

elitedali™ - for Niagara

smart lighting controls

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elitedali- H DALI 4 Channel Relay Datasheet

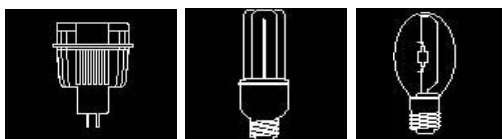
Introduction

CNS's elitedali 4 Channel Relay Module unit is manufactured by Helvar Oy and is available for use with **elitedali** Multidrop for Niagara solution, version v2.0.6 and later.

This addressable field relay provides on/off control and DALI network connectivity in order to conserve energy and effectively manage non intelligent lighting loads such as architectural and other external lighting as part of a complete Niagara smart lighting management solution. Simply connect to the integrated Digital Addressable Lighting Interface (DALI) bus to control daily operating cycle of non-intelligent lighting or other miscellaneous loads.



IMPORTANT: This datasheet refers only to the DALI operation of this unit.



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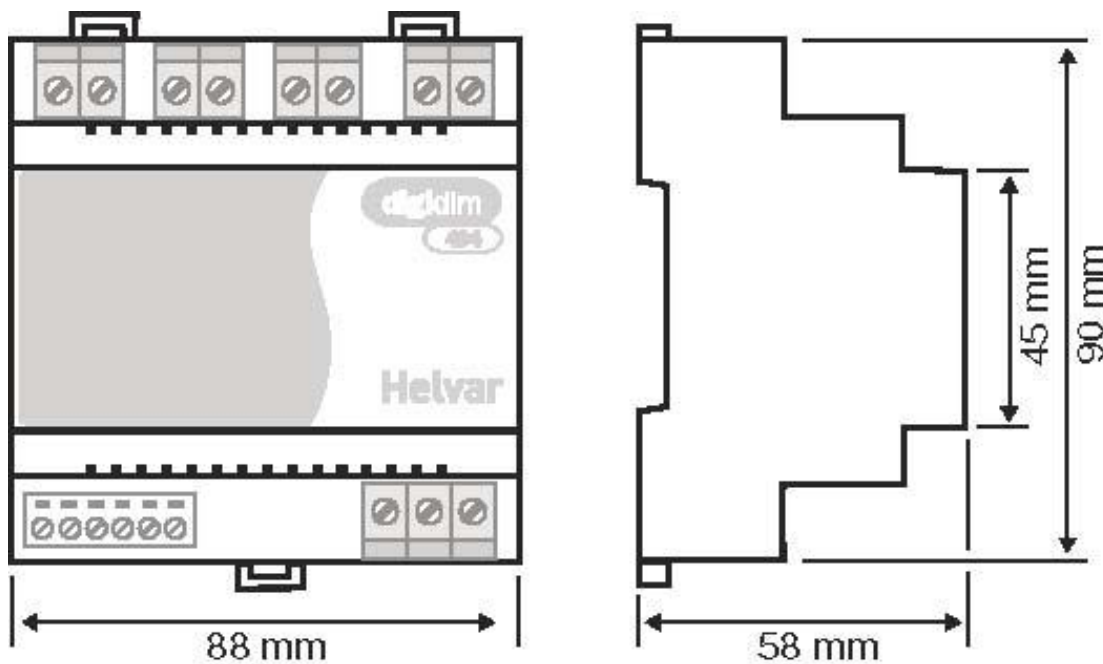
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Features

- ◆ Four individually programmable relays, normally open and volt- free.
- ◆ Relays are internally isolated permitting separate phases to be controlled in one unit
- ◆ Manual override
- ◆ All DALI functions are programmed within Niagara
- ◆ DIN-rail mounted and only 88 mm wide.

Specifications

Mechanical



DIMENSIONS (MM)

Housing:
Weight:
IP Rating:

DIN-rail case; 88mm
300 g
IP30 (00 at terminals)

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Operating and Storage Conditions

Ambient Temperature:	0°C to 40°C
Relative Humidity:	90% max, non-condensing
Storage Temperature:	-10°C to +70°C

Connections

Mains/relay:	Solid core: up to 4 mm ² Stranded: 2.5 mm ²
DALI:	0.5 mm ² - 1.5 mm ² (max. 300 m @ 1.5 mm ²)
Relay channels:	2 channels per 4-way connector; 2.5 mm ² stranded

Power

Mains Supply:	220 - 240 VAC, 50 - 60 Hz
Power Consumption:	2.6 W
Power Circuit Protection:	6 A MCB maximum. The external supply must be protected.
DALI Consumption:	2 mA

Inputs

Communication:	DALI
Override:	Wired override input

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Relay contacts	
Channels:	4
Relay contacts:	High inrush (200 μ s at 800 A), single pole single throw SPST, normally open (SPNO), volt free
Voltage:	400VAC
Isolation:	4kV
Max. load per contact:	10 A - resistive 8 A - incandescent 5 A - inductive
<i>For ballasts, quantity is limited by MCB, refer to manufacturer's data. Relay circuit external protection must not exceed 6 A type C MCB.</i>	

Conformity and Standards

DALI: According to DALI standard IEC 62386

Environment: Complies with WEEE and RoHS directives

EMC

Emission: EN 55 015

Immunity: EN 61547

Safety: EN 60950

Isolation: 4 kV

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User Information

Connections

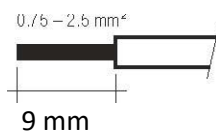
- ◆ The external mains supply must be protected. External protection must not exceed 6 A MCB
- ◆ All DALI and Mains cabling must be 230 V mains rated. The maximum cable length of the DALI control signal (for a cable cross-section of 1.5 mm²) must not be exceeded 300 m or 2 V voltage decrease
- ◆ ONLY connect to DALI
- ◆ Install the unit horizontally to allow for effective heat dissipation
- ◆ Any enclosure must provide adequate cooling ventilation

Installation Notes

DALI Wiring type and cross section

The wiring can be solid wire stranded wire with end sleeve with a cross-section of 0.75 mm² to 2.5 mm².

Wire preparation:



For installation in a restricted access location only DALI cabling must be 230 V mains rated. Isolate the mains supply before installation. The external supply must be protected. **It is recommended that a 4 A MCB is used DALI.**

3 Phase Connection

For good wiring practice, it is recommended that you do not connect different phases within the same block of two relays e.g. Connect one phase to either relays 1 or 2, the second phase to either relays 3 or 4, and the third to either relays 5 or 6 (or 7 or 8).

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IMPORTANT NOTES

DO NOT CONNECT LOW VOLTAGE AND MAINS VOLTAGE EQUIPMENT ON THE SAME CONNECTOR.

- **Install in accordance with all applicable National and Local Electrical & Building codes.**
- **Specifications subject to change without notice.**

Level Override

Insert the two-way connector and wire between terminals 'OVR' and '0V' for level override, if and when necessary (see *Figure 3* below).

Note: The decimal point on the right of the display screen is illuminated to indicate wired override.

Max. cable length = 50 m

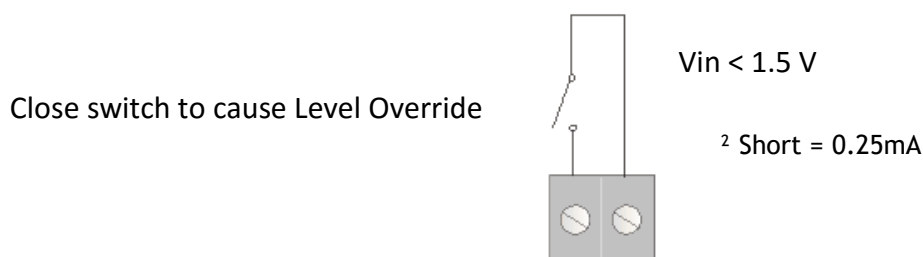
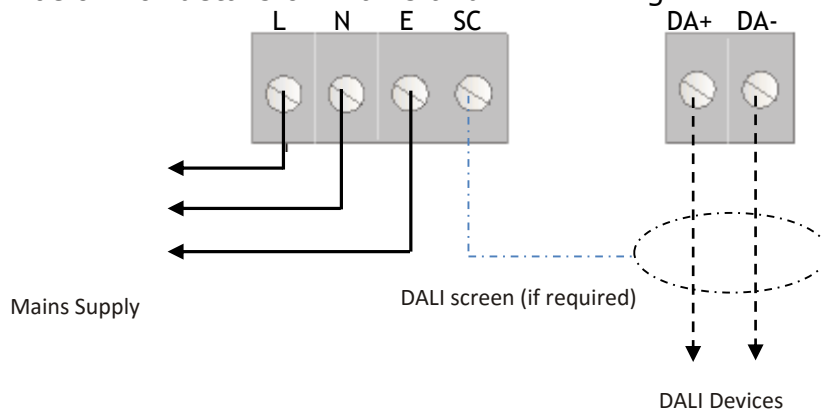


Figure 3: Level Override

Mains Power and DALI Wiring

See *Figure 4* below for details on mains and DALI wiring.



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Relay DALI Communication Interface

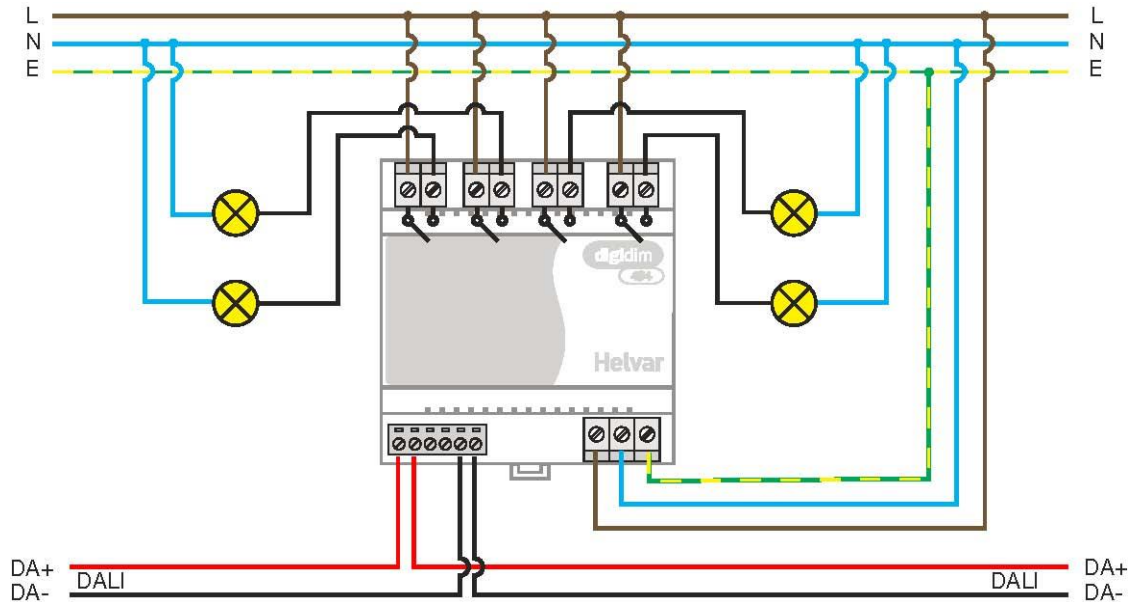
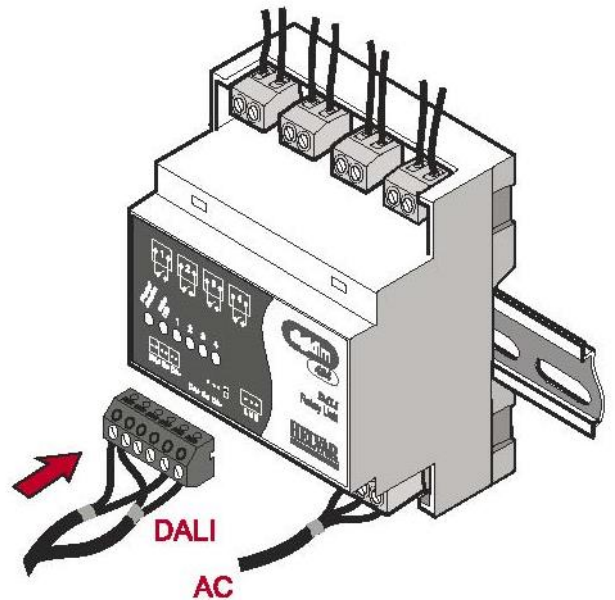


Figure 4: Mains Power & DALI

The Digital Addressable Lighting Interface (DALI) IEC 62386 is the international standard lighting communication protocol. It allows for a variety of lighting devices to be networked together on a common communication network. Run DALI wires with power wires in the same conduit or modular wiring to minimise installation costs. DALI wires are 18 AWG or larger, non-polarized, non-twisted, non-shielded and have a maximum length of 300 m. A maximum of 64 devices can be connected to a DALI bus subject to maximum DALI network power load of 250mA.



Each relay represents one of the 64 available DALI addresses applied by the native Niagara **elitedali** addressing tool.

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Order Details

Description:

DALI 4 x 10A Relay Module

Part No:

elitedali.HDALI4XR

Additional **elitedali** compatible DALI products are also available, [click here](#) for more details.

Contact Details

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