



图 1: T6634液晶数字式风机盘管温控器
Figure 1: T6634 LCD Digital Fan Coil Thermostat

■ 应用

T6000液晶数字式风机盘管温控器

T6000数字式风机盘管温控器使用现场温度来控制风机盘管的启停，使用户得到舒适的环境。通过选择及设定温度类型、设定点、运行模式和所需参数，来控制制热、通风和空调(HVAC)系统，从而维持环境的理想温度。增加有人/无人监控装置，启动有人/无人模式的扩大温度控制范围，从而达到节约能源。

T6000温控器设有带背光液晶显示(LCD)、一个模式/时间(M/⌚)选择按钮，二个调节按钮(▲和▼)，一个风速(🌀)选择按钮和一个 On/Off (🔌)按钮。

■ Application

T6000 LCD Digital Fan Coil Thermostats

The T6000 Digital Fan Coil Thermostats feature local temperature control within fan coil operations. Select the temperature scale and setpoint, the mode, and the differential values to control the Heating, Ventilating, and Air Conditioning (HVAC) system that maintains the desired room temperature. The optional Occupied/Unoccupied feature saves energy by enlarging the acceptable temperature range.

T6000 features with Backlit Liquid Crystal Display (LCD), one Mode/Timer (M/⌚) selection button, two Adjustment buttons (▲&▼), one Fan Speed (🌀) selection button and one On/Off (🔌) button.

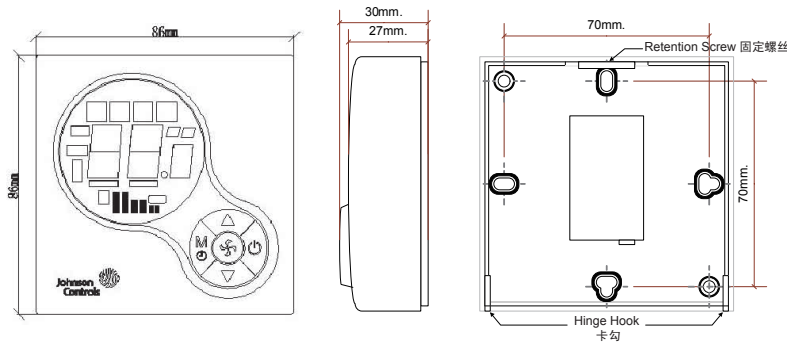


图 2: T6634系列温控器尺寸(mm)
Figure 2: T6634 Series Thermostat Dimensions (mm)

■ 安装

T6000温控器安装在用户容易观看屏幕和方便调节温度设定点的地方。并使温控器位于能代表房间总体环境温度的地方。避免将温控器安装于冷热源附近，如通风口、加热器、室外或阳光照射到的地方。

安装

T6000系列温控器设计为标准75x75x35mm墙装接线盒安装。(见图 3: 拆开图)

按照指示打开后盖底座，把它安装在墙上并接线。

注意：所有T6000系列温控器型号，需要两枚Mx5安装螺钉 (盒中自带，如遗失，需采用PWT2.5X5X5.5螺钉)。

■ Installation

Install the T6000 where the occupant can read the display and adjust the setpoint easily. Situate the thermostat where the temperature is representative of the general room conditions. Avoid installing the T6000 near cold or warm air drafts, radiant heat, on an outside wall, or in direct sunlight.

Mounting

Mount the T6000 Series thermostat to a 75x75x35mm standard electrical wallbox. (See Figure 3)

Follow the instruction in removing the base and then proceed to the wall box Mounting and the Wiring sections.

Note: All T6000 Series models require two No. Mx5 mounting screws (Included in the box, screw PWT2.5X5X5.5 is required if missing).

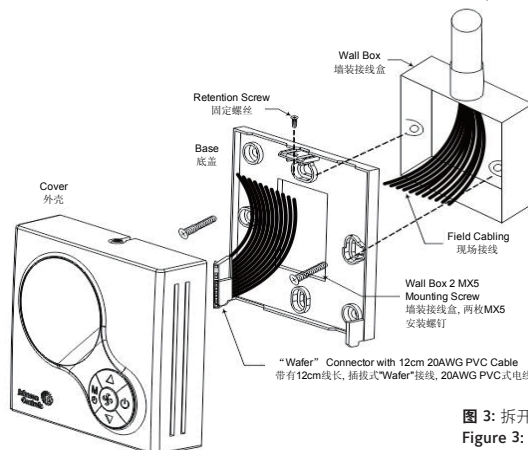


图 3: 拆开图
Figure 3: Exploded View

打开底座

松开 (不要取下) 温控器顶部一个螺钉，轻轻向前拉温控器，温控器的咬合钩就从安装底座底部的咬合槽脱离，使得安装和接线非常方便。印刷电路板 (PCB) 固定在前盖的里面，后面中部为连接钉。

Removing the Base

Loosen (Do Not Remove) the single Phillips-Head retaining screw at the top of the case to swing the thermostat slightly away from the base. By gently sliding it forward, the thermostat hinge hooks come away from the hinge slots at the bottom of the mounting base to provide easy access for mounting and wiring. The Printed Circuit Board (PCB) is attached inside the cover with connection pin near the middle of the mounting base.

墙装盒安装

安装T6000系列温控器:

把外部接线从墙里拉出并通过打开的方形底座。

通过两个安装孔与两枚Mx5螺钉, 把底座固定在安装盒上, 如图2所示。

根据应用产品的要求进行正确的接线。

■ 接线

根据指导, 给适当型号的温控器接线。

注意: 给T6000系列数字式风机盘管温控器接线时, 使用接线螺帽完成和绝缘每个接线端。

当接线完成后:

- 通过底座方形孔, 把连接线推入墙装盒里。
- 在底座咬合处把温控器钩住并轻轻推动温控器至安装底座上面。
- 固定松紧螺丝。
- 按设定调节键设定想要的参数。

根据图4-6的典型应用, 给指定接线端接线。

Wallbox Mounting

To mount the T6000 Series Thermostat:

Pull the external field wiring from the wall through the rectangular opening in the base.

Fasten the base to the wallbox using the appropriate two holes and two Mx5 screws, as shown in Figure 2.

Proceed to the Wiring section for the correct configuration for the applications and units.

■ Wiring

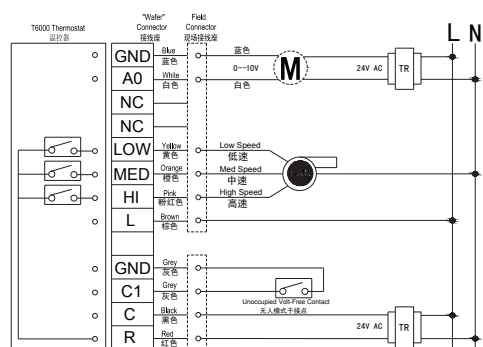
Wire the unit according to the instructions for the appropriate model.

Note: When wiring the T6000 Series Digital Fan Coil Thermostat, use wire nuts to finish and isolate each connection.

When the wiring is completed:

- Push the connected wiring through the rectangular hole in the base into the wallbox space.
- Hook the thermostat to the hinge at the bottom of the base and gently slide the thermostat down into position on the mounting base.
- Tighten the retention screw.
- Proceed to the Setup and Adjustment section to establish the desired settings.

Wiring terminal designations and connections for typical applications appear in Figure 4-6.



注: 执行器与温控器须使用独立变压器

Note: Separated transformers are required for actuator and thermostat.

图 4: T6634-TE21-9JS0接线图

Figure 4: Wiring Diagram for T6634-TE21-9JS0

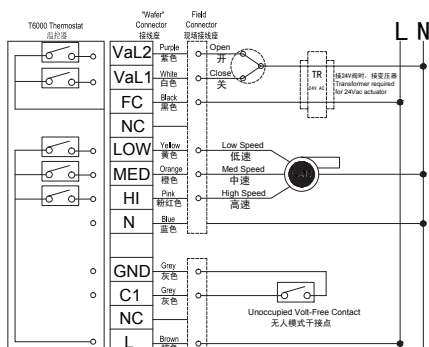


图5: T6634-TE22-9JS0接线图

Figure 5: Wiring Diagram for T6634-TE22-9JS0

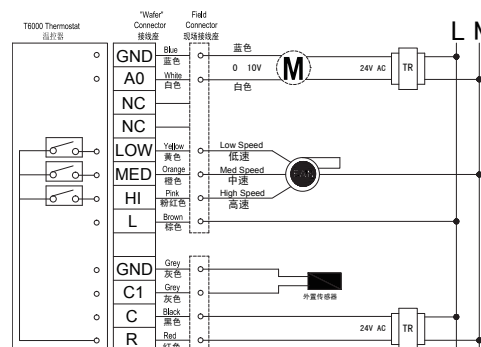


图6: T6634-TE21-9JR0接线图

Figure 6: Wiring Diagram for T6634-TE21-9JR0

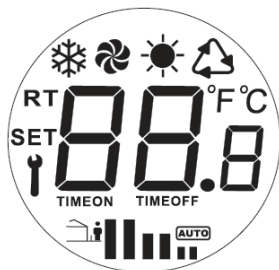
■ 检查步骤

温控器安装完毕, 在离开之前要检查制冷和制热完整的操作循环。这样可以确保所有控制设备功能正常。如果接线正确, 而设备又不能正常工作, 请就近联系Johnson Controls®办事处来替换温控器。

■ 设置和调节

按On/Off (U) 按钮, 开启关闭T6000温控器。T6000温控器开机以后, 温控器显示环境温度。LCD显示图标, (如图7)。

参考表2, T6000系列温控器出厂设定值



■ Check-Out Procedure

After the installation, observe the complete operation cycles for cooling and heating control. This is to make sure that all control devices are functioning correctly. If the device is not working properly and the wiring is correct, the thermostat should be replaced by contacting your nearest Johnson Controls® Representative.

■ Setup and Adjustments

Turn ON/OFF the T6000 Thermostat by pressing the On/Off (U) button. After turning On the T6000 Thermostat, ambient temperature will be displayed. LCD displays the icons. (see Figure 7).

The T6000 Series Thermostat comes with the default settings specified in Table 2.

图 7: T6000 LCD显示

Figure 7: T6000 LCD Display Pattern

■ 操作 - M/⌚ 按钮

模式操作

T6634-TE21/22温控器, 有三种模式选择如表 1。按M/⌚按钮操作温控器, 屏幕上会按顺序出现制冷 (❄), 制热 (☀), 仅风机 (🌀)。5秒后表示该模式已被选定。选好的图标将显示在液晶屏上(如图6和表1)。

如安装了有人/无人监控装置, 有人/无人模式 (🏠) 将会启动。

时间功能开启和时间功能关闭操作

按下M/⌚键3秒进入定时开机功能设置。此时TIMEON图标出现, 并闪烁, 使用▲和▼键设定定时开机时间 (0~24小时范围), 按🌀键进行确认。

再次按下M/⌚键进入定时关机模式设定, 此时TIMEOFF图标出现, 并闪烁, 使用▲和▼键设定定时关机时间 (0~24小时范围), 按🌀键进行确认。

注意: 如果在3-5秒内没有输入, 温控器将回到缺省设置状态。

■ Operation - M/⌚ Button

Mode Operation

On the T6634-TE21/22, three modes are available as shown in Table 1. Short press of the M/⌚ button switches through the sequence of Cooling (❄), Heating (☀), Fan only (🌀) modes followed by operation. The selected icon will flash, the icon is selected after 5 seconds. The selected icon appears highlighted on the LCD (see Figure 6 and Table 1).

Unoccupied mode (🏠), will only be activated when the Occupied/Unoccupied contact is wired.

Time-On and Time-Off Operation

Holding down the M/⌚ button for 3 seconds will enter the Timer On setting. When the TIMEON icon appears and flashes, use ▲ and ▼ keys to set the time duration (0 ~ 24 Hours Range). Press key 🌀 to confirm the settings.

Holding down the M/⌚ button for 3 seconds will enter the Timer On setting, additional one press to enter Time-Off setting. When TIMEOFF icon appears and flashes, use ▲ and ▼ keys to set the time duration (0 ~ 24 Hours Range). Press key 🌀 to confirm the settings.

Note: The thermostat returns to the default screen if no entry occurs within 3-5-seconds.

■ 上/下 (▲和▼) 调节按钮

调节温度设定点, 仅需按▲和▼按钮, 5秒内设置有效。5秒后还没有输入调节, 屏幕将返回显示环境温度。

■ 风机 (🌀) 速度按钮

制冷、制热模式操作

T6634-TE21/22温控器有4种风机速度 (没有风机停), 自动 (🌀), 高 (🌀), 中 (🌀), 低 (🌀) 风速。按 (🌀) 按钮, 将循环显示。被选的模式图标闪烁, 5s后自动确认图标被选中, 选定后图标将不再闪烁, 正常显示在屏幕上。

仅风机操作

T6634-TE21/22温控器有3种风机速度, 高 (🌀), 中 (🌀), 低 (🌀) 风速。按 (🌀) 按钮, 将循环显示。被选的模式图标闪烁, 5s后自动确认图标被选中, 选定后图标将不再闪烁, 正常显示在屏幕上。

注意: 每一次开关T6000系列温控器, 开始时都将启动低速风机。这一软启动特点防止了高启动电流, 同时节约了用电, 2秒以后, 风机按设定运转。

外接温度传感器 (T6634-TE21-9JR0)

当温控器接上外置传感器时, 内置NTC传感器自动失效。

■ Up/Down (▲&▼) Adjustment Button

To adjust the Temperature Setpoint, simply pressing the ▲ and ▼ button, allows 5-seconds for setting to take effect. After 5-seconds without further adjustment, the screen returns by displaying the ambient temperature.

■ Fan (🌀) Speed Button

Cooling or Heating Mode Operation

T6634-TE21/22, has 4 speeds fan control (No Fan Stop); Auto (🌀), High (🌀), Middle (🌀), Low (🌀) fan. Short press the (🌀) button switches through the sequence. The selected icon will flash, the icon is selected after 5 seconds. The selected icon appears highlighted on the LCD.

Fan only Operation

T6634-TE21/22, has 3 speeds fan control; High (🌀), Middle (🌀), Low (🌀) fan. Short press the (🌀) button switches through the sequence. The selected icon will flash, the icon is selected after 5 seconds. The selected icon appears highlighted on the LCD.

Note: Every time switch On the T6000 Series thermostat, the low speed fan will be initiated. These soft-start feature prevent high startup current, while provides energy saving to electricity consumption. After 2-seconds, the required fan speed will be started.

Remote Temperature sensor(T6634-TE21-9JR0)

When remote sensor is connected, the built-in sensor will be disable.

功能 Function	出厂设置 Factory setting	设定范围 Setting range
失电重启 Restart when power failure	1 00	00: 关闭 01 开启 02: 恢复到断电前状态 00: OFF 01: ON 02: Recover to previous status
设定温度上限值范围 Max.Temp setpoint range	2 30	下限~30℃/Min. temp~30℃
设定温度下限值范围 Min.Temp setpoint range	3 05	5℃~上限/5℃~Max. temp
房间温度与设定温度显示选择 Display room temp or set temp	4 00	0: Room Temp; 1: Set Temp
温度校准 Temp differential	5 00	-5~5℃ (-9~9) ;
°C/°F	6 00	0: °C; 1: °F
无人模式制冷温度 Unoccupied Temp Setpoint cooling	7 28	23-30℃
无人模式制热温度 Unoccupied Temp Setpoint heating	8 18	16-23℃
Stime	9 01	1-99s
ZBAND	A 0.3	0.0-9.9
KP	B 10	1-99
KI	C 01	0-99
KD	D 00	0-99
低温保护设置 Low temp protection setting	E 00	00: 低温保护关闭。Protection OFF; 01: 低温保护开启。Protection ON (仅用于T6634-TE21-9JS0和T6634-TE21-9JR0/ Only T6634-TE21-9JS0 and T6634-TE21-9JR0)
最小开度设置 Min. position	E 00	0-30% (仅用于T6634-TE22-9JS0) (Only for T6634-TE22-9JS0)
正反转定义 CW or CCW	F 00	0: 逆时针开, 顺时针关; 1: 逆时针关, 顺时针开 (仅用于T6634-TE22-9JS0) 0: CCW for open 1: CW for open (Only for T6634-TE22-9JS0)
总行程时间设置 Running time	L 80	30-160s (仅用于T6634-TE22-9JS0) (Only for T6634-TE22-9JS0)
低温保护设置 Low temp protection setting	H 00	00: 低温保护关闭。Protection OFF; 01: 低温保护开启。Protection ON (仅用于T6634-TE22-9JS0/only for T6634-TE22-9JS0)

Function / 功能	Icon / 图形
Cool Mode / 制冷模式	❄️
Heat Mode / 加热模式	☀️
Fan only Mode / 仅风机	🌀
Unoccupied / 有人/无人模式	🛋️

表1/Table1: T6634-TE21-9JS0, T6634-TE22-9JS0, T6634-TE21-9JR0

注: T6634-TE21-9JR0 没有Unoccupied/有人/无人模式

■ 设定差值

在关机状态下按 M 及 ▲ 键待 🛋️ 符号出现, 再按 🌀 键, 进入运行参数设置状态。按 🌀 键切换功能, ▼或▲调整相对应功能的参数, 功能含义见表2。(调整时慢些进行, 尤其在按 🌀 键时, 不能在一秒钟内按一次以上)

■ 标定

T6000系列温控器不需现场标定。

■ 故障检修

电源中断, 温控器模式和所有设置回到最近使用和设置过的状态。

■ 维修和替换

不要试图现场维修T6000系列温控器。如果温控器不能正常工作, 请与附近Johnson Controls® 办事处联系。当联系办事处更换产品的时候, 请说明外部标签或参数表上印有的类型/型号。

■ Setting Parameter

To enable the operation mode, hold down the M and ▲ till 🛋️ icon appears when the thermostat is turned off, after which press 🌀. Press 🌀 to switch functions, press ▼ or ▲ to adjust the parameter. See Table 2 for the functions. (Slowly press the key, only pressing once is allowed in 1s when press 🌀)

■ Calibration

Do not calibrate the T6000 Series thermostat in the field.

■ Troubleshooting

After a power outage, the thermostat mode and all settings return as most recently used or set.

■ Repair and Replacement

Do not attempt to repair the T6000 Series thermostat. In case of an improperly functioning control, contact the nearest Johnson Controls® representative, and specify the desired product code number. When contacting the supplier for a replacement please state the type/model number of the control located on the data plate or cover label.

■ 可选用的型号

T6634-TE21-9JSO, 调节控制
T6634-TE22-9JSO, 浮点控制
T6634-TE21-9JRO, 调节控制 (外接温度传感器)

■ 技术参数

请参考产品说明书。

■ Ordering Information

T6634-TE21-9JSO, modulating application
T6634-TE22-9JSO, floating application
T6634-TE21-9JRO, modulating application (remote temperature sensor)

■ Specifications

Refer to Product Catalog for Details.

重要:

- T6000系列温控器仅用作在线电压风机盘管控制使用。当T6000系列温控器调节装置失灵或故障时可能会导致人员伤亡, 财产损失及其它配备损坏。增加预防措施, 如常使用监控及报警系统、电压保护开关等, 在安装系统中。来加强此温度调节装置的机能失常和失效时的保护。
- 不要把温控器装在结露、潮湿或有湿气处。湿气会损坏温控器。
- 不要把封入前盖的PCB板移出, 从前盖中把封入的PCB板拆卸移出将不再享有质保服务。
- 使所有接线符合国家、地区和当地的规定。不要超过T6000系列温控器电流容量。

IMPORTANT:

- Use this T6000 Series Line Voltage Fan Coil Thermostat only as an operating control. Where failure or malfunction of the T6000 Series Thermostat could lead to personal injury or property damage to the controlled equipment or other property, additional precautions must be designed into the system. Incorporate and maintain other devices such as supervisory or alarm systems or safety or limit controls intended to warn of, or protect against, failure or malfunction of the T6000 Series Thermostat.
- Do not install this thermostat in condensing, wet, or damp environments. Moisture may cause damage to the thermostat.
- Do not remove PCB from the enclosure cover. Removing the PCB from the enclosure cover voids the product warranty.
- Make all wiring connections in accordance with local, nation, and regional regulations. Do not exceed the T6000 Series thermostat's electrical ratings.



警告:

- 在进行电器接线时确保电源断开。在带电时连接各部件可能引起电击, 从而导致人员受伤甚至死亡。
- 电击危险
按照国家、地区和当地的规定给温控器接地。接地失效可能导致电击和人员伤亡甚至死亡。
- 电击危险和财物损坏
在温控器通电前把未使用的线头保护好, 使之绝缘。任何一个未使用的线头未被绝缘和保护可能导致财产损失, 电击和人员伤亡甚至死亡。



WARNING:

- Disconnect power supply before making electrical connections. Contact with components carrying hazardous voltages can cause electrical shock and may result in severe personal injury or death.
- Risk of Electrical Shock
Ground the thermostat according to local, national, and regional regulations. Failure to ground the thermostat may result in electrical shock and severe personal injury and death.
- Risk of Electrical Shock and Property Damage
Insulate and secure each unused wire lead before applying power to the thermostat. Failure to insulate and secure each unused wire lead may result property damage, electrical shock, and severe personal injury or death.



注意:

在所有的接线未检查好之前, 不要给系统通电。短路或不正确的接线可能导致设备永久性的损坏。



CAUTION:

Do not apply power to the system before checking all wiring connections. Short circuited or improperly connected wires may result in permanent damage to the equipment.