

High Voltage Pulse Generating Device

YHPG series

There are two types of pulse (refer to all waves except sine wave). One is the same wave at a regular interval and the other is random. YHPG series is a high-voltage pulse generation device that creates the same waveform at a regular interval that is appropriate for analysis and experiment.

脉冲（Pulse：表示非正弦波的所有波）包括以一定时间出现相同波形的周期性脉冲和随机脉冲，YHPG系列属于适用于分析和实验的，以一定周期产生相同波形的高压脉冲发生装置。



YHPG-6K-4ATR

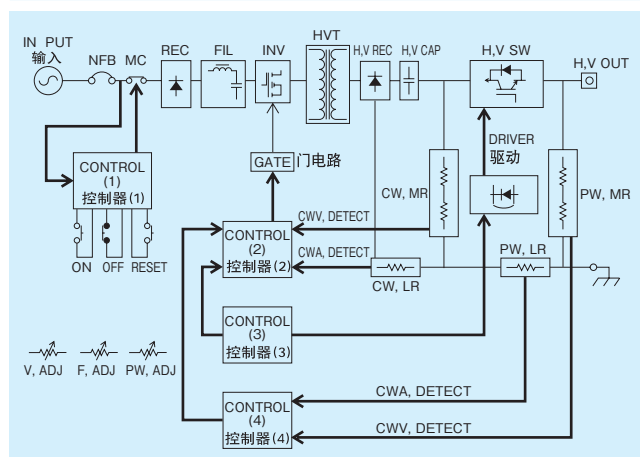
Application 用途

- Improved for material surface
改善材料表面
- Sewerage disposal
污水处理
- Physics and chemistry test
理化学实验

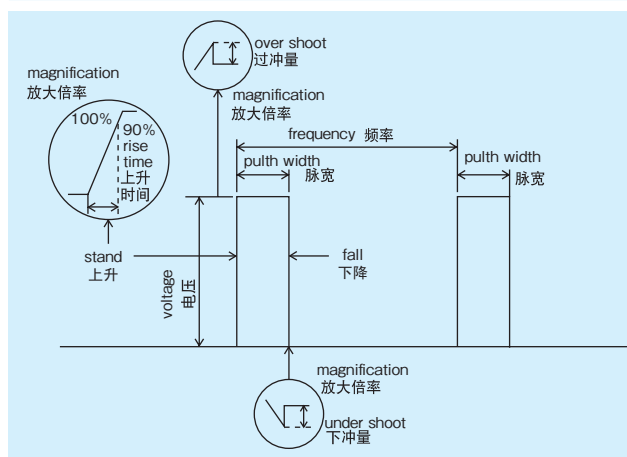
Feature 特长

- Quick rise time
上升时间快。
- High-voltage semiconductor switch is operated by optical fiber
利用光纤驱动高压半导体开关。
- Variable voltage, Variable frequency, Variable pulse width
电压可调，频率可调，脉宽可调简单。

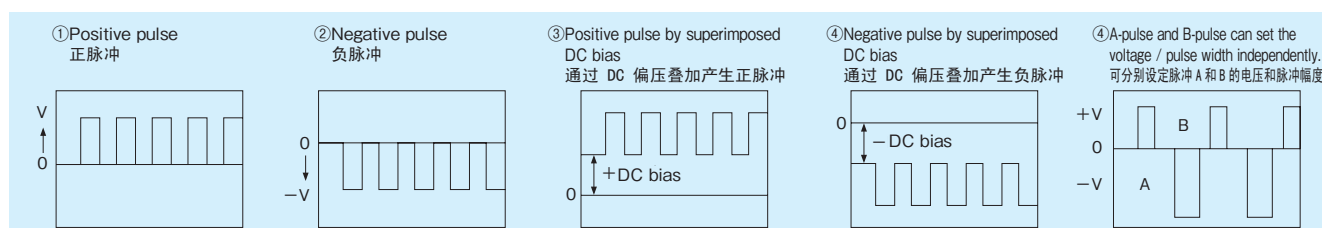
Block diagram 结构图



Wave form diagram 波形样图



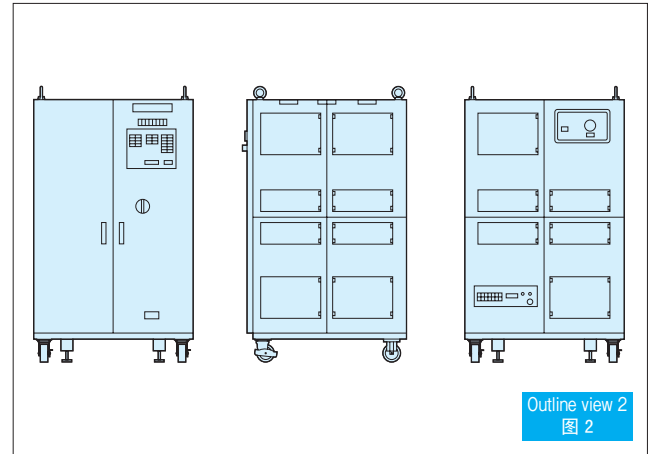
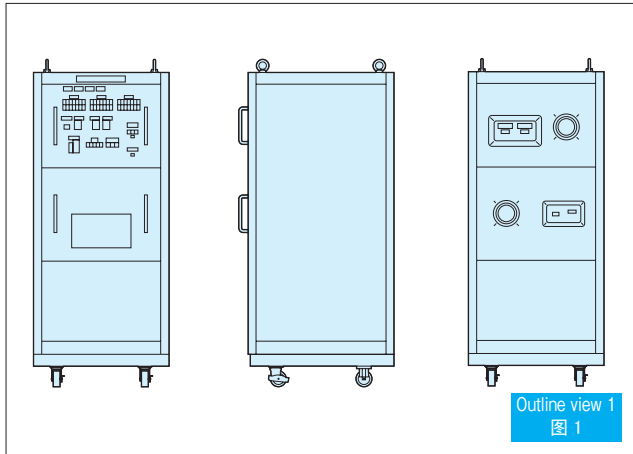
Generated pulse wave of block diagram 脉冲发生波形图



高压脉冲发生装置

YHPG系列

Outline view 外观图



Specifications 规格

Model 型号		YHPG					
		1K-5ATRX	3K-5ATRX	5K-5ATRX	10K-5ATRX	15K-15ATRX	20K-10ATRX
Output 输出	Voltage 电压	0-1KVp	0-3KVp	0-5KVp	0-10KVp	0-15KVp	0-20KVp
	Current 电流	5Ap				15Ap	10Ap
Input 输入	Number of phase 相位	Single phase 单相				Three phase 三相	
	Voltage 电压	200V, 220V, 230V, 240V or others 200V, 220V, 230V, 240V 或其他				200V or 380V or 400V or 415V 200V, 380V, 400V 或 415V	
	Frequency 频率	50/60Hz					

Common Specifications 规格

Method

- High voltage pulse generated circuit Semiconductor electronic, switch
- Cooling system Forced air

方式

- 高压脉冲发生电路 半导体开关
- 冷却系统 干式冷风

Output Rated

- Wave form pulse (square)
- Frequency 100-1000Hz
- Width of pulse 0.01mSec. (1kHz) - 0.1mSec (100Hz)
- Duty cycle Within 1% (with) limiter
- Rise time Within 0.002mSec. (0-90%)
- Fall time Depending on load Impedance
- Over shoot Within 5%
- Under shoot Within 5%
- Sag Within 10%

额定输出

- 波形 脉冲 (方形)
- 重复频率 100-1000Hz
- 脉宽 0.01 毫秒 (1kHz) - 0.1 毫秒 (100Hz)
- 负载循环 1% 之内 (使用限制器)
- 上升时间 0.002 毫秒之内 (0-90%)
- 下降时间 取决于负载阻抗
- 过冲量 小于 5%
- 下冲量 小于 5%
- 垂度 小于 10%

Operation method

- Variable output voltage Setup by manual type 10-rotation potentiometer
- Variable frequency Setup by manual type 10-rotation potentiometer
- Variable pulse width Setup by manual type 10-rotation potentiometer

操作方式

- 输出电压可变 由手动式 10 圈电位差计进行设定
- 频率可变 由手动式 10 圈电位差计进行设定
- 脉宽可变 由手动式 10 圈电位差计进行设定

Used device

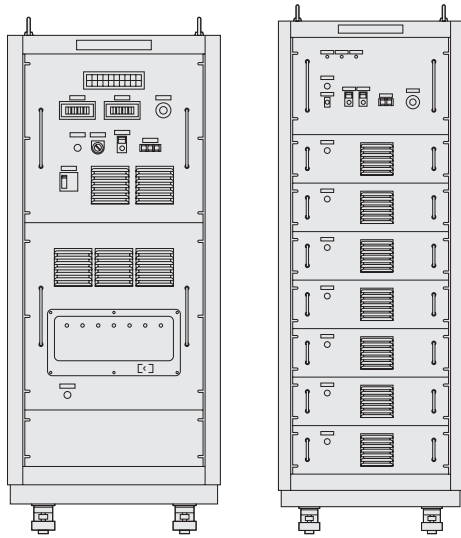
- Frequency meter Digital panel meter F.S is 1999z
- High-pressure charge voltmeter Digital panel meter F.S is rating output voltage
- High-voltage pulse voltmeter Digital panel meter F.S is rating output voltage
- High-voltage pulse current meter Digital panel meter F.S is rating output voltage
- * Option Output voltage monitor, Output current monitor and frequency band great up, Duty cycle great up, One-shot function

使用仪表

- 频率表 数字镶嵌式仪表 F. S1999Hz
- 高压充电电压表 数字镶嵌式仪表 F. S 额定输出电压
- 高压脉冲电压表 数字镶嵌式仪表 F. S 额定输出电压
- 高压脉冲电流表 数字镶嵌式仪表 F. S 额定输出电流
- * 选项 输出电压监视器, 输出电流监视器以及频率范围负载循环 UP, 功能

High Voltage Pulse Generating Device

YHPG-3K-1ATR-7WX



Feature 特长

- Quick rise time
上升时间快。
- High-speed switch with semiconductor
半导体高速开关。
- Easy to setup output voltage, frequency and pulse width
输出电压，频率和脉冲幅度设定简便。
- Low noise and high- voltage tolerance because of the high- voltage semiconductor switch is operated by light signal.
由于可以利用光信号驱动高压半导体开关，所以耐压性能强，噪音低。
- Maximum 7kHz is possible depending on connection to the load, because there are seven similar circuits.
由于有七条相同的电路，所以与负载连接后，最多可以追加 7kHz。
- Seven or more pulse outputs are available as required.
脉冲输出需要七个以上电路时，可以追加。

Specifications 规格

Input

- Three phase $\sqrt{3}$ V $\pm$ 10% 50/60Hz

Output

- Pulse output voltage 3kVp
- Pulse output current 1Ap
- Frequency 100 ~ 1kHz
- Pulse width 50 μ sec ~ 143msec
- Duty 14.3%
- At the time of 100Hz 500 μ sec ~ 1.43msec
- At the time of 1kHz 50 μ sec ~ 143sec
- Less than 2 μ sec (90%) Results about 1 μ sec
- Voltage variable, Frequency variable, Pulse width variable
- Rise time
- Control item

※ Rating Voltage

输入

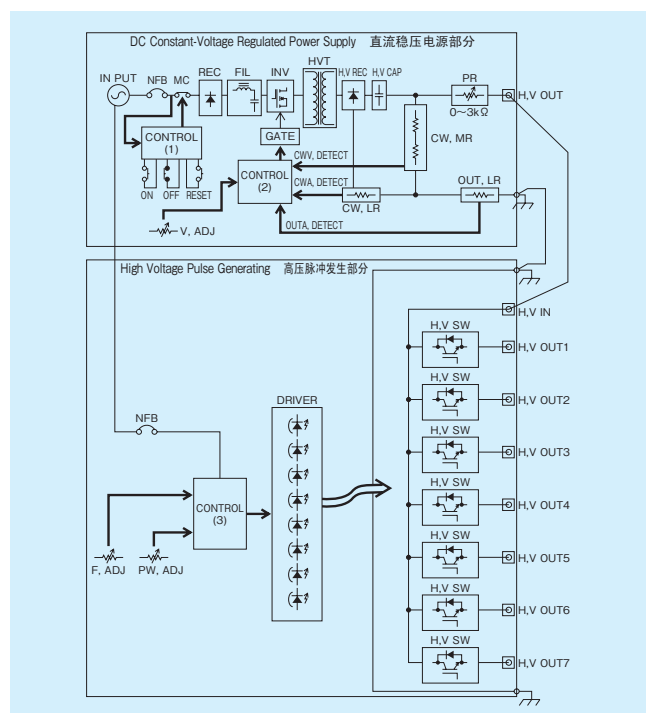
- 三相 $\sqrt{3}$ V $\pm$ 10% 50/60Hz

输出

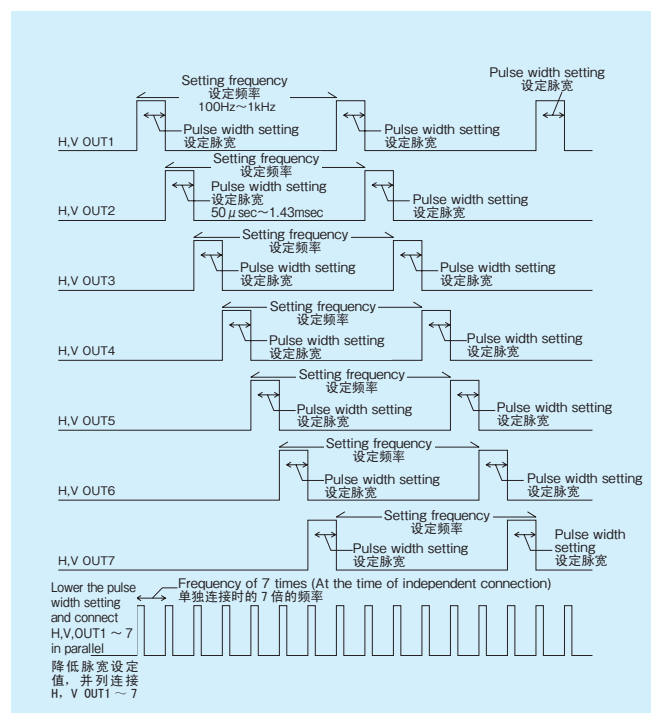
- 脉冲输出电压 3kVp
- 脉冲输出电流 1Ap
- 重复频率 100 ~ 1kHz
- 脉宽 50 μ sec ~ 143msec.
- 占空系数 14.3%
- 100Hz 时 500 μ sec. ~ 1.43msec.
- 1kHz 时 50 μ sec. ~ 143msec.
- 上升 2 μ sec. 以下 at 90% 实绩大约 1 μ sec.
- 控制项目 电压可调，频率可调，脉宽可调

※ 额定电压

Block diagram 结构图



Output generation timing 输出发生时序图



高压脉冲发生装置

Power supply for sewage disposal and surface modification 污水处理・表面改质用电源

The pulse shape that this device produces is used for sewage disposal process and surface modification. Various pulse shapes demanded at research steps can be generated.

本装置产生的脉冲波形用于污水处理及表面改质。
可以产生研究中所需的各种脉冲波形。



YHPG-10K-20ATR

Application 用途

- Sewage disposal
污水处理
- Chrome plating substitution
表面改质（替代镀铬）
- Physics and chemistry test
理化学实验

Range of production 制作范围

~ 40kVP (At the time of 30A) (30A 时)
~ 100AP (At the time of 1kV) (1kV 时)
~ 100kHz
Duty ratio 100%~ 1%
※ Please specify the followings upon selection.
Pulse voltage, Output current, Frequency, Duty ratio
占空系数 100%~ 1%
※ 选定时, 请指定以下的指标。
脉冲电压, 输出电压, 重复频率, 占空系数

Feature 特长

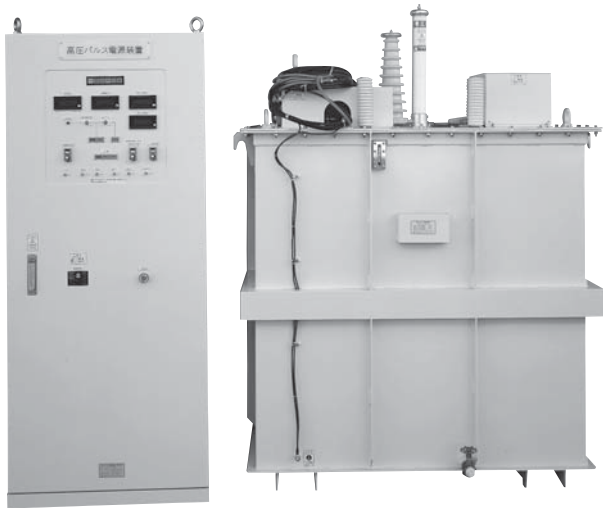
- Superimposing is possible to a DC high-voltage power supply.
直流高压电源可叠加。
- Both positive and negative poles can be output.
可正负两极输出。

Specifications 规格

- | | |
|---|---|
| ● Input
输入 | Single phase 200V
单相 200V |
| ● Output
输出 | 0 ~ - 10kV
Max 20AP
1kHz ~ 10kHz
0 ~ - 10kV
最大 20AP
1kHz ~ 10kHz |
| ● Duty ratio
占空系数 | Less than 20%
小于 20% |
| ● Rise time
上升时间 | Less than 1 μ sec
小于 1 μ sec. |
| ● Sag
垂度 | Less than 5%
小于 5% |
| ● DC bias superimposing is possible on the pulse LOW side.
脉冲 LOW 端可叠加 DC 偏压 | |

High Voltage Pulse Generating Device 高压脉冲发生装置

Power supply for sewage disposal and surface modification 污水处理・表面改质用电源



YHPG-40K-20ATR

Specifications 规格

Input • 3 ϕ 200V $\pm$ 10%	50/60Hz	输入 • 3 ϕ 200V $\pm$ 10%	50/60Hz
Output • Pulse output voltage • Pulse output current • Frequency • Pulse width • Rise time • Fall time • Pulse Output • Output voltage adjustment • Control item	3kVp (Continuation) 40kVp(MAX) 20Ap (MAX) 10pps $\sim$ 1000pps MAX2000pps 10 μ sec $\sim$ 1 msec But duty max 1% with limiter Less than 2 μ sec (90%) Results about 1 μ sec By load impedance By high pressure semiconductor switch Changeable in TAD-25MR Voltage variable, Frequency variable, Pulse width variable, Over-charge voltage setup variable, Pulse over current setup variable	输出 • 脉冲输出电压 • 脉冲输出电流 • 重复频率 • 脉宽 • 上升 • 下降 • 脉冲输出 • 输出电压调节 • 控制项目	30kVp (连续) 40kVp (MAX) 20Ap (MAX) 10pps $\sim$ 1000pps MAX2000pps 10 μ sec $\sim$ 1msec 但占空系数 MAX1% 带限制器 2 μ sec 以下 at 90% 利用负载电阻 利用高压半导体开关 可用 TAD-25MR 改变 电压可调, 频率可调, 脉宽可调, 充电过电压设定可调, 脉冲过电流设定可调
Configuration • Operation panel • High voltage generation	Built-in TAD-25MR Built-in oil tank type and high voltage charge part and pulse generation part	构成 • 操作盘 • 高压发生器	内置 TAD-25MR 油箱型, 内置高压充电器脉冲发生器
Dimension • Operation panel • High voltage generation	W700 $\times$ D1300 $\times$ H1650 (mm) 600kg W140 $\times$ D1400 $\times$ H1950 (mm) 2700kg	尺寸, 重量 • 操作盘 • 高压发生部分	W700 $\times$ D1300 $\times$ H1650 (mm) 大约 600kg W140 $\times$ D1400 $\times$ H1950 (mm) 大约 2700kg