

945 Application Controller

The 945 is a certified DALI-2 Multi Master Application Controller capable of controlling DALI-2 Lighting (Control Gear), DALI-2 Controls (Control Devices) as well as Helvar's unique range of loads and controls which also connect to the DALI-2 network.

Control and power up to two DALI-2 networks with the 945 Application Controller. Scale up to large and complex projects by networking multiple Imagine Application Controllers together using standard TCP/IP Ethernet connection.

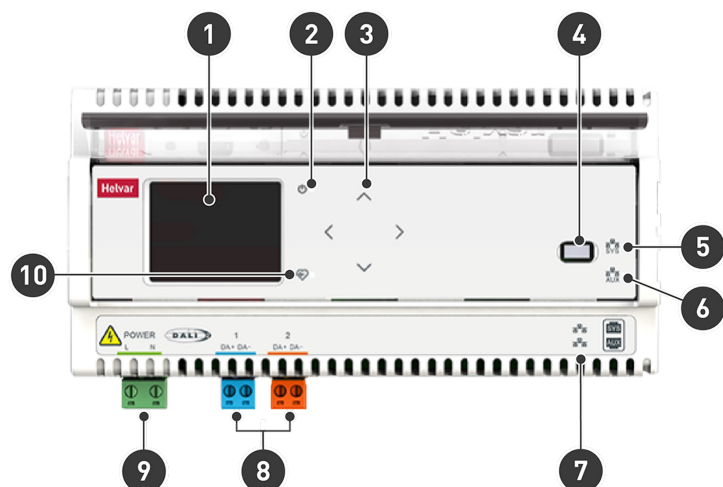
Programming can be carried out using Helvar's Designer software. All programming data is stored within the system itself eliminating a central point of failure and the need to always program with the latest saved configuration file.



Key Features

- DALI-2 Certified Multi-master application controller
- Support for 256 DALI devices
- Built in display for DALI network testing and alerts
- Built-in real-time clock
- Can be networked together to form large scalable systems
- Compatible with other Helvar Application Controllers
- Integration with other building systems
- LightOverTime Circadian Rhythm Control
- No central database required for system operation
- Hybrid connectivity to ActiveAhead wireless system via Node Link 5611

Connections



1. Display
2. Power On Indicator
3. Navigation buttons
4. Do not use. USB-C for developer purposes only.
5. SYS Indicator
6. AUX Indicator
7. SYS and AUX Ethernet connectors. SYS for lighting system network. AUX for developer purposes only.
8. DALI Connectors
9. Mains connections
10. System Heartbeat

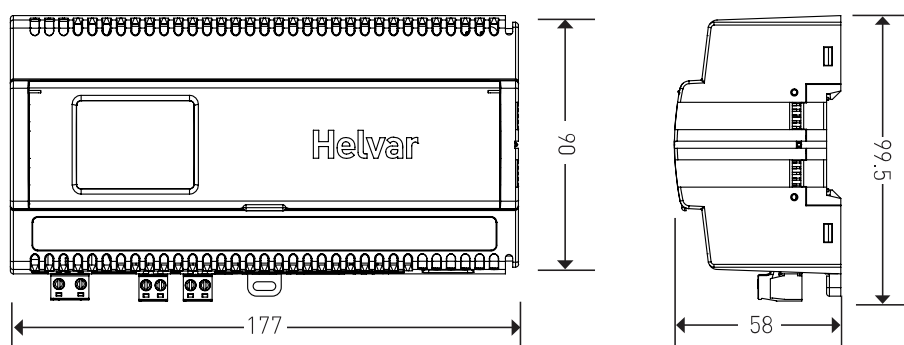
Note: The 945 Application Controller has been designed not to require an earth connection.

Note: Where DALI cable has screen, terminate to cabinet earth.

Network limits and design recommendations

	Absolute limits (DALI / DALI2)	Recommended (DALI / DALI2)
Power:	240 mA guaranteed, 250 mA max	220 mA max
Cable length:	300 m	250 m max
Cable type:	Mains rated	1.5 mm ² , mains rated
Addresses:	64 Lighting (Control gear) and DigiDim 63 DALI-2 controls (Control devices)	55 max control gear and Digidim devices; Keep under 220 mA DALI-2 and/or Digidim control devices: 15 max; Keep under 220 mA
Product compatibility:	Use recommended DALI-2 controls and application controllers only. Recommended max 1 DALI repeater per subnet.	

Dimensions (mm)



Technical Data

Connections

Mains:	Solid up to 2.5 mm ² Stranded up to 2.5 mm ²
DALI:	0.5–2.5 mm ² , Max. length: 300 m @ 1.5 mm ²
Ethernet:	2 × RJ45 10/100 Mb/s, CAT 5E up to 100 m (Auto MDI/MDI-X crossover) Sys for Lighting System Network Aux for developer purposes only

Electrical data

Mains supply:	230 VAC, 50/60 Hz 110 VAC, 50/60 Hz
Power consumption:	16 W (All DALI subnets fully loaded)
Heat dissipation:	10 W
Fusing:	Max. 16 A miniature circuit breaker

DALI output supply

DALI-OUT current:	2 × 240 mA (guaranteed) 2 × 250 mA (maximum)
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Variants

945:	230 V version
945-110V:	110 V version

Operating and storage conditions

Ambient temperature:	0 °C to +40 °C
Relative humidity:	Max. 90 %, noncondensing
Storage temperature:	–10 °C to +70 °C
Real Time Clock backup:	36 hrs in nominal environmental conditions

Mechanical data

Dimensions:	177 × 99.5 × 58 mm (10U)
Weight:	460 g
Mounting:	DIN Rail
Colour, body / lid:	White (RAL 9003) / Translucent red (RAL 3027)
Enclosure:	Polycarbonate
IP rating:	IP20 (IP00 at connectors)
Display:	Colour display 320 x 240 px

Conformity and standards

Conformity:	
DALI:	DALI-2 Application controller (Multi Master) IEC 62386 Parts 101 and 103
EMC emission:	EN 55015, EN 61000-6-3
EMC immunity:	EN 55035, EN 61547
Safety:	EN 61347
Environment:	Complies with WEEE, RoHS and REACH directives.

Note: See DALI Alliance Website for full detail of supported parts <https://www.dali-alliance.org/products>.

Compatibility

Designer:	5.8.9 or later
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Note: To ensure complete DALI-2 compatibility, use only with Helvar recommended DALI-2 controls (Control Devices).