

Notification Appliances

'Acend' Intelligent Series – Low Frequency Sounder | Sounder- Strobes

Applications : Indoor, Ceiling-Only

Architect & Engineer Specifications

- Compatible with the Siemens Cerberus PRO Modular and Desigo Modular Fire Alarm Control Panels (FACPs) via the XNLC card
- Self-Testing Capability with Disturbance-Free Testing (DFT^{technology})
 - Momentary Functional Test and Comprehensive Test meet NFPA 72 functional test requirements
- Addressable Devices with unique digital addresses
- Built-in ISO^{Technology}
- Cloud Connectivity and Compatibility
- Energy Efficient and Sustainable
 - Siemens EcoTech Certification
- LED Status Indicator
- Six (6) Configurable Candela settings: 15cd | 30cd | 75cd | 110cd | 135cd | 185cd
- Five (5) configurable Tone Pattern settings
- Low frequency sounder codes in each appliance
 - suitable for sleeping areas per NFPA 72
 - low frequency devices per UL464
 - Special Application 16 to 32VDC (UL / ULC listed)
- Uses the 520hz square wave
- Tamper Resistant
- UL 1480 | UL 1638 | UL 1971 Listed
- ULC 526 | ULC 541 Listed
- FCC Part 15 and RoHS Compliant

Product Overview

The Acend™ Intelligent notification appliances are the first of their kind; addressable, self-testing and with built-in isolators (ISO^{Technology}™). These intelligent notification appliances are designed for smart connectivity and greater efficiency to meet the ever evolving industry needs. These low frequency sounders and sounder strobes utilize the 520hz square wave tone specially designed for sleeping areas.

Acend™ Intelligent series notification appliances feature the latest cutting-edge technology:

- **Self-Testing Capability** – Self-testing ensures smoother operations, increases up-time, boosts inspection accuracy, and streamlines testing and inspection procedures. Cloud-Exclusive Disturbance-Free Testing (DFT^{technology}) reduces disruptions and improves business continuity. Available self-tests range from the **Discreet Test** (Disturbance-Free) to the **Momentary Functional Test** (Chirp Test), all the way up to the **Comprehensive Test** (Full System Test). The Comprehensive Test and the Momentary Functional Test meet annual functional test requirements of NFPA 72. (**Note:** Visual inspection is still required.)
- **Addressability** – Every 'Acend' Intelligent series device has a unique digital address. This addressable feature allows for individual customizations in a single device or categorization of devices into logical groups. The addressable intelligent devices can be programmed for test or activation on multiple notification zones on one circuit. Devices can also be programmed to activate/test on a zone level, to prevent interruption in other zones and even on a single device level. Configuration of various device attributes is available using the Modular system's ZEUS configuration tool.
- **Built-in ISO^{Technology}™** – The built-in 'Class X' isolation technology allows seamless integration, efficient maintenance and quicker troubleshooting of these appliances. This isolation feature greatly improves reliability, circuit integrity and provides advanced addressable fault finding. It also streamlines system design and use of resources, making installation and maintenance costs more efficient. With 'Class X' isolation, a short circuit situation between two appliances will not shut down the circuit, providing great system survivability.
- **LED Status Indicator** – The 'Acend' Intelligent series notification appliances are designed with a built-in LED, which indicates the real-time system status such as *Alarm, Trouble, and Normal*.
- **Cloud Connectivity** - Every intelligent addressable appliance in this series is designed with automation in mind. By connecting to the Modular system panels to the cloud, these appliances can provide real-time information like device status, test reports, troubles, etc. They can also be monitored through a cloud interface and initiate self-tests via *Building X Fire Apps*.

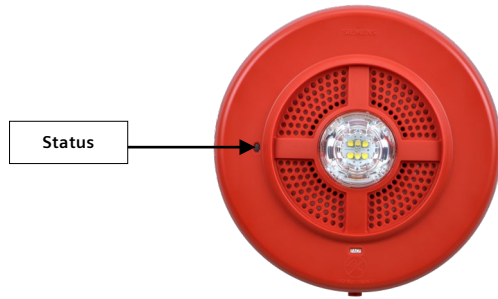


Sounder



Sounder-Strobe





LED Status Indicator

| Status | Color | Flashing Pattern | Description |
|---------|--------|------------------|--|
| Alarm | Red | 1× per 10s | Indicates that fire alarm and signaling is activated. |
| Trouble | Yellow | 1× per 4s | Indicates that the appliance has unresolved reported troubles. |
| Normal | Green | 1× per 10s | Indicates that the appliance works in normal mode. |

Product Overview (cont.)

All 'Acend' Intelligent series devices have Siemens **EcoTech** Certification, an environmental self-declaration, based on sustainability evaluations. These notification appliances use recycled materials and sustainable packaging, minimizing waste throughout their lifecycle and reducing environmental impact.

These appliances are specifically designed for Lower Energy consumption and can be refitted with field adaptable hardware including alternate covers and colored lenses.

All the 'Acend' Intelligent devices have T-tap compatibility. **Note:** To take full advantage of the ISOtechnology features and to achieve 'Class X' systems, T-Tapping should be avoided.

Specifications

Models 'SA-LFS-C' - series Sounders and 'SA-LFSS-C' - series Sounder-Strobes can be programmed with the Modular Panel ZEUS configuration tool. With the ability to utilize unique logic options, different colored strobes can be in the same room or in a zone while activation can be based on specific inputs, such as Alarm, Gas, Smoke, Heat, etc. The tone-patterns can be programmed to play different tones for different priorities depending on various inputs.

Note: The device settings like Tone patterns, Volume, Candela levels, etc. are set via the system configuration tool, not on the device itself.



The 'Acend' Intelligent low frequency sounder and sounder-strobe appliances have five (5) configurable Tone Pattern settings:

- Continuous (UL Listed for Fire)
- Temporal Code 3 ANSI S3.41 Temporal Pattern (UL Listed for Fire)
- Temporal Code 4 [Temporal 4 for carbon monoxide notification, switching to the low power mode after 4 mins (UL Listed for CO)]
- March Time 120 (*Horn* (0.2375 Sec. ON/0.2375 Sec. OFF/Repeat)
- Canadian March Time 30 (0.2 Sec ON/1.8 Sec OFF/Repeat)

All appliances meet the NFPA72 20 millisecond light pulse duration code requirements and are rated as low frequency devices per UL464, suitable for sleeping areas per NFPA 72. In addition, all appliances are UL/ULC listed as "Special Application 16 to 32VDC" and compliant with applicable clauses of FCC Part 15.

These energy efficient notification appliances are designed for low current draw (16 – 32 VDC) with a Flash Rate of 1 Hz.

The sounder-strobe devices have six (6) configurable candela settings: 15cd | 30cd | 75cd | 110cd | 135cd | 185cd

All the 'Acend' Intelligent appliances have convenient mounting options for faster and easier installation.

These appliances are tamper-resistant when used in conjunction with the LK-11 locking screw.

All inputs employ three IN / OUT wiring terminals, using #12 to #18 AWG wiring.

These Low-frequency Sounder and Sounder-Strobe appliances are UL/ULC listed for indoor Ceiling-mount operations.

Standard listings for these appliances are: UL464, UL1638, UL1971 | ULC 525, ULC 526 | FCC Part 15 | ROHS

Compatibility

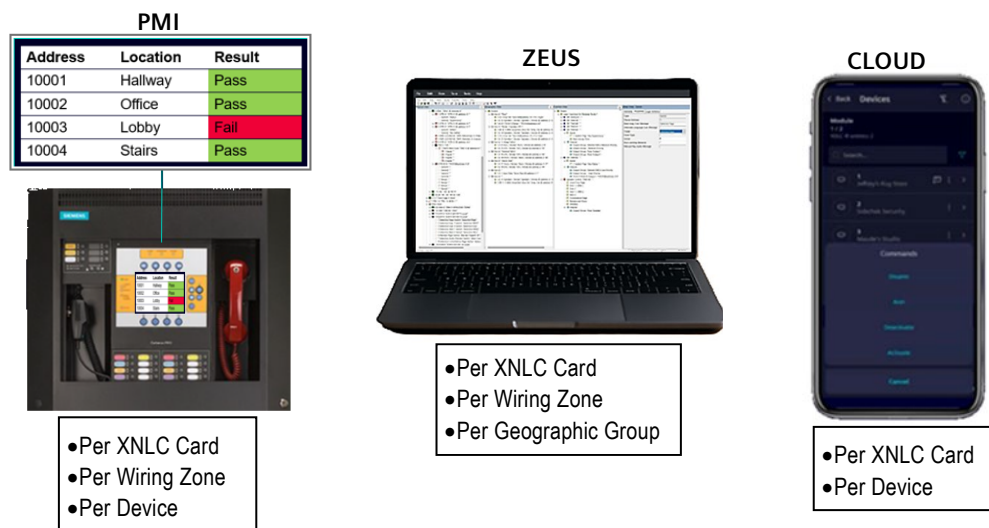
The Acend Intelligent appliances are not backwards compatible with conventional notification appliances. The intelligent appliances do not get connected to the traditional NAC circuits, but rather a dedicated Acend Intelligent circuit off of the XNLC card of the modular panel. They are not compatible with any other Siemens panels, 3rd party panels, or PADs. Acend Intelligent appliances are not able to be installed on the same circuits as initiating devices (even though they may all be addressable), and must be on their own dedicated circuits.

Self-Testing with DFTtechnology

The Acend Intelligent devices offer powerful and unique Self-Testing options. Comprehensive self-testing can be completed in a matter of seconds for all devices on an entire system.

- **Discreet Test (Disturbance-Free)**
 - Strobes may produce a very brief dim-glow and audibles should be limited to a click.
 - Small currents are passed through the audible and visible (strobe) elements.
 - Checks elements for electrical viability.
 - Superior to self-supervision. Self-supervision happens continuously and automatically on all Acend intelligent appliances, but the supervision does not have nearly the same diagnostic range as the discreet self-test.
- **Momentary Functional Test (Chirp Test)**
 - Strobes will produce a brief flash and audibles will chirp.
 - Audible and visible elements are activated and sensors are used to detect the presence of sound and/or light.
 - This ensures the functionality of the elements. Bear in mind that this does not verify that mechanical means have not been used to inhibit the device, therefore visual checks should still be performed.
 - Meets NFPA72 Annual Functional Test requirements.
NOTE: Visual inspection is still required.
- **Comprehensive Test (Full System Test)**
 - Strobes flash and audibles produce sound for approximately 15 seconds.
 - Performs at pre-configured light and sound levels / patterns and built-in sensors verify they hear a tone and see light.
 - Can select any notification priority (Alarm, Alert, Aux).
 - Meets NFPA72 Annual Functional Test requirements.
NOTE: Visual inspection is still required.

There are 3 Ways to Initiate Self-Tests: at the **Person-Machine Interface (PMI)**, using **ZEUS** configuration tool, or via **Cloud**.



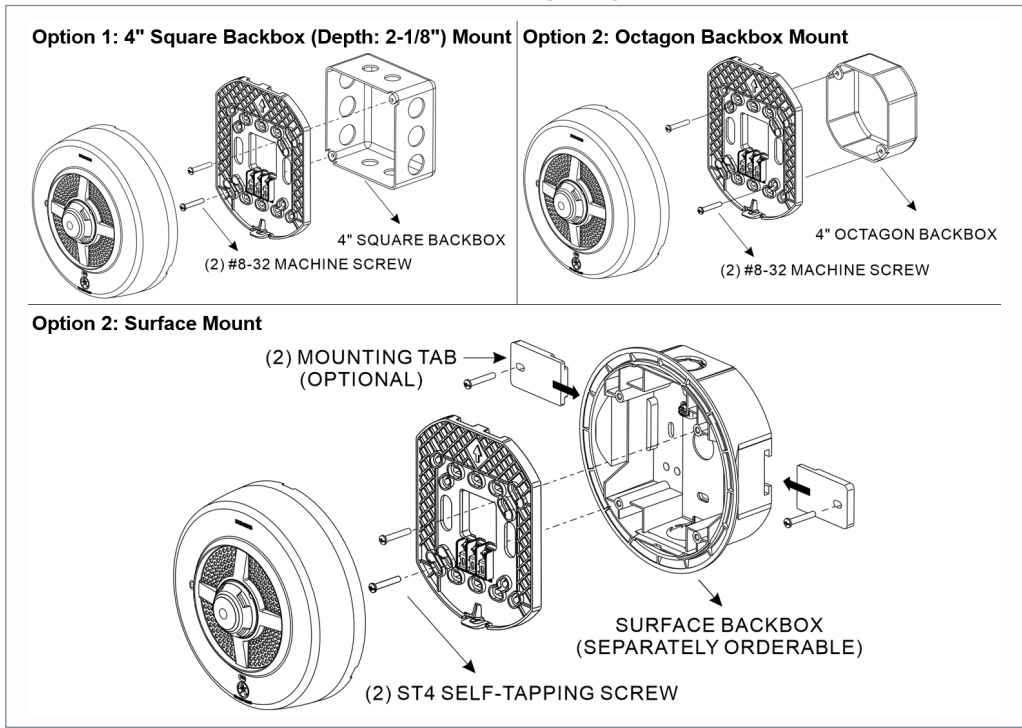
Note: Acend Intelligent appliances will sync across XNLC cards in the same panel including transponders networked using NIC-C's or XINC's, using Ethernet or Fiber modules.

Accessories (Addressability / Testing)

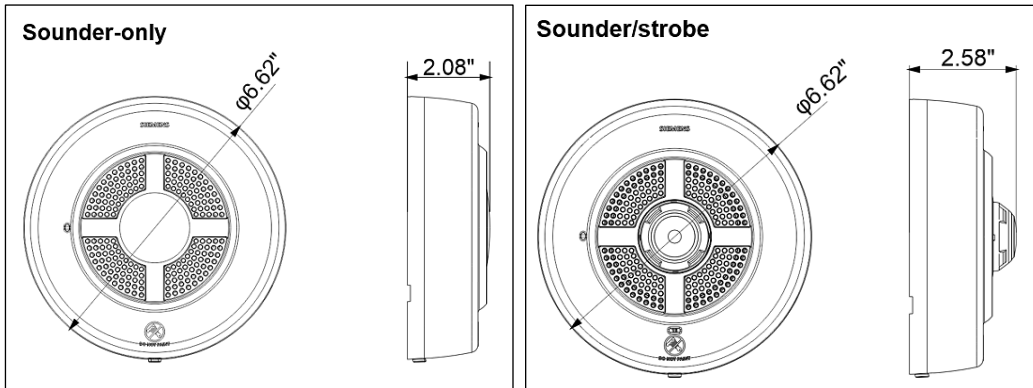
Acend DPU/FFA Adapter for Programmer/Tester

The ACEND-ADPT Adapter is a mechanical interface, compatible with the DPU and the Fire Field Assist (FFA). This adapter is required for assigning addresses to the Acend Intelligent appliances and/or interacting with the FFA's additional features (i.e. self-testing). **Note:** Only one adapter is needed per DPU/FFA, not per notification appliance. (Refer to Datasheet# 2622 for more information)

Mounting Diagrams

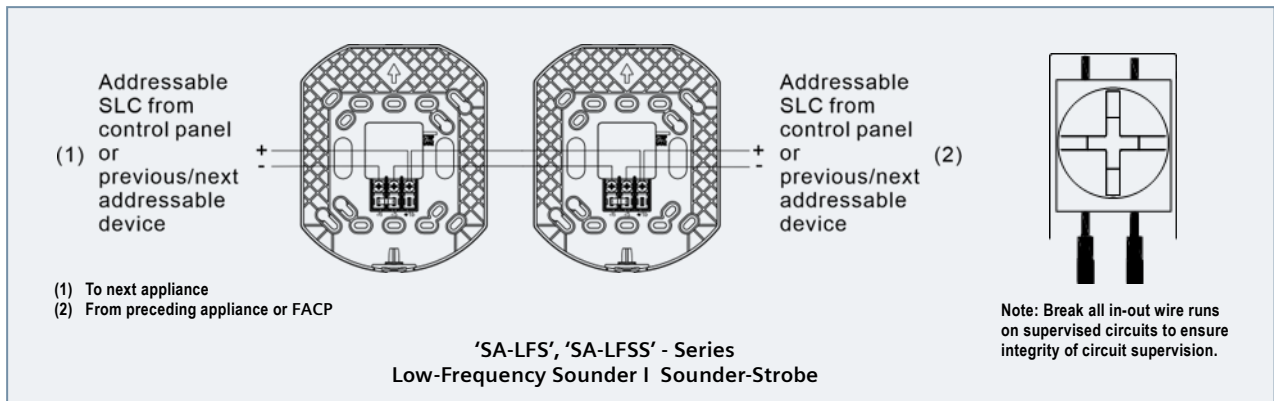


Dimensions



The dimensions and footprint are the same between Acend conventional and intelligent appliances.

Wiring Diagrams



Electrical Ratings

Sound Output Ratings (Max.)

| Reverberant dBA Per UL 464 at Voltage Range 16V - 32V | | | | | |
|---|------------------------|--------|-----|-----|-----|
| Models : SA-LFS-C-Series & SA-LFSS-C-Series | Tone Pattern | Volume | 16V | 24V | 32V |
| | Continuous | High | 80 | 80 | 80 |
| | | Low | 77 | 77 | 77 |
| | Temporal 3 | High | 80 | 80 | 80 |
| | | Low | 77 | 77 | 77 |
| | Temporal 4, Low Power | High | 80 | 80 | 80 |
| | | Low | 77 | 77 | 77 |
| | March Time 120 | High | 80 | 80 | 80 |
| | | Low | 77 | 77 | 77 |
| | Canadian March Time 30 | High | 80 | 80 | 80 |
| | | Low | 77 | 77 | 77 |

Tone Output Ratings (UL) (Max.)

| Tone Current Draw (mA) at Voltage Range 16V - 32V | | | |
|--|---|--------|-------------------|
| Models : SA-LFS-C-Series & SA-LFSS-C-Series | Tone | Volume | Current Draw (mA) |
| | Continuous | High | 92 |
| | | Low | 33 |
| | T3 (Temporal 3 for fire evacuation) | High | 54 |
| | | Low | 25 |
| | T4, Low Power (Temporal 4 for CO notification, low power mode) | High | 54 |
| | | Low | 25 |
| | March Time 120 | High | 54 |
| | | Low | 25 |
| | Canadian March Time 30 | High | 26 |
| | | Low | 11 |

Sounder-Strobe I Output Current Draw (UL) (Max.)

| Current Draw (mA) @ Voltage Range 16V – 32V | | | | | | | | |
|---|------------------------|--------|------------------|------|------|-------|-------|-------|
| Models : SA-LFSS-C-Series | Tone | Volume | Candela Settings | | | | | |
| | | | 15cd | 30cd | 75cd | 110cd | 135cd | 185cd |
| | Continuous | High | 106 | 114 | 136 | 160 | 193 | 256 |
| | | Low | 49 | 57 | 82 | 110 | 142 | 212 |
| | T3 | High | 77 | 81 | 102 | 126 | 153 | 212 |
| | | Low | 35 | 42 | 67 | 95 | 126 | 196 |
| | T4, Low Power | High | 77 | 81 | 102 | 126 | 153 | 212 |
| | | Low | 35 | 42 | 67 | 95 | 126 | 196 |
| | March Time 120 | High | 77 | 81 | 102 | 126 | 153 | 212 |
| | | Low | 35 | 42 | 67 | 95 | 126 | 196 |
| | Canadian March Time 30 | High | 35 | 40 | 58 | 81 | 112 | 180 |
| | | Low | 18 | 26 | 49 | 78 | 110 | 178 |

Sounder I Sounder-Strobe | Supervisory Current Draw (UL)

| Models: | (Avg.) Supervisory Current (mA) |
|--------------|------------------------------------|
| SA-LFS-CR-N | 0.25 |
| SA-LFS-CW-N | |
| SA-LFSS-CR-F | 1.13 |
| SA-LFSS-CW-F | |

GENERAL NOTES:

1. Strobes are designed to flash at 1-flash-per-second minimum over their "Regulated Voltage Range."
2. NFPA-72 specifies a flash rate of 1-to-2 flashes-per-second.
3. All Candela ratings represent minimum effective Strobe intensity based on UL 1971.

Technical Data

General Properties

| 'Acend' Intelligent Series LF Sounders / Sounder-Strobes | |
|--|--|
| OPERATING TEMPERATURE: | - 32°F (0°C) to 122°F (50°C) - Dry indoor operations only |
| RELATIVE HUMIDITY: | 95% |
| STROBE OUTPUT RATING: | - 6 Configurable Candela outputs: 15cd 30cd 75cd 110cd 135cd 185cd |
| STROBE FLASH RATE: | 1 Hz |
| STROBE SYNCHRONIZATION: | Compatible with Cerberus PRO Modular and Desigo Modular Panel Systems Only (on the XNLC card) |
| INPUT POWER: | 16 to 32VDC |
| STONE SOUND OUTPUT: | High Low (Configurable) |
| STONE PATTERNS: | 5 configurable settings: - Continuous - T3 (temporal 3 for fire evacuation) - T4, low power (temporal 4 for carbon monoxide notification, switching to the low power mode after 4 minutes) - March Time 120 (Horn 0.2375 Sec. ON/0.2375 Sec. OFF/Repeat) - Canadian March Time 30 (0.2 Sec ON/1.8 Sec OFF/Repeat) |

Physical Properties





| 'Acend' Intelligent Series LF Sounders / Sounder-Strobes | |
|--|---|
| MATERIAL: | All appliances are made from environmentally friendly recyclable plastics. |
| WEIGHT: | LF Sounders: 417 gm (0.92 lb.) LF Sounder-Strobes: 449 gm (0.99 lb.) |
| LENS TYPE: | LED strobe situated in a rugged Lexan lens |
| DIMENSIONS: | Low-Frequency Sounders: 6.62" (16.8 cm.) x 2.08" (5.28 cm.) Low-Frequency Sounder-Strobes: 6.62" (16.8 cm.) x 2.58" (6.55 cm.) |

Mounting and Wiring Properties


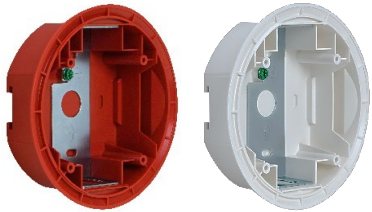




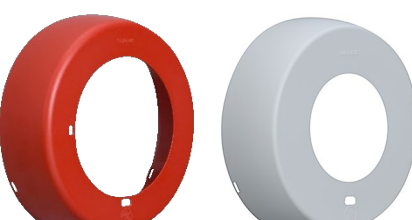
| 'Acend' Intelligent Series LF Sounders / Sounder-Strobes | |
|--|--|
| INDOOR MOUNTING: | - Ceiling-mount applications - 4" (10.2 cm.) Square Backbox Mount, Octagon Backbox Mount, Surface Backbox (Surface mount) |
| WIRING TYPE: | #12 – #18, American Wire Gauge (AWG) |

Note: Surface mount Backboxes are ordered separately.





Details for Ordering

| MODEL | PART NUMBER | APPLIANCE TYPE | MOUNTING TYPE | STROBE TYPE | FACEPLATE COLOR | FACEPLATE LETTERING | IMAGE |
|--------------|---------------|------------------------------|---------------|-------------|-----------------|---------------------|---|
| SA-LFS-CR-N | S54362-F15-A1 | Low Frequency Sounder | CEILING | - None - | RED | NO LETTERING |  |
| SA-LFS-CW-N | S54362-F15-A2 | | CEILING | - None - | WHITE | NO LETTERING |  |
| SA-LFSS-CR-F | S54362-F21-A1 | Low Frequency Sounder-Strobe | CEILING | Clear | RED | FIRE |  |
| SA-LFSS-CW-F | S54362-F21-A2 | | CEILING | Clear | WHITE | FIRE |  |

Related Hardware

| Model | Part Number | Description | Image |
|----------------|---------------|--|---|
| ACEND-ADPT | S54370-F70-A1 | Acend DPU Adapter, compatible with the DPU and Fire Field Assist (FFA). This is required for any project using Acend intelligent devices. It is used for addressing Intelligent appliances and interfacing with the programmer/tester. Only one adapter is needed per DPU/FFA, not per notification appliance. |  |
| SMB-SS-CR | S54370-F60-A1 | Red surface mount backbox for ceiling mounted low frequency sounders and sounder/strobes |  |
| SMB-SS-CW | S54370-F61-A1 | White surface mount backbox for ceiling mounted low frequency sounders and sounder/strobes | |
| SCVR-SS-CR-EMG | S54370-F41-A1 | Red plastic cover for ceiling mounted low frequency sounders and sounder/strobes with "EMERGENCY" text |  |
| SCVR-SS-CW-EMG | S54370-F42-A1 | White plastic cover for ceiling mounted sounders and sounder/strobes with "EMERGENCY" text | |
| SCVR-SS-CR-ALR | S54370-F45-A1 | Red plastic cover for ceiling mounted low frequency sounders and sounder/strobes with "ALERT" text |  |
| SCVR-SS-CW-ALR | S54370-F46-A1 | White plastic cover for ceiling mounted low frequency sounders and sounder/strobes with "ALERT" text | |
| SCVR-SS-CR-AGT | S54370-F49-A1 | Red plastic cover for ceiling mounted low frequency sounders and sounder/strobes with "AGENT" text |  |
| SCVR-SS-CW-AGT | S54370-F50-A1 | White plastic cover for ceiling mounted low frequency sounders and sounder/strobes with "AGENT" text | |
| SCVR-SS-CR-HOF | S54370-F53-A1 | Red plastic cover for ceiling mounted low frequency sounders and sounder/strobes with "HOUSE ON FIRE" logo |  |
| SCVR-SS-CW-HOF | S54370-F62-A1 | White plastic cover for ceiling mounted low frequency sounders and sounder/strobes with "HOUSE ON FIRE" logo | |
| SCVR-SS-CR-BNK | S54370-F56-A1 | Red plastic cover for ceiling mounted low frequency sounders and sounder/strobes with no text |  |
| SCVR-SS-CW-BNK | S54370-F57-A1 | White plastic cover for ceiling mounted low frequency sounders and sounder/strobes with no text | |

Related Hardware (cont.)

| Model | Part Number | Description | Image |
|----------|---------------|---|---|
| STLENS-R | S54370-F17-A1 | Red plastic translucent lens for fire alarm strobes |  |
| STLENS-A | S54370-F17-A2 | Amber plastic translucent lens for fire alarm strobes |  |
| STLENS-B | S54370-F18-A1 | Blue plastic translucent lens for fire alarm strobes |  |
| STLENS-G | S54370-F18-A2 | Green plastic translucent lens for fire alarm strobes |  |

NOTICE – The information contained in this data-sheet document is intended only as a summary and is subject to change without notice.

The product(s) described here has/have a specific instruction sheet(s) that cover various technical, limitation and liability information.

Copies of install-type, instruction sheets – as well as the *General Product Warning and Limitations* document, which also contains important data, are provided with the product. All are available from the Manufacturer.

Data contained in the aforesaid type of documentation should be consulted with a fire-safety professional before specifying or using the product.

Any further questions or assistance concerning particular problems that might arise, relative to the proper functioning of the equipment, please contact the Manufacturer.

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