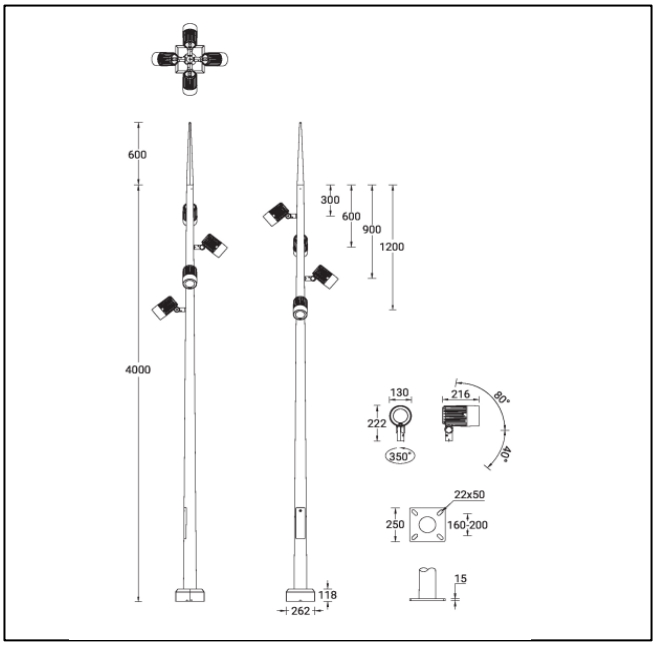
שם הפרויקט: מצפה השלום

DYNAMIC LIGHT
LIGHT DESIGNER

תאריך	10.02.25
מס עמוד	1
סעיף	
דגם	ODESSA
חברה	LIGMAN
יבואן	אידיאלייט ישראל בע"מ

LO 1
סימון



נתונים טכניים		
צריכה	W	4X1COB 280W
יעילות	LM/W	115
עוצמת הארה	LM	32152
הלם מכני	IK	08
זווית פיזור	°	בהתאם לחישוב התאורה
דרגת אטימות	IP	66
מתח עבודה	V	220
דרייבר/ספק		
מספר הדלקה		

נתוני LED	
יצרן	CREE
R9	-
גוון האור	3000K
מסירת צבע	CRI>85
MacAdam	3

פרוטוקול עמעום		
ON/OFF	V	
0-10V		
TRIAC		
DMX		
DALI		
אחר		

מידות(mm) וצבע	
צבע (RAL)	לבירת אדריכל
אורך	-
רוחב	-
גובה	-
קוטר	-
אביזרה התקנה	כולל

תקנים:	
מכון התקנים	V
LM80	60,000 Lifetime L80B10
LM79	V
ISTMS ,TM21	V
IES	V
IEC 62471	RG0

כמויות		
כמות	יחידה/מטר	מיקום
27	יחידה	

הערות
כולל עמוד תאורה וברגי יסוד

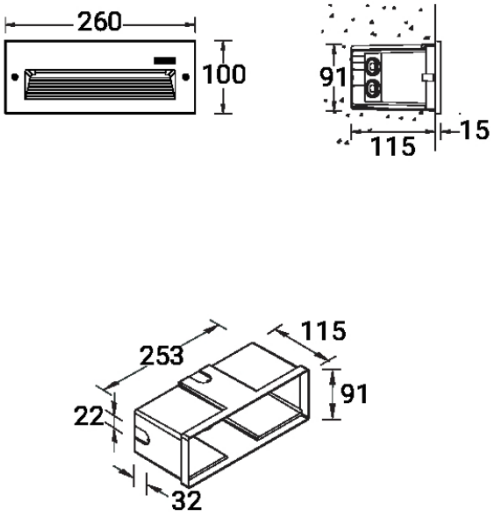
שם הפרויקט: מצפה השלום

LO 2

סימון

DYNAMIC LIGHT
LIGHT DESIGNER

תאריך	10.02.25
מס עמוד	2
סעיף	
דגם	RADO
חברה	LIGMAN
יבואן	אידיאלייט ישראל בע"מ



נתונים טכניים		
צריכה	W	17W
יעילות	LM/W	26
עוצמת הארה	LM	447
הלם מכני	IK	09
זווית פיזור	°	32°x88°
דרגת אטימות	IP	65
מתח עבודה	V	220
דרייבר/ספק		
מספר הדלקה		

נתוני LED	
יצרן	PHILIPS
R9	-
גוון האור	3000K
מסירת צבע	CRI>85
MacAdam	3

פרוטוקול עמעום		
ON/OFF	V	
0-10V		
TRIAC		
DMX		
DALI		
אחר		

מידות(mm) וצבע	
צבע (RAL)	לבירת אדריכל
אורך	-
רוחב	-
גובה	-
קוטר	-
אביזרה התקנה	כולל קופסת ביטון

כמויות		
כמות	יחידה/מטר	מיקום
26	יחידה	

תקנים:	
מכון התקנים	V
LM80	50,000 Lifetime L80B10
LM79	V
ISTMS ,TM21	V
IES	V
IEC 62471	V

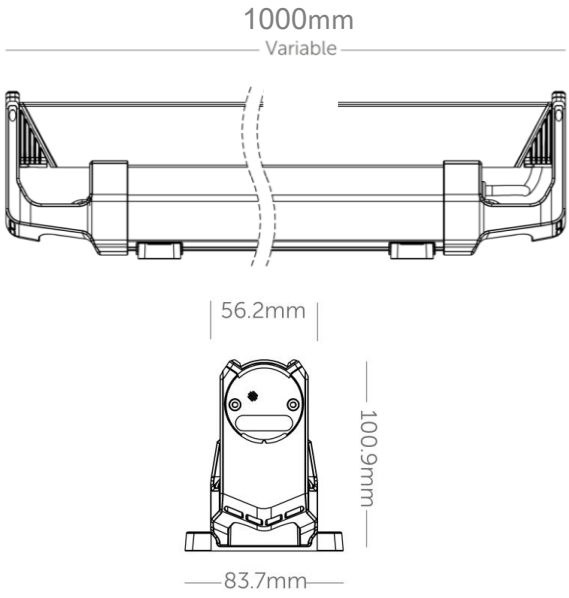
הערות

שם הפרויקט: מצפה השלום

DYNAMIC LIGHT
LIGHT DESIGNER

תאריך	10.02.25
מס עמוד	3
סעיף	
דגם	RESIST
חברה	DLED
יבואן	DANOR

LO 3
סימון



נתונים טכניים		
צריכה	W	50W RGBW
יעילות	LM/W	111
עוצמת הארה	LM	5550
הלם מכני	IK	07
זווית פיזור	°	47X10°
דרגת אטימות	IP	67
מתח עבודה	V	48
דרייבר/ספק		
מספר הדלקה		

נתוני LED	
יצרן	PHILIPS
R9	-
גוון האור	3000K
מסירת צבע	CRI>95
MacAdam	3

פרוטוקול עמעום		
ON/OFF		
0-10V		
TRIAC		
DMX	V	
DALI		
אחר		

מידות(mm) וצבע	
צבע (RAL)	לבירת אדריכל
אורך	-
רוחב	-
גובה	-
קוטר	-
אביזרה התקנה	כולל

תקנים:	
מכון התקנים	V
LM80	50,000 Lifetime L80B10
LM79	V
ISTMS ,TM21	V
IES	V
IEC 62471	V

כמויות		
כמות	יחידה/מטר	מיקום
30	מטר	

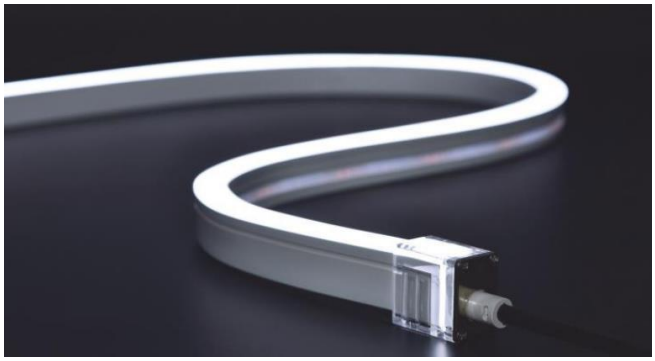
הערות
כולל כבל 8 גידים 22 AWG

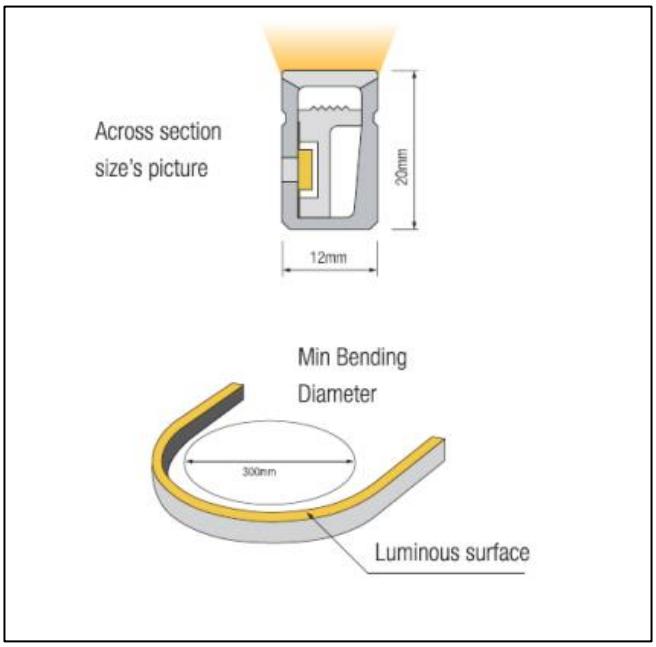
שם הפרויקט: מצפה השלום

DYNAMIC LIGHT
LIGHT DESIGNER

תאריך	10.02.25
מס עמוד	4
סעיף	
דגם	6LBU530JE0S12006
חברה	EDISON
יבואן	לד דיזיין

LO 4
סימון





נתונים טכניים		
צריכה	W	10W
יעילות	LM/W	64
עוצמת הארה	LM	640
הלם מכני	IK	08
זווית פיזור	°	47X10°
דרגת אטימות	IP	67
מתח עבודה	V	24
דרייבר/ספק		
מספר הדלקה		

נתוני LED	
יצרן	EDISON
R9	-
גוון האור	3000K
מסירת צבע	CRI>90
MacAdam	3

פרוטוקול עמעום		
ON/OFF	V	
0-10V		
TRIAC		
DMX		
DALI		
אחר		

מידות(mm) וצבע	
צבע (RAL)	לבירת אדריכל
אורך	-
רוחב	-
גובה	-
קוטר	-
אביזרה התקנה	כולל

כמויות		
כמות	יחידה/מטר	מיקום
200	מטר	

תקנים:	
מכון התקנים	V
LM80	50,000 Lifetime L80B10
LM79	V
ISTMS ,TM21	V
IES	V
IEC 62471	V

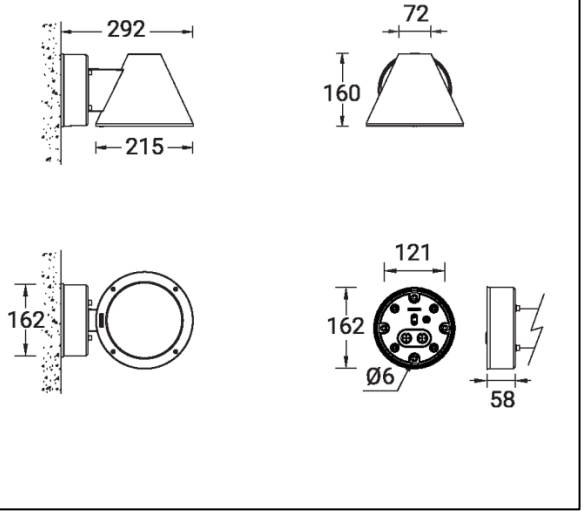
הערות
כלל אביזרה התקנה לפרגולה

שם הפרויקט: מצפה השלום

DYNAMIC LIGHT
LIGHT DESIGNER

תאריך	10.02.25
מס עמוד	5
סעיף	
דגם	CINATI
חברה	LIGMAN
יבואן	אידיאלייט ישראל בע"מ

LO 5
סימון



נתונים טכניים		
צריכה	W	20W
יעילות	LM/W	109
עוצמת הארה	LM	2180
הלם מכני	IK	08
זווית פיזור	°	71°
דרגת אטימות	IP	65
מתח עבודה	V	220
דרייבר/ספק		
מספר הדלקה		

נתוני LED	
יצרן	CREE
R9	-
גוון האור	3000K
מסירת צבע	CRI>85
MacAdam	3

פרוטוקול עמעום		
ON/OFF		
0-10V		
TRIAC		
DMX	V	
DALI		
אחר		

מידות(mm) וצבע	
צבע (RAL)	לבירת אדריכל
אורך	-
רוחב	-
גובה	-
קוטר	-
אביזרה התקנה	כולל

תקנים:	
מכון התקנים	V
LM80	50,000 Lifetime L80B10
LM79	V
ISTMS ,TM21	V
IES	V
IEC 62471	V

כמויות		
כמות	יחידה/מטר	מיקום
2	יחידה	

הערות

DYNAMIC LIGHT
LIGHT DESIGNER

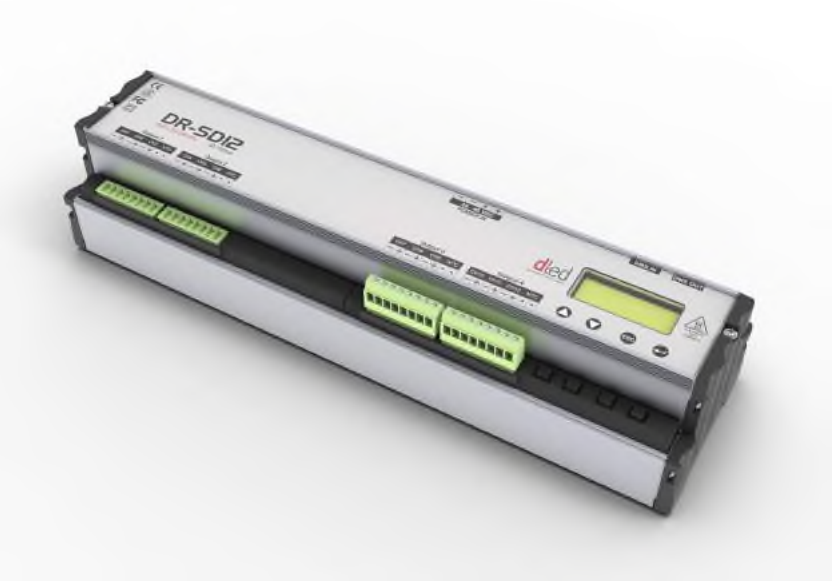
מוצרים נלווים עבור

LO-3

DR-SD12

DMX 512 Multichannel LED Driver

Adjustable current source solution,
Caters LED 435W LEDs / 12 channel,
Allows the flexibility needed in driving your high brightness LED's.



DIN Rail Mount
273 * 75 * 58mm
Terminal Block Plugs

Constant Current
Max 435w, 12 Ch
50mA-700mA Current

DMX 512
LCD & Screen Keys

Self diagnostic protocol
Line & Circuit protection
Thermal protection

FEATURES

High efficiency (up to 95%)
1 to 12 LED per channel (based on forward voltage up to 15 LED)
Manual output levels control via LCD Menu
Smooth fade control with continuous current output
Easy profile & installation
Flicker-free dimming and Active Thermal Protection

OUTPUT

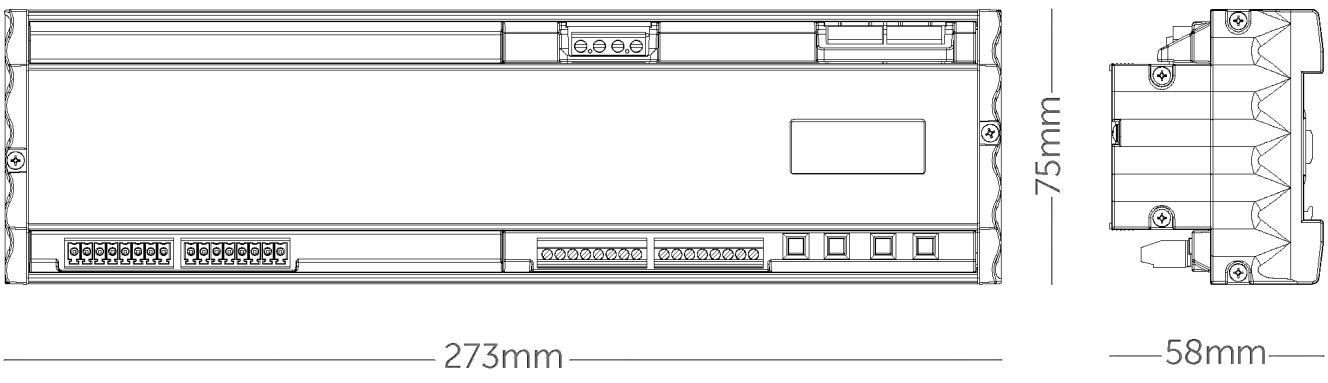
350mA = Max. 144 LEDs / 12Ch
700mA = Max. 144 LEDs / 12Ch
Max. 48VDC
Up to 700mA per channel

Netanya Stadium / Lighting design: Kobi Rosenthal

TECHNICAL SPECIFICATION

GENERAL	350MA	700MA
Rated Output Power	Max. 172.8W	Max. 345.6W
Output Voltage	2~48VDC	2~48VDC
Driving Current	Max. 350mA	Max. 700mA
Output CHs Configuration	4 Outputs total 12 channels	4 Outputs total 12 channels
Channel Driving Capabilities	Min. 1 LED per channel Max. 12 LEDs per channel	Min. 1 LED per channel Max. 12 LEDs per channel
Total Driving Capabilities	1W LED - Max. 144	3W LED - Max. 144
Optimal Output Resolution	256 grades (per channel) Total grades (each output)	256 grades (per channel) Total grades (each output)
PROTECTION		
Fixture Protection	Open line protection Short line protection Wrong interconnection protection	Open line protection Short line protection Wrong interconnection protection
Thermal Protection	Thermal Feedback	Thermal Feedback
DMX Protection	Over Voltage Protection	Over Voltage Protection
CONTROL INTERFACE		
Control Method	DMX 512	DMX 512
Stand Alone Working Mode	Adjustable / 1 - 12 Channels	Adjustable / 1 - 12 Channels
ENVIRONMENT		
Ingress Protection	IP 40	IP 40
Operating temp	-18°c ~ 40°c / -0.4°f ~ 104°f	-18°c ~ 40°c / -0.4°f ~ 104°f
Storage temp	-18°c ~ 40°c / -0.4°f ~ 104°f	-18°c ~ 40°c / -0.4°f ~ 104°f
Humidity	85% RH	85% RH
PHYSICAL		
Connections	Pluggable Terminal Block External power supply	Pluggable Terminal Block External power supply
Size	272 * 75 * 58mm	272 * 75 * 58mm

DRAWINGS



480W Single Output Industrial DIN RAIL

NDR-480 series

Features

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved
- EN61000-6-2(EN50082-2) industrial immunity level
- 100% full load burn-in test
- 3 years warranty

Applications

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

Description

NDR-480 is one economical slim 480W Din rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 85.5mm in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 90VAC to 264VAC and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current.

NDR-480 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 92.5%, the entire series can operate at the ambient temperature between -20℃ and 70℃ under air convection. It is equipped with constant current mode for over-load protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for industrial control apparatus (UL508, TUV EN60950-1, and etc.) make NDR-480 a very competitive power supply solution for industrial applications.

Model Encoding

NDR - 480 - 24

- 24 — Output voltage
- 480 — Output wattage
- NDR — Series name

SPECIFICATION

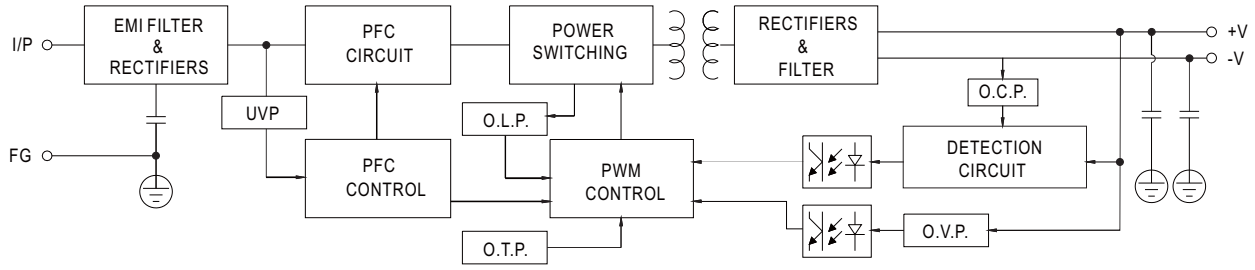
MODEL		NDR-480-24	NDR-480-48
OUTPUT	DC VOLTAGE	24V	48V
	RATED CURRENT	20A	10A
	CURRENT RANGE	0 ~ 20A	0 ~ 10A
	RATED POWER	480W	480W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 55V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%
	SETUP, RISE TIME	1500ms, 100ms/230VAC 3000ms, 100ms/115VAC at full load	
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load	
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC 127 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.94/230VAC at full load	
	EFFICIENCY (Typ.)	92.5%	92.5%
	AC CURRENT (Typ.)	4.8A/115VAC 2.4A/230VAC	
	INRUSH CURRENT (Typ.)	20A/115VAC 35A/230VAC	
	LEAKAGE CURRENT	<2mA / 240VAC	
PROTECTION	OVERLOAD	105 ~ 130% rated output power	
		Protection type : Constant current limiting, unit will shut down after 3 sec., re-power on to recover	
	OVER VOLTAGE	29 ~ 33V	56 ~ 65V
		Protection type : Shut down o/p voltage, re-power on to recover	
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down	
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)	
	VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6	
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UI508, TUV EN60950-1 approved;(meet EN60204-1)	
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC	
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25℃/ 70% RH	
	EMC EMISSION	Compliance to EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3	
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A	
OTHERS	MTBF	146.8K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	85.5*125.2*128.5mm (W*H*D)	
	PACKING	1.5Kg; 8pcs/13Kg/0.9CUFT	

NOTE

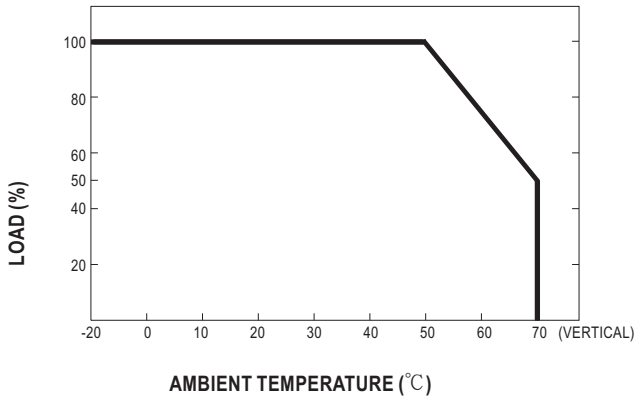
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.
5. Derating may be needed under low input voltage. Please check the derating curve for more details.
6. 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)

Block Diagram

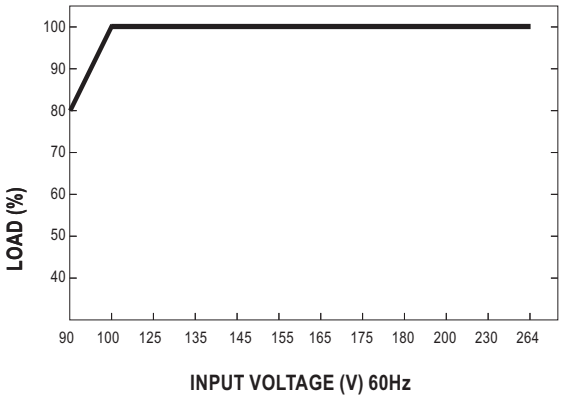
PFC fosc : 85KHz
PWM fosc : 65KHz



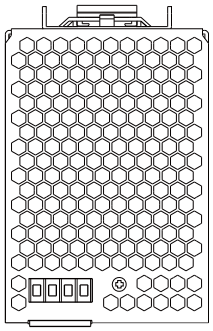
Derating Curve



Output derating VS input voltage

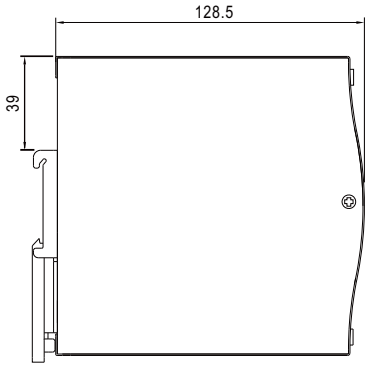


■ Mechanical Specification

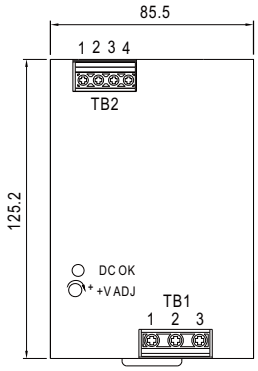


Top View

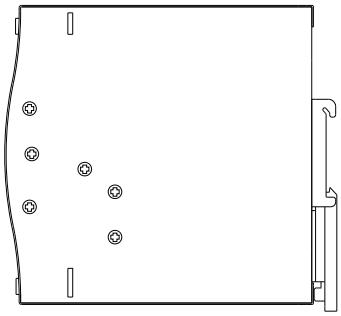
Case No.984D Unit:mm



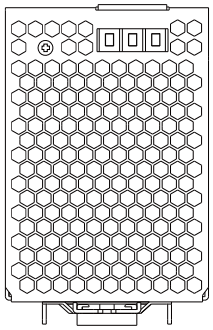
Side View



Front View



Side View



Bottom View

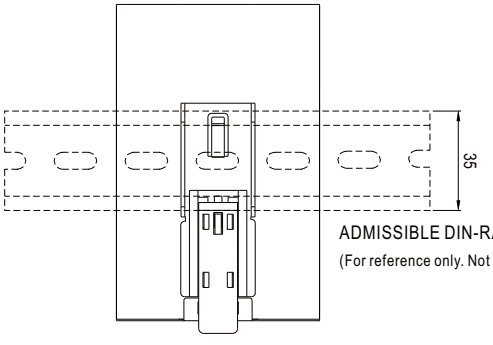
Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	FG ⏚
2	AC/N or DC -
3	AC/L or DC +

Terminal Pin No. Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT-V

■ Installation Instruction



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

(For reference only. Not included with unit.)

Back View

This series fits DIN rail TS35/7.5 or TS35/15.

For installation details, please refer to the Instruction manual.

■ Installation Manual

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

NICOLAUDIE

STICK-DE3

Sunlite Touch Sensitive Intelligent Control Keypad

Overview

The feature rich lighting controller has been designed to provide a control solution for the most demanding of projects, whilst maintaining an easy to use panel of touch sensitive buttons. The controller integrates a graphical color screen allowing scene photos to be displayed. Easily view the selected zone, scene name and design without the need to navigate through complex menus. Change the speed, color and dimmer using the circular palette.

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

http://www.nicolaudie.com/stick-de3.htm

Key Features

- Sleek glass design which sits 11mm from the wall
- Graphical color display to show selected environment
- Color/dimmer/speed palette
- Color temperature mixing
- Touch sensitive buttons. No mechanical parts
- Touch sensitive wheel allows for accurate color selection
- Multi-zone microSD memory
- Multi-room control with 500 scenes, 10 zones
- 1024 DMX channels. Control 340 RGB fixtures
- USB & Ethernet connectivity for programming and control
- RS232, Dry Contact Ports and an Infra Red input port
- Clock and calendar with Sunrise/Sunset triggering
- Network communication. Control lighting remotely
- Catalog of designs including black and white glass
- OEM customization of the color palette and logo
- Windows/Mac software to set dynamic colors/effects
- iPhone/iPad/Android remote and programming apps

Technical Data

Input Power	6V DC 0.6A
Output Protocol	DMX512 (x2)
Programmability	PC, Mac, Tablet, Smartphone
Available Colors	Black / White
Connections	USB, Ethernet, RS232, Clock, 8 dry contact ports, 5v Output Relay
Memory	microSD card
Temperature	-10 °C - 45 °C
Mounting	Single or double gang wall socket
Dimentions	146x106x11mm
Weight	247g
Standards	EC, EMC, ROHS, ETL

Optional Accessories

RJ2BLOCK	RJ45 to connector block converter for power+DMX
POWER4M	6v ACDC power supply

EASY INSTALLATION

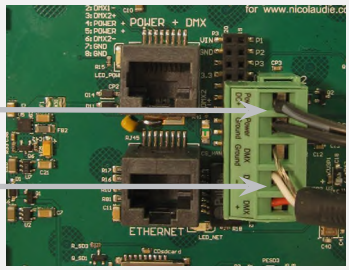
1. Mount an electrical box inside the wall

The controller can be installed in any standard electrical backbox. If you use a double size box, you can insert the power supply inside.

2. Connect the wires

POWER: Connect a 5.5V or 6V DC 0.6A ACDC supply.
Be sure to not invert the + and the ground.

DMX: Connect the DMX cable to the lighting receivers (Leds, Dimmers, Fixtures..)
(for XLR: 1=ground 2=dmx- 3=dmx+)

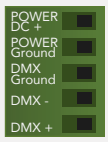


3. Mount the interface on the wall

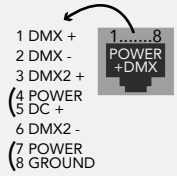
First, mount the back side of the interface on the wall with 2 or more screws
Secondly, plug the connectors :
- DMX and power (connector block or RJ45)
- Ethernet cable

The front panel is mounted by pressing it against the back plate and then sliding down. 2 screws should then be attached underneith to hold the controller in place.

POWER+DMX WITH THE CONNECTOR BLOCK



POWER+DMX WITH THE RJ45 CABLE



****CHECK PIN CONFIGURATIONS. APPLYING POWER TO THE DMX INPUT WILL DAMAGE THE CONTROLLER****
****MAKE SURE THE CONTROLLER IS MOUNTED WITHOUT TOO MUCH FORCE BEHIND AS THIS CAN PUSH APART THE GLASS****

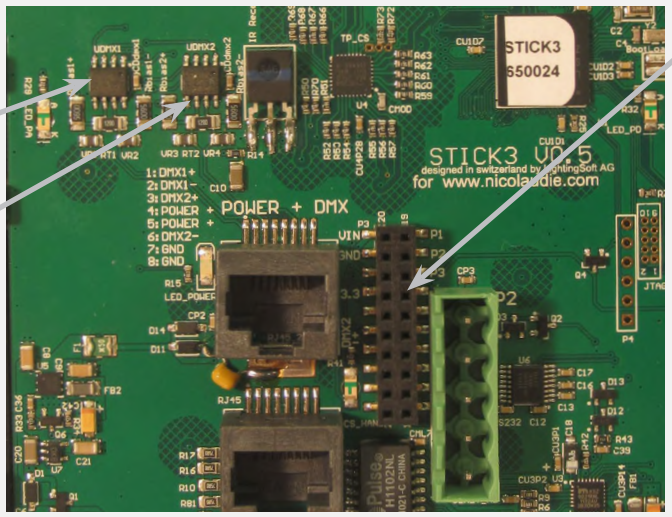
2x10 pins EXTENSION socket

DMX CHIP replacement

DMX universe #1

DMX universe #2

Ref: SP485ECN-L
MAX485 CSA

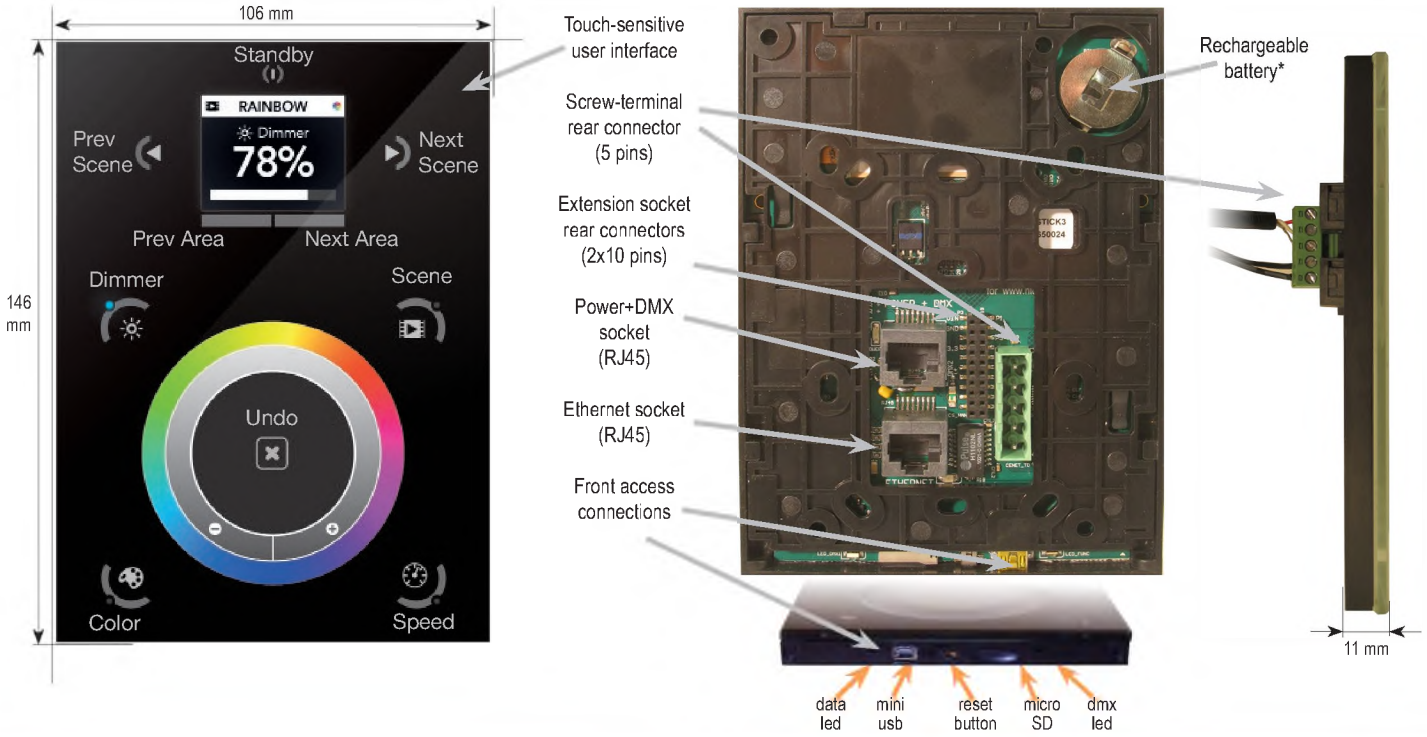


EXTENSION socket

VIN	20	19	PORT1
GND	18	17	PORT2
IR_RX	16	15	PORT3
3.3V	14	13	PORT4
Relay	12	11	PORT5
DMX2+	10	9	PORT6
DMX2-	8	7	PORT7
DMX1+	6	5	PORT8
DMX1-	4	3	RS232 RX
GND_DMX	2	1	RS232 TX

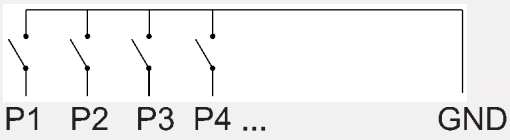
Compatible header connectors:
WURTH ELEKTRONIK ref: 61301021121
MOLEX ref: 10-89-7202
TE Connectivity ref: 1-87227-0
FCI ref: 77313-101-20LF
HARWIN ref: M20-9981046
SAMTEC ref: TSW-110-xx-T-D
FARNELL ref: 1841232
RS ref: 763-6754 673-7534 251-8165
MOUSER ref: 538-10-89-7202
DIGIKEY ref: WM26820-ND

Connections & Triggering



Dry Contact Port Triggering

It is possible to start scenes using the input ports (contact closure). To activate a port, a brief contact of atleast 1/25 second must be established between the ports (1...8) and the ground (GND). Note: the scene will not be switched off when the switch is released.



RS232 Triggering

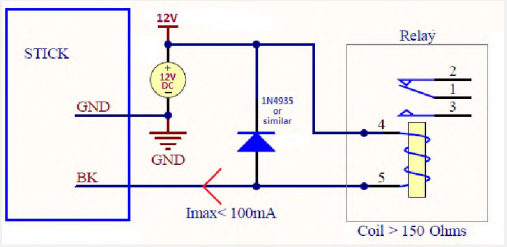
Make a cable using the 3 pins : TX, RX and G (GND)
Set the RS232 parameters to : 9600bds 8 bits, no Parity, 2 Stop bits

- To play a scene, send 3 bytes : **1 x y 255**
- To stop a scene, send 3 bytes : **2 x y 255**
- To pause a scene, send 3 bytes : **3 x y 255**
- To release a pause, send 3 bytes : **4 x y 255**
- To reset a scene, send 3 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: 1 255 45 255

BLACKOUT Relay (energy saving)

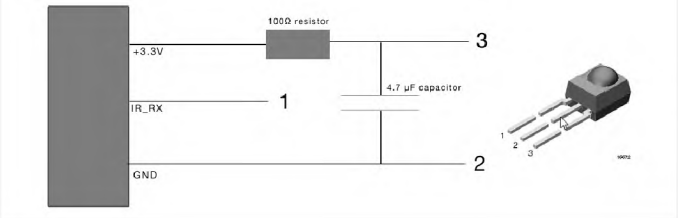
A relay can be connected between the RELAY and GND sockets of the 20 pin extension socket. This can be used to turn off other equipment such as lighting drivers. The signal is connected when the controller is in standby.



Example of relay : FINDER Ref. 22.23.9.012.4000

Infra Red

The controller works with the official IR remote control, however there is no receiver. A 36khz infra red receiver can be connected, such as the TSOP34836 by Vishay Semiconductors. Farnell ref: 4913127. This can be attached to the 20 pin connector. It's a good idea to add a resistor and capacitor to surpress power supply disturbance.



Network Control

The controller can be connected to a local network, allowing it to be controlled from a smartphone or tablet over WiFi.

- Connect the controller to a router or switch with an RJ45 cable
- The controller is set by default to get an IP address from the router via DHCP. If the network is not working with DHCP, a manual IP address and subnet mask can be set using the Hardware Manager
- If the network has a filewall enabled, allow ports 2430 and 2431

TCP Triggering

The controller can be connected to an existing automation system over a network and triggered via TCP package on port 2431 or UDP packets on 2430. Refer to the remote protocol document for more information.

Setting up the Controller

iPhone/iPad/Android Control

The controller can be used with one of 3 different apps. Each available at Google Play and the App store.

DMX Lightpad 3
Designed to work seamlessly with the controller, DMX Lightpad 3 provides an easy way to control your lights over a local WiFi network. Use the wheel to change the dimmer, color or speed, and the arrows to select scenes and effects just like the wall panel. Swipe down to reveal quick access scene selection buttons.

Easy Remote
Create an entirely customized remote controller for your tablet or smartphone. Easy Remote is a powerful and intuitive app allowing you to easily add buttons, faders, color wheels and more. Connect to a WiFi network and the app will find all compatible devices.

Arcolis
The Arcolis application is a comprehensive tool allowing you to directly control and re-program the controller from your smartphone or tablet. This is a simple application which can be used by just about everyone in any situation. Mobile, easy to use and powerful, Arcolis is the ideal controller for dimming or switching traditional, LED and RGB color mixing DMX lighting fixtures. Program static and dynamic lighting scenes and effects.

http://www.nicolaudie.com/smartphone-tablet-apps.htm

Programming the Controller

The controller be programmed from a PC, Mac, Tablet or Smartphone using the software available on our website. Refer to the corresponding software manual for more information. The firmware can be updated using the Hardware Manager which is included with the programming software.

ESA Pro Software (Windows) - Timeline + Multi-Zone
http://www.nicolaudie.com/en/esapro.htm
ESA2 Software (Windows/Mac) - Single Zone
http://www.nicolaudie.com/esa2.htm

Hardware Manager (Windows/Mac) - Firmware, clock..
http://www.dmxsoft.com/global/ftp/hardwaremanager.zip
http://www.dmxsoft.com/global/ftp/HardwareManager.dmg

Color Temperature Mixing

In addition to mixing RGB using the color pallet, it's also possible to mix up to 3 custom colors. This is useful for mixing color temperature. To set this up, choose the correct profile for your lighting fixture when programming the controller. Profiles for common channel configurations can be found in the 'Generic' folder:
RGBW for Red, Green, Blue, White
RGBA for Red, Green, Blue, Amber
RGBY for Red, Green, Blue, Yellow
WWCW for Warm White, Cold White

Once your show has been written to the controller, tap the color mode button and use the circular palette to change the color. If your lighting fixture has more than 3 color channels, tap the color mode button a second time to mix the additional colors.

Settings Menu

To access the settings menu, hold the standby button for 3 seconds.
- Use the arrow buttons or palette to scrol through the menus
- Use the area buttons to navigate forwards and backwards
- The 'undo' button can also be used to navigate forwards

Mode (M): Manages the on/off button and the 4 modes (dimmer, speed, color, scene)
Arrows (A): Allows you to adjust which modes can be controlled by the arrows
Pallet (P): Allows you to adjust which modes can be controlled by the palette wheel
Scene (S): Scene management
First Start (F): Default settings when the unit is first powered up
Trigger (T): Manages the controllers external triggering properties
Ethernet (E): Enables the Ethernet socket on the controller
Date/Time (D): Manages the date and time stored inside the controller
Graphics (G): Screen management
DMX Output (X): Manage the timings of the DMX output messages and the page priorities (advanced function!)
Sensitive (S): Manage the touch sensitivity settings
Language (L): change the language of the text which appears on the screen
About: check the firmware release date and version number and assign a name for the controller

Service

Servicable parts include:
- Memory card - used to store the scenes
- Battery - used to store the clock/calendar
- DMX Chips - used to drive the DMX (see p2.)

*To replace the Li-Ion rechargeable battery on the DE3 :
1. You need a rechargeable 3.6v LIR 2032 replacement battery
2. Remove the back panel by pulling down and sliding it out.
3. Using a paper clip push the battery from the bottom so it slides out of its cage.
4. Slide the replacement battery in from the top, making sure the positive side is facing up.
5. Replace the back panel by pushing it up into place.

Internal Menu

MODE (M) : Manages the on/off button and the 4 modes (dimmer, speed, color, scene)

- **M OFF enable :** enables/disables the use of the on/off button so that the controller is permanently on
- **M Dimm. enable :** when enabled, scenes can be made brighter or darker
- **M Color. enable :** when enabled, the color of a scene can be changed
- **M Speed. enable :** when enabled, dynamic scenes can be made faster and slower
- **M Scene. enable :** when enabled, the scene can be changed
- **M Auto mode :** when enabled, the controller will revert to the default mode after it has been left for a specified period of time
- **M Auto time :** the amount of time the controller will wait before reverting to the default mode
- **M Default :** the default mode which the controller will revert to after a certain amount of time
- **M Dimmer 100% :** when enabled, the dimmer mode will adjust between 0% and 100% without saturating to white between 100% and 200%
- **M Lock Control :** Once this is enabled, you can hold the dimmer button for 5 seconds to enable/disable lock mode. It's automatically activated after 120 seconds. When lock is activated, you'll see a red border around the screen

Arrows (A) : Allows you to adjust which modes can be controlled by the arrows

- **A Dimmer enable :** allows for the Dimmer mode to be controlled by the arrows
- **A Color enable :** allows for the Color mode to be controlled by the arrows
- **A Speed enable :** allows for the Speed mode to be controlled by the arrows
- **A Scene enable :** allows for the Scene mode to be controlled by the arrows
- **A Default :** the mode to jump to when the arrows are pressed, if the arrows are not enabled on the selected mode

Pallet (P) : Allows you to adjust which modes can be controlled by the palette wheel

- **P Dimmer enable :** allows for the Dimmer mode to be controlled by the palette wheel
- **P Color enable :** allows for the Color mode to be controlled by the palette wheel
- **P Speed enable :** allows for the Speed mode to be controlled by the palette wheel
- **P Scene enable :** allows for the Scene mode to be controlled by the palette wheel
- **P Default :** the mode to jump to when the palette is pressed, if the palette is not enabled on the selected mode

Scene (S) : Scene management

- **S 0(off) enable :** displays an empty off scene before scene 0 in each area
- **S Pause enable :** allows a scene to be paused if the scene mode button is held for 1 second
- **S Stop enable :** allows a scene to be stopped if the scene mode button is held for 4 seconds
- **S Fade config :** manages the fading between scenes
  - From Show : the fade time set inside the show file will be used
  - Force : the automatic fade time set in the menu will override all fadetimes in the show file
  - Force Max : the controller will look at the show file fade time and the menu fade time and use the greatest
  - Force Min : the controller will look at the show file fade time and the menu fade time and use the smallest
  - Never : the controller will never fade between scenes
- **S Fade time :** the time of the automatic fade between scenes
- **S Setting management :** determines how dimmer/speed/color overrides are saved
  - SaveAlways : the dimmer/speed/color overrides all scenes until the reset button has been pressed
  - NeverSave : the dimmer/speed/color is never saved
  - AutoReset : the dimmer/speed/color is saved on the current scene
- **S Trigger :** sets the scene triggering mode. Time Delay and Scene Butt allow for scenes to be scrolled through without playing
  - Auto : the scene will be triggered as soon as it's selected
  - Time Delay : a short delay is added before a scene is triggered
  - Scene Butt. : the selected scene will not play until the scene button is pressed

First Start (F) : Default settings when the unit is first powered up

- **F Scene Nr. :** specify a default scene number
- **F Scene Scene Recover :** activates the previously playing scene
- **F Display Time :** when enabled, the time will be displayed on the screen at startup
- **F Scene Nr. :** enables the triggering of a scene at startup. If disabled, no scene will be triggered

Trigger (T) : Manages the controllers external triggering properties

- **T Time enable :** enables the clock triggering
- **T Ports enable :** enables the 8 dry contact ports
- **T RS232 enable :** enables scene triggering by RS232
- **T IR enable :** enables the infra red port (disabled by default to prevent interference)
- **T UDP enable :** allows the controller to send and receive UDP messages required for network control
- **T Blackout port** : enables the blackout relay output which is triggered when the stanby putton is touched

Ethernet (E) : Manages the controllers network settings

- **Ethernet :** Enables the Ethernet socket on the controller
- **Dynamic IP Addr :** enables dynamic IP addressing (DHCP) which allows the controller to obtain an IP address from a router
- **Sync Blackout:** when this open is enabled, all other controllers on the network will go into standby when the standby button is pressed
- **Enable NTP :** enables Network Time Protocol. The controller will synchornise the clock with the internet if a connection is available
- **NTP Server :** the IP address of the server to synchronize the clock. The default is 005.135.141.108
- **Device's IP Add :** the controllers static IP address it will use if it does not receive an IP address via DHCP
- **Mask:** the subnet mask of the controller if not set to DHCP. Generally this is 255.255.255.0
- **Default Gateway :** the IP address of the router if not set to DHCP
- **MAC Address :** a unique ID used to identify the controller on the network

Date/Time (D) : Manages the date and time stored inside the controller

- **Date :** the controllers date
- **Time :** the controllers clock time
- **G Bright normal :** the % brightness when the controller is not sleeping G Bright sleep: the % brightness when the controller is sleeping
- **G Bright LED :** the % brightness of the mode and reset LEDs

Graphics (G) : Screen management

- **G Image enable :** allows for images to be shown for each scene if they have been assigned in the programming software
- **G Image full :** when enabled, the image will be displayed in full screen and the scene and area will not be visible
- **G Image time :** the time it takes before the image is displayed in full screen
- **G Sleep enable :** when enabled, the screen brightness will dim after a certain amount of time
- **G Sleep time :** the amount of time to wait before sleeping
- **G Bright normal :** the brightness of the screen's backlight
- **G Bright sleep :** the brightness of the screen's backlight whilst the controller is sleeping
- **G Bright LED :** the brightness of the scene, undo and standby LED's

DMX Output (X) : Manage the timings of the DMX output messages and the page priorities (advanced function!)

- **X MBB :** Mark Before Break- the time to wait between sending each 512 channel DMX message (or 'packet')
- **X Break :** Break- the time to wait just before sending a new packet, resetting the DMX line
- **X MAB :** Mark After Break- the message which tells your receiver to begin reading data
- **X MBS :** Mark Between Slots- the delay time between sending each DMX channels data within the DMX packet
- **Univ-1/Univ-2 :** each timing can be set differently depending on the universe number
- **X Alphab Mode :** if the same scene is triggered in the global area and a second area, the area with the highest letter will take priority
- **X LTP Mode :** If the same scene is triggered in the global area and a second area, the latest scene triggered takes priority

Sensitive (S) : Manage the touch sensitivity settings

- **S USB Init :** reset the touch sensitivity when the USB is connected and disconnected
- **S Auto Time :** the time to wait before automatically resetting the touch sensitivity
- **S High Sense :** when enabled, the sensitivity will be increased
- **S See Values :** see each touch sensitive button number and palette value

Language (L) : change the language of the text which appears on the screen

About : check the firmware release date and version number and assign a name for the controller

Reset : Reset all settings to the factory default

Troubleshooting

The 4 Mode LEDs on the controller are flickering

The controller is in bootloader mode. This is a special 'startup mode' which is run before the main firmware loads.
-Check that there is nothing metallic touching the back of the controller
-Try re-writing the firmware with the latest hardware manager
-Try formatting or replacing the SD card

All LEDs on the controller are flickering except the standby LED

There is no SD card detected.
-Check the SD card is properly connected
-Try formatting the SD card in the computer
-Try re-writing the show file
-Try replacing the SD memory card

The controller is not detected by the computer

-Be sure that the latest software version is installed
-Connect by USB and open the Hardware Manager (found in the software directory). If it's detected here, try to update the firmware

All LEDs on the controller are flickering

There has been no showfile detected on the SD memory card.
-Try formatting the SD card in the computer
-Try re-writing the show file
-Try replacing the SD memory card

The lights are not responding

-Check the DMX +, - and GND are connected correctly
-Check that the driver or lighting fixture is in DMX mode
-Be sure that the DMX address has been set correctly
-Check there are no more than 32 devices in the chain
-Check that the DMX LED is flickering to the right of the SD card
-Connect with the computer and open Hardware Manager (found in the software directory). Open the DMX Input/Output tab and move the faders. If your fixtures respond here, it is possibly a problem with the show file

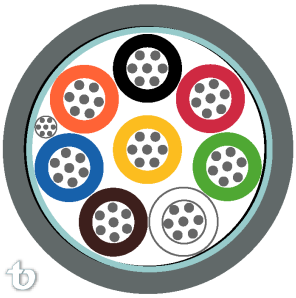
8x6005, 22 AWG Multicore Overall Foil-Shielded Cable ELECTRONICS

P/N 8005008101

INDUSTRY

Applications

Audio-frequency signals, Portable, indoor applications, outdoor, Control applications



Outer Jacket Material	Outer diameter	Weight
FR-PVC	6.5 mm nom.	65 kg/km

General Construction

The cable contains 8 single cores, cabled together, overall shielded with a polyester-aluminum foil and jacketed with a soft FR PVC compound

Design & Materials

Conductor Material	Annealed Tinned Copper
Conductor Size (AWG)	22
Conductor Construction	7x0.25 mm
Insulation Material	SR-PVC
Insulation O.D. (mm nom)	1.35
Color Code	Standard Electronic Singles
Overall Shield Design	100% Coverage
Overall Shield Material	Aluminum/Polyester Foil
Overall Drain-wire Material	Annealed Tinned Copper
Overall Drain-wire size (AWG)	7x0.25 mm
Overall Drain-wire Construction	Stranded
Total Number Of Conductors	8
Outer Jacket Color	Black
Marking	Per request

8x6005, 22 AWG Multicore Overall Foil-Shielded Cable
P/N 8005008101

INDUSTRY

Performance

DC Resistance (Ω/km nom)	62.3
Dielectric Strength (V/minute)	1500
Dielectric Strength to Shield (V/minute)	1000
Max. Operating Temperature (°C)	+80
Velocity of Propagation (% nom)	45
Voltage Rating (V)	300
Min. Operating Temperature (°C)	–30

Standards

Flammability Rating
IEC 60332-1
UL 1581 VW-1

Version 1.3 | Last update: 2022-03-24

DYNAMIC LIGHT
LIGHT DESIGNER

מוצרים נלווים עבור

LO-4

480W Single Output Industrial DIN RAIL

NDR-480 series

Features

- Universal AC input / Full range
- Built-in active PFC function
- Protections: Short circuit / Overload / Over voltage / Over temperature
- Cooling by free air convection
- Can be installed on DIN rail TS-35/7.5 or 15
- UL 508 (industrial control equipment) approved
- EN61000-6-2(EN50082-2) industrial immunity level
- 100% full load burn-in test
- 3 years warranty

Applications

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

Description

NDR-480 is one economical slim 480W Din rail power supply series, adapt to be installed on TS-35/7.5 or TS-35/15 mounting rails. The body is designed 85.5mm in width, which allows space saving inside the cabinets. The entire series adopts the full range AC input from 90VAC to 264VAC and conforms to EN61000-3-2, the norm the European Union regulates for harmonic current.

NDR-480 is designed with metal housing that enhances the unit's power dissipation. With working efficiency up to 92.5%, the entire series can operate at the ambient temperature between -20℃ and 70℃ under air convection. It is equipped with constant current mode for over-load protection, fitting various inductive or capacitive applications. The complete protection functions and relevant certificates for industrial control apparatus (UL508, TUV EN60950-1, and etc.) make NDR-480 a very competitive power supply solution for industrial applications.

Model Encoding

NDR - 480 - 24

- 24 — Output voltage
- 480 — Output wattage
- NDR — Series name

SPECIFICATION

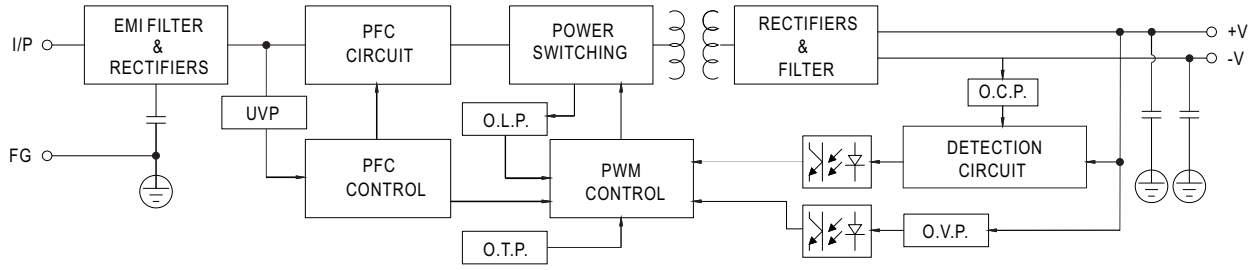
MODEL		NDR-480-24	NDR-480-48
OUTPUT	DC VOLTAGE	24V	48V
	RATED CURRENT	20A	10A
	CURRENT RANGE	0 ~ 20A	0 ~ 10A
	RATED POWER	480W	480W
	RIPPLE & NOISE (max.) Note.2	150mVp-p	150mVp-p
	VOLTAGE ADJ. RANGE	24 ~ 28V	48 ~ 55V
	VOLTAGE TOLERANCE Note.3	±1.0%	±1.0%
	LINE REGULATION	±0.5%	±0.5%
	LOAD REGULATION	±1.0%	±1.0%
	SETUP, RISE TIME	1500ms, 100ms/230VAC 3000ms, 100ms/115VAC at full load	
	HOLD UP TIME (Typ.)	16ms/230VAC 16ms/115VAC at full load	
INPUT	VOLTAGE RANGE Note.4	90 ~ 264VAC 127 ~ 370VDC	
	FREQUENCY RANGE	47 ~ 63Hz	
	POWER FACTOR (Typ.)	PF>0.98/115VAC, PF>0.94/230VAC at full load	
	EFFICIENCY (Typ.)	92.5%	92.5%
	AC CURRENT (Typ.)	4.8A/115VAC 2.4A/230VAC	
	INRUSH CURRENT (Typ.)	20A/115VAC 35A/230VAC	
	LEAKAGE CURRENT	<2mA / 240VAC	
PROTECTION	OVERLOAD	105 ~ 130% rated output power	
		Protection type : Constant current limiting, unit will shut down after 3 sec., re-power on to recover	
	OVER VOLTAGE	29 ~ 33V	56 ~ 65V
		Protection type : Shut down o/p voltage, re-power on to recover	
	OVER TEMPERATURE	Shut down o/p voltage, recovers automatically after temperature goes down	
ENVIRONMENT	WORKING TEMP.	-20 ~ +70℃ (Refer to "Derating Curve")	
	WORKING HUMIDITY	20 ~ 95% RH non-condensing	
	STORAGE TEMP., HUMIDITY	-40 ~ +85℃, 10 ~ 95% RH	
	TEMP. COEFFICIENT	±0.03%/℃ (0 ~ 50℃)	
	VIBRATION	Component:10 ~ 500Hz, 2G 10min./1cycle, 60min. each along X, Y, Z axes; Mounting: Compliance to IEC60068-2-6	
SAFETY & EMC (Note 4)	SAFETY STANDARDS	UI508, TUV EN60950-1 approved;(meet EN60204-1)	
	WITHSTAND VOLTAGE	I/P-O/P:3KVAC I/P-FG:2KVAC O/P-FG:0.5KVAC	
	ISOLATION RESISTANCE	I/P-O/P, I/P-FG, O/P-FG:>100M Ohms / 500VDC / 25℃/ 70% RH	
	EMC EMISSION	Compliance to EN55032 (CISPR32), EN61204-3 Class B, EN61000-3-2,-3	
	EMC IMMUNITY	Compliance to EN61000-4-2,3,4,5,6,8,11, EN55024, EN61000-6-2 (EN50082-2), EN61204-3, heavy industry level, criteria A	
OTHERS	MTBF	146.8K hrs min. MIL-HDBK-217F (25℃)	
	DIMENSION	85.5*125.2*128.5mm (W*H*D)	
	PACKING	1.5Kg; 8pcs/13Kg/0.9CUFT	

NOTE

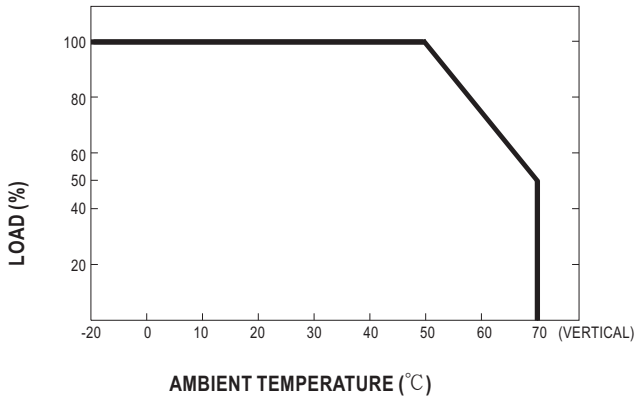
1. All parameters NOT specially mentioned are measured at 230VAC input, rated load and 25℃ of ambient temperature.
2. Ripple & noise are measured at 20MHz of bandwidth by using a 12" twisted pair-wire terminated with a 0.1uf & 47uf parallel capacitor.
3. Tolerance : includes set up tolerance, line regulation and load regulation.
4. Installation clearances : 40mm on top, 20mm on the bottom, 5mm on the left and right side are recommended when loaded permanently with full power. In case the adjacent device is a heat source, 15mm clearance is recommended.
5. Derating may be needed under low input voltage. Please check the derating curve for more details.
6. 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)

Block Diagram

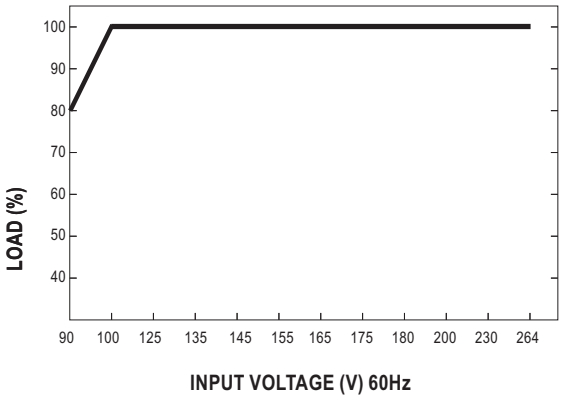
PFC fosc : 85KHz
PWM fosc : 65KHz



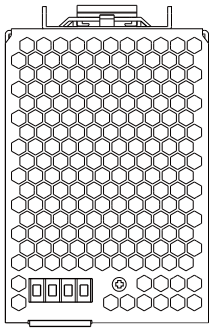
Derating Curve



Output derating VS input voltage

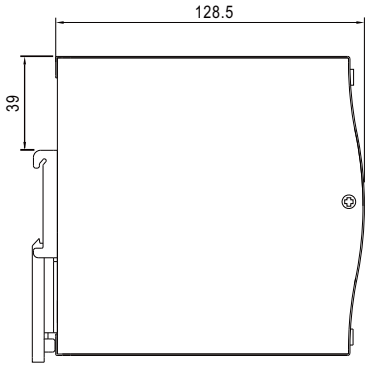


■ Mechanical Specification

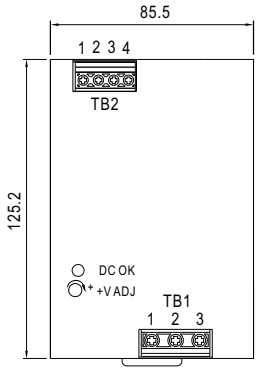


Top View

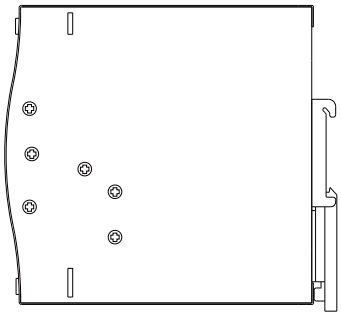
Case No.984D Unit:mm



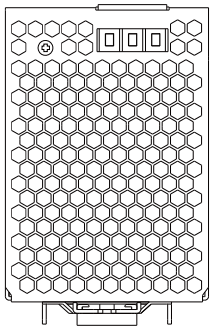
Side View



Front View



Side View



Bottom View

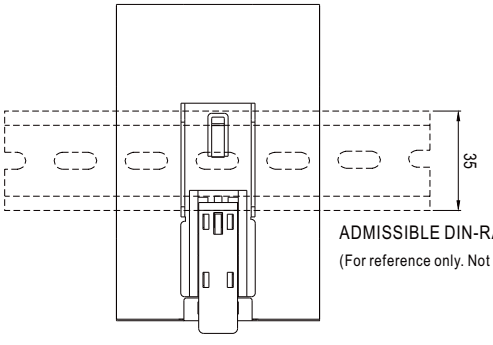
Terminal Pin No. Assignment (TB1)

Pin No.	Assignment
1	FG ⏚
2	AC/N or DC -
3	AC/L or DC +

Terminal Pin No. Assignment (TB2)

Pin No.	Assignment
1,2	DC OUTPUT +V
3,4	DC OUTPUT-V

■ Installation Instruction



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

(For reference only. Not included with unit.)

Back View

This series fits DIN rail TS35/7.5 or TS35/15.

For installation details, please refer to the Instruction manual.

■ Installation Manual

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