

DDBC300-DALI

DALI HF Ballast Controller

Installation Manual



features

- **Supply** – 230V \pm 14% 50/60Hz Single Phase at 0.1A.
- **3 x DALI Outputs** – Suitable for DALI HF ballasts & transformers.
- **Built-in DALI Bus Power Supply** – No external supply required.
- **Dry Contact Interface** – Can be programmed to perform many different functions. The factory settings will cause this input to transmit network identification information.
- **Many Control Options** – Control of this device can be via a combination of methods eg. Serial control port, push button control panels, infrared receivers and timeclocks.
- **Simple Installation** – DIN Rail mount facilitates installation. All connection terminals accessible without disassembly.



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. The device must be earthed. Installation, programming and maintenance must be carried out by qualified personnel.

Special Programming – This device will only operate in basic modes unless programmed via a computer. If programming is required, contact your local agent for details. Once the data cable is connected to the devices, the factory default settings will allow any control panel to control all channels in all dimmers.

Check Connections – Tighten all load-carrying screw connections, as vibrations from transport can cause terminal block screws to become loose.

Power Sources – This device should only be operated from the type of supply specified on the front cover. This device *must* be earthed.

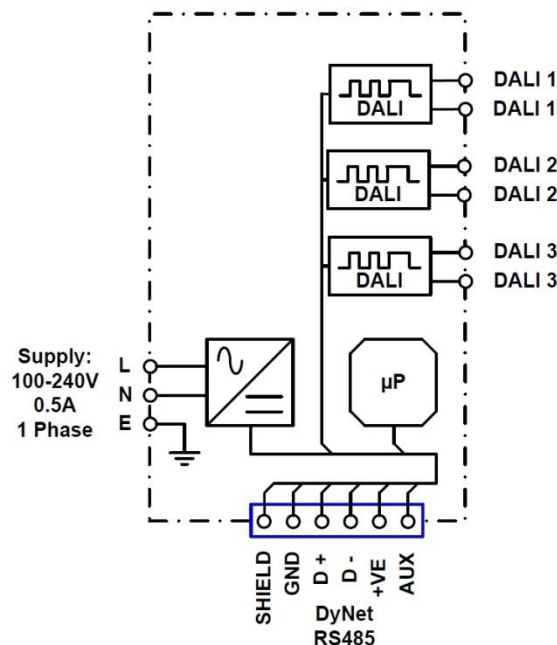
Load Control Circuit – A 2 core DALI bus cable is required to be run to the loads, this cable is in addition to the mains feed.

Load Type – This product is intended to control DALI devices.

Mounting Location – Install in a dry, well-ventilated location. Controllers may emit some mechanical noise. Take this into account when deciding the mounting location.

Data Cable – Use screened, stranded RS485 data cable with three twisted pairs. Segregate from mains cable by 300mm minimum. Connect devices in a 'daisy chain'. A data cable connected to an energized device is live. Do not cut or terminate live data cables.

electrical diagram

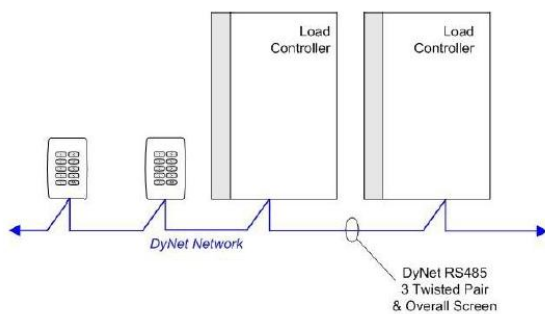


installation steps

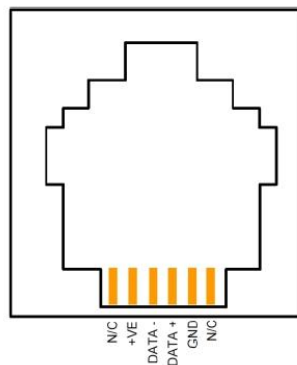
1. Mount the device on a DIN rail inside an approved enclosure.
2. Connect mains cables: Connect a 0.1A single phase supply to the Supply terminals, this will operate the product's electronics. This device must be earthed.
3. Connect the DALI bus cables: Use a mains rated 2 core cable to connect the DALI bus to the DALI ports on all DALI devices. The DALI bus cable should not be longer than 300 Metres, and should have a minimum cross section area based on cable length as follows:
 - Up to 100 Metres: 0.5mm²
 - 100 to 150 Metres: 0.75mm²
 - 150 to 300 Metres: 1.5mm²
 The DALI bus is not SELV and must be treated as a mains cable. It is not polarity conscious. A maximum of 64 DALI devices can be wired to each DALI port.
4. Connect data cables to the device as per diagrams below. Segregate data cables from mains cables.
5. If the Auxiliary input is to be used, connect a dry contact device in between the AUX and GND terminals. Keep cable runs between the AUX terminals and the dry contacts under two metres. The function of the Auxiliary input will need to be programmed at the time of commissioning.

Connecting Data Cable

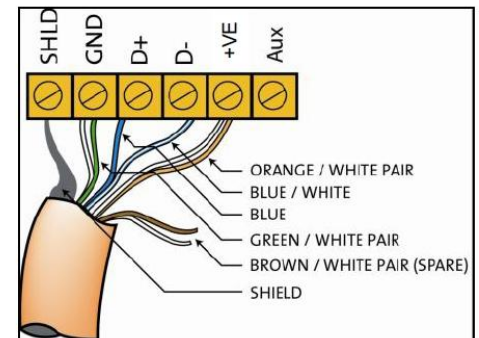
Connect Data Cable in a 'Daisy Chain'



RJ12 Socket Connections



Serial Cable Permanent Connections



Recommended Cable Colour Coding

| | |
|--------------------------|---|
| Green/White Pair | paralleled for GND |
| Orange/White Pair | paralleled for +12V |
| Blue/White Pair | Blue for DATA+ |
| | White for DATA- |
| Brown/White Pair | Spare, use for Shield on unshielded cable |

Recommended Cable Types

| | | | |
|------------|---------|----------------|------------------|
| Belden: | 9503 | M&M cable: | B9503CS |
| Garland: | MCP3S | Multicables: | AWME120236209220 |
| Hartland: | HCK603 | RS Components: | 368-687 |
| M&M Cable: | B2003CS | Dynalite: | DYNET-STP-CABLE |

| | |
|-------------------------------|---|
| Supply: | 100 – 240V 50/60Hz Single Phase at 0.5A |
| Control Output: | 3 x DALI Control Outputs, each supporting a full DALI universe of 64 channels (192 total), including backward channel |
| Supply Terminals: | Line, Neutral, Earth 1 x 4mm ² max conductor size |
| DALI Terminals: | 3 x Ballast DALI circuit - Dx, Dx - 1 x 4mm ² max conductor size |
| Control Inputs: | 1 x RS485 DyNet serial port 1 x AUX programmable dry contact input |
| DALI BUS DC Supply: | Integral 24V 250MA power supply |
| DyNet DC Supply: | 200mA (Supply for approx 10 panels) |
| Preset Scenes: | 170 |
| Compliance: | CE, C-Tick |
| Operating Environment: | 0° to 40°C ambient temperature 0% to 90% RH non-condensing |
| Construction: | Polycarbonate DIN rail mount |
| Dimensions: | H 93mm x W 211mm x D 75mm |
| Weight: | 0.49kg |