

## Features

Individually addressed and controlled multi-candela TrueAlert ES A/V (audible/visible) notification appliances provide:

- Multi-candela xenon strobe with synchronized 1 Hz flash rate and with intensity *programmable from the control panel* or jumper selected as 15, 30, 75, 110, 135, or 185 cd
- Advanced addressable notification controlled by **IDNAC SLCs** providing *regulated 29 VDC* allowing strobes to operate with lower current even under battery backup
- Wiring supervision to each appliance allowing “T-tapped” connections for Class B circuits to simplify wiring (Class A circuits require in/out wiring)
- **Self-Test Mode** allows on-board sensors to detect the strobe and horn output and then report their status to the control panel
- **TrueAlert Device Reports** at the control panel detailing appliance point ID, custom label, type, and candela setting (see sample on page 3)
- **Magnet Test diagnostics** to assist checkout and testing of appliances and wiring
- **Electrical test point access** without removing cover
- Compatibility with ADA requirements; (refer to important installation information on page 3)
- Compatibility with legacy TrueAlert addressable systems for upgrade and replacement (see page 4)
- Strobe operation is listed to UL Standard 1971 and ULC Standard S526; Horn operation is listed to UL Standard 464 and ULC Standard S525

### LED Indicator and Magnet Test feature:

- Appliance LED can be selected to display each polling cycle to indicate appliance supervision
- When the controller is in diagnostic mode, the Magnet Test pulses the LED to indicate appliance address and can be set to also briefly flash the strobe and sound the horn

### Mechanical design features include:

- Rugged, high impact, flame retardant thermoplastic housing in red with white letters or white with red letters, with clear lens, available with FIRE, FEU, ALERT, FEU/FIRE, or blank lettering
- Separate covers are available to change application type on-site or for replacement
- A separate mounting plate allows wiring to be completed before appliance is mounted; use with single gang, double gang, or 4-inch square box, flush or surface mount
- Covers can be easily removed without disturbing the connected housing and avoiding trouble conditions
- In/out wiring terminals for 18 AWG to 12 AWG
- Optional mounting adapters are available to cover surface mounted electrical boxes and to adapt to Simplex 2975-9145 boxes
- Optional red wire guards (see page 2 for details)



TrueAlert ES Addressable A/Vs are Available in Red with White Lettering and White with Red Lettering

## Features (Continued)

### Audible notification appliance (horn):

- Harmonically rich output sound for either coded or steady operation
- Horns sound as Temporal Code 3, March Time pattern, continuous; or Temporal Code 4, controlled separately from visible appliances on the same two-wire circuit
- Selectable March Time rates of 20, 60, or 120 beats per minute
- Output is “high” or “low” (~5 dBA difference) selectable at the appliance or from the controller with FACP mode selected at the appliance

## Description

**TrueAlert ES addressable A/Vs** are individually addressed audible/visible notification appliances that receive power, supervision, and control signals from a Simplex fire alarm control panel providing **IDNAC** Signaling Line Circuits (SLCs). (See compatibility list on page 4.)

## Strobe Application Reference

Proper selection of visible notification is dependent on occupancy, location, local codes, and proper applications of: the *National Fire Alarm Code* (NFPA 72), ANSI A117.1; the appropriate model building code: BOCA, ICBO, or SBCCI; and the application guidelines of the Americans with Disabilities Act (ADA).

\* These products have been approved by the California State Fire Marshal (CSFM) pursuant to Section 13144.1 of the California Health and Safety Code. See CSFM Listing 7125-0026:0373 for allowable values and/or conditions concerning material presented in this document. Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. are the property of Tyco Fire Protection Products.

## TrueAlert ES Operation Advantage

**TrueAlert ES addressable appliances on IDNAC SLCs** provide separate visible and audible notification using a single two-wire circuit that also *confirms connection to the individual notification appliance's electronic circuit*. This operation increases circuit supervision integrity by providing supervision that extends beyond the appliance wiring connections.

**Reduced current allows efficient IDNAC SLC operation.** With *IDNAC SLCs*, a *constant* 29 VDC source voltage is maintained, even during battery standby, allowing strobes to operate at higher voltage with lower current and ensuring a consistent current draw and voltage drop margin under both primary power and secondary battery standby. Efficiencies include wiring distances up to 2 to 3 times farther than with conventional notification, or support for more appliances per IDNAC SLC, or use of smaller gauge wiring, or combinations of these benefits, all providing installation and maintenance savings with high assurance that appliances that operate during normal system testing will operate during worst case alarm conditions.

**Reducing Installation and Testing Time.** With separate controls on the same two-wire SLC, installation time and expense for both retrofit and new construction can be significantly reduced. When Class B wiring is used, *wiring can be "T" tapped*, allowing more savings in distance, wire, conduit (size and utilization), and overall installation efficiency. Use of Self-Test and Magnet Test features improve installation efficiency. TrueAlert device reports conveniently identify information about each connected appliance.

## Product Selection

### TrueAlert ES Wall Mount Addressable Audible/Visible Appliances

TrueAlert ES addressable A/V appliances include cover and matching mounting plate except as noted; Dimensions with Cover = 5 1/8" H x 5" W x 2 5/8" D (130 mm x 127 mm x 67 mm)

| Model*        | Cover Color | Wording | Lens Color | Model*          | Cover Color                                | Wording | Lens Color |
|---------------|-------------|---------|------------|-----------------|--|---------|------------|
| 49AV-WRF(-BA) | Red         | FIRE    | Clear      | 49AV-WRS(-BA)   | Red  | Blank   | Clear      |
| 49AV-WWF(-BA) | White       |         |            | 49AV-WWS-BA     | White                                      |         |            |
| 49AV-WRQ      | Red         | FEU     |            | 49AV-APPLW(-BA) | Select cover and mounting plate separately |         |            |

### Separate Mounting Plate

| Model       | Color | Model       | Color | Note  |
|-------------|-------|-------------|-------|---|
| 49MP-AVVOWR | Red   | 49MP-AVVOWW | White | Mounting Plate <b>is required</b> when ordering model 49AV-APPLW(-BA) |

### Separate Covers (Required when ordering model 49AV-APPLW(-BA))

| Model*       | Color | Wording | Model*       | Color | Wording  |
|--------------|-------|---------|--------------|-------|----------|
| 49AVC-WRFIRE | Red   | FIRE    | 49AVC-WRFEU  | Red   | FEU      |
| 49AVC-WWFIRE | White |         | 49AVC-WWFEU  | White |          |
| 49AVC-WRALT  | Red   | ALERT   | 49AVC-WRBLNG | Red   | FEU/FIRE |
| 49AVC-WWALT  | White |         | 49AVC-WWBLNG | White |          |
| 49AVC-WRS    | Red   | Blank   | 49AVC-WWS    | White | Blank    |

\* **Note:** (-BA) indicates model is available either with or without the -BA suffix. Model numbers ending in -BA, APPLW models, and separate mounting plates are assembled in the USA.

### Mounting Adapters and Wire Guard

| Model     | Color  | Description                 | Dimensions  |
|-----------|--|-----------------------------|---|
| 4905-9937 | Red  | Surface Mount Adapter Skirt | 5 3/8" H x 5 1/4" W x 1 5/8" D (136 mm x 133 mm x 41 mm)<br>Total depth with strobe = 4 3/8" (111 mm) |
| 4905-9940 | White  |                             |   |
| 4905-9931 | Red Adapter Plate for mounting to Simplex 2975-9145 Box (typically for retrofit, mount vertical or horizontal) |                             | 8 5/16" x 5 3/4" x 0.060" Thick (211 mm x 146 mm x 1.5 mm)  |
| 2975-9145 | Red Mounting Box, requires 4905-9931 Adapter Plate   |                             | 7 7/8" x 5 1/8" x 2 3/4" D (200 mm x 130 mm x 70 mm)  |
| 4905-9961 | Red wire guard with mounting plate, compatible with semi-flush or surface mount boxes                          |                             | 6 1/16" H x 6 1/16" W x 3 1/8" D (154 mm x 154 mm x 79 mm)  |

## TrueAlert ES Diagnostics

**Test Features.** When IDNAC SLCs are in diagnostic mode, *Self-Test* and *Magnet Test* features provide individual appliance testing. With the *Self-Test* feature, *appliance operation can be confirmed without leaving the control panel*. Additionally, each appliance's LED can be selected to pulse when it receives a supervision poll during normal operation.

**Self-Test Details.** Selecting Self-Test Mode from the control panel allows on-board sensors, depending on the device type, to detect its own strobe and/or horn output and then report their status to the control panel. Operation is by selected VNAC appliance groups and is either automatic (all briefly simultaneously activated) or individually activated by applying a magnet. (Refer to control panel data sheet for more Self-Test information, see list on page 4.)

**Silent Appliance Magnet Test.** In this test mode, in response to application of a magnet, the appliance LED pulses sequentially to conveniently indicate the appliance's address.

**Operational Appliance Magnet Test.** In this test mode, after the address is indicated by pulsing the appliance LED, the strobe will briefly flash and the horn will briefly sound to indicate proper operation.

**TrueStart Instrument Two (TSIT).** The 2nd generation of the Simplex TrueStart Test Instrument adds testing of IDNAC SLC wiring and TrueAlert ES appliances to its ability to test IDCs, NACs, and IDNet communications *before connection to the control panel*. Please contact your local Simplex representative for additional information.

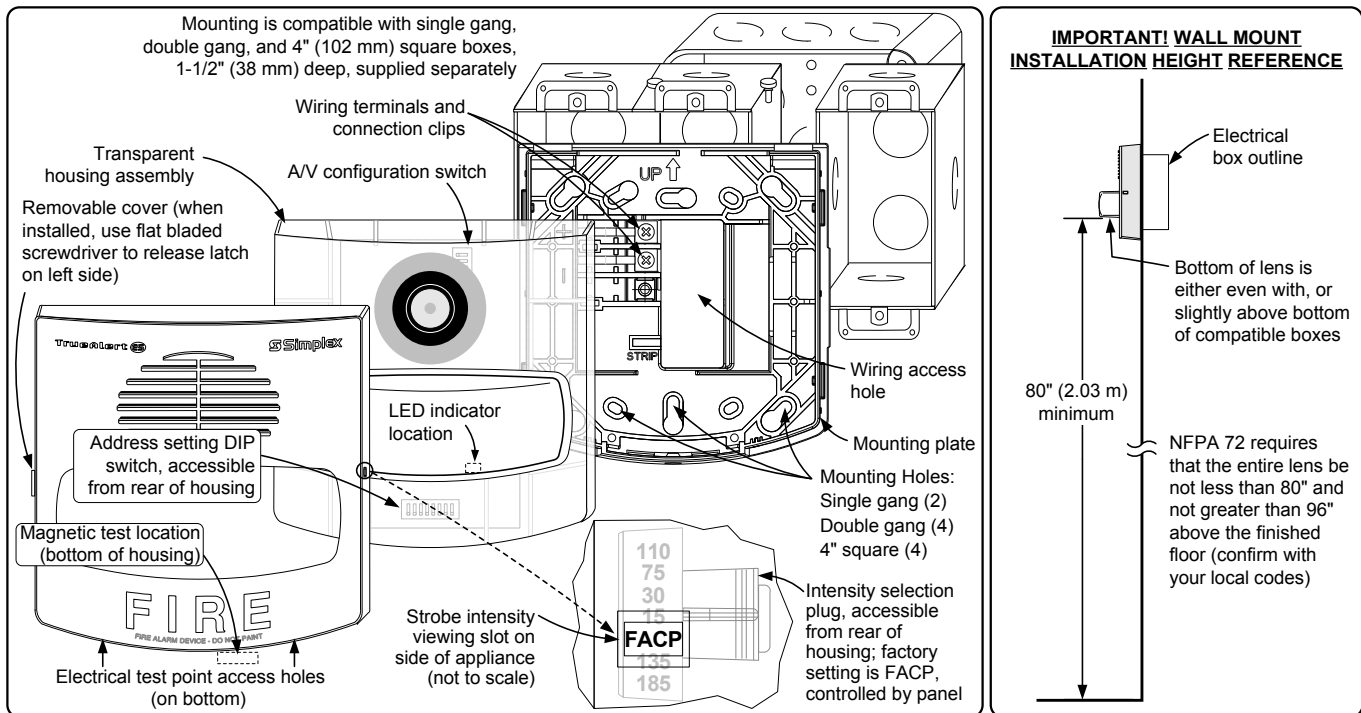
## TrueAlert Addressable Wiring Isolator

**Isolator Model 4905-9929** is available for remote mounting on TrueAlert addressable circuits to isolate short circuited wiring from functioning wiring. (See data sheet S4905-0001.)

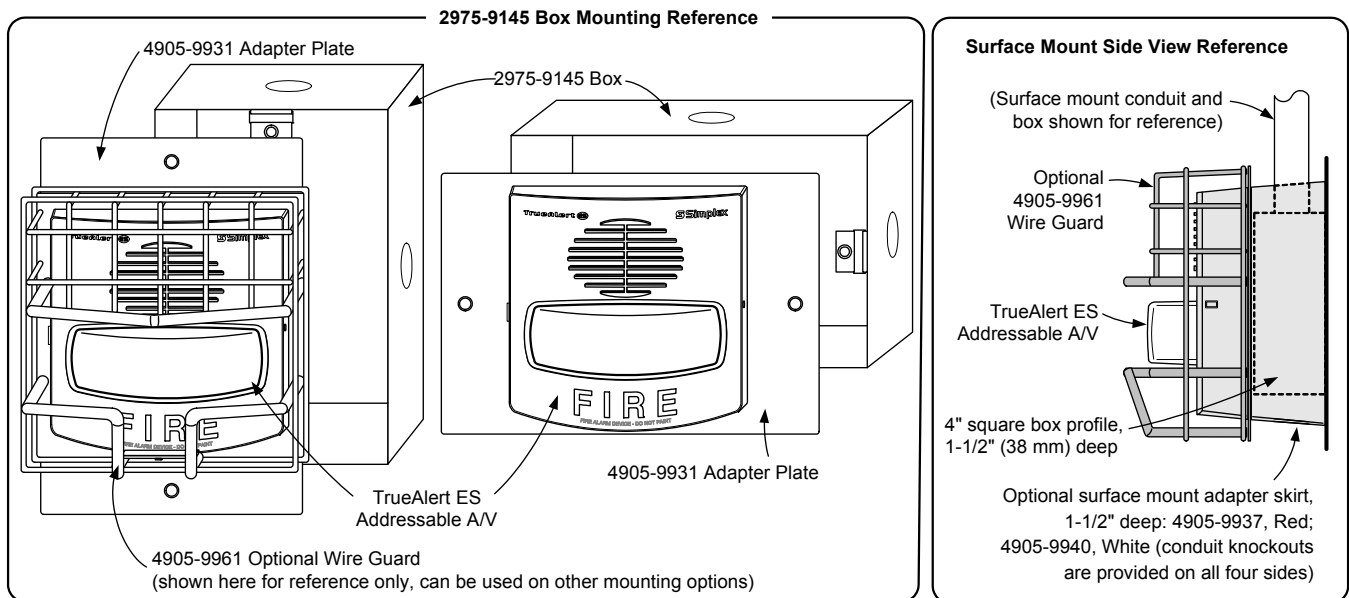
## TrueAlert Device Reports Reference

| Service Port                       |  | Page 1      |               |
|------------------------------------|--|-------------|---------------|
| REPORT 5 : TrueAlert Device Report |  | 12:34:56am  | TUE 27-Jan-15 |
| POINT ID                           | CUSTOM LABEL                             | DEVICE TYPE | CANDELA       |
| T14-1-1                            | Location Label . . . up to 40 characters | V/O         | 15            |
| T14-1-2                            | Break Room 5                             | A/V         | 110           |
| T14-1-3                            | Boiler Room                              | A/V         | 75            |
| T14-1-4                            | Elec. Room 7                             | A/V         | 135           |

## Installation Reference



## Adapter Plate and Surface Mount Installation Reference



## IDNAC SLC Controller Compatibility Reference

| Compatible Controllers                 | Data Sheet Reference | Controller Output | IDNAC SLC Output Voltage | Appliance Voltage Design Reference |
|--|----------------------|-------------------|--------------------------|------------------------------------|
| 4100ES with EPS+ or EPS Power Supply   | S4100-0100           | IDNAC SLC         | 29 VDC (regulated)       | 23 VDC (with 6 VDC drop)           |
| 4009 IDNAC Repeater                    | S4009-0004           |                   |                          |                                    |
| 4007ES with IDNAC Notification         | S4007-0002           |                   |                          |                                    |
| 4010ES with ESS Enhanced System Supply | S4010-0011           |                   |                          |                                    |

## TrueAlert ES AV Specifications

|                           |                                 |   |
|---------------------------|---------------------------------|---|
| <b>Electrical Ratings</b> | Typical Operating Voltage Range | 23 VDC to 31 VDC, Special Application (see below for 17 VDC rating) |
|                           | Supervisory Requirements        | 1 unit load (= 0.8 mA control panel current)                        |
|                           | IDNAC SLC Loading               | Maximum of 127 addresses per SLC, 139 unit loads                    |

### Sound Output Ratings @ 10 ft (3 m) @ 23 VDC (with IDNAC SLCs)

| Sound Type/Setting               | Steady/High | Steady/Low | Coded/High | Coded/Low |
|----------------------------------|-------------|------------|------------|-----------|
| Reverberant Chamber, UL 464 Test | 90.1 dBA    | 83.6 dBA   | 85.7 dBA   | 80.1 dBA  |
| Anechoic Chamber, ULC 525 Test   | 94.1 dBA    | 88.1 dBA   | 94.1 dBA   | 88.1 dBA  |

### Sound Output Dispersion per ULC S541 Anechoic Testing

|  |  |              |              |               |               |               |
|--|--|--------------|--------------|---------------|---------------|---------------|
| Horizontal   | -3 dBA @ 50°; -6 dBA @ 63°; left and right from center                       |              |              |               |               |               |
| Vertical   | -3 dBA @ 20° above, 48° below; -6 dBA @ 65° above, 60° below; ref. to center |              |              |               |               |               |
| <b>Candela Setting</b>   | <b>15 cd</b>   | <b>30 cd</b> | <b>75 cd</b> | <b>110 cd</b> | <b>135 cd</b> | <b>185 cd</b> |
| <b>23 VDC</b> RMS Current Ratings, with horn on continuous at high setting | 59 mA  | 67 mA        | 107 mA       | 139 mA        | 166 mA        | 215 mA        |

### General Specifications

|                           |   |             |  |
|---------------------------|---|-------------|--|
| Sound Characteristics     | 2400 to 3700 Hz sweep, modulated at 120 Hz rate | Connections | Terminal blocks on mounting plate for 18 AWG to 12 AWG (0.82 mm <sup>2</sup> to 3.31 mm <sup>2</sup> ); two wires per terminal for in/out wiring |
| Temperature Range         | 32° to 122° F (0° to 50° C)                     |             |  |
| Humidity Range            | 10% to 93%, non-condensing @ 104° F (40° C)     |             |  |
| Installation Instructions | 579-1031  |             |  |

### IDNAC SLC Wiring Specifications

(refer to control panel installation instructions for more information)

UTP, unshielded twisted pair recommended

Maximum wire length allowed with "T-Taps" for Class B wiring per SLC = 10,000 ft (3048 m)

Maximum wire length to any appliance = 4000 ft (1219 m)

**Note:** UL 464 test coded values are typical of the output measured with a Temporal or a March Time pattern and with a sound level meter reading on a "fast" setting. Under the same test conditions, coded horn output "peak" sound level readings are typically 4 dBA higher. Anechoic horn output ratings are typically more representative of actual installed sound output.

## TrueAlert ES AV LEGACY Compatibility Reference

| Compatible Controller                       | Data Sheet Reference | Controller Output         | Available Strobe Intensity | Available Horn Control                                       | Appliance Voltage Minimum |
|---|----------------------|---------------------------|----------------------------|--|---------------------------|
| 4100ES or 4100U with TrueAlert Power Supply | S4100-0031           | TrueAlert Addressable SLC | 15, 30, 75, and 110 cd     | Continuous, Temporal Code 3, and March Time of 60 or 120 bpm | 17 VDC                    |
| 4009 TPS, Remote TrueAlert Power Supply     | S4100-0037           |                           |                            |  |                           |
| TrueAlert Addressable Controller (4009T)    | S4009-0003           |                           |                            |  |                           |

### Electrical Ratings Differences for Legacy Applications (refer to above specifications for other ratings)

|  |                                  |                                       |                   |                   |                  |
|--|----------------------------------|---------------------------------------|-------------------|-------------------|------------------|
|  | Voltage Range                    | 17 VDC to 31 VDC, Special Application |                   |                   |                  |
| Sound Output Ratings @ 10 ft (3 m) @ 17 VDC  | Sound Type/Setting               | <b>Steady/High</b>                    | <b>Steady/Low</b> | <b>Coded/High</b> | <b>Coded/Low</b> |
|  | Reverberant Chamber, UL 464 Test | 87.8 dBA                              | 81.6 dBA          | 83.4 dBA          | 77.0 dBA         |
|  | Anechoic Chamber, ULC 525 Test   | 91.7 dBA                              | 85.4 dBA          | 91.7 dBA          | 85.4 dBA         |
|  | <b>Candela Setting</b>           | <b>15 cd</b>                          | <b>30 cd</b>      | <b>75 cd</b>      | <b>110 cd</b>    |
| <b>17 VDC</b> RMS Current Ratings, with horn on continuous at high setting, use when connected to TrueAlert Addressable SLCs per above |                                  | 74 mA                                 | 85 mA             | 140 mA            | 185 mA           |

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Tyco Fire Protection Products • Westminster, MA • 01441-0001 • USA

S49AV-0001-6 11/2016

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