Status Display (SSL-1ZBS)

Introduction

SSL-1ZBS is a ZigBee Status Display designed to display the current status of the system.

The Status Display utilizes ZigBee technology for wireless signal transmission. ZigBee is a wireless communication protocol that is reliable, has low power consumption and high transmission efficiency. Based on the 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.

The Status Display serves as an end device in the ZigBee network. It can be included in the ZigBee network but cannot permit any other ZigBee device to join the network through the Status Display.

Device Introduction

1. **LED Display**

   System Status:
   - **Off:** Disarmed Mode.
   - **Flashes Green once every 4 seconds:** Armed or Home Armed Mode.
   - **Flashes Red once every 3 seconds:** Alarming.

   ZigBee Status
   - **Flashes Red once:** Pressing and holding the Function Button for 10 seconds to Factory Reset.
   - **Flashes Red twice:** The Status Display has successfully joined a ZigBee network.
   - **Flashes Red once every 20 minutes:** The Status Display has lost connection to its current ZigBee network.
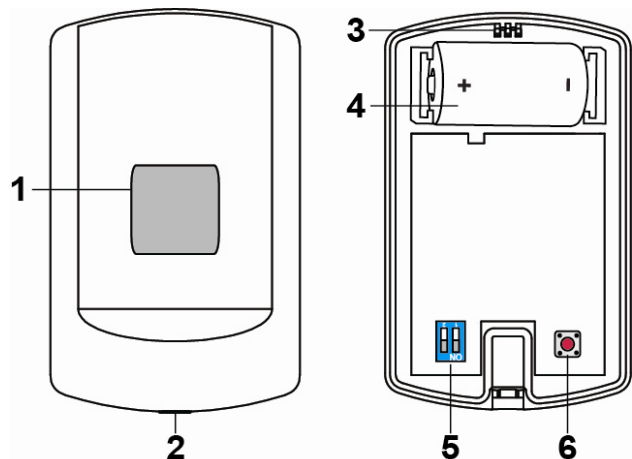
2. **Cover-Fixing Screw**

3. **Fixing Hook**

4. **Battery Compartment**

5. **DIP Switch (Currently Reserved)**

6. **Function Button**

   - Press once to send a supervisory signal to the coordinator.
   - Press and hold the button for 10 seconds to reset the Status Display.

Features

- **_Battery and Low Battery Detection_**

   The Status Display is powered by one CR123A 3V Lithium battery.
   The Status Display features Low Battery Detection function. When the battery voltage is low, the Status Display will transmit Low Battery signal to the ZigBee network coordinator.

- **_Supervisory Signal_**

   The Status Display will transmit a supervision signal to report its condition every 30 minutes.

ZigBee Network Setup

- **_ZigBee Device Guideline_**

   ZigBee is a wireless communication protocol that is reliable, 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 inserting battery into 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 removing the battery from a ZigBee device.

● *Joining the ZigBee Network*

As a ZigBee device, the Status Display needs to join a ZigBee network to connect to the power device. Please follow the steps bellow to join the Status Display into the ZigBee network.

1. Detach the Top Cover and Base assembly by loosening the Cover-Fixing Screw using a Philips screwdriver.
2. Press and hold the Function Button for 10 seconds for the Status Display to search and join an existing ZigBee network. At the 10th second, the LED Display will flash red once. Please make sure to enable the permit-join feature on the router or coordinator of your ZigBee network
3. If the Status Display successfully joins a ZigBee network, the LED Display will flash red twice to confirm.
4. After joining the ZigBee network, the Status Display will be registered in the network automatically. Please check the ZigBee network coordinator, system control panel or CIE (Control and Indicating Equipment) to confirm if joining and registration is successful.
5. If network joining and registration is unsuccessful, please check your ZigBee network coordinator, control panel or CIE setting to ensure the permit-join function is available, and then use the Factory Reset function below to join the ZigBee network.

● *Removing Device from ZigBee Network (Factory Reset)*

To remove the Status Display from current ZigBee network, the Status Display 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 Status Display to search for new ZigBee network.

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

1. Press and hold the function button for 10 seconds, then release the button to reset Status Display.
2. Upon reset, the Status Display 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.

Installation

● *Mounting the Status Display*

The Status Display can be mounted using two methods: Self-adhesive or Screw mounting.

Self adhesive mounting

1. Clean the surface with a suitable degreaser.
2. Remove the protective covering from one side of double-sided adhesive pad and firmly apply to the back of the device.
3. Remove the other covering and firmly place/press the device in the desired location.

Do not use the Self-adhesive mounting method on poorly painted and/or rough surfaces.

Screw Mounting

The base of the Status Display has two screw knockouts, where the plastic is thinner for mounting purposes. To mount the Status Display:

1. Detach the Top Cover and Base assembly by loosening the Cover-Fixing Screw using a Philips screwdriver.
2. Break through the knockouts on the base.
3. Use the holes as a template to drill two holes and insert the wall plugs.
4. Screw the base into the wall plugs.
5. Replace the top cover over the base by hooking the base onto the fixing hook and pushing the cover towards the base.
6. Secure and screw the top cover back on to its base using a Philips screwdriver.

Base Knockouts
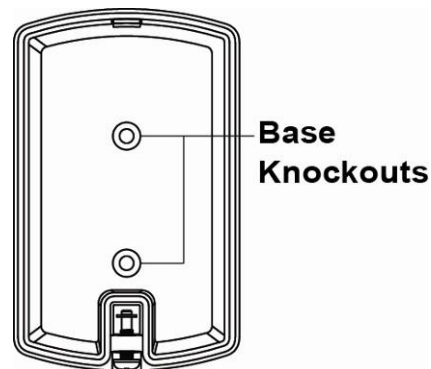
Appendix (For developers only)

- ### *Status Display Cluster ID*

Device ID: SSL (0x03FB)	
Endpoint: 0x01	
Server Side	**Client Side**
Mandatory	
Basic (0x0000)	Basic (0x0000)
Identify(0x0003)	
IAS Zone(0x0500)	
IAS WD(0x502)	
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	0x01	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
0x0001	*ZoneState*	8-bit Enumeration	All	Read only	0x00	M
0x0002	*ZoneType*	8-bit Enumeration	All	Read only		M
0x0003	*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	180	M

Federal Communication Commission Interference Statement

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 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.

FCC Caution: To assure continued compliance, any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate this equipment. (Example - use only shielded interface cables when connecting to computer or peripheral devices).

FCC Radiation Exposure Statement

This equipment complies with FCC RF radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with a minimum distance of 20 centimeters between the radiator and your body.

This transmitter must not be co-located or operating in conjunction with any other antenna or transmitter.

The antennas used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter.

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.