



POWER SERIES NEO TECHNICAL TRAINING MANUAL

COMMUNICATIONS:

OVERVIEW:

The Power Series Neo panels have the ability to transmit alarms, troubles, tests and arming/disarming signals to the monitoring station. The main paths of communication are: phone line (PSTN), Internet (T-link) and Cellular (GSM).

CELLULAR AND IP COMMUNICATORS

The panel can transmit via the IP and Cellular path to SurGard central station receivers.

The Cellular communicators support both 2G (EDGE/GPRS) and 3G (HSPA) networks

The IP Communicators support 10/100 Base-T networks

CELLULAR COMMUNICATOR MODEL

3G2080

IP COMMUNICATOR MODEL

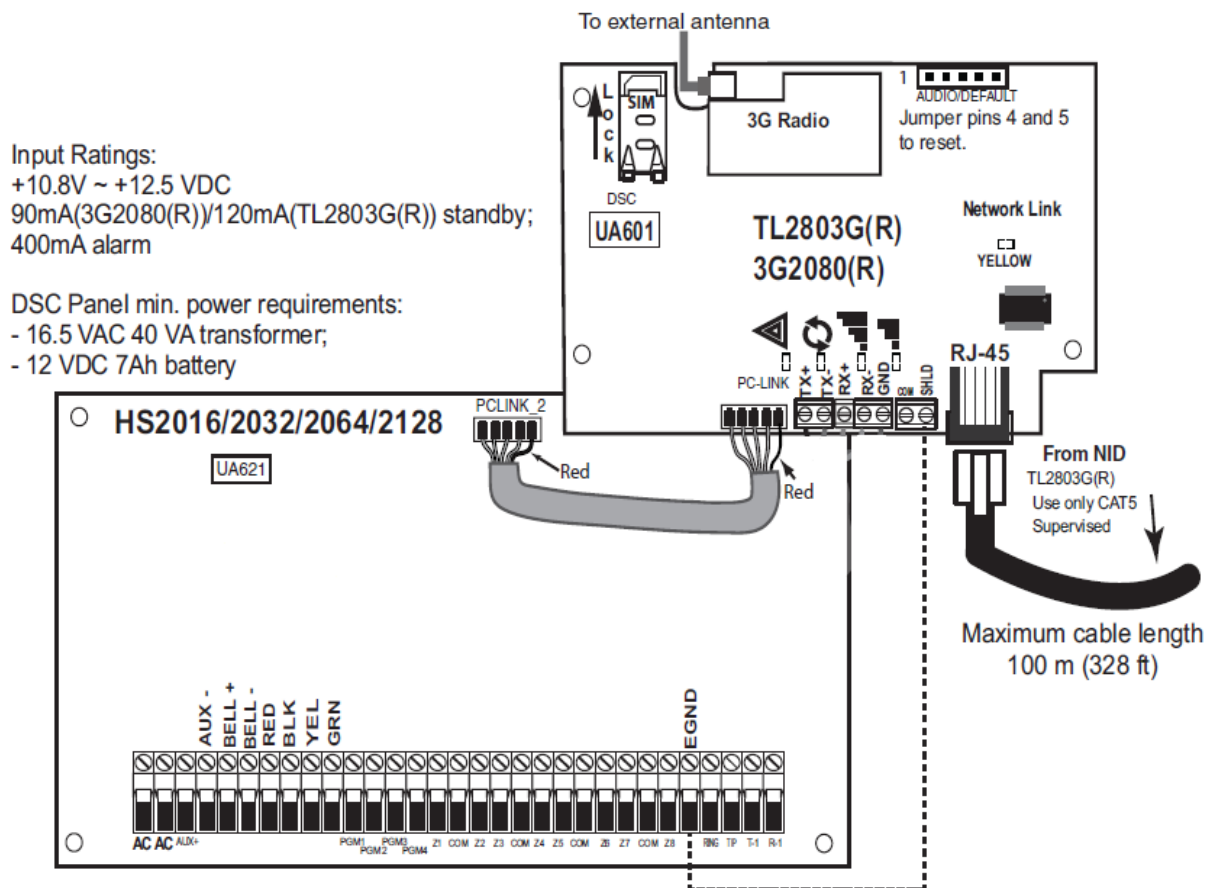
TL280

CELLULAR AND IP COMMUNICATOR MODEL

TL2803G

Note: Models with an (R) support the ITV2 integration connection; this is currently for future use.

COMMUNICATOR CONNECTIONS AND INSTALLATION



CONNECTION REQUIREMENTS

Connect the 5 pin PC-Link header cable from the NEO panel pins marked “PCLINK 2” to the Communicator pins marked “PC-LINK”.

Notes:

- Ensure you use the PCLINK 2 pins on the right of the NEO panel not the PCLINK 1 pins on the left. PCLINK 1 is for local programming with the DLS 5 downloading software, PCLINK 2 is dedicated for the communicator
- Ensure the **RED** wire is on the right hand side of the PCLINK cable when plugging in both sides

LED STATUS:

The communicators have 4 LEDs:

Green LEDs: Indications signal strength, there are two green LED's, see table below:

 (Green LED 1)  (Green LED 2) and  (Yellow LED) Signal Strength

NOTE: If the yellow LED is flashing, signal strength in table below is not valid.

Radio Signal Strength

Signal Strength	CSQ Level	Yellow LED	Green Led 2	Green LED 1	Signal Level dBm	Action Required
Radio Not Ready	N/A	N/A	Alternate Flashing	Alternate Flashing	N/A	If this status persists and the yellow LED shows 5 flashes, confirm that the SIM card is active.
No Signal	0	ON	OFF	OFF	-108.8	Check all antenna connections. Confirm cellular service is active in area. Relocate panel or install external antenna.
1 Bar	1 - 4	Flashing See Note	OFF	Flashing	-108 ~ -103	Relocate panel or install external antenna if yellow trouble LED has: 5 flashes. Location is OK. Cellular signal strength is greater than CSQ 7.
2 Bars	5 - 6	OFF	OFF	Flashing	-102 ~ -99	
3 Bars	7 - 10	OFF	OFF	ON	-98 ~ -91	
4 Bars	11-13	OFF	Flashing	ON	-90 ~ -85	
5 Bars	14 +	OFF	ON	ON	-84 and higher	

Red LED: Indicates the network status, see table below:

Red Network Connection Status LED **TL2603G**

BLINKING: Indicates communications in progress.

- Once quickly for outgoing Ethernet transmission.
- Twice quickly to indicate incoming Ethernet ACK/NACK.

OFF: This is the normal state of the red network connection status LED. There are no network connection issues present.

ON: There is a problem with the Ethernet or the cellular network connection. LED will be ON if any of the following occur:

- Ethernet cable is not connected,
- DHCP configuration times out,
- Unit fails to get an IP address from the cellular network, or
- Cellular connection has been reset.

Yellow LED: Indicates trouble condition(s) are present. Refer to the troubleshooting section at the end of this document for details.

ALTERNATE COMMUNICATOR PROGRAMMING:

Programming location [851] contains all of the programming for the IP/cellular communicators.

MINIMUM IP PROGRAMMING EXAMPLE:

The following is the bare minimum required programming to communicate to the central station over IP.

PANEL PROGRAMMING

1. SELECT COMMUNICATION PATH, SECTION [300]

Select if the communication path(s) are to be phone line or alternate communicator where:

[02] For – Alt Com auto (selects the first available path on an alternate communicator)

[03] For – Alt Com Rec 1 (selects the first IP receiver on the alternate communicator)

[04] For – Alt Com Rec 2 (selects the second IP receiver on the alternate communicator)

2. PROGRAM ACCOUNT NUMBERS, SECTION [310]

Program with the required system account number [000] and partition account numbers [001] – [008]

3. COMMUNICATION FORMAT, SECTION [350]

Select the desired option for Contact ID Auto or SIA FSK format

4. ENABLE ALTERNATE COMMUNICATOR [382]

Enable the alternate communicator in programming location [382] by enabling toggle option 5

ALTERNATE COMMUNICATOR PROGRAMMING [851]

This programming location contains all of the programming for the alternate communicator, ensure the following:

1. [001] – ETHERNET IP ADDRESS:

Enter the desired IP address to attach the IP communicator to the network. (Note: enter 000.000.000.000 for DHCP).

2. [002] – ETHERNET SUBNET MASK

Enter the desired subnet mask for the network

3. [003] – ETHERNET GATEWAY ADDRESS

Enter the gateway IP address of the network router

4. [021] – ACCOUNT CODE

Enter a 6 digit account code; this is used for internal messages from the communicator to the central station receiver (troubles, supervision etc.)

ETHERNET RECEIVER 1

1. [101] ETHERNET RECEIVER 1 ACCOUNT CODE

Enter the 10 digit account code for the panel to report to receiver 1. (EX. '000000XXXX')

2. [103] ETHERNET RECEIVER 1 ADDRESS

Enter the IP address for the first IP receiver

3. [104] ETHERNET RECEIVER 1 REMOTE PORT

Enter the destination port for the signals to the central station receiver in HEX (default: 0BF5 -> '3061')

4. [105] ETHERNET RECEIVER 1 LOCAL PORT

Enter the source port for the signals from the central station receiver in HEX (default: 0BF4 -> '3060')

ETHERNET RECEIVER 2

1. [111] ETHERNET RECEIVER 2 ACCOUNT CODE

Enter the 10 digit account code for the panel to report to receiver 2. (EX. '000000XXXX')

2. [113] ETHERNET RECEIVER 2 ADDRESS

Enter the IP address for the second IP receiver

3. [114] ETHERNET RECEIVER 2 REMOTE PORT

Enter the destination port for the signals to the central station receiver in HEX (default: 0BF5 -> '3061')

4. [115] ETHERNET RECEIVER 2 LOCAL PORT

Enter the source port for the signals from the central station receiver in HEX (default: 0BF4 -> '3060')

5. [999][55] REBOOT THE COMMUNICATOR

When finished programming all parameters, reboot the communicator with:

[*][8][Installer Code][851][999][55][#][#][#]

MINIMUM CELLULAR PROGRAMMING:

The following is the bare minimum programming required to communicate to the central station over cellular.

PANEL PROGRAMMING

1. SELECT COMMUNICATION PATH, SECTION [300]

Select if the communication path(s) are to be phone line or alternate communicator where:

[02] For – Alt Com auto (selects the first available path on an alternate communicator)

[05] For – Alt Com Rec 3 (selects the first cellular receiver on the alternate communicator)

[06] For – Alt Com Rec 4 (selects the second cellular receiver on the alternate communicator)

2. PROGRAM ACCOUNT NUMBERS, SECTION [310]

Program with the required system account number [000] and partition account numbers [001] – [008]

3. COMMUNICATION FORMAT, SECTION [350]

Select the desired option for Contact ID Auto or SIA FSK format

4. ENABLE ALTERNATE COMMUNICATOR [382]

Enable the alternate communicator in programming location [382] by enabling toggle option 5

ALTERNATE COMMUNICATOR PROGRAMMING [851]

This programming location contains all of the programming for the alternate communicator, ensure the following:

1. [021] – ACCOUNT CODE

Enter a 6 digit account code; this is used for internal messages from the communicator to the central station receiver (troubles, supervision etc.)

CELLULAR RECEIVER 1

1. [201] CELLULAR RECEIVER 1 ACCOUNT CODE

Enter the 10 digit account code for the panel to report to receiver 1. (EX. '000000XXXX')

2. [203] CELLULAR RECEIVER 1 ADDRESS

Enter the IP address for the first IP receiver

3. [204] CELLULAR RECEIVER 1 REMOTE PORT

Enter the destination port for the signals to the central station receiver in HEX (default: 0BF5 -> '3061')

CELLULAR RECEIVER 2

1. [211] CELLULAR RECEIVER 2 ACCOUNT CODE

Enter the 10 digit account code for the panel to report to receiver 2. (EX. '000000XXXX')

2. [213] CELLULAR RECEIVER 2 ADDRESS

Enter the IP address for the second IP receiver

3. [214] CELLULAR RECEIVER 2 PORT

Enter the destination port for the signals to the central station receiver in HEX (default: 0BF5 -> '3061')

CELLULAR PROVIDER PROGRAMMING

1. [221] CELLULAR NETWORK APN

Enter the cellular provider's APN name

2. [222] CELLULAR NETWORK LOGIN USER NAME

Enter the cellular provider's user name (if applicable)

3. [223] CELLULAR NETWORK LOGIN PASSWORD

Enter the cellular provider's password (if applicable)

4. [999][55] REBOOT THE COMMUNICATOR

When finished programming all parameters, reboot the communicator with:

[*][8][Installer Code][851][999][55][#][#][#]

ADDITIONAL PROGRAMMING

COMMUNICATION BACKUP – SECTION [384]

This section controls which of the 4 available receivers are set for backup and which are independent.

Options 2-4 control if receiver 2-4 are backups of the previous phone number (receiver 1 is always independent).

Select format option for Contact ID Auto

USEFUL DIAGNOSTIC FEATURES

The following commands are useful for setup and troubleshooting:

[851] ALTERNATE COMMUNICATOR PROGRAMMING

The following are programming sub-sections of [851]:

[992] ETHERNET IP ADDRESS

Displays the current programmed Ethernet IP address. This is particularly useful when using DHCP.

[995] SIM NUMBER

Displays the SIM card number for the cellular unit

[996] CELLULAR TELEPHONE NUMBER

This section displays the telephone number of the cellular communicator; the end user will use this number to send the SMS commands

[999] SOFTWARE DEFAULT

Enter one of the following commands:

00 = Factory default

11 = Factory default SMS labels only

55 = Reboot module

SMS COMMAND AND CONTROL

The purpose of this feature is to allow the end user to use SMS from their mobile phone to control the system. The available features are: arm (stay, away or night), disarm, check system status, activate command outputs and bypass/un-bypass zones

Programming:

ALTERNATE COMMUNICATOR PROGRAMMING [851]

[301] EVENT NOTIFICATION/INTERACTIVE OPTIONS

Enable option 3 for SMS command and control (default enabled).

[311] – [342] SMS PHONE NUMBER 1-32

Here you can enter up to 32 mobile phone numbers which will allow access to the panel functions via SMS.

[343] – [374] SMS PHONE NUMBER 1-32 TOGGLE OPTIONS

Here you will ensure option 8 is enabled for each phone number that needs access to SMS command and control (default enabled)

[375] – [406] SMS PHONE NUMBER 1-32 PARTITION OPTION

Here you will assign each SMS phone number to a partition (01-08) or global for all partitions (00). The default setting is global.

[451] – [596] SMS SENT LABELS

Here you can modify the default SMS strings that will be sent for each of the listed system messages

[600] – [664] SMS COMMAND LABELS

Here you can modify the default SMS commands to be sent from the end user to the panel to perform the available functions.

[996] CELLULAR TELEPHONE NUMBER

This section displays the telephone number of the cellular communicator; the end user will use this number to send the SMS commands

SMS NOTIFICATION/INTERACTIVE

The purpose of this feature is to report important system events to the end user via SMS. This is useful to notify the end user of alarms, troubles, arming/disarming etc.

Programming:

ALTERNATE COMMUNICATOR PROGRAMMING [851]

[301] EVENT NOTIFICATION/INTERACTIVE OPTIONS

Enable option 1 for SMS Notification is enabled (default enabled).

[311] – [342] SMS PHONE NUMBER 1-32

Here you can enter up to 32 mobile phone numbers which will allow notifications via SMS.

[343] – [374] SMS PHONE NUMBER 1-32 TOGGLE OPTIONS

Here you will ensure option 1 - 6 are enabled depending on what events the end user needs notifications for.

Ensure option 7 is switched on in order to enable SMS notification for each SMS phone number.

Note: options 1 – 7 are disabled by default; you must enable them in order to use SMS notifications.

[375] – [406] SMS PHONE NUMBER 1-32 PARTITION OPTION

Here you will assign each SMS phone number to a partition (01-08) or global for all partitions (00). The default setting is global.

TROUBLESHOOTING

The yellow LED indicates trouble status. Various flashing patterns indicate different trouble conditions. See below for details:

△ Yellow Trouble LED

This yellow LED will flash to indicate a trouble on the unit. The number of flashes indicates the type of trouble. See the table below for the coded flashes and the conditions which will activate the trouble status LED.

Table 6: Yellow Trouble Status LED

# of Flashes	Trouble	# of Flashes	Trouble
2	Panel Supervision Trouble	8	Receiver Supervision Trouble
4	SIM Lock Trouble	9	FTC Trouble
5	Cellular Trouble	10	Not Applicable
6	Ethernet Trouble	12	Module Configuration Trouble
7	Receiver Not Available Trouble		

NOTE: Only the highest priority trouble (2 flashes is the highest priority trouble) is indicated. When this trouble is restored, the next highest trouble will indicate, if present. This will continue until all troubles have been cleared (yellow LED is not flashing).