

DDMC802

8 x 2A Dimmer/Relay/Fan/ Curtain Controller Installation Manual



features

- **Single Phase Supply** - 1 phase at 16A
- **8 Outputs Slots** - Each with a nominal capacity of 2A. Some cards that occupy 2 slots have a capacity of 4A (maximum device load is 16A)
- **A variety of Output Cards available** – Each output slot may be populated with a variety of different types of output cards to suit most loads, including: Leading and Trailing edge dimmers, relays, fan controllers, curtain controllers and HF ballast controllers
- **Front panel LED Status Indicators and override switches (optional –MO version only)** - for each of the 8 outputs
- **Powerful Internal PLC** - Custom scripts can be written to provide process control based on conditional logic
- **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.

Special Programming – Once powered and terminated correctly this device will only operate in basic mode. A new Dynalite panel will turn on all lighting channels from button 1 and turn off from button 4 if network terminations are correct. Only once the full network is test correct can commissioning begin. Advanced functions can be commissioned via Envision software. If commissioning is required, contact your local distributor for details. 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 fed via a 16A circuit breaker or HRC fuse. This device *must* be earthed.

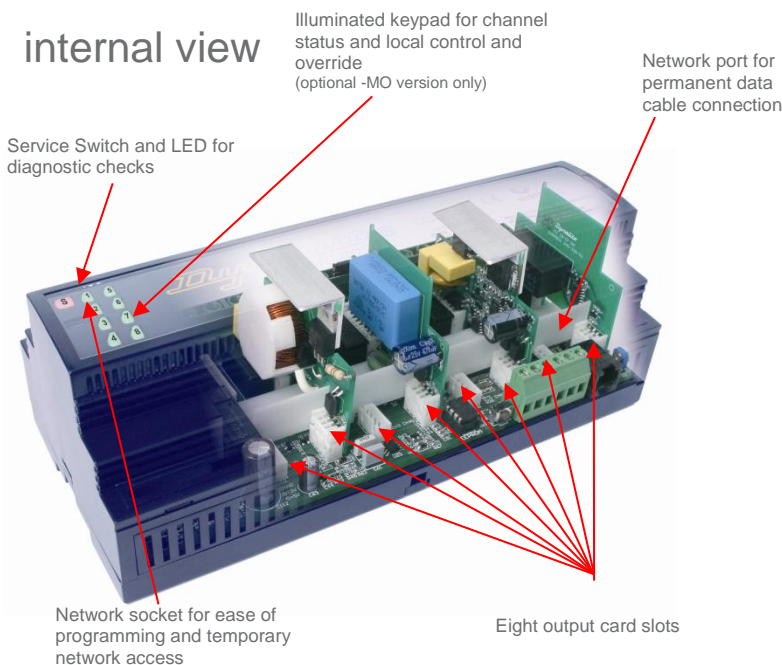
Output Circuits – The load on a circuit should not exceed the specified capacity of the output card in use. Loads should be calculated to ensure that the overall maximum capacity of 16A is not exceeded. Ballast controller output is referenced to mains neutral and is live. Only mains rated cables and control ports should be connected.

Load Types – Output cards should be carefully matched for load types. When using dimming cards with electronic transformers, check the Electronic Transformers compatibility list on Dynalite’s website.

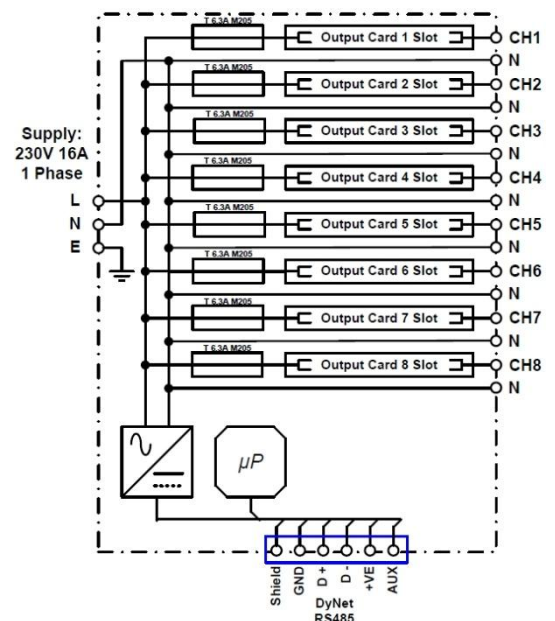
Mounting Location – Install in a dry, well-ventilated location. Controllers may emit some mechanical noise. Take this into account when deciding the mounting location.

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



electrical diagram



installation steps

Verify that the Output Cards supplied are suitable for your intended loads. Pay attention to any Output Card specific documentation that may be packed with Output Cards. When dimming electronic transformers, ensure that the intended transformer is included in Dynalite's Compatible Electronic Transformer List, the latest revision is available at dynamite-online.com

1. Snap the cover off the base unit. Plug each Output Card into the slots provided on the main circuit board. Replace the base unit's cover. If using different types of Output Cards, remember which type is associated with each set of output terminals.
2. Mount the device on a DIN rail inside an approved enclosure.
3. Calculate loads to ensure any channels are not overloaded, then connect loads to the output terminals. The maximum loading of this device is **16A**. A derating factor may need to be applied if installed in a smaller sealed switchboard when using Leading or Trailing edge dimmers, contact your dealer for details. The output card ratings are:

DDBM100 Ballast Controller – Digital mode :	5 x Ballasts	DDL102 Leading Edge Dimmer :	2 Amps
DDBM100 Ballast Controller – DSI mode :	15 x DSI Ballasts	DDL104 : Leading Edge Dimmer :	4 Amps
DDBM100 Ballast Controller – 1-10V mode :	10mA source, 20mA sink	DDRM104 Relay Controller :	4 Amps
DDCM102 Curtain Controller:	2 Amps	DDTM102 Trailing Edge Dimmer :	2 Amps
DDFM102 Fan Controller :	1 x Fan, max 400VA		

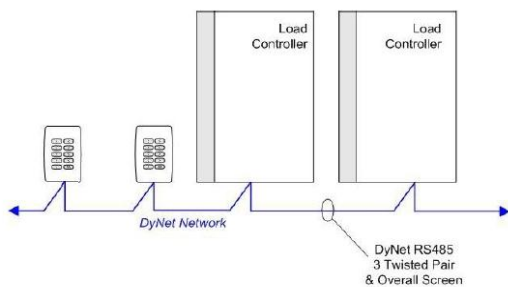
WARNING : Ballast controller output is referenced to mains neutral and is live. Only mains rated cables and control ports should be connected.

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. All ballast modules are shipped in 1-10V analogue mode. If a module is required for "DSI" or "DALI broadcast" output the settings need to be changed by moving the jumper on the module card across from the "ANLG" pins 1 & 2 to the "DIG" pins 2 & 3.

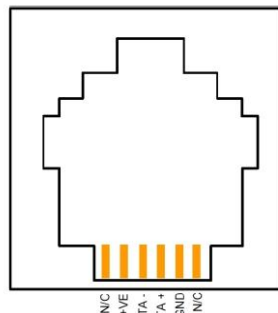
4. Every time the front cover is removed, ensure that all modules are correctly seated and locked into sockets before the cover is replaced.
5. Connect a single phase 16A feed to the supply terminals, via a 16A circuit breaker or HRC fuse. This device must be earthed.
6. Connect data cables to the device as per diagrams below.
7. The Auxiliary input is connected via a dry contact device in between the AUX and GND terminals. Keep cable runs between the device 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

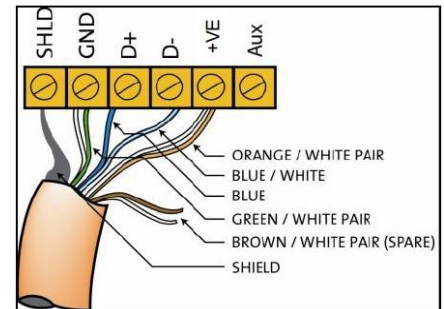
Connect Data Cable in a 'Daisy Chain'



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

product specifications

Supply:	230V ±14% 50/60Hz Single Phase at 16A
Outputs:	8 outputs - dimmed, switched or fan control, depending on module fitted. Max device load is 16A
Overload Protection:	Each channel protected by a T6.3A M205 fuse
Terminal Configuration:	Supply - 1 x phase, 1 x neutral 1 x earth, Load - 8 x phase, 8 x neutral, Conductor size - 1 x 4mm ² cable per terminal
Control Inputs:	- DyNet Network Control - AUX input, function of AUX is programmable via internal PLC
Serial Port:	1 x RS485 DyNet/DMX512 serial port
Front Panel User Controls:	Status Indicator and override LED for each channel, Service switch and LED, Network socket
DyNet DC Supply:	120mA (capacity for approx 6 panels)
Presets:	170
Programmable Logic:	8 Tasks, most UPAN mnemonics supported
Compliance:	CE, C-Tick
Ambient Temperature:	0°C to 40°C ambient temperature 0% to 95% RH non condensing.
Construction:	ABS plastic DIN rail mount
Dimensions:	Height 93mm x Width 211mm x Depth 75mm
Weight:	Packed weight 0.94kg (excluding output cards)