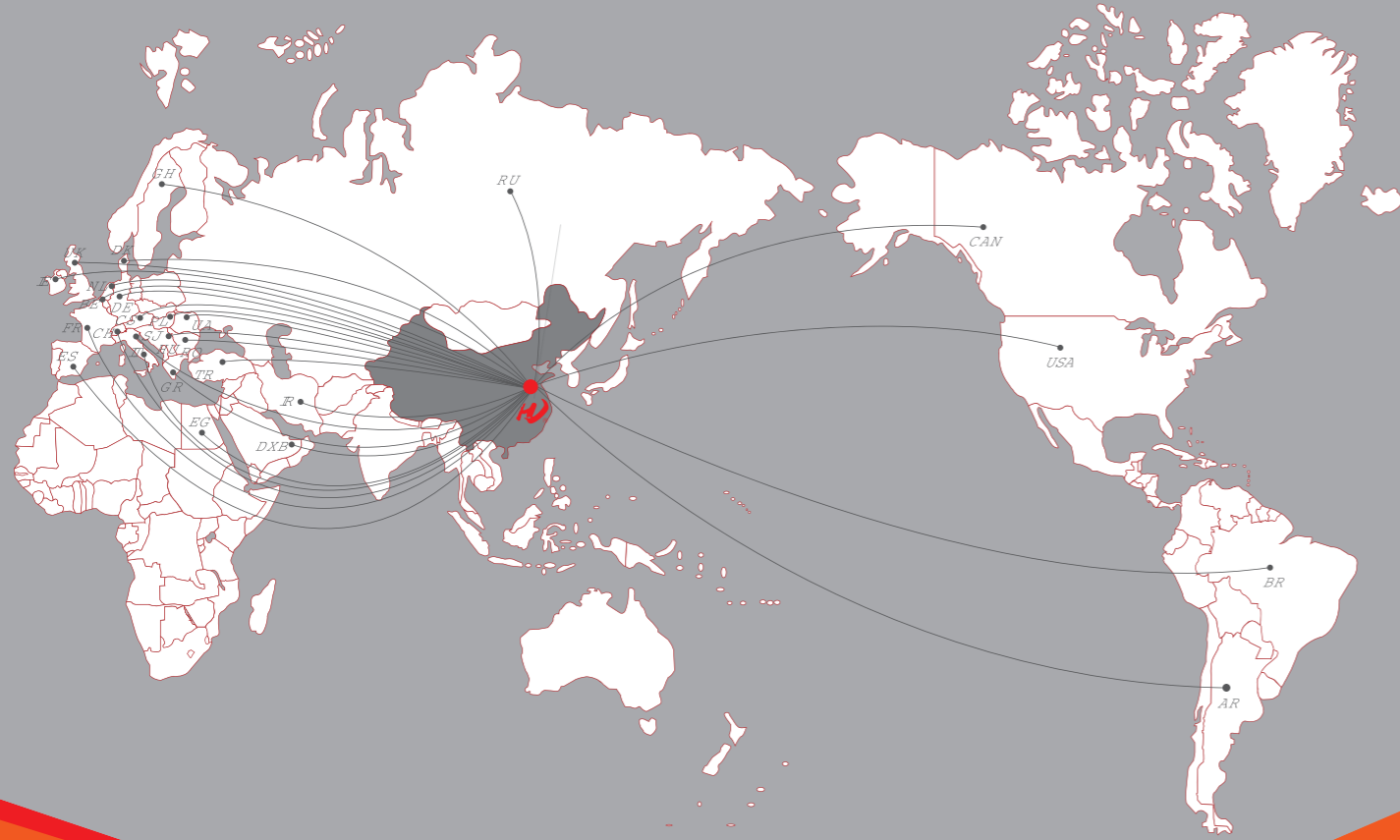




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# 无锡市惠山华宏自动控制有限公司

WUXI HUISHAN AUTOMATIC CONTROLLER CO.,LTD

PROFESSIONAL CATALOGUE **2018**

无锡市惠山华宏自动控制有限公司  
WUXI HUISHAN AUTOMATIC CONTROLLER CO.,LTD

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China · JiangSu · Wuxi



## 无锡市惠山华宏自动控制有限公司

无锡市惠山华宏自动控制有限公司是全球知名技术企业，成立于1988年，业务遍及欧洲、美洲、东南亚等多达38个国家，专注于供暖、通风、空调等领域。

经过30年的发展，我们建立了一座占地面积8400多平方米的标准现代化厂房，并配备先进的机械设备和实验室。我们拥有150名员工，平均每三人中便有一人是技术人员。

目前，华宏温控已通过ISO9001-2008质量管理体系认证，散热器恒温阀通过欧洲EN215认证，在同行业中处于领先水平，其他产品分别已通过CE、CQC、ROHS、UL、REACH认证；同时，我们的产品在实用性及设计性方面获得多项专利。

历年来，我们为广大客户提供中央空调系统、地板采暖系统、风机盘管系统、节能控制系统、智能家居系统、建筑节能等多种采暖及制冷系统的智能解决方案，受到客户的一致好评。

同时我们提供传感物联网及智能识别技术开发及转让，建筑智能化控制工程的设计及安装，通用机械及配件、电力电子元器件、工业自动化控制系统的研发及制造，并提供ODM&OEM进出口服务业务。我们竭诚为客户设计创造理想的产品，期待与您的进一步合作！

# 公司简介

## COMPANY PROFILE

Wuxi Huishan Automatic Controller co., ltd is a world-renowned technology company which specializes in heating, ventilation and air conditioning industry. Established in 1988, it has spread its business over more than 38 countries in Europe, Americas and Southeast Asia.

Over the development of 30 years, the company has constructed a standard modern factory of more than 8400 m<sup>2</sup> with advanced machinery and laboratories. Almost 150 employees are working here, among whom one-third are technical staff.

Now Wuxi Huishan Automatic Controller Co., Ltd has passed the qualification of IOS9001-2008. Its thermostatic radiator valve has been acknowledged by EN215, making it leading in this field. Other products have been acknowledged by CE, CQC and ROHS, REACH, UL; Meanwhile, the products have attained a multitude of patents in practicality and design.

For years, we are providing intelligent solutions for heating and refrigerating systems like central air conditioning, radiant floor heating, fan coils, energy-saving control, smart home and building energy conservation. These services have received constant good responses from customers.

At the same time, the company provides services like the developing and transferring of sensor-based internet of things and intelligent identification, designing and installing of the program on intelligent building control, and developing and manufacturing of general machinery and parts, electronic components and autocontrol system. Also, the company runs self-management or agent service for the import and export of products and techniques. we are offering OEM & ODM service for customers and looking forward to the further cooperation with you.

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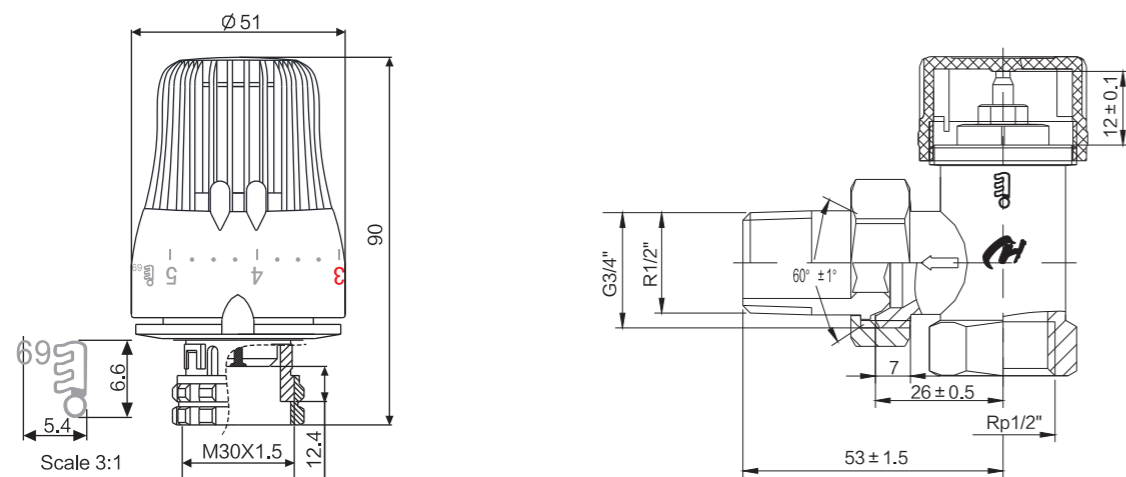
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## TF-6 散热器恒温阀控制器 Thermostatic head with liquid sensor

### 外形尺寸 Dimensions



### 刻度标识及对应温度 Temperature regulation scale and the corresponding temperature

Temperature regulation scale and the corresponding temperature



### 工作原理 The working principle for TF-6 and DN15-B

恒温阀有阀头TF-6和阀体DN15-B组成, 已经通过EN215认证。

此款为自调控制阀, 无需外部能量, 可以独立调节每个房间的温度, 维持一个恒定的室温要求。具有节能, 易使用性。

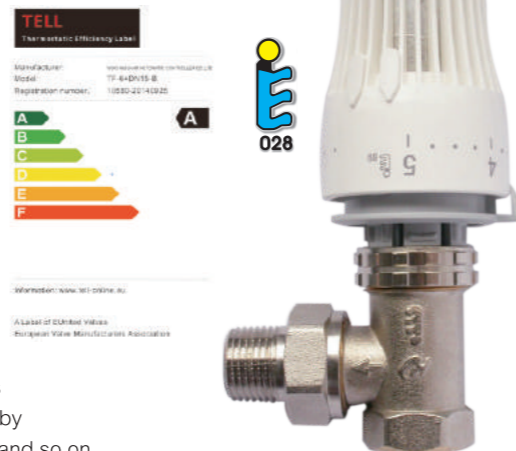
工作原理: 通过阀头TF-6中的液体感温元件感受房间温度, 从而改变水流量, 以此调节和控制房间温度。例如, 当室内温度升高时, 温度传感材料的热膨胀性将会压缩阀杆关闭阀门。相反, 阀杆将回弹打开阀门, 从而实现一个更加舒适的温度环境。同时, 如果房间内有其他辅助热源(比如阳光或其他加热器), 阀门会关小来减少散热器内的水流量, 最终实现节能的目的。

Thermostatic radiator valves: this design is composed of Model TF-6 thermostatic head and Model DN15-B angle valve and passed EN215 certification integrally.

Thermostatic radiator valve in this design is the self-adjustable control valve without needs of external energy. It can be adjusted independently for temperature in each room. And thereby maintaining a constant room temperature required. It features energy-saving and easy to use and so on.

The working principle of this design of valve is: the liquid temperature sensing element in Model TF-6 thermostatic head is to feel the room air temperature, and thereby adjust the heating water flow, so as to regulate and control room temperature: i.e., when the indoor temperature rises, the thermal expansion of the temperature sensing material shall compress to the valve stem to close down the valve up to shut up, and on the contrary, the stem shall rebound to open up the valve. In this way, a more comfortable temperature environment for people is achieved.

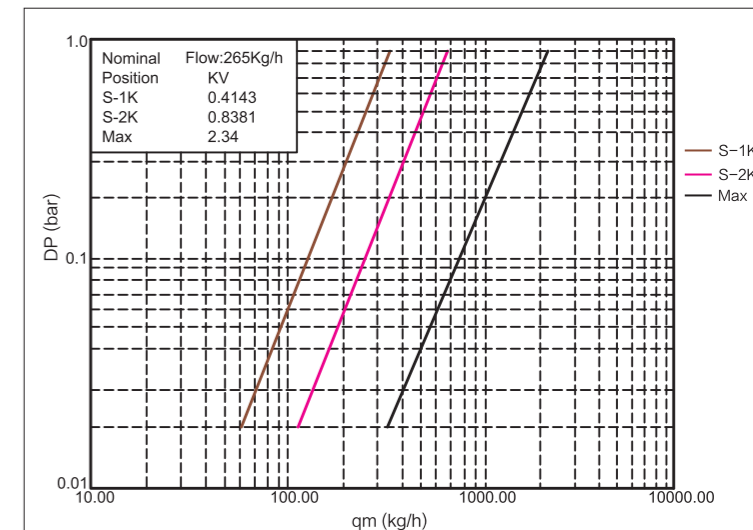
Meanwhile, if there is other auxiliary heat source(such as sunshine or other heater etc) in the room, the valve shall close down a little to reduce the water flow into the radiator, and achieve the target of energy-saving in the end.



### TF-6和DN15-B配套使用的主要参数 TF-6 and DN15-B main parameters to be used together

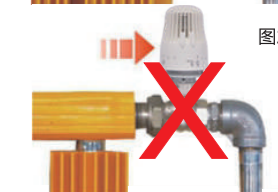
最大工作压力 Maximum admissible static pressure	1.0MPa
最大工作压差 Maximum admissible differential pressure	0.1MPa
最大流体温度 Maximum fluid temperature	110°C
公称流量 Nominal flow rate	265kg/h
滞后 (C) Hysteresis (C)	0.4K
压差的影响 (D) Differential pressure influence (D)	0.4K
水温度的影响 (W) Water temperature influence (W)	0.6K
除霜保护 Antifreeze position	❄️ 6°C
响应时间 (Z) Response time (Z)	23min
安装螺母 Installation size	M30x1.5 (M28x1.5)

### 这款散热器恒温阀设计的曲线流量图和相关数据 Flow curves and relevant parameters of this design of thermostatic radiator valve



### 产品安装和注意事项 Installation and attentions

1. 安装前旋下DN15-B的蓝色保护帽, 确保是箭头方向安装在管子上。
2. 安装时, 首先应将阀头旋钮转动到“5”的位置, 保持阀头水平安装到阀体上。其次应将阀头圆螺母旋到阀体外螺纹接口, 直到拧紧。
3. 为有效的开启和关闭阀门, 恒温阀的阀杆应处于水平位置, 故散热器恒温阀头应水平安装(如图1)。同时, 为了使阀体内用于关闭的阀杆正确动作, 阀头不能直接暴露在阳光下, 也不能太靠近窗帘等装饰物和家具, 应保持阀头周围的空气能自由流动(如图2)。
4. 在夏季, 为了避免不必要的外力作用在阀头上, 应将阀头旋钮设置到“5”的位置上。
5. TF-6散热器恒温阀头具有防霜冻的功能。当环境温度在0°C, 将阀头旋钮转到“❄️”处, 以保持阀门有极细小的热水流过, 防止水路系统霜冻结冰。



1. Remove the protective cap from the body(DN15-B) before installation, make sure to arrow direction for installation and turn it on the pipe.
2. To facilitate the installation of thermostatic head (TF-6), the handle should be set at the maximum open position (in the position of number 5) before installation, and then, turn the locking nut of the thermostatic head (TF-6) firmly to the threads of angle valve(DN15-B).
3. As the thermostatic is required to feel the indoor temperature, therefore, when installing, it is a must to keep the thermostatic radiator valve at a relatively open place where there is good ventilation. The thermostatic head (TF-6) must be installed in a level way, not in a vertically upright way, and at the same time, it must be kept away from spots where there is curtain, heating pipeline, or furniture etc, and to avoid direct exposure to the sun.
4. In order to avoid high temperature in summer caused super-pressure acted on the thermostatic valve and hence to make it early damage, please turn the temperature indicator arrow on the head to number 5 of the temperature scale.
5. This design of thermostatic radiator valve features the function of anti-freezing; please set the temperature indicator arrow to the snow tag ❄️ in winter, lest water flow frozen in the pipe when the ambient temperature is below zero.

### 包装规格 Package

产品名称 Model	只/箱 PCS/CTN	重量 G.W.(kg)	纸盒尺寸 (mm) unit box size	纸箱尺寸 (cm) Carton size	托盘尺寸 (cm) Pallet size	只/托盘 PCS/each pallet
TF-6	100	16	55x55x95	57.5x30x21	92x120x125	3000
DN15-B	50	14.5	80x37x67	35.5x20x18	92x108x110	1800

## TF-6 散热器恒温阀控制器 Thermostatic head with liquid sensor



此款为立式恒温控制阀，无需外部能量，可以独立调节每个房间的温度，维持一个恒定的室温要求。具有节能，易使用性。

Thermostatic radiator valve in this design is the self-adjustable control valve without needs of external energy. it can be adjusted independently for the temperature in each room. And thereby maintaining a constant room temperature required. It features energy-saving and easy to use.

产品名称 Model	温度范围 Temperature range	最大压力 Maximum static pressure	最大压差 Maximum differential pressure	除霜保护 Defrost protection	安装螺母 Installation size	滞后 Hysteresis	是否带锁 Differential pressure influence
TF-4	6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5 (M28x1.5)	0.4K	—
TF-5	6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■
TF-9	6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■
TF-11	6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■
TF-11D	6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■
TF-20	6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■
TF-21	6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■
TF-21D	6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■
TF-34	2 ~6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■
TFA01A01	2 ~6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■
TFB01A01	2 ~6 ~28	1.0MPa	0.1MPa	* 6	M30x1.5	0.4K	■

## 散热器恒温远程阀头 Thermostatic head with remote embedding liquid sensor

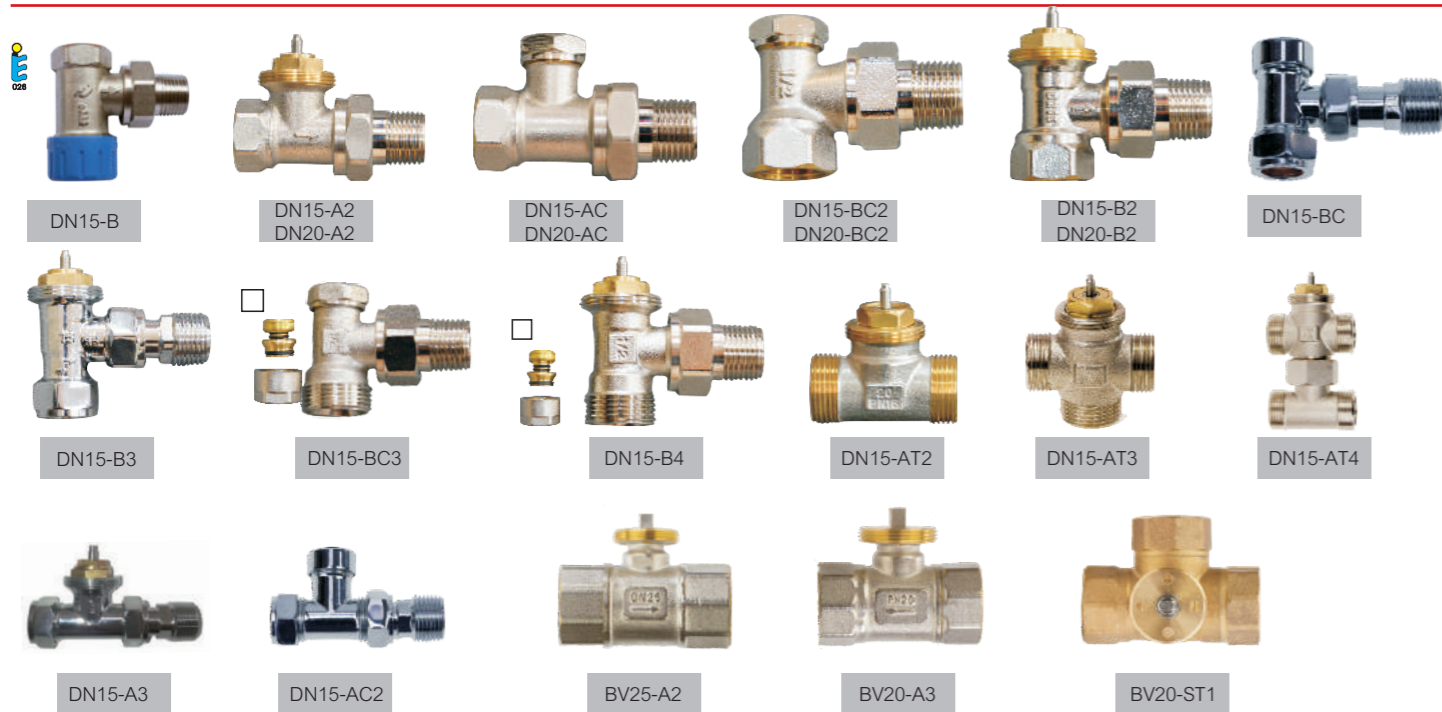


远程控制阀无需外部能源,应用于热风机、地暖、热交换器等,感温元件直接安装在管道表面或管道内部,适用于水、空气的远程温度控制。

Thermostats of this type are proportional controller without external energy requirement for the temperature-dependent control of warm air heaters, hot water generators, heat ex-changers,etc.The remote sensor is directly immersed into the medium.

产品名称 Model	温度范围 Temperature range	最大压力 Maximum static pressure	最大压差 Maximum differential pressure	毛细管长度 Capillary length	安装螺母 Installation size	温包长度 Bulb length
TF-7A	20 ~60	1.0MPa	0.1MPa	2000	M30x1.5 (M28x1.5)	Φ 9 5X110
TF-13	20 ~60	1.0MPa	0.1MPa	2000	M30x1.5	Φ 9 5X110
TF-13C	20 ~60	1.0MPa	0.1MPa	1000	M30x1.5	Φ 9 5X110
TF-15	6 ~28	1.0MPa	0.1MPa	2000	M30x1.5	Φ 9 5X110
TF-36	20 ~70	1.0MPa	0.1MPa	1000	M30x1.5	Φ 15.5X94.5
TF-42	20 ~60	1.0MPa	0.1MPa	1000 / 2000	M30x1.5	Φ 9 5X110

## 阀体 Valve



型号 Model	规格 Specification	名称 Description	型号 Model	规格 Specification	名称 Description	型号 Model	规格 Specification	名称 Description
DN15-A2	1/2"	恒温直阀 straight valve	DN15-B3	1/2"	英式恒温角阀 镀铬 Angle valve for UK chrome-plated	DN20-AT2	3/4"	英式恒温角阀 镀铬 Angle valve for UK chrome-plated
DN20-A2	3/4"		DN15-BC					
DN15-AC	1/2"	回水直阀 镀镍 Straight valve lockshield Nickel plating	DN15-BC3	1/2"	回水角阀 外丝带接头 Angle valve lockshield Male tread with fitting	DN20-AT3	1/2"	回水角阀 外丝带接头 Angle valve lockshield Male tread with fitting
DN20-AC	3/4"		DN15-B4					
DN15-B2	1/2"	恒温角阀 Angle valve	DNAC2	1/2"	英式回水直阀 镀铬 Straight valve lockshield for UK chrome-plated	DN20-AT4	1/2"	英式回水直阀 镀铬 Straight valve lockshield for UK chrome-plated
DN20-B2	3/4"							
DN15-BC2	1/2"	回水角阀 镀镍 Angle valve lockshield Nickel plating	DN15-A3	1/2"	英式恒温直阀 镀铬 Straight valve for UK chrome-plated	BV25-A2	1"	两通球阀 镀镍 Two pass ball valve Nickel plating
DN20-BC2	3/4"							
BV20-A3	3/4"	两通球阀 镀镍 Two - way ball valve Nickel plating	BV20-ST1	3/4"	三通青铜球阀 Three - way of bronze ball valves			保护帽 Protection cap

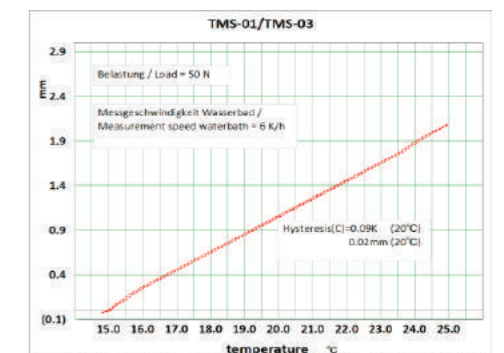
## 液阀芯 Liquid sensor



产品名称 Model	TMS-01	TMS-03	TMS-04	TMS-05
工作范围 Area of work	+5 ~ +30	+5 ~ +30	+5 ~ +30	+5 ~ +30
工作负载 Work load	40~80N	40~80N	40~80N	40~80N
最小/最大负载 Min /Max load	40/120N	40/120N	40/120N	40/120N
最小/最大温度 Min/Max Temperature	-25 ~ +55	-25 ~ +55	-25 ~ +55	-25 ~ +55
滞后 (K) Hysteresis	0.12	0.12	0.12	0.12
总升程 Total expansion	"X"=0.95±0.2mm The measure is achieved at 20 and for a load of 50N 2.2+/-0.1mm between 15 /25 with a load of 50N	"X"=6.5±0.2mm The measure is achieved at 20 and for a load of 50N 2.2+/-0.1mm between 15 /25 with a load of 50N	"X"=6.5±0.2mm The measure is achieved at 20 and for a load of 50N 2.2+/-0.1mm between 15 /25 with a load of 50N	"X"=6.22±0.35mm The measure is achieved at 24 and for a load of 50N 2.2+/-0.1mm between 15 /25 with a load of 50N
外形尺寸 Overall dimensions				

具有控温、调温的功能。一般用于温度控制器和散热器恒温阀，符合EN215。

Have the function of the temperature control, temperature regulation. Generally used for thermostatic radiator valve head and temperature controller, conform to EN215.



# 电热执行器 Electrical actuator

电热执行器广泛应用于风机盘管、 散热器采暖控制。  
Central air conditioner, radiator control or floor heating control.



DR-09



DR-10



DF-110E



DF-110H

产品名称 Model	线径 Wire diameter	U	T	H	F	P	I MAX	安装螺母 Installation size	
DR-09	0.5mm <sup>2</sup>	230VAC	<4.5min	3.0mm	90~125N	2.5W	150mA	M30x1.5	<b>安装示意图</b> Installation diagram 
	0.5mm <sup>2</sup>	24VAC	<4.5min	3.0mm	90~125N	3W	250mA	M30x1.5	
DR-10	0.35mm <sup>2</sup>	230VAC	<4.5min	4.0mm	90~125N	2.5W	150mA	M30x1.5	<b>线路图</b> Wire diagram 
	0.35mm <sup>2</sup>	24VAC	<4.5min	4.0mm	90~125N	3W	250mA	M30x1.5	
DF-110E	0.5mm <sup>2</sup>	230VAC	<4.5min	3.0mm	90~125N	2.5W	150mA	M30x1.5	<b>外形尺寸</b> Overall dimensions 
	0.5mm <sup>2</sup>	24VAC	<4.5min	3.0mm	90~125N	3W	250mA	M30x1.5	
DF-110H	0.5mm <sup>2</sup>	230VAC	<4.5min	3.0mm	90~125N	2.5W	150mA	M30x1.5	<b>外形尺寸</b> Overall dimensions 
	0.5mm <sup>2</sup>	24VAC	<4.5min	3.0mm	90~125N	3W	250mA	M30x1.5	



DR-16 DR-15B  
DR-17



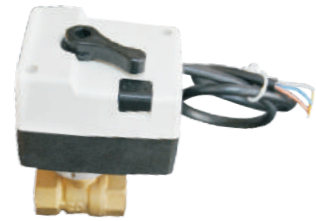
DR-16B ZRA24A01

产品名称 Model	线径 Wire diameter	U	T	H	F	P	I MAX	安装螺母 Installation size	外形尺寸 Overall dimensions
DR-16	0.5mm <sup>2</sup>	230VAC	<4.5min	4.0mm, 5.0mm	90~125N	2.5W	150mA	M30x1.5	<b>二线普通款</b> 2-wire 
	0.5mm <sup>2</sup>	24VAC	<4.5min	4.0mm, 5.0mm	90~125N	3W	250mA	M30x1.5	
DR-16B	0.5mm <sup>2</sup>	230VAC	<4.5min	4.0mm, 5.0mm	90~125N	2.5W	150mA	M30x1.5	<b>二线普通款</b> 2-wire 
	0.5mm <sup>2</sup>	24VAC	<4.5min	4.0mm, 5.0mm	90~125N	3W	250mA	M30x1.5	
DR-15B	0.3mm <sup>2</sup>	24VAC	<20min	4.0mm, 5.0mm	90~125N	3W	250mA	M30x1.5	<b>三线智能款</b> 3-wire 常闭状态 
DR-17	0.35mm <sup>2</sup>	230VAC	<4.5min	4.0mm, 5.0mm	90~125N	2.5W	150mA	M30x1.5	<b>四线信号反馈款</b> 4-wire 
	0.35mm <sup>2</sup>	24VAC	<4.5min	4.0mm, 5.0mm	90~125N	3W	250mA	M30x1.5	
ZRA24A01	0.3mm <sup>2</sup>	24VAC	<4.5min	4.0mm, 5.0mm	90~125N	0.15W	200mA	M30x1.5	

## 球阀执行器 Ball valve actuator



BA230-K



BA24-TF BA24-KF  
BA24-TT



ZBA230K01 ZBA240A01  
ZBA24M01 ZBA24C01



刷卡阀  
Intelligent card control valve

用于空调、供暖系统管路的开关及调节控制。

Switch and regulation control for air conditioning and heating system.

产品名称 Model	BA230-K	ZBA230K01	BA24-TF	ZBA24C01	BA24-KF	ZBA24A01	BA24-TT	ZBA24M01
工作电压 Nominal voltage	220VAC	220VAC	24VAC	24VAC	24VAC	24VAC	24VAC	24VAC
扭矩 Torque	4Nm	10Nm	4Nm	10Nm	4Nm	10Nm	4Nm	10Nm
旋转角度 Rotation angle	90°	90°	90°	90°	90°	90°	90°	90°
运行时间 Running time	45S	45S	45S	45S	45S	45S	45S	45S
工作环境温度 Operating temperature	-5~+50°C	-32~+55°C	-5~+50°C	-32~+55°C	-5~+50°C	-32~+55°C	-5~+50°C	-32~+55°C
介质温度 Temperature of medium	-20~+100°C	-20~+100°C	-20~+100°C	-20~+100°C	-20~+100°C	-20~+100°C	-20~+100°C	-20~+100°C
保护等级 Protection	IP40	Ip54	IP40	Ip54	IP40	Ip54	IP40	Ip54
控制信号 Control signal	开关信号 Switch signal		调节反馈 Regulation feedback	反馈信号 Feedback signal	开关反馈 Switch feedback		通讯接口 Communication interface	
线路图 Wire diagram								

## 风阀执行器 Damper actuator



ZDA24C01 ZDA24A01  
ZDA24M01

用于控制风门，广泛用于加热，通风，空调，制冷控制系统。

The damper actuator is used to control air damper, widely used in heating, ventilation, air conditioning, refrigeration control system

产品名称 Model	ZDA24C01	ZDA24A01	ZDA24M01
工作电压 Nominal voltage	AC24V 50/60Hz DC24V	AC24V 50/60Hz DC24V	AC24V 50/60Hz DC24V
扭矩 Torque	10Nm	10Nm	10Nm
电线尺寸 Wire sizing	0.5mm <sup>2</sup>	0.5mm <sup>2</sup>	0.5mm <sup>2</sup>
旋转角度 Angle of rotation	Max 90°	Max 90°	Max 90°
防护等级 Protection level	Ip54	Ip54	Ip54
环境温度 Ambient temperature	-32~+55°C	-32~+55°C	-32~+55°C
运行时间 Running time	45	45	45
线路图 Wire diagram			



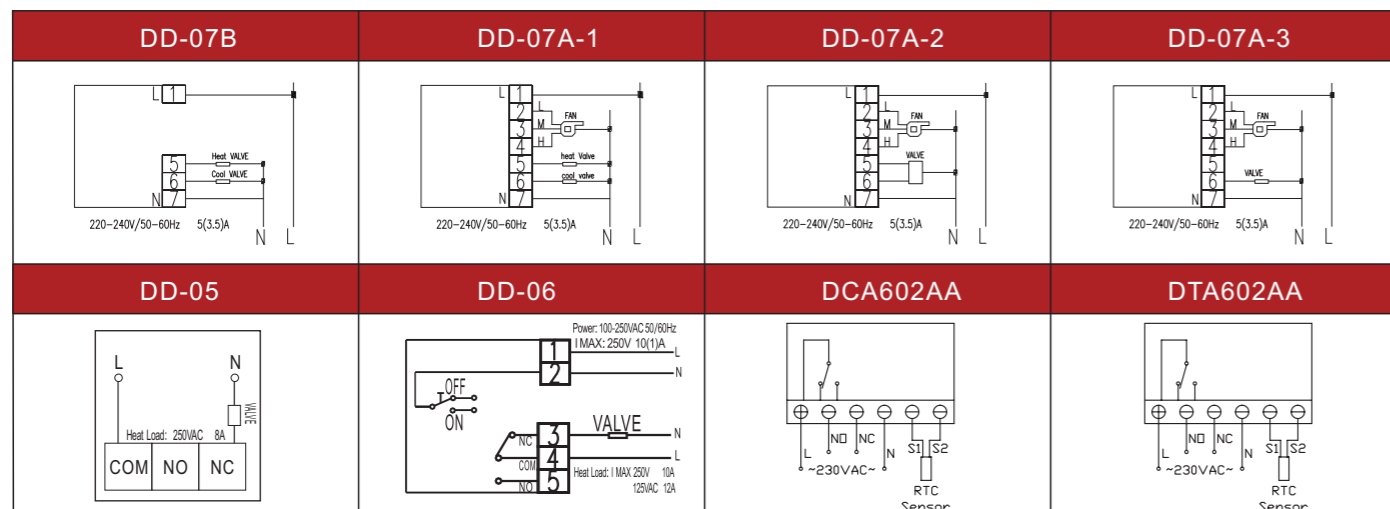
## 电子房间温控 Electronic room thermostat



大屏幕显示，带LED背光；房间温度、当前时钟同时显示；掉电永久记忆功能；可选华氏温度和摄氏温度单位；7天编程功能，每天可最多设置6个时间段的不同的温度设置

Professional-grade large screen display with led backlight, room temperature and current clock time display simultaneously, a permanent time memory during power interruption. Fahrenheit or celsius of temperature unit chose alternatively. 7-day programmed function with setting different temperature in maximum 6 time periods of one day.

产品名称 Model	供电电源 Supply voltage	工作温度范围 Temperature range	温度精度 Temperature accuracy	工作环境温度 Operating temperature	最大负载电流 Maximum load	外形尺寸 Dimensions
DD-05	100~240VAC, 50/60Hz	5 ~45 (41°F~113°F)	0.5 (1°F)	0 ~+50 (32°F~122°F)	8A/250V	108mmX88mmX21mm
DD-06	100~250VAC, 50/60Hz	5 ~45 (41°F~113°F)	0.5 (1°F)	0 ~+50 (32°F~122°F)	10(1)A 100~250V	108mmX88mmX21mm
DD-08						
DD-07B	100~240VAC, 50/60Hz	5 ~45 (41°F~113°F)	0.5 (1°F)	0 ~+50 (32°F~122°F)	5(3.5)A 220~240V	108mmX88mmX21mm
DD-07A-1						
DD-07A-2						
DD-07A-3						
DCA602AA	85~275VAC, 50/60Hz	0 ~50	0.5 (1°F)	0 ~+50 (32°F~122°F)	8A/275VAC	150mmX100mmX32mm
DTA602AA						100mmX100mmX34mm



## 电子温控 Electronic thermostat



DKA612AA该控制器用于地暖分水器系统中，通过执行器自动调节球阀的开度比例，可以控制混水温度；根据混水温度的大小，又可以控制水泵的开停，从而使系统更智能、安全、节能。

DKA612AA the controller is used in the Floor heating manifold system, to control the mixed water temperature in the method of adjusting the open ratio of the ball valve automatically by the actuator. The water pump can also be controlled to stop or open according to the mixed water temperature, which makes the system more intelligent, safe and energy-saving.

DKB612AA 该控制器用于采暖系统中，实现多个房间的分室控制，根据室内温控器发射的信号，可以控制壁挂炉、水泵的开停，通过自动调节执行器的开关，从而达到控制房间温度的作用，操作简单、接线方便，更智能化。

DKB612AA the controller is used in Water heating system to realize the compartment control of multiple rooms. According to the signal emitted by the indoor temperature thermostat, it can control the opening and stopping of the wall-mounted boiler and the water pump. By automatically adjusting the switch of the actuator, it can control the room temperature, which is of simple operation, convenient installation, and is more intelligent.

产品名称 Model	DKA612AA	DKB612AA	DCD601AA
供电电源 Supply voltage	85~275VAC, 50/60Hz	85~275VAC, 50/60Hz	85~275VAC, 50/60Hz
工作温度范围 Temperature range	5 ~45 (41°F~113°F)	—	-30°F~220°F
温度精度 Temperature accuracy	0.5 (1°F)	—	0.5°F
工作环境温度 Operating temperature	0 ~+50 (32°F~122°F)	0 ~+50 (32°F~122°F)	-49°F~239°F
最大负载电流 Maximum load	5A	5A	30A
外形尺寸 Dimensions	52mmX94mmX60mm	105mmX94mmX60mm	171mmX63mmX53mm
线路图 Wire diagram			

## 房间温控 Room thermostat

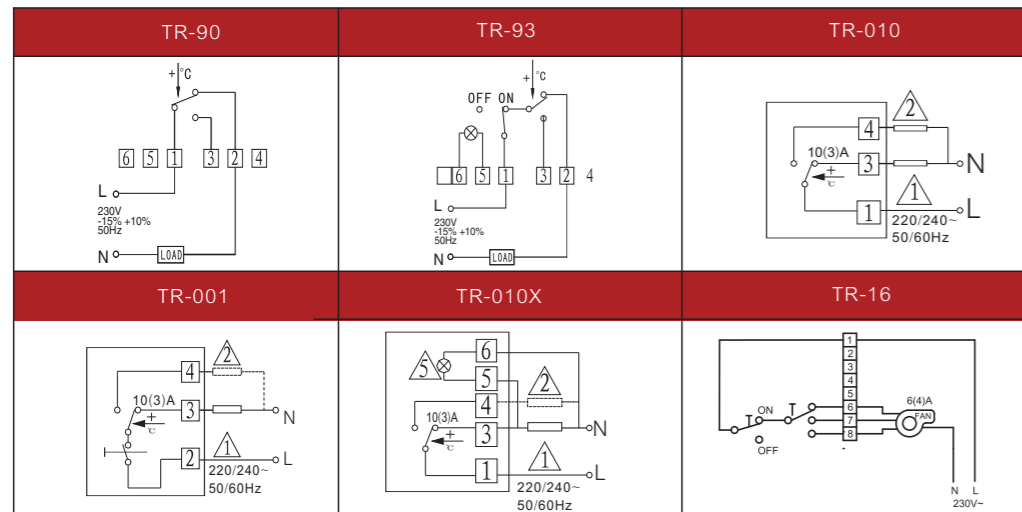


应用于中央空调或采暖设备的房间温度控制。现代设计完美匹配任何一个房间设计。

Control of central air conditioner or heating appliance for room temperature. The modern design perfectly matches any room design.

产品名称 Model	工作温度范围 Temperature range	工作电压 Rated power supply	差动 Switching differential	感温元件 Sensor type	尺寸 Dimensions	指示灯 Light	电源开关 ON/OFF	冷暖开关 Heating/Cooling Switch	外部开关连接 External switch connection
TR-90	5 ~30	12(3)A 250V	1	充气式膜盒 Gas filled syphon	80x80x37mm	-	-	-	-
TR-93						■	■	-	-
TR-010	10 ~30	10(3)A 220~240V	1	充气式膜盒 Gas filled syphon	83x83x38mm	-	-	-	-
TR-010X						■	-	-	-
TR-001						-	■	-	-
TR-16	-	230V±10% 50/60Hz	-	-	83x83x27mm	■	■	-	-

### ■ 线路图 Wire diagram

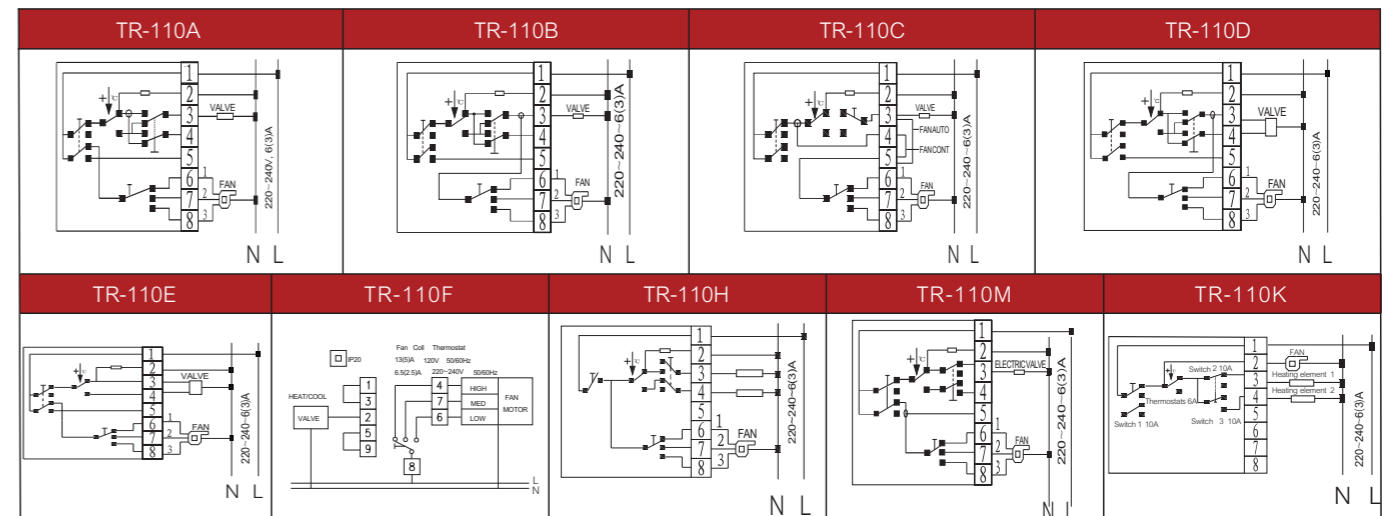


## 房间温控 Room thermostat

适用于宾馆或户式中央空调冷暖的温度控制，有各种不同的接线方式和多种工作模式可供选择。  
Central air conditioner, heating /cooling temperature control, with different wire connection option and operation mode.



产品名称 Model	TR-110A	TR-110B	TR-110C	TR-110D	TR-110E	TR-110F	TR-110H	TR-110M	TR-110K
工作温度范围 Temperature range	10 ~30	10 ~30	10 ~30	10 ~30	10 ~30	10 ~30	10 ~30	10 ~30	10 ~30
工作电压 Rated power supply	6(3)A 220~240V	6(3)A 220~240V	6(3)A 220~240V	6(3)A 220~240V	6(3)A 220~240V	6.5(2.5)A 220~240V	6(3)A 220~240V	6(3)A 220~240V	6(3)A 220~240V
差动 Switching differential	<1	<1	<1	<1	<1	<1	<1	<1	<1
独立的系统控制开关 Independent system of control switch	■	■	■	■	■	-	■	■	■
手动三档风速转换 3-speed fan switch	■	■	■	■	■	■	■	■	-
自动控制电动阀，风机不受温度开关控制 Automatic control of electric valve, Fan is not controlled by the thermostat switch	■	-	-	-	■	-	-	■	-
自动控制电动阀和风机 Electric valve and fan are both controlled by thermostat	-	■	■	■	-	-	-	-	-
风机控制与冷暖功能转换组合在同一拨动体上 Heat-fan-cool controlled by a single switch	-	-	-	-	-	-	■	-	-
风机由温度开关自动控制 The fan is controlled by the thermostat switch	-	-	-	-	-	-	-	-	■
两组加热器可独立控制 Individual control for two heating elements	-	-	-	-	-	-	-	-	■
适用于单制式温度控制 Applies to the single pole control system	-	-	-	-	■	-	-	-	-
冷暖切换开关 Heat-cool switch;	■	■	■	■	-	-	-	■	-
同一拨动开关控制系统与冷暖功能转换 Heat-fan-cool controlled by a single switch	-	-	-	-	-	■	-	-	-



## 管道温控 Pipe thermostat



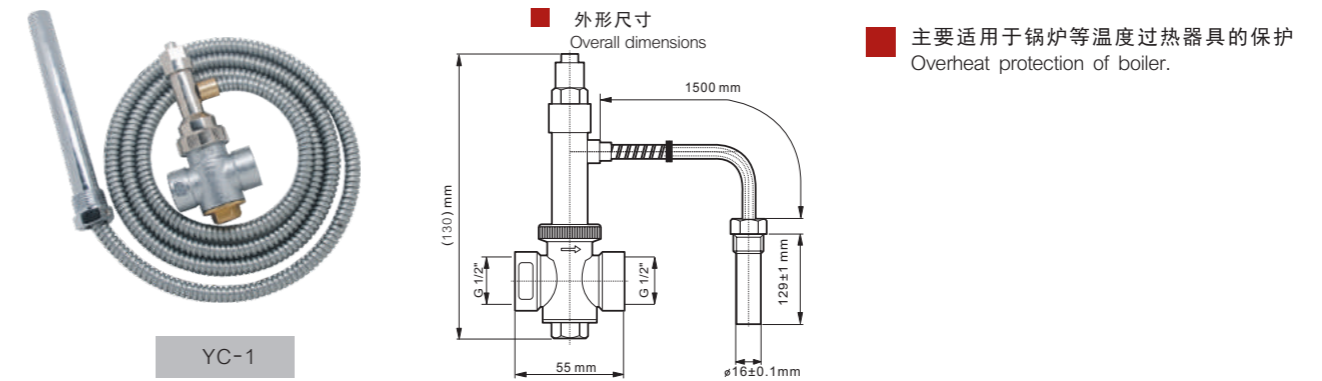
应用于管道、锅炉的温度控制。  
Control the temperature of piping and boiler, immersion thermostat with immersion rod and immersion sleeve, temperature set by knob or internal adjustable by screw driver.

产品名称 Model	WPR-90GA	WPR-90GA-2	GB-0/90A	GB-0/90A-2	GB-40/80A	GH-0/90A	WPR-90GC	WPR-90CK
工作温度范围 Temperature range	0-90	0-90	0-90	0-90	40-80	0-90	0-90	0-90
电器额定值 Electrical rating	16(4)A 250V	16(4)A 250V	16(4)A 250V	16(4)A 250V	16(4)A 250V	16(4)A 250V	16(4)A 250V	16(4)A 250V
差动 Switching differential	5	5	5 ±3	5 ±3	5 ±3	2 ~8	4 ±2	4 ±2
铜管尺寸 Pocket size	ø8x100mm	ø8x100mm	-	-	-	-	-	ø16x100mm
螺纹 Thread	NPT 1/2"	NPT 1/2"	-	-	-	-	-	R 1/2"



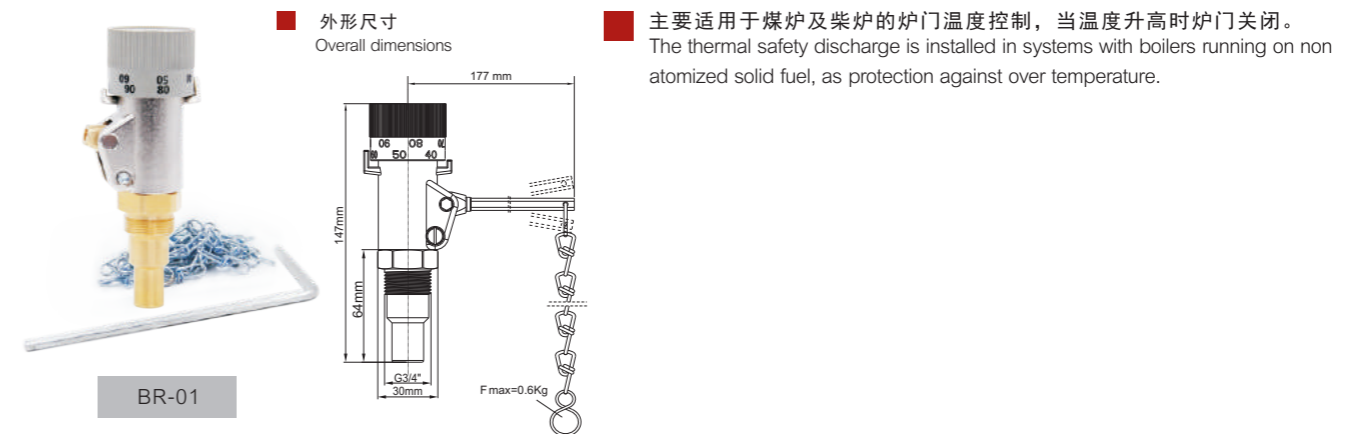
铜管组件 Immersion sleeve	产品名称 Model	铜管尺寸 Pocket size	螺纹 Thread
A	W10-G31	8x100mm	NPT 1/2"
B	W10-C26	16x100mm	R 1/2"
C	W10-C27	12.3x135mm	M20X1.5mm
D	W10-C35	16x225mm	-

## 超温保护泄压阀 Thermal safety drain Series



产品名称 Model	进/出口接头 Inlet/outlet connections	毛细管 Capillary length	设定温度 Setting temperature	最大工作压力 Max. operating pressure	最大流体温度 maximum fluid temperature	排水量 Drain capacity
YC-1	G1/2"	1500 mm	97°C	10 bar	107°C	DP= 0.1 bar, 600 L/h

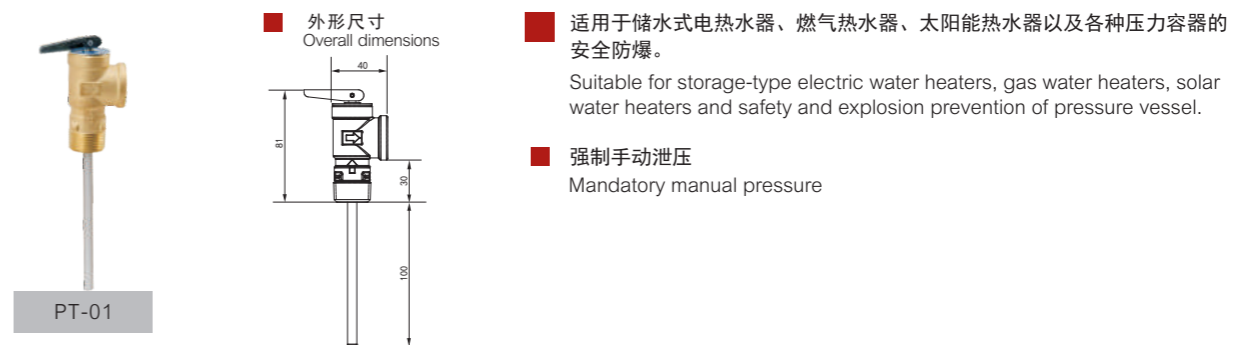
## 炉门温控 Draught regulator



产品名称 Model	热敏感元件 Heat sensitive element	温度调节范围 Temperature range	行程 Stroke	最大流体温度 maximum fluid temperature	链长度 Chain Length
BR-01	蜡阀芯 Wax sensor	30~90°C	90mm	115°C	1200 mm

## PT安全阀

## Temperature and pressure safety relief valve



产品名称 Model	热泄压温度 Temperature Relief	安全泄压 Pressure Relief Range	负压保护 Negative pressure protection	安装螺纹 Installation size
PT-01	94~99°C	0.5~1.0MPa	300~350KPa	R 3/4"

## 毛细管温控器 Capillary Thermostat



产品名称 Model	工作温度范围 Temperature range	差动 Switching differential	电器额定值 Electrical rating	毛细管长度 Capillary tube length	安装孔距 Installation Hole Distance	外形尺寸 Dimensions	附件 Accessory
G series	0~90°C 0~120°C 50°C~300°C	2°C~10°C	16(4)A 250V	1000/1500mm	28mm	44x32x60mm	■
GF series	70~90°C 90~110°C	手动复位 Manual reset 温度下降≥20°C复位 Temperature decrease ≥20 , reset	16(4)A 250V	1000/1500mm	28mm	44x32x54mm	—
HE series	-35~+35°C 0~40°C 0°C~90°C	<3°C <2.5°C <3.5°C	22A 250V	1000/1500mm	28mm	58x56.8x52.5mm	■
E series	50~300°C 50~320°C	10±2°C	16(4)A 250V	1000mm	28mm	51.5x35x51mm	▲
V series	0~120°C	5±2°C	16(4)A 250V	1000mm	28mm	58x35.1x40mm	—
F series	80°C 275°C	手动复位 Manual reset 温度下降≥20°C复位 Temperature decrease ≥20°C , reset	16(4)A 250V	1200mm	28mm	42x33.5x52mm	—

## 毛细管温控器 Capillary Thermostat

产品名称 Model	工作温度范围 Temperature range	差动 Switching differential	电器额定值 Electrical rating	毛细管长度 Capillary tube length	安装孔距 Installation Hole Distance	外形尺寸 Dimensions	附件 Accessory
C series	0~90°C 0~120°C 0~210°C 50°C~300°C	2°C~10°C	16(4)A 250V	1000/1500mm	28mm	53x37x52mm	■
CA series	90°C 90~110°C 100°C 300°C	手动复位 Manual reset 温度下降≥20°C复位 Temperature decrease ≥20 , reset	C-1 0.5A 250V C-2 16(4)A 250V	1000/1500mm	28mm	51.5x35x51mm	—



FT-90  
FT-99



FT-90-M  
FT-99-M

产品名称 Model	FT-90	FT-99	FT-90-M	FT-99-M
工作温度范围 Temperature range	90±6°C	99±6°C	90±6°C	99±6°C
差动 Switching differential	25±15°C	25±15°C	25±15°C	25±15°C
电器额定值 Electrical rating	25A 120V/240V/277V	25A 120V/240V/277V	25A 120V/240V/277V	25A 120V/240V/277V
毛细管长度 Capillary tube length	2000mm, 1450mm, 950mm, 500mm	2000mm, 1450mm, 950mm, 500mm	2000mm, 1450mm, 950mm, 500mm	2000mm, 1450mm, 950mm, 500mm
外形尺寸 Overall dimensions	<p>■ 自动复位 Automatic Reset</p>		<p>■ 手动复位 Manual reset 温度下降≥20°C复位 Temperature decrease ≥20 , reset</p>	

## 回水温控箱 TCB series multibox

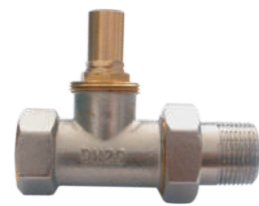


产品名称 Model	TCB - 1	TCB - 2	TCB - 3	TCB - 4
工作温度范围 Temperature range	6~28	10~50	6~28 /10~50	10~50
最大工作压力 Maximum admissible static pressure	1.0Mp	1.0Mp	1.0Mp	1.0Mp
最大工作压差 Maximum admissible differential pressure	0.1MPa	0.1MPa	0.1MPa	0.1MPa
安装深度 Installation depth	60mm	60mm	60mm	60mm
连接头螺纹 Connection size	G 3/4"	G 3/4"	G 3/4"	G 3/4"
描述 Description	TF-6	TF-23	TF-23 & TF -6	DF-110E & TF -23

## 回水恒温阀 Return water temperature control valve



TF-23



DN20-AG

热敏感元件 Heat sensitive element	温度调节范围 Temperature range	刻度标识 Temperature regulation scale
蜡阀芯 Wax sensor	10~50°C	1~5
最大工作压力 Maximum admissible static pressure	最大工作压差 Maximum admissible differential pressure	安装螺母 Installation size
1.0MPa	0.1MPa	M30x1.5

## 温度控制器 Temperature controls



MCA01A-

产品名称 Model	MCA01A01	MCA02A01	MCA03A01	MCA04A01	MCA05A01	MCA06A01	MCA07A01
温度范围 Temperature range	-25~0	-15~15	0~35	-30~15	-45~10	-20~35	-5~35
差动范围 Differential range	3.5~15	3.5~15	3.5~15	3.5~15	3.5~15	3.5~15	3.5~15
最高温度 Limit temperature	70	70	70	70	45	70	70
毛细管长度 Capillary tube length	3000/6000 /12000	3000/6000 /12000	3000/6000 /12000	3000/6000 /12000	3000/6000 /12000	3000/6000 /12000	3000/6000 /12000
电器额定值 Electrical rating	16(4)A250V	16(4)A250V	16(4)A250V	16(4)A250V	16(4)A250V	16(4)A250V	16(4)A250V
外形尺寸 Dimensions	81x80x49.5mm	81x80x49.5mm	81x80x49.5mm	81x80x49.5mm	81x80x49.5mm	81x80x49.5mm	81x80x49.5mm
线路图 Wire diagram							

■ Ts: 本体温度  
Ambient temp. of switch

Tb: 本体温度  
Sensing bulb temp.

Ts > Tb

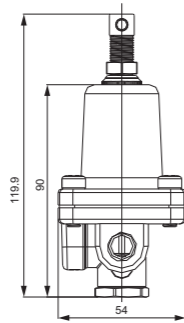
## 泄压阀 Pressure regulator



30PT96-30PV02



30PV03-30PV13



应用于非饮用水系统，种植业和通用管道系统。超大孔和手柄的调整。

Non-potable water application, farming, general-purpose piping system applications. Oversized orifice and handle adjustment.

产品名称 Model	进口尺寸 Inlet Size	出口尺寸 Outlet Size	压力调节范围 Pressure Adjustment Range	最大温度 Max. Temp.	最大压力 Max. Pressure
30PT96	1/4"	1/4"	1 to 25 psi	140 Degrees F	300 psi
30PT97	1/4"	1/4"	3 to 50 psi	140 Degrees F	300 psi
30PT98	3/8"	3/8"	1 to 25 psi	140 Degrees F	300 psi
30PT99	3/8"	3/8"	3 to 50 psi	140 Degrees F	300 psi
30PV01	1/2"	1/2"	1 to 25 psi	140 Degrees F	300 psi
30PV02	1/2"	1/2"	3 to 50 psi	140 Degrees F	300 psi
30PV03	1/4"	1/4"	1 to 25 psi	140 Degrees F	300 psi
30PV04	1/4"	1/4"	3 to 50 psi	140 Degrees F	300 psi
30PV05	1/4"	1/4"	10 to 125 psi	140 Degrees F	300 psi
30PV06	3/8"	3/8"	1 to 25 psi	140 Degrees F	300 psi
30PV07	3/8"	3/8"	3 to 50 psi	140 Degrees F	300 psi
30PV08	3/8"	3/8"	10 to 125 psi	140 Degrees F	300 psi
30PV09	3/8"	3/8"	50 to 175 psi	140 Degrees F	300 psi
30PV10	1/2"	1/2"	1 to 25 psi	140 Degrees F	300 psi
30PV11	1/2"	1/2"	3 to 50 psi	140 Degrees F	300 psi
30PV12	1/2"	1/2"	10 to 125 psi	140 Degrees F	300 psi
30PV13	1/2"	1/2"	50 to 175 psi	140 Degrees F	300 psi

## 空气阀 Manual Air Valve

应用于常规气动。  
General Pneumatic Applications



32XC-

产品名称 Model	32XC10	32XC11	32XC12	32XC13	32XC14	32XC15
出口尺寸 Port Size(In.)	1/4"NPT	3/8"NPT	1/2"NPT	1/4"NPT	3/8"NPT	1/2"NPT
描述 Description	4-way,3-position, detent,closed center			4-way,3-position, detent,exhaust center		
流量系数 Cv	2.5	3.0	6.2	2.5	3.0	6.2
气路图 Valve Operation						
外形尺寸 Overall dimensions						

## L款式温控器 L style thermostat

适用于冷藏、冷冻柜（箱）及类似用途器具的温度控制。

Temperature control for refrigerator, freezer and other similar equipments.



F3000



F3000C



WPR-35LA  
WPR-40L



A2000  
(WPR-35LB)



F2000  
(WPR-35L)

产品名称 Model	工作温度范围 Temperature range	电气额定值 Electrical rating	差动 Switching differential	毛细管长度 Capillary length
A2000 (WPR-35LB)	-35 ~+35	16(4)A/250V	≤3.5	180mm
F2000 (WPR-35L)	-35 ~+35	16(4)A/250V	2 ±1.5	1800mm
F3000	-35 ~+35	16(4)A/250V	≤3.5	180mm
F3000C	-35 ~+35	16(4)A/250V	2 ±1.5	1750mm
WPR-35LA	-35 ~+35	16(4)A/250V	2 ±1.5	1800mm
WPR-40L	0 ~-40	16(4)A/250V	2 ±1.5	1800mm

## 流量开关 FS flow switch



FS-25



FS-25B



FS-25A



FS-25C



LS-25A

适用于制冷、供暖以及感应经过管道的液体流量变化，起到开关信号作用，根据不同的流量需要，开关可以进行调节。

Suitable for cooling, heating and adjust the liquid flow through piping, play the role of the switching signal, the switch can be adjusted based on the flow required.

产品名称 Model	电器额定值 Electrical rating	最大工作压力 Maximum admissible static pressure	环境温度 Operating ambient temperature	接口 Installation size	最大管径 Largest diameter	流体温度 Temperature of liquid	防护等级 Protection
FS-25	16(4)A 220V~250V	1.0MPa	60	1"	3"	-240~120	IP65
FS-25B	16(4)A 220V~250V	1.0MPa	60	1"	3"	-40~120	IP65
FS-25A	16(4)A 220V~250V	1.0MPa	60	1"	3"	-40~120	IP65
FS-25C	16(4)A 220V~250V	1.0MPa	60	—	—	-20~120	IP60

这款开关用于监测管道里的空气流量。

This paddle switch is intended to monitor air flow within a duct and provides a switched output on detection of either a specific air velocity or flow failure.

产品名称 Model	电器额定值 Electrical rating	最大工作压力 Maximum admissible static pressure	环境温度 Operating ambient temperature	接口 Installation size	最大管径 Largest diameter	流体温度 Temperature of liquid	防护等级 Protection
LS-25A	16(4)A 220V~250V	1.0MPa	60	1"	—	-40~85	IP65

这款开关主要用于控制液体位置，最大工作压力为0.5MPa

This switch is mainly used to control liquid level in a tank or vessel, to provide a switched output to provide local alarm pump or valve control. Maximum admissible static pressure: 0.5MPa

流量调整范围 (L/min)

配管尺寸	最小 min		最大 max	
	流量减小 Flow decrease	流量增加 Flow increase	流量减小 Flow decrease	流量增加 Flow increase
1"	18	21	45	50
2"	50	58	150	155
3"	100	115	225	260

# 制冷及汽车空调用温控器

## Thermostats for refrigerating and automobile



Y108563A



WL-0.5



WL-OE



WL-1A



WL-OC



WL-4A



WL-0.5KB



WPF21I



DWL-2



DWLF-2D



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