AlphaECall™ 100 Series

Emergency Call System

Installation & Configuration Manual

Alpha Communications®

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Chapter 1 - Introduction

» What is AlphaECall™ 100?

The AlphaEcall™ 100 Series Emergency Call System has been designed to incorporate the most needed features for

- Assisted and Independent Living facilities
- Elderly Housing
- Hotels
- Clinics
- Doctor's offices
- Commercial Buildings

or anywhere that audible and visual emergency or notification signaling is required in a compact, aesthetic, and economical package.

Designed with 16 points per module, the system is versatile and scalable to fit small to very large applications. The master annunciator features long life LED indicators for lower maintenance as well as a Tone Off switch. A modular design allows for easy expandability and integration of additional features.

If you have any questions during installation about AlphaECall™ 100 Series please feel free to contact us at anytime by going to:

https://www.alphacommunications.com/support

» Typical AlphaEcall™ 100 System Components:

» Master Annunciator Panel

The Annunciator panel is modular in design and typically includes a tone unit (part# **TSMEx**) consisting of a tone speaker with a Tone Off button, and emergency light module(s) (part# **ELM116**) that can display up to 16 points each. Depending on the amount of **ELM116** modules required, mounting frames are available in 2,3,4,6, and 8 module sizes. The frames can be combined to provide virtually any size master. Master assemblies can be mounted as flush or surface units. Certain configurations can be made in a desk mount configuration. The unique modular design allows for vertical or horizontal orientation to provide maximum versatility in limited space requirements. Panels are available in White, Titanium, or Dark Brown colors to compliment the facility décor. The modular configuration also allows for intercom and Room Status system integration. Systems can be equipped with multiple master panels and/or sub-master stations to annunciate smaller zones within a larger system.

» Annunciator Controller

Each Master requires an **AC219** Controller and an SS106 transformer to be mounted within 100 ft (30m) of each master. The controller supplies regulated 24VDC power to the system, detects incoming emergency calls, and generates the alert tone.

» Duty Stations

Up to four (4) Duty Stations (model# **RS101S**), or remote audible/visual annunciators, can be installed to alert staff located away from the master station that a call is active in the system. These stations are equipped with an automatically resetting Tone Off button.

» Call Devices

The AlphaEcall™ 100 Series system is compatible with the **SF117/2A** and **SF119/2A** Emergency Pull Stations, **SF154A** Push Button Stations, and several other latching contact type devices. Many other device types are available for specialized needs. Please contact Alpha Communications® for compatible solutions.

» Corridor Lights

Several Corridor Lights are available for the AlphaEcall™ 100 Series system. **CDL101LED** 1 bulb, **CDL101B** 1 bulb w/ 24VDC piezo buzzer, **CDL118** 1 bulb w/ 24VDC horn buzzer, **CDL102LED** 2 bulb, **CDL123B** 1 bulb w/ 24VAC horn buzzer and more. Maintenance-free LED corridor lights are also compatible to provide for special system requirements.

» Additional Signaling Devices

The AlphaEcall™ system can be used with additional Buzzers, Strobes, and Floor Bells to address facility needs. Additional Equipment such as paging notification, auto-dialers and call logging/report systems are also available. The **AC219** controller has an integrated "Form C" relay to provide a N.O. or N.C. dry contact switch for external signaling devices when an alarm is received by the system.

Chapter 2 - System Requirements

» Wire Types

All wiring should be #18AWG except for the selective "L" wires which can be #22AWG. Either stranded or solid core wire is acceptable. No shielded or twisted pair type wire is required.

» Installation Procedures

All components must be installed in a cool, clean and dry location. All connections must be clean and secure to insure reliable operation. Some installations or local codes may require installation of annunciator controllers in a protective junction box with its transformer and the transformer's primary 120VAC connections.

» System Operation

The AlphaEcall™ 100 Series system is designed as a single priority level, emergency call system. With the AC219 Annunciator Controller, mechanically latching devices of various sorts are used to send an alert to a master station or multiple master stations connected in parallel. The AlphaEcall™ 100 Series system can support corridor lights, zone lights, and can trigger floor bells, strobes, and many other audible and/or visual annunciators. When any call is active, the tone light will light and the tone will sound. To silence the tone, press the Tone Off button; the Tone Off light and the tone will shut off and remain off until ALL calls are reset. All call resets must be done at the originating station(s).


» IMPORTANT NOTES

- To ensure system reliability and longevity, please check that all hardware is installed and configured as per manufacturer's recommendations and manufacturer's distance limitations and cabling requirements are observed.

- When planning your installation, consider distance limitations, and potential electromagnetic interference (EMI) sources.

- As this is considered a Life Safety system, it is recommended that a quality Battery back up/surge protector/ power filter be used for all devices and components connected to 110VAC power.

- Systems being used for emergency call, door monitoring, or any other critical application should have their devices tested regularly for proper operation.

Chapter 3 - Master Module Assembly

» Installing Modules in Frames
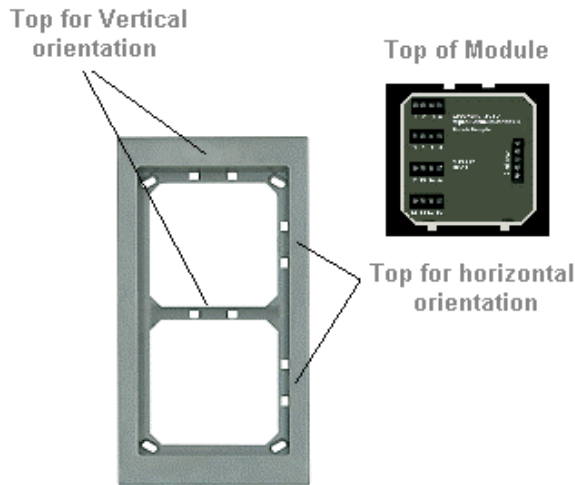
AlphaEcall™ 100 Series modules are designed for horizontal or vertical orientation to allow various configurations.

The retaining clip for each module uses a pair of rectangular holes in the frame, shown to the left, to retain the module.

The holes in the four corners of the frame are used to connect the frame to the flush or surface back box with the (4) screws supplied with the back box.

Push the tabs at the bottom of the module into the frame, position the module, then snap the retaining clip into the appropriate holes.

» Wiring ELM116 Modules

Attach all incoming selective "L" wires to their respective terminals.

Note: Terminal #1 in the upper left corresponds to the upper left label position from the front view.

Connect the **D** wire from the **AC219** to any one of the **COM (D+)** terminals and use the additional terminals to branch to additional modules (if needed). This is the power in (+24VDC) for the master.

If running wires to additional masters they can be doubled up at these terminals if necessary, but using junction blocks in a central location is a cleaner way to do this. It is also an easier way to allow troubleshooting and future changes if necessary.

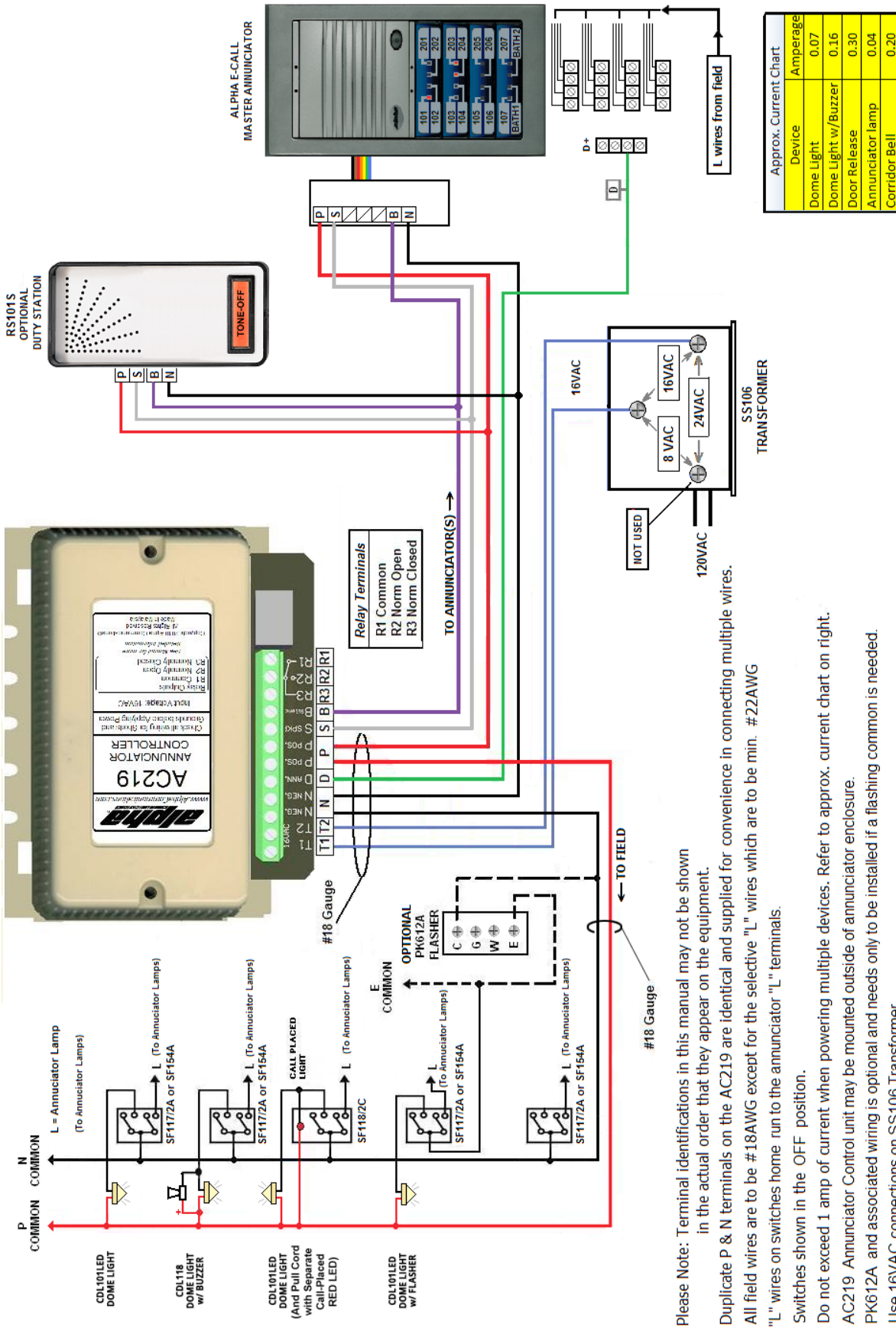## » Labeling the ELM116 modules
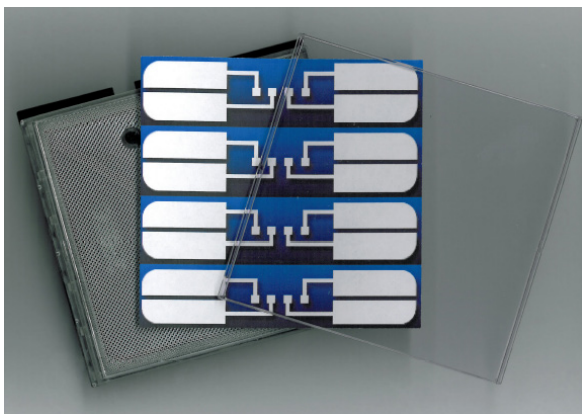
Carefully pry the clear plastic lens at one side from the module front and remove the paper insert.

Write directly on the paper insert or apply machine generated labels in the white spaces provided.

When finished, put the paper insert in the lens cover and reinstall the lens to the module using gentle pressure around the edges.

Chapter 4 - Wiring Diagrams

» Typical System Wiring Diagram

Approx. Current Chart	
Device	Amperage
Dome Light	0.07
Dome Light w/Buzzer	0.16
Door Release	0.30
Annunciator lamp	0.04
Corridor Bell	0.20

Please Note: Terminal identifications in this manual may not be shown in the actual order that they appear on the equipment.

Duplicate P & N terminals on the AC219 are identical and supplied for convenience in connecting multiple wires.

All field wires are to be #18AWG except for the selective "L" wires which are to be min. #22AWG

"L" wires on switches home run to the annunciator "L" terminals.

Switches shown in the OFF position.

Do not exceed 1 amp of current when powering multiple devices. Refer to approx. current chart on right.

AC219 Annunciator Control unit may be mounted outside of annunciator enclosure.

PK612A and associated wiring is optional and needs only to be installed if a flashing common is needed.

Use 16VAC connections on SS106 Transformer.

NOT USED

24VAC

8 VAC | 16VAC

120VAC

24VAC

SS106
TRANSFORMER

T1
T2
D
F
F
F

PK601A
24VAC to24VDC
Converter

−
+

BE007
24VDC
FLOOR BELL

CDL101LED
DOME LIGHT

24VDC
DOOR STRIKE
+
−

SF117/2A
PULL CORD

L
(To Annunciator)

PK612A
FLASHER

C
G
W
E

SMOKE DETECTOR

RS101S
OPTIONAL
DUTY STATION

P
S
B
N

TONE-OFF

alpha
AC219
ANNUNCIATOR
CONTROLLER

ALPHA E-CALL
MASTER ANNUNCIATOR

I8 Gauge

T1 T2 N D P S B R3 R2 R1

Relay Terminals
R1 Common
R2 Norm Open
R3 Norm Closed

TO ANNUNCIATOR(S) →

P
S
B
N

101 201
102 202
103 203
104 204
105 205
106 206
107 207
BATH1 BATH2

16VAC
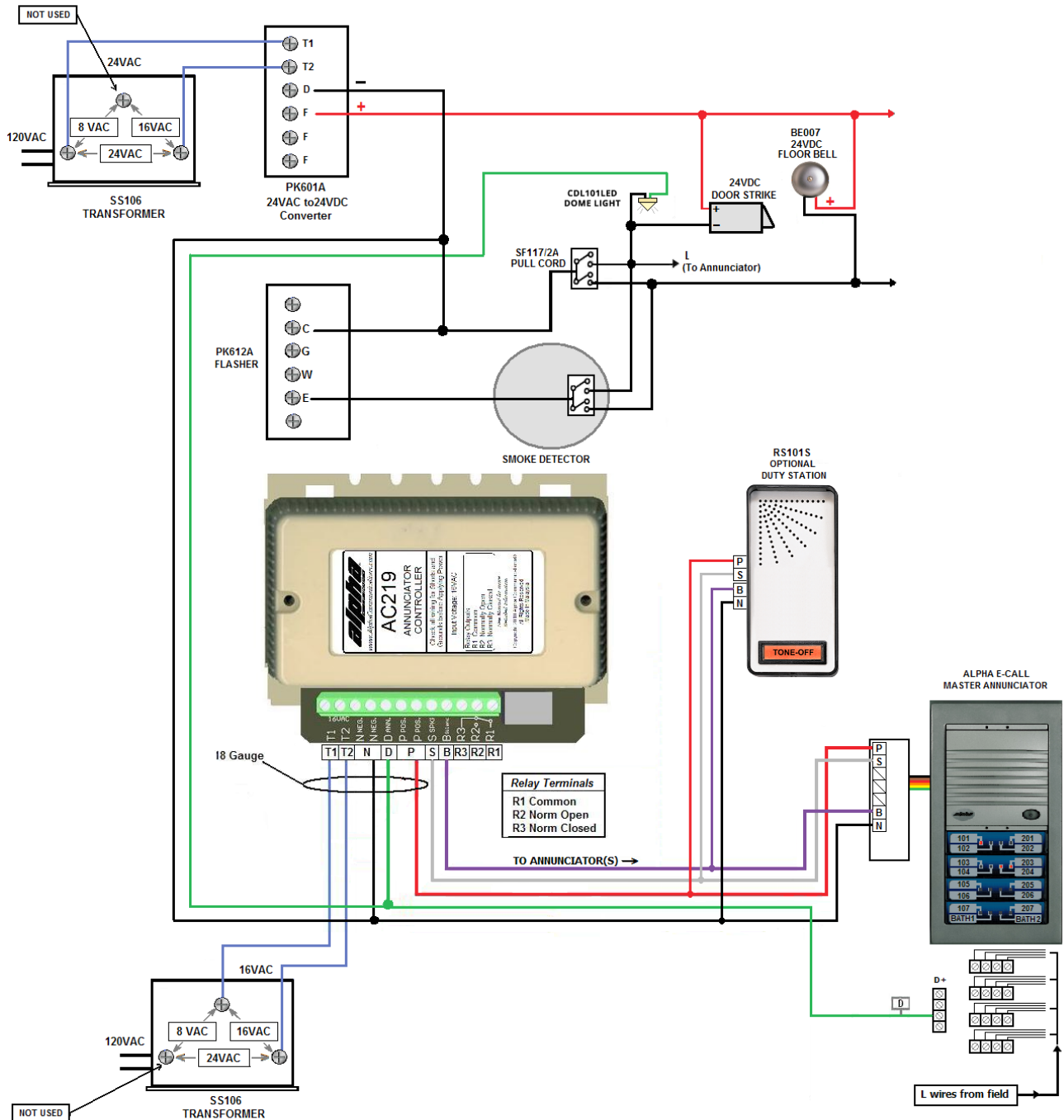
8 VAC | 16VAC

120VAC

24VAC

SS106
TRANSFORMER

NOT USED

D+
D

L wires from field

Please Note: Terminal identifications in this manual may not be shown
    in the actual order that they appear on the equipment.

Duplicate P & N terminals on the AC219 are identical and supplied for
convenience in connecting multiple wires.

All field wires are to be #18AWG except for the selective "L" wires which can be #22AWG

Floor Bell connects to emergency switches from one zone or floor only.

Door Release must be 24VDC continuous duty type

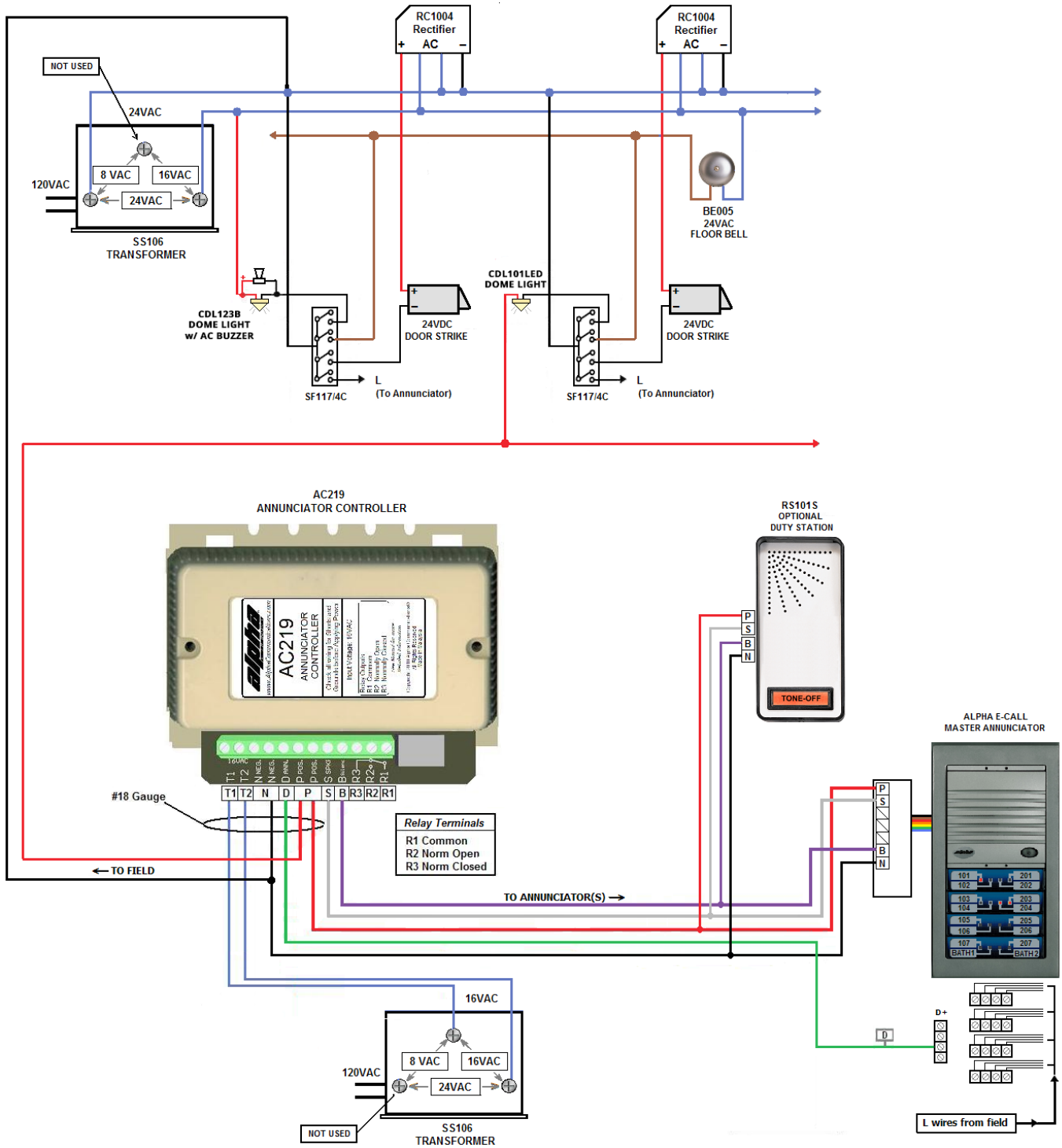Switches shown in the off position.

Smoke Detector in this scenario requires 2 separate relays (Form "A" or "C") or a dual pole relay
 for proper operation of system.

Smoke Detectors in this system are to be used for secondary annunciation only. This is not an
approved fire system!

Do not exceed 1 amp of current when powering multiple devices. Refer to approx. current chart on right.

Do not use the same transformer for AC219 and PK601A.

Approx. Current Chart	
Device	Amperage
Dome Light	0.07
Dome Light w/Buzzer	0.16
Door Release	0.30
Annunciator lamp	0.04
Corridor Bell	0.20

Please Note: Terminal identifications in this manual may not be shown
   in the actual order that they appear on the equipment.

Duplicate P & N terminals on the AC219 are identical and supplied for convenience in connecting multiple wires.

All field wires are to be #18AWG except for the selective "L" wires which are to be min. #22AWG

"L" wires on switches homerun to the annunciator "L" terminals.

Floor Bell connects to emergency switches from one zone or floor only.
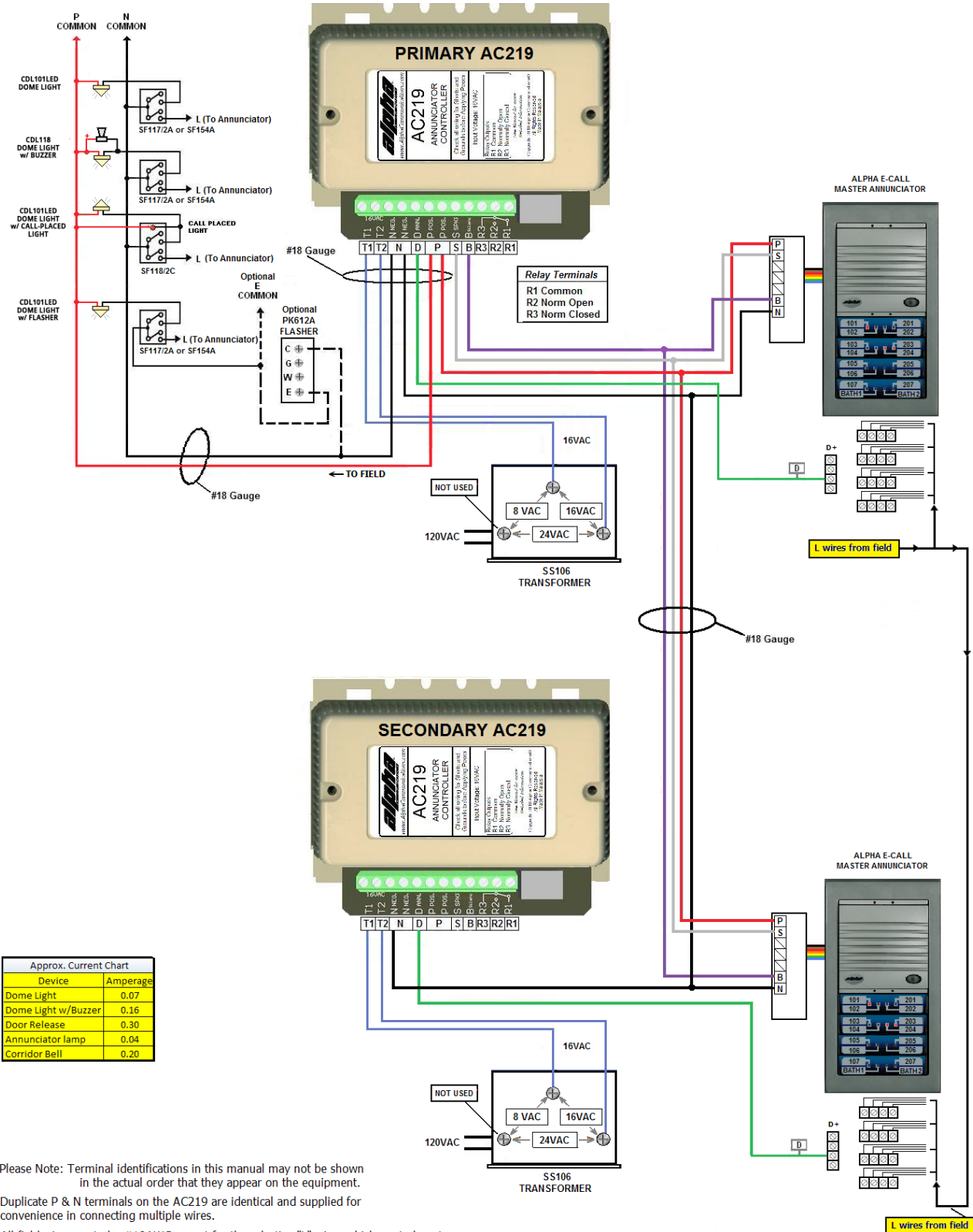
Door Release must be 24VDC "continuous duty" type.

Switches shown in the OFF position.

Do not exceed 1 amp of current when powering multiple devices. Refer to approx. current chart on right.

AC219 Annunciator Control unit may be mounted outside of annunciator enclosure.

Approx. Current Chart	
Device	Amperage
Dome Light	0.07
Dome Light w/Buzzer	0.16
Door Release	0.30
Annunciator lamp	0.04
Corridor Bell	0.20

Approx. Current Chart	
Device	Amperage
Dome Light	0.07
Dome Light w/Buzzer	0.16
Door Release	0.30
Annunciator lamp	0.04
Corridor Bell	0.20

Relay Terminals
R1 Common
R2 Norm Open
R3 Norm Closed

NOTE
Secondary Annunciators must get "L" wires from either the devices or another master station 22AWG is recommended.

Please Note: Terminal identifications in this manual may not be shown in the actual order that they appear on the equipment.

Duplicate P & N terminals on the AC219 are identical and supplied for convenience in connecting multiple wires.

All field wires are to be #18AWG except for the selective "L" wires which are to be min. #22AWG

"L" wires on switches homerun to the annunciator "L" terminals.

Switches shown in the OFF position.

Do not exceed 1 amp of current when powering multiple devices. Refer to approx. current chart on right.

Wiring may be #22AWG except where shown otherwise.

PK612A is optional. To be used if flashing common is needed.

AC219 Annunciator Control unit may be mounted outside of annunciator enclosure.

» Troubleshooting

PROBLEM	SYSTEM TEST PROCEDURE
SYSTEM DEAD	Check for 16 VAC at T1 & T2 terminals. If no power, check transformer secondary at center and right terminals for 16VAC. If no power check for 120VAC at transformer primary. If power is good at T1 & T2 (16VAC), check for 24VDC at P & N terminals. If no power there, AC219 should be checked. If power is good at P&N, then main field wiring should be checked for shorts or grounds.
TONE ON ALL THE TIME WITH NO ANNUNCIATOR LIGHT	Turn on a device to determine if Annunciator lights work. Disconnect wires going to "D" Terminal. If tone stops check field for current draw or short circuit.
TONE ON ALL THE TIME WITH ONE ANNUNCIATOR LIGHT ON	Check Device(s) associated with the annunciator light. If OK, disconnect L wire for that circuit. If light goes out, test L wire going back to device(s) for short to N wire or Ground.
TONE ON ALL THE TIME WITH MULTIPLE ANNUNCIATOR LIGHTS ON	Check for short circuit of several "L" wires to "N" or Ground either in the field or behind the annunciator panel(s).
NO TONE DURING ALARM	Check Tone Off switch is not stuck or shorted. Check speaker connections at speaker and "P" & "S" on the AC219. If connections are good, use test speaker to determine if tone generator in AC219 is working or not.

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AlphaEntry™ is the smartest way to greet your visitors, no matter the location! Your visitors are greeted with friendly, helpful voice prompts that allow them to easily find their desired contact within moments by intercom and/or telephone. Show off your building's style and cutting-edge technology by adding AlphaEntry™ to your public entrance or concierge stations.

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- **Hospital Waiting Rooms** - Staff directory and/or intercom (waiting room)
- **Self-Service Facilities** - Customer directory and/or access control

For more information, call or go to   www.AlphaEntry.com

U.S. PATENT# 7,783,018

AlphaStatus™ Room Status System

Simple yet versatile low voltage light system for doctor's offices, law offices, banks, clinics, and more. Positive visual indication/notification enabling efficient operation of a busy office. Wall or desk mounted master stations available in White, Titanium, or Brown.

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- **EK117B -** Light w/Buzzer Kit

Perfect for public or private bathroom emergency, home invalid medical emergency, and many other applications. Low Voltage, Low cost solution.

U.L. 1069 Nurse Call

Alpha Communications® offers a full range of Emergency Call and UL 1069 Nurse Call systems from small clinic to large hospital applications. Call us to help you design your system.