RDMRELAY
MANUAL

Revision History

Revision	Date	Author(s)	Description
1	10.06.2025	FL	Initial version

Contents

EU Declaration of Conformity

We, **Visual Productions BV**, as the manufacturer, hereby declare under our sole responsibility that the following device:

Product Name: RdmRelay
Product Type: Lighting Controller

complies with the requirements of the following directives and standards:

Applicable Directives:
- 2014/30/EU – Electromagnetic Compatibility (EMC)
- 2011/65/EU (as amended by 2015/863) – Restriction of Hazardous Substances (RoHS)

Applied Harmonised Standards:
- EN 61000-6-1:2019 – Electromagnetic compatibility (EMC) – Part 6-1: Generic standards – Immunity for residential, commercial, and light-industrial environments
- EN 63000:2018 – Technical documentation for the assessment of electrical and electronic products concerning the restriction of hazardous substances

This declaration is issued under the sole responsibility of the manufacturer, confirming that the object of the declaration complies with the relevant Union harmonisation legislation.

Authorised Representative:
Full name and identification of the person responsible for product quality and compliance with standards on behalf of the manufacturer:

Date: March 28, 2025
Place: Haarlem, The Netherlands

Ing. Maarten Engels
Managing Director
Visual Productions BV

WARNING: The RdmRelay can switch AC power up to 250V.

Improper wiring or installation can result in **severe damage and personal injury or death**.

Do NOT open the RdmRelay when it is in operation.

ALWAYS have the installation fully checked by a **professional, certified electrician** BEFORE applying power.

Chapter 1

Introduction

Thank you for choosing the **RdmRelay** by Visual Productions.
The RdmRelay is an easy solution that enables you to remotely switch DC or AC powered loads on and off at your convenience. It uses 4 DMX channels of your choice to switch four individual relays, each with both a normally open and a normally closed connection. Giving you a wide range of extra options, light related or otherwise, for your installation.

Chapter 2

Overview

2.1 What's in the box?

When you open the box, you should find the following items:

Figure 2.1: In the box

- RdmRelay with two-pin and six-pin terminals installed
- 4 three-pin terminal blocks
- Quick Reference Card

2.2 Connections

2.2.1 Input

The input side of the RdmRelay has two- and six-pin terminal blocks. The RdmRelay's control power, 9-24V DC is connected to the two-pin terminal. And DMX in- and throughput occupy the six-pin terminal. See fig. 2.2 for the precise pinouts.

2.2.2 Relays

On the relay side of the RdmRelay, you will find four three-pin terminal ports. From left to right, the connections of each port are: normally closed (NC), common (●), and normally open (NO). See fig. 2.3. More information on relays on page 11.

Figure 2.2: Input terminals.

Figure 2.3: Output terminals.

Chapter 3

Installation

Installing your RdmRelay should be very straightforward. However, safety considerations need to be made.

Use caution when working on the connections of the unit. Only do so with all power disconnected. See the warning section on page 6.

Connect your wiring to the appropriate terminal block. Use wire gauges that are compliant with the power requirements of the load that is to be connected. We advise to use solid core wiring.

The RdmRelay's relays are capable of handling the following power configurations:

Voltage	Maximum Amperage
30V DC Resistive	16A
250V AC Resistive	16A
30V DC Inductive	8A
250V AC Inductive	8A

3.1   Status LED

The white LED on the RdmRelay indicates the state the unit is in. This table shows the four options:

Light	Status
Off	Powered off
Steady on	Powered on, not receiving
Short blinking	Receiving DMX
Long blinking	Receiving RDM

3.2 DMX

3.2.1 DMX Addressing

Once the RdmRelay is connected to an RDM enabled DMX controller, such as the CueCore3, the RdmRelay's DMX address can be set using RDM.

The starting address is the channel number of the first relay. And the unit will occupy the three subsequent DMX channels to control the three other relays in order. For instance: Setting the address to 1, results in the relays switching on the channels 1, 2, 3 and 4.

3.2.2 DMX control

After addressing the RdmRelay to your needs, the relays can be energized by setting the value of it's corresponding DMX channel to 135 (50%) or higher. Values of 0 to 120, will have the relay be non energized.

In the zone between those values, so 120 - 135, the direction of the state change dictates the behaviour. This is called 'hysteresis'. Going from off to on, values in this zone will result in 'on'. And reversely, going from on to off, they result in 'off'.

3.3 Relays

The four relays are each equipped with both a normally open as well as a normally closed connector. This allows for, as an example, switching devices on, when they are normally off, or off when they are normally on, respectively. Also, a single relay can be used to switch between two devices / circuits in, for instance, interactive setups.

3.3.1 Relay lifetime

Switching of different loads, voltages and types of current have a different impact on the life of the relay. Simply put, the lower the voltage and amperage used, the more switching cycles the relay is able to have before wearing out and needing to be replaced. Higher voltages and amperages can increase the wear significantly, lowering the life expectancy of the relay. With the data in the figure below, you can estimate the lifetime of the relays in your particular setup.
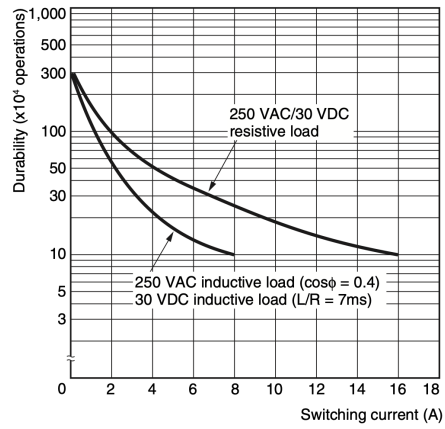
G2R-1-E, G2R-1A-E

Figure 3.1: Relay lifetime graph.[*Source: Omron*]