

# Pre-Commissioning User Guide & Checklist

## DALI Information

DALI is a digital protocol. It operates with the following requirements;

- Ideally the measured voltage should be between 12 and 22.5 V DC.
- Maximum DALI current per system or subnet is 250 mA (Lights and Emergency Devices are usually 2mA per device).
- Maximum of 64 Devices per DALI network, but it is advisable to leave a few spare addresses for future expansion.
- DALI connections are not polarity sensitive.
- DALI wiring and connections must be treated as Mains voltage wiring. Although the DALI signal is only about 16 volts, the hardware is not SELV (Safety Extra Low Voltage) isolated.
- DALI is wired as a 2-core radial from the Hub. However, it may be joined in a star or tee, but should not be wired as a loop.

DALI Cable Length	Recommended Minimum Conductor Size
Less than 100 Metres	0.5 mm <sup>2</sup>
100 to 150 Metres	0.75 mm <sup>2</sup>
151 to 300 Metres	1.5 mm <sup>2</sup>
More than 300 Metres	<b>Not Permitted!</b> Avoid runs over 300 Metres

## Pre-Commissioning Mode

The One-CONNECT DALI Hubs are shipped from the factory in “pre-commissioning mode”. This mode allows the installer to check the integrity of the DALI wiring installation before a commissioning engineer attends site. Effective use of pre-commissioning mode allows the installer to identify any installation errors prior to the attendance of the commissioning engineer. This will ensure that the installation is complete and correct, and should help to ensure that commissioning can be completed within the estimated timeframe.

## Pre-Commissioning User Guide & Checklist

In “pre-commissioning mode”, the DALI Hubs continually send out a broadcast identify command. This has the following effects:

- Lights and other output devices will change state every 5 seconds. changing from 100% full output, to minimum output, to off, in a continuously repeating cycle.
- Emergency devices will flash the charging LED between red and green continuously.
- Emergency devices will also enter inhibit mode. This will stop the device entering emergency mode if the power is turned off. This saves battery life during the build phase of a project. (Inhibit mode is active for 15 minutes after the DALI Hub is turned off).
- Sensors will flash their identification LED.

### Pre-Commissioning Mode Checklist

Task	✓
Install and power up all DALI devices connected to the DALI Hub being tested.	
Ensure there are fewer than 64 DALI devices connected to each DALI Bus.	
<b>Before</b> terminating the DALI cables to the Hub, ensure there is no mains voltage between the DALI cores or between each DALI core and earth.	
Connect the DALI cables to the Hub.	
Power up the DALI Hub – this will cause the devices to enter pre-commissioning mode.	
Ensure that all connected devices have entered pre-commissioning mode – if any devices do not enter pre-commissioning mode then investigate and rectify wiring faults.	
If you wish to inhibit the emergency devices then the Hub may be left connected and powered, otherwise the Hub may now be turned off prior to commissioning.	

# Pre-Commissioning User Guide & Checklist

## Commissioning Request Form

Task	Yes (✓)	No (✓)
All Lighting Control Panels have been installed and mains supply connected.		
All DALI devices have been installed and powered.		
Emergency devices have/will be powered for 24 hours prior to the first commissioning attendance.		
Free access is available to all areas to be commissioned.		
All DALI networks have been checked using pre-commissioning mode.		
All Cat 5/6 cables have been installed between the lighting control panels.		
Site drawings referencing the installation and DALI cabling routes are available to the engineer.		
All control/emergency testing requirements and schedules have been supplied.		
The site electricians will be in attendance during all commissioning attendances.		
Is a site safety induction required?		
If a safety induction is required, what time(s) are they carries out?	_____ : _____	

Contractor Name: \_\_\_\_\_

Contractor Address: \_\_\_\_\_

Contact Name: \_\_\_\_\_

Contact Details (Email and/or Tel) : \_\_\_\_\_

Project Name: \_\_\_\_\_

Site Address: \_\_\_\_\_

## Pre-Commissioning User Guide & Checklist

---

Site Primary Contact: \_\_\_\_\_ Tel No.: \_\_\_\_\_

Site Secondary Contact: \_\_\_\_\_ Tel No.: \_\_\_\_\_

Requested Commissioning Start Date: \_\_\_\_\_

Project Handover Date: \_\_\_\_\_

Please note that this document must be signed and returned via email prior to the commissioning attendance being confirmed. Failure to complete any of the above tasks prior to commissioning may result in aborted visits or additional commissioning charges.

Customer Signature: \_\_\_\_\_

Print Name: \_\_\_\_\_