DDBC120-DALI

DALI-2 Driver Controller

Specification Sheet

Full DALI-2 control with inbuilt DALI power supply and driver power management

The Dynalite DDBC120-DALI is a single-line controller, ideal for small-scale projects looking for a compact, all-in-one DALI control solution.

This controller operates seamlessly with all other Dynalite controllers, sensors, user interfaces, and head-end software.
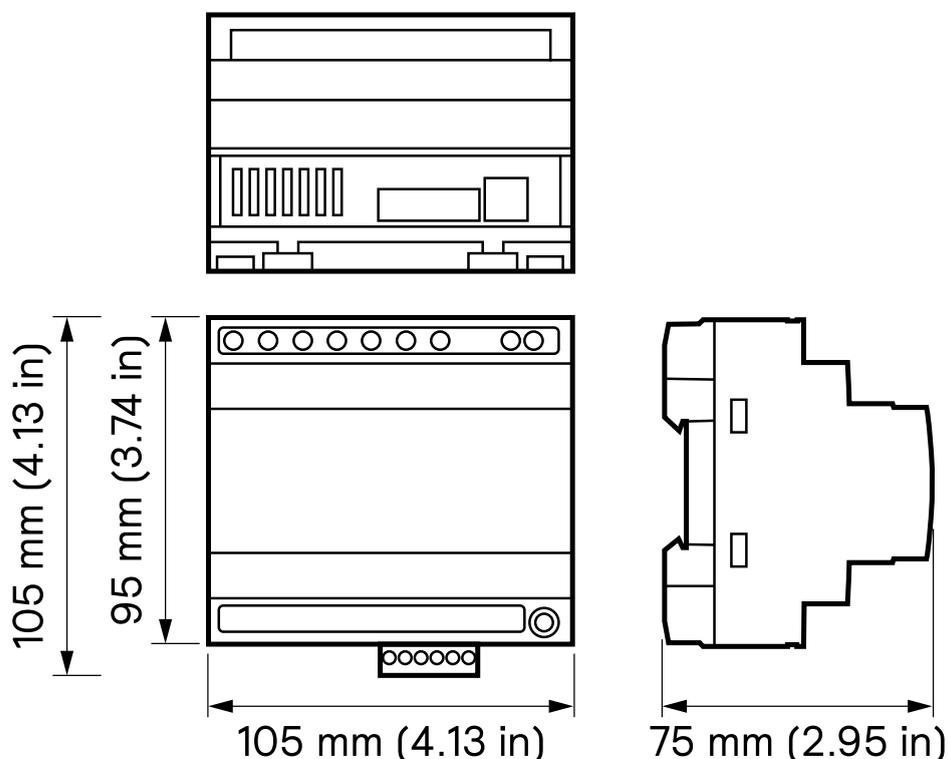
Key Features

- **Single-master solution** – Compatible with a range of DALI fittings and devices, including DALI fluorescent drivers, DALI electronic low voltage transformers, DALI LED fixtures, DALI emergency lighting fixtures and Dynalite DALI sensors and user interfaces.

- **Compatible with DALI 207 and DALI 209** – Provides control of tuneable white luminaires.

- **DALI auto-enumeration** – Provides automatic enumeration of DALI drivers when powered on and enables self-repair of the network system if a DALI driver fails.

- **Flexible mounting** – DIN rail mounting clips designed for installation into the distribution board supplying power to the controlled lighting circuit.

- **Fully scalable network solution** – Direct mapping from DALI to DyNet eliminates DALI-imposed limits such as maximum group size.

- **DALI port protection** – DALI port is protected by a self-resettable fuse, preventing damage to devices if exposed to prolonged excessive current from multiple DALI power supplies or accidental shorting to mains. Once fault conditions have been corrected, the device resumes normal operation.

- **Dual functionality** – Leverage advantages of a true DALI network solution, while still providing access to the DyNet feature set.

- **Driver standby power elimination** – Internal switched relay automatically isolates the power circuit when all drivers are dimmed to 0%.

- **Integral DALI bus power supply** – Removes the need for provision of a separate external power supply and reduces distribution board wiring complexity.

- **Driver management tools** – Includes lamp and driver status reporting, driver run time tracking, and emergency test reporting.

- **Onboard DALI test function** – Use the controller's service switch to set all connected lamps to full brightness, or flash on/off for a 5-minute test window, without the need for software or additional input devices.

Dimensions

Specifications

Electrical

Supply Type	Single-Phase
Supply Voltage	100-240 VAC
Supply Current	0.25 A
DyNet DC Output Voltage	12 VDC
DyNet DC Output Current	120 mA
Switched Outputs	1 x 20 A feed-through
DALI Protection	Electronic self-resettable fuse
IEC Overvoltage Category	III

Control

Communication Ports	1 x RS-485
Supported Protocols	DyNet DMX Rx
DMX Rx Channels	64
Control Channel Outputs	1 x DALI-2 (DALI-2 certified and DALI registered drivers only) (Supports DALI 207 & DALI 209 Tuneable White)
Dry Contact Inputs	1 (AUX)
User Controls	1 x service switch 1 x switched output channel toggle
Indicators	1 x diagnostic LED
Diagnostic Functions	Lamp failure reporting Driver failure reporting Driver runtime tracking Switched output runtime tracking Emergency test reporting Device online/offline status

Physical

Dimensions	95 x 105 x 75 mm (3.74 x 4.13 x 2.95 in)
Packed Weight	0.45 kg (0.99 lb)
Construction	Polycarbonate DIN rail enclosure (6 unit)
Serial Ports	1 x RJ12 1 x 6-way pluggable screw terminal
Serial Port Conductor Size	0.3-2.5 mm² (#22-12 AWG)
Control Terminals	1 x 2-way screw terminal
Control Terminal Conductor Size	≤5 mm² (#10+ AWG)
Relay/Loop Terminals	4 x screw terminal
Relay/Loop Terminal Conductor Size	≤5 mm² (#10+ AWG)
Supply Terminals	3 x screw terminal
Supply Terminal Conductor Size	≤5 mm² (#10+ AWG)

Environment

Operating Temperature	-20° to 50°C ambient (-4° to 122°F)
Storage/Transport Temperature	-25° to 70°C ambient (-13° to 158°F)
Relative Humidity	≤90% non-condensing
IEC Pollution Degree	II
Installation Note	For indoor installation only

Compliance

Certifications	CE, RCM, UL/cUL, FCC, ISED, UKCA, DALI-2
Sustainability	RoHS

Diagnostic Note

• Dynalite System Manager required for analysing diagnostic data.

• The availability of some diagnostics is dependent on driver type.

Output Channel Ratings

Load Type	UL/cUL (per channel)
Electronic Driver	16 A, 277 VAC
Inrush Current	500 A
Load Type	CE (per channel)
Electronic Driver	20 A, 240 VAC
Inrush Current	500 A

Control Channel Ratings

DALI	
Output Voltage	16 VDC
Guaranteed Current	220 mA
Maximum Current	250 mA
Maximum Drivers/Channel	64
Insulation	Basic

Note: Auto restart on DALI output overload or short circuit
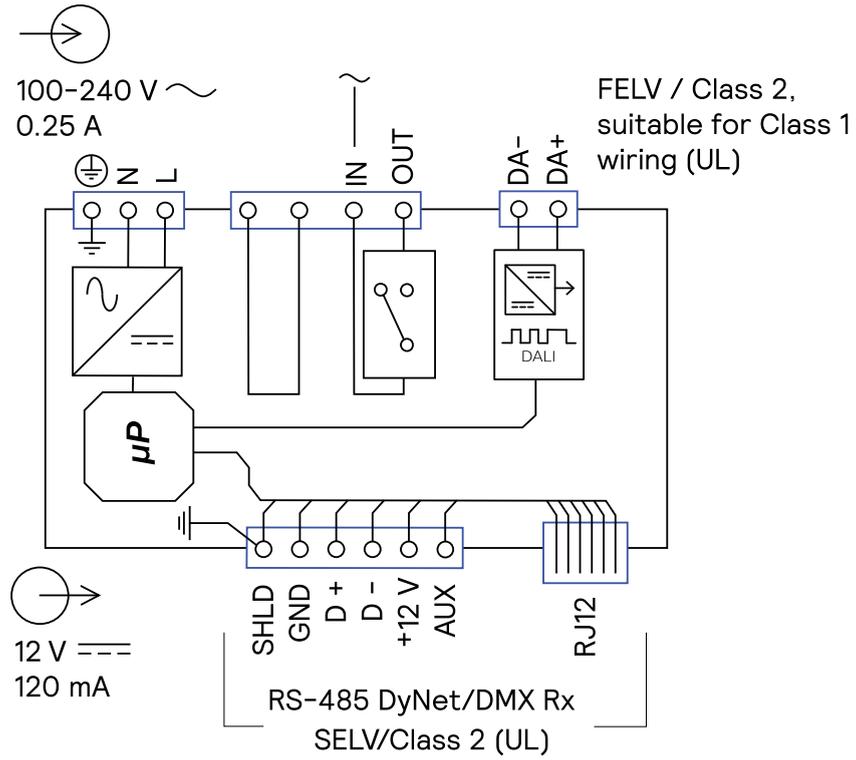
DALI Device Count

The table below shows the maximum number of DALI drivers and Dynalite DALI devices that can be connected to the DALI bus at the same time.

These devices include Dynalite DALI occupancy sensors and the DPMI940-D dry contact interface.

Dynalite DALI Devices	DALI Drivers
10	64
11	59
12	54
13	49
14	44
15	39
16	34

Due to continuous improvements and innovations, specifications may change without notice.

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Electrical Drawing

Ordering Codes

Product	12NC
DDBC120-DALI	913703685109