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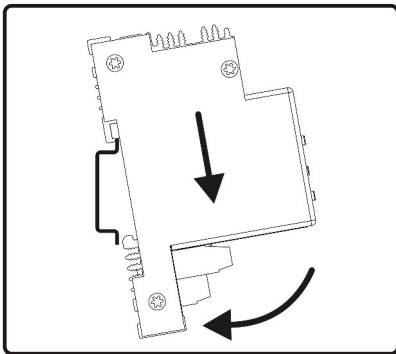
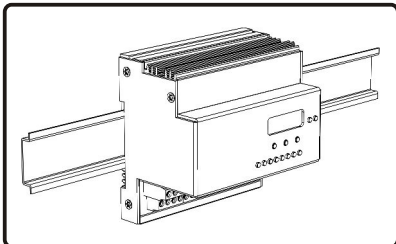
- Universal Ballast Control Module
- 300mm Data-Bus Link Cable

INSTALLATION GUIDE:

Universal Ballast Control Module DIN-UBC-01-05

The Universal Ballast Control module is a 6M sized DIN rail mounted unit which can be configured to accept up to 4 channels of 0-10V, 1-10V, DSI or switched contact inputs or to provide up to 4 channels of fully isolated 0-10V, 1-10V or DSI outputs as well as a single DALI universe.

SPECIFICATION & MOUNTING



Modules must be installed within a suitable surface mount enclosure with integral DIN rail. Installation must be carried out by a qualified electrician in accordance with National Wiring Regulations and other applicable regulations. Compliance to EC EMC and Low Voltage Directives may be invalidated if not used or installed according to the published specification.

eDIN modules are designed to attach to a standard 35mm wide DIN rail (*EN 50022, BS 5584*). To install, simply hook the module from the top, push down and click into place (see diagram).

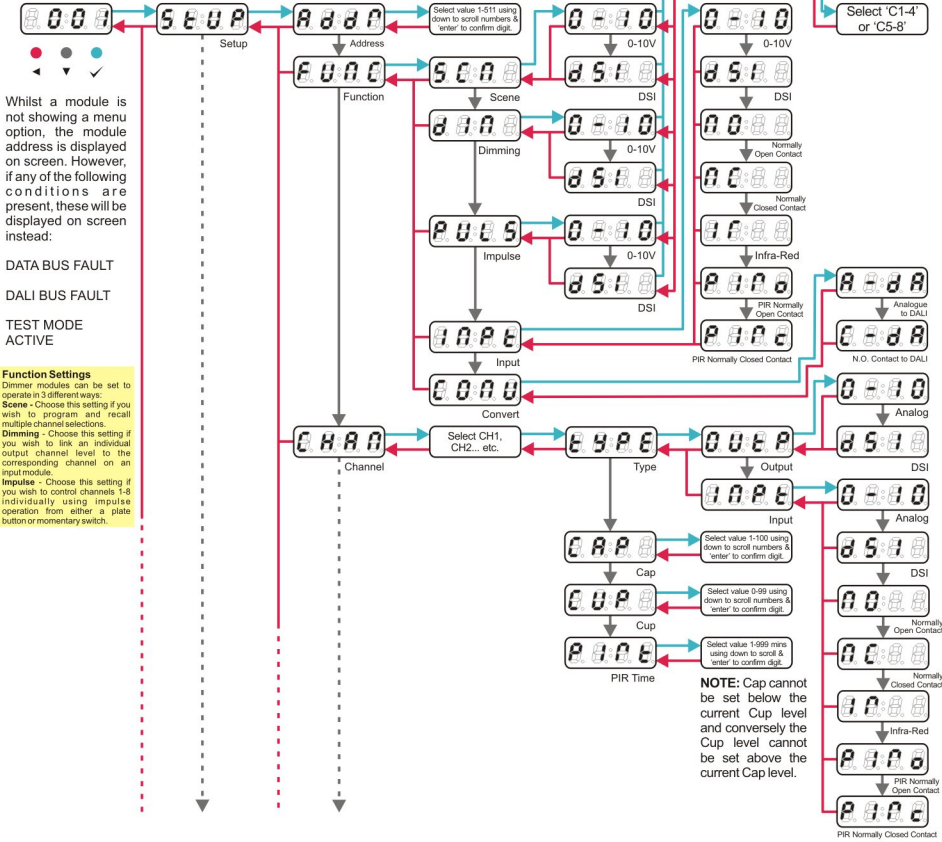
All eDIN modules must be earthed. Modules contain no user serviceable parts and should not be opened.

Module Size:	6M, L 106mm x W 100mm x H 64mm
Mains Input:	90-264V, 50 / 60Hz
Power Input:	24V, 50mA nominal
Max. Wire Size:	1.5mm ²
Control Input:	Mode M-BUS
M-BUS Connection:	2 x RJ-45 (in and out)
ta Max:	40°C
tc Max:	60°C
Standards:	(CE EMC & LVD) EN55015, EN61547, EN61000-3-2, EN61000-3-3 & EN60669-2-1

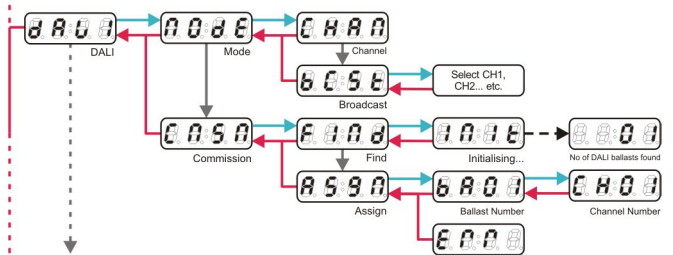
0-10V / 1-10V /	
DSI Outputs:	100mA each max.
Max. # DALI Ballasts:	64
DALI PSU:	250mA



ONBOARD SET-UP: I/O SETTINGS



DALI OPERATING MODES

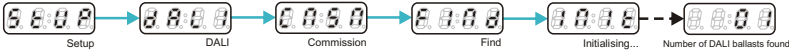


- The module can control DALI ballasts in one of two modes. The operating mode 'CHAN' (channel mode) or 'BCST' (broadcast mode) is selected from the SETUP-DALI-MODE menu.
- In 'Broadcast' mode, the current level of one eDIN channel is broadcast to all of the DALI ballasts that are connected. When broadcast mode is selected, a sub menu appears from which the user selects which eDIN channel to broadcast (CH1 to CH8).
- In 'Channel' mode, every ballast is allocated to an eDIN channel and individually controlled as per other eDIN output modules. In this mode, the ballasts need to be commissioned. The procedure for this is outlined on the following page (in 'Broadcast' mode, no commissioning is required).

DALI BALLAST COMMISSIONING

DALI ballast commissioning is only required for modules running in 'channel' operation, it is not required for modules running in 'broadcast' mode. Commissioning of the DALI ballasts running in stand-alone mode (ie: without a Network Processor Unit) is carried out using two simple steps: The first step is to 'find' all of the ballasts connected to the ballast control module and the second step is to assign each ballast to an eDIN channel.

Step 1 : Find Ballasts



From the SETUP-DALI-CMSN menu, select 'FIND'. 'INIT' will then be displayed, the display will 'ripple' and all of the ballasts connected to the UBC module will extinguish their lamps.

The display on the UBC will then display 'xx' where xx is the number of ballasts found so far. As each ballast is found, its lamp will dim to approx 50% and the display of the number of ballasts found will increment. It will take a few seconds to find each ballast.

When all the ballasts are found, the display will stop 'rippling' and 'FDxx' will be displayed, where xx is the total number of ballasts found. Once all the ballasts are found, press the ✓ (select) button where you will be returned to the DALI-CMSN menu. Proceed to step 2.

Step 2 : Allocate each ballast to an eDIN channel



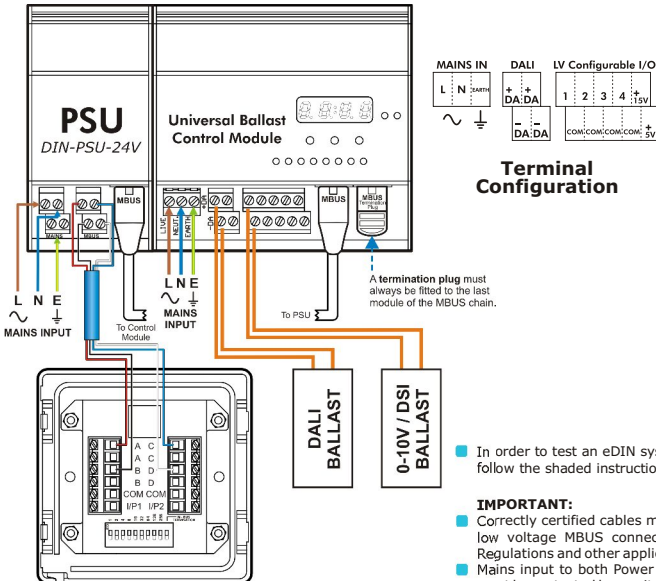
From the SETUP-DALI-CMSN menu, select 'ASGN'. 'BAXx' will then be displayed, where xx is the current ballast number to assign. All of the lamps connected to the ballasts will be extinguished except the currently selected ballast which will be dimmed to 50%.

The scroll '▼' button can then be used to select the ballast to assign. When the button is pressed, the ballast number is incremented (up to the total number of ballasts found in step 1, where it will reset to 1).

Once the ballast to be assigned is found, press the '▼' button. The display will then change to show 'CHxx' where xx is the eDIN channel that that ballast should be controlled by (If it has not been previously set, it will be 0). The '▼' button can then be used to change the channel assignment (between 1 and 8). Once the desired channel is displayed, the '▼' button should be pressed to store the assignment.

The display will then show 'DONE' and the user is returned to the ballast selection so that the next ballast can be assigned. Please note that DALI MODE must be set to 'CHAN' before using.

WIRING



SUPPORTED CONTROL TYPES

Protocol	Input	Output
0-10V	✓	✓
1-10V	✓	✓
DSI	✓	✓
DMX	✗	✗
Volt-Free Contact	✓	○
Infrared	◆	✗

✗ Not Supported
 ✓ Supported
 ○ Supported using eDIN Relay Module
 ◆ Please contact Mode Lighting for further technical information

■ In order to test an eDIN system once it has been wired together, follow the shaded instructions on the back page.

IMPORTANT:

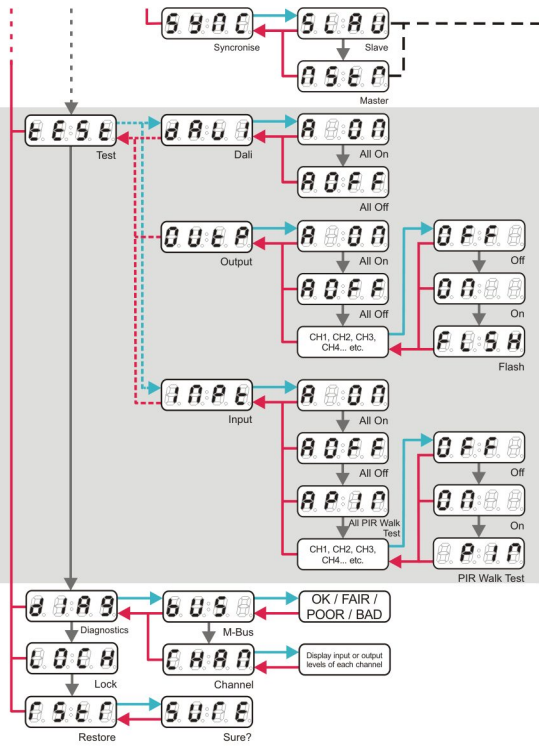
- Correctly certified cables must be used for all mains voltage and extra low voltage MBUS connections in accordance with National Wiring Regulations and other applicable regulations.
- Mains input to both Power Supply & Universal Ballast Control module must be protected by a suitably rated MCB.

ONBOARD SET-UP: TESTING

Any channel configured to be an output type can be tested from the test > output menu.

Any channel configured to be a contact input type can be tested from the test > input menu.

Setting a PIR input channel to 'PIR Walk Test' will shorten the PIR activation time to approximately 10 sec. Setting a contact input type to 'ON' simulates the input being triggered.



Using Synchronise Option (SYNC) for Standalone Setup
 This menu option should be used when scenes are needed to be copied to a unit or units that were not part of the MBUS chain during initial setup (eg: a replacement module). The specific settings that are copied during this process are: scene levels, scene fade times, impulse levels and plate LED colours.
 1. Begin by setting all modules that you wish to copy settings to, to slave (SLAV) mode. These units should now show 'RDY' (ready) on the display.
 2. Now set the module which you wish to copy settings from to 'master' (NSTR). This unit will now display 'SND' (send) as it sends all of the relevant data to the slave units which will show 'RCV' (receiving) on screen. When all units have finished sending/receiving they will flash 'DONE' and return to the 'SYNC' menu.

FAULT FINDING

- 'ERR' displayed when entering 'ASGN' menu.

No ballasts have been found yet. Carry out step 1 of DALI ballast commissioning procedure first.

- When finding ballasts during commissioning, the number of ballasts found is not the number expected.

When carrying out step 1 of the DALI commissioning procedure, all ballasts connected to the DALI universe should extinguish. If any do not, check the wiring to those ballasts.

Due to the way DALI operates, in rare cases two ballasts may reply as one. If the number of ballasts found is less than expected and the wiring is correct, repeat step 1 of the commissioning procedure.