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更多信息

- 该说明手册应该交给现场安装工程人员。
 - 有关该产品更多信息,请联系世讯科技技术支持 e-mail: sales@sation.com.cn
http: www.sation.cn \ www.sation.com.cn
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 - KNX®和ETS®是KNX协会注册商标。
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功能描述

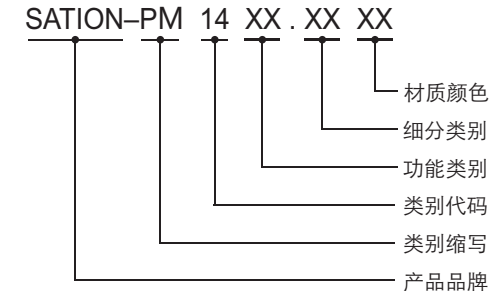
本产品集温控面板和风机盘管执行器于一体, 按国标设计要求的模块化安装设备, 方便安装在建筑墙面预留的墙盒上。可以直接连接2管和4管制的风机盘管系统或者传统的空调, 配有操作按键和LCD显示屏显示当前的操作模式和相关数值。"2-point 控制"、"PWM 控制"、"连续控制"和"风机盘管驱动"都可用于所有控制器中的加热或制冷功能。

在比较大的房间中, 温度值也可以通过KNX接收另外的温度传感器测量的温度值来改善当前的温度控制, 本产品将接收到的温度值以加权值的定义应用于环境温度控制中。

主要功能如下:

- 温度 and 相对湿度可以通过内部集成相关的传感器测量, 还可通过总线接收外部测量的温度值。可显示温度的测量值、设定值, 相对湿度的测量值。温度显示可℃/°F 切换;
- 室温控制可开关或比例 (PWM或连续) 调节;
- 季节性模式: 可以本地切换或通过总线切换加热和制冷;
- 可手动或自动控制2-管道或4-管道连接的风机盘管单元;
- 延时关机功能;
- 自带控制继电器, 可直接连接风机盘管单元;
- 配有一组两键按键功能, 可配置开关、调光、窗帘和场景功能。

产品命名规则



技术参数

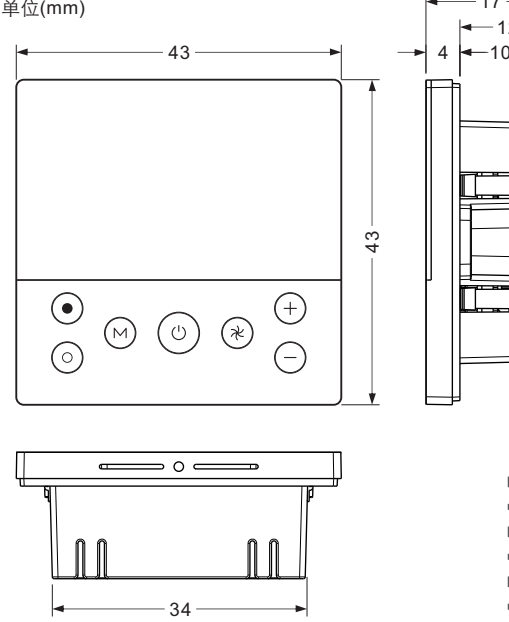
- KNX总线供电: DC 21V~31V
- AUX辅助电源: DC 20V~30V
- 供电电流 < 12mA
- 功耗 < 360mW
- 编程按键: 按键分配物理地址、编程
- 编程指示灯: 橙色LED
- 最大切换功率 (风机档位): 2000VA/150W
- 最大切换功率 (电动阀门): 62.5VA/60W
- 温度测量范围: -20℃~+80℃, ±1.5℃
- 温湿度传感器: 温度精度, ±0.3K (可以通过参数修正); 湿度精度, ±2.0% (可以通过参数修正)
- KNX端子接线: 要求使用符合KNX标准的双绞电缆

其他特性

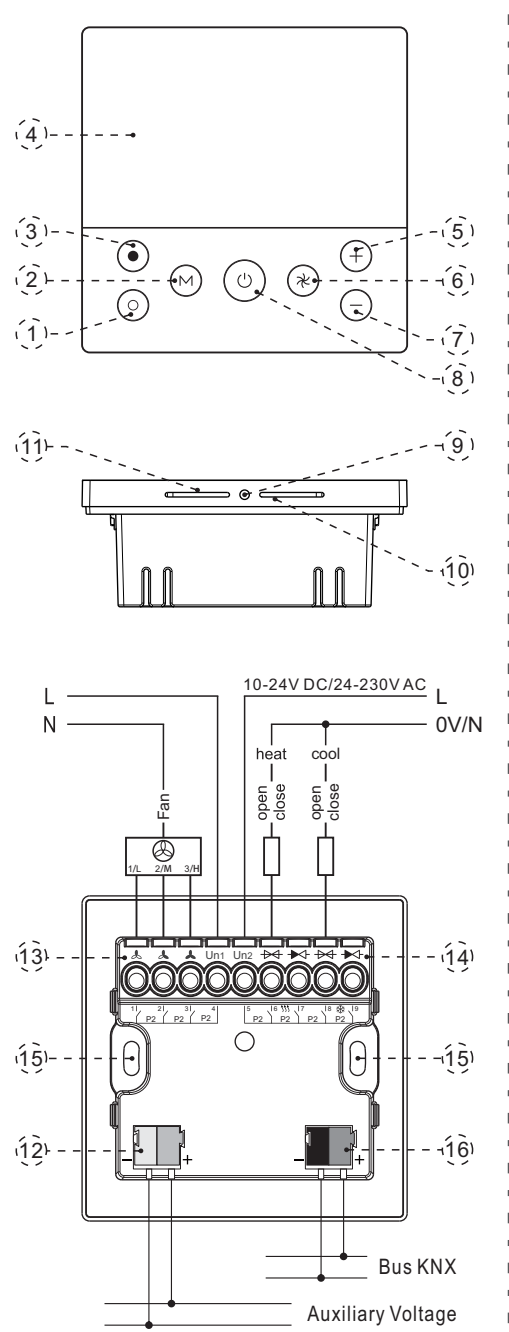
- 外壳塑胶材料, 阻燃等级达到V0级
- 防护等级IP20 (安装设备), 依据EN60529
- 安全等级II, 依据EN61140
- 污染等级2, 依据EN60664-1
- 环境条件
 - 运行温度 -5℃...+45℃
 - 储存温度 -25℃...+55℃
 - 运输温度 -30℃...+70℃
 - 相对湿度 <93%,不结露



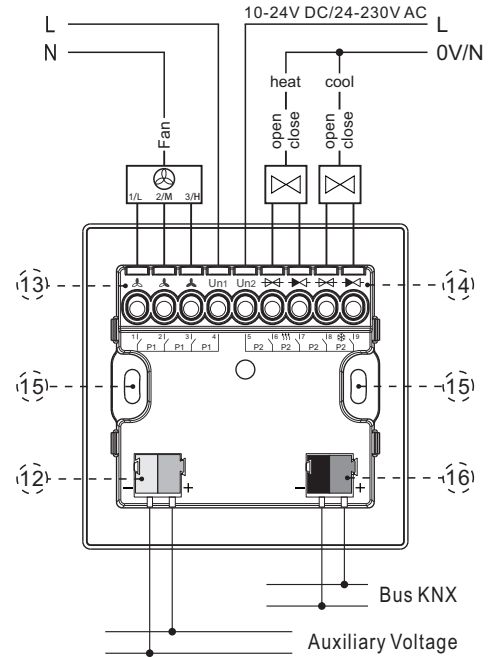
外形尺寸



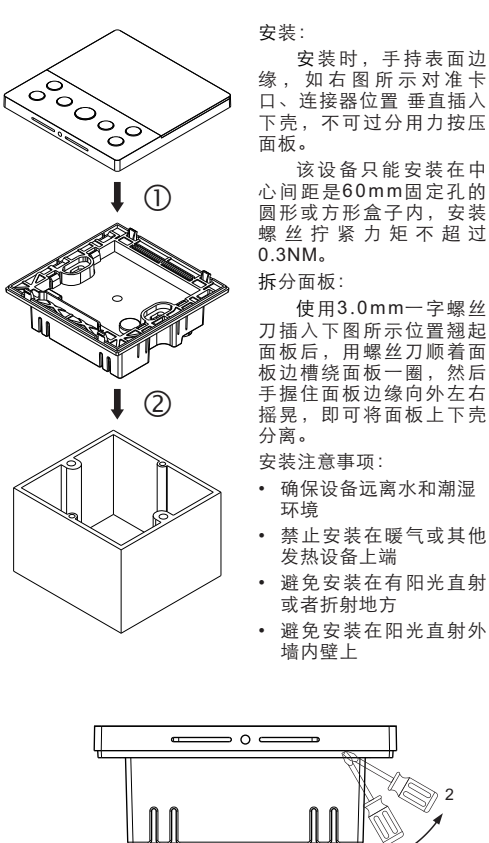
接线图



- 按键 (开关、调光、窗帘、场景)
- 模式按键, 短按模切换
- 按键 (开关、调光、窗帘、场景)
- LCD显示屏
- 按键 (+), 温度升高, 风扇转速或其他参数
- 风速按键, 风速切换0→1→2→3→Auto→0...
- 按键 (-), 温度降低, 风扇转速或其他参数
- ON/OFF按键, 长按开关机, 短按模式确定
- 设备编程按键
- 编程LED灯
- 温湿度传感器
- 辅助电源连接端子
- 风机输出端子
- 制冷和制热输出端子
- 设备安装孔位
- KNX总线连接端子



安装及拆分面板

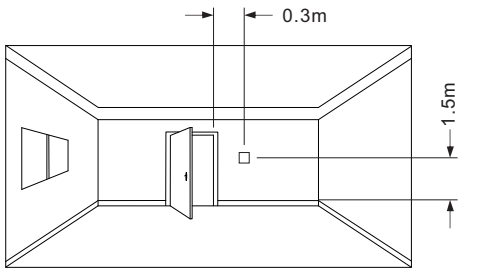


安装位置

为实现最佳调节, 温控器必须优先安装在没有阳光直射的内壁上, 离地面距离1.5米, 离门距离至少0.3米。

该设备不能安装在附近的源头像散热器或电器一样的热量或位置受直接太阳辐射。

如有必要, 可以通过外置传感器测量温度值来计算平均值, 通过总线从另一台设备接收的值KNX (例如 SATION微波存在和红外存在传感器)。



设备的连接和配置与调试

- KNX总线连接**
通过附带的连接端子(16)连接至KNX总线, 端子插入设备插槽中。
- KNX总线端子(16)特征**
弹簧导线夹紧, 端子可接4个导线(单个); 适合用于Ø0.6~Ø0.8(单线)KNX总线电缆; 建议剥线约5~6mm; 颜色红色为+(正极), 黑色为-(负极)。
- 辅助电源端子(12)特征**
弹簧导线夹紧, 端子可接4个导线(单个); 适合用于Ø0.6~Ø0.8(单线)KNX总线电缆; 建议剥线约5~6mm; 颜色黄色为+(正极), 白色为-(负极);

警告...
该设备总线供电只能使用KNX总线电源(例如SATION-SP2002.6440),如果使用其他电源会造成该设备电路损坏和无法连接到KNX总线。

- 负载连接**
风机是通过螺丝端子(13)连接, 端子位于设备上方, 加热线是通过螺丝端子(14)连接, 端子位于设备上方, 制冷阀是通过螺丝端子(14)连接, 端子位于设备上方。
- 端子特征**
螺钉夹紧导线; 导线最大截面6mm²(单线)或2mm²(多线); 建议剥线长度8~9mm; 螺丝最大扭矩0.8NM; 如果有单个负载连接在供电安全电压时, 相应同一通道的另外一个端子也要连接到负载相应电压(一个通道对应一对端子)。

警告...
220V电压会造成生命危险和火灾危险 直接或间接接触导电零件时, 可能有触电危险。可能造成电击、灼伤或死亡。

- 只能由电气专业人员在 220 V 的电网上进行工作。
- 安装/拆卸前应先切断电源电压。
- 不得在连接电缆损坏时使用设备。
- 不得打开设备外壳上任何已拧紧的板。
- 只能使用技术状态完好的设备。
- 不得在设备、设备组件和附件上进行任何更改或维修工作。
- 确保设备远离水和潮湿环境。必须明确通过总线控制的通道, 在控制加载的负载时 (例如家用电器连接到电源插座) 必须预计和评估以下风险, 即在使用者看不见实际负载的情况下, 可能会出现实际连接的负载和预计的不同, 以至于在对现有负载没有直接验证条件下控制, 以及根据场景或时间进行自动控制, 可能会对人或物产生严重伤害。

配置与调试

设备的配置和调试需要使用ETS®(工程工具软件)程序ETS4或更高版本,对于配置的设备参数相应应用程序或整个SATION®产品数据库必须加载到ETS程序中。

安装和调试必须要有相关建筑自动化工程师完成。有关该参数详细信息请到www.sation.cn 官网了解。

- 提示...**
注意配置和KNX调试设备需要专业技能。要获得这些技能, 你应该参加KNX认证工程师培训。

设备调试, 对于调试设备按以下步骤进行

- 设备进行电气连接, 连接端子位于设备上方。
- 打开KNX总线电源。
- 启动设备编程模式, 通过按下编程按键(9), 编程LED点亮时表示开始编程模式。
- 使用ETS®工程软件下载物理地址到该设备, (物理地址下载完成编程LED灯熄灭, 表示设备恢复正常模式), 即可使用ETS®软件进行工程调试。(注:物理地址只需要第一次下载, 后续工程调试时不用重复下载)。

设备认证

- KNX 认证
- CE 认证, 该产品符合低电压标准和电磁兼容标准, 按以下标准进行试验:
 - EN 50491-5-1:2010 EN 50491-3:2009
 - EN 50491-5-2:2010 EN 60669-1:1999+A2:2008
 - EN 61000-3-2:2014 EN 60669-2-1:2004+A12:2010
 - EN 61000-3-3:2013

保养和清洁

设备免保养。损坏(例如由于运输、贮存)时不允许进行维修。打开设备后保修索赔失效! 必须确保可运行、检验、检查、保养和修理该设备(依据DIN VDE 0100-520)。

清洁脏污的设备可以使用干燥的抹布。如果无法彻底清洁, 可使用肥皂溶液稍微浸湿抹布进行清洁。无论如何不得使用腐蚀性介质或溶剂。

回收

本产品采用可回收利用高性能材料和组件制造而成,如果产品上带有三个箭头形成一个三角形符号, 侧表明该符合回收利用。

设备包含可重复利用的贵重原料。已使用的电气和电子设备不得作为家庭垃圾处理。

警告...
正确处置本产品可能造成对环境 和人体造成严重损害健康。请了解当地关于分类收集电子和电气产品规定, 用正确的处置程序处理废物和收集。

重要提示

- 安装与启动调试工作仅允许由电气专业人员进行。在对电气设备进行规划和安装时, 须遵守各国相关标准、方针、规定和要求。
- 避免设备在运输途中、存放期间和使用中蒙受潮湿、污垢和损伤。
- 使用设备时务必遵守指定的技术数据!
- 产品上电前, 请确认输入电压范围符合手册的要求。
- 本设备不是玩具, 任何时候都一定不要让儿童接触到它。
- 请确保使用中产品的安全外壳的完好, 如果发现前外壳已经破损, 请不要继续使用本产品, 以免出现意外。
- 设备不得自行拆机、自行改造, 否则将不能正常保修。
- 产品发生故障时, 请退给制造商在保修范围内给予免费维修。

KNX Fan Coil Room Thermostat

Installation and Operation Manual

SATION-PM1423.123X



Participating●Achieving●Sharing

Sation technology & Intelligent building experts creat smart life

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More Information

- The instruction manual should be left on-site installation engineers;
 - For more information please contact our technical supporter
E-mail:sales@sation.com.cn
http: www.sation.cn \ www.sation.com.cn;
 - SATION®is the registered trademark of ZhuHai Sation Technology Co.Ltd;
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Important Notice

- Installation and start commissioning work may only be performed by a qualified electrician. When planning for electrical equipment and installation shall comply with relevant national standards, guidelines, regulations and requirements;
- Avoid equipment in transit, suffer moisture, dirt and damage during storage and use;
- Always observe the technical data specified using the device;
- Always turn off the case when using the device! Before the implementation of the installation work, the device must be placed in no-voltage condition;
- This device is not a toy at any time must not allow children to come into contact with it;
- Be sure to use the product safety shell intact, before the shell has been found damaged if you use, please do not continue to use the product to avoid accidents;
- The device may not disassemble, self-transformation, otherwise it will not warranty;
- Product failure, please return to the manufacturer give free repair under warranty.

Function description

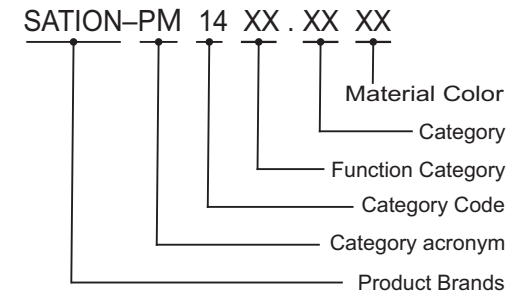
This product integrates thermostat control panel and fan coil actuator, and adopts modular installation equipment according to the design requirements of national standards, which is convenient to be installed on the wall box reserved for building wall. It can be connected directly to the 2-tube and 4-tube fan coil system or traditional air conditioner, equipped with operation keys and LCD display to display the current operation mode and related values."2-point control, PWM control, continuous control, and fan-coil drive are available for heating or cooling functions in all controllers.

In a relatively large room, the temperature value can also improve the current temperature control by receiving the temperature value measured by another temperature sensor through KNX. This product applies the temperature value received to the environmental temperature control with the definition of the weighted value.

Main functions are as follows:

- Temperature and relative humidity can be measured by an internal integrated sensor, and external temperature values can be received by the bus. It can display the measured value of temperature, set value and relative humidity. Temperature display °C / °F switch;
- Room temperature control can be switched on and off or proportional (PWM or continuous) regulation;
- Seasonal pattern: can switch local switch or through the bus heating and cooling;
- Fan coil units that can be manually or automatically controlled for 2-pipe or 4-pipe connections;
- Delayed shutdown function;
- Equipped with control relay, the fan coil unit can be connected directly;
- There is a set of two key button function, can configure switch, dimmer, curtain and scene function.

Naming Rules



Technical data

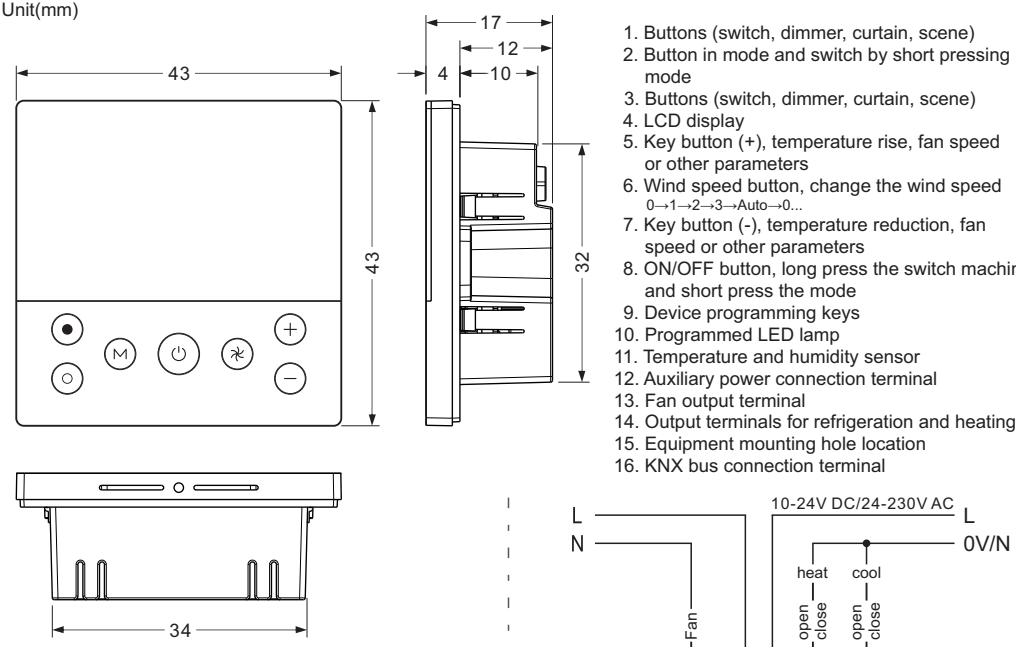
- DC 21V...31V KNX bus line
- DC 21V...31V AUX auxiliary power
- Supply Current < 12mA
- Consumption < 360mW
- Program button: button allocation physical address, programming
- LED Display: Orange LED
- Maximum switching power (fan gear) : 2000VA/150W
- Maximum switching power (electric valve): 62.5VA/60W
- Temperature measurement range: - 20 °C ~ + 80 °C, ± 1.5 °C
- Temperature and humidity sensor: temperature accuracy, ± 0.3k (parameters can be modified); Humidity accuracy, ± 2.0% (parameter correction is available)
- KNX terminal wiring: it is required to use double stranded cable in accordance with KNX standard

Other Characteristics

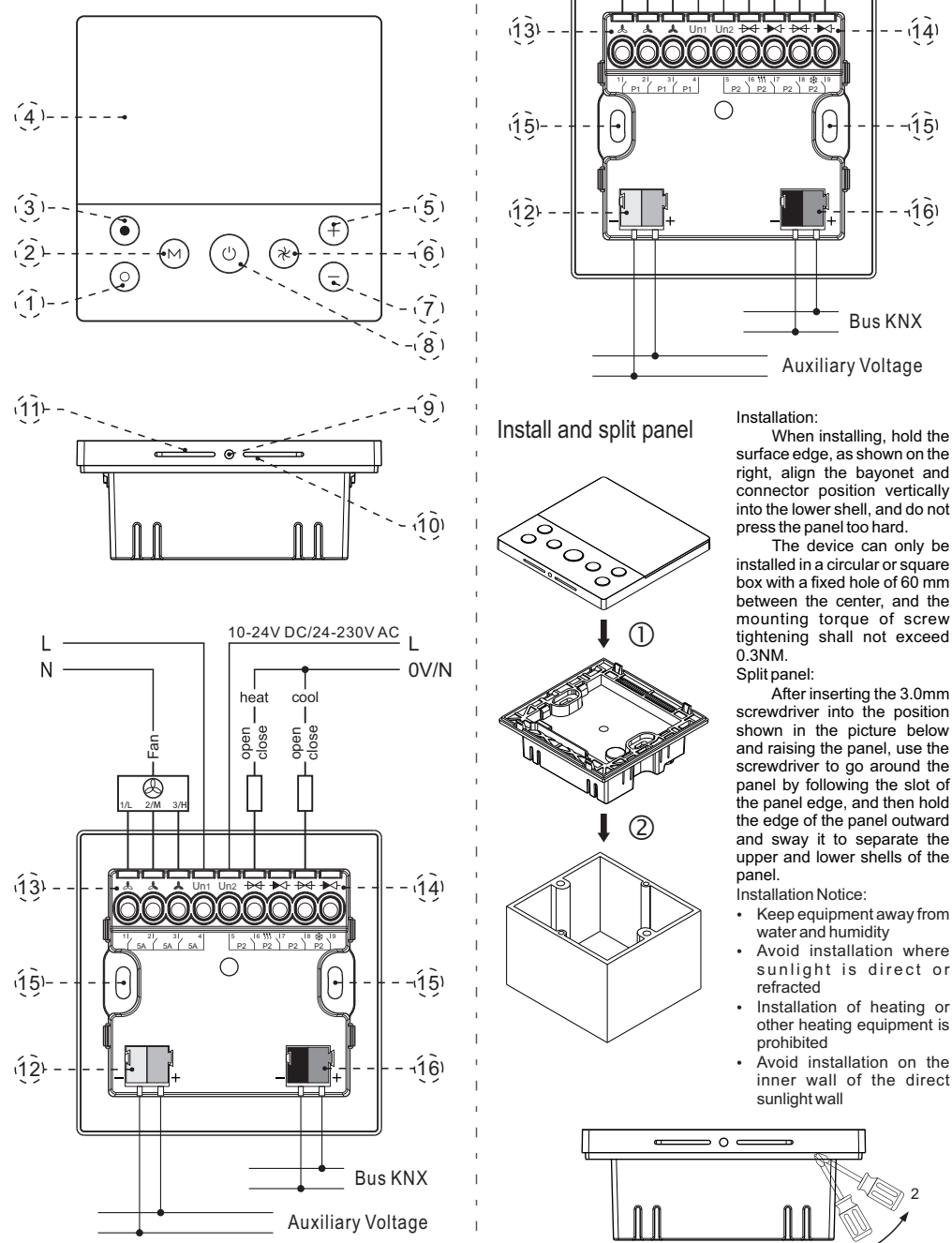
- Plastic shell, flame retardant rating is up to V0
- Protection level IP20 (installation equipment), according to EN60529
- Security Level II, according to EN61140
- Pollution level 2, according to EN60664-1
- Environment
 - Operation temperature -5℃...+45℃
 - Storage temperature -25℃...+55℃
 - Transport temperature -30℃...+70℃
 - Relatively humidity < 93%,no condensation



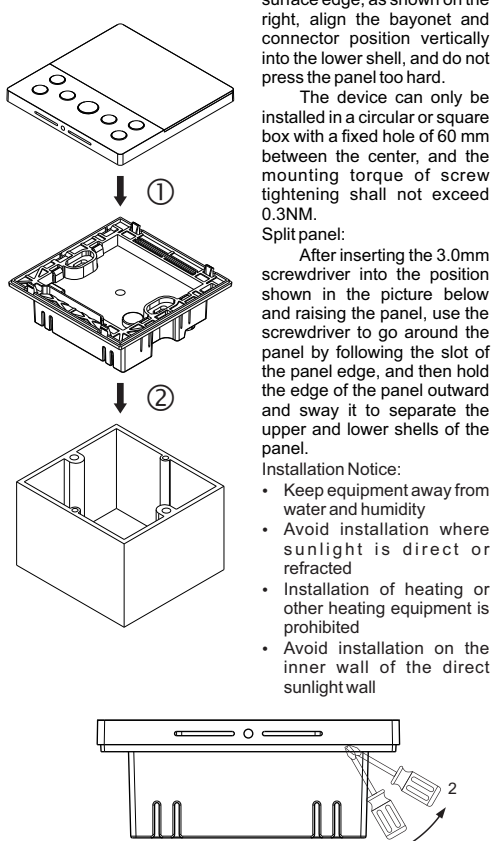
Overall dimensions



Wiring diagram



Install and split panel

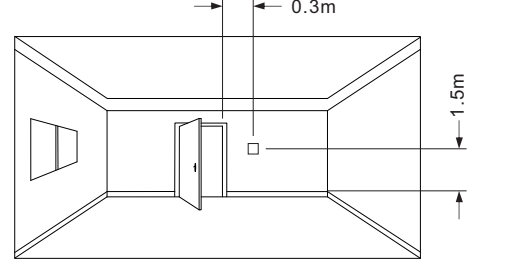


Installation position

To achieve optimal adjustment, the thermostat must be installed on the inner wall without direct sunlight, 1.5 meters from the ground and at least 0.3 meters from the door.

The device cannot be installed at a nearby source like a radiator or electrical appliance to be exposed to direct solar radiation.

If necessary, the average value can be calculated by measuring the temperature value by an external sensor, and the value KNX received by the bus from another device (such as Sation Microwave Presence Detector/ PIR Presence Detector).



Connecting and debugging

- KNX bus connection
The terminal is plugged into the device slot via the attached connection terminal (16) connected to the KNX bus.
- KNX bus terminal (16) features
Spring wire clamp,The terminal can be connected with 4 wires.For Ø0.6~Ø0.8(singel) KNX bus cable. Stripping about 5mm~6mm; Red is +(positive electrode),Black is -(Negative pole).
- Auxiliary power terminal (12) features
Spring wire clamp.The terminal can be connected with 4 wires.ForØ0.6~Ø0.8(single) KNX bus cable. Stripping about 5mm~6mm; Yellow is +(positive electrode),White is -(Negative pole).

Warning...
Only KNX bus supply can support this equipment (for example SATION-SP2064.41), circuit will be damaged and KNX bus can not be connected if using other power supply.

- Load connection
The fan is connected by screw terminal (7), which is above the equipment,
The heating valve is connected by screw terminal (8), which is above the equipment,
The cooling valve is connected by screw terminal (9), which is above the equipment
- Terminal characteristics
Screw clamps lead;
The maximum section of wires is 6 mm²(singlewire) or 2 mm² (multiple wires);
Recommend 6-7 mm for wire stripping;
The maximum torque of screw is 0.8Nm;
If connecting a single load to safe supply,the other terminal in the same channel should be connected to load voltage (a pair terminal for one channel).

Warning...
220V voltage will cause life danger and fire danger, electric shock hazard may happen when contacting conductivity directly or indirectly, which may cause electric shock, burn or death.

- Only electrician are allowed to work under 220V electric grid;
- Supply voltage should be cut off before assembling/disassembling;
- Don't use this equipment when stub cable is broken;
- Don't open the fixed cover board on the shell of equipment;
- The equipment only can be used while in good condition;
- Don't modify or maintain the equipment/ componet;
- Make sure the equipment keep distance from the water and humidity,When the channels controlled by KNX bus is controlling load (e.g. Household appliance be connected to socket), the risk must be predicted or estimated, even under the circumstances the operators can't see the load. The actual loads may be different from those expected, which may harm the people.

Configuration and debugging

Device configuration and debugging requires the use of ETS® (For configured device parameters, the corresponding application or the entire SATION product database must be loaded into the ETS.

For more information about this parameter, please go to www.sation.cn

- Prompt...
1 Professional skill will be required for configuring and debugging KNX equipment, KNX engineering train will be helpful.

Equipment debugging. The debugging steps are asbelow.

- Start electrical connection, connecting terminals are on the above of equipment;
- Turn on KNX bus supply;
- Start device programming mode by pressing the programming button, the programming LED indicates the beginning of the programming mode is on (the programming button located on the bottom left of the device).
- Download physical address to this equipment by using ETS software(LED will be off once the download is finished, which means the equipment recover normal mode), that is to say, using ETS for debugging. (Note: physical address only need to be downloaded at the first time, no more download in the future debugging)

Device authentication

- KNX certification
- CE certification, this product conforms to low voltage standard and EMC standard:
 - EN 50491-5-1:2010 EN 50491-3:2009
 - EN 50491-5-2:2010 EN 60669-1:1999+A2:2008
 - EN 61000-3-2:2014 EN 60669-2-1:2004+A12:2010
 - EN 61000-3-3:2013

Maintenance and Cleanness

The device is maintenance-free.No repairs should be carried out if damage occurs during transport and/or storage.The insurance claim will be invalid once opening the equipment

Make sure the operation examination,inspection and maintenance of this equipment (according to DIN VDE 0100-520)

Dirty devices can be cleaned using a dry cloth or a cloth dampened with soapy solution.Corrosive materials or solutions should never be used.

Recycle

This product is made of recyclable material with This product is recyclable made of high quality materials and components, if with three arrows forming a triangle symbol on the product side indicates that compliance with recycling.

Devices contain valuable recyclable materials. It has been used Electrical and electronic equipment shall not be used as household waste.

Warning...
Dealing with this product in a improper way will cause harm to humanity or environment. Please kindly learn the local rule about the collecting electronic and electrical product and deal with such waste in right procedure.