2018

SATION-RCU User Manual

The user manual refer to the following device：

SATION-RM0448.1611

SATION-RM0449.1611

Zhuhai Sation Technology Co., Ltd

2018-4-13

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Version

Version No.	Release Date	Description
V1.0	April 13rd, 2018	1st Release

Notice

1. Please read this user manual carefully before using the product.
2. This product is used in indoor environment and installed in electrical control box.
3. Please install this product in a dry and ventilated place.
4. Before power on, please confirm the input voltage according to the manual; after power on, please confirm the normal output voltage before connecting to the control bus.
5. Please make sure the secure shell is in good condition, if the shell is damaged, please stop using to avoid accident.
6. This product is NOT a toy, please make sure it is out of children touch.
7. Only be suitable for EIB/KNX system bus.
8. Others:
   The below sign indicates this product can't be dealt as ordinary family rubbish, in order to avoid the possible environment and human health harm caused by the electrical waste, this product must follow recovery processing. Please contact the local recycling department after this product is scrapped, to make sure it can go as the right waste processing procedure.

1 Technical Parameter

Power Supply	Power Input	10- 30VDC
	KNX-BUS power	DC 21V-31V
	Static bus current	< 6mA
	EIB/KNX bus	It is required to use the KNX standard double stranded cable (0.8mm in diameter) and the KNX bus terminal
Main Functions	Switch Actuator	4-fold,16A,with current measurement
	Shutter Actuator	2-fold, motor control
	Fan Coil Actuator	Control of 3-speed fans/ventilator convectors, Control thermal heating and cooling valves
	0~10V LED Dimming Actuator	6-fold,0-10V output
	Universal Interface	12-fold input/output
	Audio Play	MP3 player
	RS485 Gateway	2-fold
	IP Router	1-fold
Operation and display interface	Programming button	Button assigns physical address
	Programming LED	Light on means device is in programming status
Protection type	IP20	EN60529
Protection class	II	EN61140
Temperature range	Operation	-5℃...+45℃
	Storage	-25℃...+55℃
	Transport	-30℃...+70℃
Environmental Requirement	Max air humidity	93%, except moisture condensation
Specifications	Volume	126mm*90mm*63 mm
	Weight	Around 580g
	Installation	Standard 35mm U-shape rail of the distribution box
Appearance	Grey white、P	
Certification	KNX EN50090-1 EN50090-2	

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2 Overview Functions

RCU contains Switch Actuator 4-fold, Shutter Actuator 2-fold, Fan Coil Actuator1-fold , 0 ~ 10v LED Dimming Actuator 6-fold , Universal Interface 12-fold, Audio Player, RS485 gateway2-fold , and 1 IP Router.

2.1 Switch Actuator 4-fold

Switch actuators are used on switch 4 (A, B, C, D) independent electrical communication load or three-phase load, and the maximum load current of each control contact output is 16A/220VAC.
The following functions can be set in single way:
1) with current measurement function.
2) time control function.
3) whole staircase lighting function.
4) scene function
5) logic operation: with, or, different or, gate function.
6) the status value query reply.

2.2 Shutter Actuator 2-fold

The Shutter Actuator is used to control the 2-fold independent ac motor load. The maximum continuous load current for each control contact output is 10A/220VAC.
The following functions can be set in single way:
1) shutter control function: control the clockwise or anticlockwise operation of the shutter motor;
2) time control function: delay time can be set to open/close movement;
3) scene function
When the shutter is not needed, it can be configured as 8 (A...H) switch actuator.

2.3 Fan Coil Actuator

Fan coil is used to control the fan coil units, including three fan speed control, heating and cooling valve control, the user can quickly adjust room temperature to a state of personal preference.
The following functions can be set in single way:
1) support the single-phase fan that controls up to three fan speeds.
2) support the control of heating valve and cooling valve.
3) support the control system of 2- pipe, 3- pipe and 4- pipe.

4) support manual control or automatic control of fans and valves.
5) support status value query reply.

2.4 0 ~ 10v LED Dimming Actuator 6-fold

6 0~10V LED Dimming Actuator, capable of output with 0~10V/5mA drive output from KNX bus electrical isolation. Through the control of 0~10V actuator, KNX system can realize the dimming control of the light source controlled by 0~10V, with good linearity and soft and uniform light. The 6-fold LED dimming actuator can be configured as 2 sets of RGB 3-base tone light function, driving the background wall, lamp belt and other outlet colored light source.
The following functions can be set in single way:
1) floor function
2) open/close delay function.
3) initialization Settings.
4) adjust the ratio of light and speed setting.
5) scene function
6) automatic function

2.5 Universal Interface 12-fold

The Universal Interface 12-fold can be configured for input or output. Input support passive and active input two ways, input system and KNX system electrical isolation; Output 12VDC level is used to control load.
Combined input functions:
1) dimming function: customize one to lighten and the other to dim.
2) shutter control: customize one to move and the other to stop.
3) switch function: one of them is opened and the other is closed.
Independent input functions:
1) switch function: edge control, edge flip, state transmission, fixed value transmission, long and short input control.
2) scene function: configure scene number.
3) one-key dimming: short input switch, long input dimming.
4) one key shutter: the customized long input is to move (or stop), and the short input stops (or moves).
5) counter function: count the number of edges.
Both modes support object blocking, object and/or logical operations, and electrical behavior configuration on the device.

2.6 **Audio Player**

The user can download the MP3 audio file from the USB drive, connect the USB port to the USB port, and the device can play the music. The left and right channels can be connected to an 8 ohm /10W passive speaker directly.

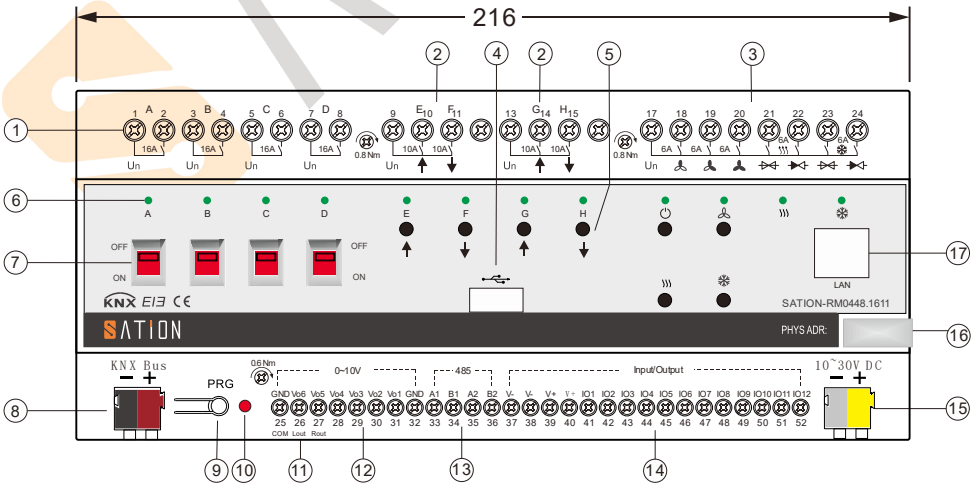
2.7 **RS485 Gateway 2-fold**

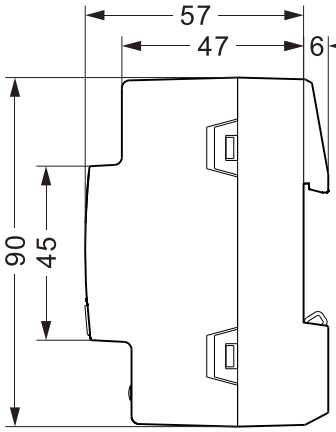
RS485 gateway is Modbus host, and the Modbus RTU (Remote Terminal Unit) protocol product is used in KNX network.

2.8 **IP Router**

The client can realize the control of the room one machine through the IP Router on the central control host. The KNX device can also be addressed and downloaded by IP Router, as well as the monitoring of the bus message data.
The main functions of IP Router are as follows:
1) complete Ethernet and line coupling, intra-domain message exchange.
2) automatically aware and set the network baud rate (10/100mb)
3) filtering, blocking and gateway of group message.

3 Dimensioned Drawing



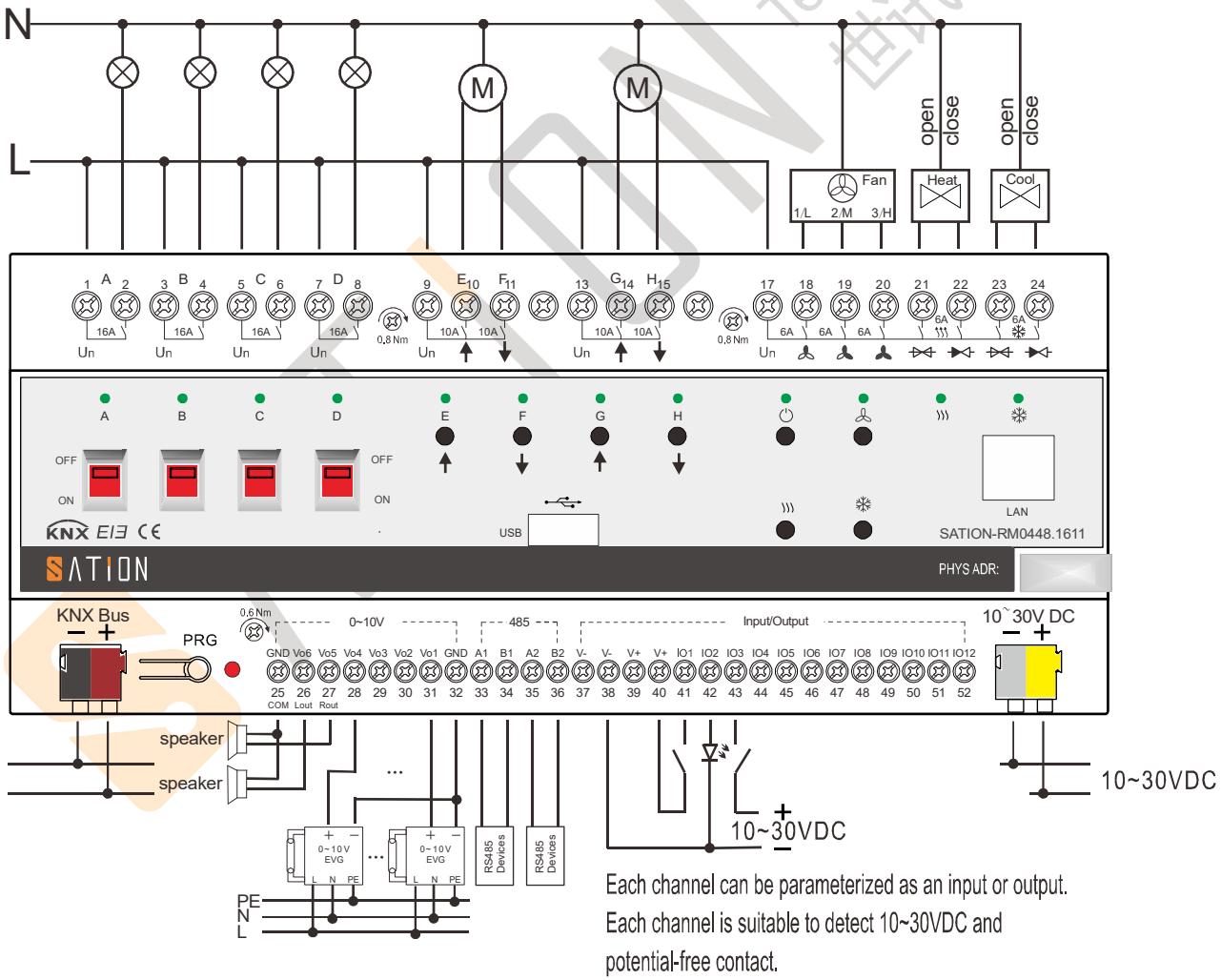


Unit: mm

1：Switch Actuator connection terminal
2：Shutter Actuator connection terminal
3：Fan Coil Actuator connection terminal
4：USB interface
5：Manual operation button
6：State display light

7：Switch Actuator manual lever
8：KNX connection terminal
9：Programming button
10：Programming display light
11：Loudspeaker connection terminal
12：0~10V LED Dimming Actuator connection terminal
13：RS485 Gateway connection terminal
14：Universal Interface 12-fold connection terminal
15：10~30VDC power input connection terminal
16：Physical address tag card.
17：IP Router interface

4 Application Wiring Diagram



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