Actuator SAM 4P/SAM 5P

gzsinon ®

GUANGZHOU SINON COMBUSTION EQUIPMENT CO., LTD.

☏ 020- 84581309

🖥 020- 84507159

🌐 www.gzsinon.net

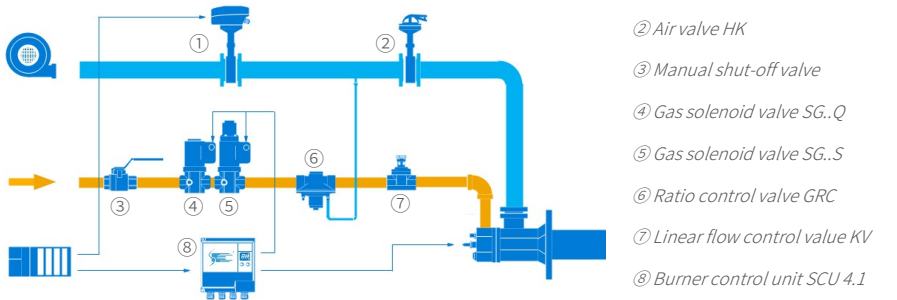✉ sinon@gzsinon.net

CHARACTERISTICS

- SAM 4P/SAM 5P series actuators use an intelligent master chip and are driven by microstepping stepper motor, which can accurately control rotary movement between 0° and 90°.

- There are 7 modes, which are respectively suitable for logic control and logic current mixed control, which can meet various control requirements.

- Optional Bluetooth module. Through Bluetooth connection, the on/off operation and parameter modification of the actuator can be realized through a mobile phone.

- High/Medium/Low/Off position of valve opening can be set as required, and the running time can be adjusted in 4～60 s.

- SAM 4PA、SAM 5PA has a high-precision 4-20 mA current feedback signal, which can track the valve opening position in real time.

APPLICATIONS

The actuator SAM 4P/SAM 5P is used in conjunction with butterfly valve SKA/HTB, SKG or linear flow control AKV and other valves to realize the control of combustion air or gas.
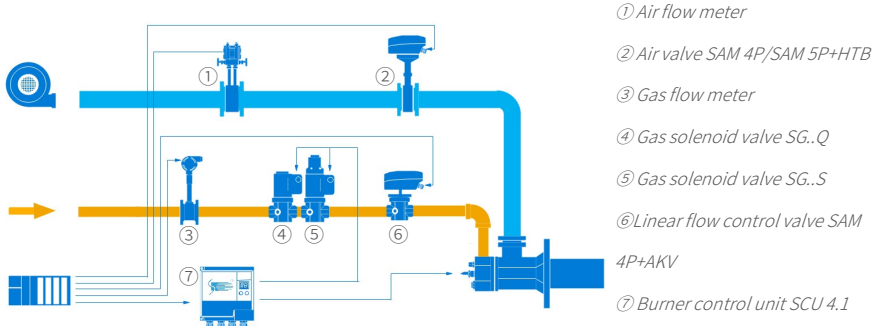
SOLUTION

Air-gas ratio control

① Air valve SAM 4P/SAM 5P+HTB

② Air valve HK

③ Manual shut-off valve

④ Gas solenoid valve SG..Q

⑤ Gas solenoid valve SG..S

⑥ Ratio control valve GRC

⑦ Linear flow control value KV

⑧ Burner control unit SCU 4.1

- In continuously controlled combustion system of air-gas ratio control, SAM 4P/SAM 5P is used to drive butterfly valve to adjust air, thereby driving proportional valve to adjust gas and realize the automatic adjustment of burner capacity.

- In high/low pulse control system, or in high/low/off pulse control system with over-temperature cut-out, the actuator can return to closed position to prevents air from entering the furnace, which reduces energy consumption.

Flow control

① Air flow meter

② Air valve SAM 4P/SAM 5P+HTB

③ Gas flow meter

④ Gas solenoid valve SG..Q

⑤ Gas solenoid valve SG..S

⑥ Linear flow control valve SAM 4P+AKV

⑦ Burner control unit SCU 4.1

- The gas pipeline before burner adopts an automatic linear flow control valve and a flow meter to achieve precise control of gas.

- It can also be used in double-cross limit flow control system as an automatic regulating valve for gas and air main pipelines.

FUNCTIONS

Bluetooth communication

It is needed to insert the Bluetooth module into the Bluetooth interface on the right side of the digital tube, and install the "Bluetooth Parameters" app on the mobile phone before using Bluetooth communication.
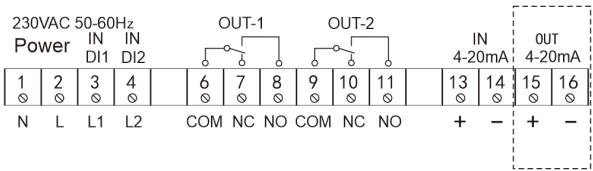
After a successful Bluetooth connection, the actuator can be switched on and off and the parameters can be adjusted directly through the mobile phone. For more information, please consult.

Output torque

Type	SAM 4P	SAM 5P
Torque /N·m	8	25

Wiring

SAM 4P/SAM 5P

Terminal 1, 2 is mains voltage, 220 V AC.

Terminal 4, 3 is logic signal "input 1", "input 2".

Terminal 6～11 is feedback, normally open/closed dry contacts.

Terminal 13, 14 is 4-20 mA current signal input.

Terminal 15, 16 is 4-20 mA current signal feedback, only for SAM 4P..A. and SAM 5P..A.
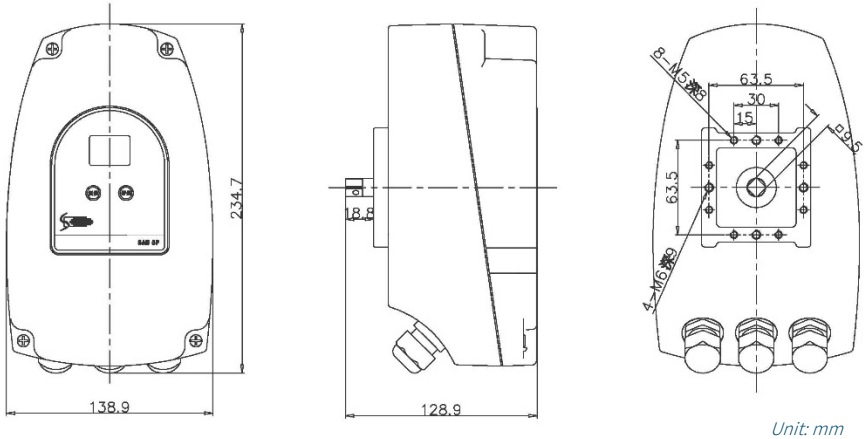
SPECIFICATION

Technical parameters

- Power supply: 220 V AC, ±10%, 50 Hz, power consumption: 9 W.

- Logic input: 220 V AC, ±10%, 50 Hz, current: 5 mA.

- Current input: 4～20 mA, internal resistance: 500 Ω.

- Relay output: dry contact signal, contact capacity: 220 V AC, 2 A.

- Current feedback: 4～20 mA, accuracy: 1%.
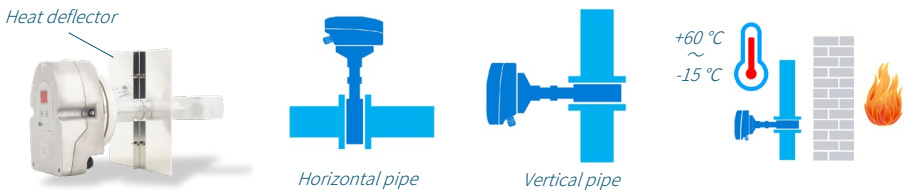
Dimensions

SAM 4P

Unit: mm

SAM 5P
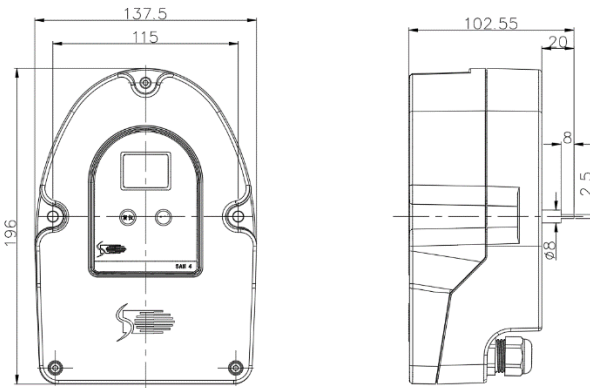
Unit: mm

INSTALLATION

- Generally used with butterfly valve HTB\SKA\SKG or linear flow control valve AKV.

- When matched with hot air butterfly valve HTB, a heat deflector should be installed, and the maximum applicable medium temperature is 450 ℃.

- Installed facing outwards or upwards, reserving enough space for operating and wiring.

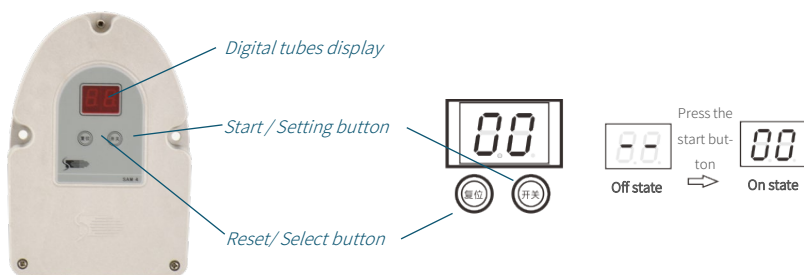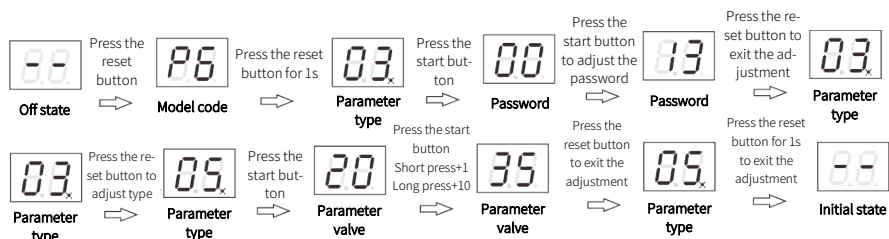- Protection class: IP 54, ambient temperature: -15～60 ℃. Install away from heat sources

Heat deflector

Horizontal pipe

Vertical pipe

+60 ℃
～
-15 ℃

Wiring

- Signal and control line: max. 2.5 mm²/AWG 14.

OPERATION

Operation panel

Digital tubes display

Start / Setting button

Reset/ Select button

Off state ⇨ On state

Press the start button

Parameter viewing and setting

Off state

Press the reset button ⇨ Model code

Press the reset button for 1s ⇨ Parameter type

Press the start button ⇨ Password

Press the start button to adjust the password ⇨ Password

Press the reset button to exit the adjustment ⇨ Parameter type

Parameter type

Press the reset button to adjust type ⇨ Parameter type

Press the start button ⇨ Parameter valve

Press the start button Short press+1 Long press+10 ⇨ Parameter valve

Press the reset button to exit the adjustment ⇨ Parameter type

Press the reset button for 1s to exit the adjustment ⇨ Initial state

Manual mode

Off state

Press the reset button for 2s, then press the start button ⇨ Manual mode

Press the reset button shortly, +1° ⇨ Opening: 10°

Press the reset button for 1s, +10° ⇨ Opening: 11°

Press the start button shortly, -1° ⇨ Opening: 10°

Opening: 10°

Press the start button for 1 s, -10° ⇨ Opening: 0°

Press the reset button for 2s, then press the start button ⇨ Off state

GUANGZHOU SINON   www.gzsinon.net   020- 84581309

Mode 1

Run within the set low and high range.

Input 1	Input 2	Valve position
On		High
Off		Low
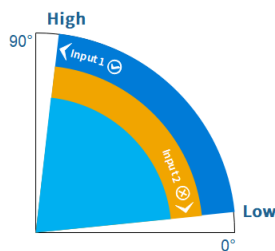
Mode 2

Run within the set low, middle and high range.

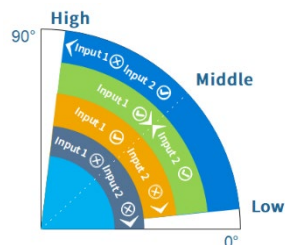| Input 1	Input 2	Valve position
On	On	High
On	Off	High
Off	On	Middle
Off	Off	Low
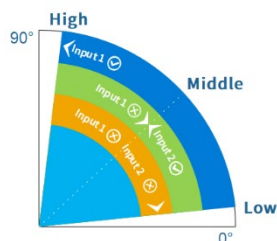
Mode 3

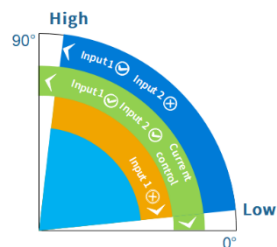Run within the closed position and the set low, medium and high range.

Input 1	Input 2	Valve position
On	On	Middle
On	Off	Low
Off	On	High
Off	Off	Closed

Mode 4

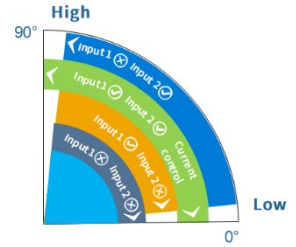Run within the set low and high range, with current control.

Input 1	Input 2	Valve position
On	On	4～20mA signal
On	Off	High
Off	On	Low
Off	Off	Low

Mode 5

Run within closed position and the set low and high range with current control.

Input 1	Input 2	Valve position
On	On	4～20mA signal
On	Off	Low
Off	On	High
Off	Off	Closed

Mode 6

Run within the set low and high range, with current control, two different ratios of current to valve position can be set respectively.
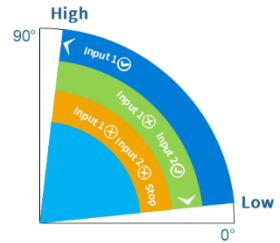
Input 1	Input 2	Valve position
On	On	4～20mA signal 2
On	Off	4～20mA signal 1
Off	On	High
Off	Off	Low
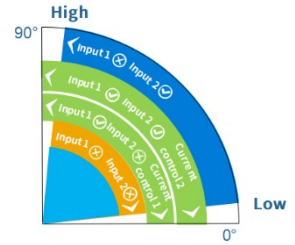
Mode 7

Three-point mode. Run within the set low and high range.

Input 1	Input 2	Valve position
On		High
Off	On	Low
Off	Off	Stop

Fault code

Fault code	Fault description
U1-U5	The code U1-U5 indicates that the positioning is in progress. The positioning has failed if the display time exceeds 20s, and it needs to be re-powered on or reset.
A1	Angle deviation, reset or re-power on positioning
A2	Temperature is too high
A3	Current error, check if the current exceeds the range of 4～20mA
E1	Parameter error, check whether the parameter setting is wrong
E2	Zero position error, check the micro switch
E3	Angle error, check the gear box and micro switch
E4	Motor failure, check the motor