UL, ULC, CSFM Listed; FM Approved*

Description

Ceiling mount addressable visible (V/O) notification appliances
are individually powered, addressed, and controlled from a Simplex
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. Xenon tube strobes devices
are interoperable on the same IDNAC channel. Separate appliance and
cover selection greatly simplifies the ordering and installation process.

Features

Individually addressed visible only (V/O) notification appliances

- Multi-candela Xenon 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 allowing horns to operate with
  lower current
- Electrical test point access by removing the cover
- Strobe intensity can be programmed from the FACU or the device
- Wiring supervision to each appliance allows 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 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 assist checkout and testing of appliances and
  wiring
- Compatibility with ADA requirements
- Strobe operation is listed to UL Standard 1971 and ULC Standard S526
- Synchronized strobe operation on its IDNAC channel

LED indicator and magnet test feature:

- Indicator LED indicates magnet test acknowledgment, 3 digit IDNAC
  address, and candela rating
- Indicator LED can be configured to blink every polling cycle to indicate
  appliance supervision
- When the controller is in diagnostic mode, the magnet test pulses the
  Indicator LED to indicate appliance address and can be set to also
  briefly 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 – Red with white letters
  or white with red letters
- Covers can be easily removed without disturbing the connected
  housing and avoiding trouble conditions
- In/out wiring terminals for 18 AWG to 12 AWG
- Mounts on 4 in. square or single gang USA electrical boxes. Adapter
  plate required for mounting on single gang electrical boxes
- Optional wire guards
- Weatherproof back boxes are required for surface mounting

Figure 1: Indoor ceiling mount strobe

Strobe application reference

Proper selection of visible notification is dependent on occupancy,
location, 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 selected for diagnostic
mode, the appliance magnet test feature provides a response at the
individual appliance being tested.

Silent appliance magnet test

The appliance LED pulses sequentially to conveniently indicate the
appliance's address when a magnet is applied.

Operational appliance magnet test

In this test mode, after the address is indicated by pulsing the appliance
LED, the strobe will briefly flash 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 FACU. Contact your local Simplex representative for additional
information.

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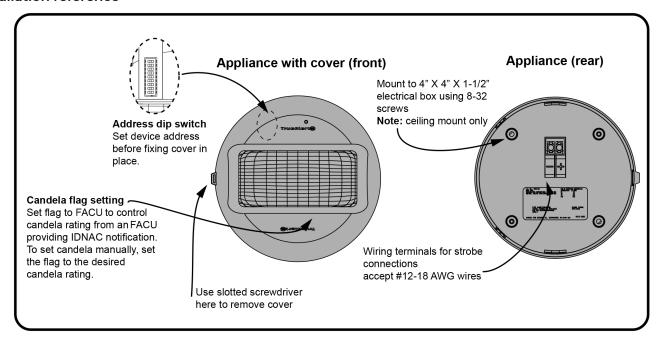
Installation reference

Appliance with cover (front)

Appliance (rear)

Address dip switch
Set device address before fixing cover in place.

Mount to 4" X 4" X 1-1/2" electrical box using 8-32 screws
Note: ceiling mount only

Candela flag setting
Set flag to FACU to control candela rating from an FACU providing IDNAC notification. To set candela manually, set the flag to the desired candela rating.

Wiring terminals for strobe connections accept #12-18 AWG wires

Use slotted screwdriver here to remove cover

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 using one 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

A constant 29 VDC source voltage is maintained, even during battery standby. This allows appliances 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, support for more appliances per IDNAC SLC, use of smaller gauge wiring, or combinations of these benefits.

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 the magnet test feature improves installation efficiency. TrueAlert device reports conveniently 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	Clear	VO appliance only. Select cover separately.	579-1227
49VO-APPLC-BA			
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	VO 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-CRALT	Red	ALERT
49VOC-CRBF		FEU/FIRE
49VOC-CRFEU		FEU
49VOC-CRFBL		FUEGO/FOGO
49VOC-CRF		FIRE
49VOC-CRS		Simplex logo only
49VOC-CRBAA		إنذار/ALERT
49VOC-CRBCF		火警/FIRE
49VOC-CRBAF		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
49VOC-CWBAA		إنذار/ALERT
49VOC-CWBCF		火警/FIRE
49VOC-CWBAF		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			
4100ES Flex 35, 50, and 100 Amplifiers	S4100-0034			
4100ES Constant Supervision and Signal Cards				
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	55 mA	83 mA	153 mA	N/A	199 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	73 mA	114 mA	210 mA	269 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.