

DDBC320-DALI

DALI-2 Driver Controller



Specification Sheet

Controllers > DALI Controllers



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

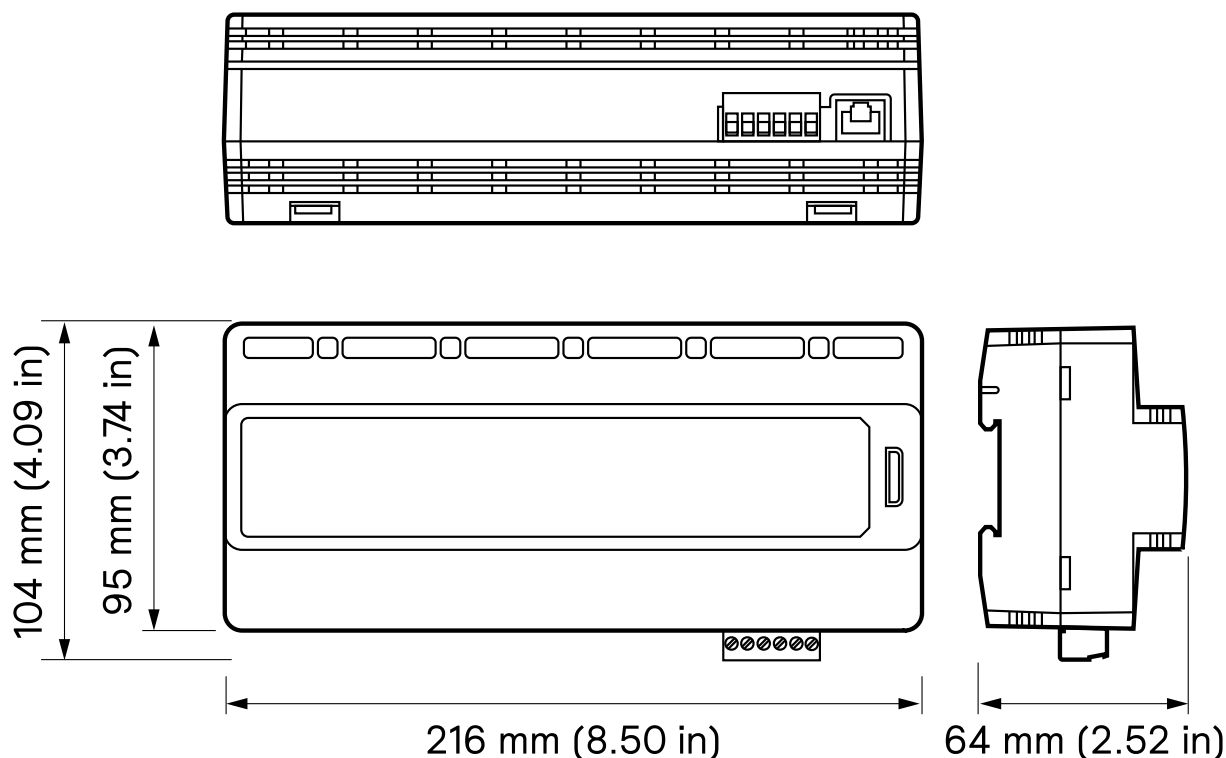
The Dynalite DDBC320-DALI is a three-line controller with integrated switched relay outputs, ideal for large-scale projects that need to combine a powerful, energy-efficient, all-in-one DALI control solution with the full DyNet feature set.

This controller operates seamlessly with all other Dynalite controllers, sensors, user interfaces, and head-end software, and includes a secured Ethernet port for network communication.

Key Features

- **Multi-master solution** – Compatible with a range of DALI fittings and devices, including fluorescent drivers, electronic low voltage transformers, LED fixtures, emergency lighting fixtures, and Dynalite DALI-2 sensors and user interfaces.
- **Compatible with DALI 207 and DALI 209** – Provides control of tunable white and RGBWAF luminaires.
- **Driver standby power elimination** – Internal switched relay automatically isolates the power circuit when all drivers are dimmed to 0%.
- **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.
- **Silent enumeration** – Constantly checks the DALI bus for changes, automatically enumerating individual driver replacements with no disruption to lighting performance.
- **UL 924 input** – Integrates seamlessly with compatible emergency systems.
- **Fully scalable network solution** – Direct mapping from DALI to DyNet eliminates DALI-imposed limits such as maximum group size.
- **Inbuilt Ethernet port** – Directly connecting to a site's LAN, the device can securely report its status and pass network messages via the Dynalite PDDEG-S (max 25 controllers per PDDEG-S).
- **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 additional software or input devices.
- **Onboard line override switch** – Set each DALI line's connected drivers to 100% or 0% brightness without additional software or input devices.

Dimensions



Specifications

Electrical	
Supply Type	Single-Phase
Supply Voltage	100-277 VAC
Supply Current	0.5 A
DyNet DC Output Voltage	12 VDC
DyNet DC Output Current	300 mA
Relay Outputs	3 x feed-through
Maximum CH-CH Voltage	500 VAC
IEC Overvoltage Category	III

Control	
Communication Ports	1 x RS-485 1 x Ethernet (10/100 baseT)
Supported Protocols	DyNet TCP/IP (TCP, UDP) IPv4 IPv6
Network Security Layer	TLS 1.2
Control Channel Outputs	3 x DALI-2 (DALI-2 certified and DALI registered drivers only) (Supports DALI 207 & DALI 209 Tunable White / RGBWAF)
Dry Contact Inputs	1 (AUX / UL 924)
User Controls	1 x service switch 3 x DALI line override switch 3 x DALI line test button
Indicators	1 x diagnostic LED 3 x DALI bus status LED 1 x Ethernet activity 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 216 x 64 mm (3.74 x 8.50 x 2.52 in)
Packed Weight	0.6 kg (1.32 lb)
Construction	Polycarbonate DIN rail enclosure (12 unit)
Serial Ports	1 x RJ45 1 x 6-way pluggable screw terminal
Serial Port Conductor Size	0.3-2.5 mm² (#22-12 AWG)
DALI Terminals	1 x 6-way screw terminal
DALI Terminal Conductor Size	0.2-5 mm² (#24-10 AWG)
Switched Terminals	1 x 8-way screw terminal (6 used, see Installation Instructions)
Switched Terminal Conductor Size	0.2-5 mm² (#24-10 AWG)
Supply Terminals	1 x 3-way screw terminal
Supply Terminal Conductor Size	0.2-5 mm² (#24-10 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	DALI-2, CE, RCM, UL/cUL, FCC, ISED, UKCA, 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
Pilot Duty	6 A, 120 VAC 3 A, 240 VAC 2.6 A, 277 VAC
Inrush Current	500 A
Load Type	CE (per channel)
Electronic Driver	20 A, 240 VAC
Inrush Current	500 A
Total Device Load	
≤60 A	

Control Channel Ratings

DALI	
Guaranteed Current	220 mA
Maximum Current	250 mA
Maximum Drivers/Channel	64
Maximum Drivers/Device	192
Insulation	Basic

Note: Auto restart on DALI output overload or short circuit

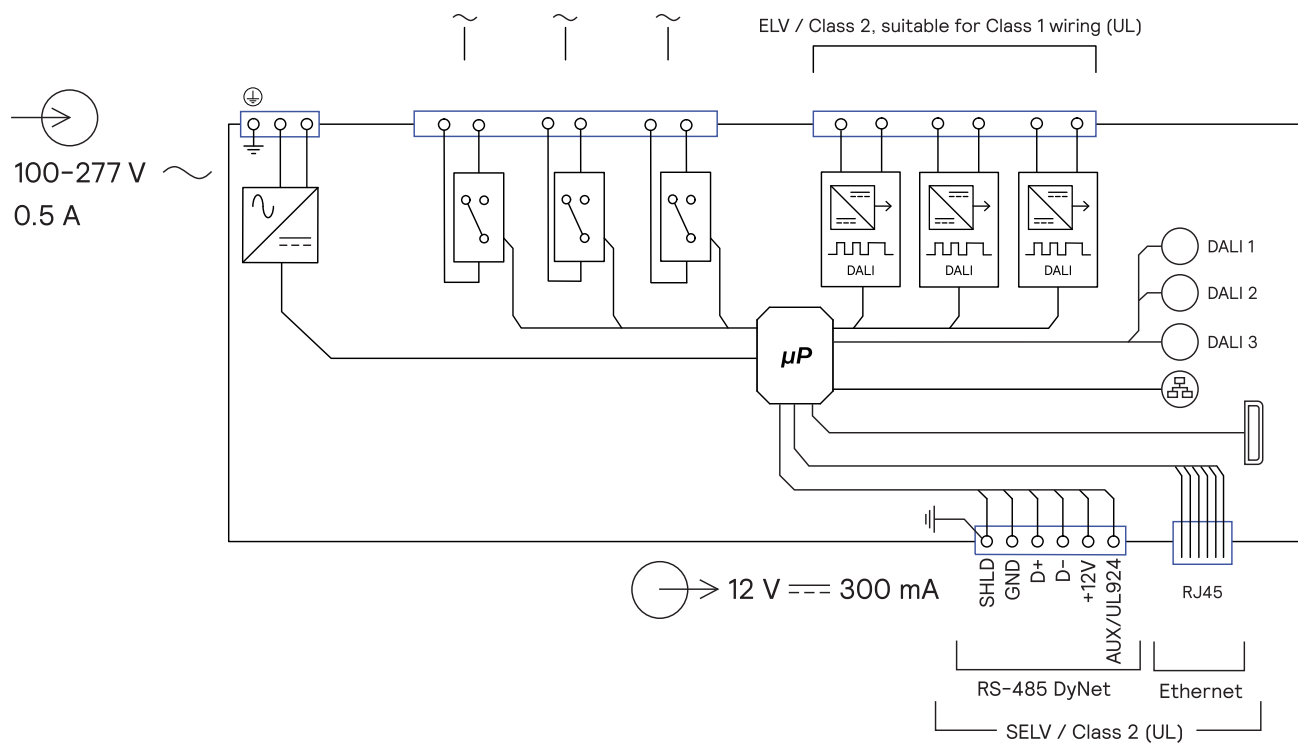
DALI Device Count

The table below shows the maximum number of DALI drivers and Dynalite DALI-2 devices that can be connected to the DALI-2 bus at the same time.

These devices include Dynalite DNS-DALI sensors and the DLLI5I-DALI dry contact interface.
Max. 16 x DLLI5I-DALI per universe.
For high-bay and directional sensor device counts, refer to <https://docs.dynalite.com/>

Dynalite DALI Devices	DALI Drivers
16	64
20	54
22	44
26	34
30	24
34	14
40	0

Electrical Drawing



Ordering Codes

Product	12NC
DDBC320-DALI	913703079709