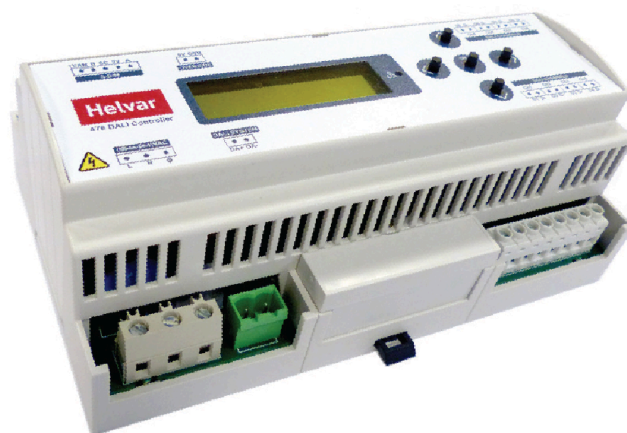# 478 8-Subnet DALI Controller

The 8-Subnet DALI Controller can control up to eight DALI channels of up to 64 devices. It is for controlling ballasts and drivers when device addressing is not required.

This reduces commissioning and maintenance costs, as the load devices can be simply replaced. The flexible control inputs support multiple protocols by routing an input address or group to its corresponding subnet output.
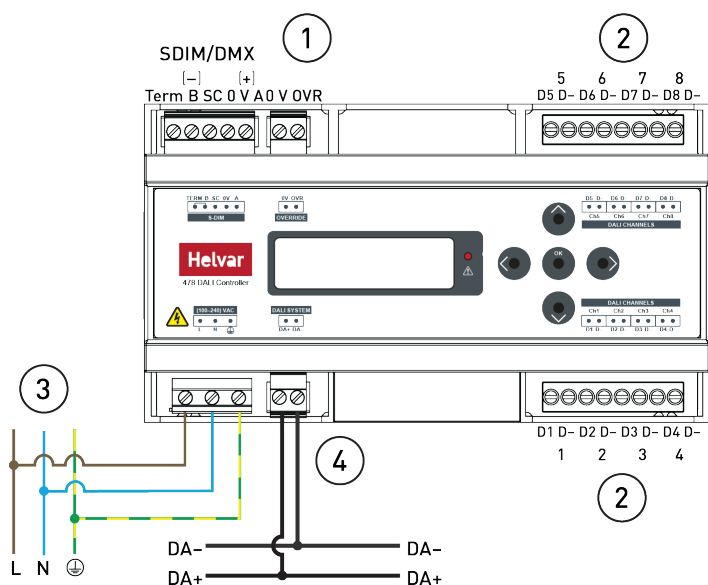
Connect the Controller to a DALI network, and configure using Helvar's Designer or Toolbox software.

Key Features

- Control using DALI broadcast messages on each subnet.
- Integral DALI power supply – supports up to 512 DALI devices (8 × 64 devices: 2 mA per driver/ballast).
- Lamp failure reporting per subnet.
- Lower commission costs – device addressing/grouping on subnet not required.
- DALI/SDIM/DMX control inputs.

Connections

1. Override
2. DALI channels
3. Mains supply
4. DALI control

Input/Output terminals

SDIM/DMX

A: Data +

B: Data -

0 V: Data reference

SC: Screen: not data reference

Term: Link to B for termination

Override

OVR V_{in} < 1.5 V; I_{short} = 1 mA

0 V   0 V return

DALI channels 1–8

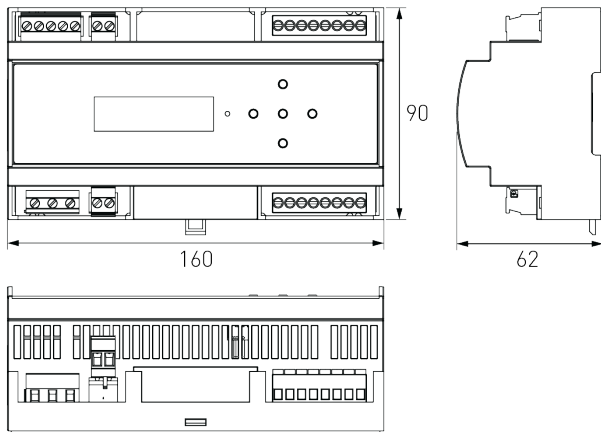DA+: D1;D2;D3;D4;D5;D6;D7;D8

DA−: D−

Note: Max. 64 devices per channel.

Mains supply

L: Live

N: Neutral

Earth: Protective earth must be connected.

DALI system

DA+

DA−

Dimensions (mm)

Technical Data

Connections	
Mains supply:	Solid core: up to 4 mm² Stranded: 2.5 mm²
DALI:	Wire section: 0.5 mm² – 2.5 mm² Max. length: 300 m @ 1.5 mm²
SDIM/DMX:	0.22 mm² – 1.5 mm² low-loss RS485 type (multistranded, twisted and shielded)
Cable rating:	Mains, relay and DALI cables (including outputs) must be mains rated.

Electrical data	
Mains supply:	100 VAC – 240 VAC (nominal) 85 VAC – 264 VAC (absolute) 45 Hz – 65 Hz
External MCB protection:	Max. 6 A The external power supply must be protected.
Isolation:	Between mains supply, DALI outputs, DALI system, and SDIM/ Override connectors. DALI channels are not isolated from each other.
Standby power:	No standby mode – DALI power provided for DALI channels.
Max. total losses:	7 W
DALI consumption:	2 mA (DALI system input)

Inputs	
Control:	DALI, SDIM or DMX
Override (OVR):	Wired override input
User interface:	5 push buttons for configuration

Outputs	
DALI:	8 output channels
Max. load per output:	128 mA (up to 64 devices, limited by current consumption)

Operating and storage conditions	
Ambient temperature:	0 °C to +40 °C
Relative humidity:	Max. 90 %, noncondensing
Storage temperature:	-10 °C to +70 °C

Mechanical data	
Dimensions:	9 module width: 160 mm × 90 mm × 62 mm
Weight:	250 g
Material:	Polycarbonate/ABS mix, UL94 V-0
Mounting:	DIN rail
IP rating:	IP00 (For installation in a restricted access location only)

Conformity and standards	
Conformity:	CE UKCA
EMC emission:	EN 55015
EMC immunity:	EN 61547
Safety:	EN 61347-2-11
DALI:	IEC 62386
SDIM:	Helvar protocol (RS485, 115 kbps)
DMX:	DMX512-A protocol (max. refresh rate: 33 Hz)
Environment:	Complies with WEEE and RoHS directives.

Software compatibilty	
Designer:	4.2.18 or higher
Toolbox:	2.3.3 or higher

478 8-Subnet DALI Controller: Datasheet
 Data is subject to change without notice.

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