

Description

Ceiling Mount Addressable Visible (A/V) Notification Appliances

are individually addressed audible/visible notification appliances that receive power, supervision, and control signals from an Autocall fire alarm control panel providing **IDNAC** Signaling Line Circuits (SLCs). LED and Xenon tube strobes devices are interoperable on the same IDNAC channel. (See [TrueAlert ES A/V LEGACY Compatibility Reference](#).)

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 or 110cd on the AV model, or 110, 135 or 185 cd on the AVH model
- Advanced addressable notification controlled by **IDNAC SLCs**.
- **IDNAC SLCs** provide **regulated 29 VDC** allowing horns to operate with lower current
- 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 in [TrueAlert Device Reports Reference](#))
- **Magnet Test diagnostics** to assist checkout and testing of appliances and wiring
- **Electrical test point access** by removing the cover
- Compatibility with ADA requirements; (refer to important installation information in [Installation Reference](#))
- Compatibility with legacy TrueAlert addressable systems for upgrade and replacement (see [TrueAlert ES A/V LEGACY Compatibility Reference](#))
- 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

- 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 onsite or for replacement
- You can use a back box to mount the appliance assembly to the wall. Mount to a 4-inch (10.16 cm) square electrical box
- 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 red wire guards (see [Product Selection](#))

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



Figure 1: TrueAlert ES Addressable A/V

Strobe Application Reference

Proper selection of visible notification is dependent on occupancy, location, and local codes.

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 usage on IDNAC SLCs

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.

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 in Table 10.)

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)

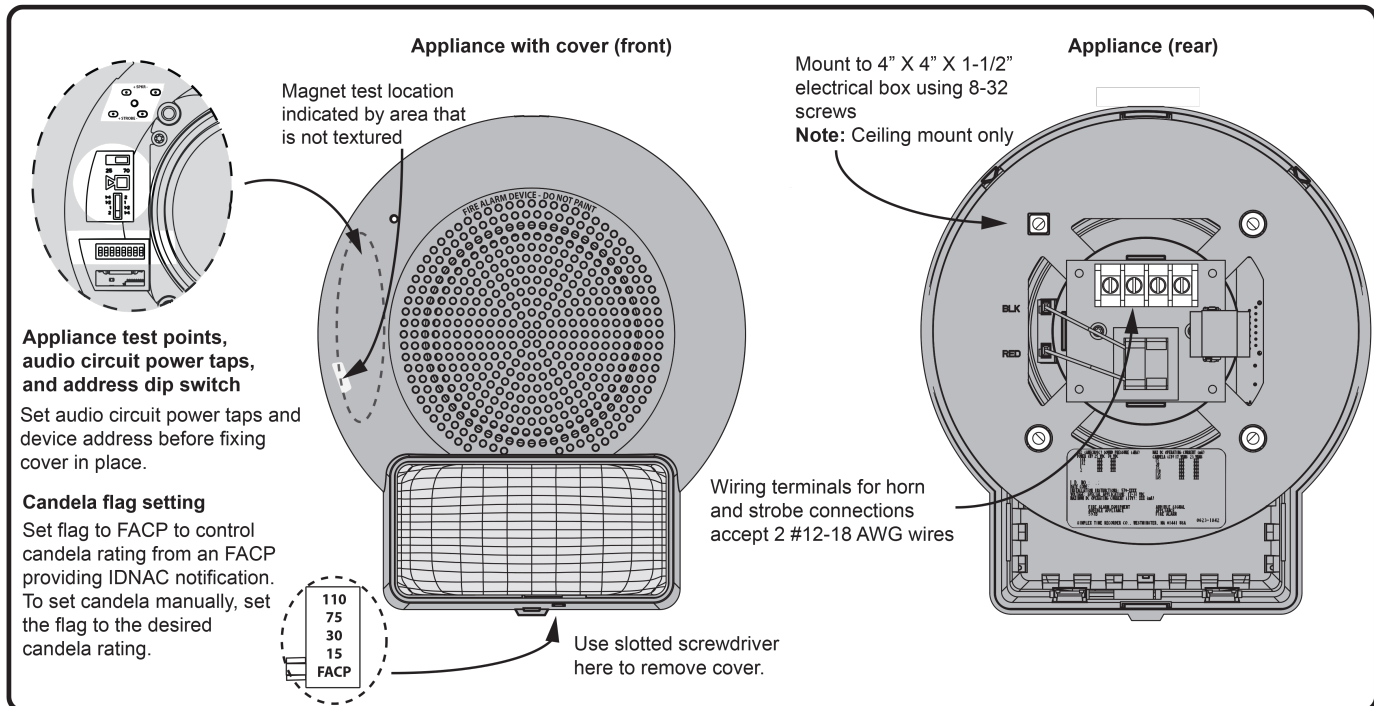
The 2nd generation of the Autocall TrueStart Test Instrument adds testing of IDNAC SLC wiring and TrueAlert ES appliances to its ability to test IDCs, NACs, and IDNet communications *before connection to the control panel*. Please contact your local Autocall representative for additional information.

TrueAlert Addressable Wiring Isolator

Isolator Model A4905-9929

Isolator Model A4905-9929 is available for remote mounting on TrueAlert addressable circuits to isolate short circuited wiring from functioning wiring. (See data sheet AC4905-0001.)

Installation Reference



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

Audible/Visible Notification Appliances, Indoor Ceiling Mount Multi-Candela Horn/Strobe, Model Series A49AV

Product Selection

Ceiling Mount Addressable Audible/Visible (A/V) Appliances

TrueAlert ES Addressable A/V appliance dimensions with cover: 8 1/8" H x 7 1/8" W x 3" D (206 mm x 180 mm x 76 mm)

Table 1: Ceiling Mount Addressable Visual Only V/O Appliances

SKU*	Lens color	Description
A49AV-APPLC A49AV-APPLC-BA	Clear	AV appliance only. Select cover separately.
A49AVH-APPLC A49AVH-APPLC-BA		
A49AVH-APPLCA A49AVH-APPLCA-BA	Amber	
A49AVH-APPLCB A49AVH-APPLCB-BA		

Table 2: Back boxes

SKU	Color
A49WPBB-SVCR	Red
A49WPBB-SVCW	White

Note: Use WP back boxes for surface mounting only. Using weatherproof back boxes does not make an appliance weatherproof.

Table 3: Separate Covers (Required when ordering model 49AV-APPLC(-BA))

SKU*	Color	Wording
A49AVC-CRFIRE	Red	FIRE
A49AVC-CWFIRE	White	FIRE
A49AVC-CRALT	Red	ALERT
A49AVC-CWALT	White	ALERT
A49AVC-CRBAA	Red	إنذار/ALERT
A49AVC-CWBAA	White	إنذار/ALERT
A49AVC-CRS	Red	Autocall logo only
A49AVC-CK	Black	Blank
A49AVC-CRFEU	Red	FEU
A49AVC-CWFEU	White	FEU
A49AVC-CRBAF	Red	حريق/FIRE
A49AVC-CWBAF	White	حريق/FIRE
A49AVC-CRBF	Red	FEU/FIRE
A49AVC-CWBF	White	FEU/FIRE
A49AVC-CWS	White	Autocall logo only
A49AVC-CWCALT	White	火警/FIRE

Table 4: Wire Guards and Wire Guard Back Boxes

SKU	Description
A49WG-SVWCR	AV Ceiling Mount Red Wire Guard
A49WG-BB-SVCR-O	AV Ceiling Mount Red Wire Guard Back Box

TrueAlert ES A/V Specifications

Table 5: Electrical Ratings

Specification	Rating
Typical Operating Voltage Range	23 VDC to 30 VDC, Special Application
Supervisory Requirements	1 unit load (= 0.8 mA control panel current)
IDNAC SLC Loading	Maximum of 127 addresses per SLC

Table 6: Sound Output Ratings @ 10 ft (3 m) (with IDNAC SLCs)

Sound Type/Setting	Voltage	Steady/High	Steady/Low	Coded/High	Coded/Low
Reverberant Chamber, UL 464 Test	23	89.0 dBA	83 dBA	85 dBA	80 dBA
	31	91 dBA	85.5 dBA	87 dBA	82 dBA
Anechoic Chamber, ULC 525 Test	23	97 dBA	92.5 dBA	97 dBA	92.5 dBA
	31	99 dBA	95 dBA	99 dBA	95 dBA

Table 7: Sound Output Dispersion per ULC S541 Anechoic Testing

Specification		Rating					
Horizontal		-3 dBA @ 30° at both left and right from center; -6 dBA @ 80° from center					
Vertical		-3 dBA @ 25° above and 35° below center; -6 dBA @ 65° above and below center					
	Candela Setting	15 cd	30 cd	75 cd	110 cd	135 cd	185 cd
A49AV	23-30 VDC	67 mA	92 mA	159 mA	215mA	-	-
A49AVH		-	-	-	272mA	300 mA	355mA

Table 8: General Specifications

Specifications	Ratings
Sound Characteristics	2400 to 3700 Hz sweep, modulated at 120 Hz rate
Temperature Range	32° to 120° F (0° to 49° C)
Humidity Range	10% to 93%, non-condensing @ 104° F (40° C)
Installation Instructions	579-1242AC
Connections	Terminal blocks on mounting plate for 18 AWG to 12 AWG (0.82 mm ² to 3.31 mm ²); two wires per terminal for in/out wiring
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.	

IDNAC SLC Controller Compatibility Reference

Table 9: Compatibility Reference

Compatible Controllers	Data Sheet Reference	Controller Output	IDNAC SLC Output Voltage	Appliance Voltage Design Reference
4100ES with EPS+ or EPS Power Supply	AC4100-0100	IDNAC SLC	29 VDC (regulated)	23 VDC (with 6 VDC drop)
4009 IDNAC Repeater	AC4009-0004			
4007ES with IDNAC Notification	AC4007-0002			
4010ES with ESS Enhanced System Supply	AC4010-0011			

TrueAlert ES A/V LEGACY Compatibility Reference

Table 10: Compatibility Reference

Compatible Controller	Data Sheet Reference	Controller Output	Available Strobe Intensity		Appliance Voltage Minimum
4100ES with TrueAlert Power Supply	AC4100-0031	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*	AC4100-0037				
TrueAlert Addressable Controller (4009T)*	AC4009-0003				
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	Steady/High	Steady/Low	Coded/High	Coded/Low
	Reverberant Chamber, UL 464 Test	87.0 dBA	81.0 dBA	82.0 dBA	77.0 dBA
	Anechoic Chamber, ULC 525 Test	94.5 dBA	90.0 dBA	94.5 dBA	90.0 dBA
	Candela Setting	15 cd	30 cd	75 cd	110 cd
17 VDC 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

*Not compatible with A49AVH-APPLC

