风机盘管模块，两管制

KTE2F

操作说明书

订货号. KTE2F

注意

RISK

All work carried out on the unit may only be performed by skilled electricians. Observe the regulations valid in the country of use, as well as the valid KNX guidelines

CAUTION

Do not connect the main voltage (230 V) or any other external voltage to any point of the BUS, except for the specific connections.

概述

KTE2F 是符合 EIB/KNX 技术标准的 KanonBUS 总线系统输出驱动控制模块，主要用于对两管制风机盘管单元进行智能控制。

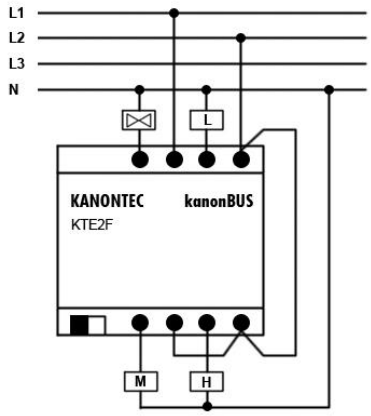
KTE2F 驱动器共有四个输出端，第一个输出端用于连接风机盘管的阀门驱动，其余三个可以控制三档风速互锁的风机盘管（分别对应低速、中速、高速）

该风机盘管控制驱动器接受外部的控制器或温控器指令（开关、风速切换、制冷/制热运转模式，当前环境温度，当前设定温度等），从而根据设置的参数及相关时间设定制定风机盘管的智能控制策略方案，达到智能化的目的需求。

特点及典型应用

- DIN-35mm 标准导轨安装
- 可接受环境温度和设定温度来自动计算温差
- 可根据温差自动控制阀门开启/关闭
- 可设定开启风机盘管时的初始风速，并可设定以该初始风速最短的运行时间，保障风机扭矩。
- 支持风速低/中/高三速互锁切换
- 风速切换时间可设定
- 支持自动风速，并可根据温差设定风量大小
- 支持冷感防护及霜冻保护
- ETS 分配参数和地址及编程调试

模块说明



ETS 参数及功能

General	
Delay between speed changeover (s)	风速切换时的转换时间 (默认 1 秒)
Fan Start-up speed	风机盘管开启时的初始风速 一般设为最高速并维持一段 Dwell 时间使得风机盘管的电机获得最大扭矩 (默认高速)
Dwell time for Fan start-up speed	初始风速的维持时间 (默认 5 秒)
Fan Start-up delay for heating (s)	用于冷感防护，即当处于制热模式下开启风机盘管时，风速应当延迟一段时间转动，避免刚开始时吹冷风 (默认 10 秒)
Fan Shut-down delay for cooling (s)	用于霜冻防护，即当处于制冷模式下关闭风机盘管时，风速应当继续转动将冷空气吹走避免冷凌水冻 (默认 10 秒)
Automatic Setting	
Temperature diff. for Valve ON/OFF	根据温差自动开启或关闭阀门 (默认 1 度)
Threshold for speed Low (inner)	自动风速下，低速运转的温差条件。(默认在温差小于 2 度时)
Threshold for speed High (above)	自动风速下，高速运转的温差条件（默认在温差大于 5 度时)
[备注]	自动风速下，中速运转的温差条件为上述两者之间。

安装及使用

① **安装**
该装置一般固定在 DIN 导轨上，听到卡扣声音即表示安装成功，注意卡扣方向向下。

② **接线**
EIB/KNX 总线使用专用 EIB 快接端子
其余参考接线示意图

③ **地址分配及参数分配**
请使用国际通用 ETS (Engineering Tool Software) 作为模块物理地址分配及模块编程的专用工具。

④ **使用：启动风机盘管**
对 Control Fan coil ON/OFF 绑定的组地址发送 1，风机盘管开始启动。
[阀门控制] 当风机盘管启动后，阀门将自动根据温差进行开启或关闭。若环境温度和设定温度有一个值未获取，则阀门处于开启；
[风速控制] 首先判断当前的运转制冷/制热模式，如果处于制热模式下，则模块进行预热（默认 10 秒）。预热结束后，风机盘管开始以设定的初始风速(一般设为最高速)运转且维持一段时间(Dwell time)。之后风机盘管开始以设定的风速(自动风速/低速/中速/高速等)进行运转。

⑤ **使用：关闭风机盘管**
对 Control Fan coil ON/OFF 绑定的组地址发送 0，风机盘管开始关闭
[阀门控制] 当风机盘管关闭后，阀门将关闭；
[风速控制] 如果当前处于制冷状态，则延时关闭当前风速

技术参数

电源供电	EIB/KNX 总线供电
电流消耗	< 12 mA
接口	KNX 采用 Wago 243-211 EIB/KNX 快接端子
工作温度	0℃ ~ +70℃
储存温度	-25 ℃ ~ +70℃
防护等级	IP20
指示灯	按下编程按钮时，编程指示灯亮；再次按下，编程指示灯灭
模块尺寸	70 X 90 X 60mm DIN-35 mm 导轨安装

Fan coil Actuator, 2-pipe

KTE2F

User Manual

Order No. KTE2F

Attention

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⚠ CAUTION

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Description

KTE2F is belonging to the Output actuator of the KanonBUS which based on EIB/KNX standard. It can be used to control the 2-pipe fan coil system.

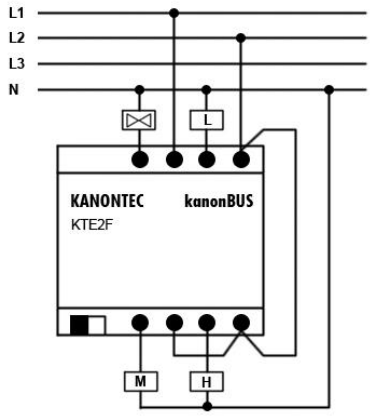
KTE2F has totally four outputs, the first one is connected to the valve of the fan coil, and the others are used to control the Three-stage fan speeds such as Low, Middle, High.

The actuator should accept first some inputs (ON/OFF, speed changeover, Heating/cooling mode, current room temperature, set-point temperature, etc.) from the Thermostat or sensors, and then execute the needed work logics according to the parameters.

Main Features

- Standard DIN-35mm rail installation
- Calculate the temperature difference from the extern room temperature and the set-point temperature, then control the valve automatically
- Start-up speed can be defined
- Fan speed changeover delay can be defined
- Auto-speed control according to the temperature difference
- Cold protection and frost protection

Diagram



Functions and Parameters

General	
Delay between speed changeover (s)	Time delay when the fan speed value changed
Fan Start-up speed	Normally using the highest speed in order to develop a higher torque for the start-up phase of the fan
Dwell time for Fan start-up speed	The minimal-time of the start-up speed
Fan Start-up delay for heating (s)	In order to prevent cold air from flowing out at the beginning of a heating process
Fan Shut-down delay for cooling (s)	In order to prevent freezing of the cooling register at the end of a cooling process
Automatic Setting	
Temperature diff. for Valve ON/OFF	The temperature difference threshold of the valve control
Threshold for speed Low (inner)	When fan speed is AUTO, the condition of the Low
Threshold for speed High (above)	When fan speed is AUTO, the condition of the High
[Remark]	When fan speed is AUTO, the condition of the Middle is the temperature difference between above.

Install and Switching

① **Mounting**
the device is suitable for installation in the connection unit or small enclosures for fast installation on 35mm mounting rails to DIN EN 60715.

② **Connection**
the electrical connection is implemented using screw terminals. The connection to the KNX is implemented using the supplied BUS Connection Terminal

③ **Commissioning**
the assignment of the physical address and the setting of the parameters are performed with the ETS (Engineering Tool Software).

④ **Test: Fan coil ON**
when the KNX Group of the "Control Fan coil ON/OFF" is 1, then the Fan coil is ON:
[Valve] after Fan coil is ON, the valve will be ON or OFF automatically according to the temperature difference.
[Fan Speed] First we must ensure the Heating/cooling mode of the Actuator. If the mode is heating, then the Actuator should make the pre-heating (10 seconds by default) In order to prevent cold air from flowing out. After that the Fan coil will work as the needed speed.

⑤ **Test: Fan coil OFF**
when the KNX Group of the "Control Fan coil ON/OFF" is 0, then the Fan coil is OFF
[Valve] after Fan coil is OFF, the valve is closed
[Fan Speed] If current Heating/cooling is Cooling, the Actuator should wait a certain time, then close the fan speed, In order to prevent freezing of the cooling register.

Technical Data

Power supply	21…30V DC, made available by the bus
Power consumption	< 12 mA
Ambient temperature	0ºC ~ +70ºC
Storage temperature	-25 ºC ~ +70ºC
IP Class	IP20
Indicator	Output indications Prog. LED For assignment of the physical address
Install/Dimensions	70 X 90 X 60mm DIN-rail mounting