RSN: 1763815
Permit #2023-2398219-CT
Sheet 1 of 12

BATTERY CALCULATION

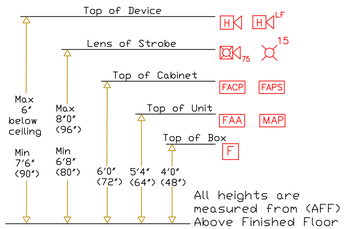
POWER SUPPLY — HOURS OF SUPERVISION: 24 HOURS
MINUTES OF ALARM: 5 MINUTES

PANEL B: EDWARDS BPS10A

ITEM	QTY	PART NUMBER	DESCRIPTION	Device Supervisory Current	Device Alarm Current	Total Supervisory Current	Total Alarm Current
1	1	BPS10A	MOTHER BOARD	0.070000	0.270000	0.070000	0.270000
2	18	GCVRF	15cd STROBE CEILING	0.000000	0.035000	0.000000	0.630000
3	1	GCVRF	30cd STROBE CEILING	0.000000	0.035000	0.000000	0.035000
4	1	GCVRF	75cd STROBE CEILING	0.000000	0.035000	0.000000	0.035000
5	6	GCAVRF	15cd HORN/STROBE CEILING	0.000000	0.060000	0.000000	0.360000
6	3	GCAVRF	30cd HORN/STROBE CEILING	0.000000	0.060000	0.000000	0.180000
7	6	GCAVRF	75cd HORN/STROBE CEILING	0.000000	0.060000	0.000000	0.360000
					TOTAL:	0.070000	1.870000

SUPERVISORY:		
SUB-TOTAL:	0.070000	AMPS
24 HOURS OF SUPERVISORY:	24.000000	HOURS
SUB-TOTAL:	1.680000	AMP HOURS
ALARM:		
SUB-TOTAL:	1.870000	AMPS
5 MINUTES OF ALARM:	0.083333	HOURS
SUB-TOTAL:	0.155833	AMP HOURS
TOTALS:		
TOTAL SUPERVISORY:	1.680000	AMP HOURS
TOTAL ALARM:	0.155833	AMP HOURS
TOTAL:	1.835833	AMP HOURS
SPARE OF 20%	0.367167	AMP HOURS
MINIMUM BATTERY SIZE REQUIRED	2.203000	AMP HOURS
BATTERIES SUPPLIED	7.000	AMP HOURS

BATTERY CALCULATIONS POWER SUPPLY



DEVICE MOUNTING HEIGHTS

VOLTAGE DROP CALCULATION

POWER SUPPLY
PANEL B: EDWARDS BPS10A

TOTAL CURRENT AVAILABLE FOR DEVICES	CIRCUIT NUMBER	CIRCUIT TYPE	CURRENT PER CIRCUIT	DEVICES	QUAN.	CURRENT PER DEVICE	TOTAL CURRENT PER DEVICE	CURRENT PER CIRCUIT REMAINING	STARTING CIRCUIT VOLTAGE	WIRE GAGE	ESTIMATED ONE-WAY WIRE DISTANCE	VOLTAGE DROP	CIRCUIT FINAL VOLTAGE	MIN. OPERATE VOLTAGE
10.000	Circuit 1B	NAC	3.000	15cd STROBE C	7	0.035	0.245	2.755	20.4	14				
				15cd H/S C	1	0.060	0.060	2.695	20.4	14				
				75cd H/S C	2	0.060	0.120	2.575	20.4	14	300	0.813	19.587	16.000
	Circuit 2B	NAC	3.000	15cd STROBE C	7	0.035	0.245	2.755	20.4	14				
				75cd STROBE C	1	0.035	0.035	2.720	20.4	14				
				15cd H/S C	3	0.060	0.180	2.540	20.4	14				
				30cd H/S C	1	0.060	0.060	2.480	20.4	14				
				75cd H/S C	4	0.060	0.240	2.240	20.4	14	350	1.697	18.703	16.000
	Circuit 3B	NAC	3.000	15cd STROBE C	4	0.035	0.140	2.860	20.4	14				
				30cd STROBE C	1	0.035	0.035	2.825	20.4	14				
				15cd H/S C	2	0.060	0.120	2.705	20.4	14				
				30cd H/S C	2	0.060	0.120	2.585	20.4	14	290	0.768	19.632	16.000

PANEL TOTALS

TOTAL USED	1.600
TOTAL CURRENT AVAIL:	10.000
TOTAL CURRENT REMAINING	8.400

NOTES:
All current calculations are in amperes.
All voltage calculations are in volts D.C.
Voltage drops are calculated assuming all of the load is at the end of the circuit.
Voltage Drop = Resistance X (one way wire Distance X2) X circuit Amps

NEC TABLE 8

wire gage	resistance ohms per 1000 feet
12	2.01
14	3.19
16	5.08
18	8.08

VOLTAGE DROP CALCULATIONS POWER SUPPLY

Tenant remodel in existing sprinkled building.
Existing EST Quickstart fire alarm system.
Installation of new synchronized temporal sounding horn/strobes.
Occupancy Group: B Area: 4,742sf. Construction Type: II-B
Codes Used: 2021ed. IFC, 2019ed NFPA 72, 2023ed. NEC

SCOPE OF WORK

QUAN.	PART #	DESCRIPTION
5	GCVRF	EDWARDS MULTI CANDELA STROBE CEILING
4	GCAVRF	EDWARDS MULTI CANDELA HORN/STROBE CEILING

NEW MATERIALS LIST

SYMBOL	DESCRIPTION
NAC A	FIRE ALARM POWER SUPPLY
2 P	SMOKE DETECTOR (PHOTOELECTRIC)
C 30	STROBE (NUMBER INDICATES CANDELA) C INDICATES CEILING MOUNTED
C 75	HORN WITH STROBE (NUMBER INDICATES CANDELA) C INDICATES CEILING MOUNTED
EOL RE	END OF LINE RESISTOR

LEGEND

DESCRIPTION	CLASS	TYPE
HORN/STROBE CIRCUITS	B	2 #14 AWG FPLP

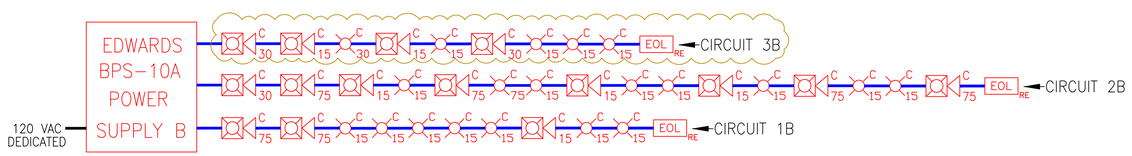
WIRE CHART

City of Aurora Building Division
Counter Permit intake by: SMK
Date: Nov 14, 2023
RSN: 1763815
Permit: 2023-2398219-CT
2021 INTERNATIONAL CODES & 2023 NEC Scope of permit to be field verified.

COA Adopted Codes for this project:
ICC-2021 - NEC-2023
NFPA 13-2019 - NFPA 72-2019
COA Amendments 22 & 66

Provide a full size set of legible approved construction documents **PRINTED IN COLOR** for review by the Field Inspector.

THE NEW DEVICES ARE CLOUDED



ONE LINE DIAGRAM

System Outputs

		Control Panel Annunciation												Notification												Safety Control											
		Actuate General Alarm Audible Sounder	Actuate General Alarm Visual Indicator	Actuate Supervisory Alarm Audible Sounder	Actuate Supervisory Alarm Visual Indicator	Actuate Trouble Alarm Audible Sounder	Actuate Trouble Alarm Visual Indicator	Actuate Panel LCD Display	Actuate Exterior Horn/Strobe Above FDC	Transmit Interior Horn/Strobes Above FDC	Transmit Water Flow Signal To Supervisory Station	Transmit Fire Alarm Signal To Supervisory Station	Transmit Supervisory Signal To Supervising Station	Transmit Trouble Signal To Supervising Station	Shut Down Air Handling Unit	Silence Horns - Strobes Continue Until System Reset
1	Smoke Detector	X	X				X	X	X	X		X																								
2	Pull Station	X	X				X	X	X	X	X																										
3	Sprinkler Water Flow Switch	X	X				X	X	X	X	X																										
4	Sprinkler Tamper Valve			X	X		X					X																									
5	Duct Detector			X	X		X					X			X																						
6	Ground Fault					X	X						X																								
7	Open Circuit					X	X						X																								
8	Notification Circuit Trouble					X	X						X																								
9	Low Battery					X	X						X																								
10	AC Power Failure					X	X						X																								
11	Communicator Trouble Condition					X	X						X																								
12	Control Panel Silence																																				X

Note: The existing elevator has recall and power shunt.

SEQUENCE OF OPERATIONS

Meridian Fire and Security, LLC
10200 E. EASTER AVE
CENTENNIAL, CO 80112
Ph: 303.790.2520
Fx: 303.790.2528

METRO DENVER ACCIDENT AND INJURY
1444 SOUTH POTOMAC STREET SUITE 170
AURORA, COLORADO 80012

SUBMITTAL PREPARED BY:
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Alarm Design Solutions Inc.
105 Red Wing Court
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JOB NUMBER: 9326

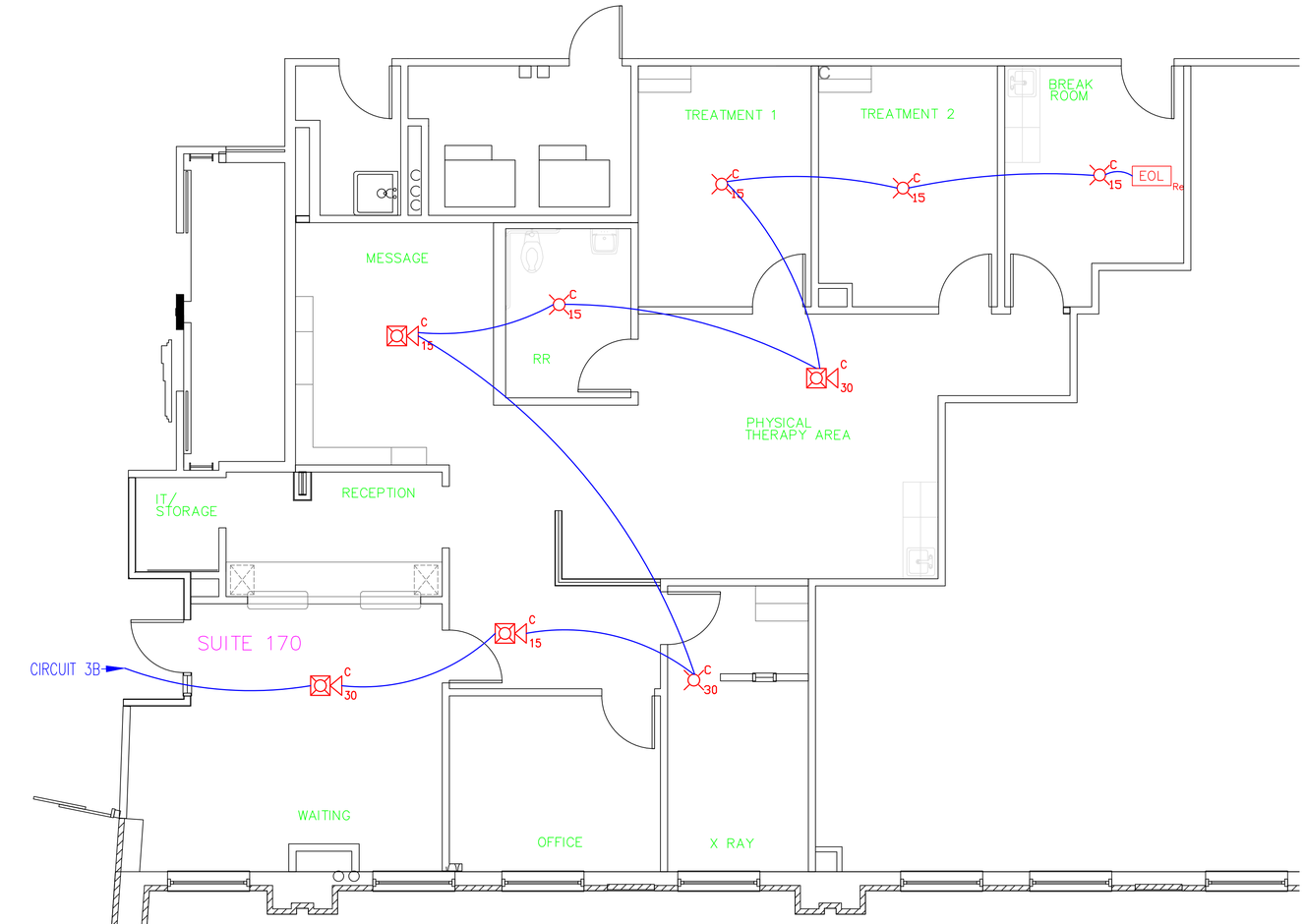
NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES
Fire Protection Engineering Technology
Fire Alarm Systems

Joel Blatt S.E.T.
NICET #103704 Level IV
EXP. 09/1/2025

DATE: 11/08/23 SCALE: N.T.S.
REVISION:
PAGE NAME: TITLE PAGE

FA-1

SHEET 1 OF 2



PARTIAL 1ST FLOOR FIRE ALARM PLAN

SCALE: 1/4" = 1'-0"

NORTH

0 5 10 15 FEET

NOTE: FLAT DROP CEILING AT 9'

SYMBOL	DESCRIPTION
NAC A	FIRE ALARM POWER SUPPLY
C 30	STROBE (NUMBER INDICATES CANDELA) C INDICATES CEILING MOUNTED
C 75	HORN WITH STROBE (NUMBER INDICATES CANDELA) C INDICATES CEILING MOUNTED
EOL RE	END OF LINE RESISTOR

LEGEND

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NATIONAL INSTITUTE FOR CERTIFICATION IN ENGINEERING TECHNOLOGIES
Fire Protection Engineering Technology
Fire Alarm Systems

Joel Blatt S.E.T.
NICET #103704 Level IV
EXP. 09/1/2025

DATE: 11/07/23 SCALE: 1/4"=1'0"
REVISION:
PAGE NAME: FLOOR PLAN

FA–2

SHEET 2 OF 2

RSN: 1763815
Permit #2023-2398219-CT
Sheet 3 of 12

EDWARDS
United Technologies

LIFE SAFETY & INCIDENT MANAGEMENT

Remote Booster Power Supplies

BPS6A, BPS10A



FM APPROVED
MEA 476-91-E Vol.13
UL UL S3424
7300-1657: 0229

Overview

The Booster Power Supply (BPS) is a UL 864, 9th Edition listed power supply. It is a 24 Vdc filtered-regulated, and supervised unit that can easily be configured to provide additional notification appliance circuits (NACs) or auxiliary power for Mass Notification/ Emergency Communication (MNEC), as well as life safety, security, and access control applications.

The BPS contains the circuitry to monitor and charge internal or external batteries. Its steel enclosure has room for up to two 10 ampere-hour batteries. For access control-only applications, the BPS can support batteries totaling up to 65 ampere-hours in an external enclosure. The BPS has four Class B (convertible to two Class A) NACs. These can be activated in one or two groups from the BPS's unique dual input circuits.

The BPS is available in 6.5 or 10 ampere models. Each output circuit has a capacity of three amperes; total current draw cannot exceed the unit's rating.

The BPS meets current UL requirements and is listed under the following standards:

Standard (CCN)	Description
UL864 9th ed.ition (UOXX)	Fire Alarm Systems
UL636 (ANET, UEHX7)	Holdup Alarm Units and Systems
UL609 (AOTX, AOTX7)	Local Burglar Alarm Units and Systems
UL294 (ALVY, UEHX7)	Access Control Systems
UL365 (APAW, APAW7)	Police Station Connected Burglar Alarm Units and Systems
UL1076 (APOU, APOU7)	Proprietary Burglar Alarm System Units
UL1610 (AMCX)	Central Station Alarm Unit
ULC-S527 (UOXXC)	Control Units, Fire Alarm (Canada)
ULC-S303 (AOTX7)	Local Burglar Alarm Units and Systems (Canada)
C22.2 No. 205	Signaling Equipment (Canada)

Standard Features

- Allows for reliable filtered and regulated power to be installed where needed
- Cost effective system expansion
- Provides for Genesis and Enhanced Integrity notification appliance synchronization
- Supports coded output operation
- Self-restoring overcurrent protection
- Multiple signal rates
- Can be cascaded or controlled independently
- Easy field configuration
- On-board diagnostic LEDs identify wiring or internal faults
- Standard EDWARDS keyed lockable steel cabinet with removable door
- 110 and 230 Vac models available
- Accommodates 18 to 12 AWG wire sizes
- Optional tamper switch
- Dual battery charging rates
- Optional earthquake hardening: OSHPD seismic pre-approval for component Importance Factor 1.5

Application

The BPS provides additional power and circuits for notification appliances and other 24 Vdc loads. It is listed for indoor dry locations and can easily be installed where needed.

Fault conditions are indicated on the on-board diagnostic LEDs, opening the BPS input sense circuit and the trouble relay (if programmed). While this provides indication to the host system, the BPS can still be activated upon command. A separate AC Fail contact is available on the BPS circuit board, which can be programmed for trouble or AC Fail. There are seven on-board diagnostic LEDs: one for each NAC fault, one for battery fault, one for ground fault, and one for AC power.

The unique dual-input activation circuits of the BPS can be activated by any voltage from 6 to 45 VDC (filtered-regulated) or 11 to 33 Vdc (full-wave rectified, unfiltered). The first input circuit can be configured to activate 1-4 of the four possible outputs. The second input circuit can be configured to control circuits 3 and 4. When outputs are configured for auxiliary operation, these circuits can be configured to stay on or automatically deactivate 30 seconds after AC power is lost. This feature makes these circuits ideal for door holder applications. The BPS also has a separate 200 mA 24 Vdc output that can be used to power internal activation modules.

BPS NACs can be configured for a 3-3-3 temporal or continuous output. California temporal rate outputs are also available on certain models. This makes the BPS ideal for applications requiring signaling rates that are not available from the main system.

In addition to the internally generated signal rates, the BPS can also be configured to follow the coded signal rate of the main system NACs. This allows for the seamless expansion of existing NACs.

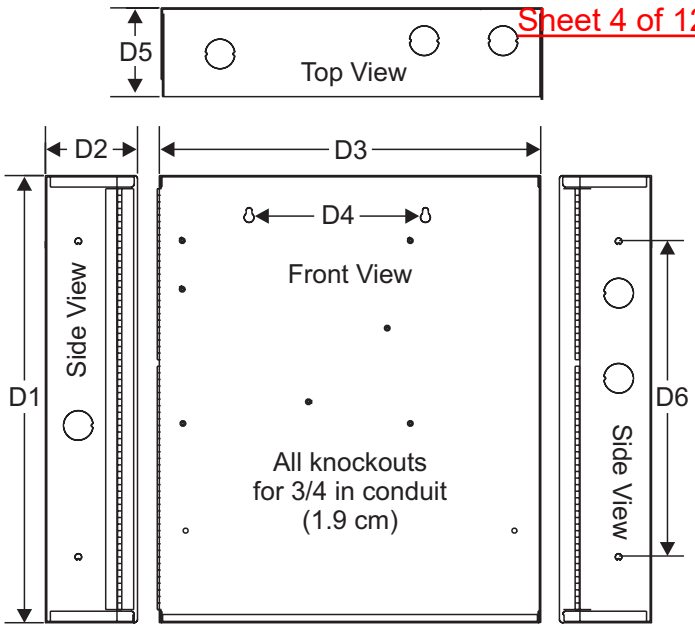
The BPS enclosure has mounting brackets for up to three Signature modules to the right of the circuit board.

Engineering Specification

Supply, where needed, EDWARDS BPS Series Booster Power Supplies (BPS) that are interconnected to and supervised by the main system. The BPS shall function as a stand-alone auxiliary power supply with its own fully-supervised battery compliment. The BPS battery compliment shall be sized to match the requirements of the main system. The BPS shall be capable of supervising and charging batteries having the capacity of 24 ampere-hours for Mass Notification/Emergency Communication (MNEC), life safety and security applications, and the capacity of 65 ampere-hours for access control applications.

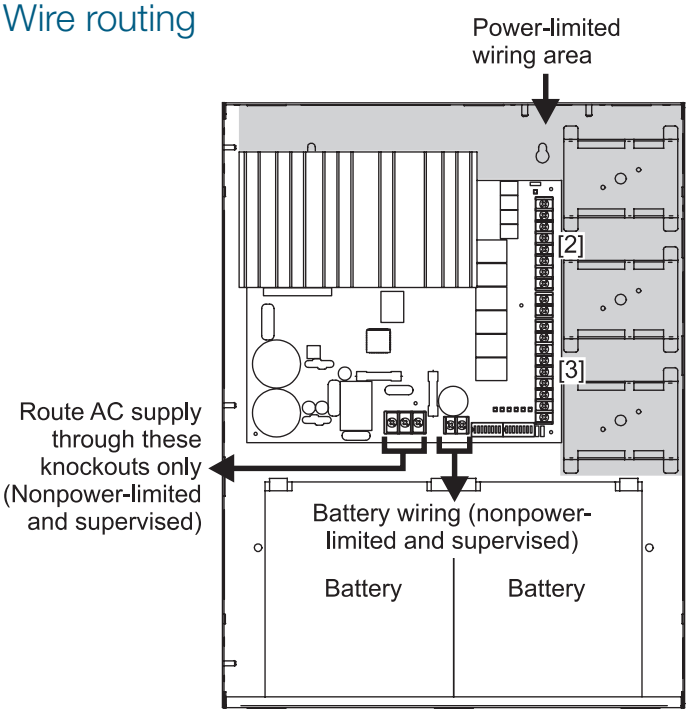
<<The BPS shall be capable of installation for a seismic component Importance Factor of 1.5.>> The BPS shall provide a minimum of four independent, fully supervised Class B circuits that can be field configurable for notification appliance circuits or auxiliary 24 Vdc power circuits. BPS NACs shall be convertible to a minimum of two Class A NACs. Each BPS output circuit shall be rated at 3 amperes at 24 Vdc. Each output circuit shall be provided with automatically restoring overcurrent protection. The BPS shall be operable from the main system NAC and/or EDWARDS Signature Series control modules. BPS NACs shall be configurable for continuous, 3-3-3 temporal or optionally, California rate. Fault conditions on the BPS shall not impede operation of main system NAC. The BPS shall be provided with ground fault detection circuitry and a separate AC fail relay.

Dimensions



D1	D2	D3	D4	D5	D6
17.0 in (43.2 cm)	3.5 in (8.9 cm)	13.0 in (33.0 cm)	6.5 in (16.5 cm)	3.375 in (8.6 cm)	12.0 in (30.4 cm)

Wire routing



Notes

1. Maintain 1/4-inch (6 mm) spacing between power-limited and nonpower-limited wiring or use type FPL, FPLR, or FPLP cable per NEC.

[2] Power-limited and supervised when not configured as auxiliary power. Non-supervised when configured as auxiliary power.

[3] Source must be power-limited. Source determines supervision.

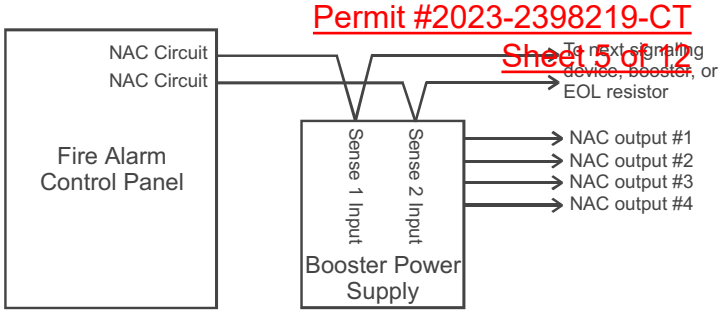
4. When using larger batteries, make sure to position the battery terminals towards the door.

RSN: 1763815
Permit #2023-2398219-CT
Sheet 5 of 12

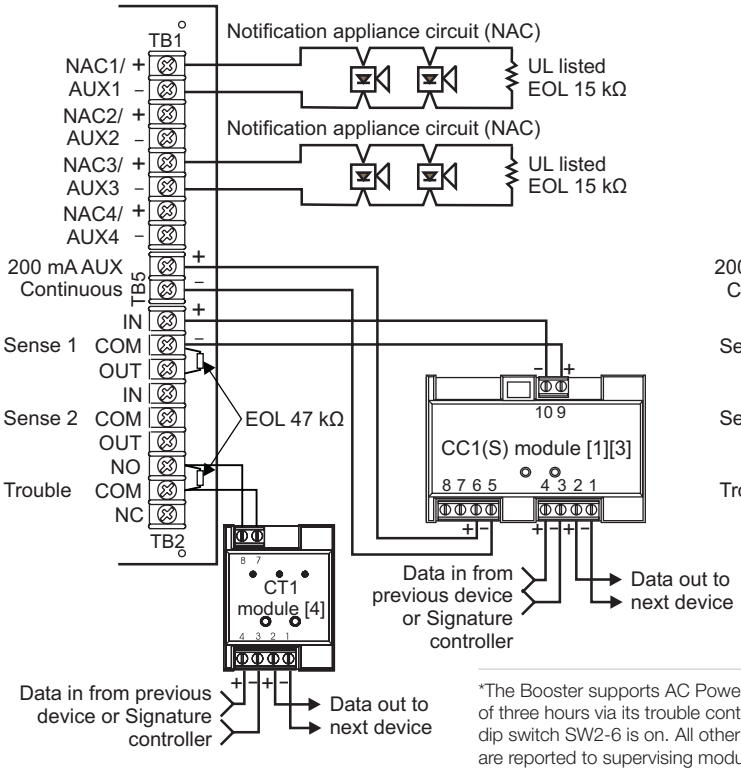
Typical Wiring

Single or cascaded booster anywhere on a notification appliance circuit

Existing NAC end-of-line resistors are not required to be installed at the booster's terminals. This allows multiple boosters to be driven from a single NAC circuit without the need for special configurations.

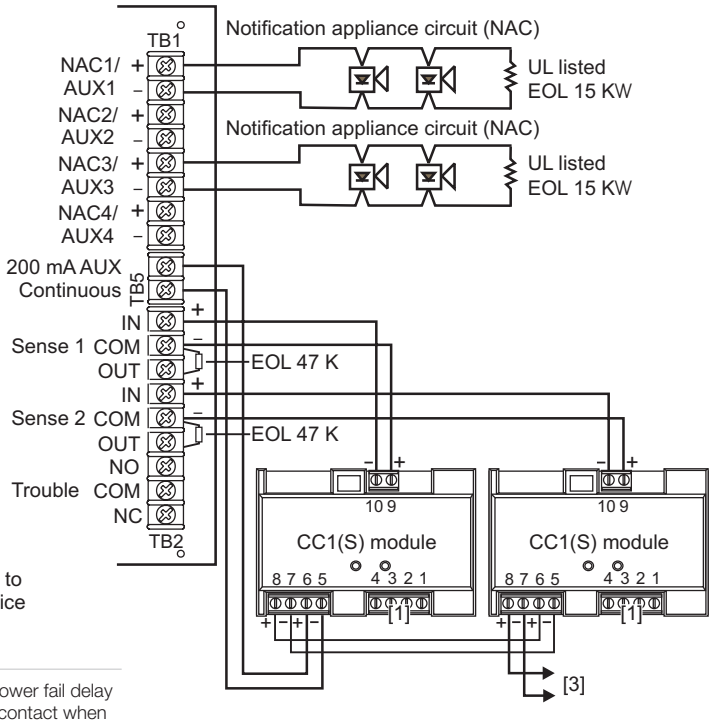


Configuring the Booster for AC Power Fail delay operation*

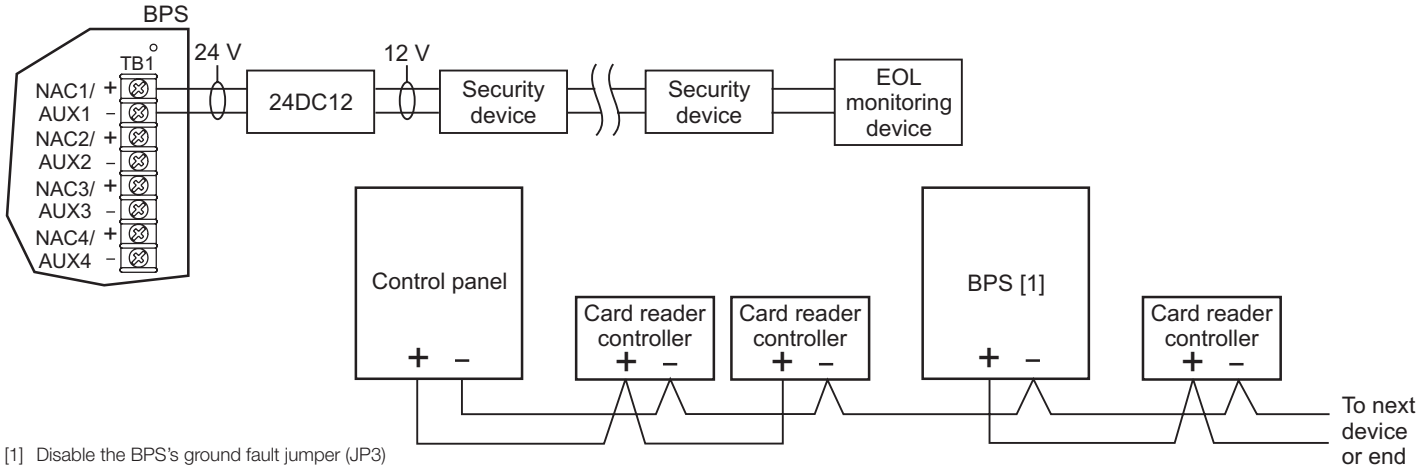


*The Booster supports AC Power fail delay of three hours via its trouble contact when dip switch SW2-6 is on. All other troubles are reported to supervising module or panel without delay via Sense inputs.

Multiple CC1(S) modules using the BPS's sense inputs



Security and access



[1] Disable the BPS's ground fault jumper (JP3)

LIFE SAFETY & INCIDENT MANAGEMENT

Contact us...

Email: edwards.fire@fs.utc.com
Web: *Edwards-fire.com*

EDWARDS is a UTC brand.
1016 Corporate Park Drive
Mebane, NC 27302

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Specifications

Model	6.5 amp Booster	10 amp Booster
AC Line Voltage	120VAC or 220-240VAC 50/60Hz 390 watts	120VAC or 220-240VAC 50/60Hz 580 watts
Notification Appliance Circuit Ratings	3.0A max. per circuit @ 24Vdc nominal 6.5A max total all NACs	3.0A max. per circuit @ 24Vdc nominal 10A max total all NACs
Trouble Relay	2 Amps @ 30Vdc	
Auxiliary Outputs	Four configurable outputs replace NACs 1, 2, 3 or 4. as auxiliary outputs and 200 mA dedicated auxiliary. (See note 2.)	
Input Current (from an existing NAC)	3mA @ 12Vdc, 6mA @ 24Vdc	
Booster Internal Supervisory Current	70mA + 35 mA for each circuit set to AUX	
Booster Internal Alarm Current	270mA	
Signature Mounting Space	Accomodates three two-gang modules.	
Maximum Battery Size	10 Amp Hours (2 of 12V10A) in cabinet up to 24 Amp hours with external battery cabinet for fire and security applications; up to 65 Amp hours for access control applications in external battery box.	
Terminal Wire Gauge	18-12 AWG	
Relative Humidity	0 to 93% non condensing @ 32°C	
Temperature Rating	32° to 120°F (0° to 49°C)	
NAC Wiring Styles	Class A or Class B	
Output Signal Rates	Continuous, California rate, 3-3-3 temporal, or follow installed panel's NAC. (See note 1.)	
Ground Fault Detection	Enable or Disable via jumper	
Agency Listings	UL, ULC, CSFM	

1. Model BPS*CAA provides selection for California rate, in place of temporal.
2. Maximum of 8 Amps can be used for auxiliary output.

Ordering Information

Catalog Number	Description	Shipping Wt. lb (kg)
BPS6A	6.5 Amp Booster Power Supply	13 (5.9)
BPS6AC	6.5 Amp Booster Power Supply (ULC)	13 (5.9)
BPS6A/230	6.5 Amp Booster Power Supply (220V)	13 (5.9)
BPS6CAA	6.5 Amp Booster Power Supply with California rate	13 (5.9)
BPS10A	10 Amp Booster Power Supply	13 (5.9)
BPS10AC	10 Amp Booster Power Supply (ULC)	13 (5.9)
BPS10A/230	10 Amp Booster Power Supply (220V)	13 (5.9)
BPS10CAA	10 Amp Booster Power Supply with California rate	13 (5.9)
Related Equipment		
12V6A5	7.2 Amp Hour Battery, two required	3.4 (1.6)
12V10A	10 Amp Hour Battery, two required	9.5 (4.3)
3-TAMP	Tamper switch	
BC-1EQ	Seismic Kit for BC-1. Order BC-1 separately. See note 3.	
BPSEQ	Seismic kit for BPS6A or BPS10 Booster Power Supplies. See note 3	
BC-1	Battery Cabinet (up to 2 - 40 Amp Hour Batteries)	58 (26.4)
BC-2	Battery Cabinet (up to 2 - 17 Amp Hour Batteries)	19 (8.6)
12V17A	18 Amp Hour Battery, two required (see note 1)	13 (5.9)
12V24A	24 Amp Hour Battery, two required (see note 1)	20 (9.07)
12V40A	40 Amp Hour Battery, two required (see notes 1, 2)	32 (14.5)
12V50A	50 Amp Hour Battery, two required (see notes 1, 2)	40 (18.14)
12V65A	65 Amp Hour Battery, two required (see notes 1, 2)	49 (22.2)

1. Requires installation of separate battery cabinet.
2. BPS supports batteries greater than 24 Amp hours for access control applications only.
3. For earthquake anchorage, including detailed mounting weights and center of gravity detail, refer to Seismic Application Guide 3101676. Approval of panel anchorage to site structure may require local AHJ, structural or civil engineer review.

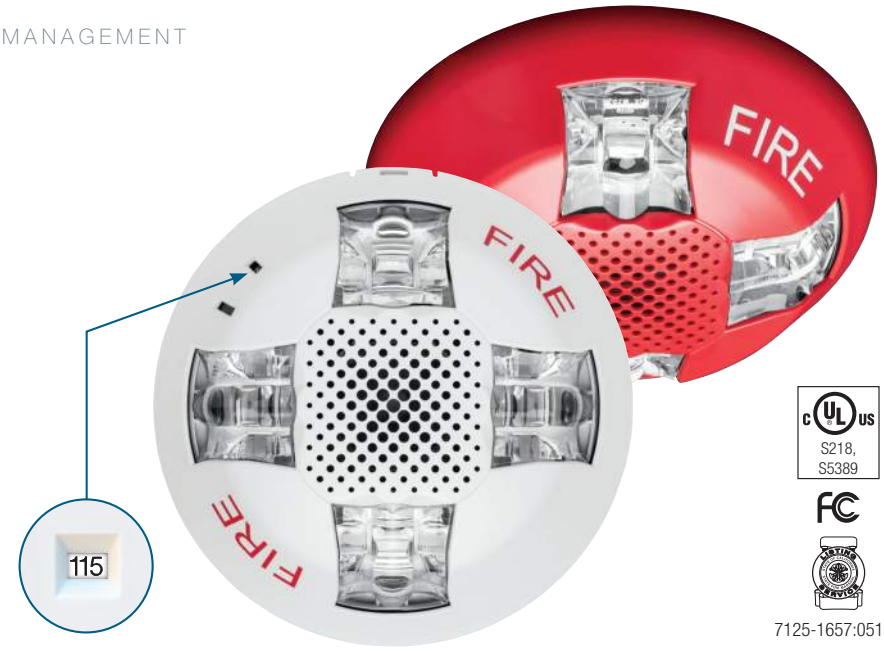
RSN: 1763815
Permit #2023-2398219-CT
Sheet 7 of 12

EDWARDS

LIFE SAFETY & INCIDENT MANAGEMENT

Genesis LED GC Series

Ceiling Mount Notification Devices



c UL us
S218, S5389

FC

7125-1657:0510

FM APPROVED

Overview

Genesis LED GC Series horns and LED strobes feature a sleek low profile design and energy-efficient technology that makes them less expensive to install and operate by reducing overhead. High performance LEDs require fewer power supplies, backup power, and batteries. These new appliances are designed with, energy-efficiency, and life safety in mind.

Genesis LED GC Series uses high efficiency optics, combined with patented electronics, to deliver a highly controlled and efficiently focused light distribution pattern in exchange for lower current requirements. Strobes feature field-selectable 15, 30,75, or 115 cd light output.

Compared with Xenon-type strobes, Genesis LED GC Series appliances need fewer power supplies and often smaller wire gauge, which lightens conduit requirements. They are also backwards compatible with legacy strobes, so there's no need to replace all your existing devices to upgrade to new LED technology. In fact, GC strobes can be mixed on the same circuit and used in the same field of view as Xenon-based strobes. This makes Genesis LED GC Series ideal for new installations and retrofits alike.

Field-configurable sound output levels provide the flexibility modern life safety projects demand, while the Genesis LED control protocol keeps multiple strobes on compatible NAC circuits synchronized to well within NFPA 72 requirements.

Serviceability is another area where GC Series appliances shine. The universal room side wiring plate allows for pre-installation and electrical wiring as well as checking continuity with the included diagnostics check bar. GC Series devices can then be easily snapped into place with the confidence of knowing the wiring is correct. The innovative under-cover diagnostic test points provide easy access to device circuit testing while mounted.

Standard Features

- **High Performance LED Strobe Technology**
  - Ultra low device current consumption allows:
    - More devices per circuit
    - Ability to use lower gauge wire
    - Longer wire runs
    - Fewer booster power supplies
  - High efficiency optics
  - Selectable 15, 30, 75, or 115 cd light output
  - LED devices may be mixed with legacy Xenon strobes
- **Efficient Audible Output**
  - Selectable high or low dB horn output
  - Selectable temporal or steady horn output
  - Improved audio frequency range for better wall penetration
- **Low-profile Design**
  - Ultra-slim... protrudes about 1.5" from the mounting surface
  - Attractive appearance... no visible mounting screws
- **Multiple "FIRE" Marking Options**
  - Order English, French, Spanish or no FIRE markings
  - Change markings at any time with replaceable quick-swap covers
- **Easy to Install**
  - Pre-install and pre-wire with convenient universal room side wiring plate
  - Check electrical continuity on room side wiring plate with included diagnostics check bar
  - Diagnostics port streamlines device circuit testing
  - Fits 1-gang, 2-gang, 4-inch octagon, and 4-inch square electrical boxes
  - Optional red and white trim plates available
  - Slide switches for field configuration
  - 12 to 18 AWG in-out screw terminals for quick wiring

RSN: 1763815
Permit #2023-239821 9-CT
Sheet 9 of 12

Application

Strobes

Genesis GC Series strobes are UL 1971-listed for use indoors as ceiling-mounted public-mode notification appliances for the hearing impaired. Prevailing codes require strobes to be used where ambient noise conditions exceed 105 dBA (87 dBA in Canada), where occupants use hearing protection, and in areas of public accommodation as defined in the *Americans with Disabilities Act*.

Synchronization is important in order to avoid triggering seizures in people with photosensitive epilepsy. All Genesis strobes exceed UL synchronization requirements (within 10 milliseconds over a two-hour period) when used with a synchronization source. See the specifications table for a list of compatible sources.

Horns

Genesis horn output reaches as high as 92 dBA and features an improved audio frequency range compared with other Genesis horns. This results in excellent sound penetration through walls and a clear warning of danger. Horn only models may be configured for either coded or non-coded notification appliance circuits. They can also be set for high or low dBA output. This setting reduces horn output by about 6 dBA.

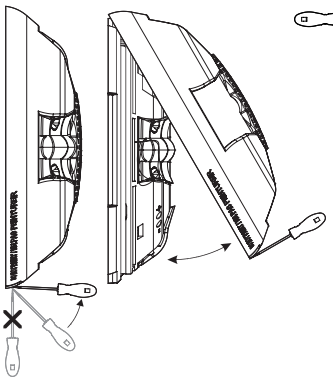
The suggested sound pressure level for each signaling zone used with alarm signals is at least 15 dBA above the average ambient sound level, or 5 dBA above the maximum sound level having a duration of at least 60 seconds, whichever is greater. These values are measured at five feet (1.5 m) above the floor. The average ambient sound level is A-weighted, fast response sound pressure measured over a 24-hour period.

Doubling the distance from the signal to the ear will theoretically result in a 6 dBA reduction of the received sound pressure level. The actual effect depends on the acoustic environment in the space. A 3 dBA difference represents a barely noticeable change in volume.

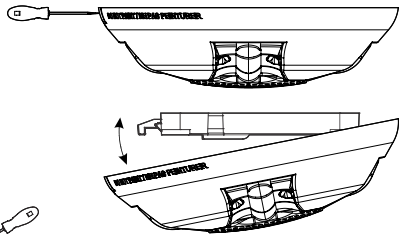
Installation

Genesis GC horns and strobes mount to the required GP10 room side wiring plate. The GP10 mounting plate is ordered separately from the GC device in packs of 10 for convenient pre-installing and pre-wiring. The device can be removed easily from the room side wiring plate by pushing up with a screwdriver. The cover can also be removed from the device easily with a screwdriver to access the light and sound output settings and a diagnostics test port for voltage testing.

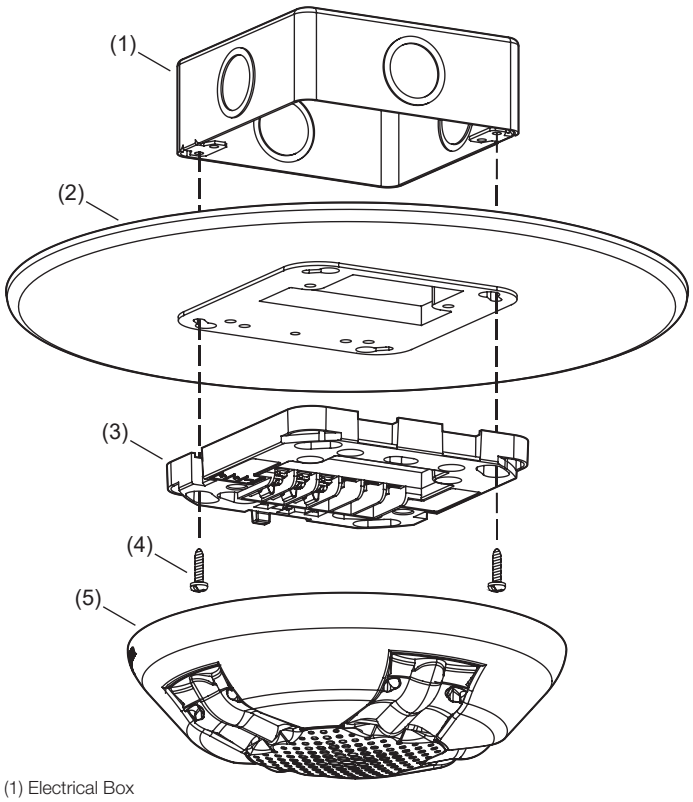
Removing Cover



Removing Device

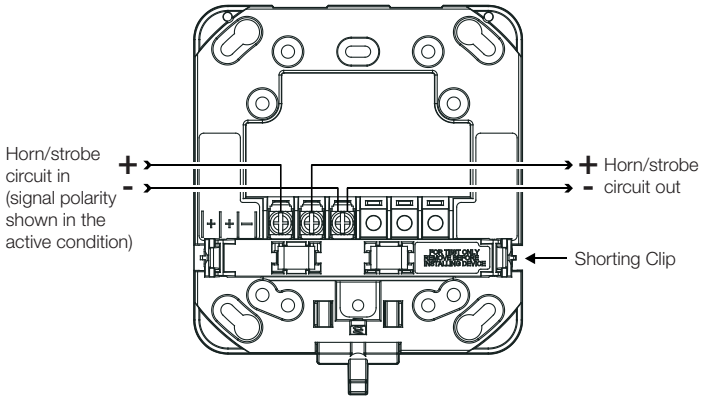


Genesis LED GC Series horns, strobes, and horn-strobes mount to any standard one-gang, two-gang, 4-inch octagon, and 4-inch square electrical box. Matching optional GCT trim rings are available to cover oversized openings. Optional color matched double-gang surface boxes are also available. Genesis LED GC series are listed to be both wall mounted or ceiling mounted.



(1) Electrical Box
(2) Trim Plate (optional)
(3) Wiring plate (required, ordered separately)
(4) Machine screw (2X, supplied with wiring plate)
(5) GC signaling appliance

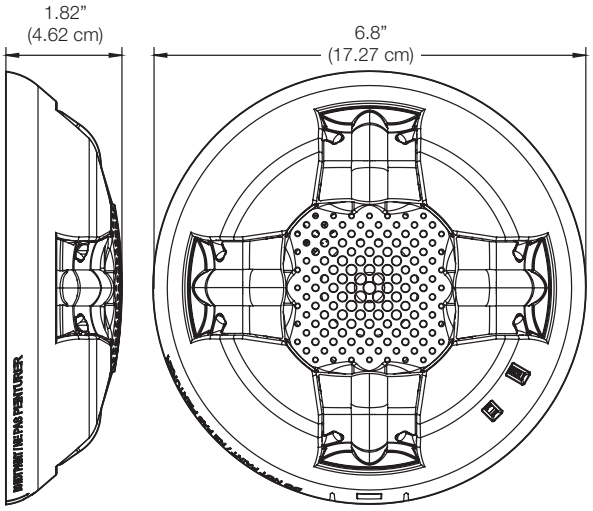
Wiring



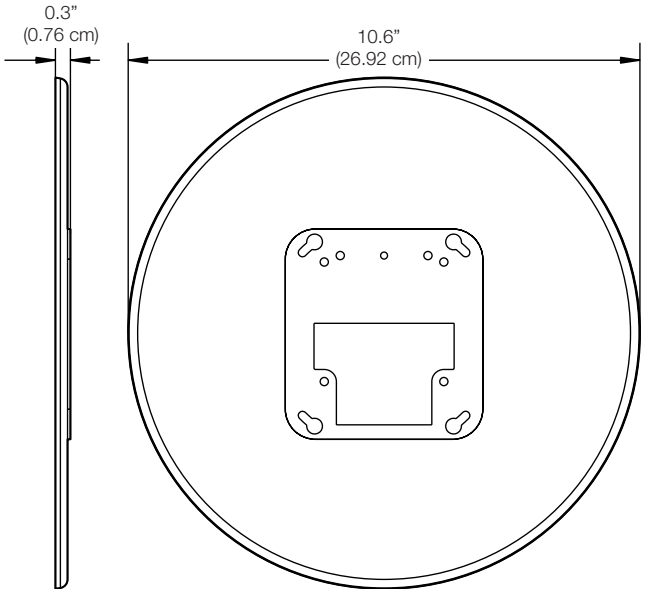
RSN: 1763815
Permit #2023-2398219-CT
Sheet 9 of 12

Dimensions

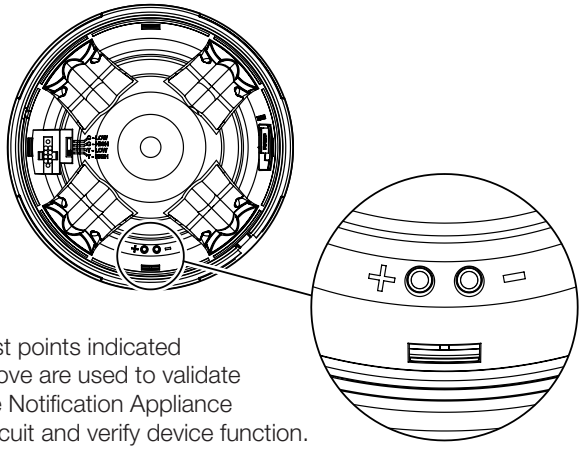
GC Notification Appliances



GCT Trim Plate (optional)



Diagnostics



Test points indicated above are used to validate the Notification Appliance Circuit and verify device function.

Field Configuration

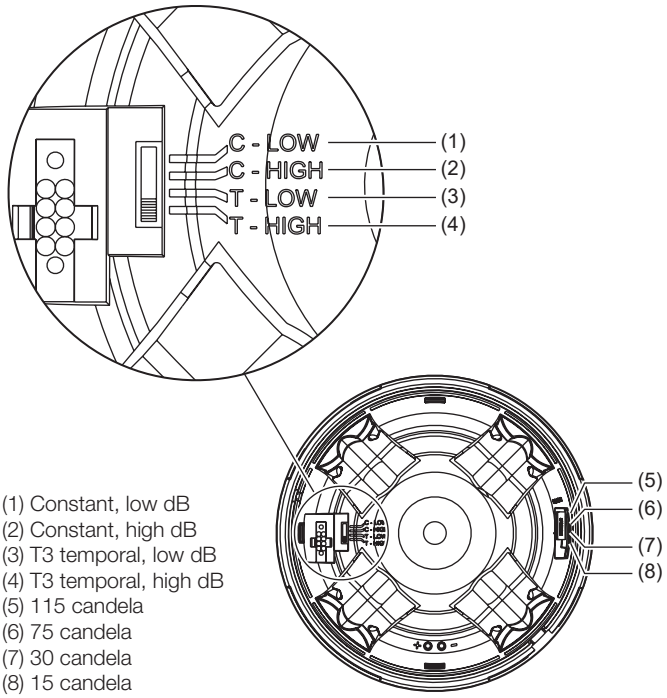
Temporal horn and horn-strobe models are factory set to sound in a three-pulse temporal pattern. By sliding the tone selector switch, horn only models may be configured for constant horn output that can be coded at precise intervals by EDWARDS control panels and control modules.

Note: Temporal 3 coding is the required output for fire notification devices per NFPA 72. Any device coding other than temporal 3 is at the discretion and approval of the local authority having jurisdiction (AHJ).

Horns and horn-strobes are factory set for high dB output. Low dB output may be selected by sliding the tone selector switch. This reduces the output by about 6 dBA.

Genesis LED clear strobes and horn-strobes may be set for 15, 30, 75, or 115 candela output. The output setting is changed by simply removing the cover and sliding the candela switch to the desired setting. The device does not have to be removed from the wall to change the output setting. The setting remains visible through a small window on the device after the cover is closed.

Light and Sound Output Settings



(1) Constant, low dB
(2) Constant, high dB
(3) T3 temporal, low dB
(4) T3 temporal, high dB
(5) 115 candela
(6) 75 candela
(7) 30 candela
(8) 15 candela

Operating current

Horns

Sound setting	16 to 33 VDC	16 to 33 VFWR
C-Low, T-Low	20 mA	25 mA
C-High, T-High	30 mA	40 mA

Strobes

Strobe setting	16 to 33 VDC	16 to 33 VFWR
15, 30, 75, 115	35 mA	45 mA

Horn-Strobes

Strobe setting	Sound setting	16 to 33 VDC	16 to 33 VFWR
15, 30, 75, 115	C-Low, T-Low	50 mA	60 mA
	C-High, T-High	60 mA	75 mA

Sound Output

Horn & Horn-Strobe

Sound setting	Reverberant (UL464)	Anechoic (CAN/ULC - S525)
C-Low, T-Low	80 dBA	86 dBA
C-High, T-High	86 dBA	92 dBA

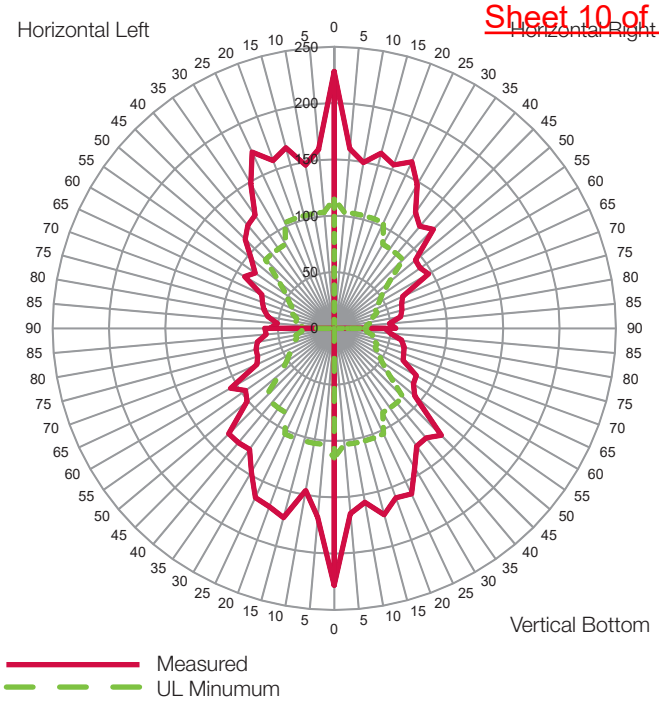
Sound pattern – Horn Models (ULC)

Axis	Angle (°)	Output (dBA)
Horizontal	115 and 55	93.3
Vertical	125 and 50	91.7

Sound pattern – Horn-Strobe Models (ULC)

Axis	Angle (°)	Output (dBA)
Horizontal	145 and 35	93.0
	155 and 35	90.8
Vertical	135 and 35	92.0
	155 and 25	85.4

Light Distribution



Specifications

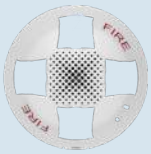
Operating voltage	16 to 33 VDC, 16 to 33 VFWR
Horn signal type	Constant or TC3 temporal
Light output	15, 30, 75, or 115 candela
Strobe flash rate	1 fps (flash per second) approx.
Synchronization	20 Ω max. between any two devices. To determine allowed wire resistance, refer to these specifications, and the specifications for the synchronized signal source.
Synchronization Sources	Edwards CC Series Signal Modules, Booster and Auxiliary Power Supplies, Intelligent and Conventional Control Panels
Wire size	12 to 18 AWG (0.75 to 2.50 mm^2)
Mounting	Wall or Ceiling mount
Dimensions (Ø × D)	6.8 × 1.82 in. (17.27 × 4.62 cm)
Strobe-to-box center offset	-1.70 inches (-4.32 cm)
Compatible electrical boxes [1]	1-gang, 2-gang, 4-inch octagon, 4-inch square
Trim plates	GCTR, GCTW 10.6 × 0.3 in. (26.92 × 0.76 cm)
Operating environment	
Temperature	32 to 122°F (0 to 50°C)
Relative humidity	0 to 93% noncondensing
Storage Temperature	-40 to 158 F (-40 to 70 C)

[1] Electrical boxes must be at least 1-1/2 in. (3.81 cm) deep.

RSN: 1763815
Permit #2023-2398219-CT
Sheet 11 of 12

Ordering Information

Notification Appliances		Color	Marking
 Horns	GCARF	Red	FIRE
	GCARF-FR	Red	FEU
	GCARF-SP	Red	FUEGO
	GCARN	Red	None
	GCAWF	White	FIRE
	GCAWF-FR	White	FEU
	GCAWF-SP	White	FUEGO
	GCAWN	White	None
 Strobes	GCVRF	Red	FIRE
	GCVRF-FR	Red	FEU
	GCVRF-SP	Red	FUEGO
	GCVRN	Red	None
	GCVWF	White	FIRE
	GCVWF-FR	White	FEU
	GCVWF-SP	White	FUEGO
	GCVWN	White	None
 Horn-strobes	GCAVRF	Red	FIRE
	GCAVRF-FR	Red	FEU
	GCAVRF-SP	Red	FUEGO
	GCAVRN	Red	None
	GCAVWF	White	FIRE
	GCAVWF-FR	White	FEU
	GCAVWF-SP	White	FUEGO
	GCAVWN	White	None

Replacement Appliance Covers		Color	Marking
 Horn Covers	GCARA-CVR	Red	ALERT
	GCARF-CVR	Red	FIRE
	GCARF-FR-CVR	Red	FEU
	GCARF-SP-CVR	Red	FUEGO
	GCARN-CVR	Red	None
	GCAWA-CVR	White	ALERT
	GCAWF-CVR	White	FIRE
	GCAWF-FR-CVR	White	FEU
	GCAWF-SP-CVR	White	FUEGO
	GCAWN-CVR	White	None
 Strobe Covers	GCVRA-CVR	Red	ALERT
	GCVRF-CVR	Red	FIRE
	GCVRF-FR-CVR	Red	FEU
	GCVRF-SP-CVR	Red	FUEGO
	GCVRN-CVR	Red	None
	GCVWA-CVR	White	ALERT
	GCVWF-CVR	White	FIRE
	GCVWF-FR-CVR	White	FEU
	GCVWF-SP-CVR	White	FUEGO
	GCVWN-CVR	White	None
 Horn-strobe Covers	GCAVRA-CVR	Red	ALERT
	GCAVRF-CVR	Red	FIRE
	GCAVRF-FR-CVR	Red	FEU
	GCAVRF-SP-CVR	Red	FUEGO
	GCAVRN-CVR	Red	None
	GCAVWA-CVR	White	ALERT
	GCAVWF-CVR	White	FIRE
	GCAVWF-FR-CVR	White	FEU
	GCAVWF-SP-CVR	White	FUEGO
	GCAVWN-CVR	White	None

Accessories

	GP10	Room Side Wiring Plate (required, ordered separately)	 GCTR	Trim plate, GC Series, red	 GCTW	Trim plate, GC Series, white
			27193-21	Two-gang surface mount box, red	27193-26	Two-gang surface mount box, white

Model Number Syntax, Appliances

Genesis Series
GC = Ceiling mount appliances

Housing Color
R = Red
W = White

GCAVRF

Housing Marking
N = None
F-FR = FEU
F-SP = FUEGO
F = FIRE
A = ALERT*

Functions
A = Horn only
V = Strobe only
AV = Horn-Strobe

* ALERT Marking available on white strobe model only. See replacement covers for more options.

Model Number Syntax, Replacement Covers

Genesis Series
GC = Ceiling mount appliances

Housing Color
R = Red
W = White

GCAVRF-CVR

Cover Designation

Cover Marking
N = None
F-FR = FEU
F-SP = FUEGO
F = FIRE
A = ALERT

Functions
A = Horn only
V = Strobe only
AV = Horn-Strobe

EDWARDS

LIFE SAFETY & INCIDENT MANAGEMENT

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