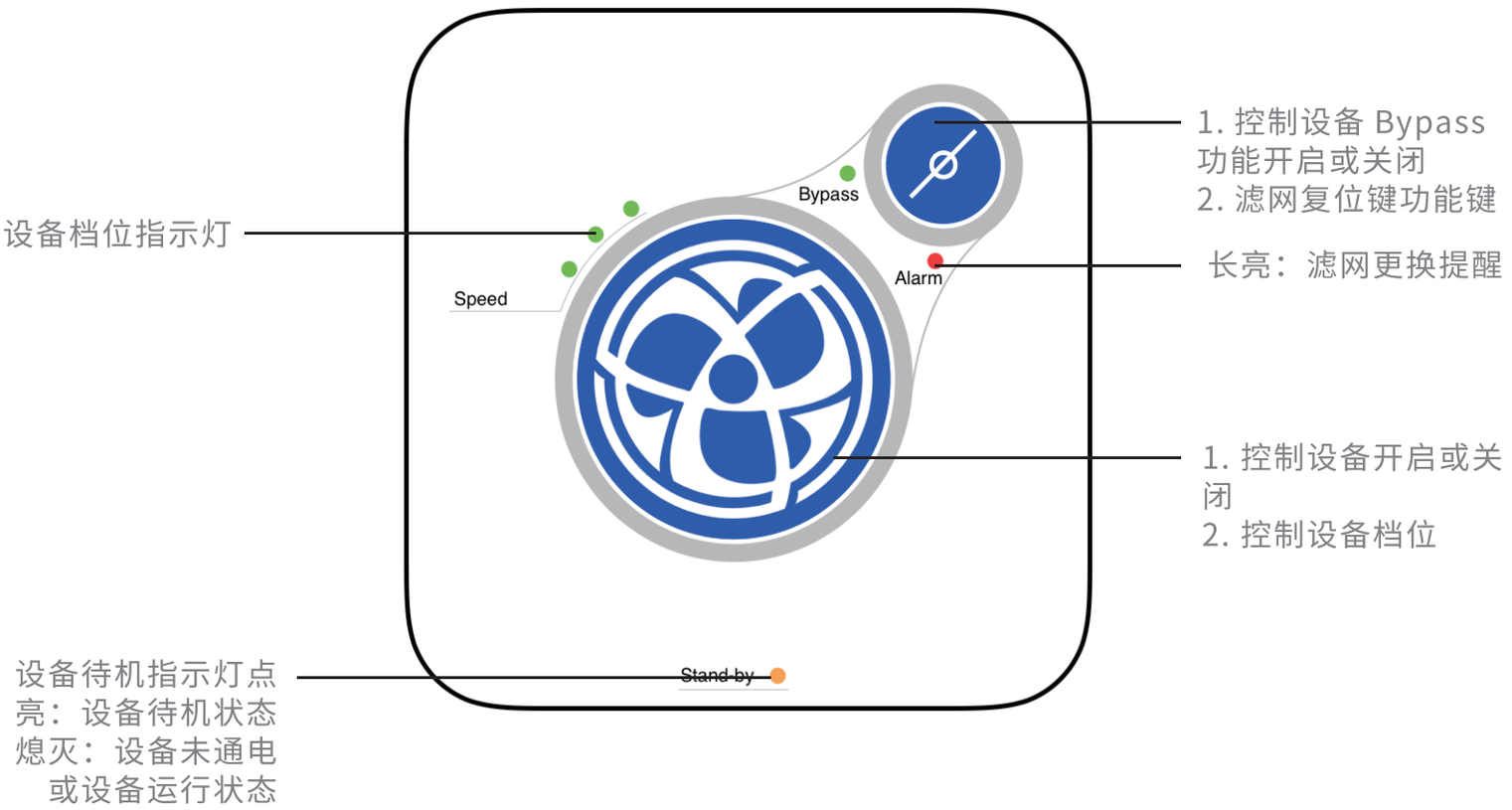
BLAUBERG Ventilatoren

S2 N（02）即 S2 N1
控制器控制操作说明书

一、型号：S2 N1

适用设备：Komfort Ultra EC L1/S1 250、ERV EC 等其他含有 EC 电机的可 0-10V 变电压调速的设备。

二、功能介绍：



大圆球按键功能：

1．控制设备开启或关闭

2．控制设备档位

Speed 指示灯：

1. 设备档位指示灯

2. 每一个 LED 指示灯代表一档

3. 总共三档

Standby 指示灯：

1. 点亮：设备待机

2. 熄灭：设备开启或未通电

Alarm 指示灯：

1. 长亮：滤网更换提醒）

2. 熄灭：设备正常运行

Bypass 指示灯：

1. 点亮：旁通功能运行 / 睡眠模式运行（S2N1 系列）。(固定输出为 1 档)

2. 熄灭：设备正常档位状态运行

小圆球按键功能：

1. 单次触摸：设备旁通功能 / 睡眠功能开启或关闭。(开启时固定输出 1 档，此时只能开关机，不能切换档位)

2. 开机状态下长按 6S：滤网复位

3. 关机状态下长按 6S 进入通讯地址设置（Standby 指示灯 1HZ 慢闪）

三、操作说明：

1．风机调速功能：

中间圆球按钮控制设备的开关和调速。每触摸一次，调节一个档位，相应的档位的 LED 灯会点亮。共 3 个档位，第 3 档时继续触摸，设备恢复到关闭状态，往复循环。

2．设备关机：

无论设备处于何种档位，长按中间大圆球键 3S，设备停机，恢复关机状态。

3．档位记忆功能：

如果在使用过程中突然断电，重新通电之后会记忆断电之前的开关档位状态。

4．档位设置功能：

在设备通电停机状态下，即 Standby 灯亮起时，长按两个键 6S，设备进入到档位设置功能，此时 Standby 指示灯快闪。

设备档位逻辑共分为 5 种不同档位区分，进入到设置状态下，每触摸一次大圆球键，从 Speed 灯的 1 档开始依次亮灯，每触摸一次，亮灯增加一个，代表不同的风量设置，直至面板上 5 个指示灯全部亮起（Alarm 为第 5 个灯）。设置完毕后长按大圆球键退出设置。

不同设置档位风量对应的电压参数如下：

1 个灯：1 档 =2.5V，2 档 =5V，3 档 =6.25V

2 个灯：1 档 =3.75V，2 档 =5V，3 档 =7.5V

3 个灯：1 档 =3.75V，2 档 =6.25V，3 档 =8.75V

4 个灯：1 档 =5V，2 档 =6.25V，3 档 =8.75V

5 个灯：1 档 =5V，2 档 =7.5 V，3 档 =10V

注意：出厂默认设置为 5 灯全亮的档位状态。

5．滤网更换提醒功能：

控制器增加滤网计时器功能，设置提醒时间 2160 小时，滤网时间到达后，Alarm 灯常亮，长按小圆球键 6S，滤网更换提醒时间复位 (Alarm 灯快闪 5 次)。

6．通讯地址设置功能：

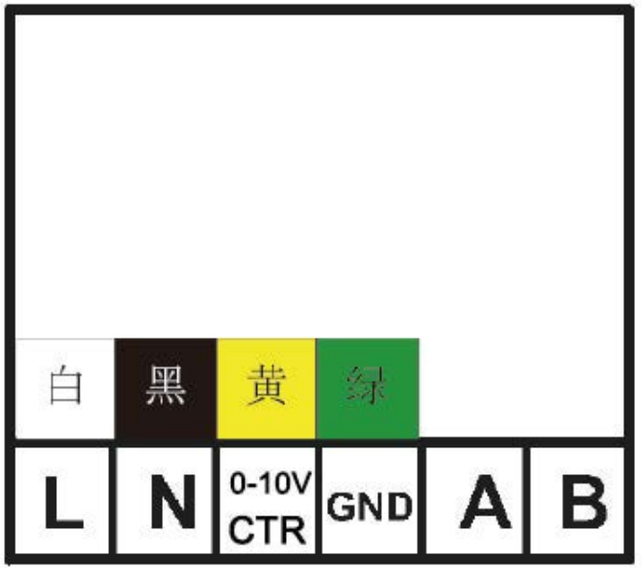
关机状态下长按 6S 进入通讯地址设置（Standby 指示灯 1HZ 慢闪）短按大圆球键进行地址加设置，设置完毕后长按大圆球键退出设置。

1 档、2 档、3 挡风速指示灯、Bypass 指示灯代表地址。四个灯代表十六进制的第 4 位。

四、技术参数：

AC220V 输入，0-10V 输出，三档控制

五、系统接线说明及接线图：



（按如图所示颜色接线，设备接线与之一一对应）

六、安全须知：

在安装、移动、清洁或检修温控器前注意通过旋开保险丝或断开断路器来切断电源

在安装控器前须详细阅读说明书

具有相应安全知识的工程公司才能安装温控器

所有的接线必须符合国家标准

严格按照说明书操作温控器

七、通讯协议 (S2 N1-RS485)：

串口使用 MODBUS-RTU 通讯协议。

串口传输方式：波特率默认 9600Bps，8 个数据位，1 个停止位，无校验。

功能域：

代码	意义	行为
03H	读系统参数寄存器	获得一个或多个保持寄存器的当前值
06H	写系统参数寄存器	设置一个保持寄存器的当前值

错误校验（Check）域：采用 CRC16 方法

参量地址表：

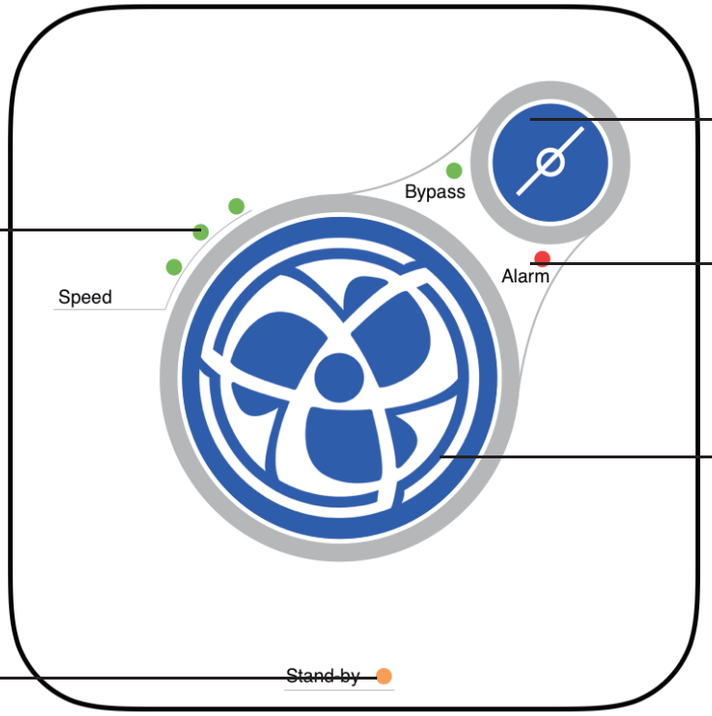
MODBUS 地址	参数	数值范围	数据类型	属性
0	参数设置允许	0：禁止 ,1：允许	WORD	R/W
1	* 设备地址	0x01-0xff	WORD	R/W
2	* 通信波特率	1：2400 2：4800 3：9600 4：19200	WORD	R/W
3	* 机型设置	1-5	WORD	R/W
4	* 滤网寿命设置（预留）	0x01-0xffff	WORD	R/W
5	旁通功能	0-1	WORD	R/W
6	风速设置	0-3	WORD	R/W
7	滤网复位	0-1	WORD	R/W
8	滤网使用时间	0x00-0xffff	WORD	R

说明：1. 为防止意外操作，加 * 部分只有在参数设置允许（寄存器 0）为 1 时才能修改 ;

I.Type: S2 N1

Applicable unit: Komfort Ultra EC L1/S1 250、ERV EC and other unit with EC fans and variable 0-10V.

II. Function introduction



Unit gears indicator lamps

1. Control the Bypass function
2.Filter reset.

Constant light: filter replace reminding.

1. Control the power on or off of the unit.
2. Control unit gears.

Standby indicator lamp is lighting; unit is in standby state. Light off: unit is power off or operation state.

Big ball function

1.Power on or off of the unit

2.Control unit gears

Speed indicator

1.Unit gear indicator

2.Each LED represent one gear

3.Three gears

Standyby indicator lamps

1.Light on: standby of unit

2.Light off: unit start or without power

Alarm indicator:

1.Constant light: filter replace reminding.

2.Light off: operation normally

Bypass indicator:

1.Light on: Bypass function running/ sleeping mode running(S2N1 Series)(Output is gear 1)

2Light off: operation normally

Small ball function:

1.Single touch: Bypass/sleeping function on or off(when start, constant output is gear 1, at this time only can turn on or off unit ,and cannot switch gear)

2.Long press 6S on boot status; filters reset

3. Long press 6S on boot status will come in communication address (Standby indicator1HZ slow flash)

III.Operation instructions

1.Fan speed regulation fucntion

The middle ball button controls the switch and speed regulation of the unit. Each touch can adjust a gear, and the corresponding gear LED lights will be lit. A total of 3 gears, continue to touch the third gear, the device returns to a closed state, cycle like this.

2.Power off the unit

Whenever which geat the unit is on, press the middle ball key 3S, the unit will power offf.

3.Gear memory function

If the unit is suddendly power lost, the unit will remember the gear state before power lost.

4.Gear set up function

Under the condition of power off state, that is, when the Standby light is on, press two keys 6S for a long time, and the device enters the gear setting function. At this time, the Standby indicator lights flash.

The unit gear logic is divided into five different gear positions, and when enter in the setting state, each touch of the large ball key, the light is on from the first gear, and each touch the light on numbers will increse one time, and respresent the different air flow set up, unit the 5 indicators on the panel are all on (Alarm is the fifth light). After the setting is complete, press the big ball key to exit the setting.

Air flow of different gears has coresponding voltage parameters as following:

1 lamp: 1st gear = 2.5 V, 2nd gear = 5 V, 3rd gear = 6.25V

2 lamps: 1st = 3.75V, 2nd = 5V, 3rd = 7.5 V

3 lamps: 1st = 3.75V, 2nd = 6.25V, 3rd = 8.75V

4 lamps: 1st = 5V, 2nd = 6.25V, 3rd = 8.75V

5 lamps: 1st = 5V, 2nd = 7.5V, 3rd = 10V

Notes: Factory default setting is 5 lamp on status.

5.Filters repalcement remindering function

Controller increase filter timing function, remindering time is 2160 hours, when filter time is arrived, Alarm lamps is constant flash, long press the small ball 6S, it
will reset filters remidering time (Alarm light quick flash 5 times)

6.Communication address set up function

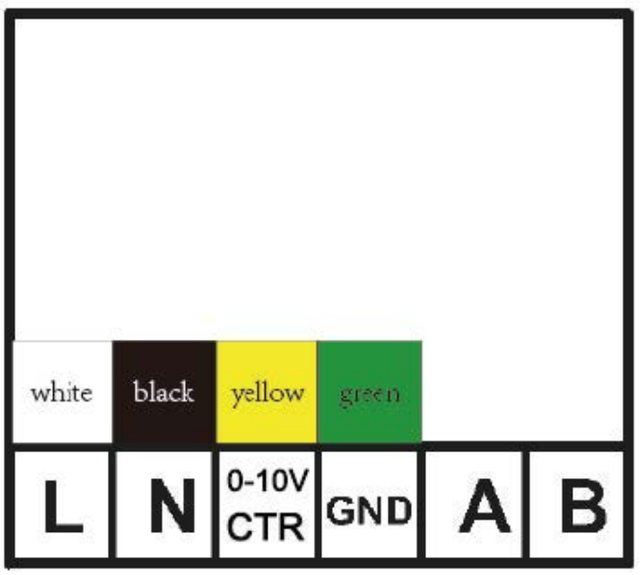
Long press 6s to enter communication address set up(Standby indicator1HZ slow flash), short press the bag ball to set up the address, and after complete, long press big ball to exit.

1st gear, 2nd gear, 3rd gear flow speed indicator, Bypass indicator stand for address. Four lamps represent the fourth digits of hexadecimal.

IV. Technical address

AC220V input, from 0 to 10V output, three-gear control.

V. System wiring description and wiring diagram



(According to the color wiring shown in the figure, the equipment wiring corresponds to it one by one.)

VI. Safety note:

Before installing, moving, cleaning or repairing the thermostats, pay attention to cutting off the power supply by turning on the fuse or disconnecting the circuit breaker for power off.

Before installing the controller, read the instructions carefully.

Only engineering companies with corresponding safety knowledge can install thermostats.

All wiring must comply with the national standard.

Operate the thermocontroller in strict accordance with the instructions.

VII. Communication protocol (S2 N1-RS485)：

Serial port uses MODBUS-RTU communication protocol

Serial port transmission mode: baud rate default as 9600 Bps, with 8 data bits, 1 stop bit, and no check.

Function：

Code	Meaning	Action
03H	Register for reading system parameter	Gets the current value of one or more registers
06H	Register for writng system parameter	Set the current value of a register

MODBUS-RTU error check (Check) domain: using CRC16 method.

Parameter address table:

MODBUS address	Parameters	Scope	Data type	Property
0	Parameter settings allowances	0:Allow 1: forbid	WORD	R/W
1	Unit address	0x01-0xff	WORD	R/W
2	Communication baud rate	1：2400 2：4800 3：9600 4：19200	WORD	R/W
3	Machine set up	1-5	WORD	R/W
4	Mesh life Settings (reserve)	0x01-0xffff	WORD	R/W
5	By-pass function	0-1	WORD	R/W
6	Wind speed setting	0-3	WORD	R/W
7	Mesh reduction	0-1	WORD	R/W
8	Screen time	0x00-0xffff	WORD	R

Notes: 1. To prevent accidental operation, the * section can only be modified when the parameter setting (Register 0) at 1;