



# VALVE **THERMOSTAT** ACCESSORIES

■ Technology ■ Energy Saving ■ Comfortable

## THERMOSTAT



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## THERMOSTAT

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## ABOUT US

SASWELL is the major manufacturer in China for HVAC thermostats and valves. Founded in 1999, aimed at developing, producing better performance and better quality HVAC products in China, From the year of 2000, we start the export business. Till now we have exported HVAC products to everywhere around the world. SASWELL has won the trust from domestic and international clients for our product quality and services.

In our trade with merchants of various countries, we always adhere to the principle of equality and mutual benefit. It is our hope to promote, by joint efforts, both trade and friendship to our mutual advantage.

## SASWELL® CONTROLS

SASWELL CONTROLS, the famous brand belongs to SASWELL GROUP for BA control. Design and Manufacture AHU control products like thermostat, motorized valve, actuator, damp actuator, Temp & Humidity sensor, DDC central controllers and all around series products. SASWELL always offer the most convenient control solutions and service to our client from different countries. And gain good reputation for simply operation, high accuracy, and various control options.

## SASWELL® THERMO

SASWELL THERMO, the famous brand belongs to SASWELL GROUP for advanced heating controls, which are designed on principle of energy-saving, low temperature heating and easy control. Products includes thermostat, manifold, central controller for water line floor heating system, floor heating mats, heating cable etc.

Today, SASWELL brand products are being exported throughout the world. With a strong R&D and engineering team, SASWELL can customize the product designs at our clients' requirements in a very short time. It is our target to provide satisfactory HVAC solution and better products to our customers around the world. SASWELL is a brand name trusted by contractors for our product quality and reliability.



## SAS803, SAS803X, SAS810, SAS908, SAS3000 Series Fan Coil Thermostats are switching model

Fan coil room thermostats used for air conditioning system, by controlling the cooling or heating valve on or off to control comfort room temperature.

Apply to Commercial buildings, Residential buildings, Industrial buildings, Hospital, Hotel and so on.

# SAS 810FCT

Programmable Fan Coil Thermostat

Menu programming  
 2-pipe or 4-pipe heating/cooling available  
 Heating mode / Cooling mode / Auto mode  
 Remote controller available  
 External sensor available / Timer function  
 Auto fan with adjustable 3-fan speed.  
 Power off memory function  
 Anti-freezing protection



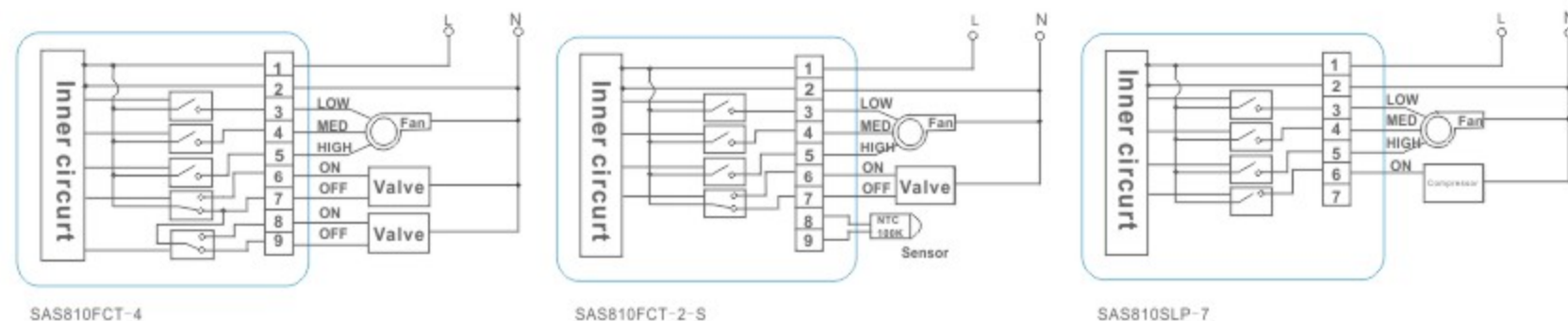
## Technical data

- Voltage: AC100-240V 50/60Hz
- Power load: 3A/ 5A / 8A
- Setting range: 5°C~35°C Accuracy: ±0.5°C
- Ambient temperature: -5~50°C
- Protective housing: IP21
- Housing material: PC
- Dimensions: 86mm×86mm×15mm Flush mount

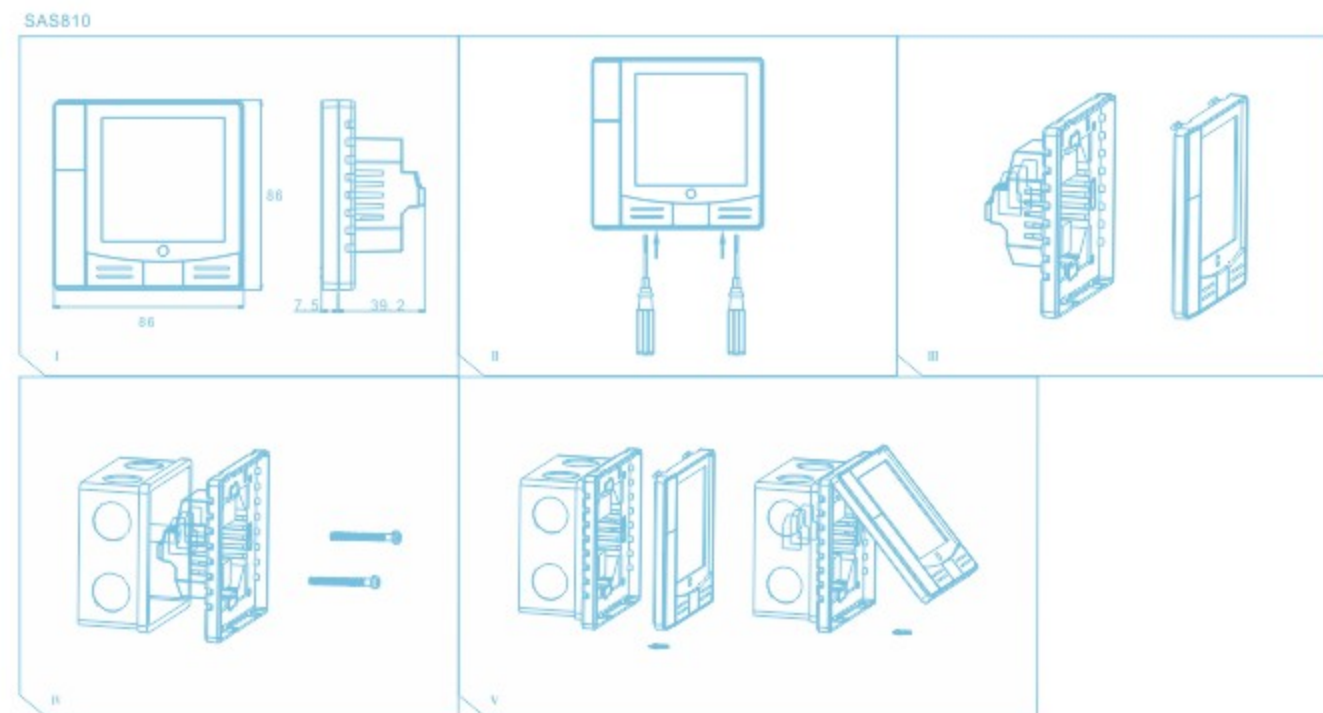
## Model Selection

Model No	Features and Functions Available					FAN Relay Max.	Application	Installation
	Compressor timer	External Sensor	Remote controller	Passive output	Program			
SAS810FCT-2		■	■			3A	2-pipe Heat/Cool	Flush mount
SAS810FCT-4			■			5A	4-pipe Heat/Cool	Flush mount
SAS810FCT-CO-CLS	■	■				5A	Cooling only	Flush mount
SAS810SLP-7	■				■	8A	DX Heat/Cool	Flush mount

## Wiring Diagram



## Installation



# SAS 803XFCT

Menu Setting Fan Coil Thermostat

- 2-pipe or 4-pipe heating/cooling available
- Remote controller available
- Passive output available ,compressor linkage
- Display shows both set points and room temperature simultaneously
- Auto fan with adjustable 3-fan speed.
- Sleeping mode save energy
- Power off memory function
- Anti-freezing protection

## Technical data

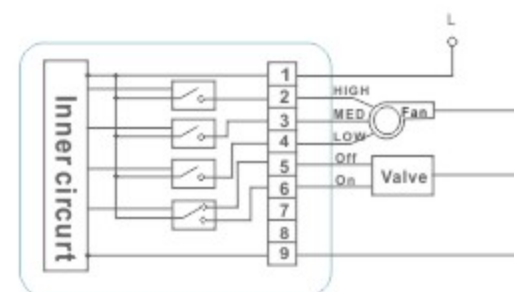
- Voltage: AC100-240V 50/60Hz
- Power load: 3A
- Setting range: 5°C~35°C Accuracy: ±1°C
- Ambient temperature: -5~50°C
- Protective housing: IP21
- Housing material: PC
- Dimensions: 86mm×86mm×15mm Flush mount

## Model selection

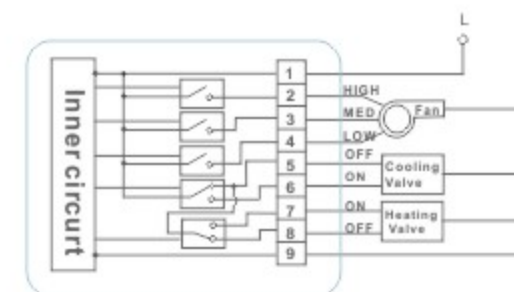
Model No	Features and Functions Available				FAN Relay Max.	Application	Installation
	Compressor timer	Extenal Sensor	Remote controller	Room Card			
SAS803XFCT-2			■		3A	2-pipe Heat/Cool	Flush mount
SAS803XFCT-4			■		3A	4-pipe Heat/Cool	Flush mount
SAS803XFCT-4W				■	3A	4-pipe Heat/Cool	Flush mount



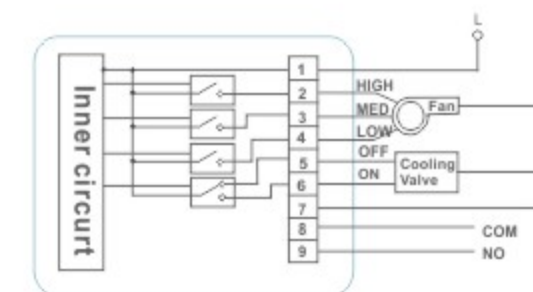
## Wiring Diagram



SAS803XFCT-2



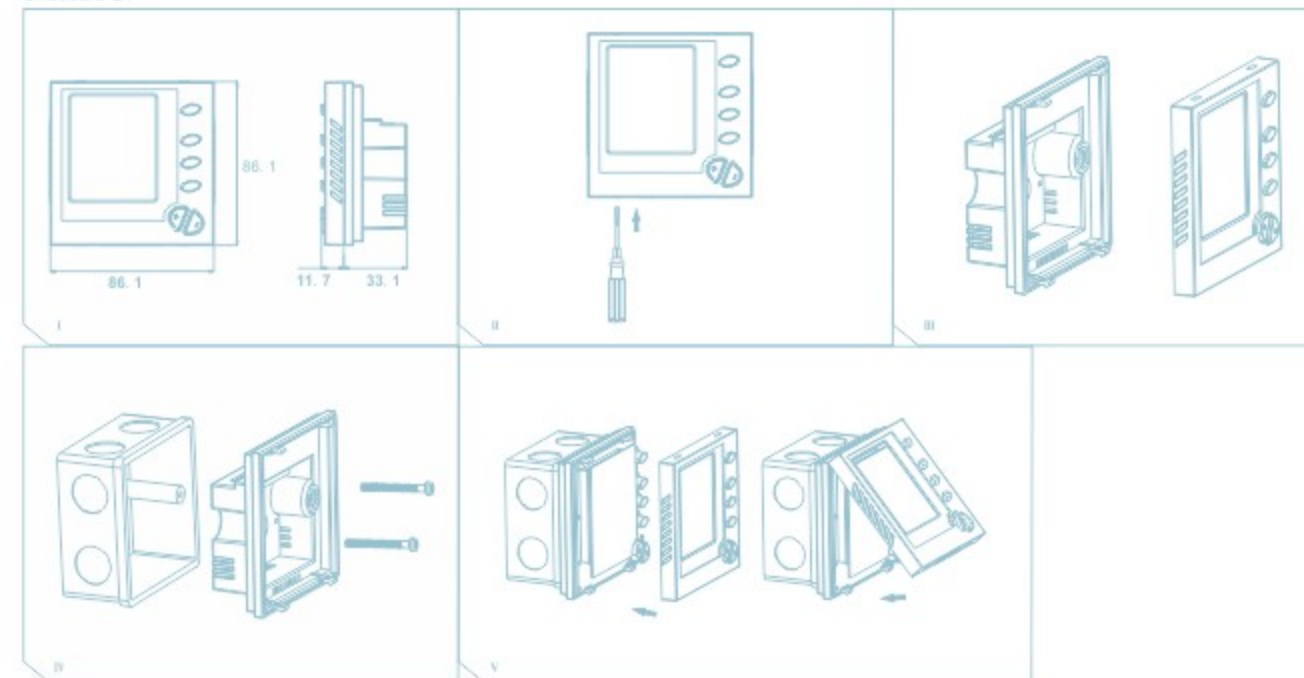
SAS803XFCT-4



SAS803XFCT-4W

## Installation

SAS803XFCT



# SAS 803FCT

Menu Setting Fan Coil Thermostat

2-pipe or 4-pipe heating/cooling available  
 Heating mode / Cooling mode / Auto mode  
 Remote controller available  
 Room card function / Window card function  
 / External sensor available / Timer function  
 Sleeping mode save energy  
 Auto fan with adjustable 3-fan speed.  
 Power off memory function  
 Anti-freezing protection

## Technical data

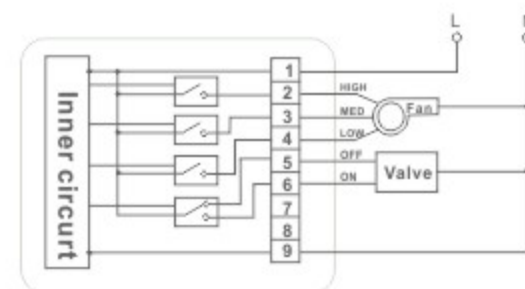
- Voltage: AC100-240V 50/60Hz
- Power load: 3A/ 5A / 8A
- Setting range: 5°C~35°C Accuracy: ±1°C
- Ambient temperature: -5~50°C
- Protective housing: IP21
- Housing material: PC
- Dimensions: 86mm×86mm×15mm Flush mount or wall mount

## Model Selection

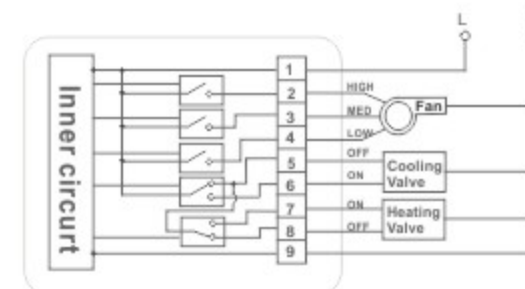
Model No	Features and Functions Available				FAN Relay Max.	Application	Installation
	Compressor timer	External Sensor	Remote controller	Room Card			
SAS803FCT-2			■	■	3A	2-pipe Heat/Cool	Flush mount
SAS803FCT-4			■		3A	4-pipe Heat/Cool	Flush mount
SAS803FCT-4B		■	■		3A	4-pipe Heat/Cool	Wall mount
SAS803FCT-4BY-RCC-S		■		■	5A	4-pipe Heat/Cool	Wall mount
SAS803HLP-0	■		■		5A	DX Heat/Cool	Flush mount
SAS803SLP-CO	■				8A	DX Cooling only	Flush mount



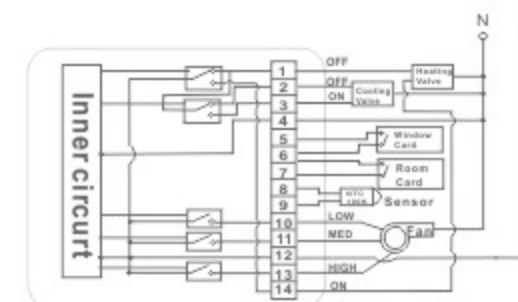
## wiring diagram



SAS803FCT-2



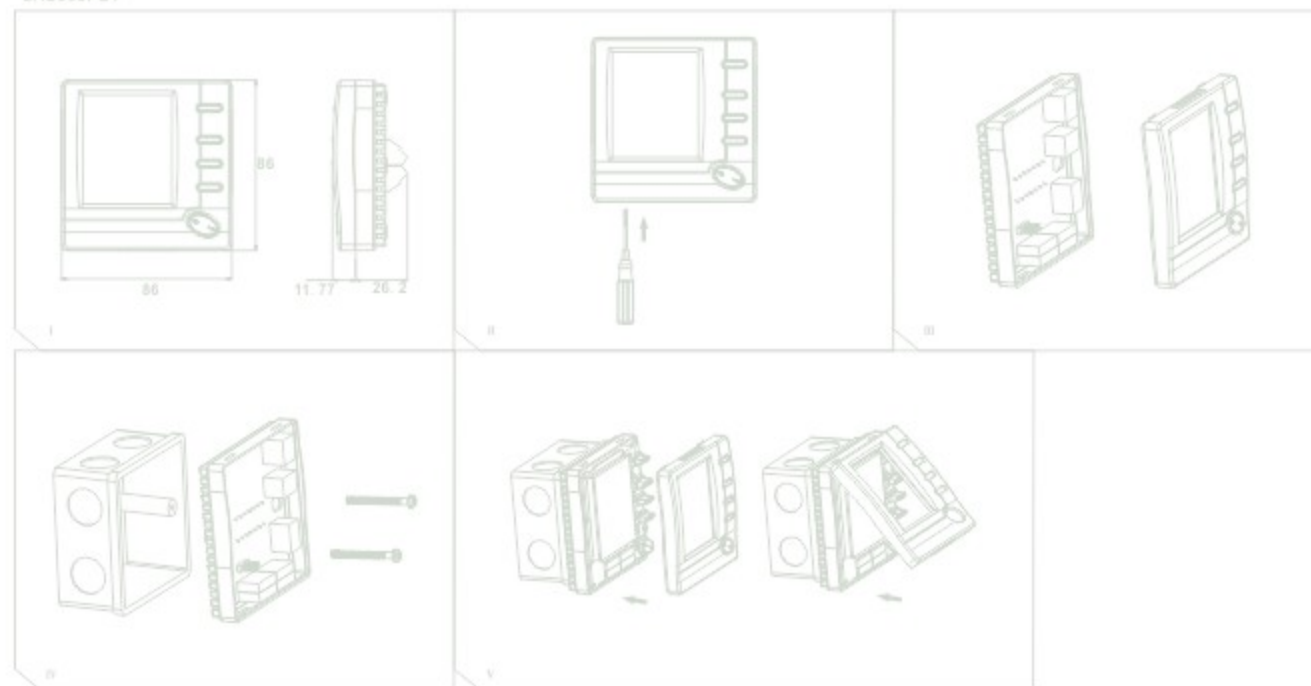
SAS803FCT-4



SAS803FCT-4B-RCC-S

## Installation

SAS803FCT



# SAS 908FCT

Large Display Digital Fan Coil Thermostat

- Large display with backlight, Menu setting easy operation
- 2-pipe or 4-pipe heating/cooling available
- Remote controller available
- Room card function / Window card function available
- External sensor available
- Auto fan with adjustable 3-fan speed.
- Power off memory function
- Anti-freezing protection



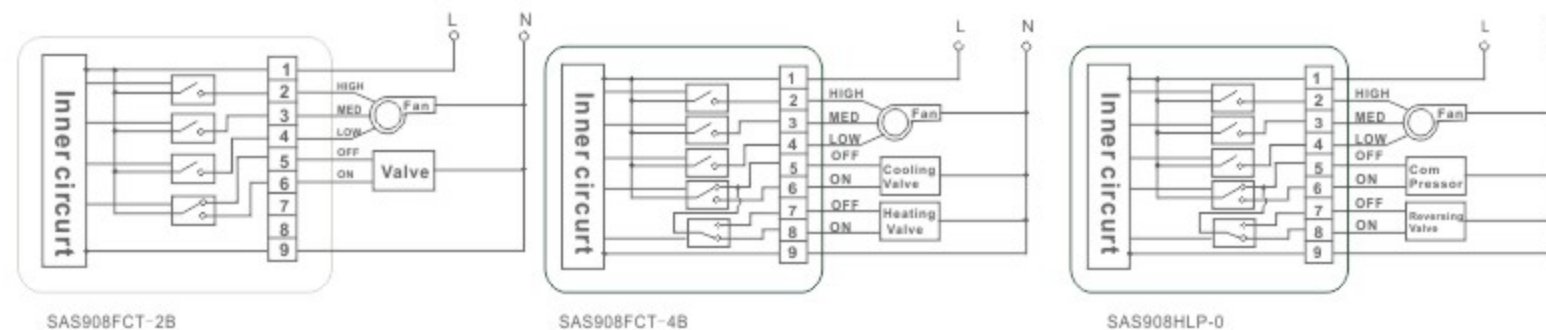
## Technical data

- Voltage: AC100- 240V 50/60Hz
- Load: 3A / 5A
- Setting range: 5°C–35°C Accuracy: ±0.5°C
- Ambient temperature: 0–50°C
- Protective housing: IP21
- Housing material: PC
- Dimensions: 115mm×90mm×16mm Flush mount or wall mount

## Model Selection

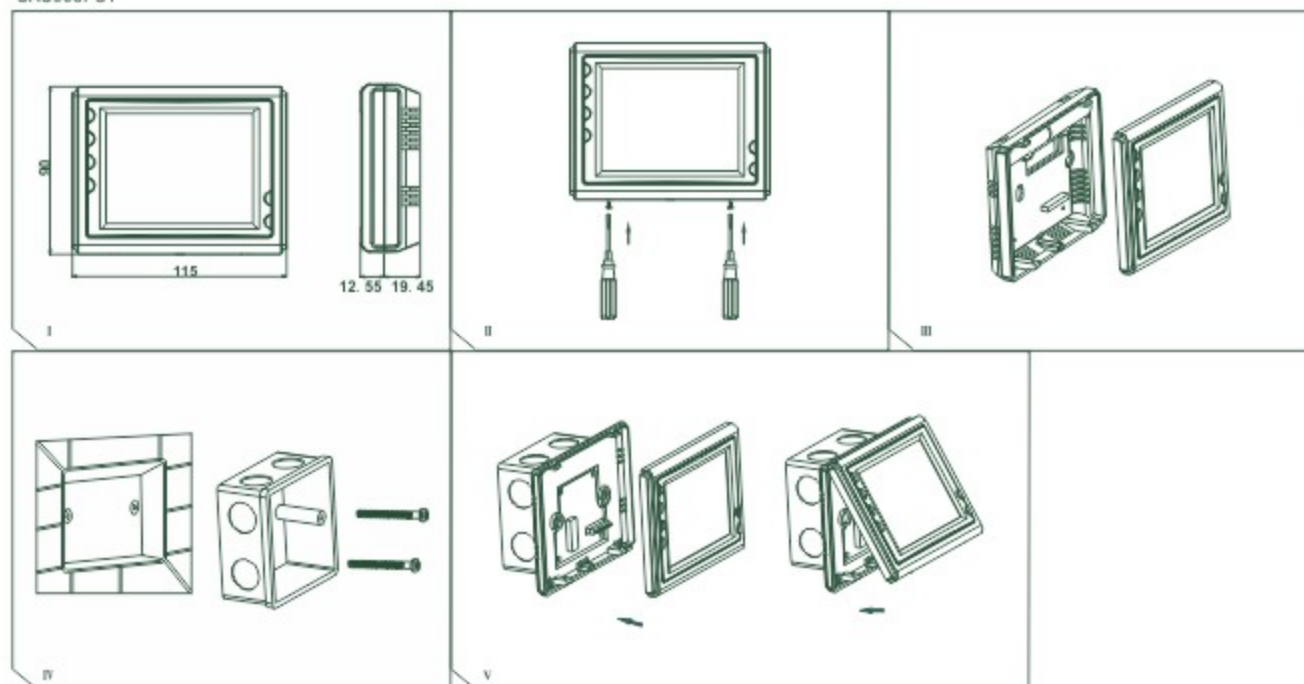
Model No	Features and Functions Available				FAN Relay Max.	Application	Installation
	Compressor timer	External Sensor	Remote controller	Room Card			
SAS908FCT-2B			■		3A	2-pipe Heat/Cool	Wall mount
SAS908FCT-4B			■		3A	4-pipe Heat/Cool	Wall mount
SAS908FCT-4B-RC-S		■		■	5A	4-pipe Heat/Cool	Wall mount
SAS908HLP-0	■		■		5A	DX Heat/Cool	Wall mount

## Wiring Diagram



## Installation

SAS908FCT



# SAS 3000FCT

Touch Screen Fan Coil Thermostat

Large LCD touch screen display with backlight  
 2-pipe or 4-pipe heating/cooling available  
 Manual changeover  
 Remote controller available  
 Auto fan with adjustable 3-fan speed.  
 Power off memory function  
 Anti-freezing protection



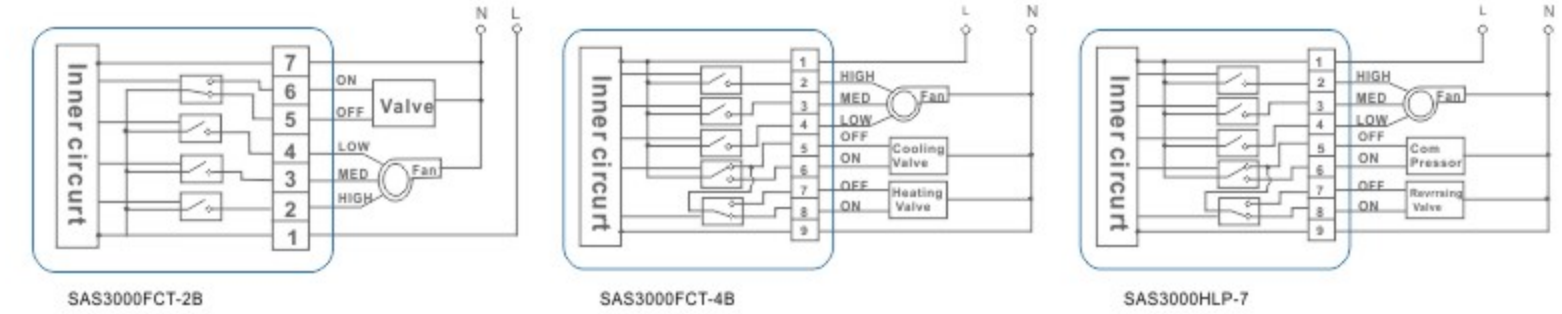
## Technical data

- Voltage: AC100- 240V 50/60Hz
- Power load: 3A/5A
- Setting range: 5°C–35°C Accuracy: ±0.5°C
- Ambient temperature: -5~50°C
- Protective housing: IP21
- Housing material: PC
- Dimensions: 115mm×90mm×16mm Flush mount or wall mount

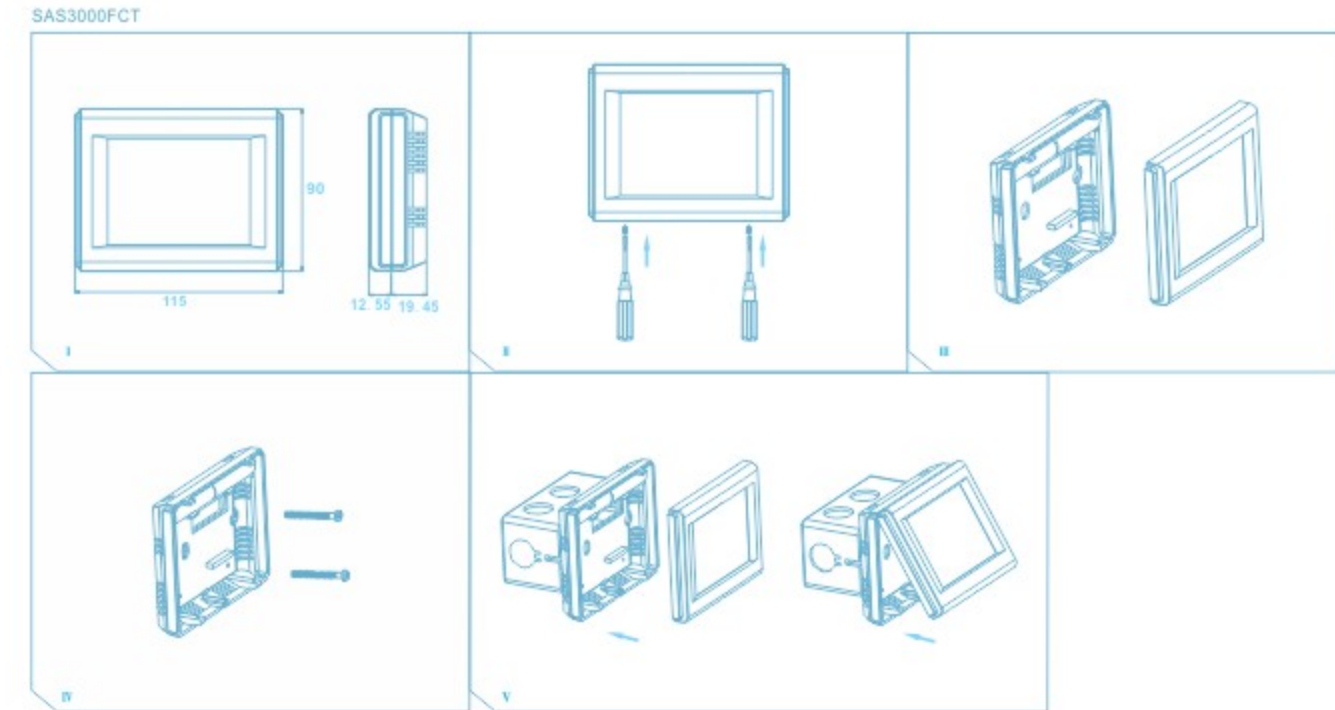
## Model Selection

Model No	Features and Functions Available				FAN Relay Max.	Application	Installation
	Compressor timer	External Sensor	Remote controller	Room Card			
SAS3000FCT-2B					3A	2-pipe Heat/Cool	Wall mount
SAS3000FCT-4B				■	3A	4-pipe Heat/Cool	Wall mount
SAS3000HLP-7	■		■		5A	DX Heat/Cool	Wall mount

## Wiring Diagram



## Installation



# SAS803PIT, SAS908PIT Series

SAS803PIT, SAS908PIT Series Thermostats provide proportional-integral (PI) modulating control in 2-pipe or 4-pipe fan coil units, zoned commercial HVAC system such as hydraulic and pressure dependent VAV with or without reheat, Ventilating and various heating and cooling applications. Advantage: More accurate, Small noise, Save Energy.

Apply to Commercial buildings, Residential buildings, Industrial buildings, Hospital, Hotel and so on.

Large Display shows both set points and room temperature simultaneously  
 0-10VDC or 4-20mA heat and cool outputs.  
 Energy saving card key input  
 Auto-detection of temperature sensor  
 Auto fan with adjustable 3-fan speed  
 Keep user setting during power off



## SAS 803PIT

Modulating digital room thermostat

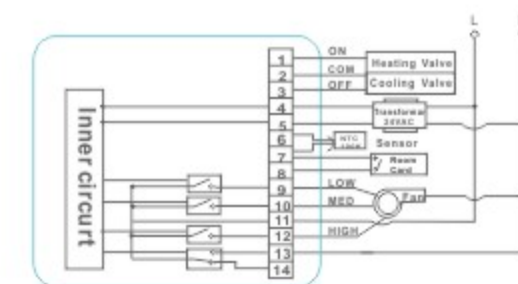
### Technical data

- Input Voltage:  
 24VAC, 50/60 Hz (Digital Thermostat)  
 24VAC-250VAC; 50/60Hz (Fan)
- Output Voltage:  
 Modulating output 4 to 20mA or 0-10VDC  
 On/Off output for fan 5A 250VAC
- Setting range: 5°C~35°C Accuracy: ±1°C
- Ambient temperature: 0~45°C, 5-95% RH
- Protective housing: IP21
- Housing material: PC
- Dimensions: 86mm × 86mm × 23mm Wall mount

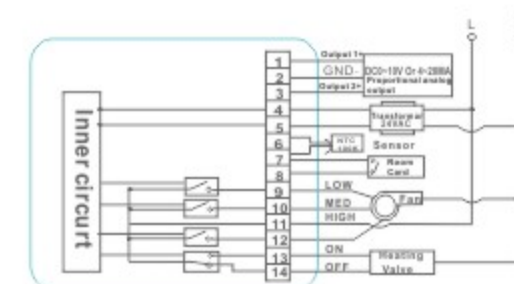
### Model Selection

Model No	Features and Functions Available					Installation
	Save Energy	External Sensor	Aux. Heating	0-10V 4-20mA Output	4-Pipe	
SAS803PIT-V1-S1-F3	■	■	1 stage	■		Wall mount
SAS803PIT-V2-F3(AU)	■	■	2 stage	■	■	Wall mount

### Wiring Diagram



SAS803PIT-V1-S1-F3



SAS803PIT-V2-S1-F3



# SAS 908PIT

Modulating digital room thermostat

## Technical data

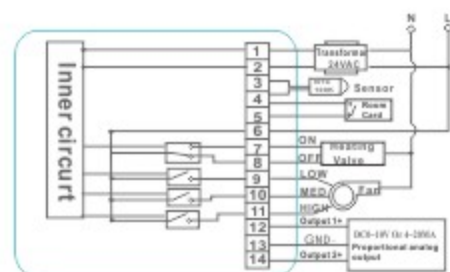
- Input Voltage:
  - 24VAC, 50/60 Hz (Digital Thermostat)
  - 24VAC-250VAC; 50/60Hz (Fan)
- Output Voltage:
  - Modulating output 4 to 20mA or 0-10VDC
  - On/Off output for fan 5A, 250VAC
- Setting range: 5°C–35°C Accuracy: ±1°C
- Ambient temperature: 0–45°C, 5-95% RH
- Protective housing: IP21
- Housing material: PC
- Dimensions: 115mm × 90mm × 16mm wall mount



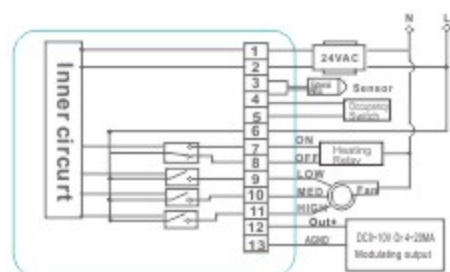
## Model Selection

Model No	Features and Functions Available					Installation
	Save Energy	External Sensor	Aux. Heating	0-10V 4-20mA Output	4-Pipe	
SAS908PIT-V1-S1-F3	■	■	1 stage	■		Wall mount
SAS908PIT-V2-S1-F3	■	■	2 stage	■	■	Wall mount

## Wiring Diagram



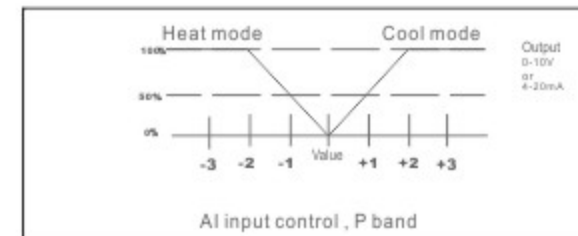
SAS908PIT-V2-S1-F31



SAS908PIT-V1-S1-F3

## PI control signal prominent characteristic

Parameter	Setting Range	Factory Default
The proportional band	1-10°C	2°C
The integral action time	0-10 Minutes	5 Minutes
Output bottom limit	0~	0
Output upper limit	-100%	100%

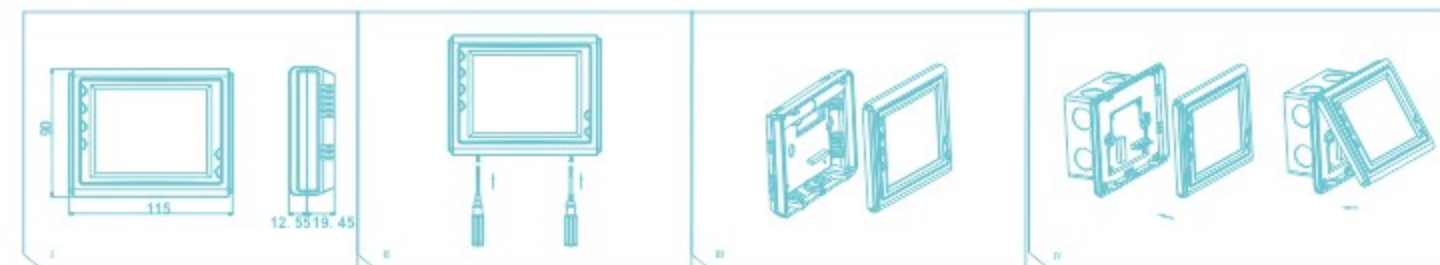


The proportional band is the amount of change required by the ambient temperature for the output to go from 0 to 100%.

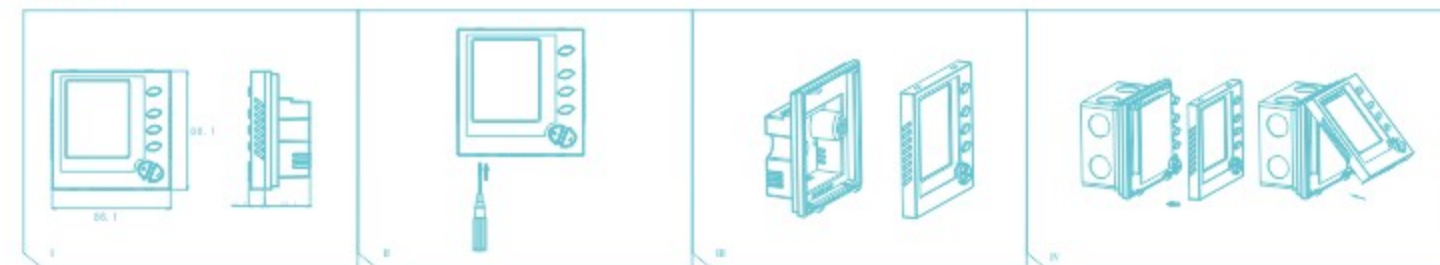
The integral gain implies that the longer the error between the ambient and the set point temperatures exists, the more the output will change to eliminate the error. The integral portion of the algorithm eliminates the temperature offset from the set point.

## Installation

SAS908PIT



SAS803PIT



# SAS 803PTC

Single loop proportional integral controller SAS803PTC  
2-pipe / 4-pipe air conditioning system, Heat & Cool mode / Cool only

Single loop proportional integral control variety of application  
2 loops proportional analog output or 2 loops 3-point floating output  
Inner sensor or external sensor available  
DC0-5V, 0-10V or 0-20mA input.



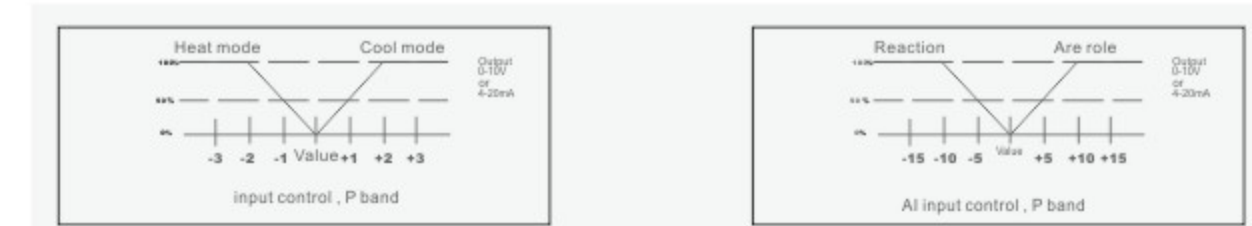
## Technical data

Power supply	Voltage AC24V, 50/60 Hz ±10% Power 3VA Connector: Terminals	Analog output AO1, AO2	Output signal Accuracy Max. Load	DC 0-10V or 0...20mA ±1% 20mA, 500V
Proportional analog input A1	Input signal DC0-10V DC0-5V or 0...20mA, Accuracy: ±2%	Digital output DO1, DO2	Output signal Max. Load	Floating, on/off 24VAC, 5A
House material	Flame-resisting materials---PC	Dimension size	86mm x 86mm x 23mm Wall mount	

Model No	Features and Functions Available						Application
	Inner sensor	External Sensor	Ai Input	0-10V 4-20mA Output	On/off input	3-point Floating output	
SAS803PTC-MT4-DI	●	●	—	—	2 loops	—	2-pipe / 4-pipe
SAS803PTC-FT4-DI	●	●	—	—	—	2 loops	2-pipe / 4-pipe
SAS803PTC-MT4-AI	—	—	—	●	2 loops	—	2-pipe / 4-pipe
SAS803PTC-FT4-AI	—	—	—	●	—	2 loops	2-pipe / 4-pipe

## Personalized settings

Sensor	Setting Range	Factory Default
NTC	1-10°C	2°C
AI	1-20	10



This feature allows you to set the integral action time for the integral to run from 0 to 100%. The value required depends on the reaction time of the control loop. If the time is chosen too short, the control loop will become instable and oscillate. If the time is chosen too long, the control loop will become sluggish.

Sensor	Output mode	The integral time setting range	Factory Default
NTC	Analog control 3-point floating	0-10 minutes 10-50 seconds	5 30 seconds
AI	Analog control 3-point floating	0-10 minutes 10-50 seconds	2 30seconds

## Analog output limitation

Output mode	Limitation Setting range	Factory Default
Analog control	0~	0 (0, 4mA)
Analog control	~100%	100% (10V, 20mA)

## Floating running time

Output mode	Travel time	Factory Default
Floating control	30-150 seconds	100 seconds



# SF<sup>13</sup>

SF13 Intelligent Compact Controller

Air Conditioning Systems: Constant or Variable Air Volume systems for single or dual duct systems. Fan Coil units for 2-pipe or 4-pipe systems

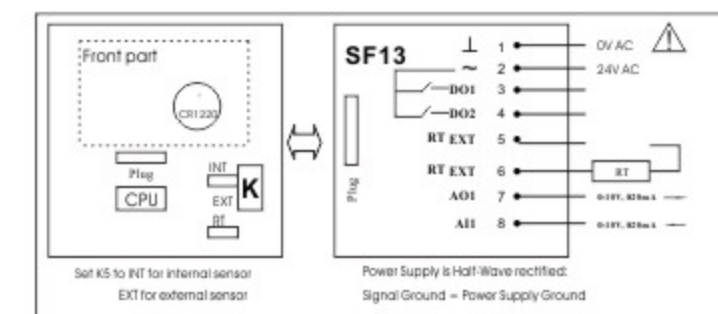
Apply to Commercial buildings, Residential buildings, Industrial buildings, Hospital, Hotel and so on

- Temperature PID control for HVAC systems.
- Up to two 3-point outputs for 24VAC actuators.
- 1 internal temperature sensor and up to 2 external sensor inputs
- Multiple remote control functions on external input
- Password protected programmable user and control parameters
- Blue / Green backlight
- Control for variable speed fans, Humidity control, Pressure control, chilled ceiling
- Monitoring of low and high limits on all inputs. Programmable reaction in case of alarm.
- Optional connection for external NTC temperature sensor
- Temperature sensor feedback
- Special functions for dehumidifying, set point shift, fan and VAV control
- Transformation of display value according to analog sensor range
- Password protected programmable user and control parameters
- Display and operation unit available in various designs and materials.

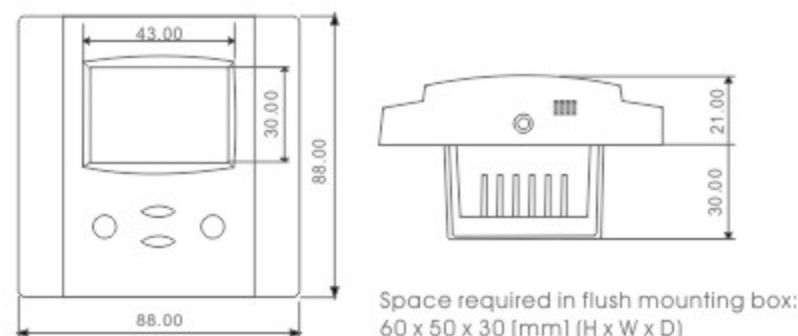
## Technical data

- AC24V 50/60Hz, Power :3 VA
- Temperature range from -40 to 140 °C.
- 4 independent PI sequences
- 6 independent binary sequences
- 1 modulating output for DC 0...10V or 0...20 mA actuators.
- 2 TRIAC controlled binary outputs 24V AC, option for floating output
- 1 Input for DC 0...5V, 0...10V or 0...20 mA sensors

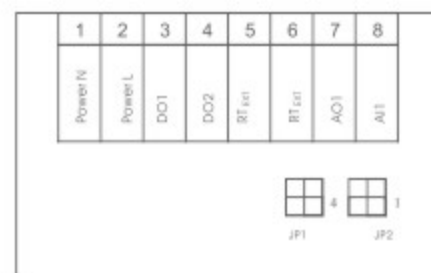
## Wiring Diagram



## Dimensions



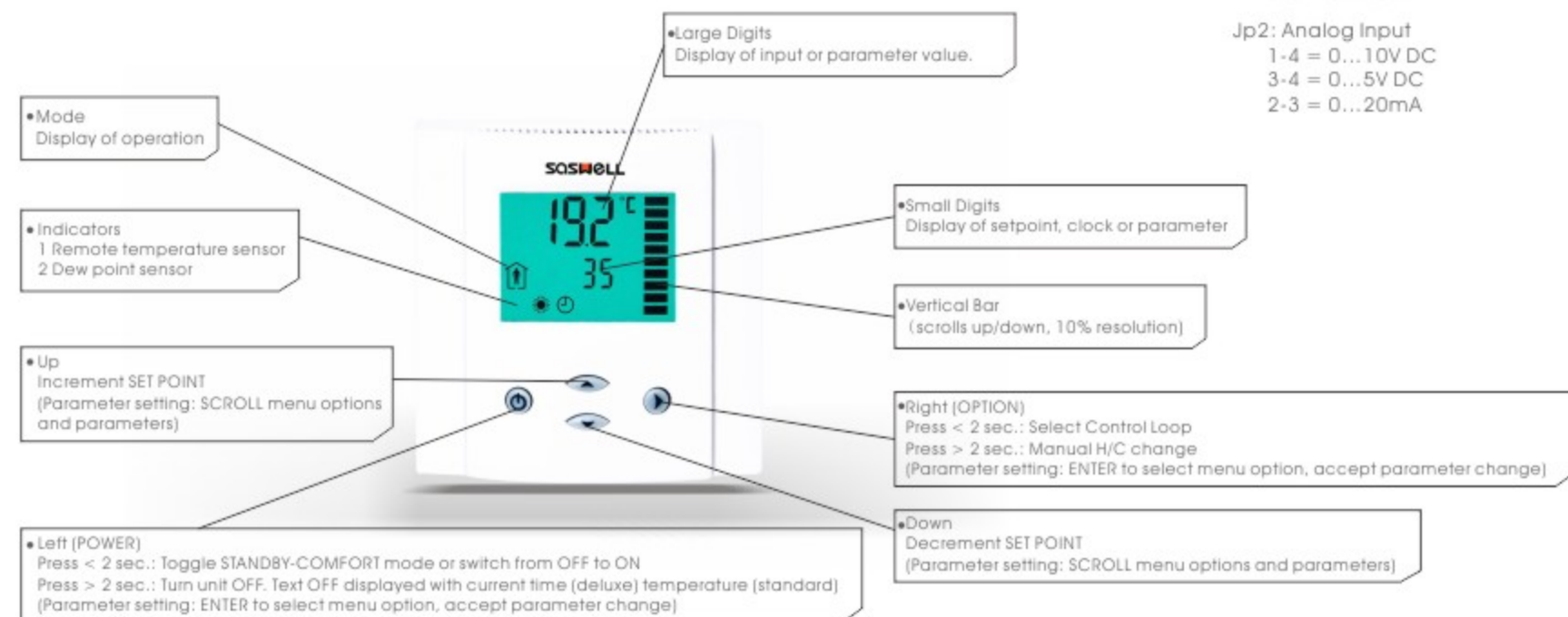
## Terminal Connections



### Legend

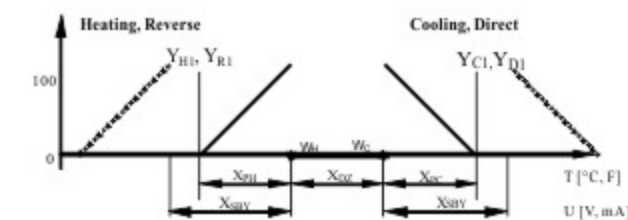
- 1: Power supply: 0V AC
- 2: Power supply: 24V AC
- 3: Digital Output 1 (TRIAC)
- 4: Digital Output 2 (TRIAC)
- 5: Temperature sensor NTC
- 6: Temperature sensor NTC
- 7: Analog Output 1:  
0...10V or 0...20mA
- 8: Analog Input 1:  
0...10V, 0...5V or 0...20mA
- JP1: Analog Output  
1-2 = 0...10V DC  
2-3 = 0...20mA

- JP2: Analog Input  
1-4 = 0...10V DC  
3-4 = 0...5V DC  
2-3 = 0...20mA



## PI-Control

Each loop has two PI sequences, one reverse and one direct acting. The adjustment of the sequence is done by selecting the proportional band, the reset time and if required limit the integral part.



### Legend:

- T, U Input Signal
- $X_{pH}$  P-band Heating, Direct
- $X_{pC}$  P-band Cooling, Reverse
- $X_{DZ}$  Dead zone
- $X_{SBY}$  Standby set point shift
- $W_H$  Set point Heating, Reverse
- $W_C$  Set point Cooling, Direct
- $Y_{RH}, Y_{RL}$  PI sequence Heating, Reverse
- $Y_{CH}, Y_{CL}$  PI sequence Cooling, Direct

### Proportional-band $X_p$ :

Control range of the proportional sequence for heating, cooling respective reverse, direct. Setting this parameter to 0 disables the P-part of the respective sequence.

### Reset Time $T_N$ :

Defines the time required for the integral to run from 0 to 100%. The value required depends on the reaction time of the control loop. If the time is chosen too short, the control loop will become unstable and oscillate.

### Maximum Limit of Integral IMAX:

The influence of the Integral may be limited with this function and thus reduce the oscillating tendency of the PI control sequence. Do not set the minimum below the heating/cooling requirement of the application; otherwise the control loop may not reach the set point. The IMAX function applies for both reverse and direct sequence.

### Accuracy $X_A$ :

The zone where the integral stops increasing or decreasing. Similar to the hysteresis of a binary control loop. Reduces wear on actuators, valves through reduction of unnecessary movement.

### 2-pipe or 4-pipe systems:

2-pipe systems use the same infrastructure for heating and cooling. Heating and cooling mode needs to be changed externally according to season. 4-pipe systems consist of individual heating and cooling equipment and hence are able to supply heating and cooling simultaneously.

### VAV Function:

The cooling output is increased parallel to the heating output but limited to a maximum value while heating is active. This may be used for fresh air supply while heating for a VAV system.

## Model Selection

Model No	Features and Functions Available						Application
	Inner sensor	Duct Sensor	AI Input	On/off Input	4-20mA Output	3-point Floating Output	
SF13-MT2	■	■			■		2pipe,Single loop
SF13-MT4	■	■			■		4pipe,Single loop
SF13-FT2	■	■				■	2pipe,Single loop
SF13-FT4	■	■				■	4pipe,Single loop
SF13-T0121R		■	■		■	■	PID control Duel loop
SF13-T1102		■	■	■	2 loops		PID control Duel loop

### SF13-T0121R typical application

■ 2 pipe HEAT/COOL water radiant system	Valve 0~10VDC PID, External sensor 0-10VDC; Valve 3-point floating, External sensor 0-10VDC
■ 2 pipe HEAT/COOL water radiant system and electrical heating system	Valve 0-10VDC PID, External sensor 0-10VDC, Electrical heating: 2 Do, 1:2 Control; Valve 3-point floating, External sensor 0-10VDC Electrical heating: 0~10VDC / 4~20mA
■ 4 pipe COOL and HEAT SYSTEM	Valve 0~10VDC PID, External sensor 0-10VDC; Cooling valve 0-10VDC PID, Heating valve 3-point floating, External sensor 0-10VDC
■ Constant Pressure System	Differential Pressure sensor 0-10VDC / 4~20mA, Inverter control 0-10VDC



# SF 16

Rotary Knob Type Temperature PI controller

AHU temperature control  
 Temperature range: 0~40°C  
 Setting style: panel rotary knob setting  
 Matching with valve: 3-position valve  
 CE authorization

## Technical data

- Type SF16, SF16-S
- Controllable temperature range 0~40°C
- External sensor NTC10K thermistor
- Control mode 3-position (controlling position control valve)
- Function transformer winter/summer mode transformer, set by local/distance
- Power consumption 2VA(0.8A) unload
- Silicon output Controllable silicon output 4VAC,0.5Amax
- Outside shell ABS plastic, white
- Spare setting 2K, close outside contact (use/unused)
- Setting range 0~40°C
- Wiring Connecting terminal, 1.5mm<sup>2</sup> connecting wire screw
- Ambient operating temperature 0~50°C
- Ambient humidity Humidity: 10 to 90%RH non-condensing water
- Storage temperature -40~70°C
- Overall dimensions 80×80×33mm

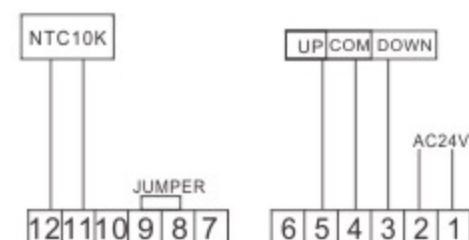
## Controller parameters

Controller type	matching sensor	Power supply	Output signal
SF16	outlay sensor	24VAC±15%	3-position type
SF16-S	build-in sensor	24VAC±15%	3-position type

Note: SF16 used with SSW-1000T



## Wiring Diagram



NOTE: JUMPER used to control running time.  
 If the route running time about 2.5min, do not connect jumper.  
 If the route running time about 5min, please use jumper.

## VAV system controller



This digital thermostat provides proportional-integral (PI) modulating control in zoned commercial HVAC system such as hydraulic and pressure dependent VAV with or without reheat. Apply to Commercial buildings, Residential buildings, Industrial buildings, Hospital, Hotel and so on.

FLT series thermostat provide 3-output can be used for following application:  
 One floating output to control floating damper/valve  
 One On/Off output to control duct reheat elements  
 One On/Off output to provide auxiliary electric heating

PIT series thermostat PI output control, 0-10VDC or 4-20mA heat and cool outputs.  
 Special energy saving mode – external sensor function (room card /window card)  
 Auto-detection of temperature sensor, Auto changeover heat/cool.

# SAS 803 Series

VAV system controller

## Technical data

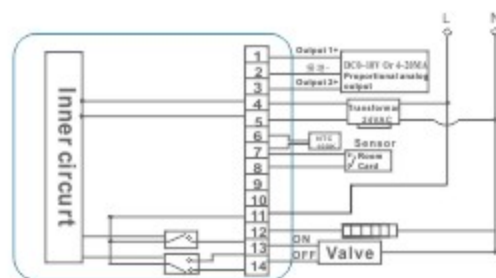
- Input Voltage:
  - 24VAC, 50/60 Hz (Digital Thermostat) ,
  - 24VAC-250VAC; 50/60Hz (Fan)
- Output Voltage:
  - Modulating output 4 to 20mA or 0-10VDC ,
  - On/Off output for fan 5A 250VAC
- Setting range: 5°C–35°C Accuracy: ±1°C
- Ambient temperature: 0–45°C , 5-95% RH
- Protective housing: IP21
- Housing material: PC
- Dimensions: 86mm×86mm×23mm Wall mount



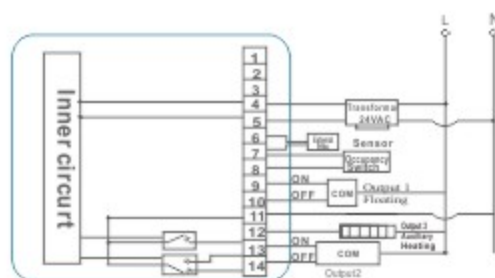
## Model Selection

Model No	Features and Functions Available					Mode
	Save Energy	External Sensor	Aux. Heating	0-10V 4-20mA Output	3-Fan Speed	
SAS803PIT-V1-S1	■	■	■	■		COOL /HEAT /AUTO
SAS803FLT-S1	■	■	■		■	COOL /HEAT /AUTO

## Wiring Diagram



SAS803PIT-V1-S1



SAS803FLT-S1

# SAS 908 Series

VAV system controller

## Technical data

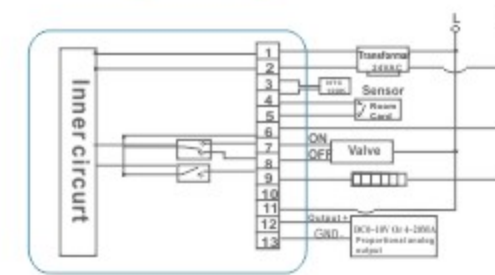
- Input Voltage:
  - 24VAC, 50/60 Hz (Digital Thermostat) ,
  - 24VAC-250VAC; 50/60Hz (Fan)
- Output Voltage:
  - Modulating output 4 to 20mA or 0-10VDC ,
  - On/Off output for fan 5A 250VAC
- Setting range: 5°C–35°C Accuracy: ±1°C
- Ambient temperature: 0–45°C , 5-95% RH
- Protective housing: IP21
- Housing material: PC
- Dimensions: 115mm×90mm×16mm wall mount



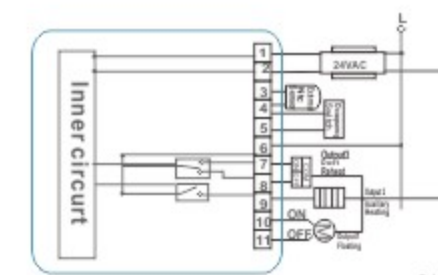
## Model Selection

Model No	Features and Functions Available					Mode
	Save Energy	External Sensor	Aux. Heating	0-10V 4-20mA Output	3-Fan Speed	
SAS908PIT-V1-S1	■	■	■	■		COOL /HEAT /AUTO
SAS908FLT-S1	■	■	■		■	COOL /HEAT /AUTO

## Wiring Diagram

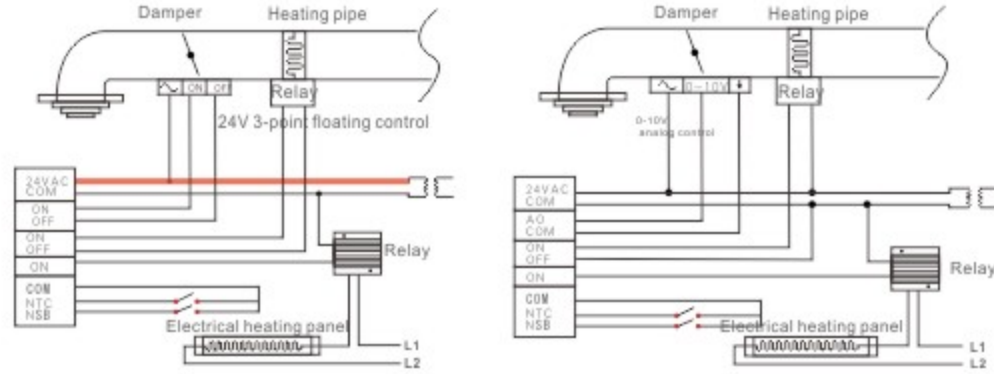


SAS908PIT-V1-S1

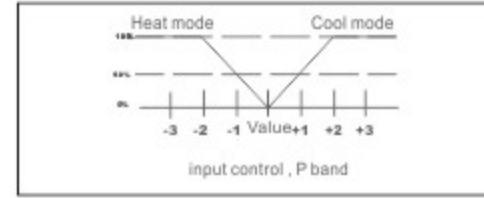


SAS908FLT-S1

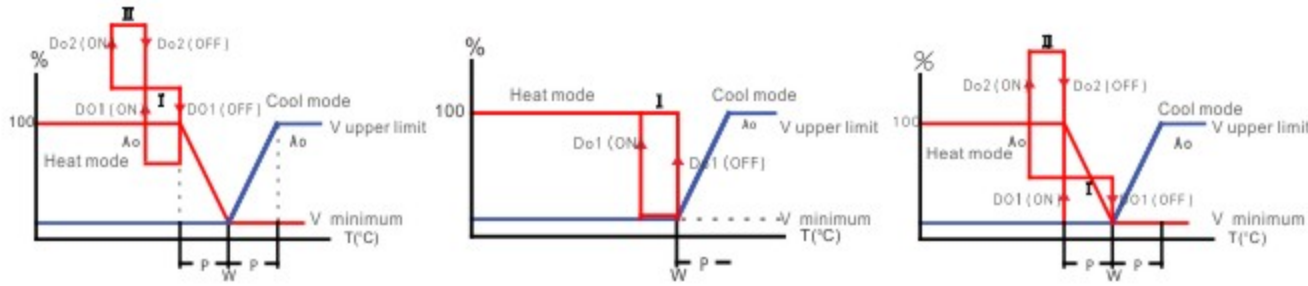
## VAV SYSTEM



VAV system : Short name of " Variable Air Volume".  
 VAV system is an air conditioning system by changing the air flow to regulate the indoor temperature and humidity.  
 Advantage: Energy-saving, Environmental Protection, Low noise, Comfort.



## Three heating control mode output logic



AO: Analog output  
 DO1: 1 stage heating on/off output  
 DO2: 2 stage heating on/off output  
 P: Proportional band  
 W: Setting temperature

The integral gain implies that the longer the error between the ambient and the set point temperatures exists, the more the output will change to eliminate the error. The integral portion of the algorithm eliminates the temperature offset from the set point.

## Personalized settings

Temperature setting	Setting Range	Factory Default
HeatMode	25-30°C	25°C
CoolMode	10-18°C	18°C

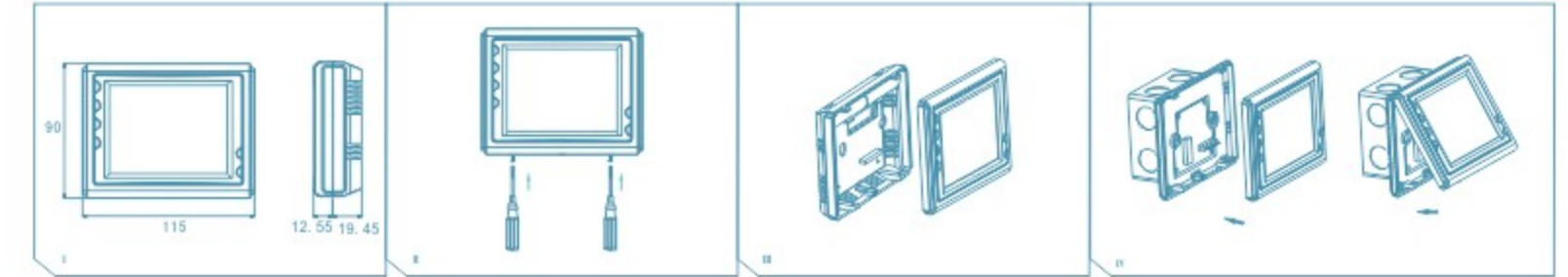
## PI control signal prominent characteristic

Output mode	Parameters	Setting Range	Factory Default
PI output	The proportional band The integral action time Output bottom limit Output upper limit	1-10°C 0-10 Minutes 0~ ~100%	2°C 5 0 100%
3-point output	The proportional band The integral action time Running time	1-10°C 10-50 Seconds 30-150 Seconds	2°C 30 Seconds 100 Seconds

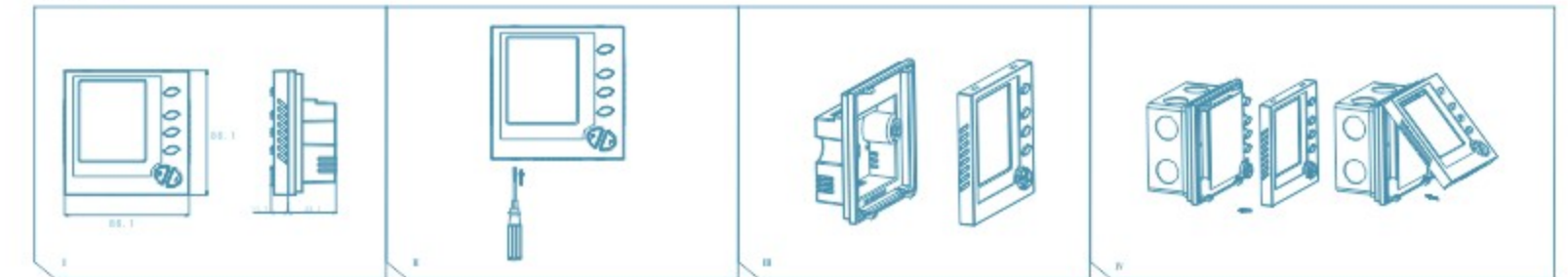
The proportional band is the amount of change required by the ambient temperature for the output to go from 0 to 100%.

## Installation

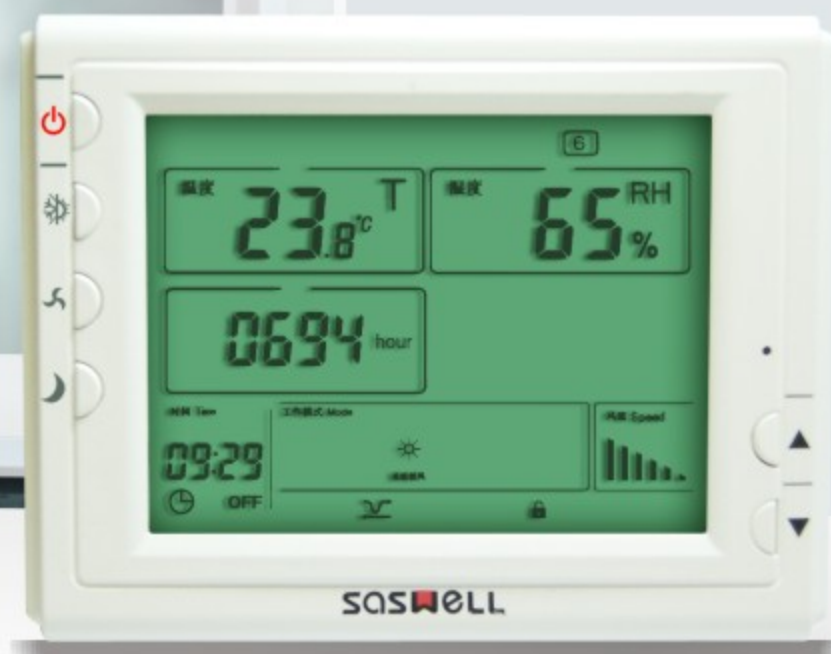
SAS908PIT



SAS803PIT







908HTC

# SAS 908HTC

Digital Humidity Controller

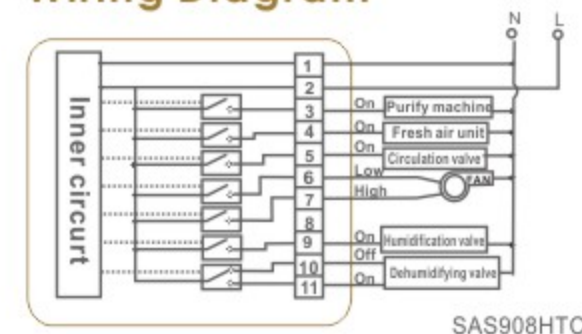
Designed for monitoring and control the ambiance relative humidity by control a humidifier or dehumidifier

- Large LCD display shows indoor humidity, temperature, clock simultaneously
- Reading and operating easily , Humidity control accurate :  $\pm 3\%$
- Temperature detection
- Keep memory when power off
- Timer on/off
- Lock function avoids wrong operation

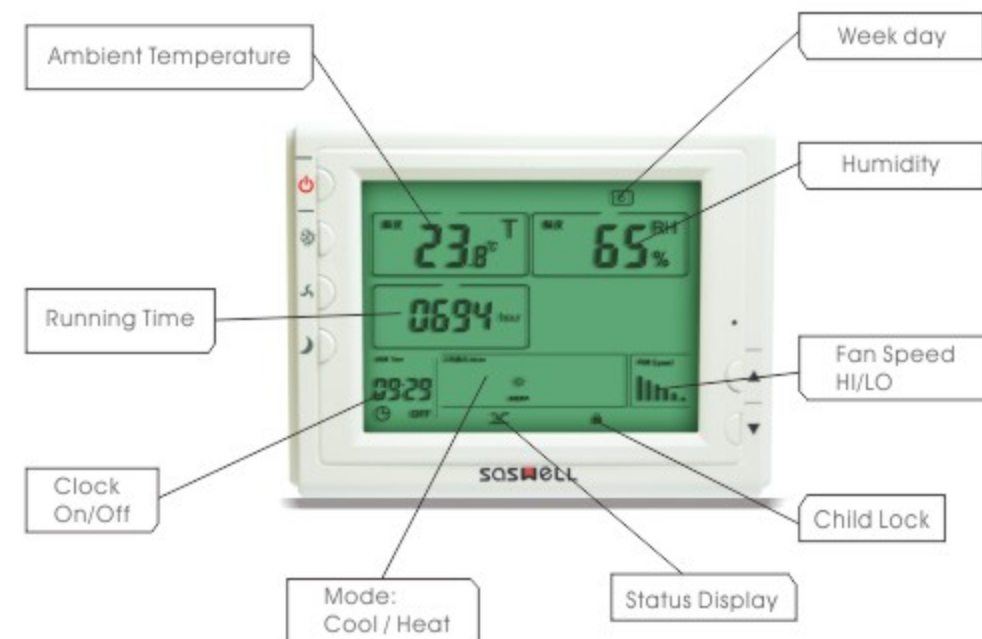
## Technical data

- Power source: 100-240VAC, 50/60Hz
- Humidity setting range: 20%-80% ( Display range: 0-90%)
- Temperature display range: 5°C~35°C
- High, Low fan speed output Max. load:
- Humidification valve output: 0.5A, 250VAC
- Dehumidifying valve output: 0.5A, 250VAC
- Purify machine output: 8A, 250VAC
- Fan coil Output: 0.5A, 250VAC
- Ambient temperature: 0°C-50°C
- The storage temperature: -10°C-60°C
- Dimensions: 115mmX90mmX28mm

## Wiring Diagram



SAS908HTC





## AQC 910 series IAQ controller

Monitoring room CO<sub>2</sub> and VOC, room temperature and humidity.  
School, office, classroom, other public places and house for air quality measurement.

# AQC<sup>910</sup>

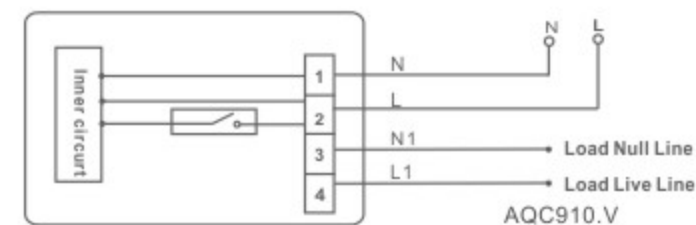
IAQ controller

Real time monitor indoor air quality  
Monitoring room CO<sub>2</sub> and VOC, room temperature and humidity ;  
Built in the famous Japanese semiconductor mixed gas sensor;  
Provide 1 relay outputs for auto control ventilation system ;  
Three-color (green/yellow/red) backlit indicating optimal/moderate/poor ventilation  
LCM dot matrix screen  
Buzzer alarm and backlight colours switch  
Wall mounting type with easy installation.

### Technical data

The detection of gas	Cigarette smoke, wood coatings and decorative materials of low concentration toluene, formaldehyde, ammonia, hydrogen sulfide smell gas, ethanol, natural gas, sulfur dioxide,
Power source	220VAC ± 10% 50/60Hz
Warm up time	96Hours (First time), 10 Minutes ( Normal)
Sensing element	HS series Capacitance sensor
Display resolution	0.1 ppm
LCD backlit	Green- --optimal ; Yellow---moderate ; Red---Poor
Temperature measuring range	-20°C -80°C (-4- 176°F)
Outputs	Relay output, auto control ventilation systems. Max. resistive Load: 3A (220VAC),

### Wiring diagram



## Model Selection

AQC910.V

Model	Description	Power Supply	
AQC910.0V Vertical type	VOC control & Humidity, Temperature monitor with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm	External power supply transformer input DC12V 1A
AQC910.1V Wall mounted type	VOC control & Humidity, Temperature monitor with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm	100-240VAC 50/60HZ Power input compatible with DC12V1A
AQC910.2V Wall mounted type	VOC control & Humidity, Temperature monitor with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm	18-30VAC 50/60HZ Power input compatible with DC12V1A
AQC910.1V-D0 Wall mounted type	VOC control & Humidity, Temperature monitor and control ,with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm, 1 loop On/Off output	100-240VAC 50/60HZ Power input compatible with DC12V1A
AQC910.2V-D0 Wall mounted type	VOC control & Humidity, Temperature monitor and control ,with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm, 1 loop On/Off output	18-30VAC 50/60HZ Power input compatible with DC12V1A
AQC910.0V-DF Vertical type	VOC control & Humidity, Temperature monitor and control ,with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm, 1 loop FSK RF868MHZ on/off output	External power supply transformer input DC12V 1A
AQC910.1V-DF Vertical type	VOC control & Humidity, Temperature monitor and control ,with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm, 1 loop FSK RF868MHZ on/off output	100-240VAC 50/60HZ Power input compatible with DC12V1A
AQC910.2V-DF Vertical type	VOC control & Humidity, Temperature monitor and control ,with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm, 1 loop FSK RF868MHZ on/off output	18-30VAC 50/60HZ Power input compatible with DC12V1A
AQC910.0V-DF1 Vertical type	VOC control & Humidity, Temperature monitor and control ,with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm, 1 loop ASK RF433MHZ on/off output	External power supply transformer input DC12V 1A
AQC910.1V-DF1 Vertical type	VOC control & Humidity, Temperature monitor and control ,with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm, 1 loop ASK RF433MHZ on/off output	100-240VAC 50/60HZ Power input compatible with DC12V1A
AQC910.2V-DF1 Vertical type	VOC control & Humidity, Temperature monitor and control ,with alarm	Three-color (green/yellow/red) backlight, LCM Dot matrix screen, Buzzer alarm, 1 loop ASK RF433MHZ on/off output	18-30VAC 50/60HZ Power input compatible with DC12V1A
BYQ-1210	Power Transformer	Input: 100-240VAC 50/60HZ Output: 12VDC 1A DC plug line	—
AQC910-ZJ	Desktop Bracket	Supporting the thermostat on the desk	—

## SAS900 series low voltage room thermostat, Manual changeover



SAS900, SAS1000, SAS6000 Low Voltage Series Room Thermostat  
Used in Gas, oil or electric heat with air conditioning system or heat pump system.  
Single stage or Multi-stage available.

Apply to Commercial buildings, Residential buildings, Industrial buildings, Hospital, Hotel and so on.



# SAS 900 Series

Low voltage thermostat, manual changover

The LCD display with backlight, continuous backlight option.  
 Manual Changeover  
 Air Filter change Indicator.  
 Low Battery Indicator.  
 Emergency icon indicates a system malfunction  
 Compressor short cycling protection available  
 Batteries required to maintain clock function., Keep user setting during power off  
 Optional temperature display of Celsius or Fahrenheit scale

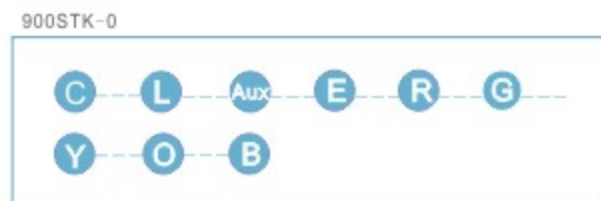
## Technical data

- Voltage: 24VAC 50-60HZ or Battery powered.
- Power load: 3A
- Setting range: 45°F to 90°F (7°C to 32°C).  
Accuracy: ±0.5°C (1°F)
- Ambient temperature: -5~50°C
- Protective housing: IP21
- Housing material: PC
- Dimensions: 130mm × 94mm × 30mm wall mount

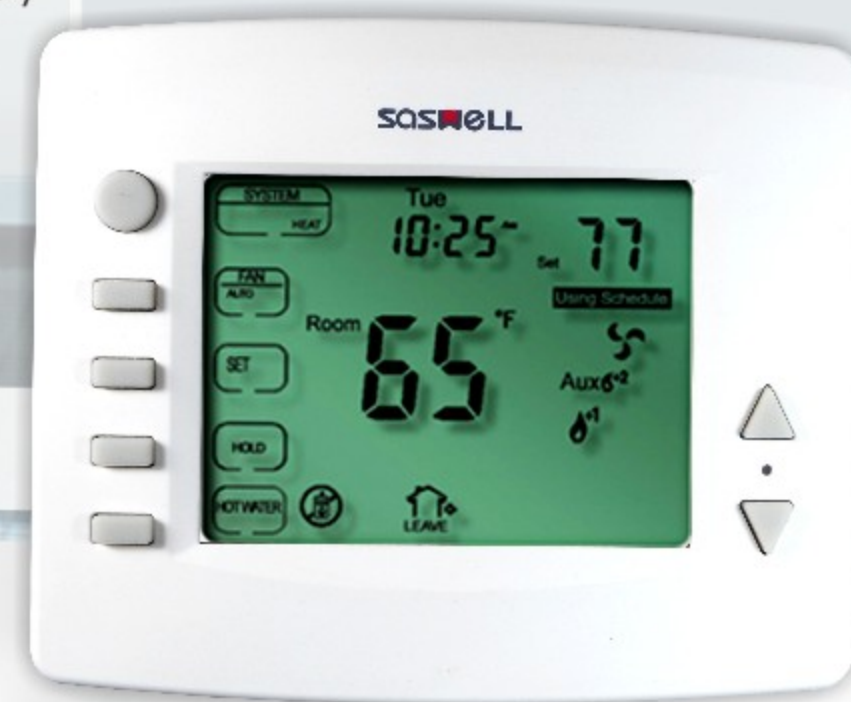
## Model Selection

Model No	Heat / Cool	Fan (On,Auto)	Programs	AAA Battery powered	Multistage
SAS900STK-0	1H/1C	■	Non		
SAS900STK-2	1H/1C	■	5+2		
SAS900HTW-0	2H/1C	■	Non		■
SAS900HTW-2	2H/1C	■	5+2		■
SAS900MTW-0	2H/2C	■	Non		■
SAS900MTW-2	2H/2C	■	5+2		■
SAS900MTK-0	2H/2C	■	Non	■	■
SAS900MTK-2	2H/2C	■	5+2	■	■

## Wiring Diagram



SAS1000 series low voltage room thermostat, Digital display



# SAS 1000 Series

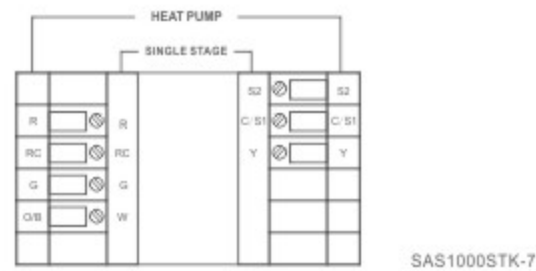
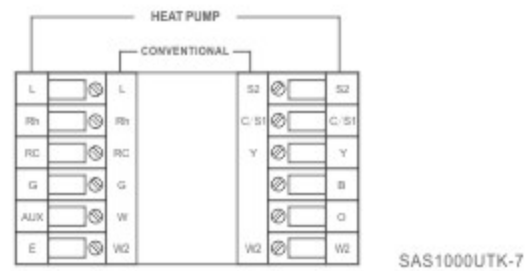
Low voltage thermostat, digital display

Large LCD display, continuous backlight option  
 Menu Driven Programming: optional 7 day programming and non-programmable  
 Keep user setting during power off  
 Air Filter change Indicator.  
 Low Battery Indicator. Temperature calibration.  
 Optional temperature display of Celsius or Fahrenheit scale  
 Minimum compressor off-time setting available  
 UV light change indicator  
 Wireless control with socket receiver

## Technical data

- Voltage: Dual Power 24VAC or 2 size "AAA" alkaline batteries powered
- Power load: 3A
- Setting range: 45°F to 90°F (7°C to 32°C). Accuracy: ±0.5°C
- Ambient temperature: 30°FH to 105°FH (0°C to 40°C)
- Protective housing: IP21
- Housing material: PC
- Dimensions: 115mm x 90mm x 32mm wall mount

## Wiring Diagram



## Model Selection

Model No	Heat / Cool	Fan (On,Auto)	Programs	AAA Battery powered	Multistage	Wireless
SAS1000STK-7	1H/1C	■	Non or 5+2	■		
SAS1000UTK-7	3H/2C	■	Non or 5+2	■	■	
SAS1000STK-7-RF	1H/1C	■	Non or 5+2	■		■
SAS1000UTK-7-RF	3H/2C	■	Non or 5+2	■	■	■



SAS6000 series low voltage room thermostat, Touch screen

SASWELL

# SAS 6000 series

Low voltage thermostat, touch screen

Large touch screen , continuous backlight option  
 Menu Driven Programming: optional 7 day programming and non-programmable  
 Keep user setting during power off  
 Air Filter change Indicator.  
 Low Battery Indicator. Temperature calibration.  
 Optional temperature display of Celsius or Fahrenheit scale  
 Minimum compressor off-time setting available  
 UV light change indicator



## Technical data

- Voltage: Dual Power 24VAC or 2 size "AAA" alkaline batteries powered
- Power load: 3A
- Setting range: 45°F to 90°F (7°C to 32°C). Accuracy: ±0.5°C
- Ambient temperature: 30°F H to 105°F H (0°C to 40°C)
- Protective housing: IP21
- Housing material: PC
- Dimensions: 150mm x 115mm x 32mm wall mount

## Model Selection

Model No	Heat / Cool	Fan (On,Auto)	Programs	AAA Battery powered	Multistage
SAS6000STK-7	1H/1C	■	Non or 5+2	■	
SAS6000UTK-7	3H/2C	■	Non or 5+2	■	■

## Wiring Diagram



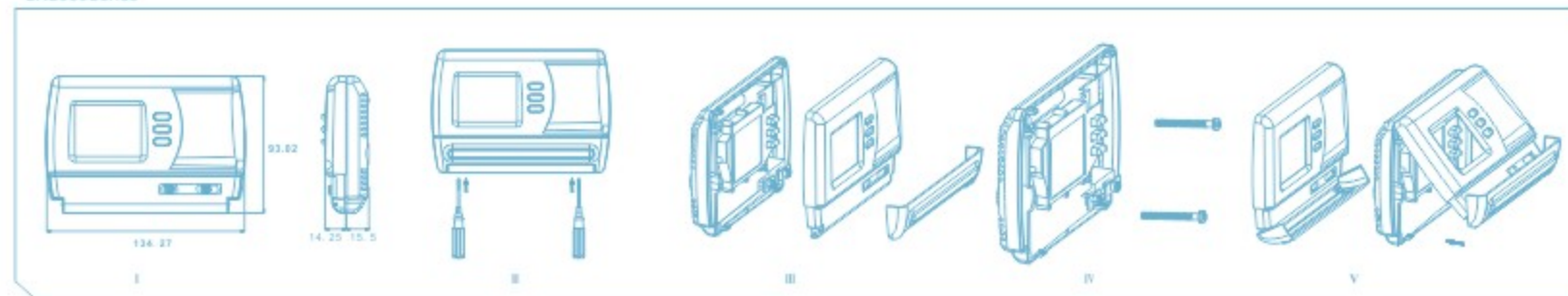
SAS6000UTK-7



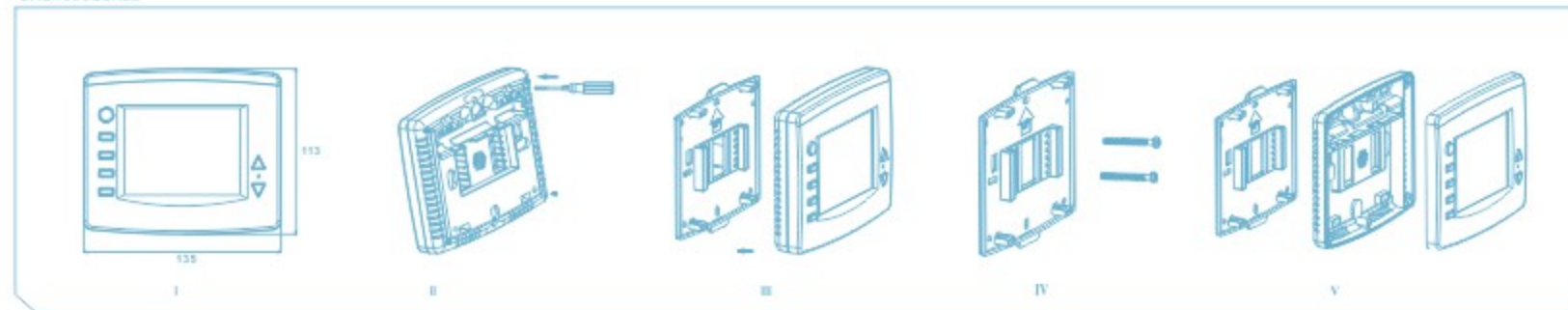
SAS6000STK-7

## Installation

SAS900Series



SAS1000Series



SAS6000series

