

Logic requirements for human-presence temperature control intelligent fan controller



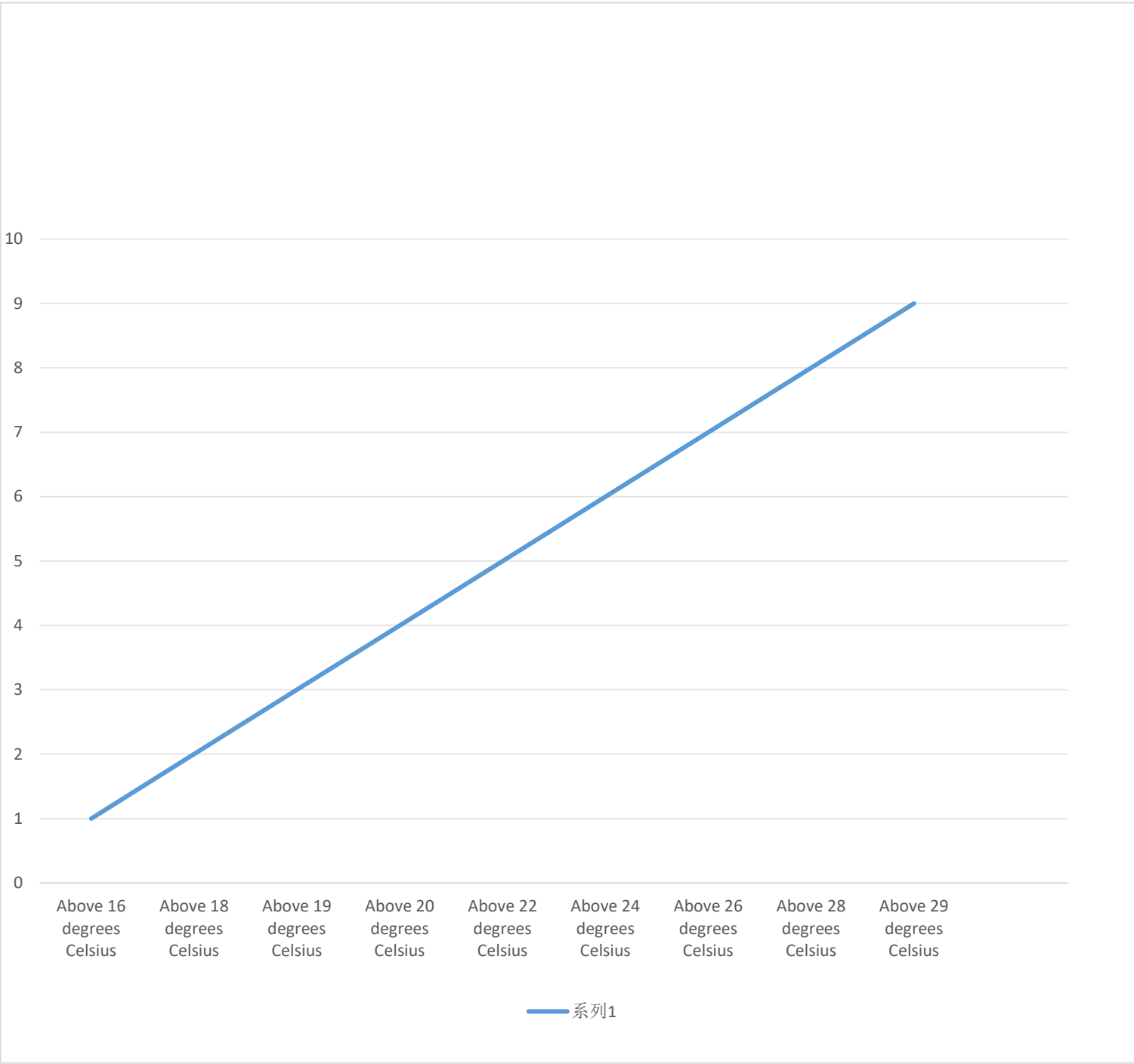
	Fan and light on/off together
	Fan on and switch between 1-9 speed settings and natural breeze mode
	Fan forward and reverse selection
	AI Thermostatic fan automatic speed adjustment mode
	Radar personnel presence switch, fan and light selection
	One-click night light mode, with adjustable color temperature
	Timing button, 0.5-8 hours
	matching key
	light switch
	Adjust brightness
	Adjust brightness down
	Color temperature reduction
	Adjust color temperature

Briefly describe

This product is a smart brushless fan light control with human presence detection and temperature control, featuring a liquid crystal display and a 13-button 2.4GHZ remote control that can display the current ambient temperature. The fan has 9 settings and is equipped with a 24GHz radar sensor module to detect human presence and control the on/off of the fan and lights. The lighting system offers quick 3-level color temperature adjustment and infinitely adjustable color temperature, while the brightness has quick 10-level adjustment and infinitely adjustable brightness, along with a one-button night light function. The fan can automatically adjust its operating speed based on the current ambient temperature. The display allows for free switching between temperature units of Fahrenheit and Celsius, forward and reverse rotation functions, and a timer function. The remote control has an ultra-low standby power consumption of 13uA;

The battery display on the remote control fully illuminates for 3 seconds, followed by the display of the current ambient temperature. Afterwards, operate the buttons to activate the corresponding desired function. Once the light body is powered on, the buzzer sounds once, the light is turned on, and the wall switch can be used to switch the color temperature level of the light. The fan does not turn on when powered on; instead, you need to press the remote control to activate the corresponding desired function;

	Radar personnel presence switch, fan and light selection	Short press to select sensing mode: sensing fan – sensing light – sensing fan and light – off mode 1. The fan function is detected to be automatically activated by someone, and it will automatically shut down 1 minute after the person leaves; 2. It is detected that someone automatically turns on the lights, and they will automatically turn off 1 minute after the person leaves; ; 3. It has been detected that someone has automatically turned on the fan and lights, which will automatically turn off 1 minute after the person leaves; ;	The buzzer sounds once	
	One-click night light mode, with adjustable color temperature	After pressing, it automatically adjusts the light to the dimmest level of 10%. Short press to switch color temperature, warm light – neutral light – white light – off – cycle	The buzzer sounds once	
	Timing button, 0.5-8 hours	Press to enter timing settings, each press increments by 0.5 hours, with a cycle of 0-8 hours to choose from; long press to continuously toggle the value; after selection, the timing time flashes three times to automatically confirm the start of timing;	The buzzer sounds once	
	light switch	Press once to turn on the light, press again to turn off the light;	The buzzer sounds once	
	Adjust brightness down	Short press to adjust brightness in 10 stages, long press to infinitely dim to the brightest;10%-20%-30%-40%-50%-60%-70%-80%-90%-100%	The buzzer sounds once	
	Adjust brightness down	Short press to adjust brightness in 10 stages, long press to infinitely dim to the darkest level; 100%-90%-80%-70%-60%-50%-40%-30%-20%-10%	The buzzer sounds once	
	Color temperature reduction	Short press to adjust color temperature in 10 stages, long press to infinitely adjust to warm light;	The buzzer sounds once	
	Adjust color temperature	Short press to adjust color temperature in 10 stages, long press to infinitely dim to white light;	The buzzer sounds once	
Other unfulfilled logical display requirements				
	When the human presence priority is higher than the A temperature sensing function and the unmanned fan is automatically turned off due to the influence of the human presence radar, the AI temperature control takes precedence over other logic, such as the overall shutdown and fan shutdown. When the AI is turned on, the fan cannot be turned off			

Comparison of duty cycle of PWM signal for different fan operating levels			Comparison of duty cycles of PWM signals for lighting fixtures and color change sequence		
speed	PWM	rotation speed			
P1	20%	customer settings			
P2	36%	auto setting			
P3	52%	auto setting			
P4	68%	auto setting			
P5	84%	auto setting			
P6	99%	customer settings	night light	A-AB-B-OFF	10%
The following is a graph depicting the ambient temperature and PWM output duty cycle in intelligent mode					
	Temperature setting	gear setting			
	Below 15 degrees Celsius	Turn off the fan			
	Above 16 degrees Celsius	1			
	Above 18 degrees Celsius	2			
	Above 19 degrees Celsius	3			
	Above 20 degrees Celsius	4			
	Above 22 degrees Celsius	5			
	Above 24 degrees Celsius	6			
	Above 26 degrees Celsius	7			
	Above 28 degrees Celsius	8			
	Above 29 degrees Celsius	9			
When the AI temperature control and speed adjustment mode is activated, the remote control detects the current ambient temperature in real time and displays it. It then sends a gear operation command corresponding to the current ambient temperature to the receiving end to control the fan gear speed,					

FCC Warning:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Caution: Any changes or modifications to this device not explicitly approved by manufacturer could void your authority to operate this equipment.

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 0cm between the radiator and your body.