

# DDMC802GL

8 x 2A Dimming/Relay/HF  
Ballast/Fan/Curtain Controller  
Installation Manual



## features

- **Single Phase Supply** - 1 phase at 10A
- **4 x 2 Channel Outputs** - Each with a capacity of 2A nominal per channel (total box load 10A)
- **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 earthed.

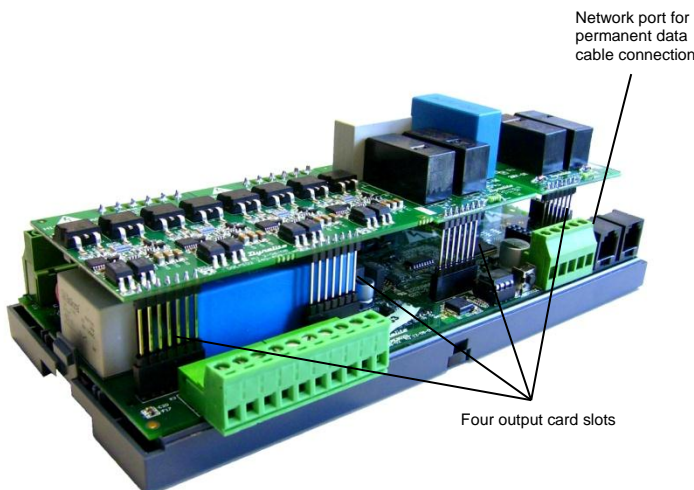
**Output Circuits** – The load on a circuit should not exceed the specified capacity of 2A. Loads should be calculated to ensure that the overall maximum capacity of 10A is not exceeded. This device should be fed via a 10A HRC fuse or MCB.

**Load Types** – Dimmer modules should be used with loads that are suitable for dimming with Leading Edge dimmers. Only dim Electronic Transformers that are listed on Dynalite's Compatible Electronic Transformer List.

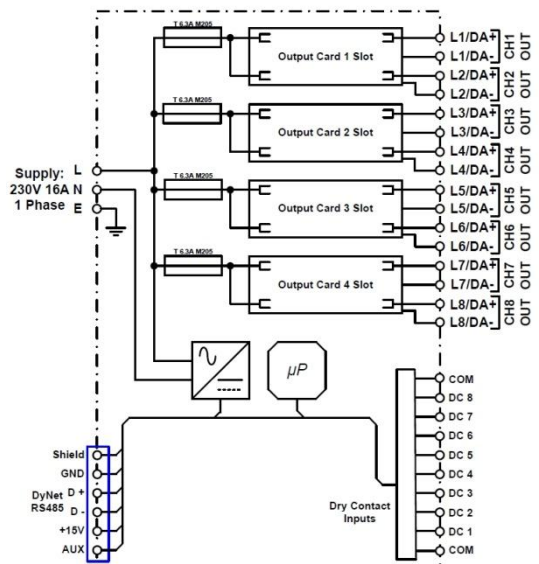
**Mounting Location** – Install in a dry, well-ventilated location. Controllers may emit some mechanical noise. Take this into account when deciding the mounting location.

**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 [dynamalite-online.com](http://dynamalite-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 **10A**. 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 rating of each output card are as follows:

**DGMB200** – Ballast Controller - DALI mode: 5 x DALI Ballasts per channel  
**DGMB200** – Ballast Controller - DSI mode: 10 DSI Ballasts per channel  
**DGMB200** – Ballast Controller – 1-10V mode: 10mA source, 10mA sink per channel  
**DGFM102** - Fan Control: 1 x Fan, max 400VA  
**DGLM105** – Leading Edge Dimmer: 5 Amps  
**DGLEDM401** – Mains rated LED dimmer: 1 Amp load Max

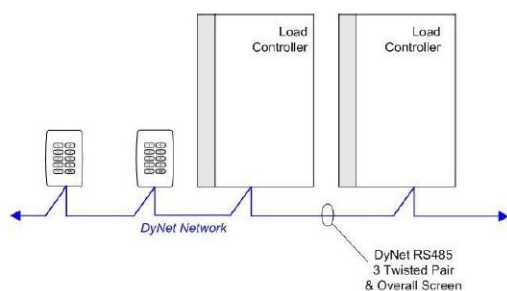
**DGTM105** – Trailing Edge Dimmer: 5 Amps  
**DGTM402** – Trailing Edge Dimmer: 2 Amps  
**DGCM102** – Curtain Controller: 2 Amps  
**DGLM402** – Leading Edge Dimmer: 2 Amps  
**DGRM204** – Relay Controller: 4 Amps

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.

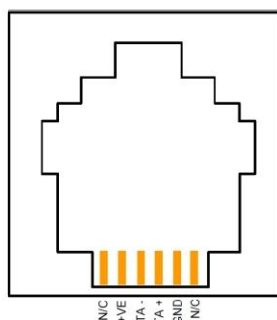
4. Connect a single phase 16A feed to the supply terminals, via a 16A circuit breaker or HRC fuse. This device must be earthed.
5. Connect data cables to the device as per diagrams below.
6. If the Auxiliary input is to be used, connect a dry contact device in between the AUX and GND terminals. Keep cable runs between the 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

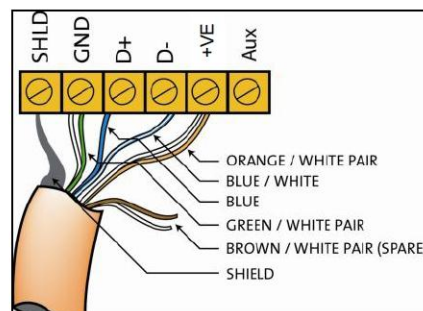
Connect Data Cable in a 'Daisy Chain'



RJ12 Socket Connections



Serial Cable Permanent Connections



## Recommended Cable Colour Coding

<b>Green/White Pair</b>	paralleled for GND
<b>Orange/White Pair</b>	paralleled for +12V
<b>Blue/White Pair</b>	Blue for DATA+
	White for DATA-
<b>Brown/White Pair</b>	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

<b>Supply:</b>	230V $\pm$ 14% 50/60Hz Single Phase at 10A
<b>Outputs:</b>	4 x 2 channel output slots at 2A nominal per channel. Maximum device load is 10A. Some modules occupy 2 slots.
<b>Overload Protection:</b>	No integral protection, supply from a 16A MCB
<b>Regulating Device:</b>	Triac – 600V, 25A nom, 250A surge
<b>Switching Device:</b>	Relay - 16A nom.
<b>Terminal Configuration:</b>	Supply - 1 x phase, 1 x neutral 1 x earth, Load - 8 x phase, 8 x neutral, Conductor size - 1 x 4mm <sup>2</sup> cable per terminal
<b>Control Inputs:</b>	1 x RS485 DyNet and DMX512 serial port, 8 x programmable dry contact inputs
<b>Serial Port:</b>	1 x RS485 unterminated, consisting of 2 x RJ12 socket & 1 x 5 way terminal strip, for permanent connections
<b>DyNet DC Supply:</b>	120mA (supply for approx 6 panels)
<b>Presets:</b>	170 Internal, selectable presets
<b>Programmable Logic:</b>	8 Tasks, most UPAN mnemonics supported
<b>Compliance:</b>	AS3548, EN50-081 & EN50-082
<b>Ambient Temperature:</b>	0° - 40°C ambient temperature, 0% to 95% RH non condensing
<b>Construction:</b>	Polycarbonate DIN rail enclosure (12 unit)
<b>Dimensions:</b>	Height 93mm x Width 211mm x Depth 75mm
<b>Weight:</b>	0.94Kg