

## EPU 系列电加热器调功器使用说明

### 1. 简介

EPU 系列电加热器调功器是我公司根据用户高精度温度控制要求设计的,对电加热器进行无级调功控制的控制装置。其可实现电加热器功率从零至满负荷的连续调节,实现温度、湿度的精确控制。

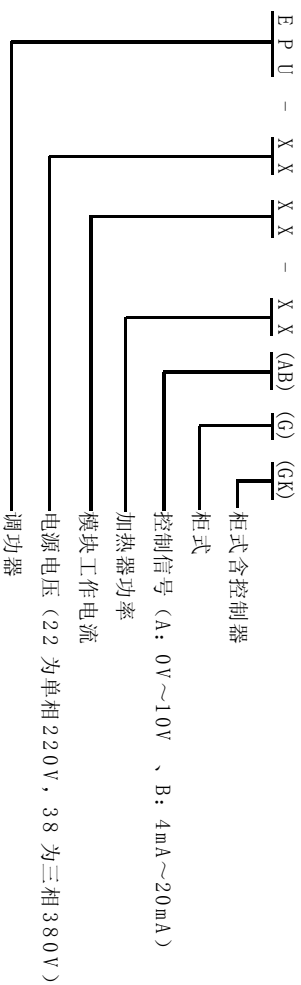
调功器由调功模块、散热器、冷却风扇、信号灯、信号灯、温度开关、端子板等组成,适用于已有的动力柜配套,作为组件安装于具有快速熔断器的动力柜中。

调功器设计有光电耦合电路,将控制器引来的控制信号与被控对象在电气上进行完全隔离,保证了控制设备安全。过零触发电路使功率调节从零位开始避免了对电网的冲击及造成射频干扰。温度开关及冷却风扇增加了对调功模块的保护,而功率指示灯可对调功器工作状态作出迅速的判断,为用户使用提供了最大的方便。

该调功器适用于空气调节系统、热处理、食品、医药、电子等多种温度控制电功率场合。

### 2 选型

#### (1). 型号



#### (2). 技术规格

型号	额定电压	额定电流	额定阻性负载功率	控制信号
EPU-2225-4A	220V	25A	4KW	0V~10V
EPU-3816-10A	380V	16A	10KW	0V~10V
EPU-3840-25A	380V	40A	25KW	0V~10V
EPU-3860-40A	380V	60A	40KW	0V~10V
EPU-38100-60A	380V	100A	60KW	0V~10V
EPU-3812075A	380V	120A	75KW	0V~10V
EPU-2225-4B	220V	25A	4KW	(4~20)mA
EPU-3816-10B	380V	16A	10KW	(4~20)mA
EPU-3840-25B	380V	40A	25KW	(4~20)mA
EPU-3860-40B	380V	60A	40KW	(4~20)mA
EPU-38100-60B	380V	100A	60KW	(4~20)mA
EPU-38120-75B	380V	120A	75KW	(4~20)mA

#### (3). 技术参数

额定输入电压: 三相 380V 50Hz  
单相 220V 50Hz

最大输出功率: 7.5KW

冷却方式: 10KW 以内自冷, 10KW 以上强迫风冷。

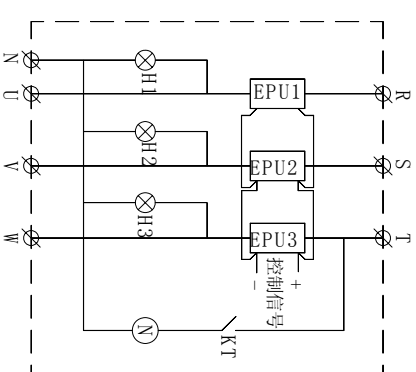
输出电压: 378V

控制信号: (0~10)V (A型)  
(4~20)mA (B型)

调功范围: 0%~100%

主电路控制方式: 三相全控、两相全控(一相直通)、单独控制。

### 3 调功器控制原理图



图中:

EPU1~EPU3: 调功模块

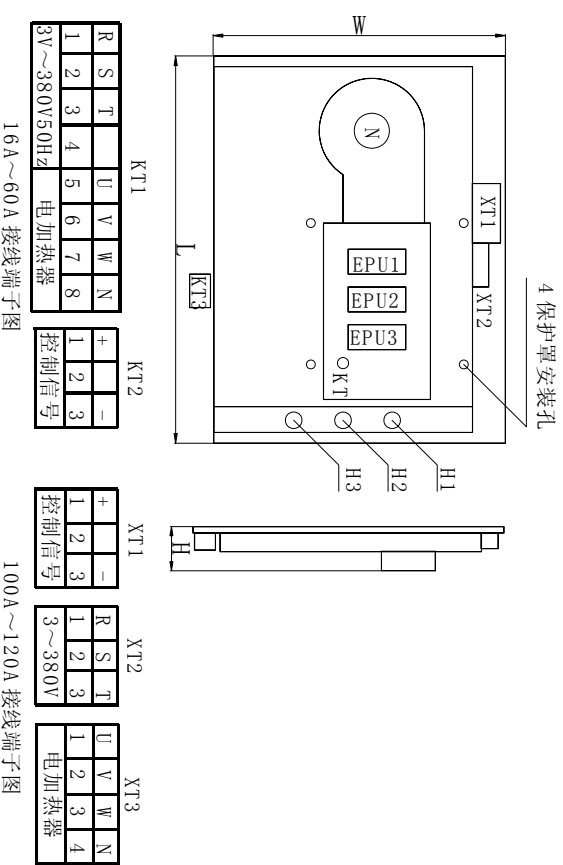
H1~H3: 功率指示灯, 接在各相回路中。接入电源、负载后, 当输入控制信号由 0V 增至 10V 时, 信号灯由暗、闪亮变为全亮。通过此灯, 可对负载功率情况及各相工作是否正常作出判断。

KT: 温度开关, 用于保护调功模块。当散热器温度高 / 低于 55°C, 温度开关动作开启 / 停止冷却风扇。

M: 冷却风扇

R、S、T 为三相电源输入端, U、V、W 为输出至电加热器端, N 为电源零线。

### 4 调功器外形及端子板图



外形尺寸: EPU~3816~3860

400(L) × 300(W) × 120(H) (mm)

EPU38100~38120

500(L) × 400(W) × 120(H) (mm)

## The Manual of Electric heater - EPU Series

### 1. Summary

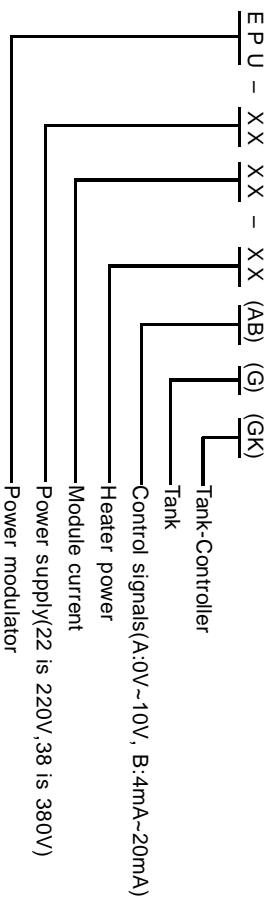
The EPU series electric heater is designed according to the user's high accuracy for temperature and humidity control. It can achieve electric heater power from zero to full load of continuous adjustment and temperature, humidity accuracy control.

It consists of power regulation module, radiator, cooling fan, signal light, temperature switch, terminal strip.

The power is transferred to the air-conditioning system, heat treatment, food, medicine, electronics, and other temperature control electric power occasions.

### 2. Selection

#### (1). Model



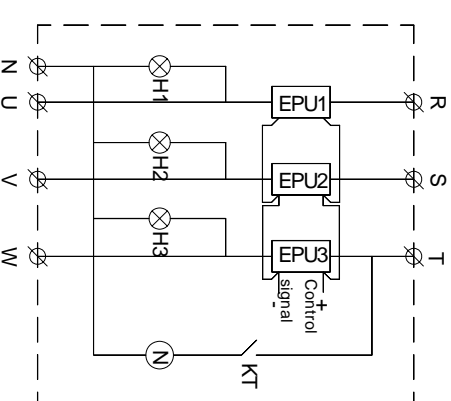
#### (2). Technical specifications

Model	Rated voltage	Current Rating	Rated resistive load power	Control signal
EPU-2225-4A	220V	25A	4KW	0V-10V
EPU-3816-10A	380V	16A	10KW	0V-10V
EPU-3840-25A	380V	40A	25KW	0V-10V
EPU-3860-40A	380V	60A	40KW	0V-10V
EPU-38100-60A	380V	100A	60KW	0V-10V
EPU-38120-75A	380V	120A	75KW	0V-10V
EPU-2225-4B	220V	25A	4KW	(4-20)mA
EPU-3816-10B	380V	16A	10KW	(4-20)mA
EPU-3840-25B	380V	40A	25KW	(4-20)mA
EPU-3860-40B	380V	60A	40KW	(4-20)mA
EPU-38100-60B	380V	100A	60KW	(4-20)mA
EPU-38120-75B	380V	120A	75KW	(4-20)mA

#### (3). Technical parameter

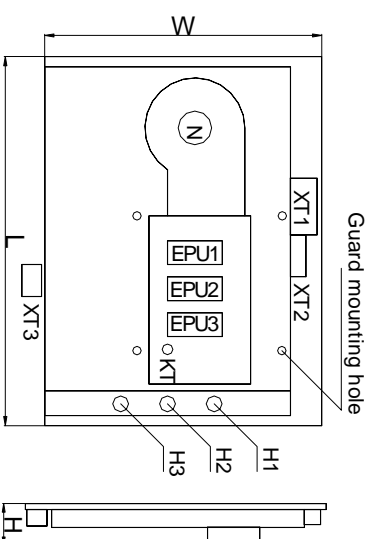
Rated input voltage: 380V 50HZ  
220V 50HZ  
Maximum output power: 75KW  
Cooling: within 10KW provide for oneself, over 10KW forcibly cooling.  
Output voltage: 3.78V  
Transfer of power: 0%~100%  
Control signals: 0V~10V (type A)  
(4~20)mA (type B)

### 3. Schematic diagram



EPU1-EPU3: Power Regulation Module  
H1-H3: Power indicator (Access to power, load, when the input control signals from 0 V to 10V, the signal from the dark, bright flashes into the whole. Through this lamp may to the operating power situation and each work whether to make the judgment normally.)  
KT: Temperature switch (Protecting the Power Regulation module)  
M: Cooling fan  
R, S, T: For three power input  
N: Power lines  
U, V, W: Output for the electric heater to end

### 4. Appearance and terminal board plans



KT1			KT2			XT1			XT2			XT3					
R	S	T	U	V	W	+	-	+	-	R	S	T	U	V	W	N	
1	2	3	4	5	6	7	8	1	2	3	1	2	3	1	2	3	4
3~380V/50Hz			Electric heater			Control signal			3~380V			Electric heater					

Dimension: EPU-3816~3860

400(L)X00(W)X120(H)(mm)

EPU38100~38120

500(L)X400(W)X120(H) (mm)