

StarLink™ Commercial SLE-MAXVI-FIRE & SLE-MAXAI-FIRE Sole/Dual-Path Alarm Communicators INSTALLATION INSTRUCTIONS



WI2465.aLF 5/22

INTRODUCTION

The **SLE-MAXVI-FIRE** and **SLE-MAXAI-FIRE** *Sole/Dual-Path Alarm Communicators* are specifically designed to interface with FACP (Fire Alarm Control Panels) and to comply with UL 864. The **SLE-MAXVI-FIRE** operates on the Verizon network, the **SLE-MAXAI-FIRE** on the AT&T network and both models utilize CAT-M1 technology. These devices support both Sole Path and Dual Path communication. Sole Path communication is cellular only and Dual Path communication is cellular and IP, which requires connection to the local network using the on-board Ethernet jack or via Wi-Fi using the optional UL 864 Certified **SLE-WIFI-MODULE**. The communication mode (Sole Path or Dual Path) requires selection of the appropriate service plan at the point of communicator activation. The communicators are equipped with two dry relays, one for a trouble output and one for an auxiliary output. The units are 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. These communicators are for use as the primary means of communication with the central station and do not have backup mode capability. These Communicators can also be utilized as a Sole Path Cell Communicators. No POTS (Telco Line) connection permitted. For Commercial Burglary installations, under the armed condition, any loss of communication must be treated as a Burglary Alarm at the Central Station.

For connection to the FACP DACT, the **SLE-MAXVI-FIRE** and **SLE-MAXAI-FIRE** provides two RJ-45 Telco connections to satisfy the FACP telephone requirements. The primary Telco connector can be supervised and can report a trouble to the central station upon any open or short on the primary Telco wires that prevents 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.

The **SLE-MAXVI-FIRE** and **SLE-MAXAI-FIRE** are compatible with most 12 or 24VDC alarm control panels (always adhere to the documentation provided by the control panel manufacturer). Mount to a single-, dual-, or three-gang electrical box and route the wires through the back knock-out(s), or as specified by local codes. **See WI2140 for programming information.**

The **SLE-MAXVI-FIRE** and **SLE-MAXAI-FIRE** communicators use 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 to the Napco Virtual IP Cen-

tral Station Receiver (NCSR), 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-MAXVI-FIRE** and **SLE-MAXAI-FIRE** are powered directly from the control panel. **Note:** UL Certified for UL 1076 APOU Proprietary Alarm Systems and UL 365 APAP Police Connect when reporting to a UL Certified Central Station Receiver Certified for UL 1076 APOU Proprietary Alarm Systems or UL 365 APAP Police Connect, respectively. For TCP/IP only Bosch D6600 or D6100IPV6 for UL1076 and UL 365 applications. For the NAPCO Virtual IP Central Station Receiver (NCSR), UL 864 -Control Units and Accessories for Fire Alarm Systems, UL 1076 -Standard for Proprietary Burglar Alarm Units and Systems and UL 1610 -Central-Station Burglar-Alarm Units.

The **SLE-MAXAI** and **SLE-MAXVI** Series of Communicators are provided with two antennas. Only one antenna is active at a time, and should the communicator have a loss of adequate signal strength, the communicator will connect to the tower via the other antenna. If neither antenna can connect to the tower within 200 seconds, a trouble output will be activated. If using an external antenna such as from the NAPCO StarLink SLE-ANTEXTXXX Series of Extended Antenna Kits, connect it to the left antenna connector.

StarLink Fire Self-Supervision

NFPA 72 requires that any fire communicator trouble be locally annunciated by the fire panel within 200 seconds of the trouble. The troubles include loss of signal, NOC supervision check-in failure, etc. The StarLink MAX Fire communicator models include a "**Self-Supervising Fire Communicator**" feature that allows the communicator to annunciate a communication trouble without the need for wiring to an FACP zone input or any FACP reprogramming. This is accomplished by dropping the emulated phone line voltage to the FACP secondary phone line, causing the FACP to annunciate communication trouble. To enable Self-Supervision, simply remove Jumper **JP2**. Note that when using Self-Supervision, some FACP's may require the Jumper **J7** shunt to be removed for the Primary Phone line

AGENCY LISTINGS



- UL 864 Standard For Control Units and Accessories For Fire Alarm Systems, 10th Edition
- UL 1610 Standard For Central-Station Burglar-Alarm Units
- UL 985 Standard For Household Fire Warning System Units
- UL 1023 Standard For Household Burglar-Alarm System Units
- UL 1076 APOU Proprietary Alarm Systems
- UL 365 APAP Police Connect

to restore correctly. To also report a communicator trouble to the central station, enable the feature "**Tip/Ring Wiring Fault Report**" in the **Advanced** tab in the StarLink NOC.

The two models include:

SLE-MAXVI-FIRE & SLE-MAXAI-FIRE - Commercial / Residential Fire / Burglary CAT-M1 alarm capture Communicator. SIM card included. Red plastic enclosure. Rated nominal 12/24VDC input.

ADDITIONAL COMPONENTS

In addition to the **SLE-MAXVI-FIRE** and **SLE-MAXAI-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. Not Certified for Commercial or Residential Burglary.

SLE-DLCBL - Download Cable, 6 feet.

SLE-ANTEXT30 – Antenna kit* with 30 feet of LMR 300 cable.

SLE-ANTEXT50 - Antenna kit* with 50 feet of LMR 300 cable.

SLE-ANTEXT75 - Antenna kit* with 75 feet of LMR 400 cable.

SLE-ANTEXT100 - Antenna kit* with 100 feet of LMR 400 cable.

SLE-ANTEXT04 - Antenna kit * with 4 feet of LMR 300 cable. Ideal for installations that may require a few extras dBs of gain but running the external cable may not be practical.

SPECIFICATIONS

Electrical Ratings for +12V / 24V (powered by the control panel)[†]

- Input Voltage: 10-24VDC regulated (power-limited output from Certified control panel Aux/Remote Fire Power).
- Input Current:
 - 10VDC standby: 115mA
 - 12VDC standby: 101mA
 - 15VDC standby: 92mA
 - 24VDC standby: 85mA
- Wi-Fi Module:** (Optional) Add 45mA to the above. (With peak RF transmission current of 325mA).

Electrical Ratings for the IN 1 Fire Input:

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

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 5⁻²⁹/₆₄ x 1¹/₂" (20.3 x 13.9 x 3.8cm)

- Mounting: Plastic housing includes three keyhole slots for triple gang boxes (see scale template on page 10);
- Antenna Length: 8.25" (21cm)

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). Located at the bottom of the StarLink communicator 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 that goes active low when the dealer-defined option occurs; see the NAPCO NOC (www.NapcoNOC.com) to configure options for PGM activation.

TB4: IN 1 (+): Smart Channel input. Active high input for wiring to the control panel bell output. When this input detects a steady input, it sends a burglary alarm; 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 3 feet for Residential Fire; max 20 feet for Commercial Fire).

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.

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.

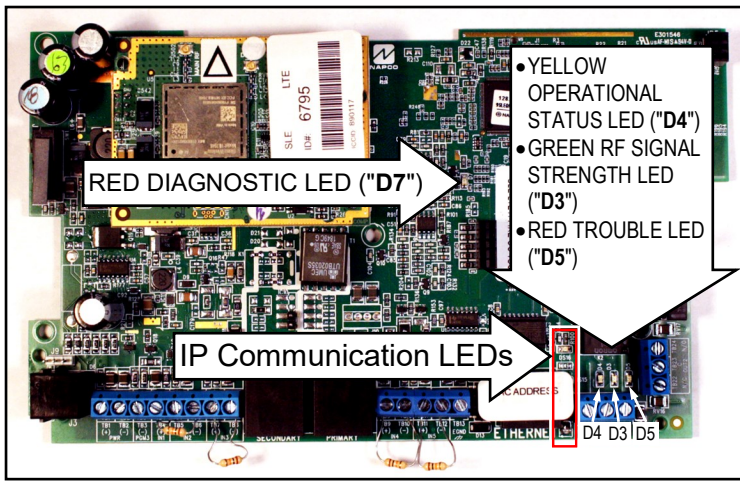
TB13: GND: Earth ground terminal.

Ethernet: Connect the SLE Sole/Dual-Path communicator to your broadband modem, router or switch for dual path operation. **Note:** The cable modem/router and switch (if any) at the premises requires standby power, therefore a UL 1481 / UL 864 or UL Certified ITE (*Information Technology Equipment*) UPS must be used at the premises to power these devices for

[†]For Commercial Fire installations, a UL Certified Fire Alarm regulated power supply or FACP regulated auxiliary output is required.

*All antenna kits include high quality/low loss LMR 300 or 400 Coax Type N male to SMA male terminated cable, all mounting hardware and StarLink SLE-ANTEXT-ISO Commercial Fire Ground Fault Isolation Plate to ensure that the external antenna will not cause ground fault system troubles. (Any suitable external cellular antenna is permitted by UL). Always follow the manufacturer's installation instructions. **Note:** Antennas are not Certified by UL.

**Factory programmed options; may be changed at the NOC website (www.NapcoNOC.com).



LED LOCATIONS

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 LEDs, 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 communicator 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 5 times, providing a signal strength indicator that is updated constantly and is always displayed.

Green LED Operation

Signal strength (as received by the communicator) is displayed by this LED blinking 1 to 5 times at a constant rate (with a short delay between blink cycles). **Acceptable power level is greater than or equal to 2 blinks.**

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.).

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:** Check Input Power
- **3 Blinks:** Alarm report Failed to Communicate (will restore only when the communicator path is restored)
- **4 Blinks:** RF trouble (antenna connection or cellular registration)
- **5 Blinks:** Communicator poll or check-in failure (cellular and/or IP). Either or both paths will trigger the trouble, but for the trouble to clear, unit requires that the previously active path(s) must restore (i.e. cellular if used as a Sole Path communicator, and both cellular and IP if unit is used as a Dual Path communicator)
- **6 Blinks:** Unit disabled (reporting or control panel downloading not allowed). Power cycle the unit and if it does not clear, then call for Technical assistance.
- **7 Blinks:** Unit was shut down and has no functionality; requires a restart (full power down and full power up)

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. Note: See page 7 "Configuration Download / Firmware Updates" for jumper instructions.
IN2 and IN3 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. Inputs 2 and 3 can be unsupervised with jumpers 4 and 5 removed; IN4 and IN5 always require EOLR.
7 Day Supervision, Communicator 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 Communicator 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.

sequence) to restore operation

- **8 Blinks:** Line Cut; check Telco and input wiring

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/ Remote Fire 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, UL 864 or ITE (*Information Technology Equipment*) Certified 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.

Jumper Block "X5" Options 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 IN3 and IN2, respectively. EOLR(s) required, see page 3	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 communicators 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 11.

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

NETWORK COVERAGE

The StarLink communicator constantly supervises the cell network coverage. When the StarLink communicator detects a loss in network coverage, the StarLink communicator must be configured to prompt the control panel to announce a Telco Line Cut failure trouble using the Management Center screen (at www.NapcoNOC.com).

INSTALLATION STEPS

STEP 1: ACCOUNT REGISTRATION

Create a new account and register specific StarLink communicator modules at www.NapcoComNet.com. Accounts and modules registered via the Internet are enabled for activation within 24 hours (usually within 30 minutes). **Note:** Activate radio before applying power.

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 communicator in basements or below grade as unpredictable performance may result.
- DO NOT mount the communicator 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.
- A fair amount of care may be required to mount the communicator 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 communicator from a fully charged 12V (4AH minimum) battery. DO NOT mount the StarLink communicator 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 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 2 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 or to a Certified 1, 2 or 3 gang electrical box.

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.

STARLINK COMMUNICATOR 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
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	Zone 1 for radio/cell path fail. Zone 2 for IP path fail	D1 or D2
Tip/Ring Wiring Fault Report		E789	000	F2
Path Test Report		E602	890	77

*Not generated by the StarLink communicator.

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

Cover Tamper

The communicators in the plastic housings are provided with a front tamper switch. **Note:** The tamper switch on the communicator PC board is always functional and requires programming if reporting to the central station.

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 communicator 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 Signal Log screen (located at www.NapcoNOC.com). Sends test into CS receiver.	Same comment as above.
Press to Send Communicator Test	Not Applicable Nothing sent to CS receiver	Not Applicable	Manually by dealer from the Management Center Checkins screen (located at www.NapcoNOC.com). Sends a command to the StarLink communicator to force a check-in to the NOC.	----

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

- **TB1: PWR** Regulated DC
- **TB2: PWR GND (-)**
- **TB21: N/C OUT1:** Wired to the (+) of a zone dedicated to monitoring the communicator 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 Certified 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 communicator Signal Verification to ensure that the StarLink communicator Network has properly received the signals.

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

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

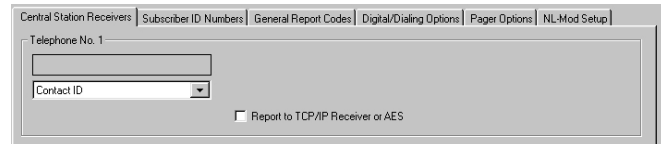
NOTE: This equipment has been tested and found to comply with the limits for a Class B Unintentional Radiator, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and 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 communicator 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. If the NOC account is programmed for "Dealer Entered Programming," the receiver formats must be the same.

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

Optional: If you wish the StarLink communicator 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).

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 COMMUNICATOR RELATED EVENT REPORT CODES"** table also includes the most common Contact ID alarm codes.

Programming StarLink Communicator Troubles

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

When the StarLink communicator detects and sends a trouble to the control panel, the control panel must be programmed to annunciate this trouble. The communicator 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):

Wire the communicator **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 communicator 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 "Communicator Trouble" as the Zone Description.

StarLink Communicator Supervision

If the two Telco wires (DACT interconnect wiring to the communicator) between the StarLink communicator and the control panel are cut or otherwise disconnected, the control panel must detect and generate a local trouble indication. Program the control panel for telephone supervision. Program the StarLink communicator using the Management Center **Advanced Features** screen (at www.NapcoNOC.com) to enable **Tip/Ring Wiring Fault Report**. Refer to wiring diagram.

Supervision Time Schedule Considerations

If a status change (alarm trouble, etc.) is transmitted, the communicator 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.

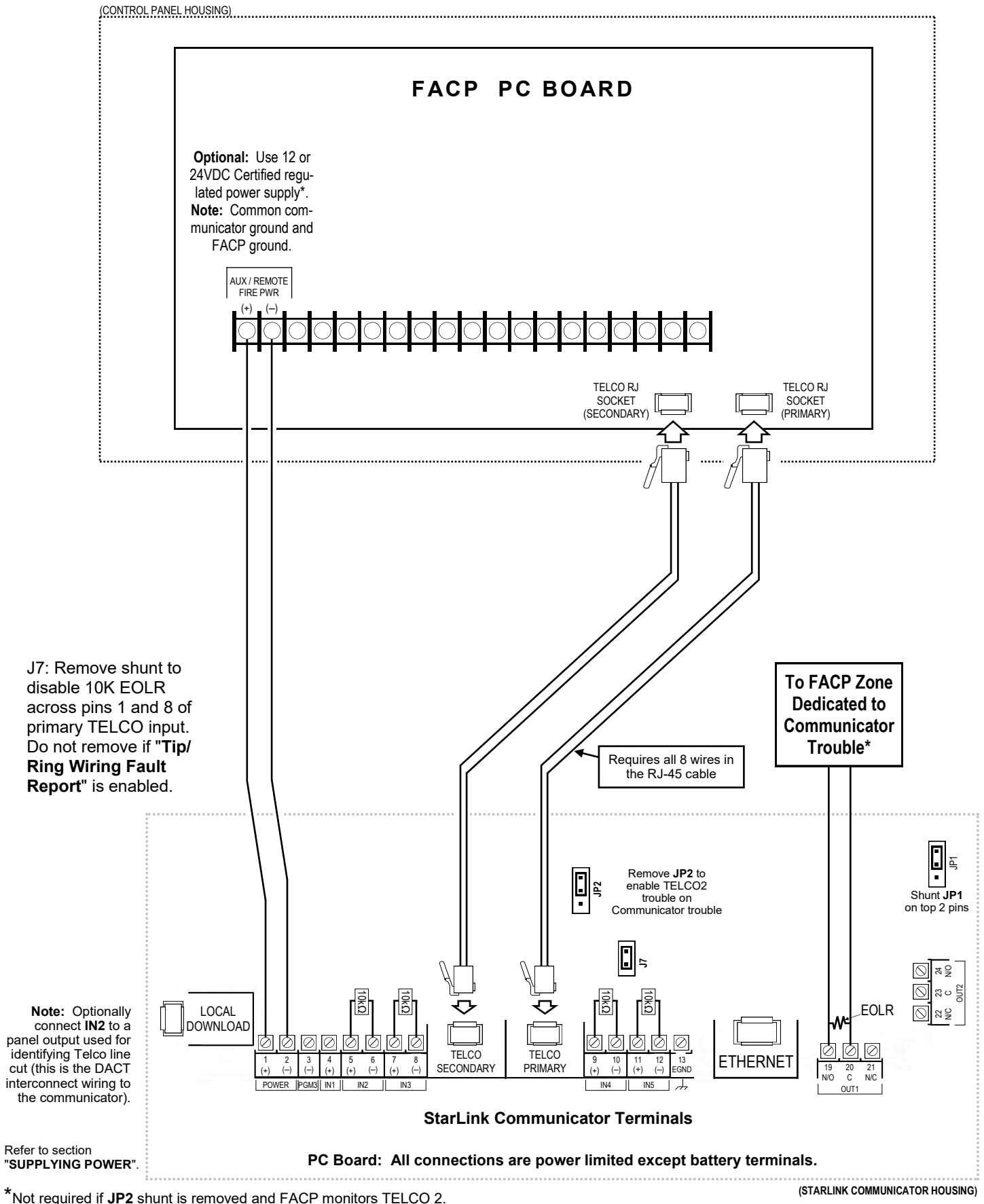
Configuration Download / Firmware Updates

Technician on site required.

For Commercial Installations a technician is required to be on site during any reprogramming of the communicator or control panel and must perform / re-perform acceptance testing. To perform a download or update the communicator 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 communicator 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.

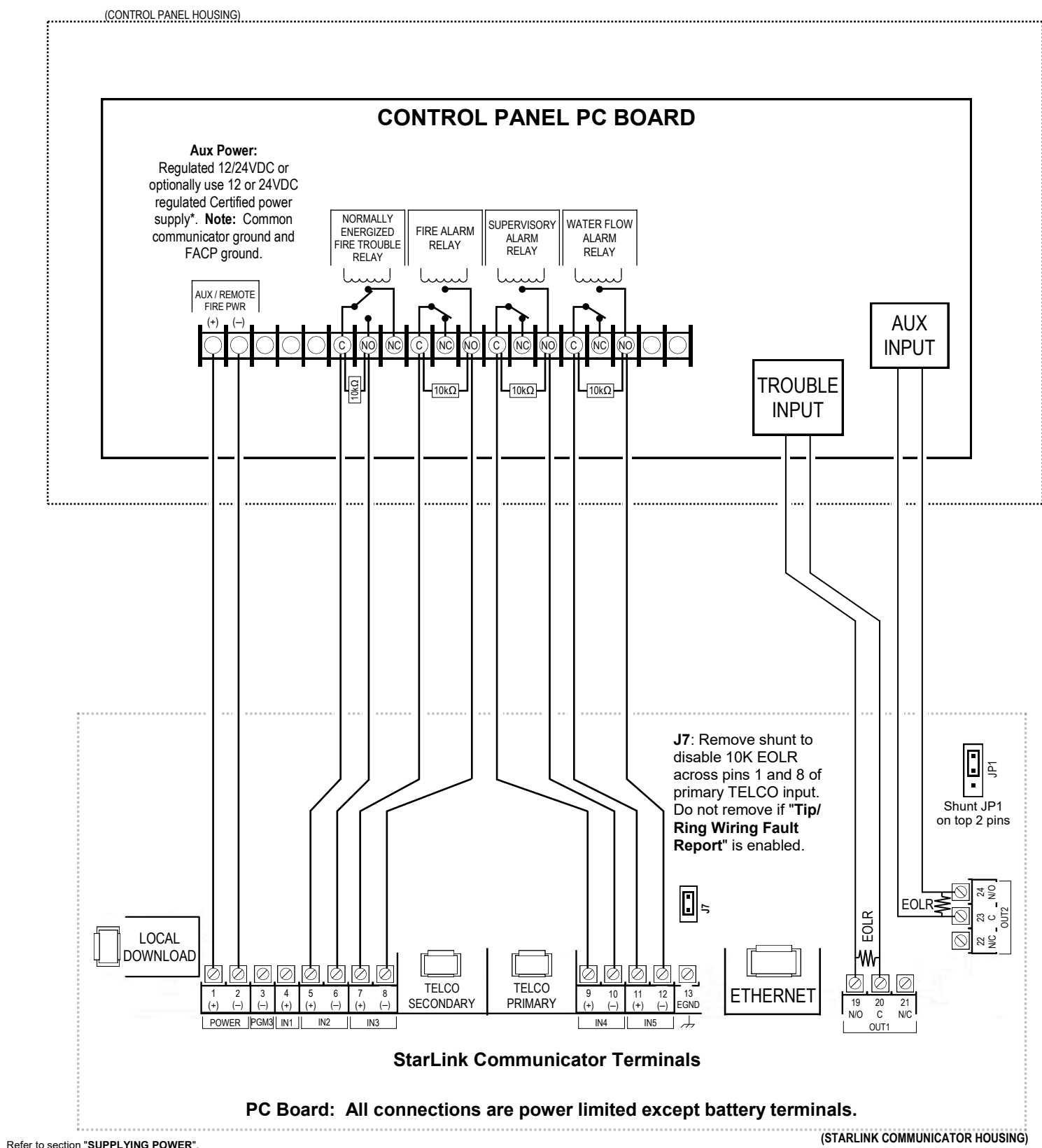
Wiring Diagram for Generic FACP's with TELCO RJ Sockets



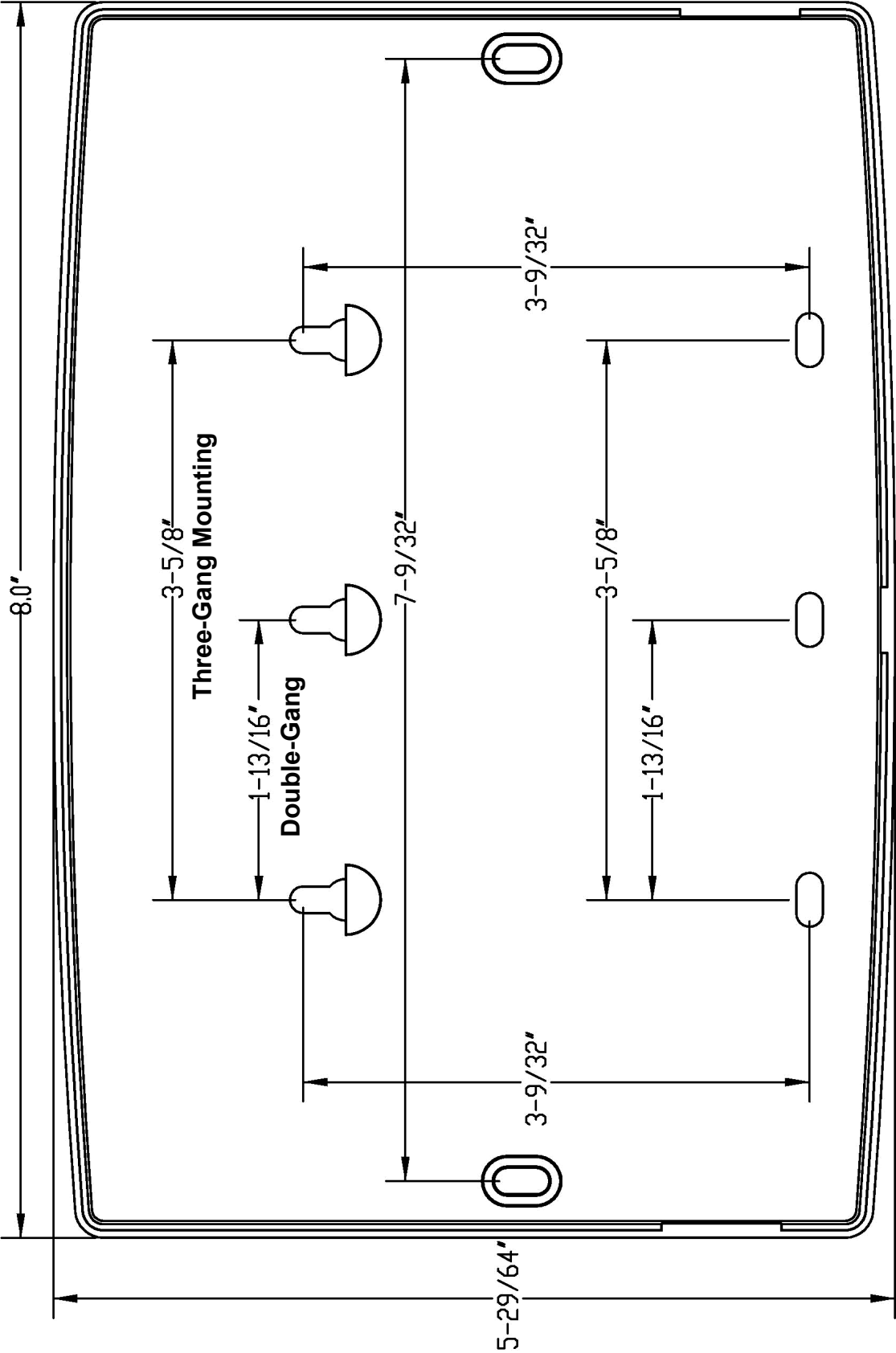
Refer to section
"SUPPLYING POWER".

* Not required if JP2 shunt is removed and FACP monitors TELCO 2.

Wiring Diagram for FACP Relay Trigger Input Reporting



Housing Template (1:1 Scale)



4/2 Pulse Dialing Format Compatibility

Note: The SLE Series Communicators are compatible with any Certified 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).

Alternate Telco Line to Alarm Panel Supervision

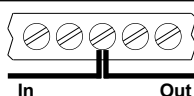
The following wiring and programming method allows an existing FACP to use its two telephone connections (primary and secondary) for supervision and central station reporting through the StarLink SLE-MAXVI-FIRE communicator. By removing the **JP2** shunt and enabling the feature "**Tip/Ring Wiring Fault Report**", when any communicator trouble is detected, the StarLink communicator will remove voltage from the secondary telephone output, triggering the FACP to locally annunciate the Telco trouble and report the trouble to the central station.

Note: Some FACP's require **J7** shunt to be removed for Primary Phone line to restore correctly.

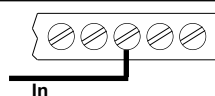
IMPORTANT WIRING METHODS



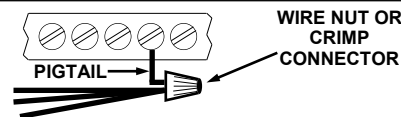
For single-conductor terminal blocks (like the type shown at left), to terminate more than one conductor to a terminal, use the wiring methods shown at right:



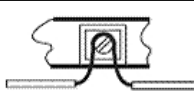
Incorrect



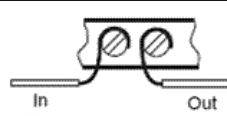
Correct -- Single incoming and/or pigtail with UL Certified wire nut / crimp connectors



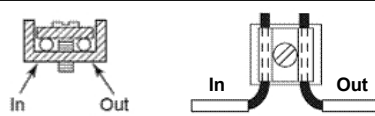
For "barrier" type terminal blocks (like the type shown at left), to terminate two conductors to a terminal, use the wiring methods shown at right:



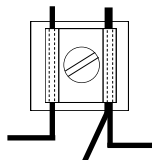
Incorrect



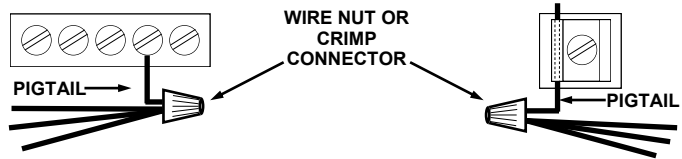
Correct -- Separate incoming and outgoing conductors



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



Correct -- Use UL Certified pigtail or wire nut / crimp connector

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