

INTRODUCTION

Ozone LED Driver is an Intelligent and flexible device, designed for indoor and outdoor lighting applications. This Application Note “**AN1_Ozone Wiring Diagram**” provides technical information for the wiring connections of the Ozone 70W LED Driver and mechanical fixing (all models).

Ozone LED Driver has a wide voltage range input connector and a multifunction output connector for LED connections, LED thermal protection (NTC), dimming and +5 V_{AUX}. It has also an additional connector for DALI communication.

This document describes how to connect the Ozone LED Driver (AC Input, Constant Current Output Channel, Communication and Controls).

CONNECTORS OVERVIEW

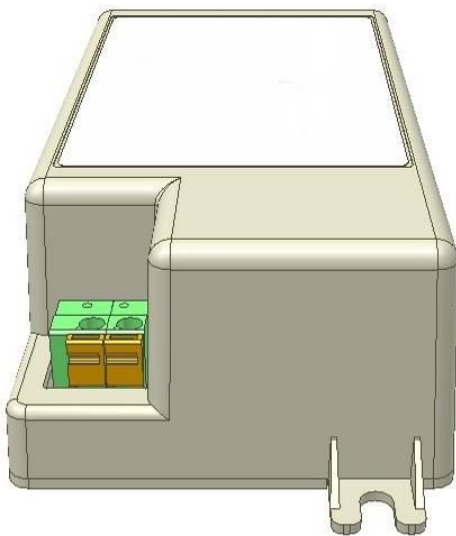


Figure 1
Input AC connector

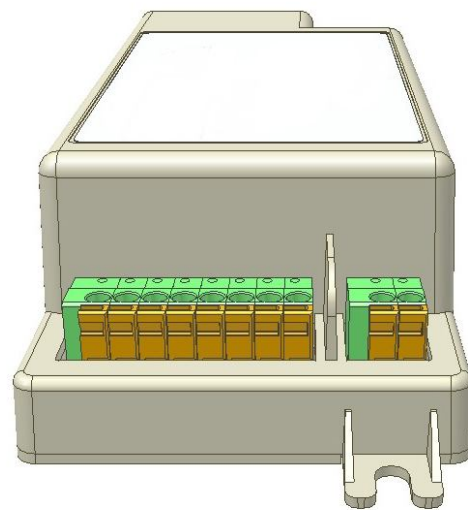


Figure 2
LEDs, NTC, 0-10V / 1-10V Dimming, Vaux and DALI connectors

AC INPUT CONNECTION^(*)

Ozone LED Driver can be powered by a wide voltage range AC Input from 120 to 277 V_{AC} (see **Figure 4**). Consult the product Datasheet “**DS_Ozone 70W Series**” for Input Voltages and Current ratings.

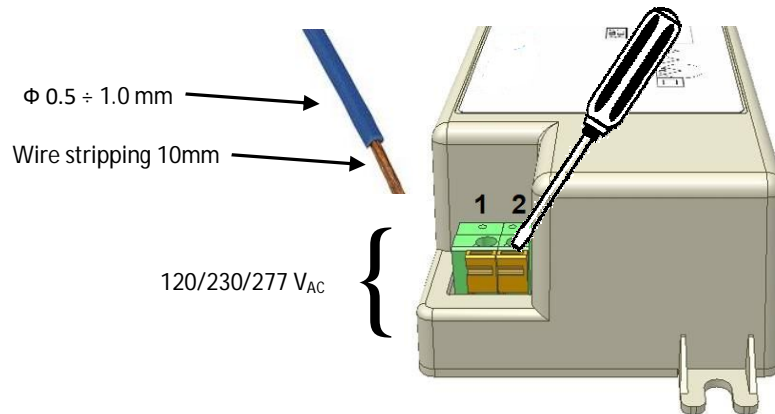


Figure 4
AC input Connector

(*) For European applications (ENEC), connect live parts with harmonized cables, according to the standard H03VVH02-F, H05VVH2-F or equivalent harmonized standards.

Connector	Pin number	Pin name	Description
2 pins	1	N	Neutral
	2	L	Line

Table 1
Ozone Input Connections Table



CAUTION: Electrical shock risks

Wrong device installation can cause serious injuries to the user, and irreparable damages to the device and to the connected LED lamp.

The driver may be installed only by qualified operators.

OUTPUT AND DRIVING CONNECTION(*)

Ozone LED Driver versatility permits the user to approach different driving solutions as showed below (see **Figure 5**). Consult the Datasheet “**DS_Ozone 70W Series**” for Output Voltages and Current ratings.

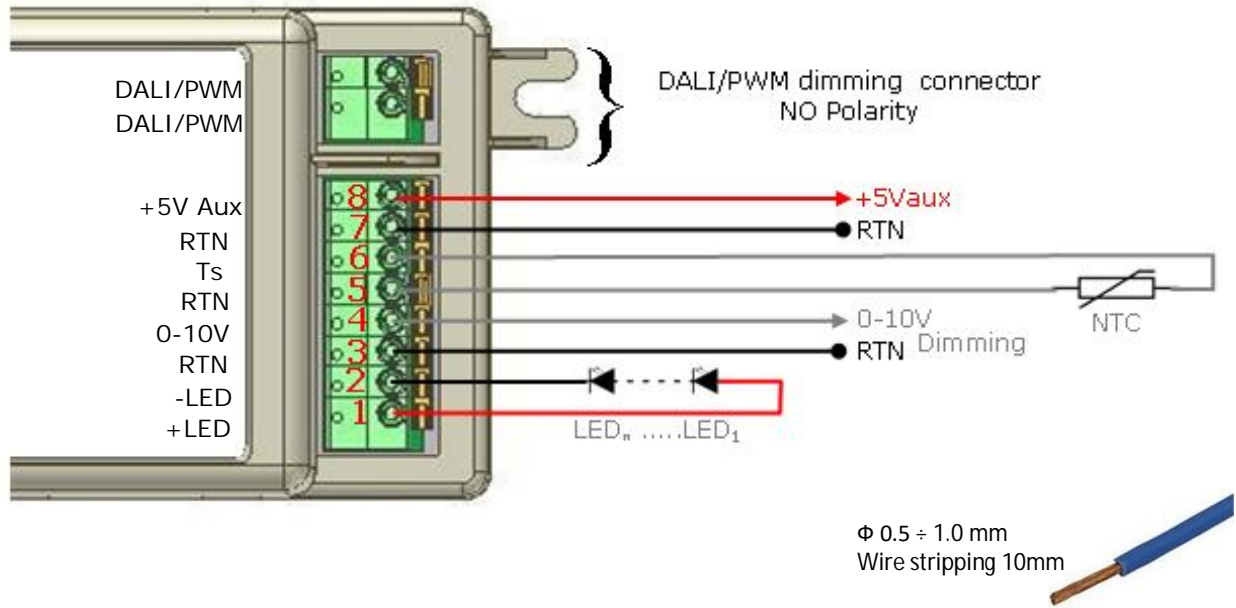


Figure 5
Ozone Output and Control Connections

(*) For European applications (ENEC), connect live parts with harmonized cables, according to the standard H03VVH02-F, H05VVH2-F or equivalent harmonized standards.

Connector	Pin number	Pin name	Description
8 pins	1	+LED	LEDs positive output
	2	-LED	LEDs negative output
	3	RTN	Return
	4	0-10V	1/10 V dimming input
	5	RTN	Return
	6	Ts	Thermal sense input
	7	RTN	Return
	8	+5 V _{AUX}	Auxiliary +5 V
2 pins	1	DALI/PWM	DALI or PWM dimming input
	2	DALI/PWM	DALI or PWM dimming input

Table 2
Ozone Output and Control Connections Table

Output/Control	Short Description
+LED -LED	Use these connector pins (1-2) to connect the LED string. Pay attention to respect the LED Driver output ratings. For additional info see the Product Datasheet " DS_Ozone 70W Series ".
0-10V Dimming	An external 0-10 V standard dimmer can be connected to dim the LED driver output current, from 10 % to 100 % of the maximum current set. For additional info see " AN2_Ozone Temperature Sense & 0-10V dimming ".
Ts (Thermal sense)	Using output connector pins (5-6), to connect a negative coefficient thermistor (NTC), in order to avoid a potential extra temperature of the LED fixture. For additional info see " AN2_Ozone Temperature Sense & 0-10V dimming ".
+5V Aux	Using output connector pins (7-8), the user has the possibility to power an external active cooling device or any max 3.75 W external control circuitry.
DALI	Ozone LED driver can be connected to a DALI network using the dedicated 2-way connector, both for input and output transmissions without polarity. The same connector may be used for PWM dimming. For additional information see " AN4_Ozone DALI&PWM Dimming ".
PWM dimming	Ozone can accept a PWM dimming signal on the DALI input connector according to the EN60929 annex E3. For additional info see " AN4_Ozone DALI&PWM Dimming ".

Table 3
Ozone Output and Controls

MECHANICAL FIXING

Ozone LED Driver has to be mounted on a flat surface as shown in **Figure 6**.

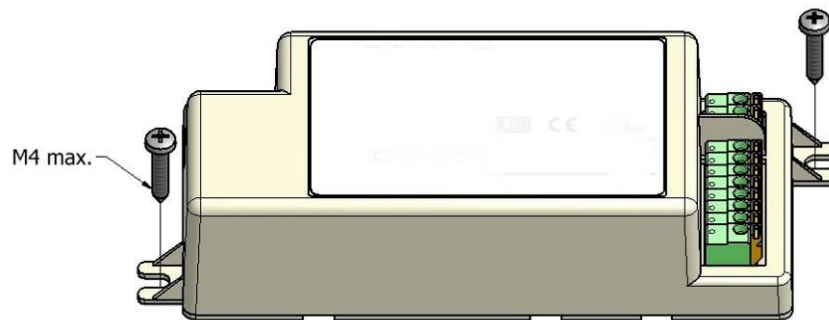
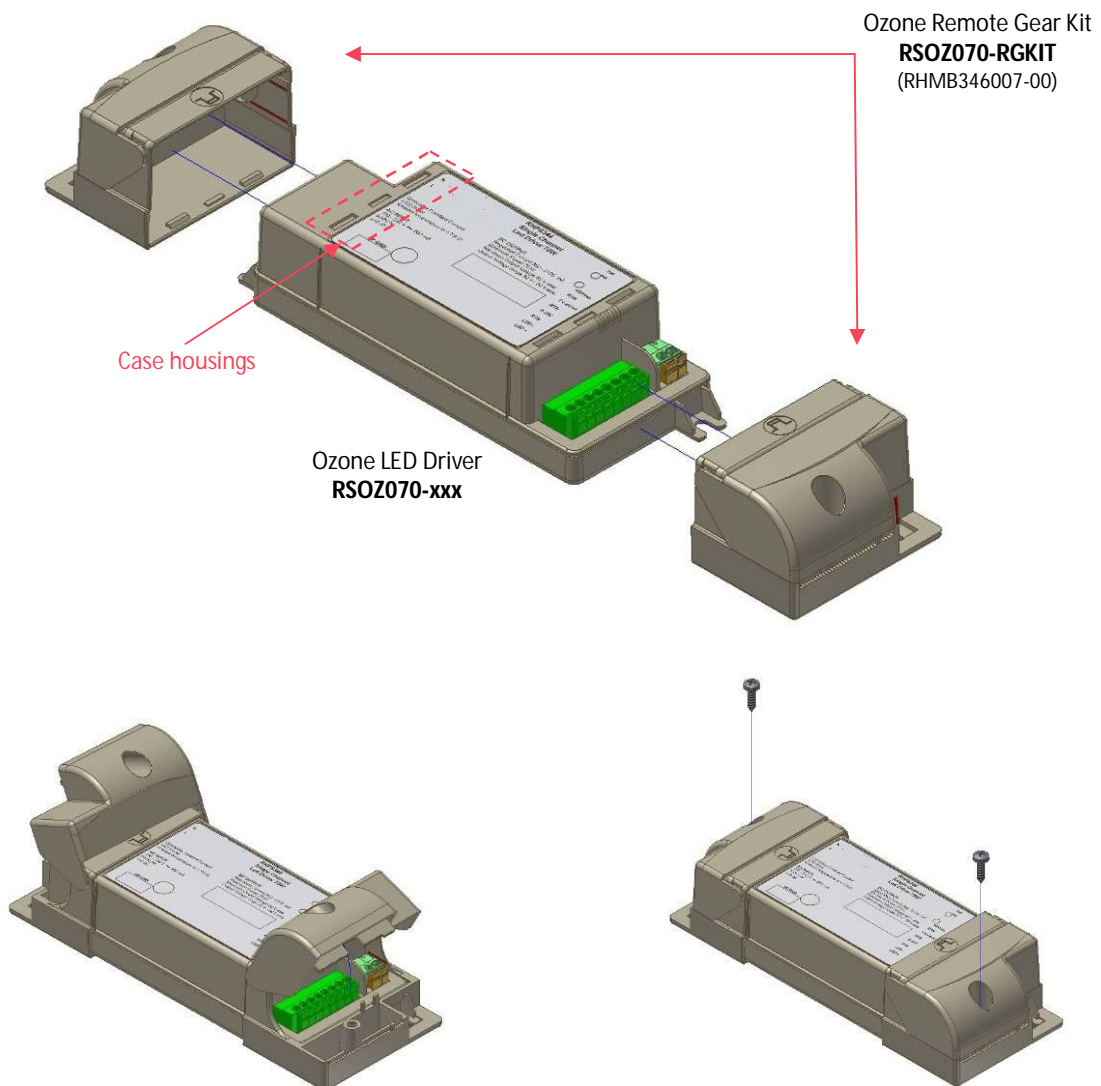


Figure 6
LED Driver mounting

OZONE REMOTE GEAR KIT

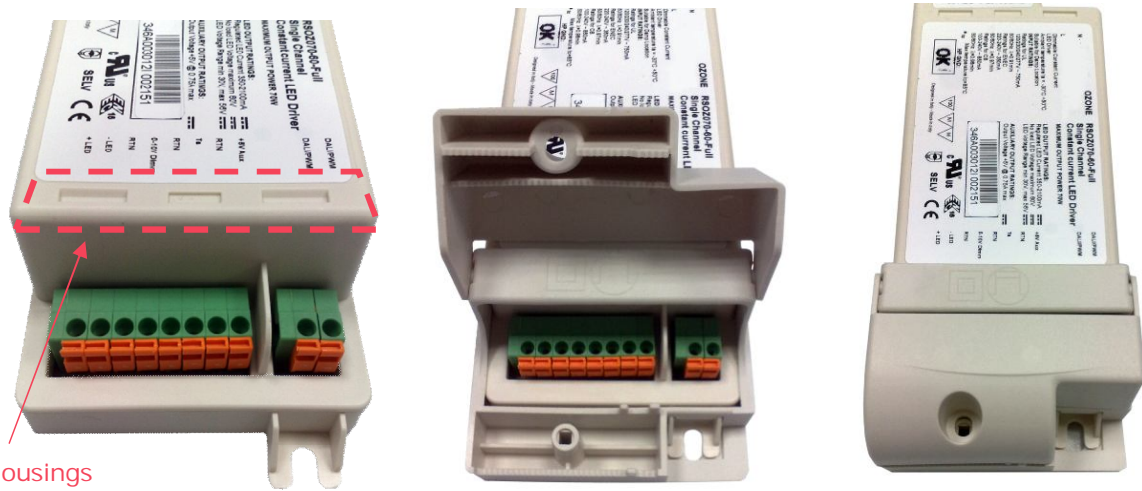
Ozone LED driver can be installed as an Independent Unit by using the Ozone Remote Gear Kit, available as optional with the code **RSOZ070-RGKIT** (production code: RHMB346007-00).

The kit is easily assembled by pushing the two shells toward the input and output connectors, locking them in the case housings and securing the unit by tightening the two screws in place, as shown in the following pictures:



Suggested AWG wires and screws for a good mechanical installation are the following:

Input and Output connectors:	Wires 0.5 – 1.0 mm
DALI connector:	Wires 0.5 – 1.0 mm
Screw type:	Thread forming screw for thermoplastic, Pan head screw, Phillips H cross recessed, d: 3.5 mm L: 12 mm
Screw torque:	10-12 Kgf x cm, Phillips H2 screwdriver tip



Case housings

Figure 7
Ozone Remote Gear Kit installation

The Independent Unit mark  is indicated on the kit, as illustrated in **Figure 8**.

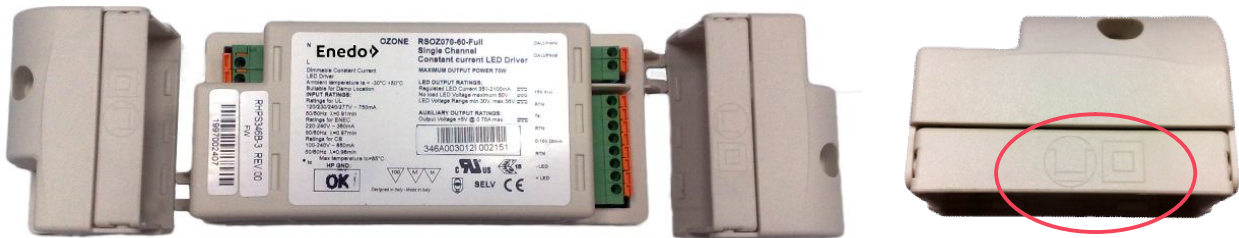


Figure 8
Ozone Remote Gear Kit

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