NICOLAUDIE ARCHITECTURAL

DINA-DR1 / LITE

DIN rail mounted - Advanced lighting controller

Overview

The DINA-DR1 is a lighting controller for the most ambitious of projects, outputting 6 DMX universes (3072 channels) in 20 zones. Trigger lighting scenes using calendar triggers and conditional rules with our New Stand Alone engine, using contact ports, RS232 or over Ethernet. In 2021 new features will be unlocked such as direct support for LED Pixel tape, DALI and remote management.

The lighting levels, color and effects can be programmed from a PC, Mac, Android, iPad or iPhone using software from our website.

http://www.nicolaudie.com/dina.htm

Key Features

- DMX / eDMX / LED Pixel Stand Alone controller
- Up to 6 x DMX512 universes (3072 channels)
- RDM compatable
- USB & Ethernet connectivity for programming/ control
- Stand Alone mode with 2000 scenes
- Play scenes in 20 areas / zones
- 16MB flash memory
- microSD slot
- 8 dry contact trigger ports
- Windows/Mac software to set dynamic colors/ effects
- iPhone/iPad/Android remote and programming apps
- SUT Technology allows the device to be used with other Nicolaudie Group software via an online upgrade

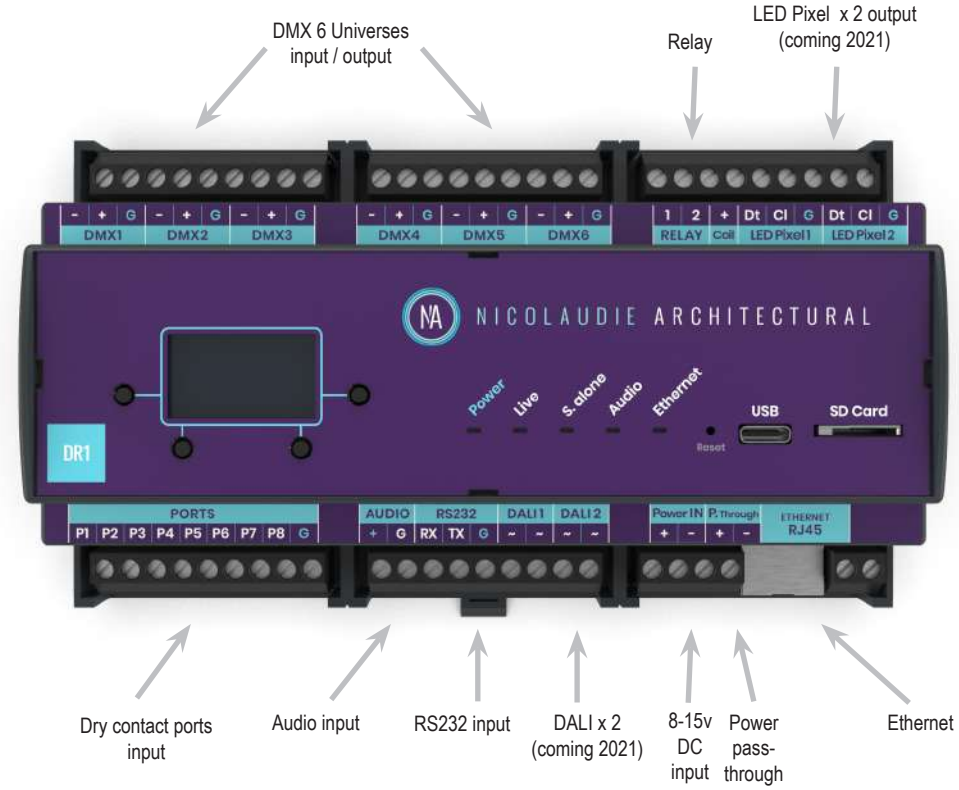
Optional Accessories

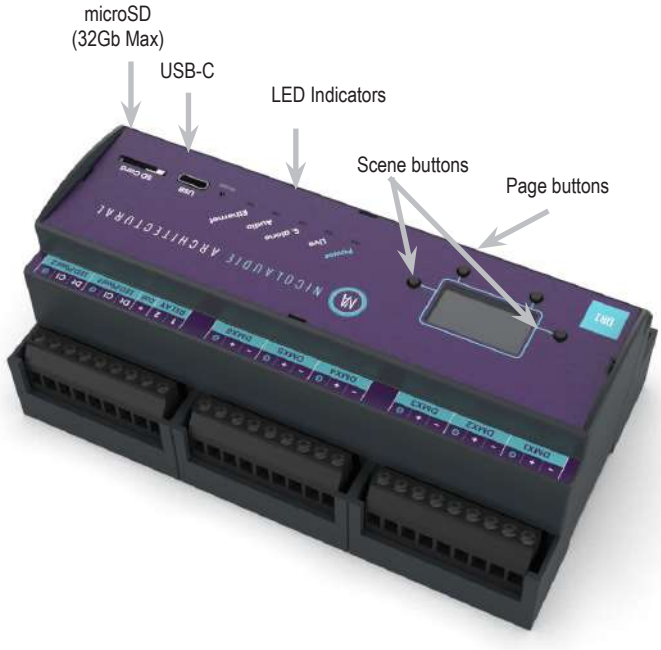
POWER	12V AC/DC power supply

Technical Data

Input Power	12v DC (8-15V range)
Output Protocol	DMX512 (x6), eDMX, LED Pixel (SPIx2)
Programmability	PC, Mac, Android, iOS
Connections	USB-C Ethernet Scew terminals for - 6 DMX / RDM Universes - 2 DALI loops (2021) - LED Pixel (2021) - 8 Contact ports - Relay - 12v power-in & p.through - RS232 scene trigger - Audio in (sound to light) Battery holder (CR2032) microSD slot
Memory	16MB flash, SD Card
Environment	IP20
Buttons	2 scene, 2 page, 1 reset
Dim / Weight	160 x 91 x 62 mm 317g
OS Requirements	Mac OS X 10.8-10.14 Windows 7/8/10

Connections





EASY INSTALLATION

1. Mount a DIN Rail or DIN Rail Encloser against a wall

2. Connect the wires

POWER: Connect 12V DC ACDC supply. The DINA-DR1 can accept 8v-15v.
Be sure to not invert the + and the ground.

DMX: Connect the DMX cables from one of the 6 universes to the lighting receivers

3. Clip the DINA-DR1 onto the DIN RAIL

On the back of the interface housing is a channel designed to accept a DIN Rail with a black plastic clip which secures the interface.

To mount: Slide the mounting teeth behind the top of the rail and then rotate downwards to engage the clip.

To dismount: At the lower edge of the interface you will see a plastic clip. Pull this down to release interface from the rail.

SETTING UP THE CONTROLLER

Programming the DINA-DR2

The controller can be programmed from a PC, Mac, iOS (Apple) or Android device using the software listed below. Refer to the corresponding software manual for more information. Firmware and settings can be updated using Hardware Manager (installed with PC/Mac programming software) or with Hardware Tools (Android / iOS, compatibility coming soon).

Windows / Mac Programming Software

ESA Pro 2 (Windows/Mac) - Multizone
www.nicolaudie.com/esapro2.htm

ESA2 (Windows/Mac) - Single Zone
www.nicolaudie.com/esa2.htm

Hardware Manager (Windows/Mac) For Firmware, time/date..
Find this under Tools @ nicolaudie.com/download.htm

Apple iOS and Android Apps

Arcolis - Search for 'Arcolis' on the Google Play Store and iOS App Store

Hardware Tools (compatibility coming soon)
Search for 'Hardware Tools' on the iOS App Store. Android coming soon.

CONNECTIONS AND TRIGGERING

DMX512

Connect up to 6 DMX universes and 2 for the DINA-DR1 LITE . It is possible to buy extra DMX universes for the LITE version to reach the maximum amount of channels (6 universes in total).

PORTS

Use up to 8 external trigger ports (dry contacts)
Connect G and P1 to start the port #1
Connect G and P2 to start the port #2...
The ports can be programmed in your show file (TCA)

LED INDICATORS

- POWER: orange LED is ON when the interface is powered
- LIVE: green LED is ON when a soft/app communicates with the controller
- S.ALONE: red LED is ON when the controllers runs in standalone mode
- AUDIO: white LED is flashing when the controller receives an audio signal
- ETHERNET: blue LED is flashing when the controllers is connect to a local network

AUDIO

It is possible to directly connect an analog audio source to the DINA-DR1 in order to trigger your lighting scenes with the music beat. Simply connect a line livel signal to the controller.

The programming/configuration must be done with ESA Pro 2 software like any other TCA trigger. You can decide to make a scene to jump from step to step according to the music beat.

When an audio signal is received by the controller, the AUDIO LED (white) is flashing.

RS232

Make a cable using the 3 pins : TX, RX and G (GND)
Set the RS232 parameters to : 9600bds 8 bits, no Parity, 2 Stop bits
Messages should be hexadecimal not decimal (ie. 1 = 01, 255 = ff etc.)
- To play a scene, send 4 bytes : 1 x y 255
- To stop a scene, send 4 bytes : 2 x y 255
- To pause a scene, send 4 bytes : 3 x y 255
- To release a pause, send 4 bytes : 4 x y 255
- To reset a scene, send 4 bytes : 5 x y 255

When (y)=0, (x) can be set between 0 and 255
-to stop scene 145, send the command: 2 145 0 255
When (y)=1, (x) can be set between 0 and 243 to trigger scenes 256-499
-to play scene 300, send the command: 1 44 1 255

A page can contain 1-2000 scenes as long as the total number on all pages does not exceed 2000. The index of a scene can be found by looking in the file /show1/show_map.xml after writing a scene.

General examples:
0x01 0x02 0x00 0xFF to call scene 2
0x01 0x05 0x00 0xFF to call scene 5
0x01 0x10 0x05 0xFF to call scene 1296

HARDWARE SETTINGS DISPLAY

It is possible to display most of the controller settings from the device screen. Simply press and hold for 2 seconds the 2 zone buttons to display the settings. You can then navigate with the scene buttons. Repeat the operation to leave the display mode.
The most important settings can be visualized from the device display: date/time, firmware version, serial number, network settings, etc...It is also possible to visualize the controller performances (CPU, memory...).

LOG MANAGEMENT

The DINA-DR1 offers the possibility to store activity logs on the SD CARD or on a syslog server. This option can be activated from the Hardware Manager program (Settings tab) and could be very helpful to service an installation. We recommend to activate the SD CARD option on demand only (debugging operation) to lower the SD CARD access.

15W Ultra Slim Step Shape DIN Rail HDR-15 series

User's Manual

LPS UL508 UL62368-1 BS EN/EN61558 R33100 RoHS TPTC004 AS/NZS60950-1 IEC62368-1 ECO Household Automate Industrial Security Network Telecom

Features

- Ultra slim design with 17.5mm(1SU) width
- Universal input 85~264VAC(277VAC operational)
- No load power consumption<0.3W
- Isolation class Ⅱ
- Pass LPS (Limited power source)
- DC output voltage adjustable
- Protections : Short circuit / Overload / Over voltage
- Cooling by free air convection (working temperature:-30~+70°C)
- DIN rail TS-35/7.5 or 15 mountable
- Over voltage category Ⅲ
- LED indicator for power on
- 3 years warranty

Applications

- Household control system
- Building automation
- Industrial control system
- Factory automation
- Electro-mechanical apparatus

GTIN CODE

MW Search: https://www.meanwell.com/serviceGTIN.aspx

Description

HDR-15 is one economical ultra slim 15W DIN rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 17.5mm(1SU) in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 85VAC to 264VAC(277VAC operational) and conforms to BS EN/EN61000-3-2, the norm the European Union regulates for harmonic current.

HDR-15 is designed with plastic housing that it can effectively prevent user from electric hazards. With working efficiency up to 87%, the entire series can operate at the ambient temperature between -30℃ and 70℃ under air convection. The complete protection functions and relevant certificates for home automations and industrial control apparatus (IEC62368-1, UL508, UL62368-1, BS EN/EN61558-2-16) make HDR-15 a very competitive power supply solution for household and industrial applications.

Model Encoding

HDR - 15 - 12

- 12 — Output voltage
- 15 — Rated wattage
- HDR — Series name

SPECIFICATION

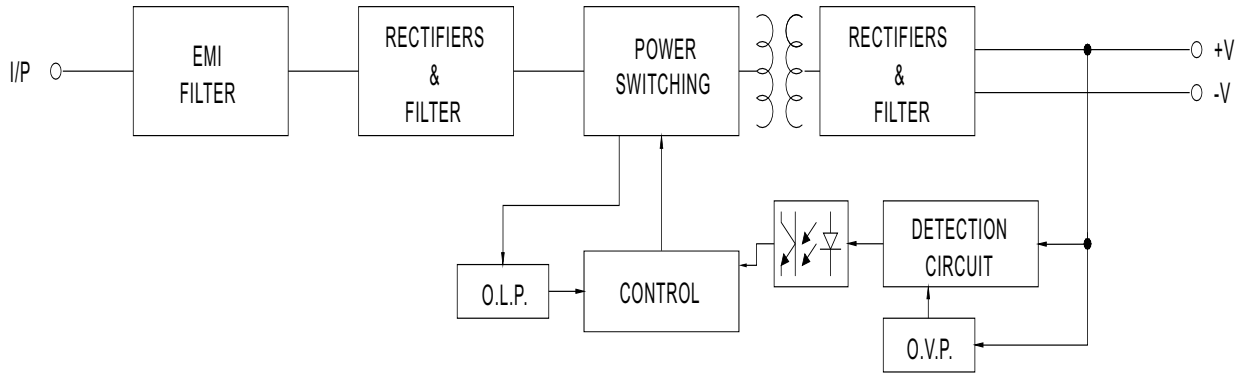
MODEL		HDR-15-5	HDR-15-12	HDR-15-15	HDR-15-24	HDR-15-48
OUTPUT	DC VOLTAGE	5V	12V	15V	24V	48V
	RATED CURRENT	2.4A	1.25A	1A	0.63A	0.32A
	CURRENT RANGE	0 ~ 2.4A	0 ~ 1.25A	0 ~ 1A	0 ~ 0.63A	0 ~ 0.32A
	RATED POWER	12W	15W	15W	15.2W	15.4W
	RIPPLE & NOISE (max.) Note.2	80mVp-p	120mVp-p	120mVp-p	150mVp-p	240mVp-p
	VOLTAGE ADJ. RANGE	4.5 ~ 5.5V	10.8 ~ 13.8V	13.5 ~ 18V	21.6 ~ 29V	43.2 ~ 55.2V
	VOLTAGE TOLERANCE Note.3	±2.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LINE REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	LOAD REGULATION	±1.0%	±1.0%	±1.0%	±1.0%	±1.0%
	SETUP, RISE TIME	2000ms, 80ms/230VAC 2000ms, 80ms/115VAC at full load				
	HOLD UP TIME (Typ.)	30ms/230VAC 12ms/115VAC at full load				
INPUT	VOLTAGE RANGE	85 ~ 264VAC (277VAC operational) 120 ~ 370VDC (390VDC operational)				
	FREQUENCY RANGE	47 ~ 63Hz				
	EFFICIENCY (Typ.)	80%	85%	85.5%	86%	87%
	AC CURRENT (Typ.)	0.5A/115VAC 0.25A/230VAC				
	INRUSH CURRENT (Typ.)	COLD START 25A/115VAC 45A/230VAC				
PROTECTION	OVERLOAD	110 ~ 145% rated output power				
		Hiccup mode when output voltage <50%, recovers automatically after fault condition is removed				
		Constant current limiting within 50% ~100% rated output voltage, recovers automatically after fault condition is removed				
	OVER VOLTAGE	5.75 ~ 6.75V	14.2 ~ 16.2V	18.8 ~ 22.5V	30 ~ 36V	56.5 ~ 64.8V
		Protection type : Shut off o/p voltage, clamping by zener diode				
ENVIRONMENT	WORKING TEMP.	-30 ~ +70℃ (Refer to "Derating Curve")				
	WORKING HUMIDITY	20 ~ 90% RH non-condensing				
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH non-condensing				
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃) RH non-condensing				
	VIBRATION	10 ~ 500Hz, 2G 10min./1cycle, period for 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6				
	OPERATING ALTITUDE	2000 meters				
	OVER VOLTAGE CATEGORY	Ⅲ ; According to EN61558, EN50178,EN60664-1, EN62477-1 ; altitude up to 2000 meters				
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UL62368-1, UL508, TUV BS EN/EN61558-2-16, BS EN/EN61558-1, IEC62368-1, EAC TP TC 004, BSMI CNS14336-1 approved; Design refer to TUV BS EN/EN62368-1				
	WITHSTAND VOLTAGE	I/P-O/P:4KVAC				
	ISOLATION RESISTANCE	I/P-O/P:100M Ohms / 500VDC / 25℃/ 70% RH				
	EMC EMISSION	**Parameter**	**Standard**	**Test Level / Note**		
		Conducted	BS EN/EN55032(CISPR32), CNS13438	Class B		
		Radiated	BS EN/EN55032(CISPR32), CNS13438	Class B		
		Harmonic Current	BS EN/EN61000-3-2	Class A		
		Voltage Flicker	BS EN/EN61000-3-3	-------		
	EMC IMMUNITY	BS EN/EN55024, BS EN/EN55035, BS EN/EN61000-6-2, BS EN/EN61204-3				
		Parameter	**Standard**	**Test Level /Note**		
		ESD	BS EN/EN61000-4-2	Level 3, 8KV air; Level 2, 4KV contact, criteria A		
		Radiated Susceptibility	BS EN/EN61000-4-3	Level 3, criteria A		
		EFT/Burest	BS EN/EN61000-4-4	Level 3, criteria A		
		Surge	BS EN/EN61000-4-5	Level 4,2KV/L-N, criteria A		
		Conducted	BS EN/EN61000-4-6	Level 3, criteria A		
		Magnetic Field	BS EN/EN61000-4-8	Level 4, criteria A		
		Voltage Dips and interruptions	BS EN/EN61000-4-11	＞95% dip 0. 5 periods, 30% dip 25 periods, ＞95% interruptions 250 periods		
OTHERS	MTBF	3724.3K hrs min. Telcordia SR-332 (Bellcore) ; 1166.1K hrs min. MIL-HDBK-217F (25℃)				
	DIMENSION	17.5*90*54.5mm (W*H*D)				
	PACKING	78g;160pcs/13.5Kg/1.14CUFT				

NOTE

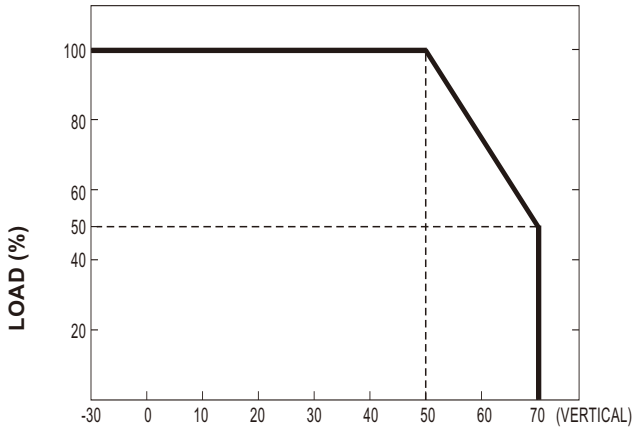
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1μf & 47μf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. The power supply is considered as an independent unit, but the final equipment still need to re-confirm that the whole system complies with the EMC directives. For guidance on how to perform these EMC tests, please refer to “EMI testing of component power supplies.” (as available on http://www.meanwell.com)
5. The ambient temperature derating of 3.5℃/1000m with fanless models and of 5℃/1000m with fan models for operating altitude higher than 2000m(6500ft).

※ Product Liability Disclaimer ： For detailed information, please refer to https://www.meanwell.com/serviceDisclaimer.aspx

■ Block Diagram

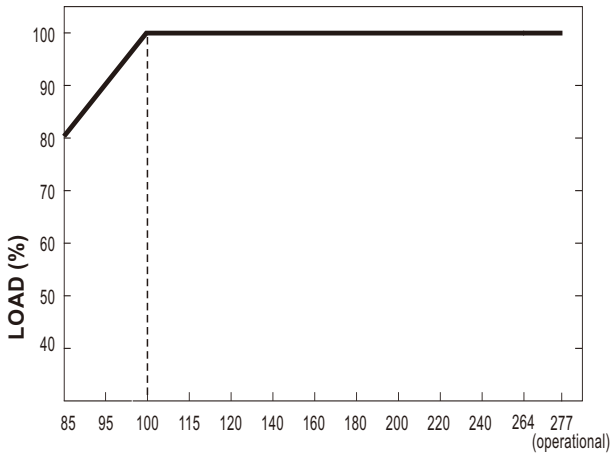


■ Derating Curve



AMBIENT TEMPERATURE (℃)

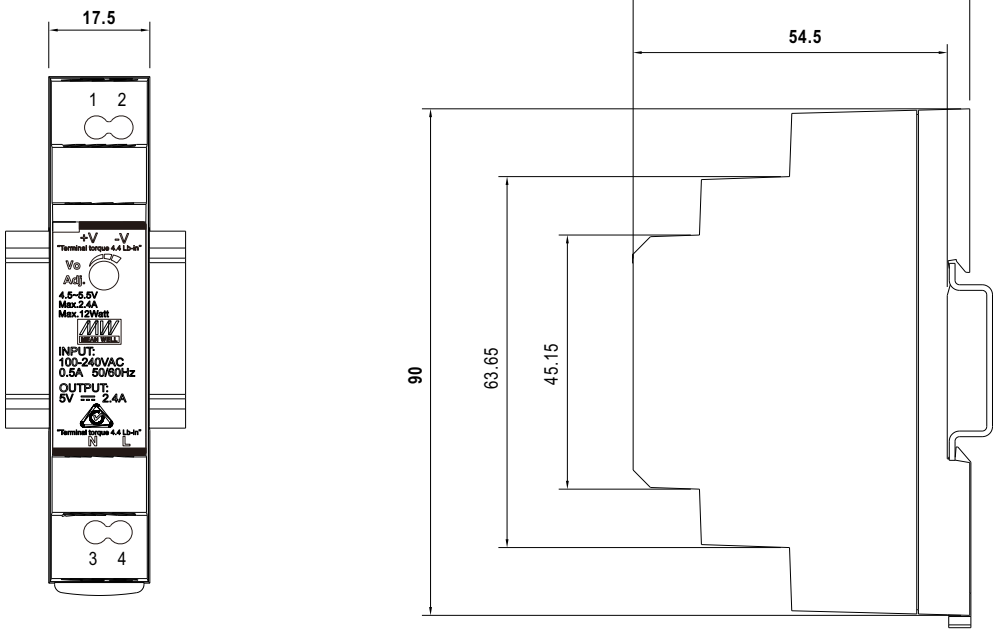
■ Output Derating VS Input Voltage

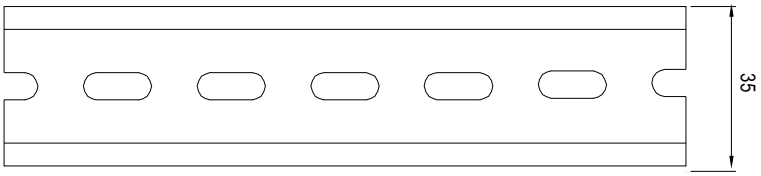


INPUT VOLTAGE (VAC) 60Hz

■ Mechanical Specification

（Unit: mm , tolerance ± 0.5mm)





ADMISSIBLE DIN-RAIL:TS35/7.5 OR TS35/15

Terminal Pin No. Assignment

Pin No.	Assignment	Pin No.	Assignment
1	+V	3	AC/N
2	-V	4	AC/L

■ Installation Manual

Please refer to : http://www.meanwell.com/manual.html