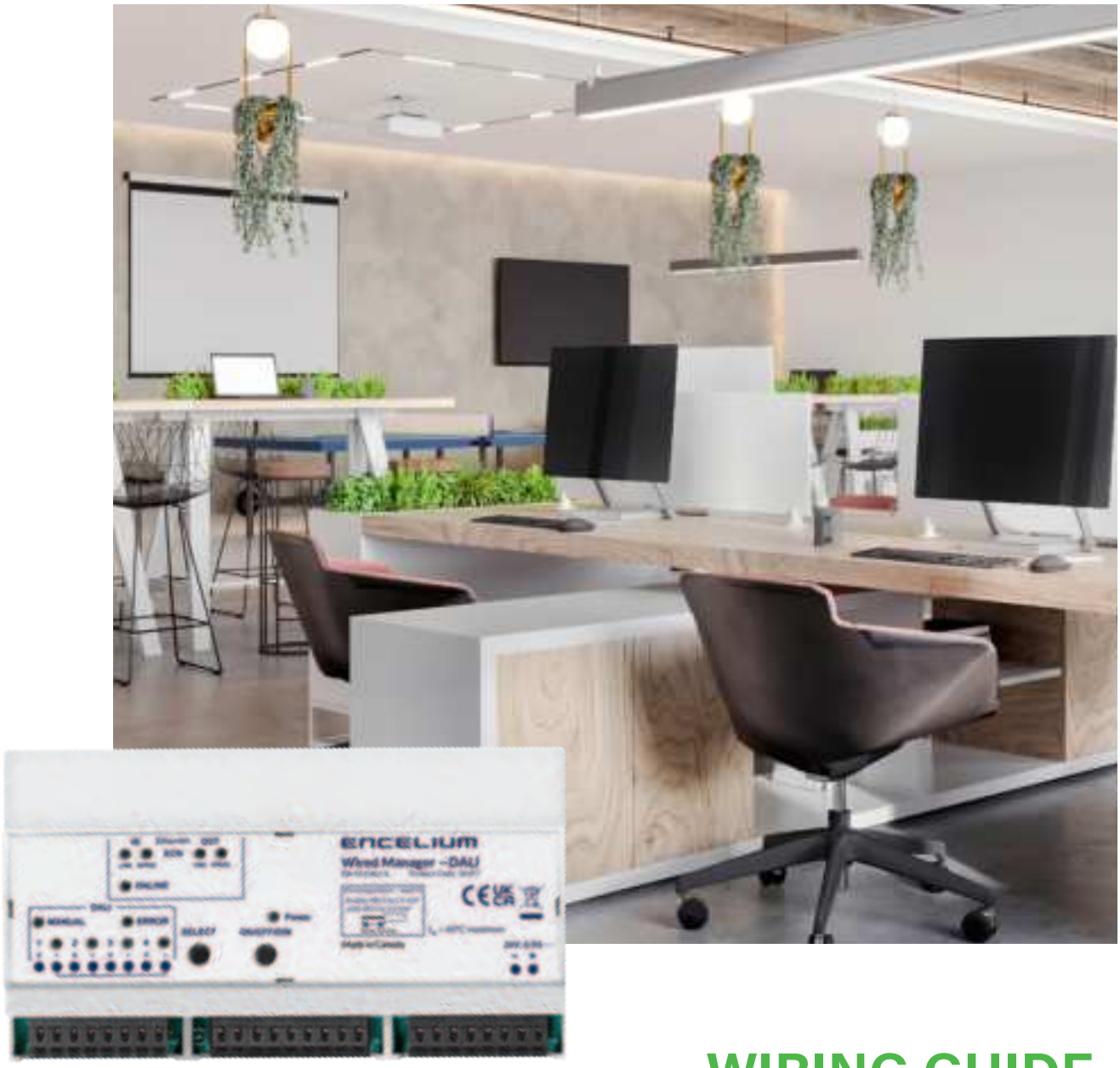
CONNECTED LIGHTING CONTROL SYSTEM



WIRING GUIDE

POWERED BY SPECIALISTS

legrand®

connected lighting control system

typical radial topology

Overview

One benefit of the connected lighting control system is that the 2 wire DALI subnet may be wired with a free topology, this means that any wiring configuration may be used so long as everything is connected, and it does not exceed the maximum subnet length of 300 m[1] or the maximum load capacity of each DALI subnet at 64 x inputs + 64 outputs per channel or 200 mA

We recommended design levels are 180 mA (10 % spare capacity) and 50 devices (typically a maximum of 12 control devices) per DALI subnet

Each wired manager features 4 DALI channels and typically controls up to 64 inputs + 64 outputs per channel according to the current consumption of the devices used

Please refer to latest copy of application drawings that indicate which lighting circuits have been allocated to specific wired manager
Any deviation from these drawings may result in the wired manager's maximum loadings being exceeded and could lead to additional wiring and equipment

Please discuss any changes with us to ensure no overload
For further information contact technical support on
+44 (0) 0333 900 0671

1 : 300 m max. applies to a radial topology
Star field network is acceptable : yotal cable used must not exceed 300 m

Typical components : number of devices / mA load

Luminaires
DALI luminaire (single driver) 1 x device, 2 mA
DALI emergency module (additional) 1 x device, 2 mA
Please note some luminaires may contain more than one driver

Control devices
EBDMR-DALI 2... mid range PIR with photocell : 1 x device, 8 mA
EBDSPIR-DALI2… PIR with photocell : 1 x device, 8 mA
DP-SR-S4-WCU-DALI2… 4 button scene plate : 1 x device, 2 mA
DALI-COUPLER-PB-G… (switch interface) 1 x device, 5 mA
DP-SR-RM-DALI2… DALI switching actuator : 1 x device, 3mA

DALI cable type
Recommended field network cable : 1.5 mm² twisted pair 600-1000 V rated LSOH : flex or equivalent (mains rated cable)
Maximum length 300 m : singles must not be used. For further information or to discuss these options, contact technical support on +44 (0) 0333 900 0671

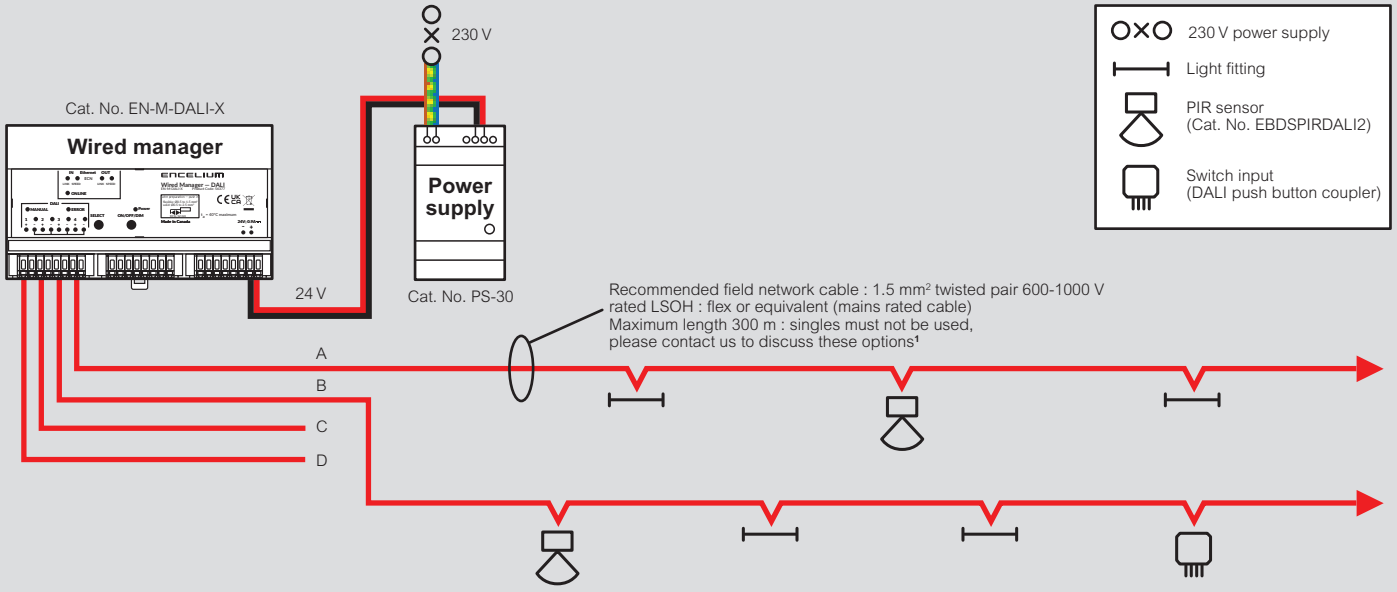
When DALI and mains cable share containment, DALI cable to be rated at same potential voltage as mains (although the DALI cable operates at ELV potential it is not classified as SELV). All wiring and connections are the responsibility of the customer

Ethernet cable
1 x RJ45 10/100 Mbps, Cat 5e up to 100 m (audio MDI/MDI-X crossover). All equipment, wiring and connections are the responsibility of the customer

Typical radial topology

This illustration shows how each component is easily integrated into the Encelium Energy Management System
DALI is a daisy chain communication topology that enables data in and out to the system components
Each light fixture, sensor, and wall controller is daisy-chained back to the wired manager

Note : sensors and wall controllers are powered from the DALI bus



Wired manager – DALI is powered from 24 V DALI power supply (Cat. No. PS-30 sold separately)
Connect -/+24 V from DALI power supply to wired manager
Do not connect DALI lines to mains or any mains referred voltage
Wired manager and power supply will need to be installed in approriate DIN rail enclosure to ensure terminal connections are not accessible
For further information contact technical support on +44 (0) 0333 900 0671

Note : wired manager needs to be installed in dry, indoor locations ONLY

For more information on product specifications and design tools visit **www.legrand.co.uk/en/brands/cp-electronics** or contact your local Account Manager

1 : For further information contact technical support on +44 (0) 0333 900 0671

All dimensions (mm) are nominal

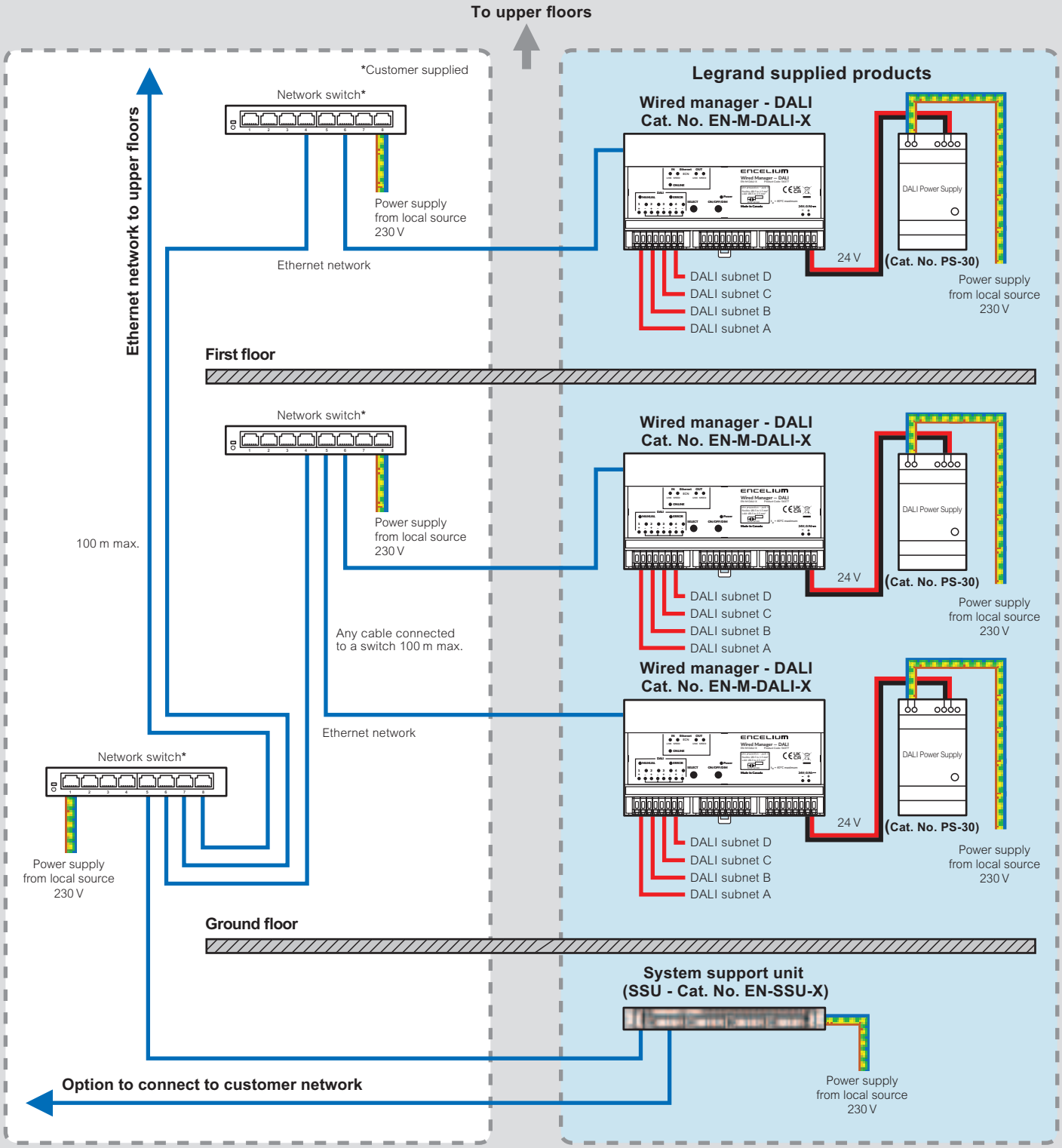
connected lighting control system

typical networked system

Typical networked system

Each wired manager, typically controlling individual floors / groups of inputs and outputs and can be linked via an Ethernet network, when data analytics / Polaris software is required. Internet or LAN connection allows control software to be operated anywhere on the network

Note: if the customer's Ethernet network is not dedicated to the connected lighting control system then static IP addresses will need to be issued to Technical Support prior to the commissioning of the control's installation
Static IP addresses will be required for each wired manager, each PC and 1 additional IP address should an SSU (system support unit Cat. No. EN-SSU-X) be installed
Please liaise with the Commissioning Department for confirmation of the number of static IP addresses required



Customer to supply devices, i.e. Network switches for connection to Legrand products

Customer supplied : DALI cable : 2 core mains rated, 1·5 mm² radial
Maximum length = 300 m

Customer supplied: Ethernet cable: 1 x RJ45
10/100 Mbps up to 100 m

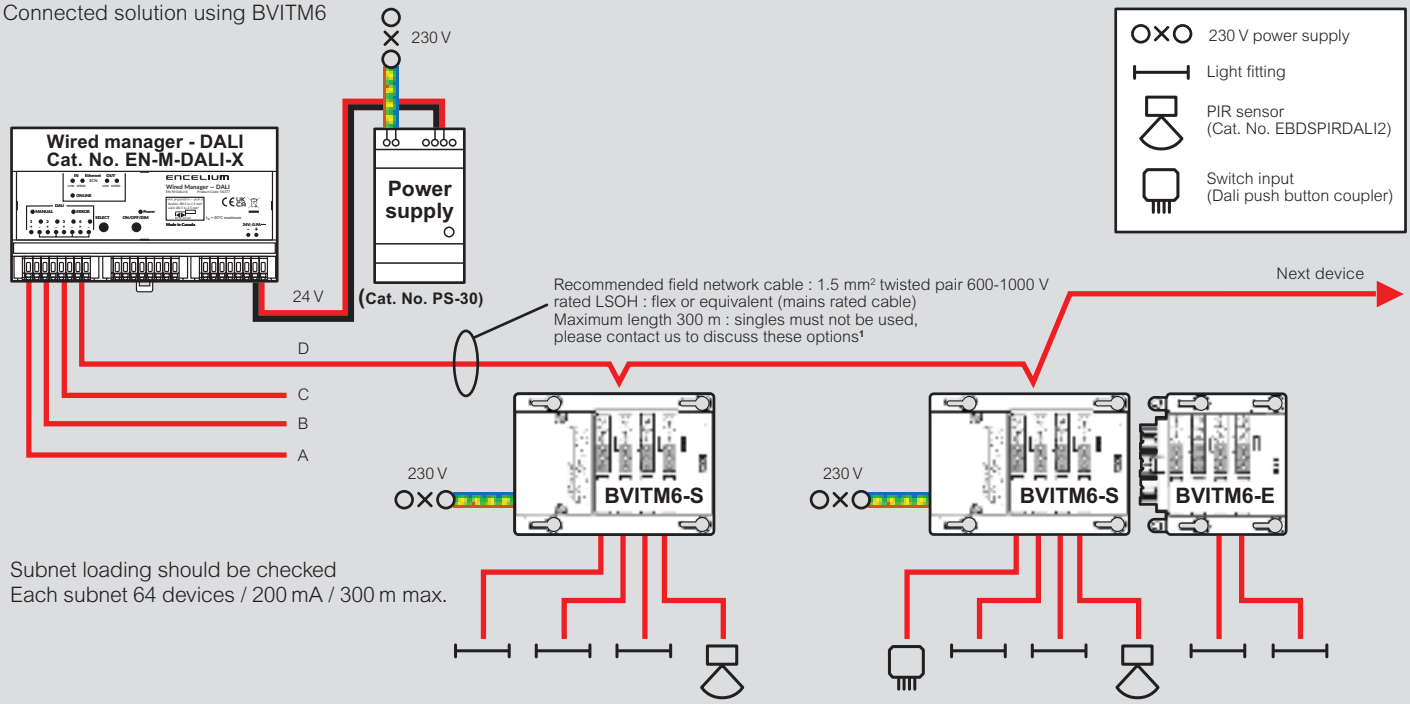
All dimensions (mm) are nominal

connected lighting control system

typical connected topology and simple network

Typical connected topology

Connected solution using BVITM6

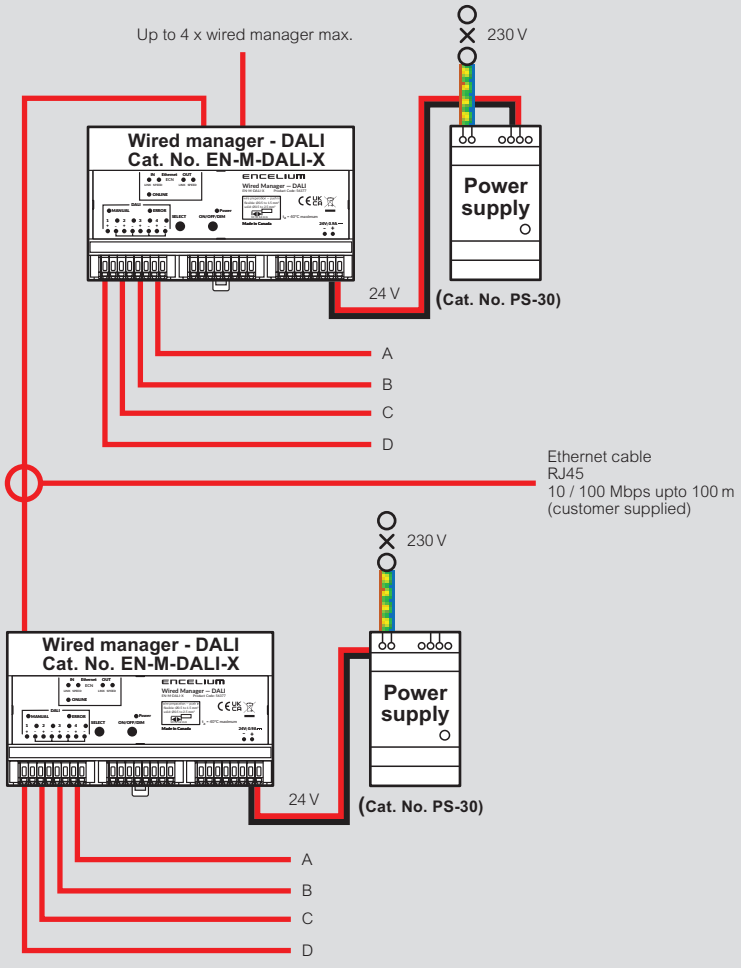


Subnet loading should be checked
Each subnet 64 devices / 200 mA / 300 m max.

1 : For further information contact technical support on +44 (0) 0333 900 0671

Simple network

Where communication is required between wired managers, upto 4 x wired managers can be directly connected, this enables wired managers to communicate directly, alternatively network switches, by others, can be employed. Enabling more than 4 x wired managers to be employed for a given project or allow for system scaling



Wired manager – Cat. No. EN-M-DALI-X

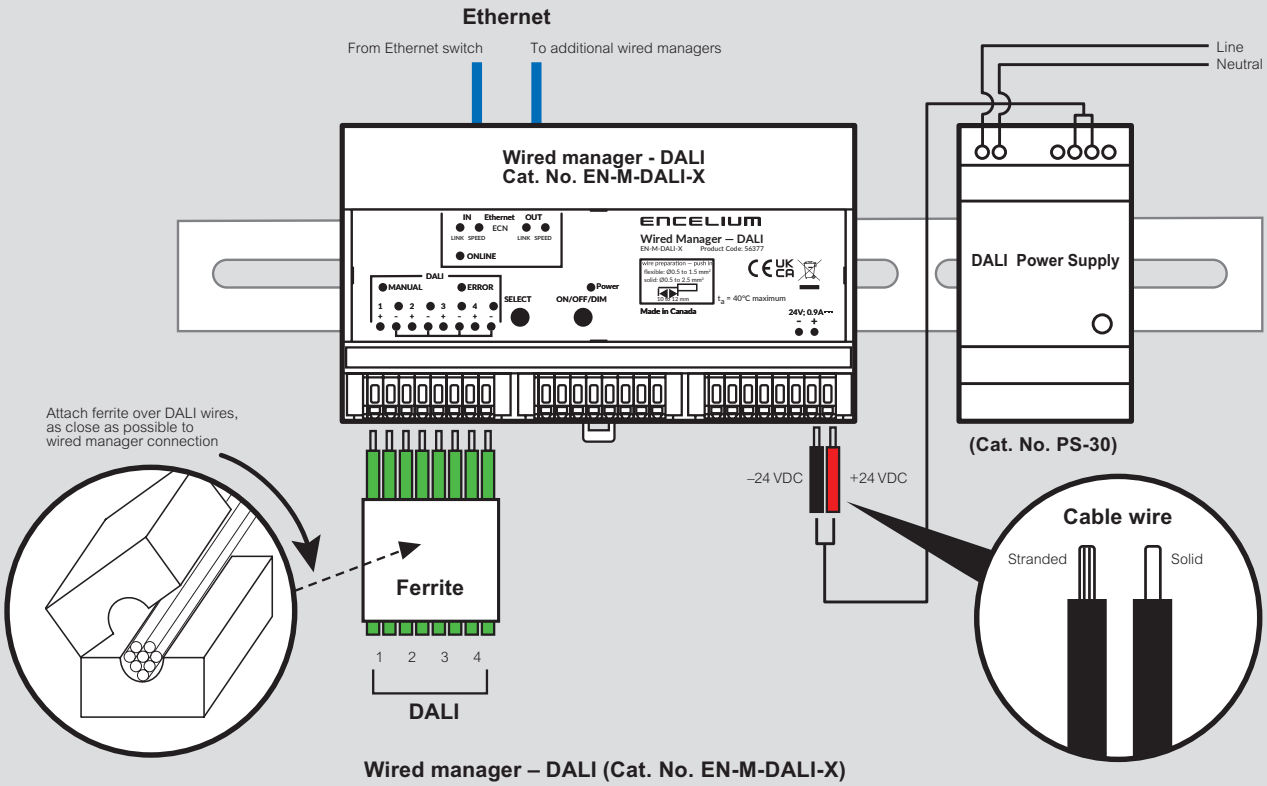
Power supply – Cat. No. PS-30

All dimensions (mm) are nominal

connected lighting control system

wiring diagram

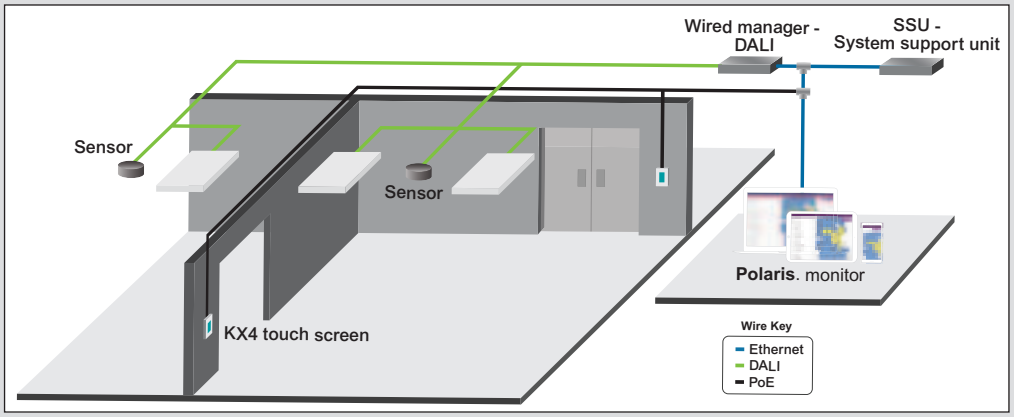
Mounting option



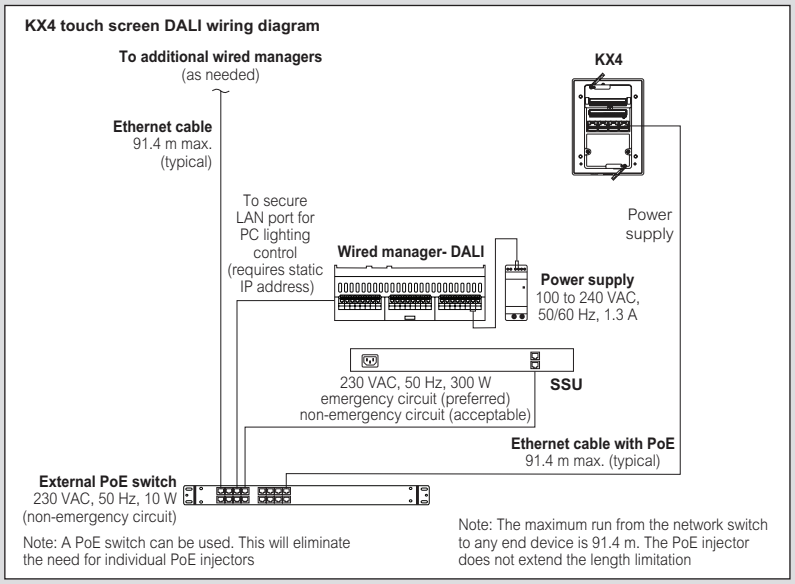
Wired manager – DALI (Cat. No. EN-M-DALI-X)

KX4 touch screen – LCD touch screen display panel Cat. No. RTI-KX4

KX4 touch screen – Cat. No. RTI-KX4



Flush mounting LCD touch screen display that provides the ability to recall multiple lighting scenes for a given zone. It's ideal for large multi-purpose spaces where lighting requirements vary throughout the day, such as an auditorium or conference room



connected lighting control system

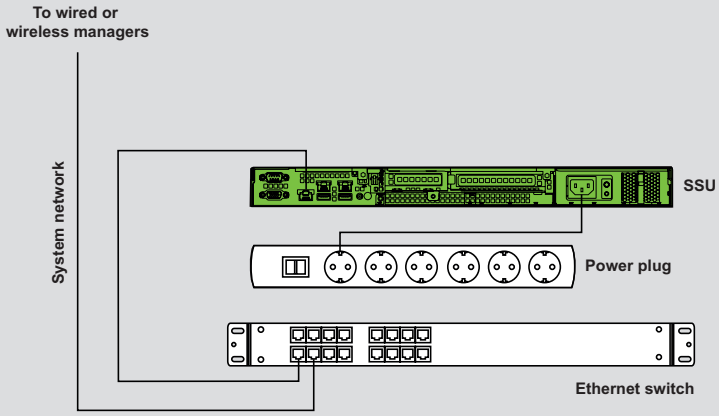
System Support Unit

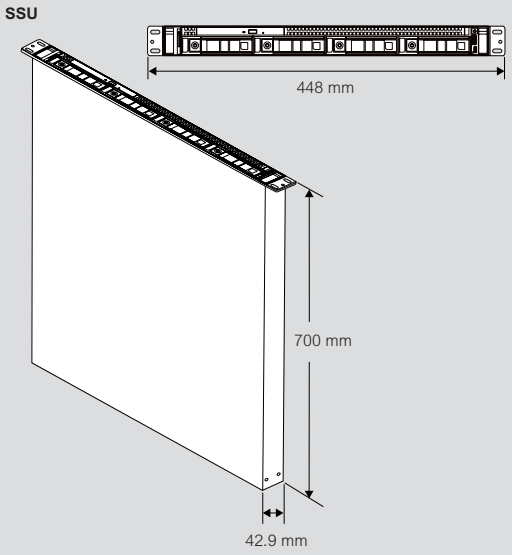
System Support Unit – Cat. No. EN-SSU-X

The System Support Unit (SSU) is a key component in the connected lighting control system. It hosts the Polaris software giving Facility Managers and Building Operators the ability to monitor and maintain their system. It enables them to change or modify light settings, schedules and other system settings. A typical building or campus requires one SSU per site

Cat. No. EN-SSU-X

DALI wiring





Technical data	
Dimensions	700 x 448 x 42.9 mm (H x W x D)
Weight	14.3 kg
Housing colour	Black
Housing material	Steel
Mounting options	Rack mount
	Wall mount
	4U wall mounted rack (optional and sold separately)

All dimensions (mm) are nominal

Contact details

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