DDBC400 HF Ballast/Dimming/Switching Controller - Installation Manual

Features

- **Single Phase Supply** - 1 phase at 5A
- **4 x Load Outputs –** Switched or dimmed at 2A (total box load 5A)
- **4 x 1-10V or DSI Outputs –** Suitable for HF Ballasts
- **Powerful Internal PLC -** Custom scripts can be written to provide process control based on conditional logic
- **365 Day Time clock –** Internal 365 day real time clock, which can control this and other devices connected to the DyNet network
- **Dry Contact Interface -** An Auxiliary dry contact interface is provided. 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, relay contacts, push button wall stations, infrared receivers and time clocks
- **Simple Installation -** DIN Rail mount facilitates installation. All connection terminals are accessible without disassembly

WARNING
ISOLATE FROM MAINS SUPPLY BEFORE REMOVING THIS COVER
NO USER SERVICEABLE PARTS INSIDE
SERVICE BY QUALIFIED PERSONNEL ONLY

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

Read Instructions – We recommend that you read this Instruction Manual prior to commencement of installation.

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 operate all channels in all controllers.

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

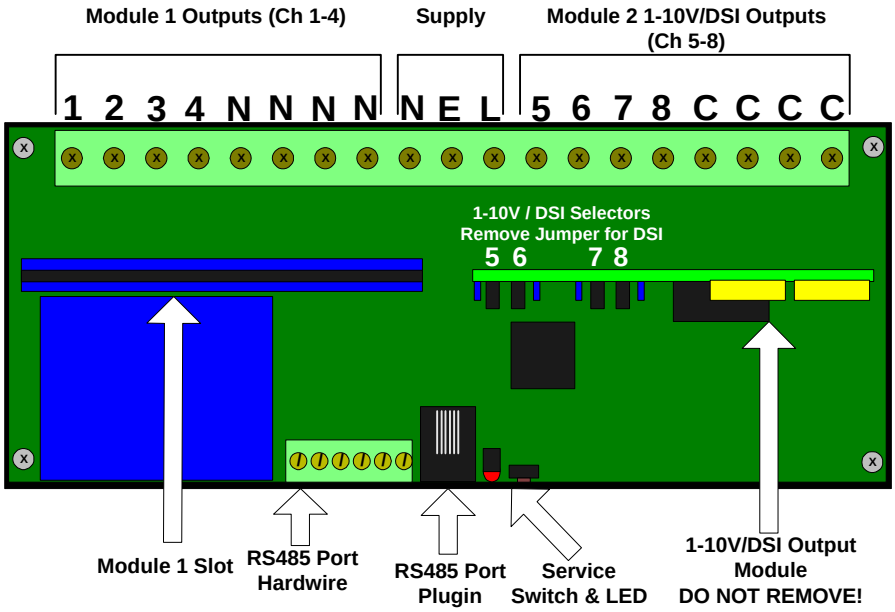
Power Sources – This device should only be operated from the type of supply specified on the front cover. This device *must* be earthed.

Output Circuits – The load on a circuit should not exceed the specified capacity of 2A. Loads should be calculated to ensure that the overall maximum capacity of 5A is not exceeded. This device should be fed via a 5A HRC fuse or MCB.

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 cables by 300mm minimum. Connect devices in a 'daisy chain'. A data cable that is connected to an energised device is live. Do not cut or terminate live data cables.

Internal View

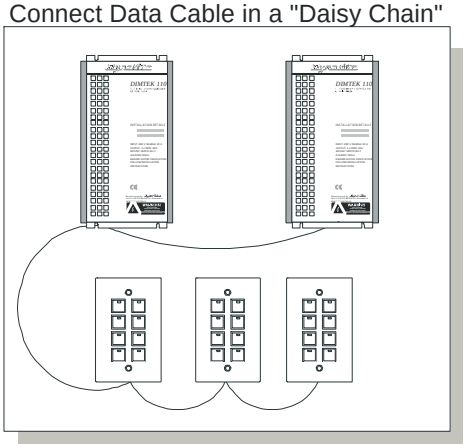


Installation Steps

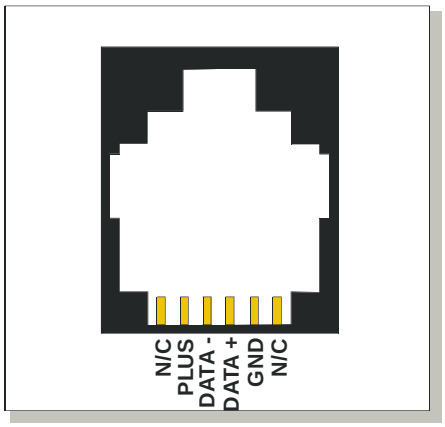
1. Remove the base unit and modules from the shipping carton. Verify that the Output Module supplied is suitable for your intended loads. Pay attention to any Output Module specific documentation that may be packed with Output Modules.
   NOTE: The 4 x 1-10V/DSI HF Ballast module fitted in Slot 2 must not be removed.
   Slot 1 is available for use with any of the following output modules:
   LSDM801 4 x 1A dimmer module
   LSDM105 1 x 5A dimmer module
   LSRM401 4 x 1A relay module
   LSFCM202 2 x 400VA ceiling fan 3 speed control
2. Snap the cover off the base unit. Plug the desired Output Module into the Slot 1 on the main circuit board. Replace the base unit's cover.
3. Mount the device on a DIN rail inside an approved enclosure.
4. Calculate loads to ensure any channels are not overloaded, then connect loads to the output channels 1-4. The maximum loading of this device is as follows: **Total Box Load: 5A Maximum Channel Load: 2A**
   Ensure that lamp holders are marked with the maximum permissible lamp size that will not overload a channel. This is to protect the end user from inadvertently overloading a channel by replacing lamps with higher wattage types.
5. Connect 1-10V/DSI control cables to output channels 5–8. Note that 1-10V cables are polarity conscious. Confirm that the Jumpers on the 1-10V/DSI HF Ballast module are set correctly. There is a Jumper for each of the 4 outputs:
   * **DSI - Jumper Removed**
   * **1-10V- Jumper fitted**
6. Connect a single phase 10A feed to the supply terminals. This device must be fed from a 10A circuit breaker. This device must be earthed.
7. Connect data cables to the device as per diagrams below.
8. 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 DDBC400 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

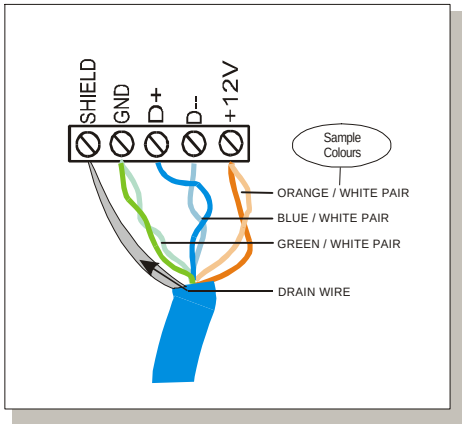
Connect Data Cable in a "Daisy Chain"



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-

Recommended Cable Types

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

Product Specifications

Supply:	230V 50/60Hz single phase at 5A
Load Outputs:	4 outputs at 2A per channel, dimmed, switched or fan control 2V 400VA, depending on module fitted
Control Outputs:	4 x HF Ballast control outputs, each selectable to 1-10V or DSI
Regulating Device:	Triac – 800V, 20A nom., 350A surge
Switching Device:	Relay - 10A nom.
Overload Protection:	No integral protection, supply from an MCB
Supply Terminals:	1 x Phase, 1 x Neutral 1 x Earth, 1 x 4mm^2 cable per terminal
Load Terminals:	4 x Phase, 4 x Neutral, Control – 4 x Control, 4 x Common, 1 x 4mm^2 cable per terminal
Control:	DyNet Network Control AUX input, function of AUX is programmable via internal sequencer
Serial Port:	1 x RS485 unterminated, consisting of 1 x RJ12 socket & 1 x 5 way terminal strip for permanent connections
DyNet DC Supply:	50mA (capacity for approx 2.5 Smart Panels)
Presets:	170 Internal, selectable presets
Optional Time clock:	365 day Time clock with Sunrise / Sunset and Daylight Savings options
Programmable Logic:	8 Tasks, most UPAN mnemonics supported
Compliance:	AS3548, EN50-081 & EN50-082
Ambient Temperature:	40°C max.
Construction:	ABS plastic DIN rail mount
Dimensions:	Height 85mm x Width 210mm x Depth 66mm
Weight:	1Kg

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