950 Application Controller

The 950 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 four DALI-2 networks with the 950 Application Controller. Scale up to large and complex projects by networking multiple Imagine Application Controllers together using standard TCP/IP Ethernet connection.
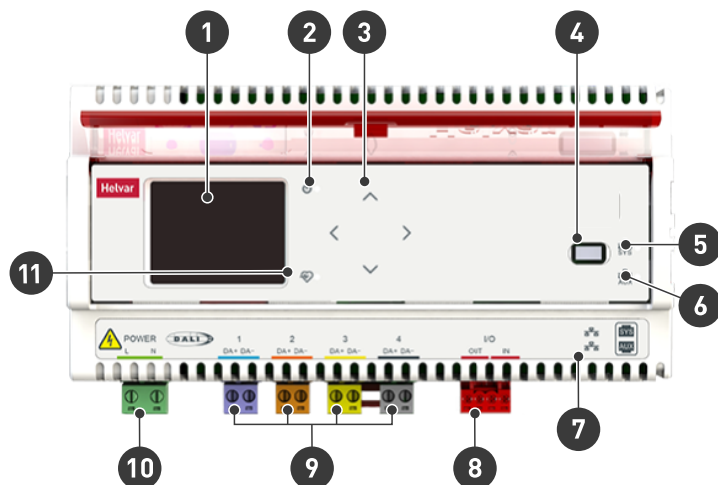
Programming can be carried out using Helvar's Designer software. All programming data is stored within the system itself eliminating a central point of failure and the need to always program with the latest saved configuration file.

Key Features

- DALI-2 Certified Multi-master application controller
- Support for 512 DALI devices (128 per subnet consisting of 64 lighting and Helvar DigiDim services + 63 DALI-2 Controls (Control Devices). Address 128 reserved for Application Controller)
- 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 (905, 910, 920 and 945)
- 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 and Ethernet connectors.
   SYS for lighting system network.
   AUX for developer purposes only
8. I/O Port (currently not in use)
9. DALI Connectors
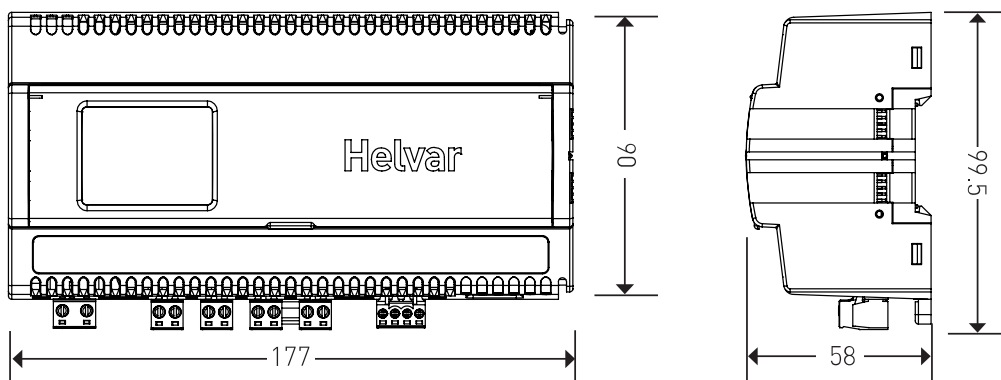10. Mains connections
11. System Heartbeat

Note: The 950 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 mm², mains rated
Addresses:	64 Lighting (Control gear) and DigiDim	55 max control gear and Digidim devices, Keep under 220 mA
	63 DALI controls (Control devices)	DALI-2 and/or Digidim control devices: 15 max; Keep under 220 mA
Product compatibility:	Use recommended DALI-2 controls and application controllers only.	

Dimensions (mm)

Technical Data

Connections

Mains:	Solid up to 2.5 mm²
	Stranded up to 2.5 mm²
DALI:	0.5–2.5 mm², Max. length: 300 m @ 1.5 mm²
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:	24 W (All DALI subnets fully loaded)
Heat dissipation:	12 W
Fusing:	Max. 16 A miniature circuit breaker

DALI output supply

DALI-OUT current:	4 × 240 mA (guaranteed)
	4 x 250 mA (maximum)

Variants

950:	230 V version
950-110V:	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:	CE UKCA
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 and RoHS directives.

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

Compatibility

Designer:	5.7.0 or later

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