DGOZ-RLY-16A-01 / DGOZ-RLY-16A-02 - RAPIX DALI-2 Relays

Product summary and capabilities

These one and two channel DALI Relays are suitable for on/off switching of up to 16 Amps of lighting load using DALI commands.

The on-board 240 V ac relay can switch a full 16 A of LED, incandescent, fluorescent, and HID lighting loads, making it suitable for a wide range of commercial and industrial building applications.

These Relays include a large area for terminating all 1.5 mm^2 or 2.5 mm^2 double insulated cables: ac supply cables, switched load cables and DALI Line cables.

To maximise contact life, these Relays include a proprietary zero cross turn on feature. The load is switched on at the mains voltage zero-crossing point, helping to reduce the effects of inrush current and maximise contact life.

Product Features

- General purpose load switching (ON and OFF) via received DALI commands.
- Capable of switching 16 AX at up to 220 - 240 V ac.
- Very high inrush current rating – 500 A (2 ms).
- Includes large Neutral and Earth termination bars.
- Suitable for mounting in a ceiling void.
- Zero crossing detection to maximise relay contact life.
- Optional DIN rail mounting bracket.
- Fits through a 90 mm downlight hole.
- LED indicators (DALI and power).
- Uses a single DALI Short Address; can be including in up to 16 DALI Group Addresses and/or up to 16 DALI Scenes.
- DALI Short Address, Group Addresses and DALI Scenes are configured using *RAPIX Addressing* or *RAPIX Integrator* software. Can also be commissioned using other DALI commissioning software that supports DALI Device Type 7.
- Complies with DALI standard IEC 62386 and Device Type 7 (Switching Function).

Important notes and safety information

WARNING – Electric shock may result in serious injury or death. Follow all warnings in this guide and on the product. Work in accordance with the latest electrical safety practices.

- DALI system wiring is only single insulated from mains. Treat DALI wiring the same as mains wiring.
- There are no user serviceable parts inside the Relay. Do not attempt to disassemble or operate the device with any covers removed.
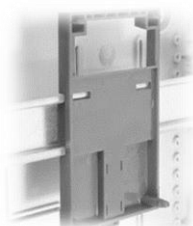- This Relay is intended for indoor use only.

Mounting

Surface Mounting

Three 6mm mounting holes are provided for mounting the device.

6mm Mounting holes

DIN Rail Mounting

For DIN rail mounting, use the optional DIN Rail mounting bracket (order code DGOZ-RLY-DINBKT)

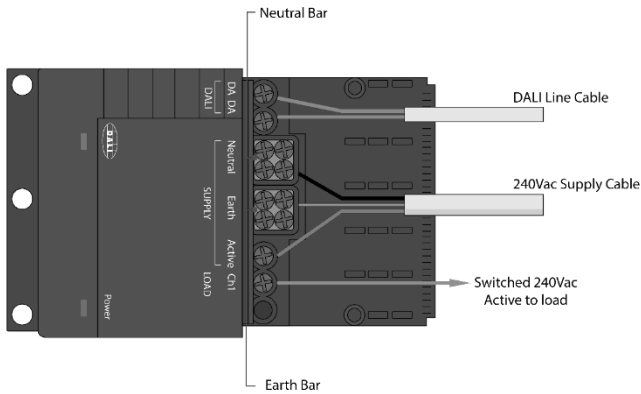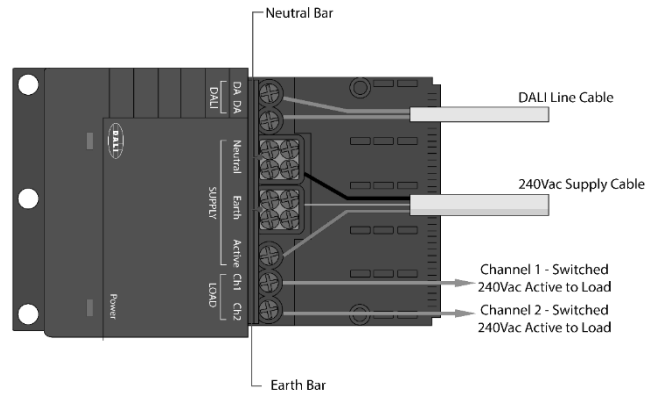|		
Mount the optional mounting bracket onto DIN rail. Lock into place by pushing up the black locking pin at the bottom of the bracket	Locate the Relay device onto the two pins at the bottom mounting bracket	Push the top of the Relay onto the mounting bracket and clip into place

Wiring

To operate correctly, the DALI Relays must be connected to ac mains voltage and a DALI line, as shown below.

One Channel Relay   **Two Channel Relay**
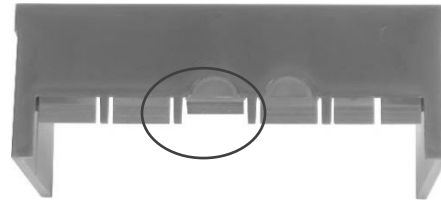

Notes:

- The Relays are not 'voltage-free' type: The load (switched line) output has an internal high impedance connection to Line input.
- The mains earth connection is optional and is not internally connected. Only the Mains Line & Neutral connections are required. If a 3-core cable with Earth conductor is used, the included Earth bar can be used to loop the Earth wire.
- If required, the Neutral and Earth bars can be used to loop 3-core cables to the load or other parts of the circuit.

Cable entry tabs/knockouts for 1.5mm2, 2.5mm2 and 5-Core modular cables
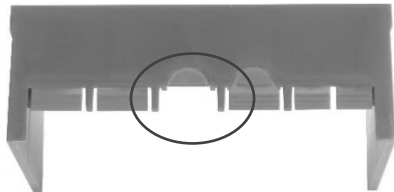
The terminal cover includes cable entry tabs/knockouts for use with typical 1.5 mm^2 and 2.5 mm^2 Flat TPS/building cable.
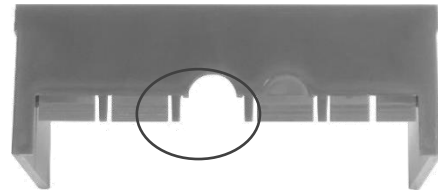

Tab locations

Tab pushed backwards to accommodate 1.5mm^2 cable

Tab removed to accommodate 2.5mm^2 cable

Circular knockout removed to accommodate 5-core modular wiring cable

Use cable ties to secure DALI mains supply and switched output cables

The base of the cable termination area has slots to tie down cables. Knockouts for additional cable ties are also provided. Cable ties are included with the Relay.

Commissioning

To operate correctly, the DALI Relay must be programmed with the appropriate DALI addresses. Depending on application, the following parameters may need to be configured:

- DALI Short Address;
- DALI Group Address(s);
- DALI Scene Address(s);
- Minimum Level and Maximum Level;
- Power On Level and System Failure Level;
- Fade Time and Fade Rate.

These parameters can be configured using *RAPIX* software, or any other DALI software which allows these standard DALI parameters to be configured in a DALI Compliant Relay device.

Standards and compliance

The product is designed to meet/exceed the following Australian and International standards:

EMC and Electrical Safety Frameworks and Standards
IEC/EN 60669-2-1, AS/NZS 60669.2.1
IEC/EN 61000-3-2, -3, AS/NZS 61000-3-2, -3
IEC 61000-4-2, -3, -4, -5, -6, -8, -11, EN 61547:2009
AS/NZS CISPR 15:2011
IEC/EN 60669-2-1, AS/NZS 60669.2.1

DALI Standards and Compliance
IEC 62386-101
IEC 62386-102
IEC62386-208

EU Directives
2014/35/EU	Low Voltage
2014/30/EU	Electromagnetic Compatibility (EMC)
2015/863	Restriction of Hazardous Substances (RoHS) in Electrical and Electronic Equipment

Specifications

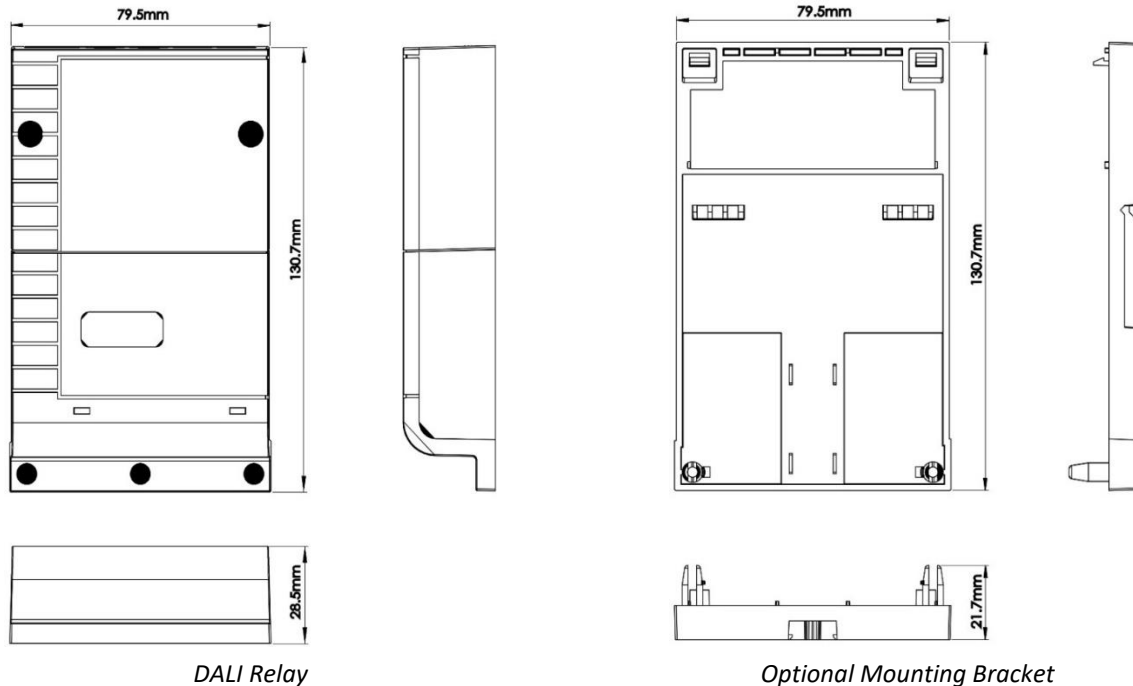|	
Number of Switched Outputs	DGOZ-RLY-16A-01: 1 DGOZ-RLY-16A-02: 2
Mains Supply Voltage	90 – 250 V ac
Mains Frequency Range	47 – 63 Hz
Electrical Isolation	4 kV (DALI to Mains)
Status Indicators	Power: Red ON DALI: Green ON
Load Rating	Resistive, Inductive, Fluorescent, LED, Capacitive: 10 A per channel Motor: 2 A (1 HP) per channel
Inrush Current Rating	500 A (2 ms)
Relay Switch Operations	> 50 000 operations at rated load
Relay Contact Type	Bifurcated High Inrush
Zero Crossing Switching	At the zero-crossing of voltage for relay turn-on.
Standby Power	< 500 mW
DALI Line Current Draw	2 mA
DALI Device Type	Type 7
Connections	Screw terminal: up to 2 x 2.5 mm^2 per terminal or up to 3 x 1.5 mm^2 per terminal
Ambient operating temperature	0 - 50°C
Humidity	0% to 95% RH non-condensing
Ingress protection	IP20
Housing Material Type	Flame Retardant Polycarbonate, UL 94V-0
Weight	1 Channel: 155 g 2 Channel: 170 g
Mounting	Surface mount using 6 mm mounting holes, or using optional DIN rail bracket
Approvals	UK CA CE RoHS COMPLIANT DALI 2

Indicators

DALI Green LED:

Indicator ON and fast-blink OFF once every 2 seconds	DALI OK
Indicator ON and multiple fast-blinks	DALI communications
Indicator OFF and fast-blink ON once every 2 seconds	Relay is functional, but no DALI Line voltage present

POWER Red LED:

Indicator ON	Mains power connected correctly
Indicator OFF	No mains connected

Dimensions

DALI Relay

Optional Mounting Bracket

Warranty

This product has a TWO YEAR warranty against manufacturing defects. The warranty applies from the date of purchase.

Refer to ozuno.com for the full conditions for warranty and returns process. A summary of the process:

1. Contact the seller of the goods, or in their absence contact Ozuno to request a return goods authorisation.
2. When a return is authorised, the goods must be returned to Ozuno at the owner's expense for technical evaluation.
3. The warranty claim will be evaluated by Ozuno and accepted if the goods are found to be faulty, or rejected if the fault was caused by conditions beyond the responsibility of Ozuno. Considerations of installation, removal, return, freight and testing are not the responsibility of Ozuno.

The Australian Consumer Law requires the inclusion of the following statement with this Warranty:

Our goods come with guarantees that cannot be excluded under the Australian Consumer Law. You are entitled to a replacement or refund for a major failure and for compensation for any other reasonably foreseeable loss or damage. You are also entitled to have the goods repaired or replaced if the goods fail to be of acceptable quality and the failure does not amount to a major failure.

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