

# 专业智能UV电源设计制造商

PROFESSIONAL INTELLIGENT STEPLESS UV

POWER DESIGNER & MANUFACTURER

UV Lamp Input Power Up to 1~50KW

Input Voltage up to 450~3000V

No need additional ignitor



[www.yyy-charm.com](http://www.yyy-charm.com)

厦门泓赫进出口有限公司

XIAMEN CHARM IMPACT IMPORT & EXPORT CO., LTD

“Only Better!”

# 企业介绍

## Company profile

厦门泓赫进出口有限公司坐落于厦门市，本公司致力于研发生产高品质智能UV电源；公司的研发中心和生产基地在中国厦门。

公司专注于大功率的放电管电离领域的研究；在电源开发中融合单片机技术，高频开关电源技术，以及IGBT逆变技术等现代电子电力技术研发出智能UV电源；该产品具备高效节能，稳定可靠，控制精准体积小，重量轻等特点。

我们的智能UV电源HAMAL系列产品，能够匹配各种UV灯管(汞灯，金属卤素灯，碘镓灯以及其他特种UV灯)，功率范围从1KW到50KW，HAMAL电源主要应用在图文印刷业，PBC，UV固化行业，喷涂行业，木器制造业等用来替代传统UV电源(UV变压器+电容)的理想电源。

我们的汞氙灯(球形灯)电源，功率范围1KW到30KW，无需外置触发器，高效节能，主要应用于PCB，LCD，PDP模拟太阳光源，放映灯等平行光应用领域，提供稳定可信赖的电源；该电源可以匹配各类球形灯：USHIO, ORC, YUMEX and OSRAM...

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Xiamen Charm Impact Import & Export Co., Ltd is a company based in Xiamen China, with international investors. Its core business is projecting and producing high quality electronic Ballasts, for the of ultraviolet rays. Our R&D and Manufacturing center are all located in Xiamen China.

Our company is constantly engaged with research and development concerning physic of plasma sector and electronic projects regarding high power and high tension devices, It combines with some technology such as: microprocessor, HF-switching power, IGBT inverter in order to get highest efficiency, reliability, more precision control and saving energy.

Our intelligent UV inverter ballast==Hamal serial, which can be matched with all kinds of lamps(mercury, metal halide lamp, Gallium lamp or other special UV lamps). Power range can be reached from 1 KW to 50 KW based on customer' s detailed requests. Hamal will replace and improve the traditional electromagnetic transformer + Capacitor ballast for printing industry,PBC,UV curing system and painting industry, wooden industry, conformal PCB, food and environment dis-infection and so on.

Our Xenon DC Power supply, Power range is from 1KW to 30KW, NO need extra igniter; This power supply is easy to use and more stable. It can be used for medical, cinema projection and industrial applications (PCB, LCD and PDP) where a stable light source is essential, it can drive different kinds of lamp easily for example: USHIO, ORC, YUMEX and OSRAM...

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智能UV电源特点	智能UV电源优势
1. 高频方波技术 (8~16(Hz方波输出))	>比传统电源增加20~30%UV能量输出 > 对低极性转换产生的热量,降低能耗至少30%以上
2. 隧道启动系统 (专利 技术)	>延长灯管寿命约50%以上 >大幅减低启动时间 (1分钟以内)
3. 单片机动态控制技术	>使电源的转换效率高达95%以上 >自动找到灯管的最佳工作电压和电流 实时监测, 自动调整工作参数
4. 高速IGBT软开关技术	>响应速度快, 从工作待机到全功率输出时间:8ms!!!
5. 功率调节技术	>输出功率规可调 (10%~100%) >长期待机状态最小功率仅需10%由灯管的特性决定)
6. 相位平衡技术	>功率因素96%, 无冲击电流, $\text{Cos } \phi = 1$
7. 自检和电路保护技术	>有自检功能 >具有过压, 过流, 过热, 断路, 短路等保护, 以免灯管受损
8. 卓越的机构设计技术	>重量是传统电源的1/5; 体积是传统电源的1/8; 安装简单方便
9. 便于多台联机控制	>采用PLC控制多台电源输出并反馈电源的工作状况
<b>FEATURES AND BENEFITS</b>	
<b>HAMAL Features</b>	<b>HAMAL Benefits</b>
1. High-frequency(8~16KHz) Square Wave	> More UV radiation output (increase 20%~30%) > Reduce the Dipole overheating
2. Tunneling System ( patent)	> Lamp life is increased > Warm-up of the lamp is heavily reduced
3. Micro-process Dynamic Control	> Best efficiency (>95%) of the Lamp over the time > Find the best working point of current and voltage > Control and recovery of the external events
4. High-Speed and Soft Switching IGBT	> Very fast response
5. True Power Regulator with Magnitude Control	> Fully Stepless regulation > Minimal power is 5% for long term standby > No special algorithm from customer is required
6. Phase Balance	>Power factor is 96% >No inrush current $\text{Cos}\phi=1$
7. Self-diagnostics and Protection	>Self-diagnostics >Protection technology: OVP,OCP,OP,BCP,SCP
8. Excellent Compact Design	>Weight is 5 times less >Volume is 8 times less >Easy to setup
9. Easily connected with Milti-power supply	> Easy to connect to PLC to control different power supply and get feedback from them.

	传统UV变压器+电容模式	可控硅模式	开关电源模式	
			普通开关电源模式	智能电源模式
工作频率	50/60HZ	50/60HZ	200~400Hz	8~16KHZ
满载效率	30%~80%	30%~80%	>90% (仅针对3相 输入)	>92%<96%
待机效率	非常低	非常低	>90%	》92%
功率因素	待机状态非常低	非常低	>90% (输入是3相电)	》96%
控制模式	模拟量控制	采用模拟量控制电 流电压相移	电流模式或功率模 式	矢量功率模式
波形	正弦电压波形, 产生 巨大谐 波的干扰	在电压和电流模式下产 生 巨大谐波的干扰	普通方波	高频平稳方波
调节范围	40%~100% (2~4档位)	40%~100% 无级可调	20%~100%无 级可调	20%~100%无级可调 10%~100%长期待机
长时间待机功率	50% (典型)	40% (典型)	15% (典型)	5%~10%长时间待机
反应时间	200 毫秒	2 秒	0.5 秒	8 毫秒
与PLC连接	复杂 DIGITAL	复杂 (Analo +Digital)	简单 (Analog Digital)	简单 (Analog + Digital); RS485
尺寸和重量 (17KW为例)	150公斤		40公斤	21公斤

	Traditional Electromagnetic Type	SCR-Regulated Type	Switching Mode	
			Electronic Type	HAMAL Power Supply
Working Frequency	50/60HZ	50/60HZ	200~400Hz	8~16KHz
Efficiency	from 30 to 80%	from 30 to 80%	>90%	>=95%
Power factor	very low in dimming	very low in dimming	>90% (3 phase only)	》96%
Control Type	Contact and inductor open circuit	Current and voltage shift phase analog control	Current or Power	Vectorial Power
Digital control	Electromechanical	Analog	Analog / Microprocessor	Fully microprocessor controlled
Wave Form	Voltage Sinusoidal wave, Big current harmonic distortion	Big harmonic distortion in voltage and current	Square Wave Amplitude controlled	Square Wave re-strike less
Regulation Range	50 to 100% with some step (2-4)	40 to 100% stepless	20-100% Stepless	10%~100% stepless
Stand-by Power	50% typical	40% typical	15% typical	5% in long stand by mode
Ignition & W.U.	4 minute typical	2 minute typical	1 minute	10 to 60 sec
W.U. from Stand by	20 sec	20 sec	10/20 sec	8 ms
Connected with PLC	digital	Analog digital	Analog digital	Analog digital /RS485
Size & Weight		for 17kw = 150 kg	for 17kw = 40 kg	for 17kw = 21 kg

# ULTA

智能UV电源

## 用于UV灯管功率1KW-11KW (低电压灯管)



### 特点:

#### 高频方波输出

比传统变压器增加20-30%的UV能量输出

#### 隧道触发系统(专利技术)

更容易触发各类灯管, 延长灯管寿命

#### 单片机动态控制技术

效率更高输出更稳定

#### 功率调幅技术

做到无级调节

#### 通讯界面:

MOD BUS RS485 和模拟/数字I/O

#### 卓越的机构设计

尺寸更小更轻

#### 能够匹配普通UV灯和LED UV灯

### 应用领域:

UV 固化

UV 涂覆和黏结

UV 消毒和杀菌

UV 光催化

UV 光解氧化

### 输入特征

输入电压	360~440VAC
频率	>47Hz
COSφ	1
功率因数	0.96
总谐波失真	30%
效率	Typ ≥94%

### 输出特征

工作频率	2.5KHz
触发电压	>6000Vpp
触发频率	270KHz
最大输出功率	8.1Kw (环境温度55度) 11Kw (环境温度40度)
输出电压范围	Up to 450VAC
输出电流范围	Up to 25A
通讯接口	MODBUS 模拟/数字 I/O
灯管参数监测	电压/电流/功率 工作状态/异常检测记录
电源保护机制	输入电压过高/过低/短缺 输出短路/开路 超温保护 对地/机壳漏电保护

### 辅助电源

电压	21VDC-30VDC
电流	2.0A

### 工作环境

工作允许最高环境温度	40-55摄氏度 (海拔1000米)
最大允许湿度	<80%
IP等级	IP20
冷却方式	强制风冷
外形尺寸(长宽高) 毫米	518*160*128
重量	10Kg



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# ULTA

Intelligent UV  
Inverter Ballast

## For 1KW-11KW Low Voltage UV Lamp



### Features:

#### High Frequency and Square-Wave power output

To get more UV output

#### Tunneling ignition (Patent technology)

To ignite the lamp easily

#### Micro-processor dynamic control technology

To get more efficiency and stability

#### Amplitude technology

To regulate the power control from 10% to 100%(based on lamp character)

#### Control Interfaces:

MOD BUS RS485 and analog & digital interface

#### Compact design

To get small size and lower weight

#### Suitable for normal lamp and LED lamp

### Application:

**UV** Curing

**UV** Coating and Bonding

**UV** Sterilization&Disinfection

**UV** Photochemical Catalysis

**UV** Photolysis Oxidation

### Input Section

Main Input Voltage	360~440VAC
Frequency	>47Hz
COSφ	1
Power Factor	0.96
THD	30% (Hex Bridge)
Efficiency	Typ≥94%

### Output Section

Working Frequency	2.5KHz
Ignition Voltage	>6000Vpp
Ignition Frequency	270KHz
Max. Output Power	8.1Kw(55°Cambient Temp) 11Kw(40°Cambient Temp)
Output Voltage	Up to 450VAC
Output Current	Up to 25A
Control Port	MODBUS Analog&Digital I/O
Lamp Monitoring	Voltage/current/power /status/error code
Protections	Input under/over Voltage; Phase Loss Output Open/Short; Output Over voltage Over Temperature; Ground Leakage Faulty

### Auxiliary Section

Voltage	21VDC-30VDC
Current	2.0A

### Working Environment

Max. ambient Temperature	40-55°C (up to 1000meters Sea Level)
Max. Humidity	<80%
Protection Class	IP20
Cooling	Forced Air Cooling
Dimension (LWH)mm	518*160*128
Weight	10Kg



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# UVTA

智能UV电源

用于UV灯管功率3KW-12KW



## 特点:

### 高频方波输出

比传统变压器增加20-30%的UV能量输出

### 隧道触发系统(专利技术)

更容易触发各类灯管, 延长灯管寿命

### 单片机动态控制技术

效率更高输出更稳定

### 功率调幅技术

做到无级调节

### 通讯界面:

MOD BUS RS485 和模拟/数字I/O

### 卓越的机构设计

尺寸更小更轻

## 应用领域:

- UV 固化
- UV 涂覆和黏结
- UV 消毒和杀菌
- UV 光催化
- UV 光解氧化

## 输入特征

输入电压	360~440VAC
频率	>47Hz
COSφ	1
功率因数	0.96
总谐波失真	30%
效率	Typ≥94%

## 输出特征

工作频率	可变频率 6KHz to 16KHz
触发电压	>4000Vpp
触发频率	270KHz
最大输出功率	7.2Kw (环境温度55度) 12Kw (环境温度40度)
输出电压范围	Up to 1800VAC
输出电流范围	Up to 15A
通讯接口	MODBUS 模拟/数字 I/O
灯管参数监测	电压/电流/功率 工作状态/异常检测记录
电源保护机制	输入电压过高/过低/缺相 输出短路/开路 超温保护 对地/机壳漏电保护

## 辅助电源

电压	21VDC-30VDC
电流	3.0A

## 工作环境

工作允许最高环境温度	40-55摄氏度 (海拔1000米)
最大允许湿度	<80%
IP等级	IP20
冷却方式	强制风冷
外形尺寸(长宽高)毫米	548*160*172
重量	12Kg



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# UVTA

Intelligent UV  
Inverter Ballast

## For 3KW-12KW UV Lamp



### Features:

#### High Frequency and Square-Wave power output

To get more UV output

#### Tunneling ignition (Patent technology)

To ignite the lamp easily

#### Micro-processor dynamic control technology

To get more efficiency and stability

#### Amplitude technology

To regulate the power control from 10% to 100%(based on lamp character)

#### Control Interfaces:

MOD BUS RS485 and analog & digital interface

#### Compact design

To get small size and lower weight

### 应用领域:

- UV Curing
- UV Coating and Bonding
- UV Sterilization&Disinfection
- UV Photochemical Catalysis
- UV Photolysis Oxidation

#### Input Section

Main Input Voltage	360~440VAC
Frequency	>47Hz
COSφ	1
Power Factor	0.96
THD	30%
Efficiency	Typ≥94%

#### Output Section

Working Frequency	Variable from 6KHz to 16KHz
Ignition Voltage	>4000Vpp
Ignition Frequency	270KHz
Max. Output Power	7.2Kw(55°C ambient Temp) 12Kw(40°C ambient Temp)
Output Voltage	Up to 1800VAC
Output Current	Up to 15A
Control Port	MODBUS Analog&Digital I/O
Lamp Monitoring	Voltage/current/power /status/error code
Protections	Input under/over Voltage; Phase Loss Output Open/Short; Output Over voltage Over Temperature; Ground Leakage Faulty

#### Auxiliary Section

Voltage	21VDC-30VDC
Current	3.0A

#### Working Environment

Max. ambient Temperature	40-55°C (up to 1000meters Sea Level)
Max. Humidity	<80%
Protection Class	IP20
Cooling	Forced Air Cooling
Dimension (LWH)mm	548*160*172
Weight	12Kg



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# UMTA

智能UV电源

用于UV灯管功率8KW-12KW



## 特点:

### 高频方波输出

比传统变压器增加20-30%的UV能量输出

### 隧道触发系统(专利技术)

更容易触发各类灯管, 延长灯管寿命

### 单片机动态控制技术

效率更高输出更稳定

### 功率调幅技术

做到无级调节

### 通讯界面:

MOD BUS RS485 和模拟/数字I/O

### 卓越的机构设计

尺寸更小更轻

## 应用领域:

- UV 固化
- UV 涂覆和黏结
- UV 消毒和杀菌
- UV 光催化
- UV 光解氧化

## 输入特征

输入电压	360~440VAC
频率	>47Hz
COSφ	1
功率因数	0.96
总谐波失真	30%
效率	Typ ≥94%

## 输出特征

工作频率	可变频率 6KHz to 16KHz
触发电压	>4000Vpp
触发频率	270KHz
最大输出功率	12Kw (环境温度40度)
输出电压范围	Up to 1800VAC
输出电流范围	Up to 25A
通讯接口	MODBUS 模拟/数字 I/O
灯管参数监测	电压/电流/功率 工作状态/异常检测记录
电源保护机制	输入电压过高/过低/缺相 输出短路/开路 超温保护 对地/机壳漏电保护

## 辅助电源

电压	21VDC-30VDC
电流	3.0A

## 工作环境

工作允许最高环境温度	40摄氏度 (海拔1000米)
最大允许湿度	<80%
IP等级	IP20
冷却方式	强制风冷
外形尺寸(长宽高) 毫米	530*160*252
重量	20Kg



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# UMTA

Intelligent UV  
Inverter Ballast

## For 8KW-12KW UV Lamp



### Features:

#### High Frequency and Square-Wave power output

To get more UV output

#### Tunneling ignition (Patent technology)

To ignite the lamp easily

#### Micro-processor dynamic control technology

To get more efficiency and stability

#### Amplitude technology

To regulate the power control from 10% to 100%(based on lamp character)

#### Control Interfaces:

MOD BUS RS485 and analog & digital interface

#### Compact design

To get small size and lower weight

### Application:

- UV Curing
- UV Coating and Bonding
- UV Sterilization&Disinfection
- UV Photochemical Catalysis
- UV Photolysis Oxidation

#### Input Section

Main Input Voltage	360~440VAC
Frequency	>47Hz
COSφ	1
Power Factor	0.96
THD	30%
Efficiency	Typ≥94%

#### Output Section

Working Frequency	Variable from 6KHz to 16KHz
Ignition Voltage	>4000Vpp
Ignition Frequency	270KHz
Max. Output Power	12Kw(40°C ambient Temp)
Output Voltage	Up to 1800VAC
Output Current	Up to 25A
Control Port	MODBUS Analog&Digital I/O
Lamp Monitoring	Voltage/current/power /status/error code
Protections	Input under/over Voltage; Phase Loss Output Open/Short; Output Over voltage Over Temperature; Ground Leakage Faulty

#### Auxiliary Section

Voltage	21VDC-30VDC
Current	3.0A

#### Working Environment

Max. ambient Temperature	40°C (up to 1000meters Sea Level)
Max. Humidity	<80%
Protection Class	IP20
Cooling	Forced Air Cooling
Dimension (LWH)mm	530*160*252
Weight	20Kg



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# UMDA 用于UV灯管功率13KW-18KW

智能UV电源



## 特点:

### 高频方波输出

比传统变压器增加20-30%的UV能量输出

### 隧道触发系统(专利技术)

更容易触发各类灯管, 延长灯管寿命

### 单片机动态控制技术

效率更高输出更稳定

### 功率调幅技术

做到无级调节

### 通讯界面:

MOD BUS RS485 和模拟/数字I/O

### 卓越的机构设计

尺寸更小更轻

## 应用领域:

UV 固化

UV 涂覆和黏结

UV 消毒和杀菌

UV 光催化

UV 光解氧化

## 输入特征

输入电压	360~440VAC
频率	>47Hz
COSφ	1
功率因数	0.96
总谐波失真	30%
效率	Typ≥94%

## 输出特征

工作频率	可变频率6KHz to 16KHz
触发电压	>4000Vpp
触发频率	270KHz
最大输出功率	18Kw (环境温度40度)
输出电压范围	Up to 2500VAC
输出电流范围	Up to 20A
通讯接口	MODBUS 模拟/数字 I/O
灯管参数监测	电压/电流/功率 工作状态/异常检测记录
电源保护机制	输入电压过高/过低/缺相 输出短路/开路 超温保护 对地/机壳漏电保护

## 辅助电源

电压	21VDC-30VDC
电流	1.5A

## 工作环境

工作允许最高环境温度	40摄氏度 (海拔1000米)
最大允许湿度	<80%
IP等级	IP20
冷却方式	强制风冷
外形尺寸(长宽高) 毫米	630*160*350
重量	24Kg



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# UMDA For 13KW-18KW UV Lamp

Intelligent UV  
Inverter Ballast



## Features:

### High Frequency and Square-Wave power output

To get more UV output

### Tunneling ignition (Patent technology)

To ignite the lamp easily

### Micro-processor dynamic control technology

To get more efficiency and stability

### Amplitude technology

To regulate the power control from 10% to 100%(based on lamp character)

### Control Interfaces:

MOD BUS RS485 and analog & digital interface

### Compact design

To get small size and lower weight

## Application:

- UV Curing
- UV Coating and Bonding
- UV Sterilization&Disinfection
- UV Photochemical Catalysis
- UV Photolysis Oxidation

### Input Section

Main Input Voltage	360~440VAC
Frequency	>47Hz
COSφ	1
Power Factor	0.96
THD	30% (Hex Bridge)
Efficiency	Typ≥94%

### Output Section

Working Frequency	Variable from 6KHz to 16KHz
Ignition Voltage	>4000Vpp
Ignition Frequency	270KHz
Max. Output Power	18Kw(40°C ambient Temp)
Output Voltage	Up to 2500VAC
Output Current	Up to 20A
Control Port	MODBUS Analog&Digital I/O
Lamp Monitoring	Voltage/current/power /status/error code
Protections	Input under/over Voltage; Phase Loss Output Open/Short; Output Over voltage Over Temperature; Ground Leakage Faulty

### Auxiliary Section

Voltage	21VDC-30VDC
Current	1.5A

### Working Environment

Max. ambient Temperature	40°C (up to 1000meters Sea Level)
Max. Humidity	<80%
Protection Class	IP20
Cooling	Forced Air Cooling
Dimension (LWH)mm	630*160*350
Weight	24Kg



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# UMXA

智能UV电源

用于UV灯管功率19KW-22KW



## 特点:

### 高频方波输出

比传统变压器增加20-30%的UV能量输出

### 隧道触发系统(专利技术)

更容易触发各类灯管, 延长灯管寿命

### 单片机动态控制技术

效率更高输出更稳定

### 功率调幅技术

做到无级调节

### 通讯界面:

MOD BUS RS485 和模拟/数字I/O

### 卓越的机构设计

尺寸更小更轻

## 应用领域:

UV 固化

UV 涂覆和黏结

UV 消毒和杀菌

UV 光催化

UV 光解氧化

## 输入特征

输入电压	360~440VAC
频率	>47Hz
COSφ	1
功率因数	0.96
总谐波失真	30%
效率	Typ≥94%

## 输出特征

工作频率	可变频率 6KHz to 16KHz
触发电压	>4000Vpp
触发频率	270KHz
最大输出功率	22Kw (环境温度40度)
输出电压范围	Up to 2500VAC
输出电流范围	Up to 20A
通讯接口	MODBUS 模拟/数字 I/O
灯管参数监测	电压/电流/功率 工作状态/异常检测记录
电源保护机制	输入电压过高/过低/缺相 输出短路/开路 超温保护 对地/机壳漏电保护

## 辅助电源

电压	21VDC-30VDC
电流	1.5A

## 工作环境

工作允许最高环境温度	40摄氏度 (海拔1000米)
最大允许湿度	<80%
IP等级	IP20
冷却方式	强制风冷
外形尺寸(长宽高) 毫米	675*160*363
重量	31Kg



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# UMXA

Intelligent UV  
Inverter Ballast

## For 19KW-22KW UV Lamp



### Features:

#### High Frequency and Square-Wave power output

To get more UV output

#### Tunneling ignition (Patent technology)

To ignite the lamp easily

#### Micro-processor dynamic control technology

To get more efficiency and stability

#### Amplitude technology

To regulate the power control from 10% to 100%(based on lamp character)

#### Control Interfaces:

MOD BUS RS485 and analog & digital interface

#### Compact design

To get small size and lower weight

### Application:

- UV Curing
- UV Coating and Bonding
- UV Sterilization&Disinfection
- UV Photochemical Catalysis
- UV Photolysis Oxidation

#### Input Section

Main Input Voltage	360~440VAC
Frequency	>47Hz
COSφ	1
Power Factor	0.96
THD	30%
Efficiency	Typ≥94%

#### Output Section

Working Frequency	Variable from 6KHz to 16KHz
Ignition Voltage	>4000Vpp
Ignition Frequency	270KHz
Max. Output Power	22Kw(40°C ambient Temp)
Output Voltage	Up to 2500VAC
Output Current	Up to 20A
Control Port	MODBUS Analog&Digital I/O
Lamp Monitoring	Voltage/current/power /status/error code
Protections	Input under/over Voltage; Phase Loss Output Open/Short; Output Over voltage Over Temperature; Ground Leakage Faulty

#### Auxiliary Section

Voltage	21VDC-30VDC
Current	1.5A

#### Working Environment

Max. ambient Temperature	40°C (up to 1000meters Sea Level)
Max. Humidity	<80%
Protection Class	IP20
Cooling	Forced Air Cooling
Dimension (LWH)mm	675*160*363
Weight	31Kg



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# UMHA 用于UV灯管功率23KW-30KW

智能UV电源



## 特点:

### 高频方波输出

比传统变压器增加20-30%的UV能量输出

### 隧道触发系统(专利技术)

更容易触发各类灯管, 延长灯管寿命

### 单片机动态控制技术

效率更高输出更稳定

### 功率调幅技术

做到无级调节

### 通讯界面:

MOD BUS RS485 和模拟/数字I/O

### 卓越的机构设计

尺寸更小更轻

## 应用领域:

- UV 固化
- UV 涂覆和黏结
- UV 消毒和杀菌
- UV 光催化
- UV 光解氧化

## 输入特征

输入电压	360~440VAC
频率	>47Hz
COSφ	1
功率因数	0.96
总谐波失真	30%
效率	Typ≥94%

## 输出特征

工作频率	可变频率6KHz to 16KHz
触发电压	>4000Vpp
触发频率	270KHz
最大输出功率	30Kw(环境温度40度)
输出电压范围	Up to 3000VAC
输出电流范围	Up to 25A
通讯接口	MODBUS 模拟/数字 I/O
灯管参数监测	电压/电流/功率 工作状态/异常检测记录
电源保护机制	输入电压过高/过低/缺相 输出短路/开路 超温保护 对地/机壳漏电保护

## 辅助电源

电压	21VDC-30VDC
电流	3.0A

## 工作环境

工作允许最高环境温度	40摄氏度 (海拔1000米)
最大允许湿度	<80%
IP等级	IP20
冷却方式	强制风冷
外形尺寸(长宽高) 毫米	753*210*366
重量	38Kg



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# UMHA For 23KW-30KW UV Lamp

Intelligent UV  
Inverter Ballast



## Features:

### High Frequency and Square-Wave power output

To get more UV output

### Tunneling ignition (Patent technology)

To ignite the lamp easily

### Micro-processor dynamic control technology

To get more efficiency and stability

### Amplitude technology

To regulate the power control from 10% to 100%(based on lamp character)

### Control Interfaces:

MOD BUS RS485 and analog & digital interface

### Compact design

To get small size and lower weight

## Application:

**UV** Curing

**UV** Coating and Bonding

**UV** Sterilization&Disinfection

**UV** Photochemical Catalysis

**UV** Photolysis Oxidation

## Input Section

Main Input Voltage	360~440VAC
Frequency	>47Hz
COSφ	1
Power Factor	0.96
THD	30% (Hex Bridge)
Efficiency	Typ≥94%

## Output Section

Working Frequency	Variable from 6KHz to 16KHz
Ignition Voltage	>4000Vpp
Ignition Frequency	270KHz
Max. Output Power	30Kw(40°C ambient Temp)
Output Voltage	Up to 3000VAC
Output Current	Up to 25A
Control Port	MODBUS Analog&Digital I/O
Lamp Monitoring	Voltage/current/power /status/error code
Protections	Input under/over Voltage; Phase Loss Output Open/Short; Output Over voltage Over Temperature; Ground Leakage Faulty

## Auxiliary Section

Voltage	21VDC-30VDC
Current	3.0A

## Working Environment

Max. ambient Temperature	40°C (up to 1000meters Sea Level)
Max. Humidity	<80%
Protection Class	IP20
Cooling	Forced Air Cooling
Dimension (LWH)mm	753*210*366
Weight	38Kg



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# UMGA 用于UV灯管功率31KW-40KW

智能UV电源



## 特点:

### 高频方波输出

比传统变压器增加20-30%的UV能量输出

### 隧道触发系统(专利技术)

更容易触发各类灯管, 延长灯管寿命

### 单片机动态控制技术

效率更高输出更稳定

### 功率调幅技术

做到无级调节

### 通讯界面:

MOD BUS RS485 和模拟/数字I/O

### 卓越的机构设计

尺寸更小更轻

## 应用领域:

- UV 固化
- UV 涂覆和黏结
- UV 消毒和杀菌
- UV 光催化
- UV 光解氧化

## 输入特征

输入电压	360~440VAC
频率	>47Hz
COSφ	1
功率因数	0.96
总谐波失真	30%
效率	Typ ≥94%

## 输出特征

工作频率	可变频率6KHz to 16KHz
触发电压	>4000Vpp
触发频率	270KHz
最大输出功率	40Kw (环境温度40度)
输出电压范围	Up to 3000VAC
输出电流范围	Up to 25A
通讯接口	MODBUS 模拟/数字 I/O
灯管参数监测	电压/电流/功率 工作状态/异常检测记录
电源保护机制	输入电压过高/过低/缺相 输出短路/开路 超温保护 对地/机壳漏电保护

## 辅助电源

电压	21VDC-30VDC
电流	1.5A

## 工作环境

工作允许最高环境温度	40摄氏度 (海拔1000米)
最大允许湿度	<80%
IP等级	IP20
冷却方式	强制风冷
外形尺寸(长宽高) 毫米	785*300*395
重量	52Kg



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# UMGA For 31KW-40KW UV Lamp

Intelligent UV  
Inverter Ballast



## Features:

### High Frequency and Square-Wave power output

To get more UV output

### Tunneling ignition (Patent technology)

To ignite the lamp easily

### Micro-processor dynamic control technology

To get more efficiency and stability

### Amplitude technology

To regulate the power control from 10% to 100%(based on lamp character)

### Control Interfaces:

MOD BUS RS485 and analog & digital interface

### Compact design

To get small size and lower weight

## Application:

- UV Curing
- UV Coating and Bonding
- UV Sterilization&Disinfection
- UV Photochemical Catalysis
- UV Photolysis Oxidation

### Input Section

Main Input Voltage	360~440VAC
Frequency	>47Hz
COSφ	1
Power Factor	0.96
THD	30% (Hex Bridge)
Efficiency	Typ≥94%

### Output Section

Working Frequency	Variable from 6KHz to 16KHz
Ignition Voltage	>4000Vpp
Ignition Frequency	270KHz
Max. Output Power	40Kw(40°C ambient Temp)
Output Voltage	Up to 3000VAC
Output Current	Up to 25A
Control Port	MODBUS Analog&Digital I/O
Lamp monitoring	Voltage/current/power /status/error code
Protections	Input under/over Voltage; Phase Loss Output Open/Short; Output Over voltage Over Temperature; Ground Leakage Faulty

### Auxiliary Section

Voltage	21VDC-30VDC
Current	1.5A

### Working Environment

Max. ambient Temperature	40°C (up to 1000meters Sea Level)
Max. Humidity	<80%
Protection Class	IP20
Cooling	Forced Air Cooling
Dimension (LWH)mm	785*300*395
Weight	52Kg



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# UMDC 用于汞氙灯功率5KW-10KW

汞氙灯电源



## 特点:

### 电流输出稳定

电流纹波低至0.4%

### 内置高压软启动触发器

减少对灯管的高压冲击, 延长灯管寿命

### 单片机动态控制技术

效率更高输出更稳定

### 功率调幅技术

做到无级调节

### 通讯界面:

MOD BUS RS485 和模拟/数字I/O

### 卓越的机构设计

尺寸更小更轻

## 应用领域:

PCB 曝光

电影放映灯

太阳光模拟器

探照灯/舞台灯

## 输入特征

输入电压	200~440VAC
频率	>47Hz
COSφ	1
功率因数	0.96
总谐波失真	30%
效率	Typ≥87%

## 输出特征

工作频率	可变频率6KHz to 16KHz
触发电压	>30KVpp
触发频率	270KHz
最大输出功率	10Kw (环境温度40度)
输出电压范围	Up to 150VDC
输出电流范围	Up to 100A
通讯接口	MODBUS 模拟/数字 I/O
灯管参数监测	电压/电流/功率 工作状态/异常检测记录
电源保护机制	输入电压过高/过低/缺相 输出短路/开路 超温保护 对地/机壳漏电保护

## 辅助电源

电压	21VDC-30VDC
电流	1.5A

## 工作环境

工作允许最高环境温度	40摄氏度 (海拔1000米)
最大允许湿度	<80%
IP等级	IP20
冷却方式	强制风冷
外形尺寸(长宽高) 毫米	630*160*350
重量	30Kg



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# UMDC

Intelligent UV  
Inverter Ballast

## For 5KW-10KW Xenon DC Lamp



### Features:

#### Output Current Stable

Low current ripple till 0.4%

#### Built-in Ignitor with high voltage and soft trigger

To reduce the impact on the lamp and make the lamp life longer

#### Amplitude technology

To regulate the power control from 10% to 100% (based on lamp character)

#### Control Interfaces:

MOD BUS RS485 and analog & digital interface

#### Compact design

To get small size and lower weight

### Application:

UV exposure Equipment for PCB

Solar Simulator

Film/Digital Projection

Search/Stage Lighting

#### Input Section

Main Input Voltage	200~440VAC
Frequency	>47Hz
COS $\phi$	1
Power Factor	0.96
THD	30% (Hex Bridge)
Efficiency	Typ $\geq$ 87%

#### Output Section

Working Frequency	Variable from 6KHz to 16KHz
Ignition Voltage	>30KVpp
Ignition Frequency	270KHz
Max. Output Power	10Kw(40°C ambient Temp)
Output Voltage	Up to 150VDC
Output Current	Up to 100A
Control Port	MODBUS Analog&Digital I/O
Lamp Monitoring	Voltage/current/power /status/error code
Protections	Input under/over Voltage; Phase Loss Output Open/Short; Output Over voltage Over Temperature; Ground Leakage Faulty

#### Auxiliary Section

Voltage	21VDC-30VDC
Current	1.5A

#### Working Environment

Max. ambient Temperature	40°C (up to 1000meters Sea Level)
Max. Humidity	<80%
Protection Class	IP20
Cooling	Forced Air Cooling
Dimension (LWH)mm	630*160*350
Weight	30Kg



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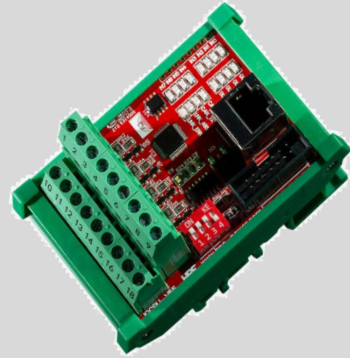
## 1. IO CPU CARD IO CPU板

该IO CPU板是可选购,其主要功能是由于PLC与HAMAL主机通讯;

同时,还可以用于RS485通讯时作为扩展功能卡使用 (APP01),还有以下功能:

**This card is optional, can be used to interface the machine device with control instruments (via a PLC).Using the this devise in work processing APP-01, man can improve also the following functions:**

- |           |                                |
|-----------|--------------------------------|
| 控制快门开启/关闭 | •Shutter Opening or closure    |
| 灯管冷却控制    | •Lamp cooling control          |
| 灯箱温度控制    | •Housing temperature           |
| 水压/气压控制   | •Water or air pressure control |



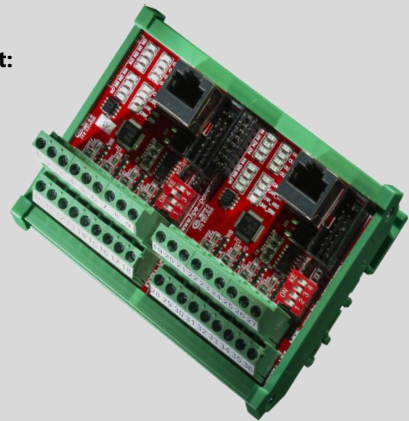
## 2. DOUBLE IOCPU CARD 双IOCPU板

可用于手动控制灯箱系统,实现以下功能:

**This card can be used to interface machine with control instruments.**

**The Double IO CPU enables the following functions without using the Mod.Bus net:**

- |            |                                  |
|------------|----------------------------------|
| 功率设定       | • Power settings                 |
| 待机设置       | •Stand by                        |
| 快门开启/关闭    | •Shutter open close              |
| 灯箱排风量大小控制: | •Lamp blower speed or air dumper |
| 灯箱过热保护     | • Housing Thermal                |
| 灯箱排风开启/关闭  | • Exhaust air control            |
| 水压/气压控制    | • Water/air pressure             |
| 错误/警报反馈    | • Errors & warnings              |



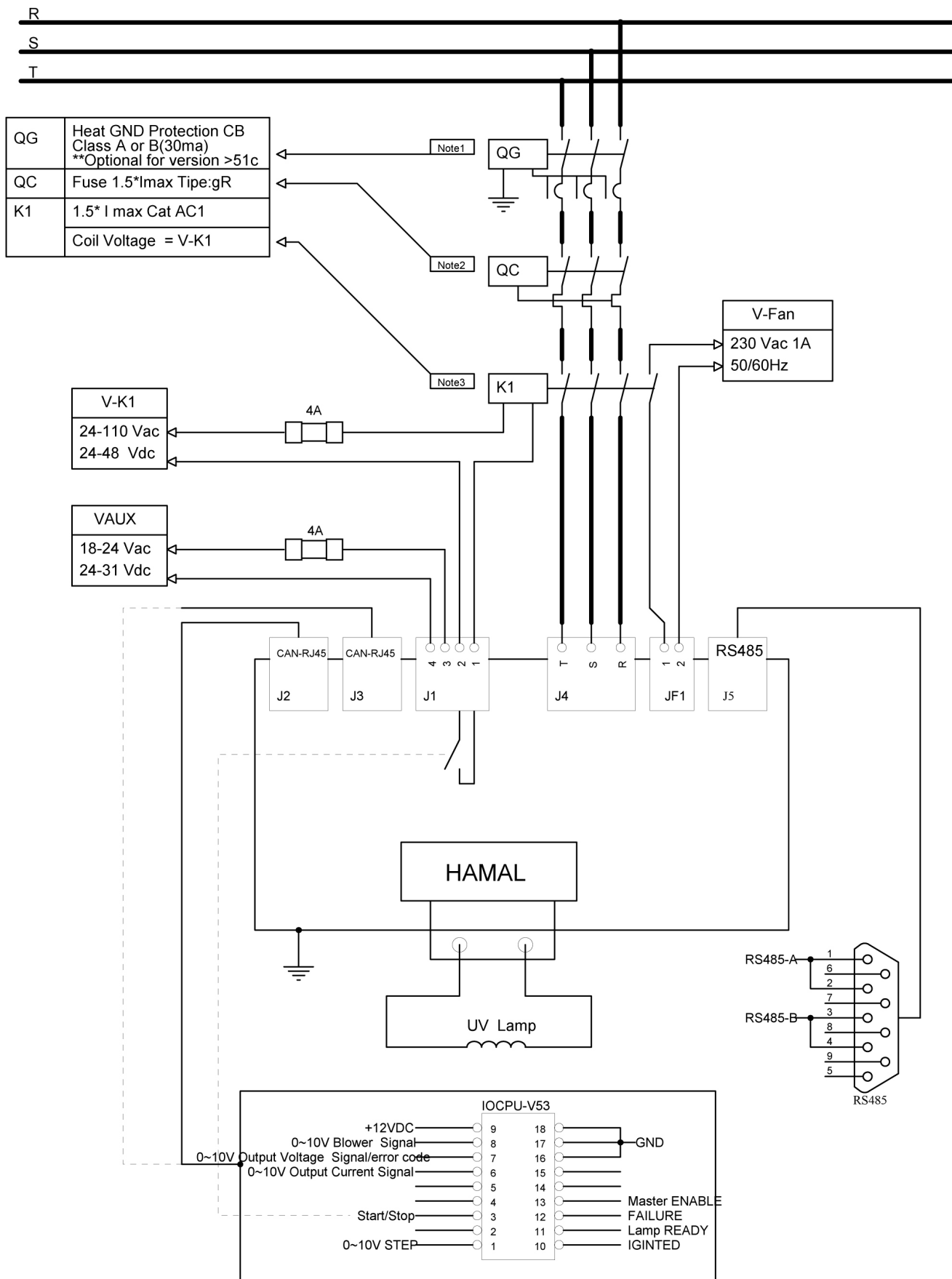
## 3. Remote Display 远程显示屏

连接该远程显示屏到电源主机,可以进行如下操作:

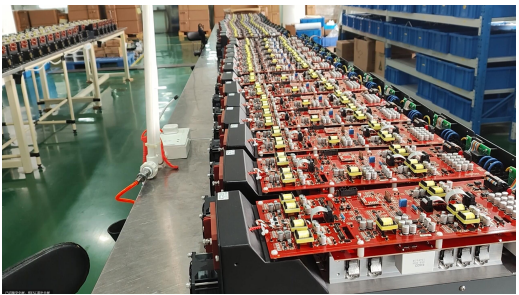
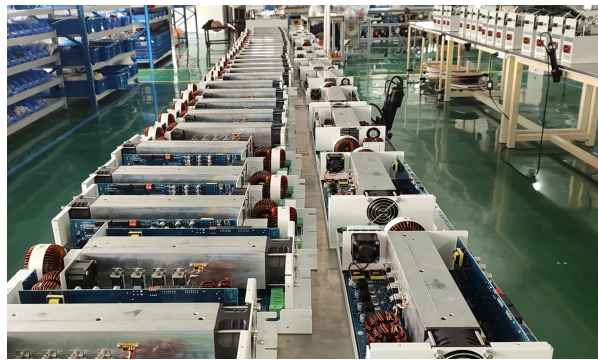
**If connected with machine enables to consult the following operating data:**

- |           |  |
|-----------|--|
| 查询/调整运行参数 | • Electrical output, measured in percentage    |
| 灯管电压/电流   | • Lamp's voltage and current                   |
| 电源的工作温度   | • Momentary temperature measured on dissipater |
| 错误反馈      | • Errors signalization                         |
| 电源开/关     | •Power On & Off functions                      |











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