Simplex

*UL, ULC, CSFM Listed; FM Approved**

Datasheet

TrueAlert ES Addressable Notification Appliances

Visual Only Notification Appliances, Indoor Ceiling Mount Strobe, Model Series 49VO

Description

Ceiling mount addressable visible only (V/O) notification appliances

are individually powered, addressed, and controlled from an a Autocall fire alarm control unit (FACU) IDNAC Signaling Line Circuit (SLC). V/O notification appliances use a multi-candela strobe with synchronized 1 Hz flash rate and selectable candela rating. LED and Xenon tube strobes devices are interoperable on the same IDNAC channel. Separate appliance and cover selection simplifies the ordering and installation process.

Features

Individually addressed visible only (V/O) notification appliances

General features:

- Multi-candela LEDXenon strobe available in low: 15 cd, 30 cd, 75 cd, and 110 cd; and high: 110 cd , 135 cd, and 185 cd range candela models
- Small compact design and low current draw due to energy efficient Xenon tube strobes, with LED indicators
- Advanced addressable notification controlled by IDNAC SLCs.
- IDNAC SLCs provide regulated 29 VDC for options to operate horns with lower current
- Removable cover for access to electrical test point
- Strobe intensity programming from the FACU or the device
- Wiring supervision to each appliance with T-tapped connections for Class B circuits simplifies wiring. Class A circuits require in/out wiring
- Self-Test Mode with onboard sensors to detect the strobe output and then report their status to the FACU
- TrueAlert Device Reports at the FACU detail appliance point ID, custom label, type, and candela setting
- Magnet test diagnostics for checkout and testing of appliances and wiring
- Compatibile with ADA requirements
- Strobe operation is listed to UL Standard 1971 and ULC Standard S526
- Synchronized strobe operation on the IDNAC channel

LED indicator and magnet test feature:

- LED indicates successful magnet test, 3-digit IDNAC address, and candela rating
- Option for LED to blink every polling cycle to indicate appliance supervision
- When the controller is in diagnostic mode, the magnet test blinks the LED to indicate appliance address and can be set to flash the strobe LEDs

Mechanical design features

- Rugged, high-impact, flame retardant thermoplastic housing in red and white colors
- Various covers and lettering options available
- Covers can be removed without disturbing the connected housing or causing trouble conditions
- In/out wiring terminals for 18 AWG to 12 AWG
- Mounts on 4 in. square or single gang USA electrical boxes.

  Note: Adapter plate required for mounting on single gang electrical boxes

- Optional wire guards

Figure 1: Indoor ceiling mount strobe



Strobe application reference

Proper selection of visible notification is dependent on occupancy, location, and local codes., and proper applications of: the National Fire Alarm and Signaling 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).

TrueAlert addressable wiring isolator

Isolator model 4905-9929

Isolator model 4905-9929 is available for remote mounting on TrueAlert addressable circuits to isolate short circuited wiring from functioning wiring. Refer to data sheet *TrueAlert Addressable Isolator+ Module, Model 4905-9929 S4905-0001* for additional information.

TrueAlert ES diagnostics

Test features

Controllers can be selected to pulse each appliance's LED when it receives a supervision poll. When the controller is in diagnostic mode, the appliance magnet test feature provides a response at the individual test appliance.

Silent appliance magnet test

The appliance LED pulses to indicate the appliance's address when performing a magnet test.

Operational appliance magnet test

In this test mode the appliance LED indicates the address, then the strobe will briefly flash to indicate proper operation.

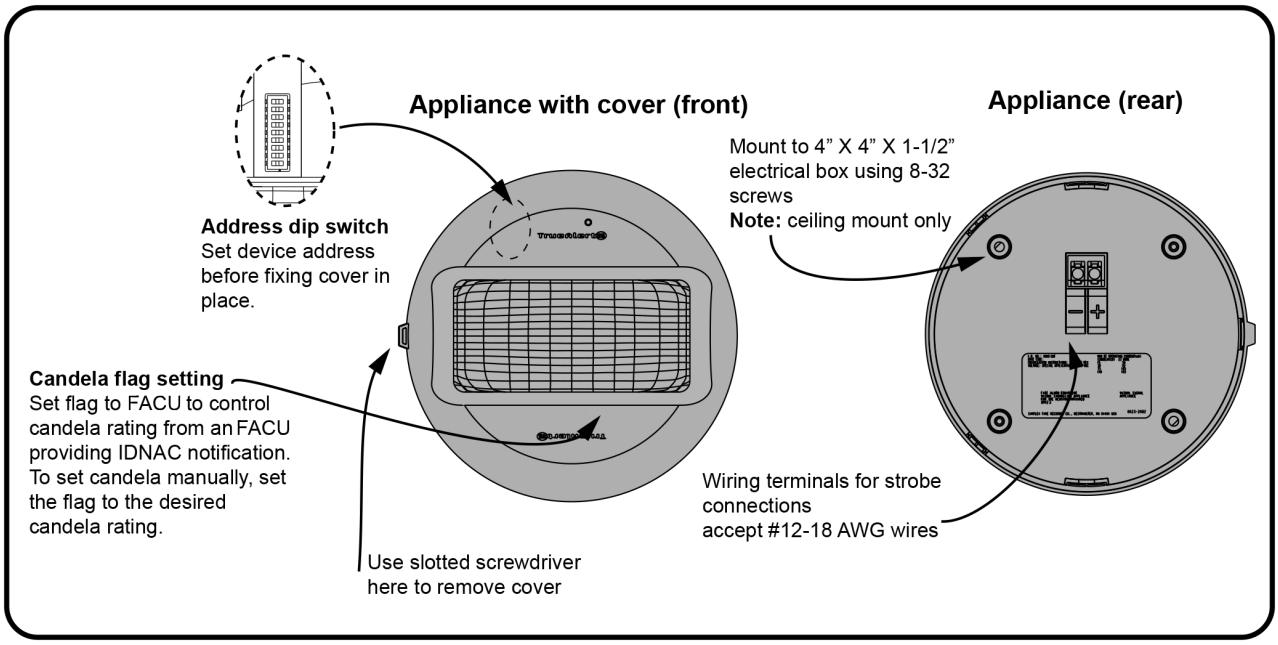
TrueStart instrument two (TSIT)

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 FACU. Contact your local Autocall representative for additional information.

* Additional listings may be applicable; contact your local Simplex product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co.

Installation reference

Figure 2: Indoor Ceiling Mount Strobe installation



IDNAC SLC operation advantage

TrueAlert Addressable visible appliances on IDNAC SLCs

TrueAlert Addressable visible appliances on IDNAC SLCs provide visible notification with a two-wire circuit. The circuit also confirms connection to the individual notification appliance's electronic circuit. This increases circuit supervision integrity by providing supervision that extends beyond the appliance wiring connections.

Reduced current usage on IDNAC SLCs

The system maintains a constant 29 VDC source voltage, even during battery standby. Appliances can operate at higher voltage with lower current. This ensures a consistent current draw and voltage drop margin under both primary power and secondary battery standby. This gives the option for wiring distances up to 3 times farther than with conventional notification, support for more appliances for each IDNAC SLC, and options to use smaller gauge wiring.

Reducing Installation and Testing Time

Separate controls on the same two-wire SLC reduces installation time and expense for both retrofit and new construction. When Class B wiring is used, wiring can be T-tapped for more optimisation of distance, wire, conduit size and utilization, and installation. Use of the magnet test feature improves installation efficiency. TrueAlert device reports identify information about each connected appliance.

Product selection

Table 1: Ceiling mount addressable visual only V/O appliances

Model*	Lens color	Description	Installation Instructions
49VO-APPLC 49VO-APPLC-BA	Clear	V/O appliance only. Select cover separately.	579-1227
49VOH-APPLC 49VOH-APPLC-BA			
49VOH-APPLCA-BA	Amber		
49VOH-APPLCB-BA	Blue		
49VOH-APPLCG	Green		579-1280
49VOH-APPLCR	Red		

Table 2: Surface/WP back boxes

Model	Color	Description	Installation instructions
49WPBB-VOCR	Red	Surface/WP back box in red	579-1270
49WPBB-VOCW	White	Surface/WP back box in white	

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

Table 3: Adapter plates

Model	Description	Installation Instructions
49VO-APCS	V/O Ceiling Mount Adapter Plate. Required for mounting on a single gang electrical box.	579-1227

Table 4: V/O covers (required when ordering APPLC models)

Model*	Color	Wording
49VOC-CRFBL	Red	FUEGO/FOGO
49VOC-CRALT	Red	ALERT
49VOC-CRBF		FEU/FIRE
49VOC-CRFEU		FEU
49VOC-CRF		FIRE
49VOC-CRS		Simplex logo only
49VOC-CRBCF	Red	إنذار/ALERT 火警/FIRE حريق/FIRE
49VOC-CK	Black	Blank
49VOC-CWALT	White	ALERT
49VOC-CWBF		FEU/FIRE
49VOC-CWFEU		FEU
49VOC-CWF		FIRE
49VOC-CWS		Simplex logo only
		إنذار/ALERT
49VOC-CWBCF	White	火警/FIRE حريق/FIRE

Table 5: Wire guards

Model	Description
49WG-VOCR	VO Ceiling Mount Red Wire Guard
49WGBB-VOCR	VO Ceiling Mount Wire Guard Back Box

Note: * (-BA) indicates model is available either with or without the -BA suffix. Model numbers ending in –BA are assembled in the USA

IDNAC SLC controller compatibility reference

Table 6: 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 Fire Alarm Control Unit with IDNAC	S4007-0002			
Note: See TrueAlert ES V/O LEGACY compatibility reference for 17 VDC ratings				

Ceiling mount V/O specifications

Table 7: Specifications

Specification	Rating
Environmental	32°F to 120°F (0°C to 49°C); 10% to 93%, non-condensing at 104°F (40°C)
Connections	Terminal blocks for 18 AWG to 12 AWG (0.82 mm^2 to 3.31 mm^2); two wires per terminal for in/out wiring. Use Unshielded Twisted Pair (UTP) for IDNAC.
IDNAC SLC Loading	Maximum of 127 addresses per SLC, 139 unit loads. See device and compatible FACU Installation Instructions for circuit current load limits.

Table 8: Percentage of rated light output at room temperature

Angle	On-Axis	Vertical, Below Axis		Horizontal, Left/Right of Axis	
	0°	45°	90°	45°	90°
UL required output	100%	45%	25%	45%	25%
Typical output	327%	134%	83%	129%	47%

Table 9: Appliance specifications

Specification		Rating						
Operating Voltage Range		23 VDC to 30 VDC, Special Application						
Supervisory Requirements		1 unit load (= 0.8 mA FACU current)						
Flash Rate and Synchronized SLC Loading		1 Hz; with up to 63 synchronized strobes maximum per powered circuit, max 127 S/V appliances per IDNAC channel						
Current consumption, see note	**Candela Setting**	**15 cd**	**30 cd**	**75 cd**	**90/95 cd**	**110 cd**	**135 cd**	**185 cd**
	49VO model	56.5 mA	87 mA	182 mA	N/A	238 mA	N/A	N/A
	49VOH model	N/A	N/A	N/A	N/A	253 mA	296 mA	377 mA
	49VOH amber lens	N/A	N/A	N/A	253 mA (90 cd)	296 mA	377 mA	N/A
	49VOH blue lens	N/A	N/A	253 mA	296 mA (95 cd)	377 mA	N/A	N/A
Note: Measured at 23 VDC on IDNAC Addressable SLC								

TrueAlert ES V/O LEGACY compatibility reference

Table 10: Compatibility reference

Compatible Controller	Data Sheet Reference	Controller Output	Available Strobe Intensity	Appliance Voltage Minimum
4100ES or 4100U with TrueAlert Power Supply	S4100-0031	TrueAlert Addressable SLC	15 cd, 30 cd, 75 cd, and 110 cd	17 VDC
4009 TPS, Remote TrueAlert 17 VDC Power Supply, see note.	S4100-0037			
TrueAlert Addressable Controller (4009T)	S4009-0003			
Electrical ratings differences for legacy applications, see IDNAC SLC controller compatibility reference for 29 VDC ratings				
Voltage Range		17 VDC to 31 VDC, Special Application		
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 TrueAlertAddressable SLCs per above	76 mA	114 mA	245 mA	321 mA

Note: * For connection to legacy fire panel models Simplex 4009T and 4100/TPS. High candela (49VOH) appliances are not compatible with Simplex models 4009T and TPS, see the fire panel compatibility charts.

All specifications and other information shown were current as of document revision and are subject to change without notice. Additional listings may be applicable, contact your local Simplex® product supplier for the latest status. Listings and approvals under Simplex Time Recorder Co. Simplex, and the product names listed in this material are marks or registered marks. Unauthorized use is strictly prohibited. NFPA 72 and National Fire Alarm Code are registered trademarks of the National Fire Protection Association (NFPA).