SRAC-23-ZBS / SRAC-23B-ZBS / SRAC-23B-ZBSR
AC Powered Indoor Siren

Introduction

SRAC-23(B)-ZBS is an AC Powered ZigBee Indoor Siren. It is capable of raising alarm upon receiving alarm signal from the coordinator in the ZigBee network when an alarm is activated. During the alarm, the siren will sound alarm with its built-in buzzer.

The Indoor Siren utilizes ZigBee technology for wireless signal transmission. ZigBee is a wireless communication protocol that is reliable and has low power consumption and high transmission efficiency. Based on IEEE802.15.4 standard, ZigBee allows a large amount of devices to be included in a network and coordinated for data exchange and signal transmission.

● *Model*

The Indoor Siren includes the following models:

SRAC-23-ZBS: Standard Indoor Siren

SRAC-23B-ZBS: Features built-in rechargeable battery to serve as backup power source when the Siren is unplugged from AC power.

SRAC-23B-ZBSR: Features built-in rechargeable battery and ZigBee network router function

| Model No.	Rechargeable Battery	ZigBee Router
SRAC-23-ZBS	No	No
SRAC-23B-ZBS	Yes	No
SRAC-23B-ZBSR	Yes	Yes

Parts Identification

1. Function Button/LED Indicator

Function Button Usage:

- Press once to send a supervision signal.
- Press and hold the button for 10 seconds then release to reset the Indoor Siren.
- Press and hold the button for 3 seconds to change indication beep volume.

LED Indicator:

- One Flash:
  The security system is armed.
- Two flashes:
  The security system is disarmed
  The Indoor Siren has successfully joined a ZigBee network
- One Flash every 20 minutes **(SRAC-23(B)-ZBS Only)**
  The Indoor Siren has not joined any ZigBee network, or has lost connection to its current ZigBee network.
- Continuous Flash:
  The Siren is alarming.
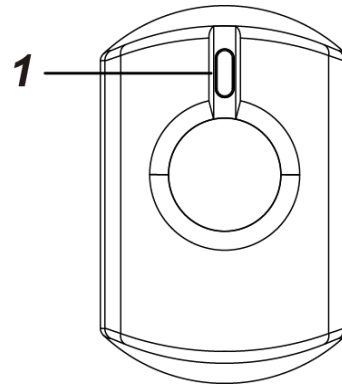
Features

● *Alarm Activation*

When an alarm is activated, the Indoor Siren will activate its buzzer and the LED indicator will flash continuously while the siren is alarming. If the alarm system control panel has programmed alarm duration, the Siren will be activated according to panel alarm length. If the alarm system does not have alarm duration programmed, the Siren will be activated for 15 minutes.

- ● *Audio Status Indication*

  - ● The Indoor Siren activates different audio sounds according to different statuses of the security system, as listed in table on the right:
  - ● You can change the volume of the indication beeping sound between High and Low by pressing and holding the learn button for 3 seconds. The factory default volume is set to Low.

	Siren Audio
Arm/Home	1 beep
Disarm	2 beeps
Entry/Exit Sound	Count-down beeps

- ● *Power Supply*

  The Siren is powered by AC power; plug the Siren into the power socket to activate the Siren. The Siren will enter normal operation mode.

  SRAC-23B-ZBS and SRAC-23B-ZBSR models have a rechargeable battery inside that serves as backup when the Siren is unplugged from AC power. The battery will be charged automatically when the Siren is plugged. It takes about 72 hours to fully charge the battery.

- ● *Low Battery Detection (SRAC-23B-ZBS / SRAC-23B-ZBSR only)*

  After AC power failure, the Siren will transmit a Low Battery signal to The Control Panel when low battery voltage is detected. To restore battery, re-plug AC power into the power socket. After 12 hours, the Siren will transmit a low battery restored notification to the Control Panel.

- ● *AC Failure Detection*

  Whenever the Siren is removed from the power socket, the siren will transmit an AC fault signal to the coordinator to notify the situation and switch to its internal battery for power supply.

  When the Siren is plugged in again on the power socket, it will send an AC power restore signal to the coordinator.

- ● *Supervision*

  The Indoor Siren will transmit a supervision signal to report its condition regularly according to user setting. The factory default interval is 30 minutes. The user can also press the Function Button once to transmit a supervision signal manually.

ZigBee Network Setup

- ● *ZigBee Device Guideline*

  ZigBee is a wireless communication protocol that is reliable and has low power consumption and high transmission efficiency. Based on IEEE802.15.4 standard, ZigBee allows a large amount of devices to be included in a network and coordinated for data exchange and signal transmission.

  Due to the fundamental structure of ZigBee network, ZigBee device will actively seek and join network after powering on. Since performing a task in connecting network may consume some power, it is required to follow the instructions to avoid draining battery of a ZigBee device

  - Ensure your ZigBee network router or coordinator is powered on before powering on the ZigBee device.
  - Ensure the ZigBee network router or coordinator is powered on and within range while a ZigBee device is in use.
  - Do not remove a ZigBee device from the ZigBee network router or coordinator without powering down the ZigBee device.

Joining the ZigBee Network

As a ZigBee device, the Indoor Siren needs to join a ZigBee network to send and receive alarm signal. Please follow the steps below to join the Indoor Siren into the ZigBee network.

1. Plug the Indoor Siren into a power outlet.
2. Press and hold the function button for 10 seconds as the Siren resets and starts searching for existing ZigBee network. Please make sure the permit-to-join feature on the router or coordinator of your ZigBee network is enabled.
3. If the Siren successfully joins a ZigBee network, the LED Indicator will flash twice to confirm.
4. After joining the ZigBee network, the Indoor Siren will be registered in the security system in the network automatically. Please check the security system control panel or CIE (Control and Indicating Equipment) to confirm if joining and registration is successful.
5. For SRAC-23(B)-ZBS, after joining the ZigBee network, if the Siren loses connection to its current ZigBee network, the LED indicator will flash every 20 minutes to indicate. Please check your ZigBee network condition and siren signal range and correct the condition.

- ### *Removing Device from ZigBee Network (Factory Reset)*

    To remove the Siren from current ZigBee network, the Siren must be put to Factory Reset to complete device removal. Factory Reset function will clear the device of its stored setting information and prompt the Siren to search for new ZigBee network.

    Before removing device, make sure the Siren is within current ZigBee network signal range

    1. Press and hold the function button for 10 seconds, then release the button to reset Siren.
    2. Upon reset, the Siren will clear current ZigBee network setting and transmit signal to ZigBee coordinator to remove itself from current ZigBee network. It will then actively search for available ZigBee network again and join the network automatically.

- ### *ZigBee Router Device Capacity (SRAC-23B-ZBSR)*

    The Siren model with Router function (SRAC-23B-ZBSR) allows other ZigBee devices to join the ZigBee Network through the Router. It has maximum capacity of 40 ZigBee devices or routers

Appendix (For developers only.)

- ### *Indoor Siren Cluster ID*

Device ID: IAS Warning Device: 0x0403 Endpoint: 0x01	
Server Side	**Client Side**
Mandatory	
Basic (0x0000)	*None*
Identify(0x0003)	
IAS Zone(0x0500)	
IAS WD(0x0502)	
Optional	
None	*None*

- ### *Attribute of Basic Cluster Information*

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	*ZCLVersion*	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x01	M
0x0001	ApplicationVersion	Unsigned 8-bit integer	0x00 – 0xff	Read only	0x00	O
0x0003	*HWVersion*	Unsigned 8-bit integer	0x00 –0xff	Read only	0	O
0x0004	*ManufacturerName*	Character String	0 – 32 bytes	Read only	Climax Technology	O
0x0005	*ModelIdentifier*	Character String	0 – 32 bytes	Read only	(Model Version)	O
0x0006	*DateCode*	Character String	0 – 16 bytes	Read only		O
0x0007	*PowerSource*	8-bit	0x00 –0xff	Read only		M
0x0010	*LocationDescription*	Character String	0 – 32 bytes	Read / Write		O
0x0011	*PhysicalEnvironment*	8-bit	0x00 –0xff	Read / Write	0x00	O
0x0012	*DeviceEnabled*	Boolean	0x00 –0x01	Read / Write	0x01	M

- ### *Attribute of Identify Cluster Information*

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	*IdentifyTime*	Unsigned 16-bit integer	0x00 –0xffff	Read / Write	0x0000	M

- ### *Attribute of IAS Zone Cluster Information*

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	*ZoneState*	8-bit	All	Read	0x00	M

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
		Enumeration		only		
0x0001	*ZoneType*	16-bit Enumeration	All	Read only		M
0x0002	*ZoneStatus*	16-bit bitmap	All	Read only	0x00	M
0x0010	*IAS_CIE_ADDRESS*	IEEE ADDRESS	Valid 64bit IEEE address	Read / Write		M
0x0011	*ZONE_ID*	Unsigned 8-bit integer	All	Read only	0xFF	M

- ***Attribute of IAS WD Cluster Information***

Identifier	Name	Type	Range	Access	Default	Mandatory / Optional
0x0000	MaxDuration	Unsigned 16-bit integer	0x00 –0xfffe	Read / Write	240	M