

DGOZ-LPVFR-11 - RAPIX Xi DALI-2 Low Power Voltage Free Relay

Suitable for lighting, small motors and general-purpose switching functions

Product summary and capabilities

The Low Power Voltage Free Relay acts as a solid-state relay switching device on a DALI or DALI-2 system. This relay has full compliance with DALI-2 Device Type 7 (Switching Function) and includes support for the optional up/down switching thresholds.

The product includes a large area for terminating 1.5 mm² or 2.5 mm² double insulated cables (100 - 240 V ac cable and/or, DALI cables).



Product Features

- Switching function for DALI, compliant to IEC Standard 62386-208 (Device type 7).
- DALI line powered – draws only 2 mA from a DALI line.
- Switches ac and dc loads up to 1 A, including all lighting load types and low power motors (exhaust and ceiling fans).
- For ac loads above 100 V, performs switching at the mains zero-crossing to minimise stresses on loads and reduce inrush currents.
- dc loads to 24 V can be switched with no de-rating.
- Use for low power / low current voltage-free interface functions wherever an isolated relay contact is required.
- The output can be linked to a DALI Short Address.
- The output can be allocated to up to 16 DALI Group Addresses and/or up to 16 DALI Scenes.
- Includes over-temperature, overload and short circuit protection.
- Output suitable for use with SELV loads up to 24 V ac or dc.
- Commissioned using the **RAPIX Addressing** or **RAPIX Integrator** software. These software packages are available at no charge from ozuno.com.

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.

- This DALI-2 Solid State Relay is powered only from DALI line.
- 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**.

Applications & Compatible Load Types

Symbol	Load Type	Comment
	LED Lamps / Drivers	100 V – 240 V ac, up to 1 A. All lighting load types - including non-dimmable lighting loads and loads marked not suitable for electronic switches.
	Electronic Transformers	
	Standard Iron-Core Transformers	
	Toroidal Iron-Core Transformers	
	Incandescent	
	CFLs	
	Motors	100 V – 240 V ac, up to 1A. Exhaust fans & Ceiling fans
	DC general purpose switching	0 – 24 V dc, general purpose
	DC signal interfacing from DALI	0 – 24 V dc, Voltage-free / Dry-contact equivalent function

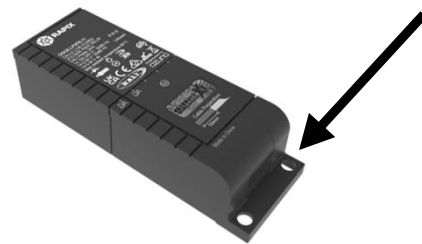
Incompatible Loads and Operations

Switching with voltages between 24 and 100 V, ac or dc.

Mounting

Surface mounting

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



DIN rail mounting

For DIN rail mounting, use the included DIN Rail mounting bracket:



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 onto the two pins at the bottom mounting bracket



Push the top on the relay onto the mounting bracket and clip into place

Cable entry tabs/knockouts

The terminal cover includes cable entry tabs/knockouts for use with typical 1.5 mm² and 2.5 mm² flat and round cable.



Tab pushed backwards to accommodate 1.5 mm² cable



Tab removed to accommodate 2.5 mm² cable

Use cable ties to secure cables

The base of the cable termination area includes slots for cable tying cables. Knockouts for additional cable ties are also provided.

Four suitable cable ties are included with the product.

Round cables

The cable cover allows round cable by appropriate removal of knock out regions.

Knockouts in the terminal cover allow circular and 5-core modular cables.



Standards and compliance

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

EMC and Electrical Safety Frameworks and Standards

EN 61347-1, AS/NZS 61347.1

EN 61347-2-11, AS/NZS 61347.2.11

IEC/EN 60669-2-1, AS/NZS 60669.2.1

IEC/EN 61000-3-2, -3, AS/NZS 61000.3.2, .3

IEC/EN 61000-4-2, -3, -4, -5, -6, -8, -11

EN 61547

IEC/EN 55015, AS/NZS CISPR 15, AS CISPR 15

DALI Standards and Compliance

IEC 62386-101 Ed 2

IEC 62386-102 Ed 2

IEC 62386-208

EC Council Directives

2014/35/EU Low Voltage

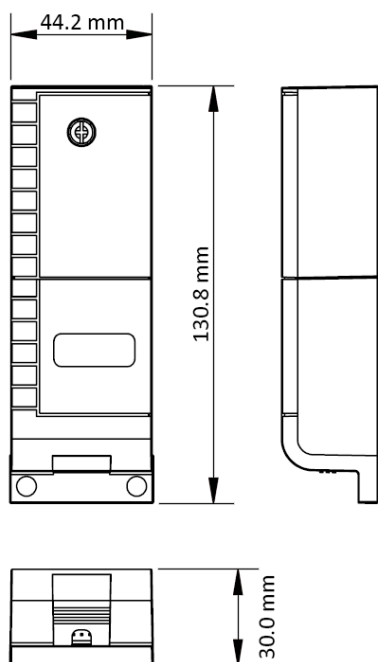
2014/30/EU Electromagnetic Compatibility (EMC)

2015/863 Restriction of Hazardous Substances (RoHS) in Electrical and Electronic Equipment

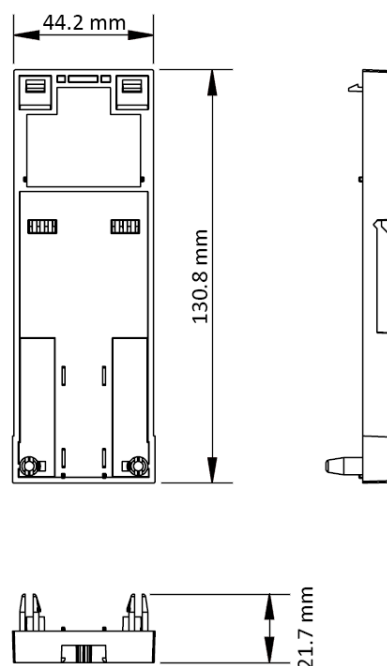
Specifications

Compatibility	DALI and DALI-2
Power source	DALI line
DALI operating voltage	16 V dc (nominal), with suitable operation from 9.5 V – 22.5 V
DALI line current draw	2 mA (nominal)
Mains tolerance	DALI input is mains voltage tolerant
Connections	Screw terminal: up to 2 x 2.5 mm ² per terminal or up to 3 x 1.5 mm ² per terminal
DALI – Output Isolation	> 1500 V
Relay Terminals Polarity	Non-polarised
Output terminal switching technology	Solid-state
AC switching voltage range	100 – 240 V ac, 50-60 Hz with zero-voltage switching 0 – 24 V ac, 50-60 Hz without zero-voltage switching
dc switching voltage range	0 – 24 V dc
dc de-rating	Not required
Maximum load	1 A (ac or dc)
AC off-state leakage current	≤ 0.1 mA rms at 240 V ac
dc off-state leakage current	≤ 5 µA at 24 V dc
dc off-state resistance	≥ 5 MΩ
dc on-state resistance	≤ 1Ω
Zero voltage switching	YES – 100 – 240V ac only
Thermal overload protection	YES – auto restart
Overload cut-out protection	YES – with manual restart: Switch off and then on with DALI commands
Short Circuit cut-out protection	YES – with manual restart: Switch off and then on with DALI commands
Ambient operating temperature	0 to 60° C
Ambient storage temperature	-10 to 70° C
Humidity	0% to 95% RH non-condensing
Ingress protection	IP20
Materials	Enclosure – Flame retardant Polycarbonate, UL 94V-0
Weight	80 g
Approvals	    

Dimensions



Low Power Voltage Free Relay



DIN Mounting Bracket

Suitability for SELV loads

This product can be used to switch SELV loads up to 24 V dc. The installer must ensure appropriate separation between DALI and SELV at all times.

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 owners 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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