Electronic Lamp Drivers

Product catalogue

nedap

www.nedap-uv.com

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UVINEO LOW PRESSURE LAMP DRIVERS

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INTRODUCTION

Nedap smart UV lamp driver technology

Nedap is a company that provides UV lamp driver solutions for various applications such as drinking and wastewater, ballast water, air and surface disinfection, and UV curing.

Our UV lamp driver solutions are the culmination of over 30 years' experience in lamp driver technology. We partner with UV professionals from across industries and sectors to develop innovative solutions that tackle real-world challenges.

Our smart UV lamp driver hardware and software empower integrators to revolutionize UV treatment and disinfection. Selecting the right UV lamp driver optimizes efficiency, prevents power supply problems, and improves ease of installation. This can cut the total cost of ownership and increase sustainability.

Low pressure UV lamp drivers

Low pressure lamp technology has proven to be 2,5 to 3 times more energy efficient in their capabilities to convert electrical energy to the required UV light, compared to medium pressure lamp technology.

Nedap's Low Pressure lamp drivers have a proven efficiency of at least 95%. Our intelligent drivers give real time information on relevant parameters for optimal operation and maintenance of your system.

See pages 6 through 9 for our range of low pressure UV lamp drivers.

Medium pressure UV lamp drivers

Medium pressure lamps have unsurpassed power capabilities at small dimensions, and are therefore often used in compact disinfection, AOP treatment or curing solutions.

Nedap's electronic lamp drivers have proven to extend the lamp life to its double lifetime and beyond. As a direct result this leads to a reduction of lamp waste, labour costs and downtime.

The Modbus interface, and data logging empower you to create relevant insights for a smooth and sustainable operation.

See pages 10 through 19 for our range of medium pressure UV lamp drivers.

LED UV drivers

Businesses are benefitting from advanced LED UV lamp driver technology. The advantages of LED lamp drivers include a uniquely small design footprint, instant-on/off to optimise energy usage, and are built from environmentally friendly materials. Nedap produces power supplies rated from 1500W up to 6kW for modular UV LED curing systems and solutions.

See pages 21 and 22 for our range of LED UV drivers.

INTRODUCTION

Approved by major UV lamp manufactureres

Nedap lamp drivers work with all major brands of low- and medium-pressure UV lamps. The drivers have step-less dimming and for low pressure lamps support additional filament heating (patented) and pre-programmed lamp parameters.

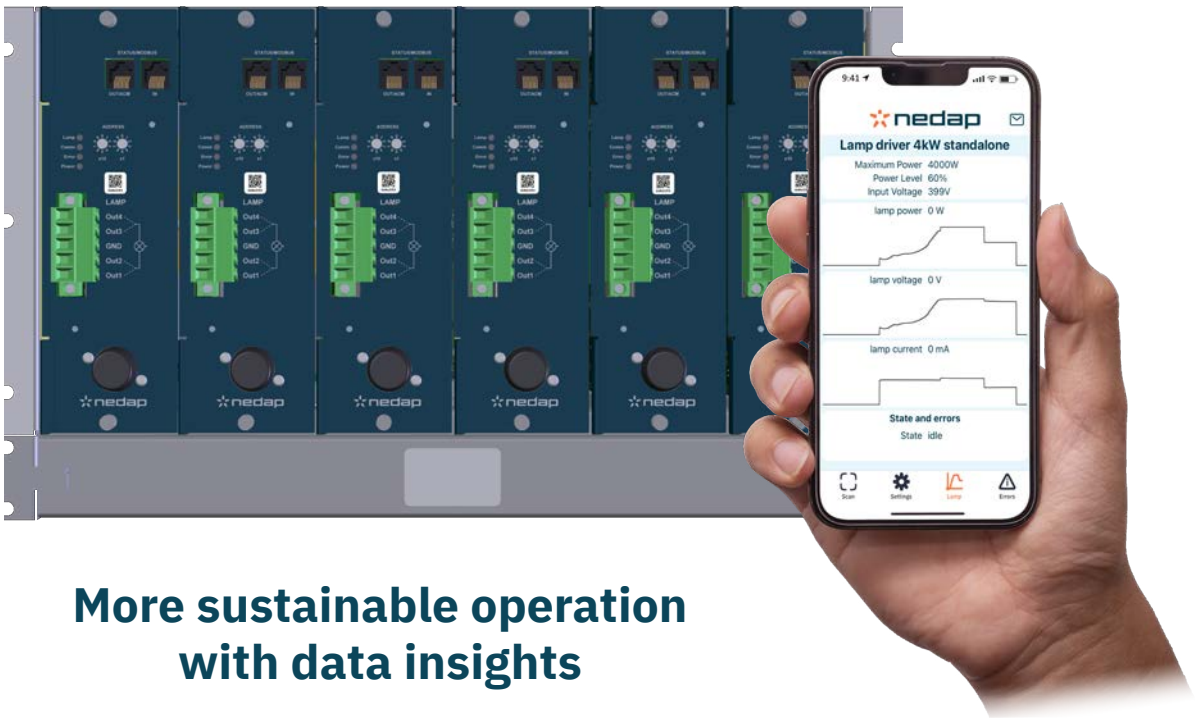
Membership

Nedap is member of the International Ultra Violet Association **IUVA**, the Associations for UV&EB Technology **Radtech USA/ Europe** and the **International Ozone Association**.

Nedap UV Tool

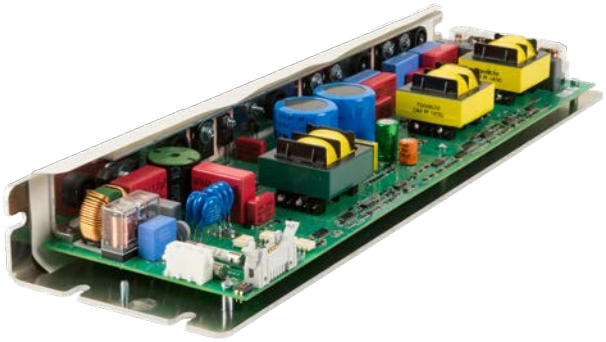
Our smart lamp driver platform offers you full control and flexibility when designing your UV solution. We offer a testtool called “Nedap UV Tool” to support the succesful integration of our lamp driver in the system.

In case of questions, our experienced support team can give a high level of support.



More sustainable operation with data insights

Lamp Driver 2x240W



Features

- High efficiency
- High reliability
- Long lamp life
- Multiple outputs (2 lamps)
- Low inrush current
- Constant lamp power control
- Dimming down to 60% power
- Lamp end of life protection
- Remote on/off and dimming (PWM)
- Long lamp wiring length allowed (up to 25 m)

Applications

- UV disinfection

Input

Input voltage	1 phase 187 - 305 V_{rms}
Input frequency	50/60Hz ±3Hz
Input current	peak, 2,8A
Power Factor	> 0.98
Current THD	< 5%

Output

Lamp power	2 x 240W
Power regulation	± 3%
Lamp voltage	115 - 160 V_{rms} at 100% power max. 200 V_{rms} at 60% power
Lamp current	2,1 A max
Ignition voltage	1000 Vp
Dimming	60% to 100% (lamp power)
Preheat current	3 A_{rms} - 4 seconds

Miscellaneous

Efficiency		> 95% at nominal power
Protections		open / short output ground fault Temperature input under / overvoltage EOL rectification
Cooling		Convection
Operating temperature		0° to +65° C / 32°F to 149°F
Storage		-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals		CE / cUL
Weight		3kg /6.6 lb
Dimensions		440 x 123 x 48 mm 17.3 x 4.84 x 1.89 inch
Connector types	Input: Lamp: Control:	TE 350789-1 (3-pole) TE 640900-1 (5-pole) FCI 71918-210LF (10-pole)

Ordering information

Description	Part number	Packaging**
Lamp driver 2x240W	9985336	4pcs / box

**Other quatities available upon request

Specifications subject to change without notice RH20230721

Lamp Driver UniMulti

Features

- **Modbus** monitoring and control, remote on/off and dimming
- Easy daisy chain Modbus RJ45 control wiring
- **1-10V** or **PWM**, remote on / off and dimming
- LED status indication (status / alarms)
- Multiple outputs (2 or 4 lamps)
- Constant lamp power or lamp current control
- Wide range opre-programmed lamp types
- Programmed start for optimal lamp life
- Lamp end of life protection
- Instant start possibility
- Low inrush current
- High efficiency
- High reliability
- Long lamp wiring length allowed (7 to 40m)*

* depending on lamp cable type and output range, see manual

Applications

- UV disinfection

Selection table

	Lamp Voltage			
	67 - 90V	90- 120V	120 - 162V	162 - 220V
2 lamp	9946101	9948317	9948325	9946179
4 lamp	9940529	9948333	9948341	9949399

Ordering information

Description	Part number	Packaging**
Lamp Driver UniMulti 2 Lamp 67-90V	9946101	6 pcs / box
Lamp Driver UniMulti 2 Lamp 90-120V	9948317	
Lamp Driver UniMulti 2 Lamp 120-162V	9948325	
Lamp Driver UniMulti 2 Lamp 162-220V	9946179	
Lamp Driver UniMulti 4 Lamp 67-90V	9940529	
Lamp Driver UniMulti 4 Lamp 90-120V	9948333	
Lamp Driver UniMulti 4 Lamp 120-162V	9948341	
Lamp Driver UniMulti 4 Lamp 162-220V	9949399	

**Other quatities available upon request

Input

Input voltage *	1 phase 100-140Vac at total power < 440W 180-305Vac at total power < 880W
Input frequency	50/60Hz ±3Hz
Input current	5.2 A max
Inrush current	20A max. at 305Vac
Power Factor	> 0.98
Current THD	< 8%
Standby power	< 4W

* If the input voltage drops below 180V the output power will be dimmed to attempt to continue lamp operation. Below 100V (typ.) the lamp driver will switch off.

Output

Lamp power	4 x 90 - 220W or 2 x 220 - 440W*)
Power regulation	± 3%
Lamp voltage	67 - 90V / 90 - 120 V 120 - 162V / 162 - 220 V*)
Ignition voltage	660 /900 / 1200 / 1600 Vp*) 7 attemps
Dimming	50% (lamp current) 60% (lamp power)

Miscellaneous

Efficiency	> 95% at nominal power and 200 - 277V input
Protections	open / short output ground fault temperature input under / overvoltage EOL rectification
Cooling	Forced air cooling
Operating temperature	Tamb: 0°C - 55°C / 32°F to 131°F Tcase: 0°C - 65°C / 32°F to 149°F 20 - 95% non-condensing
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / UL / cUL
Weight	2kg / 4.4lb
Dimensions	300 x 200 x 73 mm 11.8 x 7.87 x 2.87 inch
Connector types	Wago type 257 / RJ45

*Depending on version

Lamp Driver 800W

Features

- **Modbus** monitoring and control, remote on/off and dimming
- Dimming with additional filament heating
- **0 - 10V** control of output power
- 4 LED status indication
- Small size / low weight
- Continuous GND fault detection
- Lamp End of Life (EOL) protection
- Autorange input
- High PF and Low input current THD
- High efficiency
- Low inrush current
- Opto-isolated control outputs
  - Lamp on
  - System status
  - Lamp driver status
  - Lamp status
- Long lamp cable length (up to 38m / 124ft)*

* depending on lamp cable type, see manual

Applications

- UV Disinfection
- UV Curing

Input

Input voltage *	1 phase 200 - 277 V_{ac} ± 10%
Input frequency	50/60Hz ±3Hz
Input current	4.5 A max.
Inrush current	4.5 A max. at 305Vac
Power Factor	> 0.98 at 100% power
Current THD	< 5% typ.
Standby power	< 5 Watt.

* If the input voltage drops below 180V the output power will be dimmed to attempt to continue lamp operation. Below 100V (typ.) the lamp driver will switch off.

Output

Lamp power	240 - 800W
Lamp voltage	90 - 160 V_{rms} typ.
Lamp current	2 - 9.5 A
Ignition voltage	1200 Vp / 7 attemps with interval 14s + preheat time
Dimming	down to 30% Adjustable filament heating during dimming
Filament power	60W (0 to 30 W per filament)
Preheat	adjustable 8 A max Power up to 2 x 80W adjustable duration

Miscellaneous

Efficiency		> 94% typ.
Protections		open / short output ground fault lamp leakage temperature input under / overvoltage EOL rectification
Cooling		Field replaceable fan
Lamp cable		38m / 124ft max.
Operating temperature		0°C - 50°C / 32°F to 122°F 20 - 95% non-condensing
Storage		-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals		CE / UL / cUL
Weight		3.1kg / 6.9lb
Dimensions		299 x 203 x 70.2 mm 11.8 x 7.99 x 2.76 inch
Connector types	Input: Lamp: Control:	Phoenix: GFKC 2.5/3-st-7,62 Phoenix: GFKIC 2,5/4-st-7,62 Modular Jack RJ45

Ordering information

Description	Part number	Packaging**
Lamp driver 800W	9560114	6pcs /box

**Other quatities available upon request

Lamp Driver Full Rack 2x1000W

Features

- **Modbus** monitoring and control, remote on/off and dimming
- Dimming with additional filament heating
- Status indication LED's
- Preprogammed lamp parameters for optimal lamp life
- Allows very small footprint cabinets
- High PF and Low input current THD
- Continuous GND fault detection
- High efficiency
- Low inrush current
- Lamp End of Life (EOL) protection
- Long lamp cable lenght (up to 30m / 98ft)*

* depending on lamp cable type, see manual

Applications

- UV Disinfection

Ordering information

Description	Part number	Packaging
Lamp driver Full Rack 2x1000W	9987700	1pcs (6pcs / pallet)
Rack 2 x1000W	7681437	1pcs / box
Lamp Driver Rack Mount 2x1000W	9988467	1pcs / box
Rack Blind Plate 2x1000kW	9233296	10pcs/box

Input

Input voltage Rack	360 - 480 V_{ac} (312 - 528 V_{ac}) 3PH + N + PE
Input current Rack	31.5 - 18.6 A
Input voltage Driver *	208 -277 V_{ac} (180 - 305 V_{ac}) 1PH + N + PE
Input current Driver	11.8 - 6.9 A
Input frequency	50/60 Hz ± 3 Hz
Inrush current	Lower than operating current
Power Factor	> 0.99 at 100% power
Current THD	< 5% at max. power
Standby power	< 5 W

* If the input voltage drops below 180V the output power will be dimmed to attempt to continue lamp operation. Below 100V (typ.) the lamp driver will switch off.

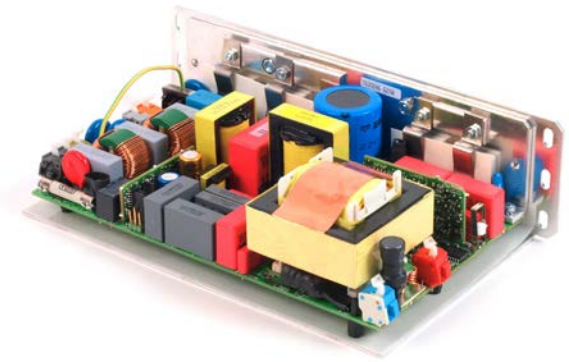
Output

Output power Rack	16.000W (16 lamps of 1000 W)
Lamp Power	300-1000 W (± 30 W)
Lamp voltage	105 - 150 V_{rms} at P_{out}=1000W
lamp current	2 - 9.5 A
Ignition voltage	1200 Vp / 7 attemps with interval 14s + preheat time
Filament power	60W (0 to 30 W per filament)
Dimming	down to 30% adjustable filament heating during dimming
Preheat	adjustable 8 A max power up to 2 x 80W adjustable duration

Miscellaneous

Efficiency	> 94% typ.
Protections	open / short output ground fault / lamp leakage temperature input under/overvoltage EOL rectification
Cooling	fan tray required / fans not included 40 cfm per lamp driver
Lamp cable	30m max.
Operating temperature	0 - +50° C / 32°F to 122°F
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / UL / cUL
Weight	32 kg / 71 lb
Rack 19" 6U dimensions	483 x 266 x 413 mm 19.0 x 10.5 x 16.3 inch
Rack Connectors Input:	Phoenix PC6-16/5-G1-10
Lamp:	Phoenix GIC2,5/4-G-7,62
Control:	Phoenix MCV 1,5/ 3-GF-3,5

Lamp Driver 620W



Input

Input voltage	1 phase 180 - 305 V_{rms}				
Input frequency	50/60Hz ±3Hz				
Input current	3.7A maximum at 180 V_{rms}				
Inrush current	< 7.6A at 230 V_{rms}				
Shunt position, see manual	P1	P2	P3	P4	P5
Output power	380	400	500	600	620W
THD (Current) at 230 V_{rms}	9.5	9.3	8.5	8.0	8.0%
Power Factor at 230 V_{rms}	0.96	0.96	0.97	0.98	0.98
Leakage current	< 3.5mA				

Output

Output voltage Vout	120 - 200 V_{rms}, 620W output				
Minimum driver frequency	85kHz				
Run-up current	5.0A				
Shunt position, see manual	P1	P2	P3	P4	P5
Current at 120 Vout	3.2	3.3	4.2	3.2	5.2A
Maximum Crest Factor	1.6				
Ignition	2.2kVp				
Regulation Within	± 2%				
1 - 10Vdc analog Dimming	According to EN60929				
Shunt position	P1	P2	P3	P4	P5
Minimum dim level = 50%	190	200	150	300	310W
Minimum dim level = 30%	117	120	150	180	180W
See manual for settings					

Features

- Analog **1 - 10V** dimming
- Powers MH & HPS lamps
- Limited inrush current
- Low leakage current
- Input Power Factor Correction
- Low line distortion
- Five distinct user selectable (shunt) power settings
- Two distinct user selectable (shunt) minimum dim level settings
- Up to 9m / 30 ft cable between driver and lamp*
- Typical MH re-strike within 5 minutes, HPS instantaneous
- Bracket mount version
- Protections:
  - Open Output
  - Output short
  - Output over voltage
  - Thermal
  - Lamp end of Life / Rectification
  - Lamp power reduction at low line input

* depending on lamp cable type

Applications

- UV Curing
- UV Disinfection
- UV Tanning

Miscellaneous

Efficiency	95% at Pmax.
Cooling	Heat sinking required
Operating temperature	0°C to +50°C / 32°F to 122°F
Storage temperature	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / cUL / FCC pending UL designation: NMP-620-M
Weight	1.1 kg / 2.5 lb
Dimensions	238 x 123 x 67mml 9.37 x 4.84 x 2.64 inch
Connectors	Cage clamps

Ordering information

Description	Part number	Packaging**
Lamp driver 620W	9947736	12pcs / box

**Other quatities available upon request

Lamp Driver 1 - 3.5kW

Features

- PWM control of output power
- Optional: serial **Modbus** communication
- Very small size, low weight
- Very wide input & load range
- Remote on / off
- High efficiency
- High PF and Low input current THD
- Opto-isolated control outputs
  - Lamp on
  - System status
  - Lamp driver status
  - Lamp status
- Optimized for minimum acoustic resonance

Aplications

- UV Disinfection
- UV Disinfection Ballast Water
- UV Curing

Ordering information

Description	Part number	Packaging**
Lamp driver 1-3.5kW Basic	9984887	4pcs / box 144pcs / pallet
Lamp driver 1-3.5kW Modbus	9984607	

**Other quatities available upon request

Input

Input voltage	1 phase 180-305 V_{rms} 90-305 V_{rms} up to 1.8 kW output power
Input frequency	50/60Hz ±3Hz
Input current	21.5 A max.
Power Factor	> 0.98 at 100% power
Current THD	< 5% typ.

Output

Power	controlled within 5% 600-3500W
Voltage range	@ 3,5kW 411 - 520 V_{rms} @ 3kW 352 - 500 V_{rms} @ 2kW 235 - 450 V_{rms} @ 1kW 118 - 350 V_{rms}
Current limit	10 A typ.
Nominal current	< 8.5 A
Crest factor	1.6
Dimming	down to 14% (@ 3kW mode)
Ignition voltage	2000 Vp 250 msec. max, no hot restrike

Miscellaneous

Efficiency	> 95% typ.
Protections	output open / short output overvoltage input under / overvoltage temperature
Cooling	Air or liquid cooling Preferred aluminium heatsink with water or aluminium heatsink with forced air cooling. Maximum heatsink temperature: 60° C
Operating temperature	0° - 55° C / 32°F to 131°F
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / cUL UL designation: NMPM
Weight	3 kg / 6.6 lb
Dimensions	330 x 140 x 65 mm Excl. optional heatsink
Connector types Input:	Phoenix FRONT 4-H-7,62
Lamp:	Phoenix FRONT 4-H-7,62
Analog control:	Phoenix MC 0,5/8-G-2,5
Modbus control:	Phoenix FK-MC 0,5/3-ST-2,5

Lamp Driver 1-3.5 kW with Heatsink

Features

- PWM control of output power
- Optional: serial **Modbus** communication
- Very small size, low weight
- Very wide input & load range
- Remote on / off
- High efficiency
- High PF and Low input current THD
- Opto-isolated control outputs
  - Lamp on
  - System status
  - Lamp driver status
  - Lamp status
- Optimized for minimum acoustic resonance

Applications

- UV Disinfection
- UV Curing

Input

Input voltage	1 phase 180-305 V_{rms} 90-305 V_{rms} up to 1.8 kW output power
Input frequency	50/60Hz ±3Hz
Input current	21.5 A max.
Power Factor	> 0.98 at 100% power
Current THD	< 5% typ.

Output

Power	controlled within 5% 600 - 3500W
Voltage range	@ 3,5kW 411 - 520 V_{rms} @ 3kW 352 - 500 V_{rms} @ 2kW 235 - 450 V_{rms} @ 1kW 118 - 350 V_{rms}
Current limit	10 A typ.
Nominal current	< 8.5 A
Crest factor	1.6
Dimming	down to 14% (@ 3kW mode)
Ignition voltage	2000 Vp 250 msec. max, no hot restrike

Miscellaneous

Efficiency	> 95 % typ.
Protections	output open / short output overvoltage Input under / overvoltage temperature
Cooling	Air cooling
Operating temperature	0° - 55° C / 32°F to 131°F
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / cUL UL designation: NMPM
Weight	5.5 kg / 12.2 lb
Dimensions	330 x 230 x 100 mm 13.0 x 9.06 x 3.94 inch incl. heatsink
Connector types	Input: Phoenix FRONT 4-H-7,62 Lamp: Phoenix FRONT 4-H-7,62 Analog control: Phoenix MC 0,5/8-G-2,5 Modbus control: Phoenix FK-MC 0,5/3-ST-2,5

Ordering information

Description	Part number	Packaging
Lamp driver 1-3.5kW Basic + Heatsink	9985131	1pcs / box 80pcs/pallet
Lamp driver 1-3.5kW Modbus + Heatsink	9985123	

Specifications subject to change without notice RH20230721

Lamp Driver 4kW

Features

- **Modbus** monitoring and control, remote on/off and dimming
- Wireless diagnostic **Bluetooth** monitor (IOS and Android)
- Support wide range of medium pressure UV lamps worldwide
- Very compact, low weight
- Very wide input voltage range
- Parallel operation up to 8kW
- Up to 40m* / 131ft lamp cable length*
- Optimized for minimum acoustic resonance
- Ground Fault detection (also in lamp idle mode)
- High efficiency, High PF and Low input current THD

*depending on selected output and lamp cable type, see manual

Applications

- UV Disinfection
- Advanced oxidation processes
- Ballast water disinfection
- UV Curing systems

Ordering information

Description	Part number	Packaging
Lamp driver 4kW	9987126	1pcs/box

Input

Input voltage	400/440/480 V_{ac} ± 10% 2PH + PE
Input current	12 A max.
Input frequency	50/60Hz ±3Hz
Inrush current	7.5 A max. at 528 Vac
Power Factor	> 0.98 (at 1-4kW) @ multiple of 3 drivers distributed over 3 phases
Current THD	< 5% typ.
Standby Power	< 5W

* If Input voltage is below 360V the output power will be dimmed to attempt to continue operation and keep the input current below 42A. Below 165V the lamp driver will switch off.

Output

Power accuracy	<5% (at 0.4-4 kW)
Voltage ranges	Single 4kW

	$Voltage_{(max)}$ (Vrms)	$Current_{(min)}$ (A)	$Current_{(max)}$ (A)	$Ignition_{(typ)}$ (kV_{peak})	$Cable\ Cap_{(max)}$ (nF)
Range 1	315	6.9	14.8	2.1	9
Range 2	375	5.8	12.7	2.6	6
Range 3	440	4.9	10.6	3.0	4.5
Range 4	525	4.3	9.1	3.5	3

Frequency	40 - 240kHz
Warmup current	115% of current (max)
Crest factor	< 1.6
Dimming	down to 10% of 4000 W
Ignition	10 starts of 0.5s / 1min off 10 attempts Totall of 100 strikes, no hot restrike

Miscellaneous

Efficiency	> 96.5% typ.
Protections	output open / short output overvoltage input under / overvoltage ground fault temperature lamp EOL rectification
Cooling	forced air cooling
Operating conditions	0°C - 55°C / 32°F to 131°F 25 - 95% non-condensing
Storage conditions	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / UL1029 / FCC47 part18 DNV No. 2.4
Weight	7,3kg / 16.1 lb
Dimensions	395 x 244 x 87 mm 15.6 x 9.61 x 3.43 inch
Connector types	Input: Phoenix PC 5/ 3-G-7,62 Lamp: Phoenix, IPC 5/5 -GF-7,62 Modbus control: Modular Jack RJ45

Specifications subject to change without notice RH20231211

Lamp Driver 8kW

Features

- **Modbus** monitoring and control, remote on/off and dimming
- Wireless diagnostic **Bluetooth** monitor (IOS and Android)
- Support wide range of medium pressure UV lamps worldwide
- Very compact, low weight
- Very wide input voltage range
- Up to 40m / 131ft lamp cable length*
- Optimized for minimum acoustic resonance
- Ground Fault detection (also in lamp idle mode)
- High efficiency, High PF and Low input current THD

*depending on selected output and lamp cable type, see manual

Applications

- UV Disinfection
- Advanced oxidation processes
- Ballast water disinfection
- UV Curing systems

Ordering information

Description	Part number	Packaging
Lamp driver 4kW	2x 9987126	2x 1pcs / box
Dual mount set 4kW	9232885	1pcs / box
Bus Terminations RJ45	5005752	20pcs / box

Input

Input voltage	400/440/480 Vac ± 10% 2PH + PE (3PH not recommended)
Input current	12 A max. per phase
Input frequency	50/60Hz ±3Hz
Inrush current	7.5 A max. at 528 Vac per phase
Power Factor	> 0.98 (at 2-8kW) @ multiple of 3 drivers distributed over 3 phases
Current THD	< 5% typ.
Standby Power	< 5W per driver

* If Input voltage is below 360V the output power will be dimmed to attempt to continue operation and keep the input current below 42A. Below 165V the lamp driver will switch off.

Output

Power accuracy	<5% (at 0.8-8 kW)
Voltage ranges	8kW parallel configuration

	$Voltage_{(max)}$ (Vrms)	$Current_{(min)}$ (A)	$Current_{(max)}$ (A)	$Ignition_{(typ)}$ (kV_{peak})	$Cable\ Cap_{(max)}$ (nF)
Range 1	315	13.9	29.6	2.1	18
Range 2	375	11.5	25.4	2.6	12
Range 3	440	9.8	21.2	3.0	9
Range 4	525	8.5	18.2	3.5	6

Frequency	40 - 240kHz
Warmup current	115% of current (max)
Crest factor	< 1.6
Dimming	down to 10% of 8000 W
Ignition	10 starts of 0.5s / 1min off 10 attempts Totall of 100 strikes, no hot restrike

Miscellaneous

Efficiency	> 96.5% typ.
Protections	output open / short output overvoltage input under / overvoltage ground fault temperature lamp EOL rectification
Cooling	forced air cooling
Operating conditions	0°C - 55°C / 32°F to 131°F 25 - 95% non-condensing
Storage conditions	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / UL1029 / FCC47 part18 DNV No. 2.4
Weight	14,6kg / 32.2 lb
Dimensions	395 x 244 x 172 mm 15.6 x 9.61 x 6.8 inch
Connector type	Input: Phoenix PC 5/ 3-G-7,62 Lamp: Phoenix, IPC 5/5 -GF-7,62 Modbus control: Modular Jack RJ45

Lamp Driver Full Rack 4kW

Features

- **Modbus** monitoring and control, remote on/off and dimming
- Wireless diagnostic **Bluetooth** monitor (IOS and Android)
- Support wide range of medium pressure UV lamps worldwide
- Very wide input voltage range
- Parallel and series operation up to 8kW
- Optimized for minimum acoustic resonance
- Ground Fault detection (also in lamp idle mode)
- High PF and Low input current THD
- High efficiency
- Full Rack 19” with 6 x 4kW Lamp drivers to operate as:
  - 6 x 4kW single drivers
  - 3 x 8kW lamp drivers in parallel for high current lamps up to 29.6A
  - 2 x 8kW lamp drivers in series for high voltage lamps up to 1050V
    For series configuration a balancer is needed
- Up to 40m / 131ft lamp cable length*
- Integrated Fan tray power supply

*depending on selected output and lamp cable type, see manual

Applications

- UV Disinfection
- Advanced oxidation processes
- Ballast water disinfection
- UV Curing systems

Ordering information

Description	Part number	Packaging
Lamp driver Full Rack 4kW	9987801	1pcs / box (pallet)
Fan Tray 4kW	9230661	1pcs / box
Rack 4kW	7682239	1pcs / box
Lamp Driver Rack Mount 4kW	9988459	1pcs / box
Balancer Rack Mount 4kW	9988203	1pcs / box
Rack Blind Plate 4kW	9232893	10pcs/box

Input

Input voltage *	400/440/480 V_{ac} ± 10% 3PH + PE
Input current	42 A max. (full rack)
Input frequency	50/60Hz ±3Hz
Power Factor	> 0.98 @ multiples of 3 lamp drivers
Current THD	< 5% typ.
Standby Power	< 30W

* If Input voltage is below 360V the output power will be dimmed to attempt to continue operation and keep the input current below 42A. Below 165V the lamp driver will switch off.

Output

Power accuracy	<5% (at 0.4-4 kW/0.8-8kW)
Voltage ranges	Single 4kW

See manual for ranges of 8kW series and parallel configurations

	$Voltage_{(max)}$ (Vrms)	$Current_{(min)}$ (A)	$Current_{(max)}$ (A)	$Ignition_{(typ)}$ (kV_{peak})	$Cable\ Cap_{(max)}$ (nF)
Range 1	315	6.9	14.8	2.1	9
Range 2	375	5.8	12.7	2.6	6
Range 3	440	4.9	10.6	3.0	4.5
Range 4	525	4.3	9.1	3.5	3

Frequency	40 - 240kHz
Warmup current	115% of current (max)
Crest factor	< 1.6
Dimming	down to 10% of 4/8kW
Ignition	10 starts of 0.5s / 1min off 10 attempts Totall of 100 strikes, no hot restrike

Miscellaneous

Efficiency	> 96.5% typ.
Protections	output open / short / overvoltage input under / overvoltage ground fault / temperature lamp EOL rectification
Cooling	Nedap Fan Tray P/N 9230661 Dimensions: 19” x 1U Forced air cooling needed at 70 CFM per driver
Operating conditions	0°C - 55°C / 32°F to 131°F 25 - 95% non-condensing
Storage conditions	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / UL1029 / FCC47 part18
Weight	28,5kg / 62.9 lb
Rack 19” 5U dimensions	483 x 222 x 442 mm 19.0 x 8.7 x 17.4 inch
Rack connectors Input:	Phoenix PLH 16/4-15
Lamp:	Phoenix, IPC 5/5 -GF-7,62
2 Lamps with balancer:	Phoenix, PC 5/10 -G-7,62
Modbus control:	Modular Jack RJ45

Lamp Driver 6kW

Features

- Output power control: **PWM** or **1 - 10V** signal
- Optional: serial **Modbus** communication
- Remote on / off
- Control status with 4 LED's
- Very small size, low weight
- Very wide input & load range
- High PF and Low input current THD
- High efficiency
- Opto-isolated control outputs
  - Lamp on
  - System status
  - Lamp driver status
  - Lamp status
- Optimized for minimum acoustic resonance

Aplications

- UV Disinfection
- UV Curing

Ordering information

Description	Part number	Packaging
Lamp driver 6kW	9559531	1pcs / box
Lamp driver 6kW Modbus	9927034	
Lamp driver HV 6kW Modbus	9954961	

Input

Input voltage	200 - 277 Vac ±10% 1 phase /3 wires L1 - N -PE 2 lines / 3 wires L1 - L2 -PE 2 lines / 4 wires L1 - L2 - N - PE
Input frequency	50/60Hz ±3Hz
Input current	1 phase 36 A max, 2 phase 2x 18 A max.
Power Factor	> 0.98 at 100% power
Current THD	< 5% typ.

Output

Power	controlled within 5% 1000 - 6000W
Voltage range	353 - 500 V_{rms} 500 - 650 V_{rms} (HV version)
Nominal current	< 17A. <12A (HV version)
Current limit	20 A typ. 15A (HV version)
Crest factor	< 1.6
Dimming	down to 17%
Ignition voltage	LV version: 1600 Vp HV version: 2500 Vp 250 msec. max., no hot restrike

Miscellaneous

Efficiency	> 94% typ.
Protections	output open / short output overvoltage input under / overvoltage temperature
Cooling	Forced air cooling
Operating temperature	0º - 40º C / 32°F to 104°F
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / UL / cUL UL designation: NMPL
Weight	13,8 kg / 30.5 lb
Dimensions	400 x 255 x 190 mm 15.8 x 10.1 x 7.48 inch
Connectors	Phoenix DFK - PC / MC

Lamp Driver 12kW

Features

- **MODBUS** or **Analog 0-10V** monitoring and control, remote on/off and dimming
- Alarms
  - Temperature
  - Fan status
  - Lamp open / short / ground fault
- Monitoring
  - Lamp power / voltage / current
  - Fan status
- High Power Factor
- High efficiency
- Low inrush current
- Easy installation
- Cooling fans included (service part)

Aplications

- UV Disinfection
- UV Curing

Ordering information

Description	Part number	Packaging
Lamp driver 12kW Modbus	9930442	1pcs / box (15pcs / pallet)

Input

Input voltage	400 - 480 V_{ac} (360 - 528 V_{ac}) 3PH + PE
Input current	18 A max.
Input frequency	50/60Hz ±3Hz
Inrush current	20 A max.
Power Factor	> 0.98 at 100% power
Current THD	< 10% typ.

Output

Lamp power	11.7 kW max.
Power accuracy	< 5% (at 2.7 - 11.7 kW)
Lamp voltage	900 - 1460 V_{rms}
Lamp current	< 10 A_{rms}
Output capacitance	1.5 nF Maximum lamp wiring capacitance
Dimming	down to 5% (600W)
Step response time	100ms from 100% to 30% power
Ignition voltage	4 kVp max. 5 attemps of 275ms with 18s interval
Frequency	45 - 200 kHz

Miscellaneous

Efficiency	> 95% typical
Protections	output open / short / overvoltage input under / overvoltage ground fault / temperature lamp EOL rectification
Cooling	Forced air cooling Field replaceable fan
Operating temperature	0° - 55° C / 32°F to 131°F
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / UL / cUL UL designation: NMPXL
Weight	31 kg / 68 lb
Dimensions	500 x 356 x 242 mm 19.7 x 14.0 x 9.53 inch
Connectors	Screw terminals
IP rating	IP20

Lamp Driver 24kW

Features

- **MODBUS** or **Analog 0-10V** monitoring and control, remote on/off and dimming
- Alarms
  - Temperature
  - Fan status
  - Lamp open / short / ground fault
- Monitoring
  - Lamp power / voltage / current
  - Fan status
- High Power Factor
- High efficiency
- Low inrush current
- Easy installation
- Cooling fans included (service part)

Aplications

- UV Disinfection
- UV Curing

Ordering information

Description	Part number	Packaging
Lamp driver 12kW Modbus	2x 9930442	1pcs / box (15pcs / pallet)

Input

Input voltage	400 - 480 V_{ac} (360 - 528 V_{ac}) 3PH + PE
Input current	36 A max.
Input frequency	50/60Hz ±3Hz
Inrush current	40 A max.
Power Factor	> 0.98 at 100% power
Current THD	< 10% typ.

Output

Lamp power	23.4 kW max.
Power accuracy	< 5% (at 5.4 - 23.4 kW)
Lamp voltage	900 - 1460 V_{rms}
Lamp current	< 20 A_{rms}
Output capacitance	3.0 nF Maximum lamp wiring capacitance
Dimming	down to 23% (5.4kW)
Step response time	100ms from 100% to 30% power
Ignition voltage	4 kVp max. 5 attemps of 275ms with 18s interval
Frequency	45 - 200 kHz

Miscellaneous

Efficiency	> 95% typical
Protections	output open / short / overvoltage input under / overvoltage ground fault / temperature lamp EOL rectification
Cooling	Forced air cooling Field replaceable fan
Operating temperature	0° - 55° C / 32°F to 131°F
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / UL / cUL UL designation: NMPXL
Weight	62 kg / 136 lb
Dimensions	500 x 356 x 484 mm 19.7 x 14.0 x 19.1 inch
Connectors	Screw terminals
IP rating	IP20

Lamp Driver 36kW

Features

- **MODBUS** or **Analog 0-10V** monitoring and control, remote on/off and dimming
- Alarms
  - Temperature
  - Fan status
  - Lamp open / short / ground fault
- Monitoring
  - Lamp power / voltage / current
  - Fan status
- High Power Factor
- High efficiency
- Low inrush current
- Easy installation
- Cooling fans included (service part)

Aplications

- UV Disinfection
- UV Curing

Ordering information

Description	Part number	Packaging
Lamp driver 12kW Modbus	3x 9930442	1pcs / box (15pcs / pallet)

Input

Input voltage	400 - 480 V_{ac} (360 - 528 V_{ac}) 3PH + PE
Input current	54 A max.
Input frequency	50/60Hz ±3Hz
Inrush current	60 A max.
Power Factor	> 0.98 at 100% power
Current THD	< 10% typ.

Output

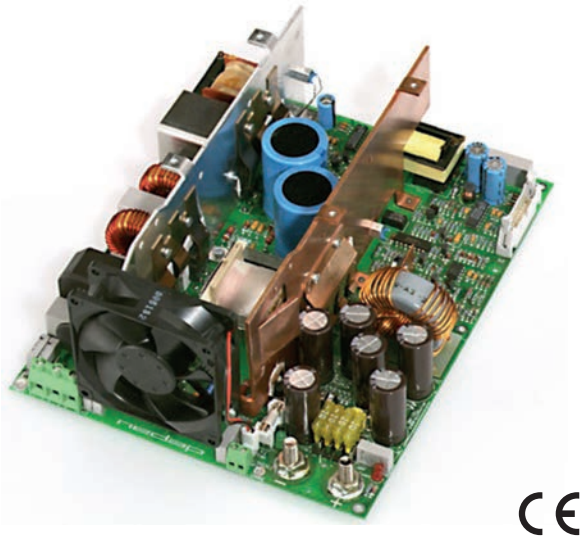
Lamp power	35.1 kW max.
Power accuracy	< 5% (at 8.1 - 35.1 kW)
Lamp voltage	900 - 1460 V_{rms}
Lamp current	< 30 A_{rms}
Output capacitance	4.5 nF Maximum lamp wiring capacitance
Dimming	down to 23% (8.1kW)
Step response time	100ms from 100% to 30% power
Ignition voltage	4 kVp max. 5 attemps of 275ms with 18s interval
Frequency	45 - 200 kHz

Miscellaneous

Efficiency	> 95% typical
Protections	output open / short / overvoltage input under / overvoltage ground fault / temperature lamp EOL rectification
Cooling	Forced air cooling Field replaceable fan
Operating temperature	0° - 55° C / 32°F to 131°F
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / UL / cUL UL designation: NMPXL
Weight	93 kg / 205 lb
Dimensions	500 x 356 x 726 mm 19.7 x 14.0 x 28.6 inch
Connectors	Screw terminals
IP rating	IP20

Specifications subject to change without notice RH20240306

LED Driver 1500W Open Frame



Input

Input voltage	1 phase 187 - 265 Vac
Input frequency	50/60Hz ±3Hz
Input current	9 A max. at 200 V_{rms}
Power Factor	> 0.98

Features

- Small size
- Remote on / off
- Auxiliary 12 V output
- Power Factor Corrector included
- Voltage or current control
- Voltage and current monitor output
- High efficiency
- Parallel operation (share) or redundancy option
- 750W universal input version available
- Optional housing

Output

Output power	1500W
Aux. power	12V - 0.5A
Power regulation	± 2.5 %
Output voltage	30V / 60V / 120V max.
Output current	50A / 25A / 12.5A max.

Aplications

- Power LED UV Curing
- Special Power LED Lighting

Miscellaneous

Efficiency	> 85% at full load
Protections	overload overvoltage overcurrent short circuit temperature
Cooling	Forced air cooling
Operating temperature	0º to +40º C / 32°F to 104°F
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / cUL pending
Dimensions	250 x 209 x 100 mm 9.84 x 8.23 x 3.94 inch
Connector	input Screw terminal block output 2x M8

Ordering information

Description	Part number	Packaging**
LED driver 30V/50A	9863281	4pcs / box
LED driver 60V/25A	9864563	
LED driver 120V/12.5A	9884106	

**Other quatities available upon request

Specifications subject to change without notice RH20230721

LED Driver 3000W Rack 19”

Input

Input voltage	1 phase 187 - 265 V_{rms}
Input frequency.	50/60Hz ±3Hz
Input current	18 A max. at 200 V_{rms}
Power Factor	>0. 98

CE

Features

- Remote on / off
- Auxiliary 12V output
- Power Factor Corrector included
- Voltage or current control
- Voltage and current output monitor
- High efficiency.
- Parallel operation (share) or redundancy option
- 1500W universal input version available
- 19” rack mounting

Output

Output power	3000W
Aux. power	12V - 0.5A
Power regulation	± 2.5 %
Output voltage	30V / 60V / 120V max.
Output current	100A / 50A / 25A max.

Aplications

- Power LED UV Curing

Miscellaneous

Efficiency	>85% at full load
Protections	overload over-voltage over-current short circuit temperature
Cooling	Forced air cooling
Operating temperature	0º to + 40º C / 32°F to 104°F
Storage	-25°C to +70°C / -13°F to 158°F 20 - 95% non-condensing
Approvals	CE / cUL pending
Dimensions	440 x 310 x 135 mm 17.3 x 12.2 x 5.32 inch
Connectors	input Phoenix DFK - PC16 output Phoenix DFK - PC16 control Phoenix MC 1,5

Ordering information

Description	Part number	Packaging
Led Driver 120V/25A	9981675	1pcs / box

Specifications subject to change without notice RH20230721

Nedap UV Tool

Supported lamp drivers*

Part number	Description
9560114	Lamp driver 800W
9988467	Lamp driver 2x1000W
9987700	Lamp driver Full Rack 2x1000W
9984607	Lamp driver 1-3.5kW Modbus
9985123	Lamp driver 1-3.5kW Modbus + Heatsink
9987126	Lamp driver 4kW
9987801	Lamp driver Full Rack 4kW
9930442	Lamp driver 12kW Modbus (from PMI ver. J)

* Nedap is continuously improving the product line and more drivers will be supported in the future.

Features

The Nedap UV Tool is a windows software tool to configure, control, monitor Nedap lamp drivers and lamps and perform firmware updates of lamp drivers.

Compatible OS

The Nedap UV Tool supports Windows operating system (OS) versions 10, 8, 7, 98, ME, 2000 and XP.

Contact Nedap in case you are using OS Windows 11.

Ordering information

Description	Part number	Packaging
Nedap UV Tool	9214917	1pcs / box

Notes

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