Solution 4+4
Quick Reference Guide

ISSUE 1.10

BOSCH

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Document Part Number MA400Q

Document Issue 1.10

Printed 23 May 2006

This documentation is provided to suit Solution 4+4 (CC400/LP400)

Firmware Revision 1.20 - 1.27

Hardware Revision D

Alarm Link Form - Software Version 1.20 - 1.27 = S4_V12

Introduction

Thankyou for choosing the Solution 4+4 control panel for your installation. We are sure that you will find this system extremely flexible, reliable and easy to use.

Before using the system for the first time, we suggest that you read the section in this Quick Reference Guide called "Programming Using A Remote Codepad" to familiarise yourself with the basic programming methodology.

The Quick Reference Guide is supplied with the Solution 4+4 to provide users with enough basic information to wire, configure and operate the system. Due to the systems many programmable features and options we suggest that you obtain the complete Installation Manual which provides detailed information on all system options and functions as well as detailed information on the numerous programming methods.

Programming

The programming options of this system are stored in a non volatile EPROM. This memory will hold all the relevant configuration and user specific data even during a total power loss.

The data retention time is as long as ten years without power, therefore no reprogramming will be required after powering the system down.

The data can be altered as many times as required without the need for any additional specialised equipment. This memory is laid out in numerous locations each of which holds the data for a specific function. In general, the entire programming sequence will consist of nominating the location then entering or altering the required data. You will repeat this procedure until all the data has been altered to suit your requirements. The factory default settings have been selected for Contact ID format.

Note: '15' is the maximum value that can be programmed into any location.

There are two programming modes. The Installer's Programming Mode and the Operators Programming Mode. Both modes have individual access codes and these two codes must always be programmed differently. The Master Code, as well as being able to arm and disarm the system gives access to the Operators Programming Mode. The Installer's Code only gives access to the Installer's Programming Mode and does NOT arm and disarm the system.

Programming of the Solution 4+4 control panel can be carried out via any of the following four methods.

- ❑ System Codepad
- ❑ Hand Held Programmer (CC814)
- ❑ Programming Key (CC810)
- ❑ Alarm Link (Upload/Download) Software (CC816)

Note: For further information on the different programming options available for the Solution 4+4, refer to the Installation Manual (MA400I).

Programming Using A Remote Codepad

The system must be in a disarmed state with no flashing zone alarm memories, this can be achieved by entering the [MASTER CODE] followed by the [AWAY] button. The factory default Master Code is [2][5][8][0].

To access the Installer's Programming Mode, enter the four digit [INSTALLER CODE] followed by the [AWAY] button. The factory default Installer Code is [1][2][3][4]. Three beeps will be heard and both the AWAY and the STAY indicators will flash simultaneously. If a long beep is heard, check the system for alarm memory. The combination of the MAINS and ZONE indicators will indicate the data stored in the first location (LOCATION 000).

Data Value	Zone 1 Indicator	Zone 2 Indicator	Zone 3 Indicator	Zone 4 Indicator	Zone 5 Indicator	Zone 6 Indicator	Zone 7 Indicator	Zone 8 Indicator	MAINS Indicator
1	✓								
2		✓							
3			✓						
4				✓					
5					✓				
6						✓			
7							✓		
8								✓	
9	✓							✓	
10									✓
11	✓								✓
12		✓							✓
13			✓						✓
14				✓					✓
15					✓				✓

Zone Indicators When Programming

Example

To move to a particular programming location, enter the location number required followed by the [AWAY] button. The data of the new location will now be displayed.

To move to the next location, press the [AWAY] button. This will step you to the next location and the data in that location will be displayed via the zone LED indicators.

If you press the [STAY] button without previously entering a location number, the system will step back one location. To change data in the current location, enter the new value followed by the [STAY] button. This will store the new data into the location and still leave you positioned at the same location.

To proceed to the next location, press the [AWAY] button. The next locations data will now be displayed.

To exit the Installer's Programming Mode, enter the command [9][6][0] followed by the [AWAY] button. Two beeps will be heard and the system will return to normal.

For a more detailed explanation, refer to the Solution 4+4 Installation Manual (MA400I).

Quick Start

The following steps will enable you to use the Solution 4+4 panel with the default values as set in the factory. The default settings allow the panel to communicate in Contact ID format.

1. Connect AC plug pack to the control panel.

2. Check the operation of the red overload LED (LD1) on the PCB. In normal operation the LED will not illuminate. The MAINS indicator will remain on as will the AWAY indicator. The unit is now in the armed state.

3. The back-up battery should now be connected.

4. Enter the default Master Code [2][5][8][0] followed by the [AWAY] button. The AWAY indicator will extinguish. The panel is now in the disarmed state. Installer's Programming Mode can now be accessed.

5. Enter the factory default Installer Code [1][2][3][4] followed by the [AWAY] button. The STAY and AWAY indicators will now flash simultaneously.

6. Enter the primary and secondary telephone numbers and the Subscriber ID Number.

7. Set the time for the test reports if this option is required. Any other programming changes required can also be made, otherwise the factory programming default settings will be used.

8. Enter command [9][6][0] followed by the [AWAY] button to exit Installer's Programming Mode. The panel will return to the unarmed state and is now ready for use.

9. Using a Master Code to set the date and time.

- Enter [MASTER CODE] followed by [6] and the [AWAY] button.
- Enter the day of the month, then the month, then the year, then the hour, then the minute using the format (DD, MM, YY, HH, MM).
- Press the [AWAY] button when finished.

Zone Default Settings

The zone default settings are as listed in the table below.

Zone No	Zone Type
1	Delay-1
2 & 3	Handover
4	24 Hour

Note: The example given in this quick reference guide is a simplified description of how to configure the panel. This system offers many other programmable features which are described in detail in the Solution 4+4 Installation Manual (MA400I).

Installer's Programming Commands

There are several commands that can be invoked to perform the functions as listed below. These commands only operate while you are in the Installer's Programming Mode. To invoke the command, enter in the corresponding numerical code then press the AWAY button.

Command	Description
958	Enable and Disable Zone Status Mode
959	Test Programming Key
960	Exit Installer's Programming Mode
961	Reset to Factory Default Settings (Contact ID Format)
962	Copy The Panel Memory To The Programming Key
963	Copy The Programming Key Data To The Panel Memory
964	Wipe Programming Key
965	Set Defaults For Domestic Dialling Reporting Format
966	Enable and Disable Automatic Stepping Of Locations During Programming
999	This Command Displays The Control Panel's "Software Version" Number When Using The Hand Held Programmer

Installers Programming Commands

Installer Code Functions

Installer Code functions are designed to allow the installer to perform various system tests without the need to know a Master Code.

The INSTALLER CODE is entered followed by a FUNCTION digit then the AWAY button to activate the particular mode.

INSTALLER CODE + FUNCTION + AWAY

These functions can only be carried out while the system is in the disarmed state.

Function	Description
0	Fault Analysis Mode
1	Reserved
2	Set Number Of Days Until The First Test Report
3	Event Memory Recall
4	Walk Test Mode
5	BOSCHSAT - Satellite Siren Service Mode
6	Initiate Modem Call
7	Turning Telephone Monitor Mode On and Off
8	Reserved
9	Send A Test Report

Installer Code Functions

Master Code Functions

Master Code functions are designed to allow those users that have the appropriate access level to perform certain functions of a supervisory level. These functions can only be carried out while the system is in the disarmed state.

MASTER CODE + FUNCTION + AWAY

Function	Description
0	Reserved
1	Changing and Deleting User Codes
2	Changing Domestic Phone Numbers
3	Event Memory Recall
4	Walk Test Mode
5	Fault Analysis Mode
6	Setting The Date and Time
7	Turning Day Alarm On/Off
8	Reset Latched Outputs
9	Initiate Modem Call

Master Code Functions

Fault Analysis Mode

There are various system faults that can be detected by Solution 4+4. When any of these are present the FAULT indicator will begin to flash and the codepad will beep once every minute. Hold the 5 button down for two seconds until two beeps are heard. The STAY and AWAY indicators will begin to flash in unison with the FAULT indicator. One or more zone indicators (1-8) will illuminate to indicate the current fault(s). Refer to the following table.

Zone Indicator	Description
1	Low Battery
2	Date and Time
3	Sensor Watch
4	Horn Speaker Disconnected
5	Reserved
6	E^2 Fault
7	Reserved
8	Communications Failure

Fault Types

Hold Down Functions

Hold Down functions have been incorporated to allow easy activation of specific operations. When a button is held down for two seconds, two beeps will be heard and a particular function will operate. The functions are listed below.

Function	Description
AWAY	Arm The System In AWAY Mode
STAY	Arm The System In STAY Mode
0	Reserved
1	Horn Speaker Test
2	Bell Test
3	Strobe Test
4	Turning Day Alarm On and Off
5	Fault Analysis Mode
6	Initiate Modem Call
7	Reset latching Outputs
8	Codepad Beeper Tone Change
9	Initiate Test Report

Hold Down Functions

How To Test The Dialler

Telephone Monitor mode allows the codepad to be used for a visual representation of data transmissions between the control panel and the base station receiver. The dialling sequence is also shown in this mode.

The codepad will beep once every two seconds while Telephone Monitor Mode is turned on regardless of whether the system is in Installer's Programming Mode or normal operating mode. The first five zone indicators are used to display the progressive steps for a transmission to the base station receiver.

Zone LED	Event
1	Telephone Line Seized
2	Dialling Phone Number
3	Handshake Received
4	Data Is Being Transmitted
5	Kiss Off Received
None	Telephone Line Released

To Turn Telephone Monitor Mode On

1. Enter your [INSTALLER CODE] followed by [7] and the [AWAY] button.
Three beeps will be heard.

[INSTALLER CODE] + [7] + [AWAY]

To Turn Telephone Monitor Mode Off

1. Enter your [INSTALLER CODE] followed by [7] and the [AWAY] button.
Two beeps will be heard.

[INSTALLER CODE] + [7] + [AWAY]

Location 000 - 015

Primary Telephone Number

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Location 016 - 031

Secondary Telephone Number

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Location 032 - 047

Callback Telephone Number

0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

Location 048

Dialling Format

1 = Australian DTMF
2 = Australian Decadic
3 = Alternate DTMF & Decadic (AUST)
4 = International DTMF
5 = Reversed Decadic
6 = Alternate DTMF & Reversed Decadic

1

Location 049

Handshake Tone

1 = HI-LO Handshake (Contact ID)
2 = 1400 Hz (Ademco TX @ 1900 Hz)
3 = 2300 Hz (Sescoa TX @ 1800 Hz)
4 = No Handshake Required
5 = Pager

1

Location 050

Transmission Format

1 = Contact ID
2 = 4 + 2 Expressed
3 = 4 + 2 Pulsed
4 = 4 + 2 Pulsed + Checksum
5 = 4 + 1 Pulsed + Universal
6 = 4 + 1 Pulsed Expanded
7 = 3 + 1 Pulsed Universal
8 = 3 + 1 Pulsed Expanded
9 = Reserved
10 = Reserved
11 = Domestic
12 = Basic Pager
13 = Reserved
14 = Reserved
15 = Reserved

1

Location 051

Transmission Speed

1 = 1 Pulse / Second
2 = 10 Pulses / Second
3 = 15 Pulses / Second
4 = 20 Pulses / Second
5 = 20 Pulses / Second FDL
6 = 40 Pulses / Second

2

Location 052 - 055

Subscriber ID Number

0	0	0	0

Location 056 - 059

Installer Code

1	2	3	4

Location 060

Ring Count

15 = Answering Machine Bypass 1
14 = Answering Machine Bypass 2 (New - Software Version 1.27 Onwards)

8

Location 061 - 100

User Codes

Location 61 - 65

User Code 1

2	5	8	0	8

Location 66 - 70

User Code 2

15	15	15	15	0

Location 71 - 75

User Code 3

15	15	15	15	0

Location 76 - 80

User Code 4

15	15	15	15	0

Location 81 - 85

User Code 5

15	15	15	15	0

Location 86 - 90

User Code 6

15	15	15	15	0

Location 91 - 95

User Code 7

15	15	15	15	0

Location 96 - 100

User Code 8

0	15	15	15	1

Location 101

Day Alarm Mask

1 = Zone 1
2 = Zone 2
4 = Zone 3
8 = Zone 4

1

Location 102

Code Retries

6

Location 103

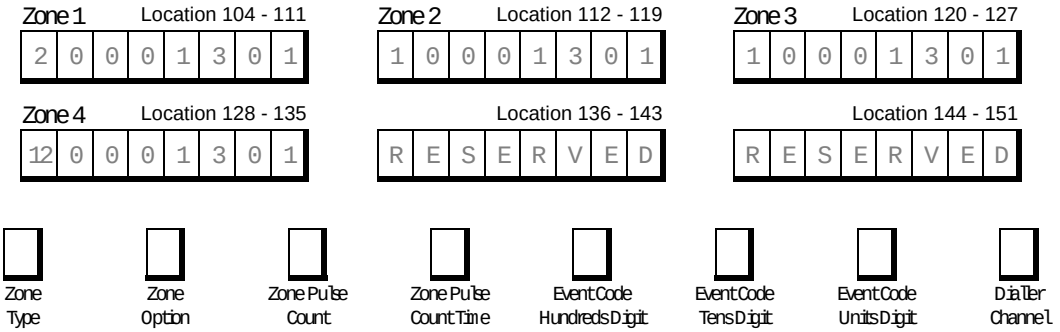
EOL Resistor Value

1 = 1K
2 = 1K5
3 = 2K2
4 = 3K3
5 = 3K9
6 = 4K7
7 = 5K6
8 = 6K8
9 = 10K
10 = 12K
11 = 22K
12 = Reserved
13 = Reserved
14 = Reserved
15 = Split EOL (3K3/6K8) For 4 Zones + 4 Tamper Zones

4

Location 104 - 151

Zones



Each zone contains eight locations which are divided into two groups of four. The first four locations determine how the zone operates, while the second four locations contain the dialler reporting information.

Zone Types

There are thirteen different zone types to choose from. Each zone can be programmed as any of the zone types listed in the table below.

Zone Type	Description	Zone Type	Description
0	Instant	**8**	Delay-1 + Isolated In STAY Mode 1
1	Handover	**9**	Delay-2 + Isolated In STAY Mode 1
2	Delay-1	**10**	Reserved
3	Delay-2	**11**	Keyswitch
4	Reserved	**12**	24 Hour Burglary
5	Reserved	**13**	24 Hour Fire
6	Instant + Isolated In STAY Mode 1	**14**	Chime Only
7	Handover + Isolated In STAY Mode 1	**15**	Zone Not Used

Zone Options

Zone Option	Description
1	Lockout Siren
2	Lockout Dialler
4	Silent Alarm
8	Sensor Watch

Zone Pulse Count Settings

The pulse count settings for each zone can be programmed between 0 - 15.

Zone Pulse Count Time

Zone pulse count time is the time frame or period over which the number of pulses must register.

20 ms Loop Response Time Zone Pulse Count Time		150 ms Loop Response Time Zone Pulse Count Time	
0	0.5 Second	**8**	20 Seconds
1	1 Second	**9**	30 Seconds
2	2 Seconds	**10**	40 Seconds
3	3 Seconds	**11**	50 Seconds
4	4 Seconds	**12**	60 Seconds
5	5 Seconds	**13**	90 Seconds
6	10 Seconds	**14**	120 Seconds
7	15 Seconds	**15**	200 Seconds

Zone Descriptions

Use this table as a reference to indicate what each zone is connected to.

Zone	Description	Tamper Zone	Description
1		**1**	
2		**2**	
3		**3**	
4		**4**	

Location 152 - 153
Bypass Codes (Zones 1 To 4) 9 9

Location 154 - 155
Trouble Codes (Zones 1 To 4) 9 9

Location 156 - 159
Codepad Duress 1 2 1 1

Location 160 - 163
Codepad Panic 1 2 0 1

Location 164 - 167
Access Denied (Code Retries) 4 2 1 1

Location 168 - 161
AC Fail 3 0 1 1

Location 172 - 175
Low Battery 3 0 9 1

Location 176 - 179
Sensor Watch 3 0 7 1

Location 180 - 181
Open/Close 8 9

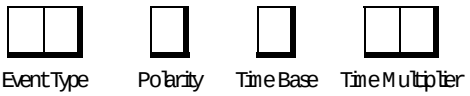
Location 182 - 185
Test Reporting Time

Location 182	Actual Hour Of The Day (Tens Digit)	
Location 183	Actual Hour Of The Day (Units Digit)	
Location 184	Repeat Interval In Days	
Location 185	Expansion Code For 4+2 Format	0 0 0 9

Location 186 - 209

Output Configurations

	Location 186 - 191		Location 192 - 197		Location 198 - 203	
Output 1	1	14 0 0 0 0	Strobe	2 0 1 0 0 0	Relay	1 15 1 0 0 0
Codepad	Location 204 - 209	0 12 2 1 0 1				



Location 210 - 211
Entry Timer 1

Location 210	Increments Of 1 Second (0 - 15 Sec's)	10 0
Location 211	Increments Of 16 Seconds (0 - 240 Sec's)	

Location 212 - 213
Entry Timer 2

Location 212	Increments Of 1 Second (0 - 15 Sec's)	4 1
Location 213	Increments Of 16 Seconds (0 - 240 Sec's)	

Location 214 - 215
Exit Time

Location 214	Increments Of 1 Second (0 - 15 Sec's)	12 3
Location 215	Increments Of 16 Seconds (0 - 240 Sec's)	

Location 216 - 217
Entry Guard Time For STAY Mode

Location 216	Increments Of 1 Second (0 - 15 Sec's)	12 3
Location 217	Increments Of 16 Seconds (0 - 240 Sec's)	

Location 218 - 219
Sensor Watch Time

Location 218	Increments Of Days (Tens Digit)	0 0
Location 219	Increments Of Days (Units Digit)	

Location 220
Codepad Lockout Time Location 220 Increments Of 10 Seconds [0]

Location 221
Siren Run Time Location 660 Increments Of Minutes (0-15) [10]

Location 222
Siren Sound Rate (Slow < -Sound-> Fast) [7]

Location 223
Swinger Shutdown Count [0]

Location 224
Dialler Options 1
1 = Enable Dialler Reporting Functions
2 = Enable Remote Arming Via The Telephone
4 = Enable Upload/Download Via Alarm Link
8 = Terminate “Alarm Link” Session On Alarm [5]

Location 225
Dialler Options 2
1 = Send Open/Close Reports Only If A Previous Alarm Has Occurred
2 = Reserved
4 = Send Open/Close Reports When In STAY Mode
8 = Delay Siren Until Transmission Complete [0]

Location 226
System Options 1
1 = Enable Forced Arming
2 = Enable BOSCH Smart Lockout
4 = Enable Monitoring Of Horn Speaker
8 = Enable Horn Speaker Beeps For Remote Control Operation [1]

Location 227
System Options 2
1 = Enable Radio Key/Keyswitch Interface or Night Arm Station
2 = Enable Handover Delay To Be Sequential
4 = Enable Codepad Panic To Be Silent
8 = Enable Codepad Tamper To Be Silent [2]

Location 228
System Options 3
1 = Reserved
2 = Reserved
4 = Ignore AC Fail
8 = Enable Pulse Count Handover [0]

Location 229
Consumer Options 1
1 = Send Test Reports Only If The System Is Armed
2 = Enable Operation Of Siren & Strobe In STAY Mode
4 = Enable Answering Machine Bypass Only When Armed
8 = Enable Codepad Extinguish Mode [2]

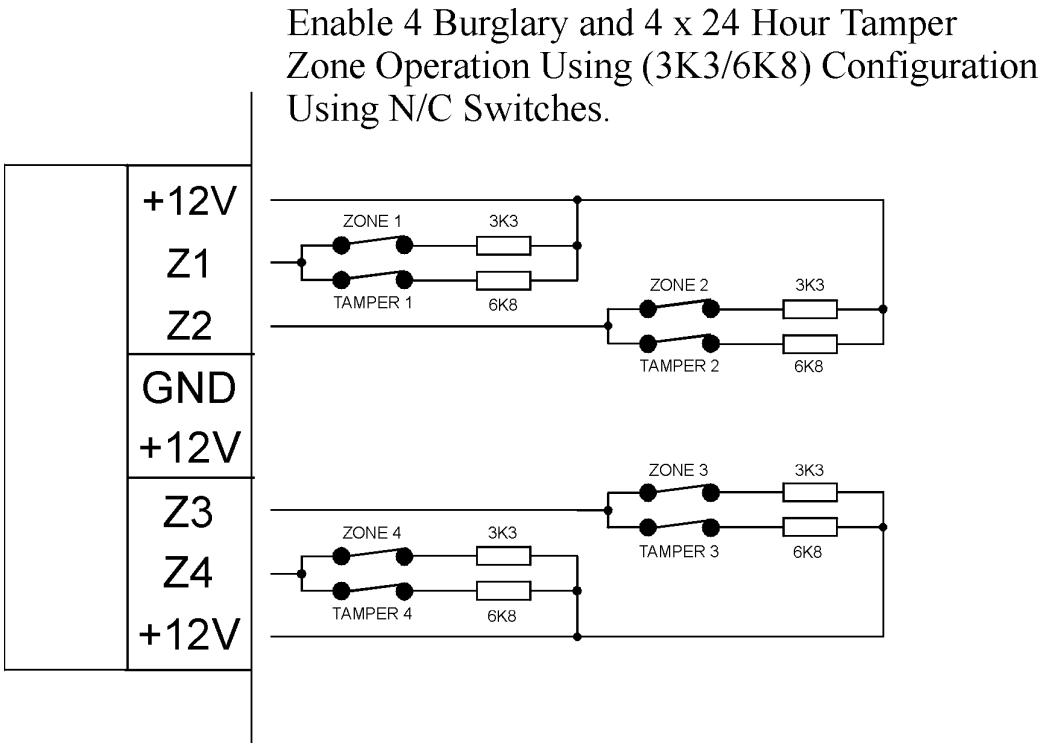
Location 230
Consumer Options 2
1 = Reserved
2 = Enable Single Button Arming In AWAY, STAY Mode 1 and STAY Mode 2
4 = Enable Single Button Disarming From STAY Mode 1 and STAY Mode 2
8 = Enable Alarm Memory Reset On Disarm [0]

Location 900
Disable Factory Default
0 = Defaulting Enabled
15 = Defaulting Disabled [0]

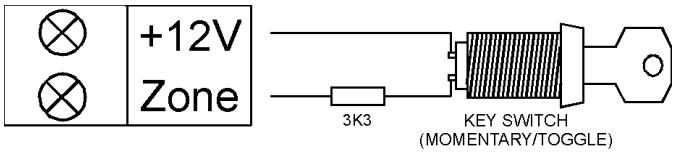
Location 901 - 904
System Time

Location 901	Hour Of The Day (Tens Digit)	
Location 902	Hour Of The Day (Units Digit)	
Location 903	Minute Of The Day (Tens Digit)	
Location 904	Minute Of The Day (Units Digit)	[0][0][0][0]

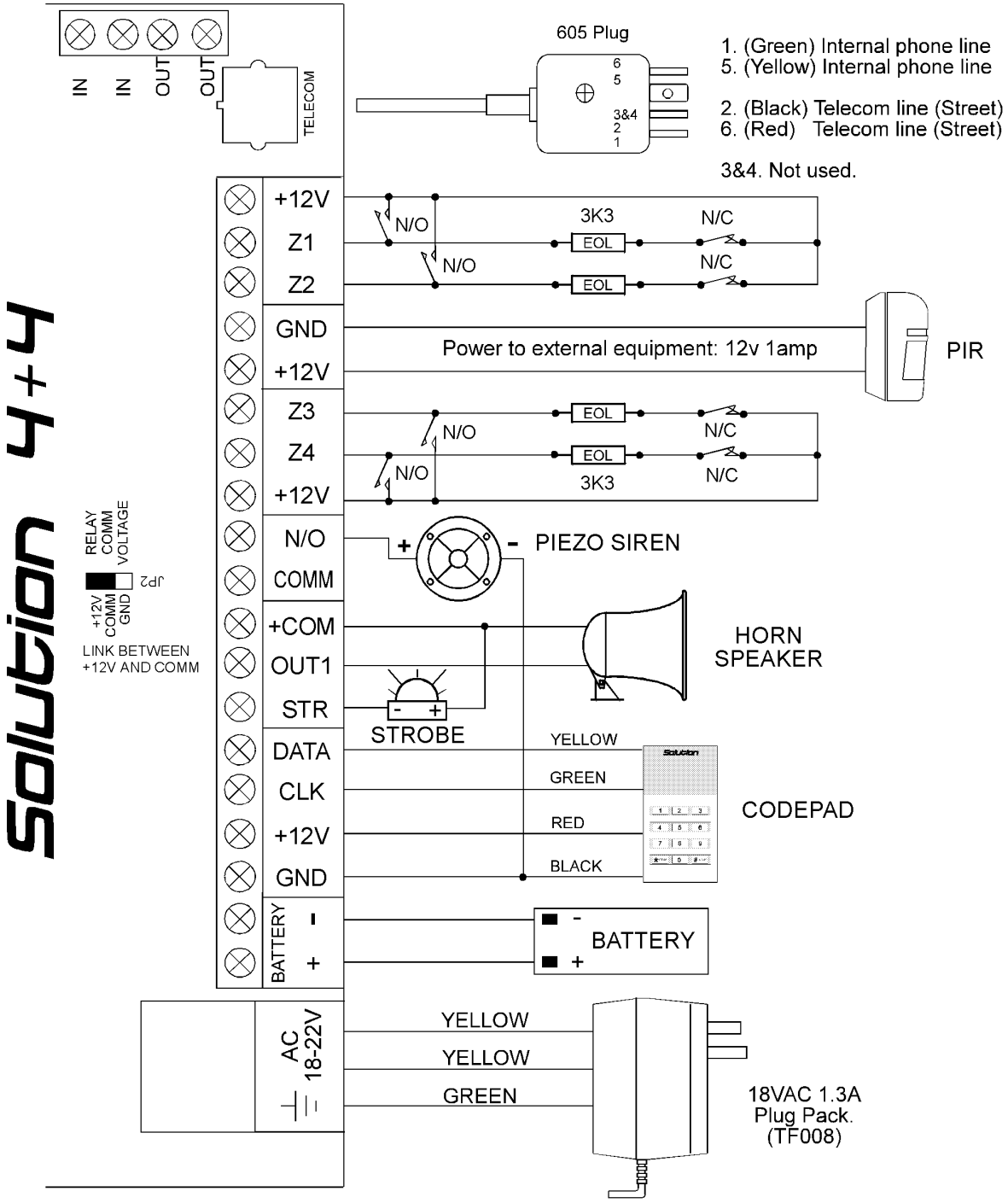
Connections For Split EOL Resistors For 4 Burglary Zones and 4 Tamper Zones



Wiring Diagram For Keyswitch Zone



Wiring Diagram



Component Overlay