



333 Bayview Avenue, Amityville, New York 11701  
 For Sales and Repairs, (800) 645-9445  
 For Technical Service, (800) 645-9440 or visit us at  
<http://tech.napcosecurity.com/>

(Note: Technical Service is for security professionals only)  
 Publicly traded on NASDAQ Symbol: NSSC

© NAPCO 2018

# StarLink™ Commercial SLE-LTEVI-FIRE Dual-Path Alarm Communicator INSTALLATION INSTRUCTIONS



WI2326LF 12/18

## INTRODUCTION

The **SLE-LTEVI-FIRE Dual-Path Alarm Communicator** is specifically designed to interface with FACP (Fire Alarm Control Panels) and to comply with UL 864. The **SLE-LTEVI-FIRE** is equipped with two dry relays, one for a trouble output and one for an auxiliary output. The unit is also equipped with four supervised inputs to report a Fire Alarm, a Fire Trouble, a Water Flow Alarm and a Supervisory Alarm, each triggered from the N/O and Common terminals of the associated FACP output relays.

When connected to a FACP with one or two standard RJ-45 telephone inputs, the **SLE-LTEVI-FIRE** provides two RJ-45 outputs to satisfy both telephone inputs. The primary RJ-45 output is supervised and reports a trouble to the central station upon any open or short on the primary RJ-45 wires that prevent reporting. The secondary telephone line is supervised by the FACP; when a line fault is detected, a trouble is reported to the central station through the primary telephone line.

When connected to a FACP without digital dialing capability, the StarLink™ **SLE-LTEVI-FIRE** Dual-Path Commercial Fire alarm capture radio communicator is a fully supervised, wireless digital two-way subscriber unit supported by an extensive nationwide wireless network. The **SLE-LTEVI-FIRE** is compatible with most 12 or 24VDC alarm control panels (always adhere to the documentation provided by the control panel manufacturer). Mount the unit to a single-, dual-, or three-gang electrical box and route the wires through the back knockout(s), or as specified by local codes. **See WI2140 for programming information.**

The **SLE-LTEVI-FIRE** communicator uses proprietary data-capture technology that captures the alarm report from the control panel and transmits the alarm signals to the SLE Control Center; the alarm signals are then forwarded to ANY central station via Contact ID or 4/2 via DACT from the NOC or Sur-Gard System II, Sur-Gard System V, Bosch D6100IPV6 or Bosch D6600 Receiver (with ITS-D6686 Ethernet Adapter) via TCP/IP using standard line security. The SLE Control Center reports a trouble signal in the event that the network does not receive the expected supervision signal from the wireless communicator. In addition, the **SLE-LTEVI-FIRE** is powered directly from the control panel.

**SLE-LTEVI-FIRE** - Commercial / Residential Fire LTE Verizon Network Compatible GSM alarm capture Communicator. SIM card included. Red plastic enclosure. Rated nominal 12/24VDC input.

## ADDITIONAL COMPONENTS

In addition to the **SLE-LTEVI-FIRE** listed above, the following sub-assemblies are available:

**SLE-WIFI-MODULE** - Allows your Napco StarLink™ device to connect to the Internet by means of a wireless (Wi-Fi) link, eliminating a wired Ethernet cable connection.

**Note:** 7AH battery required when using the **SLE-WIFI-MODULE**. For more information, see WI2191.

**SLE-DLCBL** - Download Cable, 6 feet.

**SLE-ANTEXT30** - Extended antenna with 30 feet of cable

**SLE-ANTEXT50** - Extended antenna with 50 feet of cable

**SLE-ANTEXT75** - Extended antenna with 75 feet of cable

(Any suitable external cellular antenna is permitted by UL). Always follow the manufacturer's installation instructions. **Note:** Antennas are not Listed by UL. For LTE radios where an External Antenna needs to be installed outside of the room in which the radio is installed (maximum 30 meters (98 feet) in Residential applications), please use RF Transmitter Board 9SLELTEEXAPSLD available from our Customer Service Department, if not provided. The 9SLELTEEXAPSLD is identified by "two red dots" located on the lower right corner of the board. See WI2239 included with the 9SLELTEEXAPSLD for the simple installation procedure.

## SPECIFICATIONS

**Electrical Ratings for +12V / 24V (powered by the control panel)\***

- Input Voltage: 10-25VDC regulated (power-limited output from Listed control panel).
- Input Current:
  - 10VDC standby: 162mA
  - 12VDC standby: 125mA
  - 15VDC standby: 110mA
  - 24VDC standby: 100mA
  - 25VDC standby: 100mA

**Wi-Fi Module:** (Optional) Add 40mA to the above. (With peak RF transmission current of 300mA).

**Electrical Ratings for the IN 1 Fire Input:**

- Input Voltage: 9-25VDC.
- Maximum Input Current: Up to 2mA from FACP NAC circuit



## AGENCY LISTINGS

- UL 864 Standard For Control Units and Accessories For Fire Alarm Systems, 10th Edition

\*For Commercial Fire installations, a UL Listed Fire Alarm regulated power supply or FACP regulated auxiliary output is required.

### Electrical Ratings for IN 2, IN 3, IN 4, and IN 5:

(Inputs IN 2, IN 3, IN 4, and IN 5 are Class B)

- Maximum Loop Voltage: 25VDC input.
- Maximum Loop Current: 1.7mA
- End of Line Resistor (EOLR) Value: 10K

### Electrical Ratings for PGM3 Output:

- Open Collector Output: Maximum Voltage 25VDC.
- Maximum PGM Sink Current: 50mA (up to 15VDC), 25mA (15.1VDC - 25VDC)

### Physical (W x H x D)

- Plastic Housing: 8 x 5<sup>-29</sup>/<sub>64</sub> x 1<sup>1</sup>/<sub>2</sub>" (20.3 x 13.9 x 3.8cm)
- Mounting: Plastic housing includes three keyhole slots for triple gang boxes (see scale template on page 13);

### Environmental

- Operating Temperature: 0°C - 49°C (32°F - 120°F)
- Humidity: Maximum 93% Non-Condensing
- Indoor / dry location use only

## TERMINAL DESCRIPTIONS

Configure all inputs and outputs using the Management Center screen (located at [www.NapcoNOC.com](http://www.NapcoNOC.com)). Located at the bottom of the StarLink radio PC board, the terminals are described as follows:

#### TB1: PWR (+10 - 25VDC)

(Refer to section "STEP 4: APPLY POWER")

#### TB2: PWR GND (-)

(Refer to section "STEP 4: APPLY POWER")

**TB3: PGM3 (-):** Open collector output. PGM3 is normally on (active low). When it is triggered (for example, a trouble is detected) it becomes open collector/high. To have a zone dedicated to an StarLink radio trouble, insert one side of the end of line resistor into this PGM3 terminal, and wire the other side of the resistor to the positive terminal of the zone.

**TB4: IN 1 (+):** Smart Channel input. Active high input for wiring to the control panel bell output. When this input detects a pulsing temporal 3 high, it sends a

Fire alarm; a pulsing temporal 4 (CO Alarm), a CO alarm is sent. When used, these conductors must be run in conduit (max 20 feet for Commercial Fire, and 3 feet for Residential Fire). For this input to report to a central station, the StarLink radio must be configured with the central station telephone number and correct reporting formats and codes. For more information, see WI2140 located at [www.NapcoNOC.com](http://www.NapcoNOC.com).

**TB5: IN 2 (+):** Fire Trouble input\*\*. Wire to FACP trouble relay N/O with parallel 10K EOLR at FACP.

**Note:** Inputs IN 2, IN 3, IN 4 and IN 5 can be supervised end-of-line resistor inputs that can be triggered with N/O or N/C relay contacts. Wire the common ground terminal **GND** (terminal **TB13**) to the relay common. For these inputs to report to a central station, the radio must be configured with the central station telephone number and correct reporting formats and codes.

**TB6: IN 2 (-):** See **TB5**, above.

**TB7: IN 3 (+):** Fire Alarm input\*\*. Wire to FACP Fire Alarm relay N/O with parallel 10K EOLR at FACP.

**TB8: IN 3 (-):** See **TB5** and **TB7**, above.

**Secondary Telephone:** RJ-45 socket for FACP DACT connection.

**Primary Telephone:** RJ-45 socket for FACP DACT connection.

**TB9: IN 4 (+):** Supervisory Alarm input\*\*. Wire to FACP Supervisory relay N/O with parallel 10K EOLR at FACP.

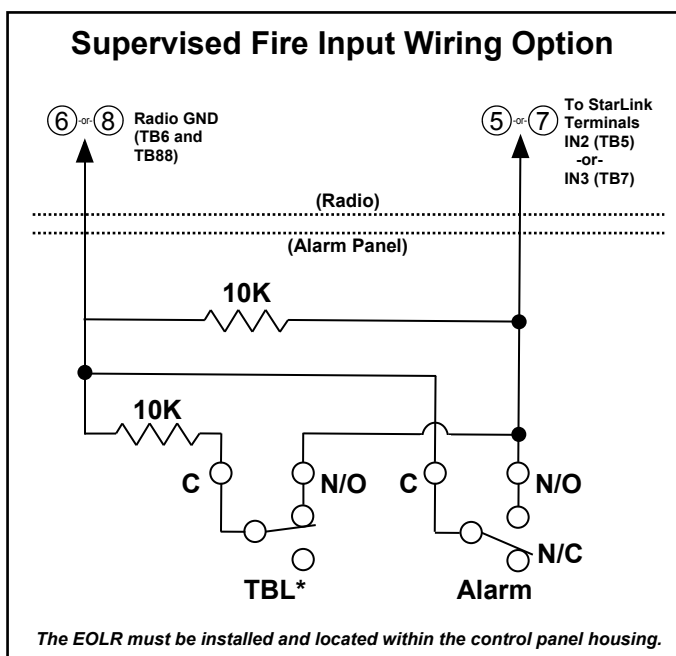
**TB10: IN 4 (-):** See **TB5** and **TB9**, above.

**TB11: IN 5 (+):** Water Flow Alarm input\*\*. Wire to FACP Water Flow relay with parallel 10K EOLR at FACP.

**TB12: IN 5 (-):** See **TB5** and **TB11**, above.

**TB13: GND:** Earth ground terminal.

**Ethernet:** Connect the SLE Dual-Path radio communicator to your broadband modem, router or switch.  
**Note:** The cable modem/router and switch (if



\*Reverse polarity / energized state.

\*\*Factory programmed options; may be changed at the NOC website ([www.NapcoNOC.com](http://www.NapcoNOC.com))



**LED LOCATIONS**

any) at the premises requires standby power, therefore a UL 1481 / UL 864 or UL Listed ITE UPS must be used at the premises to power these devices for a minimum of 24 hours.

**TB19: N/O OUT1:** Normally open. Dry contact Form C relay. Add shunt to lower two pins of JP1 for wet contacts.

**TB20: C OUT1:** Common. Dry contact Form C relay. Add shunt to lower two pins of JP1 for wet contacts (connects relay Common to system ground). Relay rated 30V AC/DC, 500mA.

**TB21: N/C OUT1:** Normally closed. Dry contact Form C relay. Add shunt to lower two pins of JP1 for wet contacts.

**TB22: N/O OUT2:** Normally open. Dry contact Form C relay.

**TB23: C OUT2:** Common. Dry contact Form C relay. Relay rated 30V AC/DC, 500mA.

**TB24: N/C OUT2:** Normally closed. Dry contact Form C relay.

## LED DESCRIPTIONS

The PC board contains several LED's, as follows:

### GREEN RF SIGNAL STRENGTH LED

Labeled "**D3**", this LED is located at the lower right corner of the PC board.

Every 30 seconds, the StarLink radio receiver section turns on and listens to the cell tower. Depending on the signal strength detected, it will blink the Signal Strength LED from 1 to 8 times, providing a signal strength indicator that is updated constantly and is always displayed. Refer to Coverage Table below.

#### Green LED Operation

Signal strength (as received by the radio) is displayed by this LED blinking 1 to 8 times at a constant rate (with a short delay between blink cycles). Acceptable power level is greater than or equal to -91dBm (minimum 4 blinks at the mounting location).

| GREEN RF SIGNAL STRENGTH LED<br>RADIO RECEIVER COVERAGE TABLE |                           |     |     |     |     |     |     |      |
|---------------------------------------------------------------|---------------------------|-----|-----|-----|-----|-----|-----|------|
| LED Blinks                                                    | 8                         | 7   | 6   | 5   | 4   | 3   | 2   | 1    |
| Power (dBm)                                                   | -55                       | -65 | -75 | -85 | -91 | -95 | -99 | -105 |
|                                                               | Stronger . . . . . Weaker |     |     |     |     |     |     |      |

### YELLOW OPERATIONAL STATUS LED

Labeled "**D4**", this LED is located at the bottom right of the PC board. Operation is as follows:

#### Normal Standby Condition:

- **Blinks on momentarily every 10 seconds:** Unit is in standby waiting for an alarm to report.

#### Processing Alarm Conditions:

- When processing an alarm, this LED will blink variably during each part of the process (dialing, handshaking, data transmission, etc.).

## NOTICE TO AUTHORITIES HAVING JURISDICTION, USERS, INSTALLERS, DEALERS, AND OTHER AFFECTED PARTIES

| FIRE PROGRAMMING OPTION                           | PERMITTED IN UL864? (Y/N) | AVAILABLE SETTINGS                                             | REQUIRED UL 864 SETTINGS                                                                                                                                                         |
|---------------------------------------------------|---------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Unattended Remote Downloading                     | No                        | Enable / Disable                                               | Disabled (Jumper 1 installed). Also required for Commercial installations. <b>Note:</b> See page 7 " <b>Configuration Download / Firmware Updates</b> " for jumper instructions. |
| IN2, IN3, IN4 and IN5 Unsupervised                | Yes                       | Supervised / Unsupervised                                      | Unsupervised using conduit within 20 feet of FACP (default). If not using conduit, install Jumpers 4 and 5 and EOL Resistors.                                                    |
| 7 Day Supervision, Radio to NOC                   | No                        | 200 seconds, 5 minutes, 6 minutes, 60 minutes, 6 hours, 7 days | 200 seconds, 5 minutes, 60 minutes. 6 Hours permitted in Commercial Fire UL 864 with Dual Path enabled.                                                                          |
| Trouble on Radio or IP Path (Annunciate / Report) | Yes                       | Either Path or Both Paths                                      | Either Path (annunciation and report of trouble).                                                                                                                                |
| Wi-Fi Module                                      | Yes                       | Enable / Disable                                               | May be enabled as a primary reporting path for Fire.                                                                                                                             |



## RED TROUBLE LED

Labeled "**D5**", this LED is located at the bottom right of the PC board. Operation is as follows:

- **1 Blink:** Low Aux Power input voltage
- **2 Blinks:** Battery trouble
- **3 Blinks:** Alarm report Failed to Communicate (will restore only when the radio path is restored)
- **4 Blinks:** RF trouble (antenna connection or cellular registration)
- **5 Blinks:** Radio poll or check-in failure (radio and/or Ethernet). Either or both paths will trigger the trouble, but for the trouble to clear, unit requires both IP and radio polling/checkins to be operational
- **6 Blinks:** Unit disabled (reporting or control panel downloading not allowed)
- **7 Blinks:** Unit was shutdown and has no functionality; requires a restart (full power down and full power up sequence) to restore operation.
- **8 Blinks:** Telco Line Cut (this is not the DACT interconnect to the radio)

## RED DIAGNOSTIC LED

Labeled "**D7**", this LED is located in the middle of the PC board. One blink indicates a weak or non-existent signal from the network (green LED is off). If this red LED is blinking in any other manner, please contact technical support.

## GREEN IP NETWORK CONNECTION LED

Labeled "**D14**" (or **DS14**), this LED is located to the right of the **ETHERNET** socket on the PC board. Operation is as follows:

**Off** = No network cable detected

**Fast Flash** = No IP connection (Occurs just after power on, while trying to obtain a IP address)

**Slow Flash** = Normal IP network operation

- **1 Blink:** Static IP
- **2 Blinks:** DHCP
- **3 Blinks:** Auto IP (if unable to acquire DHCP address, then after 5 minutes it will convert to Auto IP)

## RED IP NETWORK TROUBLES LED

Labeled "**D16**" (or **DS16**), this LED is located to the right of the **ETHERNET** socket on the PC board. Operation is as follows:

**Off** = No troubles

**Fast Flash** = No IP connection (occurs just after power on while trying to obtain a DHCP address)

**Slow Flashing:**

- **1 Blink:** No network cable detected
- **2 Blinks:** No access to the Internet
- **3 Blinks:** Ethernet failed to communicate
- **4 Blinks:** Ethernet poll / checkin fail
- **5 Blinks:** Wi-Fi is enabled, but **SLE-WIFI-MODULE** is not detected
- **6 Blinks:** Wi-Fi no access to the Internet
- **7 Blinks:** Wi-Fi failed to communicate
- **8 Blinks:** Wi-Fi poll / checkin failure
- **9 Blinks:** Wi-Fi serial data error or no serial data response
- **10 Blinks:** Wi-Fi Security / Authentication failed

## YELLOW IP NETWORK STATE LED

Labeled "**D15**" (or **DS15**), this LED is located to the right of the **ETHERNET** socket on the PC board. Operation is as follows:

**Off** = No power

**Steady with 1 quick blink** off every 1.7 seconds when reporting signal to NOC

**Steady with 2 quick blinks** off every 1.7 seconds when downloading to control panel or the module

**Slow Flashing:**

- **1 Blink:** Ethernet Available
- **2 Blinks:** Wi-Fi Station Mode (normal operation)

## SUPPLYING POWER

Control panels can provide power through their Auxiliary Power terminals if the available standby current is reduced by the SLE standby power (refer to Electrical Ratings for +12V / 24V).

**Note:** The cable modem/router and switch (if any) at the premises requires standby power, therefore a UL 1481 or UL 864 Listed UPS must be used at the premises to power these devices for 24 hours (unless an engine driven generator is provided on the premises, then only 4 hours of UPS backup are required).

## JUMPER DESCRIPTIONS

Jumper block labeled "**X5**"; from top to bottom, as detailed in the following table. **Note:** Contact ID is always available in response to a Contact ID handshake.

| <b>Jumper Block "X5" Options</b><br>Jumper block labeled "X5" contains 5 jumper terminals; from top (labeled "1") to bottom (labeled "5") as follows: |               |                                                                                                       |
|-------------------------------------------------------------------------------------------------------------------------------------------------------|---------------|-------------------------------------------------------------------------------------------------------|
| Jumper ON                                                                                                                                             | Jumper Number | Jumper OFF                                                                                            |
| Tech on site must temporarily remove to download                                                                                                      | 1             | Not permitted by UL 864                                                                               |
| 4/2 with Checksum Pulse Format*                                                                                                                       | 2             | 4/2 Pulse Format*                                                                                     |
| Supervised inputs. EOLR(s) required, see page 2                                                                                                       | 4 and 5       | Not permitted by UL 864 (UL 864 permits use of conduit within 20 feet of FACP in lieu of Supervision) |

\*See table "NOTICE TO AUTHORITIES HAVING JURISDICTION..." on page 3.

The SLE series radios are compatible with 4/2 Pulse Dialing formats with 10pps, 20pps, and 40pps with and without checksum, either 1400Hz or 2300Hz handshake / kissoff. See table of formats on page 5.

Refer to WI2140 for selecting the required handshake / kissoff frequency in the NOC ([www.NapcoNOC.com](http://www.NapcoNOC.com)) set-up screens (as required by the control panel).

## NETWORK COVERAGE

The StarLink radio constantly supervises the cell network coverage. When the StarLink radio detects a loss in net-

work coverage, the StarLink radio must be configured to prompt the control panel to announce a Telco Line Cut failure trouble using the Management Center screen (located at [www.NapcoNOC.com](http://www.NapcoNOC.com)).

## INSTALLATION STEPS

### STEP 1: ACCOUNT REGISTRATION

Create a new account and register specific StarLink radio modules at [www.NapcoComNet.com](http://www.NapcoComNet.com). Accounts and modules registered via the Internet are enabled for activation within 24 hours.

### STEP 2: SELECT A MOUNTING LOCATION

The mounting location should be indoors within the protected area and selected based on RF performance. It is HIGHLY recommended that the installer carefully adhere to the following recommendations BEFORE any wires are installed.

- Generally, high locations are best. DO NOT mount radio in basements or below grade as unpredictable performance may result.
- DO NOT mount the radio in non-climate controlled environments (i.e. attics may become extremely hot in summer, garages may become extremely cold in winter).
- Avoid mounting locations within 3 feet of AC power lines, fluorescent light fixtures, or large metal objects (air conditioners, metal garage doors, etc.) as these locations have been shown to have a detrimental effect on signal strength.

## STARLINK RADIO RELATED EVENT REPORT CODES (Contact ID by default)

| EVENT                        | AREA | CONTACT ID |        | PULSE 4/2** |
|------------------------------|------|------------|--------|-------------|
|                              |      | CODE       | ZONE # |             |
| IN 1 Fire                    | 0    | E110       | 990    | 1A          |
| IN 2 Trouble                 | 0    | E373       | 992    | F2          |
| IN 3 Fire                    | 0    | E110       | 993    | 1A          |
| IN 4 Supervisory             | 0    | E200       | 994    | 00          |
| IN 5 Water Flow              | 0    | E113       | 995    | 13          |
| Low Battery/Voltage          | 0    | E302       | 994    | F4          |
| Tamper Trouble               | 0    | E341       | 995    | F5          |
| Line Cut                     | 0    | E352       | 996    | F6          |
| Reboot                       | 0    | E625       | 997    | F7          |
| IN 1 CO (Carbon Monoxide)    | 0    | E162       | 998    | 18          |
| Medical Alarm*               |      | E100       |        |             |
| 24 hour Aux. Alarm*          |      | E150       |        |             |
| 24 hour Aux. Restore*        |      | R150       |        |             |
| Keypad Emergency Alarm*      |      | E140       |        |             |
| A.C. Trouble*                |      | E301       |        |             |
| Tel 1 Fail*                  |      | E351       |        |             |
| Fire Polling Report          |      | E780       | 999    | F9          |
| Supv Failure Report          |      | E788       | 000    | D1 or D2    |
| Tip/Ring Wiring Fault Report |      | E789       | 000    | F2          |
| Path Test Report             |      | E602       | 890    | 77          |

\*Not generated by the StarLink radio.

\*\*See table "NOTICE TO AUTHORITIES HAVING JURISDICTION..." on page 3.

### Cover Tamper Switch

The SLE series radios in the plastic housings are provided with a front tamper switch. **Note:** The tamper switch on the radio PC board is always functional and requires no programming.

## SIGNALS ORIGINATED AT THE NOC

| NOC Originated Alarms     | Contact ID Event Data Sent                    | Pulse Format Event Code Sent | Initiated By                                                                                                                                                                                                     | Comments                                                                                                                                     |
|---------------------------|-----------------------------------------------|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------|
| Supervisory Fail          | E356 A00 Zn000                                | 99                           | Automatically by NOC if fail to receive any signal from StarLink radio within Supervisory Timeout duration.                                                                                                      | For Auto Enroll, uses captured telephone number, Sub ID and format. For Dealer Programmed, uses entered telephone number, Sub ID and format. |
| Press to Send Test Signal | E601 A00 Zn000                                | 98                           | Manually by dealer from the Management Center <b>Signal Log</b> screen (located at <a href="http://www.NapcoNOC.com">www.NapcoNOC.com</a> ). Sends test into CS receiver.                                        | Same comment as above.                                                                                                                       |
| Press to Send Radio Test  | Not Applicable<br>Nothing sent to CS receiver | Not Applicable               | Manually by dealer from the Management Center <b>Checkins</b> screen (located at <a href="http://www.NapcoNOC.com">www.NapcoNOC.com</a> ). Sends a command to the StarLink radio to force a check-in to the NOC. | ----                                                                                                                                         |

- A fair amount of care may be required to mount the radio so as to achieve an optimal RF path. The installer should spend as much time as needed to obtain the highest signal level possible.

- Before applying power, be sure to connect the antenna.** Temporarily connect power to the radio from a fully charged 12V (4AH minimum) battery. DO NOT mount the StarLink radio at this time. Press **Tamper** switch to send a signal.
- Position the unit in the desired mounting location, with antenna oriented vertically. The signal strength is displayed by the Green "Signal Strength LED" labeled "D3" (located at the lower right corner of the PC board). The GSM radio tower signal strength may fluctuate from day to day, therefore it is best to try to find a mounting location where the LED provides a **minimum of 4 blinks**.
- Once a location has been selected based on signal coverage, permanently secure the unit using #8 screws (not supplied) in the two mounting holes.

**WARNING:** To ensure user safety and to satisfy FCC RF exposure requirements, this unit must be installed so that a minimum separation distance of 60cm (24") is always maintained between the antenna of the transmitting device and nearby persons.

### STEP 3: WIRING

22-gauge wire may be used if mounted up to 50 feet from the control panel, and 18-gauge wire should be used for up to 100 feet. Reference the wiring diagrams further in this manual. See the section **CONTROL PANEL PROGRAMMING** further in this manual.

The wiring between the control panel and the StarLink radio is over several wires, as follows:

- **TB1: PWR**
- **TB2: PWR GND (-)**
- **TB21: N/C OUT1:** Wired to the (+) of a zone dedicated to monitoring the radio status. Should be programmed on Napco GEMC control panels as Monitor or Supervisory Zone.
- **TELCO PRIMARY** to FACP Telco 1 RJ-45 socket.
- **TELCO SECONDARY** to FACP Telco 2 RJ-45 socket.
- (Place **JP1** shunt on bottom two pins)
- **Optional:** Wire **IN2** with a 10K EOLR in parallel with the FACP trouble relay output **Common** and **N/O** (or in series with **Common** and **N/C**).

### Wiring Methods

- Strip wire carefully to avoid exposed conductors after installation, etc.)
- Use of Listed wire, ensuring that all conductors are to be insulated for the maximum voltage of any conductor in the enclosure
- All wiring methods must be performed in accordance with NFPA70, Articles 725, and 800

### STEP 4: APPLY POWER

- **Attach antennas before applying power !**
- Apply 12/24VDC to terminals 1 and 2.

### STEP 5: SIGNAL VERIFICATION

After triggering channels, use the StarLink radio Signal Verification to ensure that the StarLink radio Network has properly received the signals.

- **Verify Online:** To verify that the signals have been received by the StarLink radio GSM Network online, go to [www.NapcoNOC.com](http://www.NapcoNOC.com), log in with your Username and Password, enter your **Company ID** number and the StarLink GSM **Radio Number**, then click **Signal Log**.

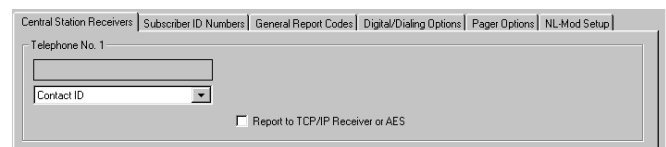
**IMPORTANT:** Verify that the signals transmitted by the StarLink radio have been properly received by your central station before leaving the premises.

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B Unintentional Radiator, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the Instruction Manual, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one of more of the following measures: 1. Reorient or relocate the receiving antenna; 2. Increase the separation between the equipment and receiver; 3. Connect the equipment into an outlet on a circuit different from that to which the receiver is connected; 4. Consult the dealer or an experienced radio/TV technician for help.

### NAPCO GEMINI C-SERIES (GEMC) CONTROL PANEL PROGRAMMING

To program the central station receiver reporting format, use PCD-Windows Quickloader download software. Open the **Digital Communications** screen, **Central Station Receivers** tab, as shown in the following image:

A "Point ID" (also called "Contact ID") receiver format programming example:



The radio can transmit to any central station capable of receiving SIA Contact ID or 4/2 via DACR technology or the DSC Sur-Gard Model System II or Sur-Gard System V central station receivers, Bosch D6100IPV6 or Bosch D6600 Receiver (with ITS-D6686 Ethernet Adapter) via TCP/IP using standard line security.

**Note:** A receiver reporting format must be entered for each telephone number used, but each telephone number may be assigned a different format.

**CAUTION:** The installer should always be certain an area code is programmed into the control panel.

**Optional:** If you wish the StarLink radio to report a code and zone number (Contact ID by default) to the central station in response to a triggered input event, see the table on page 5. **Note:** These event codes and zone numbers can be changed from the Management Center screen (located at [www.NapcoNOC.com](http://www.NapcoNOC.com)).

Upon alarm, the NOC can optionally send an SMS message to a third party that includes the appropriate Contact ID alarm code, including the zone or user number, if applicable. The **"STARLINK RADIO RELATED EVENT REPORT CODES"** table also includes the most common Contact ID alarm codes.

### Programming StarLink Radio Troubles

It is required that if a StarLink radio or control panel trouble is detected, that it is reported to the central station.

When the StarLink radio detects and sends a trouble to the control panel, the control panel must be programmed to annunciate this trouble. The radio can detect multiple troubles as indicated by the "Red Trouble LED" ("D5"). For these troubles to be annunciated at the control panel, there are several methods, some of them are configurable at the Management Center screen ([www.NapcoNOC.com](http://www.NapcoNOC.com)):

Wire the radio **OUT1** relay to a dedicated control panel zone (input) to annunciate the trouble. Two wiring options are available:

- Activate the trouble with an open by wiring the EOLR in series with the **Common** and **N/C** of the **OUT1** relay;
- Activate the trouble with a short by wiring the EOLR in parallel with the **Common** and **N/O** of the **OUT1** relay

The radio must also report this trouble to the central station. With Napco GEMC series control panels, wire the zone as indicated in the wiring diagrams further in this manual. Optionally, the FACP trouble relay can be used to trigger a report to the central station.

Wire the FACP trouble relay to **IN2**; **Common** and **N/O** terminals in parallel with a 10K EOLR. With Gemini C-Series (GEMC) control panels, we recommend using the Fire Aux Relay. Program the Fire Aux Relay to activate as a trouble

relay. Wire this relay to the StarLink module **IN 2** terminal; by wiring the EOLR in parallel with **Common** and **N/O** of the **OUT1** relay. **Note:** We recommend using the text "GSM Trouble" as the Zone Description.

### StarLink Radio Supervision

If the two Telco wires (DACT interconnect wiring to the radio) between the StarLink radio and the control panel are cut or otherwise disconnected, the control panel must detect and generate a local trouble indication. The control panel must trigger an output to activate the StarLink radio to report this line cut fault to the central station. Program the control panel for telephone supervision. Program the StarLink radio using the Management Center "Advanced Features" screen (at [www.NapcoNOC.com](http://www.NapcoNOC.com)) to enable the Line Cut feature on all troubles (therefore a dedicated zone is not required). **Note:** Some control panels may require a different duration than the default time of 3 minutes. See also the alternate supervision method described on page 12, **"Alternate Telco Line to Alarm Panel Supervision (For Primary Mode Only)"**.

### Supervision Time Schedule Considerations

If a status change (alarm trouble, etc.) is transmitted, the radio supervision timer is restarted.

For example, if a status change is sent, the next regular supervision transmission will occur at the interval determined by your rate plan.

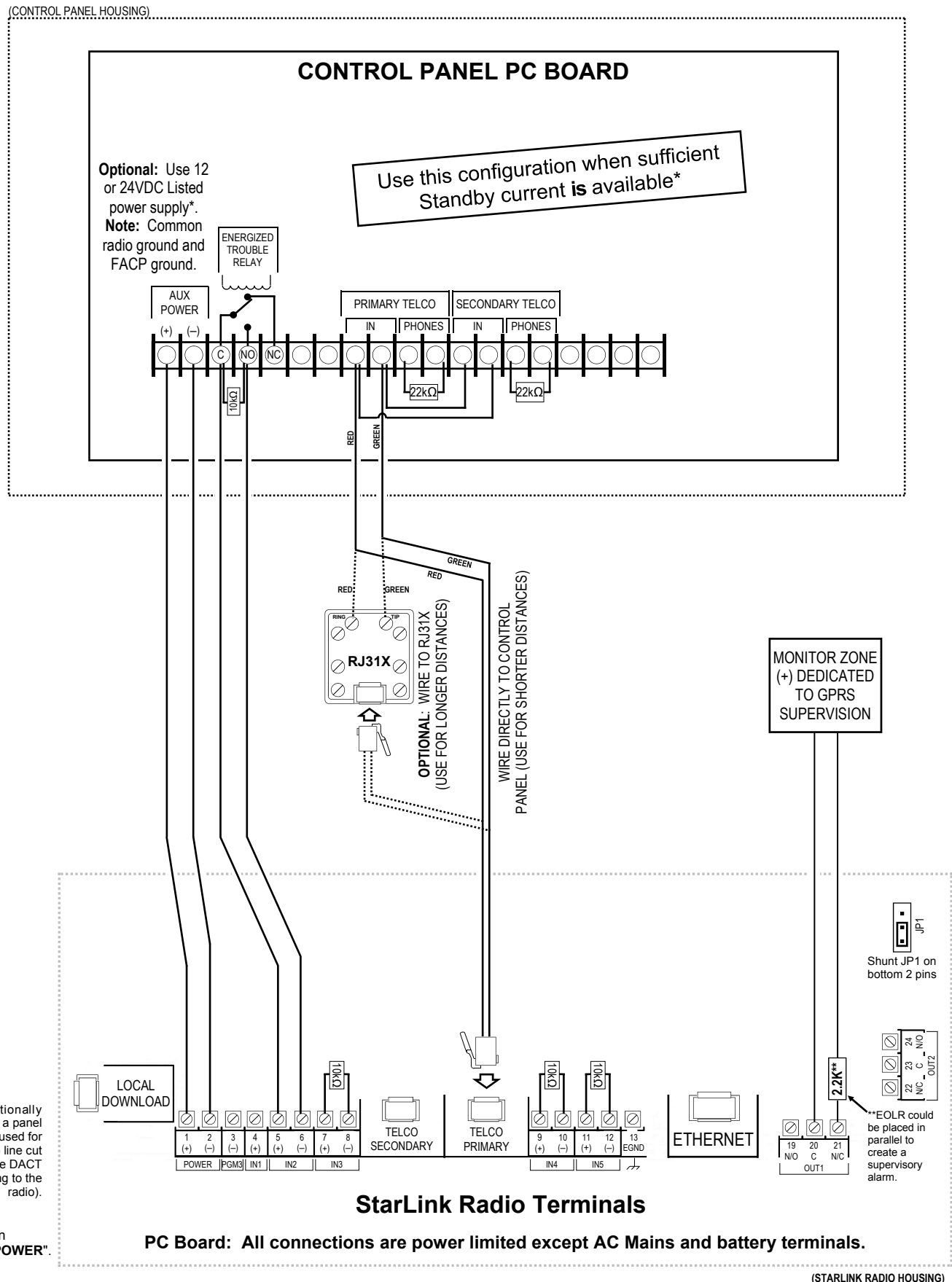
### Configuration Download / Firmware Updates

#### Technician on site required.

For Commercial Installations a technician is required to be on site during any reprogramming of the radio or control panel and must perform / re-perform acceptance testing. To perform a download or update the radio firmware, jumper 1 must be removed. UL requires that the jumper be replaced after the download is complete. ***Failure to replace the jumper would allow downloads to the radio without a technician on-site.***

For Residential installations jumper 1 may be removed to permit uploading and downloading without a technician on site, however, the dealer is responsible for ensuring the system is operating correctly after any downloads or changes to the system.

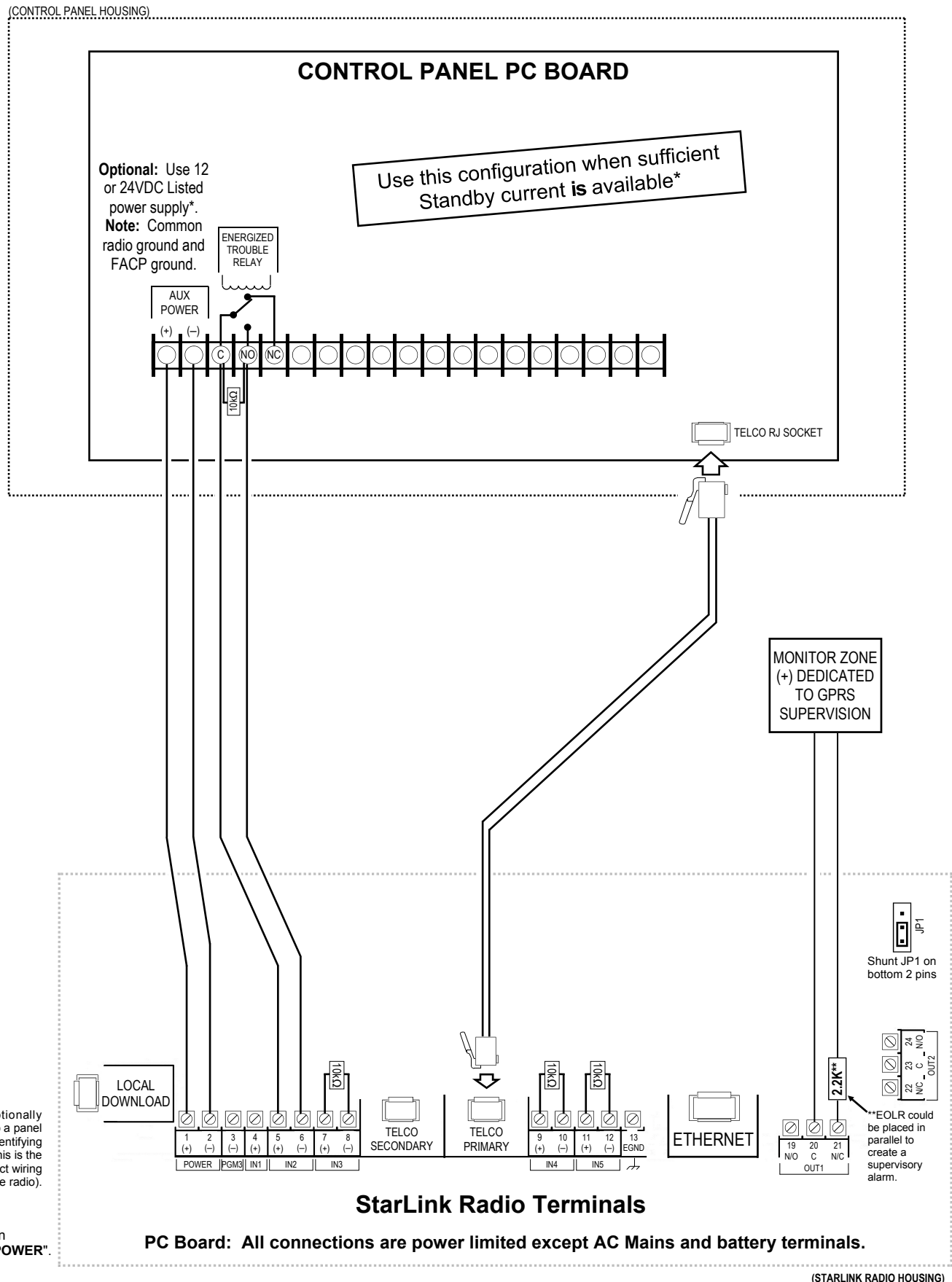
# Wiring Diagram for PRIMARY Reporting Configuration for Generic FACP's without TELCO RJ Sockets



\*Refer to section "SUPPLYING POWER".

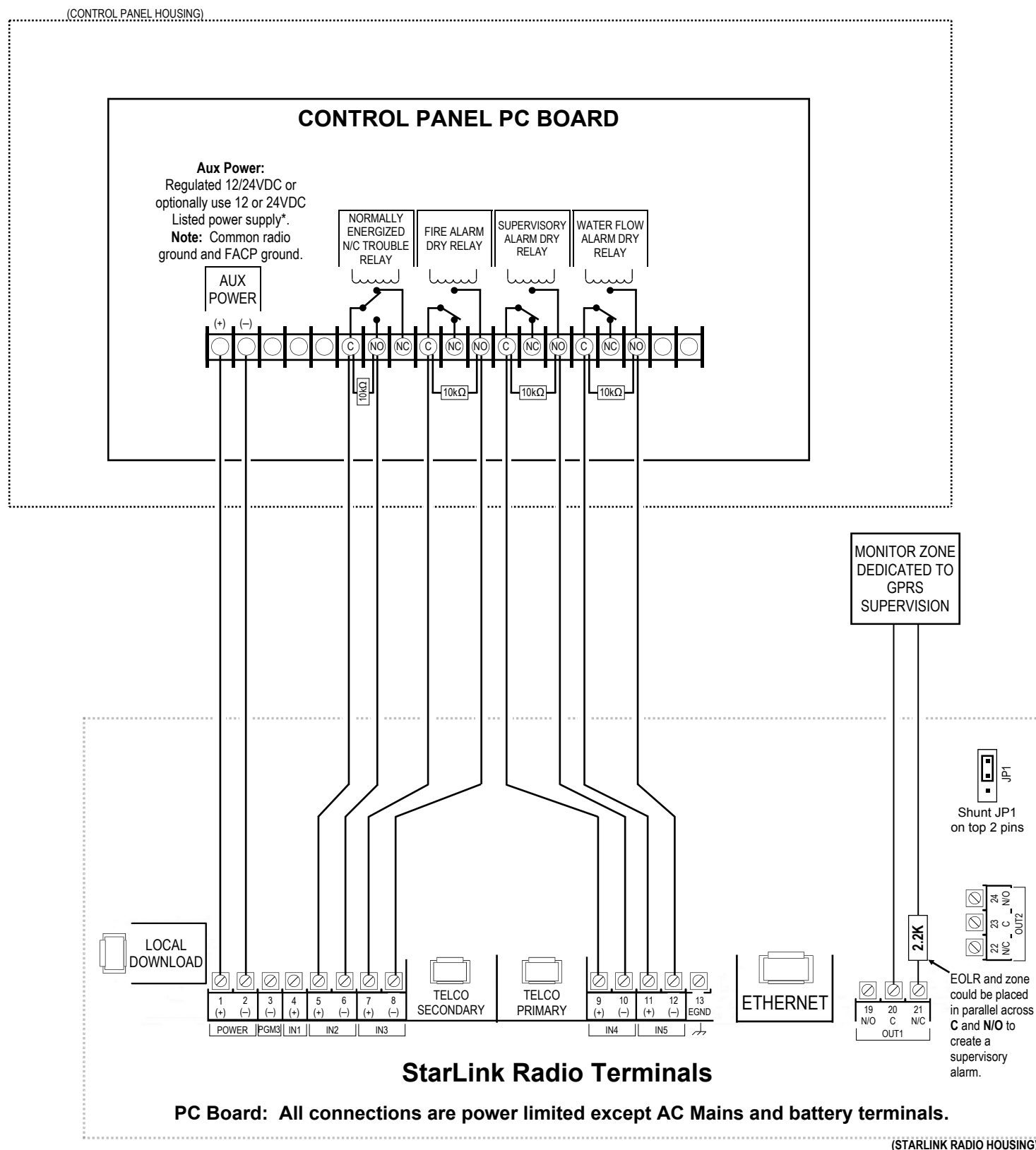


# Wiring Diagram for PRIMARY Reporting Configuration for Generic FACP's with TELCO RJ Sockets



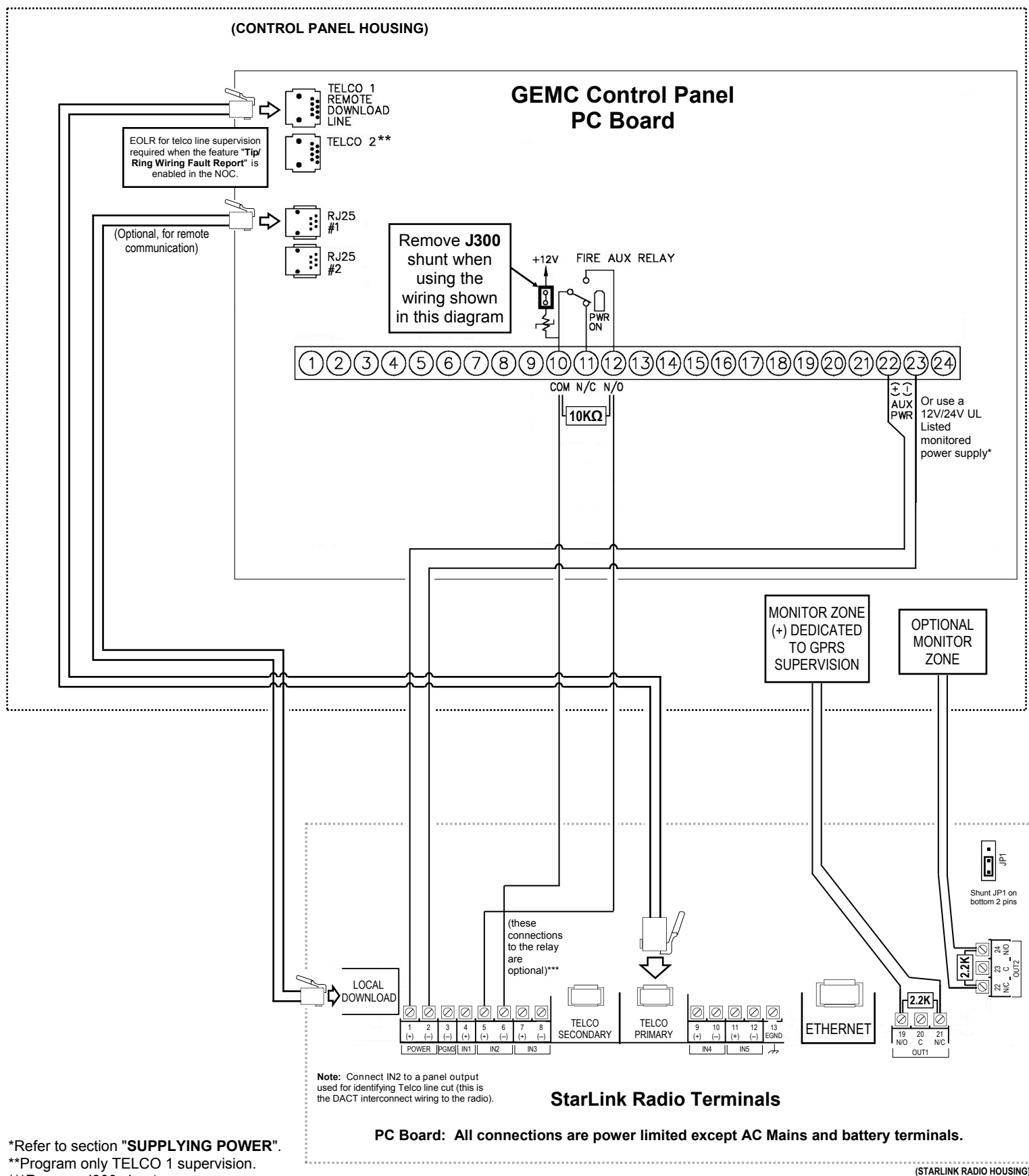
\*Refer to section "SUPPLYING POWER".

# Wiring Diagram for FACP Relay Trigger Input Reporting



\*Refer to section "SUPPLYING POWER".

# Wiring Diagram for GEMC-32, GEMC-96, GEMC-128 and GEMC-255 Control Panels



\*Refer to section "SUPPLYING POWER".

\*\*Program only TELCO 1 supervision.

\*\*\*Remove J300 shunt

#### **Alternate Telco Line to Alarm Panel Supervision (For Primary Mode Only)**

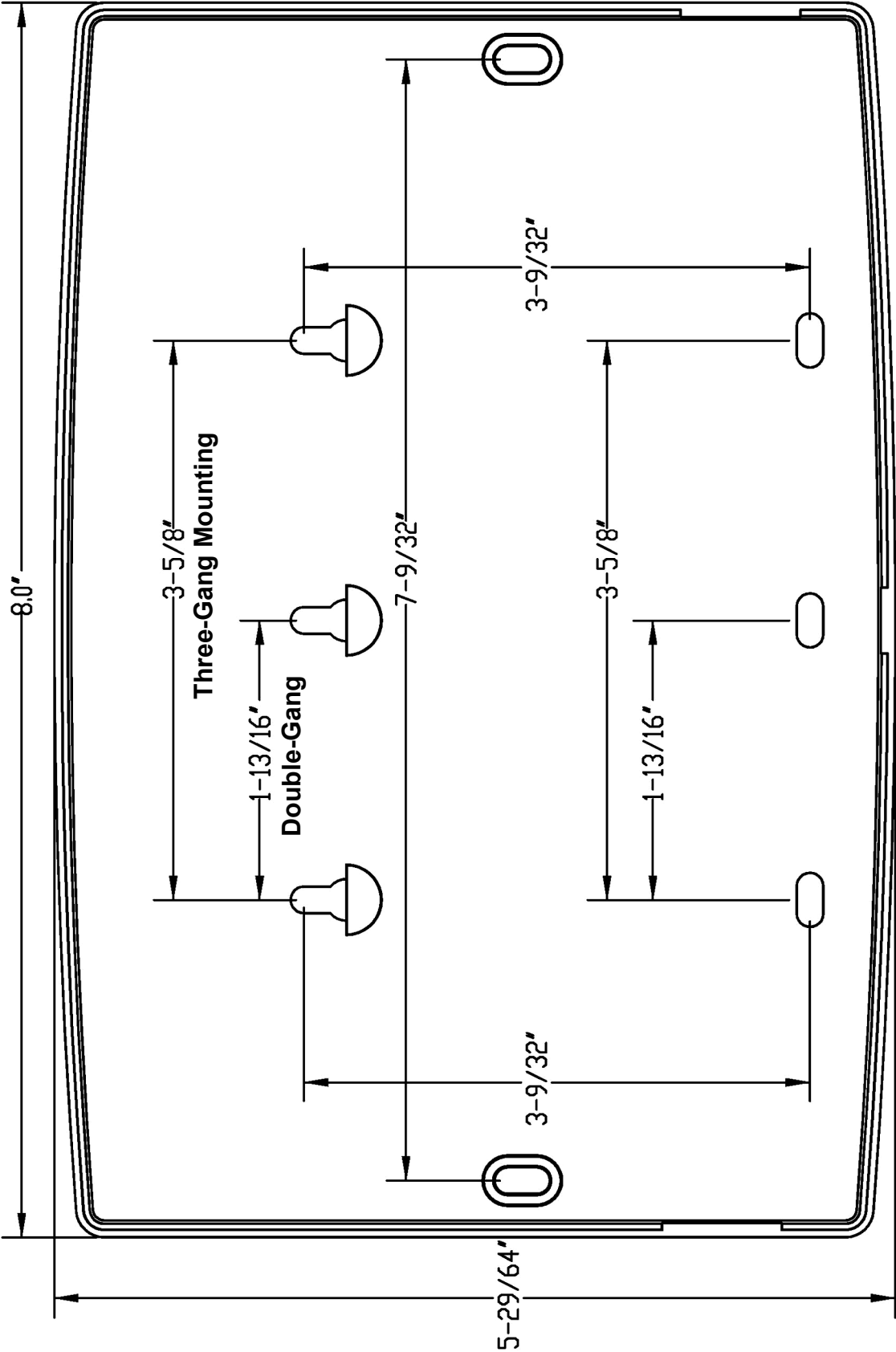
A 10K ohm resistor (5% tolerance) can be placed across the "house side" of the telephone line circuit (see wiring diagrams). Use this resistor instead of using a relay on the alarm control panel to trip an input on the radio to supervise the connection between the alarm control panel telco circuit and the radio. **Note:** In installations where two telco lines are used, a 22K ohm resistor (5% tolerance) is required for each telco line (see wiring diagrams).

**REMEMBER:** Enable the feature "**Tip / Ring Wiring Fault Report**" in the NOC ([www.NapcoComNet.com](http://www.NapcoComNet.com)) to supervise the telephone line connection to the control panel.

**REMINDER:** *Never* use this option when the alarm control panel is connected to telephone service!



# Housing Template (1:1 Scale)



This page intentionally left blank.

## 4/2 Pulse Dialing Format Compatibility

**Note:** The SLE Series Radios are compatible with any Listed 4/2 Receiver such as the Ademco 685.

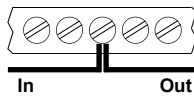
| Name                 | Format Type  | Handshake Frequency | Speed |
|----------------------|--------------|---------------------|-------|
| Ademco Slow          | 4/2          | 1400 Hz or 2300Hz   | 10pps |
| Ademco Slow          | 4/2 checksum | 1400 Hz or 2300Hz   | 10pps |
| Radionics Slow       | 4/2          | 2300Hz              | 10pps |
| Radionics Slow       | 4/2 checksum | 2300Hz              | 10pps |
| Silent Knight Fast   | 4/2          | 1400 Hz or 2300Hz   | 20pps |
| Silent Knight Fast   | 4/2 checksum | 1400 Hz or 2300Hz   | 20pps |
| Radionics Fast       | 4/2          | 2300Hz              | 40pps |
| Radionics Fast       | 4/2 checksum | 2300Hz              | 40pps |
| Universal High Speed | 4/2          | 1400 Hz or 2300Hz   | 40pps |
| Universal High Speed | 4/2 checksum | 1400 Hz or 2300Hz   | 40pps |

**REN = 0.** The *Ringer Equivalence Number (REN)* indicates the maximum number of devices allowed to be connected to a telephone interface. The termination of an interface may consist of any combination of devices subject only to the requirement that the sum of the **RENs** of all the devices not exceed five (5).

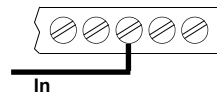
## IMPORTANT WIRING METHODS



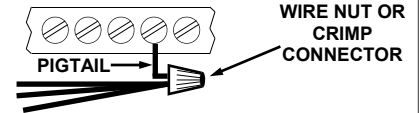
**For single-conductor terminal blocks** (like the type shown at left), to terminate more than one conductor to a terminal, use the wiring methods shown at right:



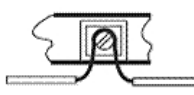
Incorrect



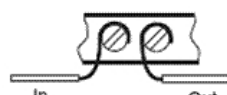
Correct -- Single incoming and/or pigtail with wire nut / crimp connectors



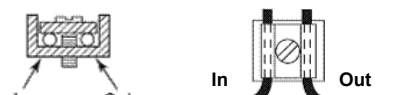
**For "barrier" type terminal blocks** (like the type shown at left), to terminate two conductors to a terminal, use the wiring methods shown at right:



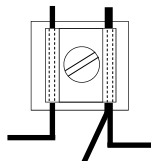
Incorrect



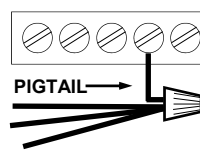
Correct -- Separate incoming and outgoing conductors



**To terminate more than two conductors** or conductors of different wire sizes to a terminal, use the "pigtail" type wiring method as shown at right. Use insulated wire for the pigtail, and firmly secure the conductors to the pigtail using an appropriate wire nut or crimp connector for the number and gauge of conductors used.



Incorrect



WIRE NUT OR CRIMP CONNECTOR

Correct -- Use pigtail and wire nut / crimp connector

# NAPCO LIMITED WARRANTY

NAPCO SECURITY SYSTEMS, INC. (NAPCO) warrants its products to be free from manufacturing defects in materials and workmanship for *thirty-six months* following the date of manufacture. NAPCO will, within said period, at its option, repair or replace any product failing to operate correctly without charge to the original purchaser or user.

This warranty shall not apply to any equipment, or any part thereof, which has been repaired by others, improperly installed, improperly used, abused, altered, damaged, subjected to acts of God, or on which any serial numbers have been altered, defaced or removed. Seller will not be responsible for any dismantling or reinstallation charges.

THERE ARE NO WARRANTIES, EXPRESS OR IMPLIED, WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. THERE IS NO EXPRESS OR IMPLIED WARRANTY OF MERCHANTABILITY OR A WARRANTY OF FITNESS FOR A PARTICULAR PURPOSE. ADDITIONALLY, THIS WARRANTY IS IN LIEU OF ALL OTHER OBLIGATIONS OR LIABILITIES ON THE PART OF NAPCO.

Any action for breach of warranty, including but not limited to any implied warranty of merchantability, must be brought within the six months following the end of the warranty period. IN NO CASE SHALL NAPCO BE LIABLE TO ANYONE FOR ANY CONSEQUENTIAL OR INCIDENTAL DAMAGES FOR BREACH OF THIS OR ANY OTHER WARRANTY, EXPRESS OR IMPLIED, EVEN IF THE LOSS OR DAMAGE IS CAUSED BY THE SELLER'S OWN NEGLIGENCE OR FAULT.

In case of defect, contact the security professional who installed and maintains your security system. In order to exercise the warranty, the product must be returned by the security professional, shipping costs prepaid and insured to NAPCO. After repair or replacement, NAPCO assumes the cost of returning products under warranty. NAPCO shall have no obligation under this warranty, or otherwise, if the product has been repaired by others, improperly installed, improperly used, abused, altered, damaged, subjected to accident, nuisance, flood, fire or acts of God, or on which any serial numbers have been altered, defaced or removed. NAPCO will not be responsible for any dismantling, reassembly or reinstallation charges.

This warranty contains the entire warranty. It is the sole warranty and any prior agreements or representations, whether oral or written, are either merged herein or are expressly cancelled. NAPCO neither assumes, nor authorizes any other person purporting to act on its behalf to modify, to change,

or to assume for it, any other warranty or liability concerning its products.

In no event shall NAPCO be liable for an amount in excess of NAPCO's original selling price of the product, for any loss or damage, whether direct, indirect, incidental, consequential, or otherwise arising out of any failure of the product. Seller's warranty, as hereinabove set forth, shall not be enlarged, diminished or affected by and no obligation or liability shall arise or grow out of Seller's rendering of technical advice or service in connection with Buyer's order of the goods furnished hereunder.

NAPCO RECOMMENDS THAT THE ENTIRE SYSTEM BE COMPLETELY TESTED WEEKLY.

**Warning:** Despite frequent testing, and due to, but not limited to, any or all of the following; criminal tampering, electrical or communications disruption, it is possible for the system to fail to perform as expected. NAPCO does not represent that the product/system may not be compromised or circumvented; or that the product or system will prevent any personal injury or property loss by burglary, robbery, fire or otherwise; nor that the product or system will in all cases provide adequate warning or protection. A properly installed and maintained alarm may only reduce risk of burglary, robbery, fire or otherwise but it is not insurance or a guarantee that these events will not occur. CONSEQUENTLY, SELLER SHALL HAVE NO LIABILITY FOR ANY PERSONAL INJURY, PROPERTY DAMAGE, OR OTHER LOSS BASED ON A CLAIM THE PRODUCT FAILED TO GIVE WARNING. Therefore, the installer should in turn advise the consumer to take any and all precautions for his or her safety including, but not limited to, fleeing the premises and calling police or fire department, in order to mitigate the possibilities of harm and/or damage.

NAPCO is not an insurer of either the property or safety of the user's family or employees, and limits its liability for any loss or damage including incidental or consequential damages to NAPCO's original selling price of the product regardless of the cause of such loss or damage.

Some states do not allow limitations on how long an implied warranty lasts or do not allow the exclusion or limitation of incidental or consequential damages, or differentiate in their treatment of limitations of liability for ordinary or gross negligence, so the above limitations or exclusions may not apply to you. This Warranty gives you specific legal rights and you may also have other rights which vary from state to state.