ATTENTION!
Only to be used with
Transport-PC (TP 5103)
and dialler
as from Version 6.0

# ADVISOR®

# CD 3403

# Installation Manual

**Software from version: V6.0**

142714999-2

# HOW TO USE THIS MANUAL

This manual contains installation details for the CD34. When used in conjunction with the Programming Manual and the User Manual, it provides the installation engineer with basic installation and programming information.

## Programming

The **'Programming Manual'** for the CD34 covers all necessary aspects of programming the system. Everybody involved in installing or maintaining this panel should have access to a copy of this manual. The **'Programming Manual'** is available from your ARITECH national office.

The **'Programming Map'** for the various systems can be found at the end of this manual.

# CONTENTS

# INSTALLATION GUIDELINES

The CD3403 control panel has been designed, assembled and tested to meet current standards of stability and resistance to electrical interference from the environment.

If the following guidelines are followed, the system should give many years of reliable service.

**1.** Ensure that there is a good earth for the alarm system.

**A GOOD EARTH IS ESSENTIAL FOR EFFECTIVE RESISTANCE TO ELECTRICAL INTERFERENCE**

Do not forget to provide a (network) earth for the telephone dialler.

**2.** Maintain a good separation between low voltage and mains supply cables, and use separate points of entry into the control panel cabinet.

**3.** Avoid loops of wire inside the control panel and route cables so they do not lay on top or underneath the printed circuit board. The use of cable ties is recommended and improves neatness in the box.

**4.** Mains switching relays must NOT be fitted inside the control panel cabinet. The switching of these relays may cause electrical interference.

**4.1** Use a relay with good insulation between the contacts and the coil.

**4.2** Place a suppression diode (e.g. a 1N4001) across the relay coil.

**4.3** Relays connected to open collector outputs of the alarm system should be rated at 12 volts DC with a coil impedance greater than 400 Ohms.

**5.** The remote bus cable is used for communication between the control panel and the keypads/expanders. The greatest care should therefore be taken when installing this cable. NEVER split this cable into separate cables. Do not use cables with wires which are used for TELEPHONE connections or for switching, for example, flashing lights, sirens or relays.

**6.** Avoid cable ducts and cable ways which contain mains power cables. This is particularly important when such ducts contain cables supplying electric motors, fluorescent lights or 3-phase power. If this is not possible, shielded cable should be used and the cable should be earthed at the control panel end ONLY.

# BEFORE SWITCHING ON THE POWER

Detectors (or key switches) can be connected in two ways:

**Conventional:** One zone each is required for both tamper and the alarm. Both zones should be closed with an end-loop resistor (4.7 kOhm). Program the 'zones' menu as 'Alarm'

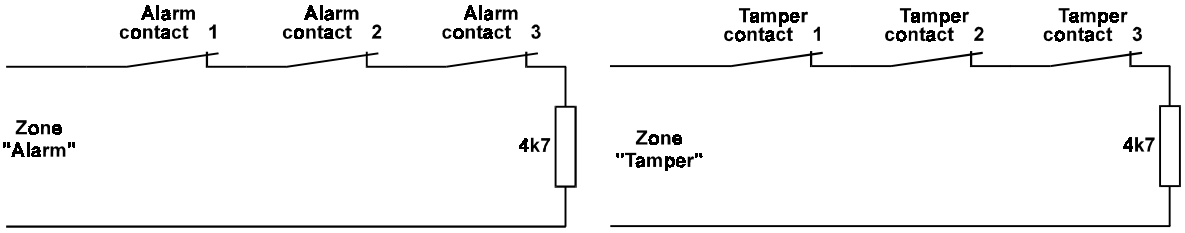



*Figure 1.* ***Separate alarm and tamper connection***

**Dual loop:** The alarm and tamper are placed together in one zone. The zone has two end-loop resistors (4.7 kOhm) to differentiate between alarm and tamper. Figure 2 shows how they are connected. Program the 'zones' menu as 'Dual'.

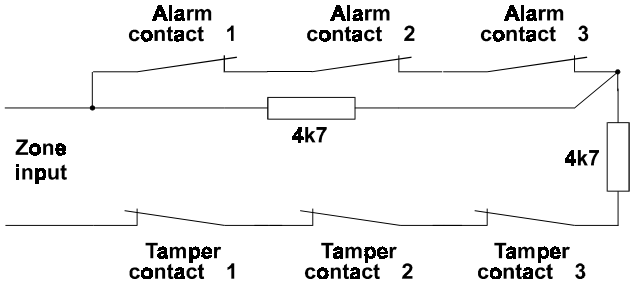



*Figure 2.* ***Joint connection of the alarm & tamper***

This connection method gives the following input values:

| The zone is | Resistance | Panel zone voltages | Remote zone voltages | Reaction |
|---|---|---|---|---|
| on standby | 3k5 - 6k2 | 2.1 - 2.8 V | 4.7 - 6.8 V | none |
| triggered | 6k6 - 11k7 | 2.9 - 3.6 V | 6.9 - 8.6 V | alarm |
| open | > 12k7 | > 3.7 V | > 8.7 V | tamper |
| short-circuited | < 2k9 | < 1.9 V | < 4.6 V | tamper |

*Table 1.* ***Operation of the inputs***

**1.** Set the DIP switches of all the remote keypads and expanders.

**2.** Close the tamper switches on the remote keypads, expanders and the control panel. Also close all zones which can cause a direct alarm. If this is not done, the system will be triggered as soon as it is switched on.

**3. Remove link JP1 from the PCB so that it returns to default settings.**

**4.** Supply only mains power to the control panel. The system will power up in the ARMED state. Any zones that may be open will initiate a full alarm condition and the sounders will activate.

Do not use a battery to power the system when installing or changing the installation. If there is a short circuit in the 12 volt power supply, the voltage regulators in the supply (together with the fuses) will prevent serious damage to the system The 12 volt power supply will decrease sharply in the event of a short circuit.

If a short circuit should occur, remove the 12 volt connections one by one. When the connection with the short circuit is removed the power supply will return to 12 volts.

**NOTE: ONLY KEYPAD ONE IS OPERATIONAL.**

Every time power is removed from the system the control panel memorises its status. If power is restored to the panel, the system starts up again in this status (except if JP1 has been removed).

**5.** Enter **'0'** followed by the default user code **'1122'** at keypad 1. **'Disarm?'** is shown on the display. System then disarms after pressing the '✓' button.

If the sirens have been activated, these will now stop. The status of the system or the time and date will now appear in the display.

**6.** Enter **'0'** followed by the default engineer's code **'1278'** at keypad 1 and press **'↓'** to return to programming mode.

**N.B.** *Do not forget to initialise additional keypads and expanders with the menu 5.2, 'INSTALL REMOTE'*

Replace JP1.

# PROGRAMMING GUIDE

**Always enter a '0' before entering an engineer/user code to prevent errors !**

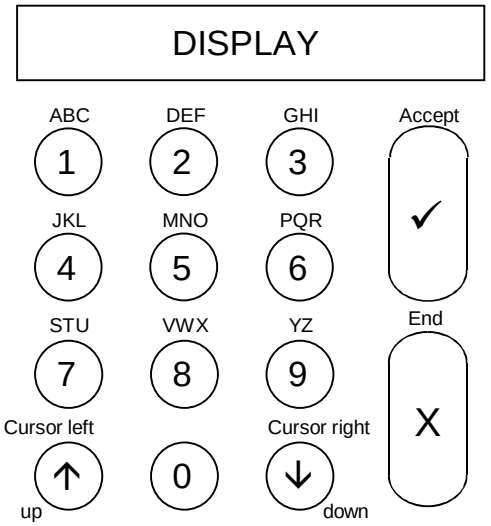



*Figure 3.* ***Keys on a CD30xx***

Under keys 1 to 9 there are 3 letters of the alphabet: press the keys repeatedly to enter first the number, then the lower case letters and then the upper case letters. Keys 9 and 0 have special symbols such as the comma and space.
The arrows move the cursor during entry.
Press **'✓'** to accept an entry.
Cancel an entry by pressing **'X'**.

To delete a character, overwrite with another character or a space.

***Note: CD30xx stands for the keypads: CD3008, CD3048, CD3009 and CD3049***

# RETURNING TO DEFAULT SETTINGS

There are two methods of returning the system (not the dialler) to default settings, these are:

**1.** By removing the **JP1**. Subject to the 'Engineers Lock' not being programmed, this method will return the panel to default settings without the use of an engineer's code. Proceed as follows:

- Remove both the battery and the mains power.
- Remove jumper **JP1**.
- Connect the mains power. Only keypad 1 is operational. The software version is displayed on the other keypads (if present). As the default setting is "armed" any open zones will trigger the system and the sounders will activate.
  Enter '0' followed by the default code **'1122'** to disarm the system.
  Use code **'1278'** to return to programming mode.
  If the default codes are invalid, the system has 'Engineers Lock' blocking programmed.
  If the current engineers' code is known use procedure 2, if not, then replacement of the PCB is the only way to gain access to programming mode.

**2.** By programming. Use this method if 'Engineers Lock' blocking is active and the engineers' code is known. Proceed as follows:

- KEYPAD ONE MUST BE USED FOR THIS PROCEDURE
  THE SYSTEM MUST BE DISARMED
- Go to keypad 1.
- Enter the installation engineers' code.
- Press **'6'**, **'6'** and **'1'** successively. You are now in the menu **'Miscellaneous'**, **'Factory Prog. Menu'**, **'Default Settings'**. **'Are you sure?'** flashes in the display.
- Press accept (**'✓'**). **'Wait ...'** appears in the display.
- The system has now reverted to default settings.

## LEAVING PROGRAMMING MODE

Before leaving programming mode use the 'Show Open Zones' facility under the **'Maintenance**' menu (menu 1.3). If any zones shown are 24Hr zones (e.g. tamper or fire) the alarm will activate on leaving the engineers' programming mode.

If dual loop is programmed, the letter T will appear next to the zone number to indicate the tamper section of the loop is open.

Procedure:

a. Check for open 24Hr zones (see above).
b. Press **'X'** until **'Goodbye'** is displayed.
c. Press accept **'✓'**.

## DIALLER

The use of the RD6203 dialler is recommended. This dialler fits inside the control panel cabinet and is connected to the control panel's PCB using the cable supplied. The dialler may be programmed via the keypad.

A separate manual is available for the dialler.

## OTHER MANUALS

| | |
|---|---|
| **Programming Manual CD3403** | *A fully documented programming information manual.* |
| **User manual** | *Details user options.* |
| **Manager Manual** | *A user manual which examines the options in more depth. Intended for the manager.* |
| **Programming Manual RD6203** | *Documented information on programming the RD6203 dialler.* |

## WIRING DIAGRAMS CD3403

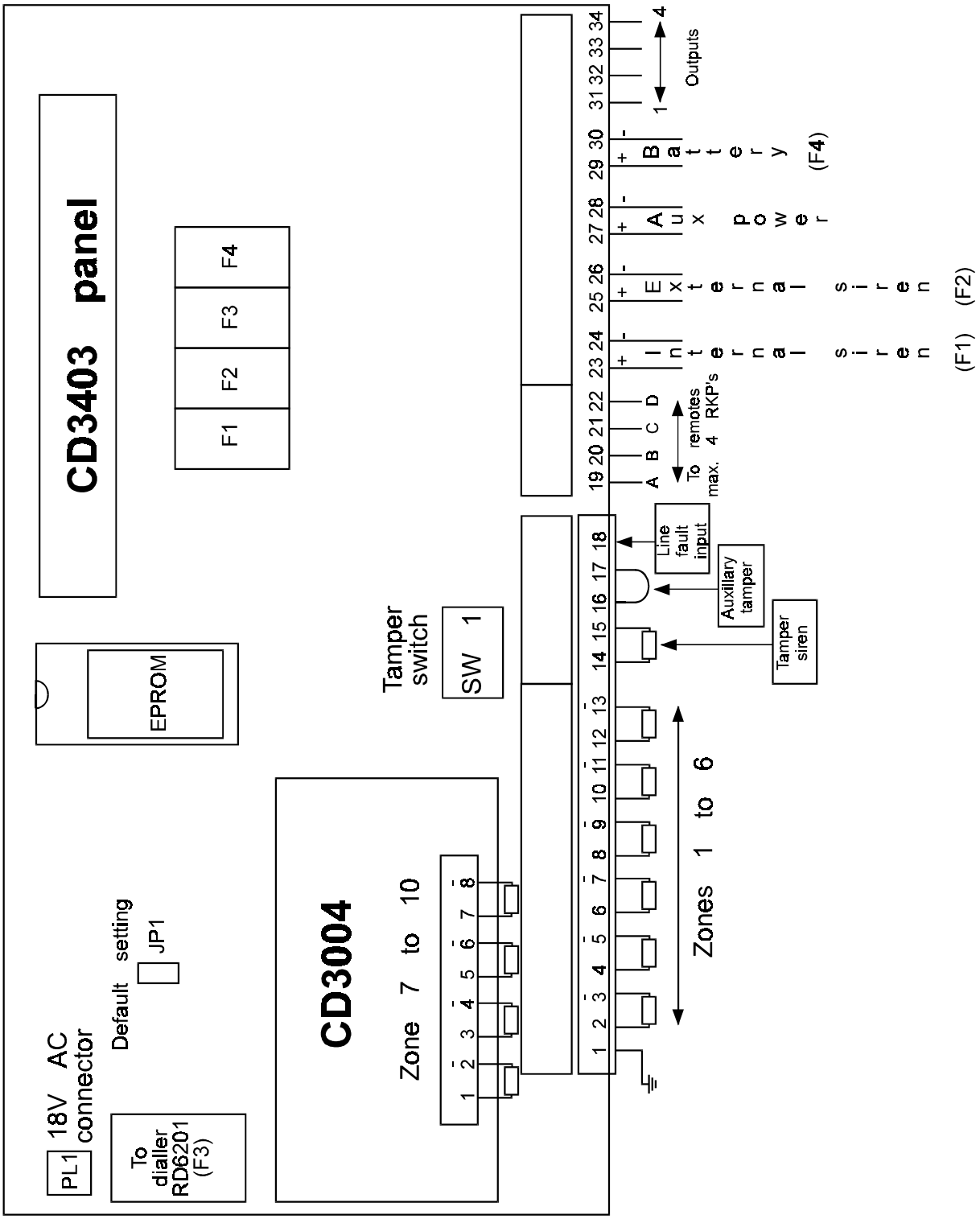



*Figure 4.* ***CD3403 PCB***

# OPENING CD3008 / CD3048 KEYPADS

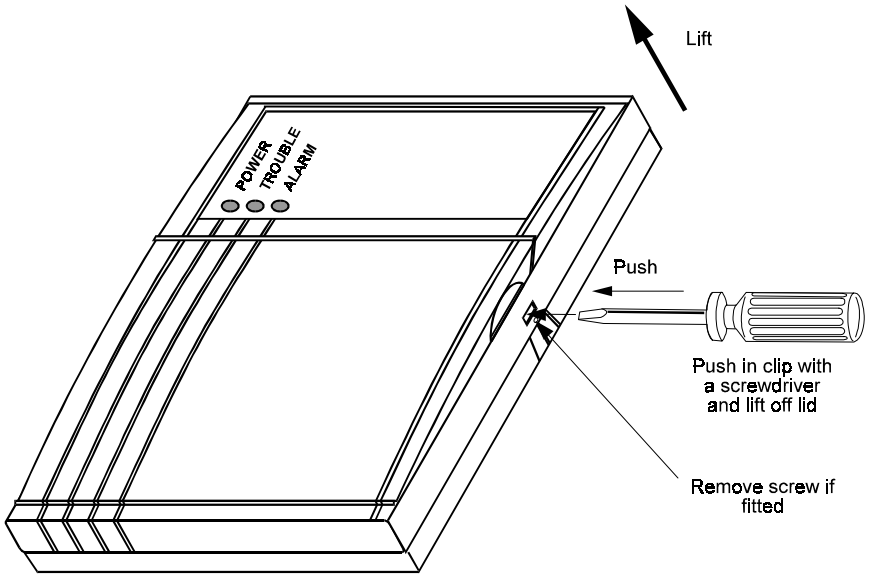



*Figure 5.* ***Opening the CD3008 / CD3048 keypad***

# OPENING CD3009 / CD3049 KEYPADS

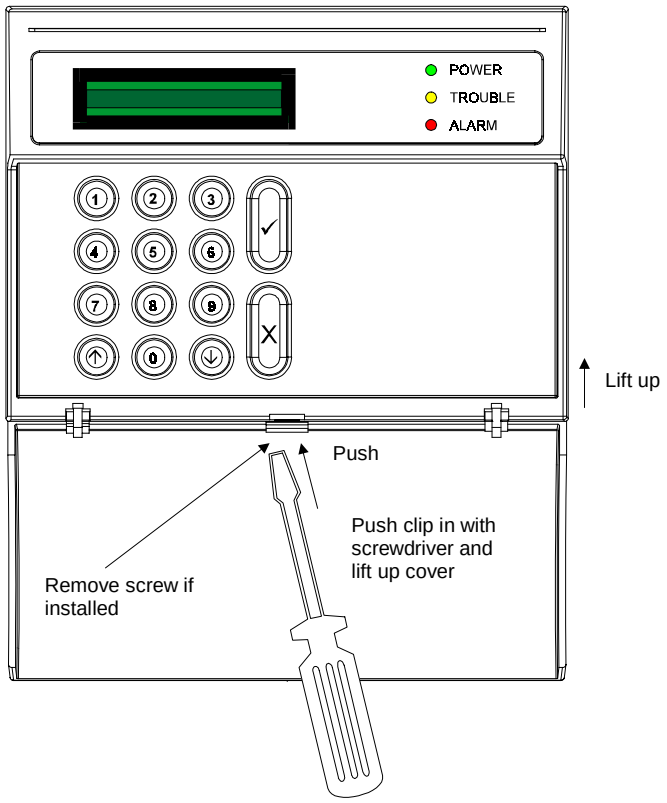



*Figure 6.* ***Opening the CD3009 / CD3049 keypad***

# CD3008 / CD3009 KEYPAD

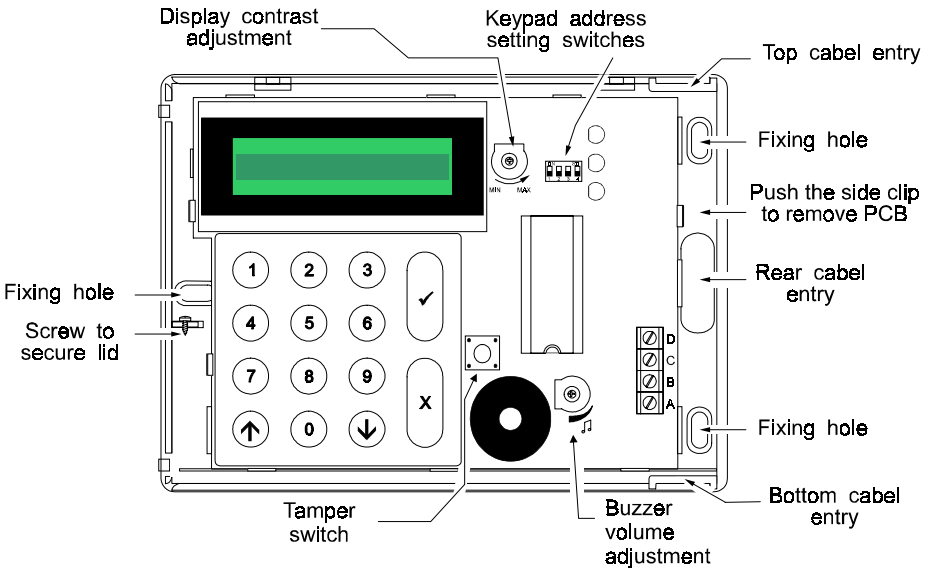



*Figure 7.* ***CD3008 / CD3009 keypad***

# CD3048 / CD3049 KEYPAD

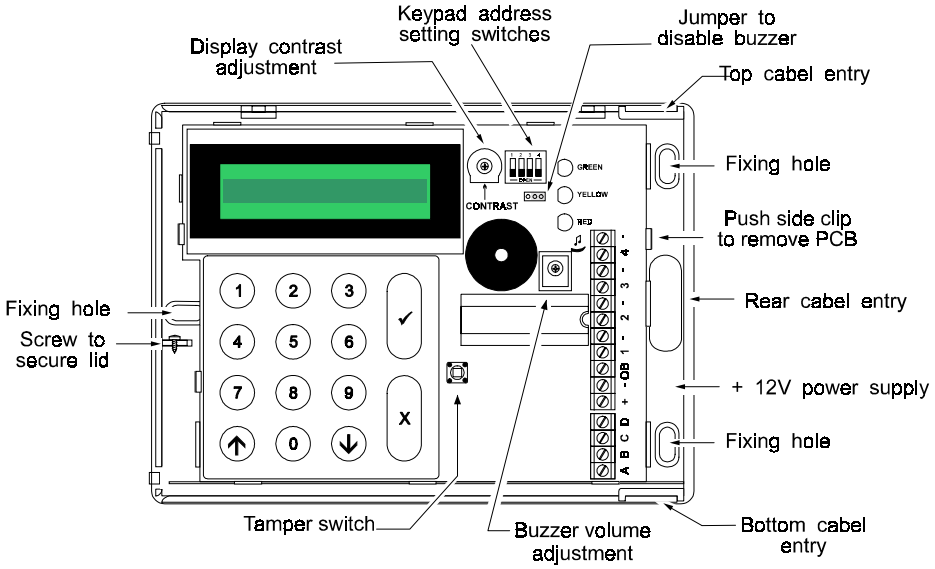
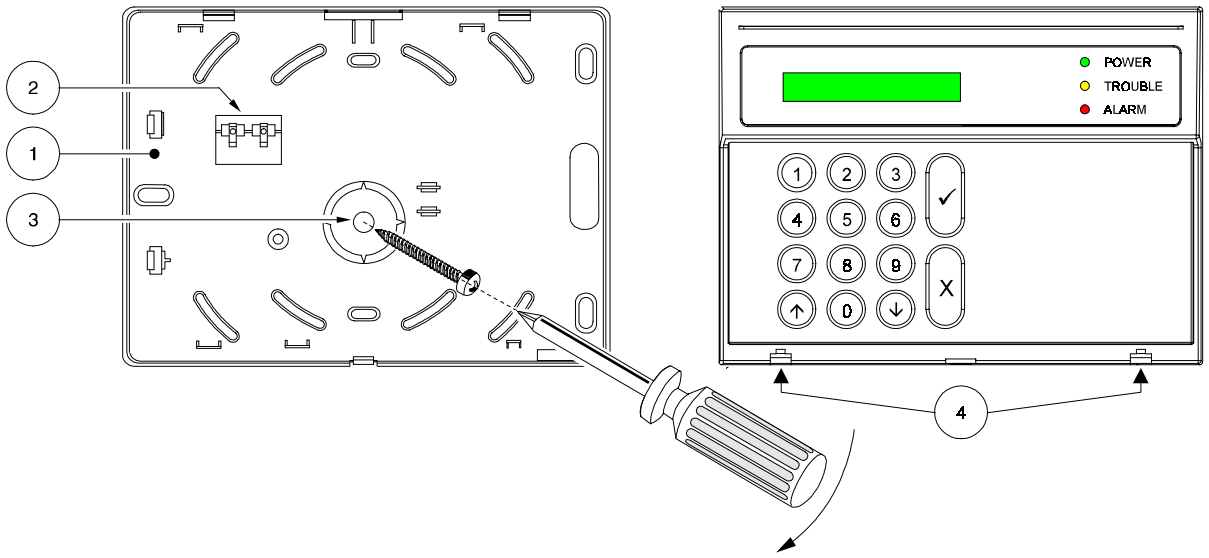



*Figure 8.* ***CD3048 / CD3049 keypad***

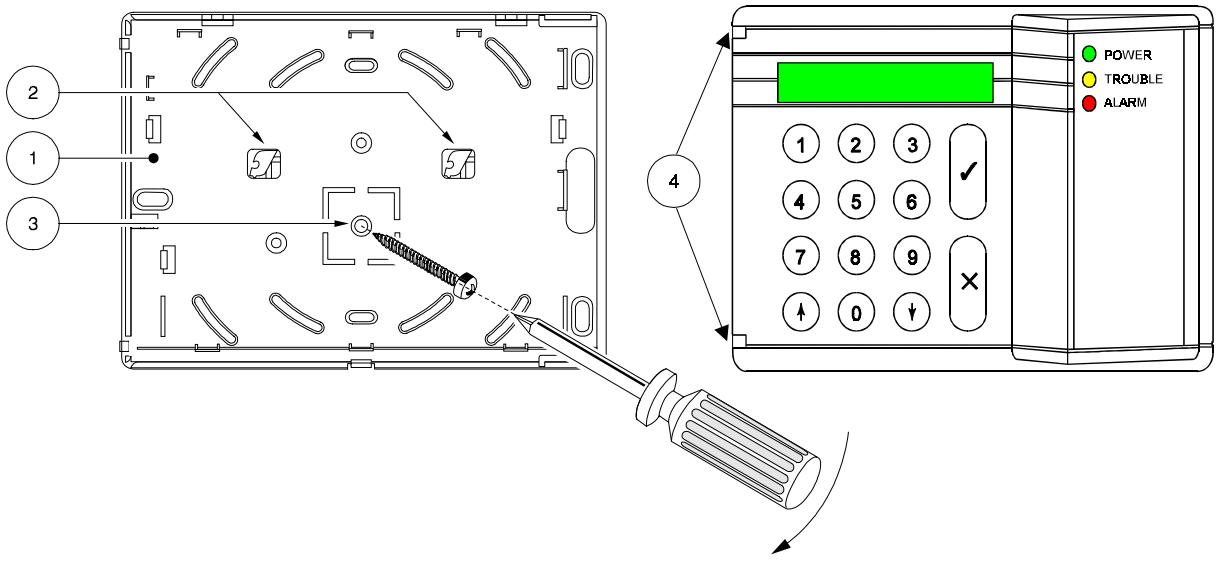
| DATABUS | | |
|---|---|---|
| **PNL** | **REM** | **Description** |
| 19 | A | + 12 Vdc |
| 20 | B | GND |
| 21 | C | data OUT |
| 22 | D | data IN |

*Table 2.* ***Databus connections***

# KEYPAD BACK TAMPER




CD3009 / CD3049




CD3008 / CD3048

- CD30xx base ①.
- When the keypad lid is not used, remove the hinge-slot blanking pieces from the base ②and place them in the hinge-slot openings ④.
- For back tamper protection fix the screw through the hole into the wall ③.

## CONNECTION OF A DETECTOR WITHOUT MEMORY

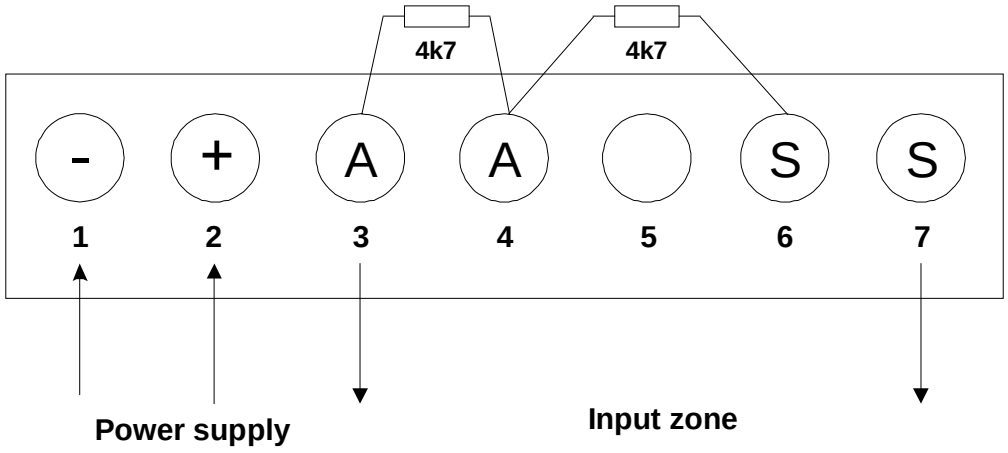



*Figure 9.* ***Dual loop connection of a detector without memory***

## CONNECTION OF A DETECTOR WITH LATCH

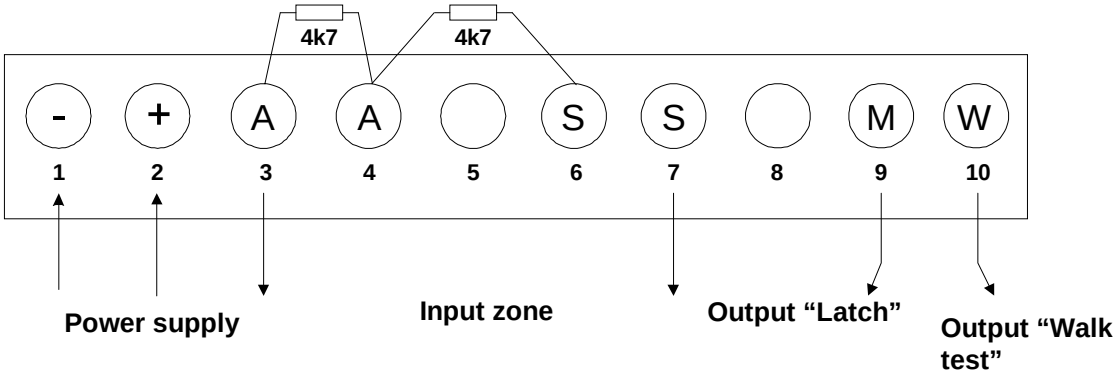
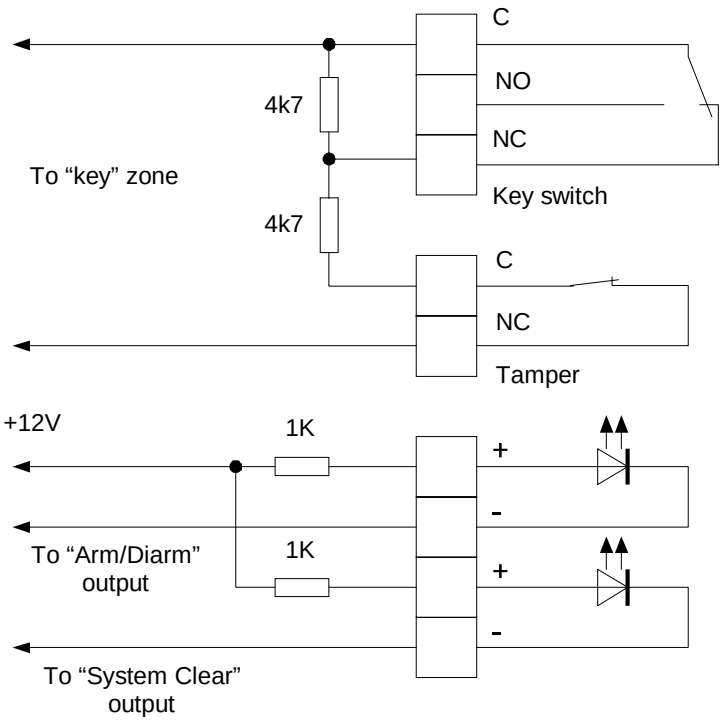



*Figure 10****. Dual loop connection of a detector with latch***

**Note:** *Before connecting, the cable between terminal 2 and terminal 10 should be removed!*

## CONNECTION OF A KEY SWITCH




Programme outputs for negative applied (-)

*Figure 11.* ***Connection of a key switch with LED's***

## CONNECTION OF A RELAY OR AN LED

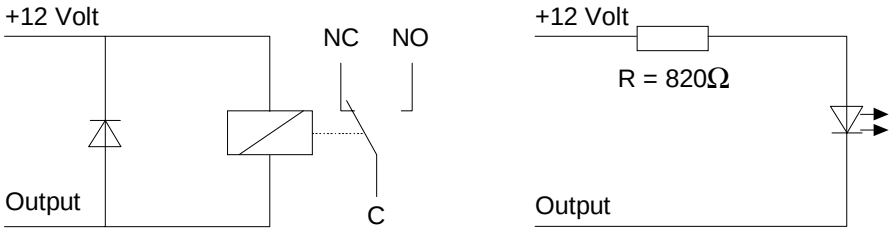



*Figure 12.* ***Connection of a relay or an LED on the output***

The resistor R is necessary to adjust the current. For most LED’s a current of approximately 15 mA is sufficient. The resistance calculation is as follows:

$$\mathbf{R} = \frac{\mathbf{V}}{\mathbf{I}} = \frac{13.8\text{V} - V_{\text{led}}}{15\text{ mA}} = \frac{13.8\text{V} - 2\text{V}}{15\text{mA}} = 787\Omega$$

When rounded off this is 820 Ohms.

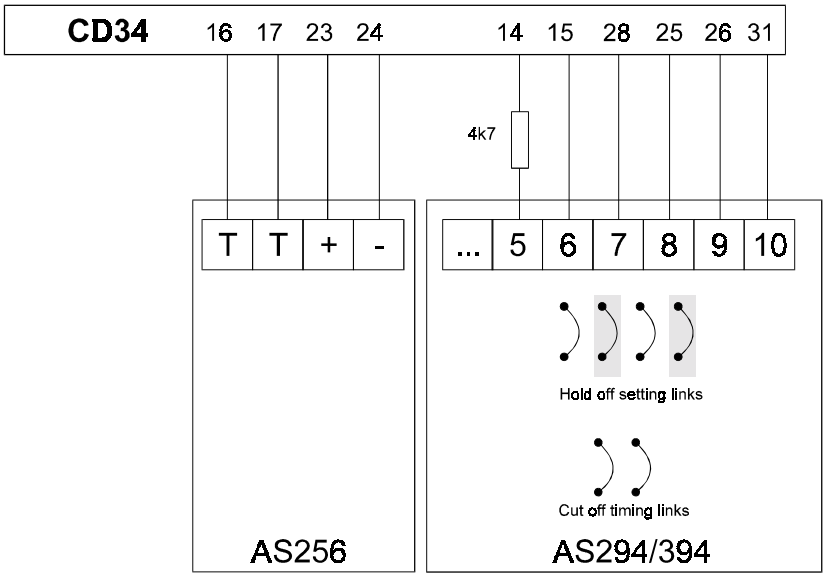



*Figure 13.* ***Connection of the AS294/394 & internal siren AS256***

| Programming | CD3403 |
|---|---|
| **Beacon control** | 01 Int Sir Sy + |
| **Internal siren control** | 05 Int Sir Sy - |
| **External siren control** | 06 Ext Sir Sy + |

*Table 3.* ***Programming sirens***

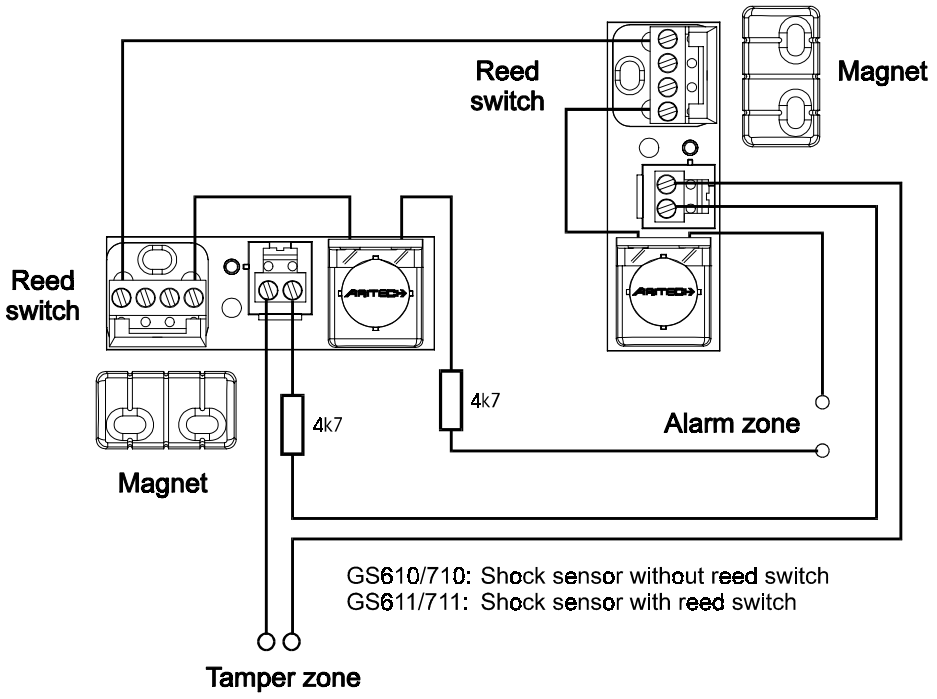



*Figure 14.* ***Connecting the GS710/711 with separate alarm & tamper loops***

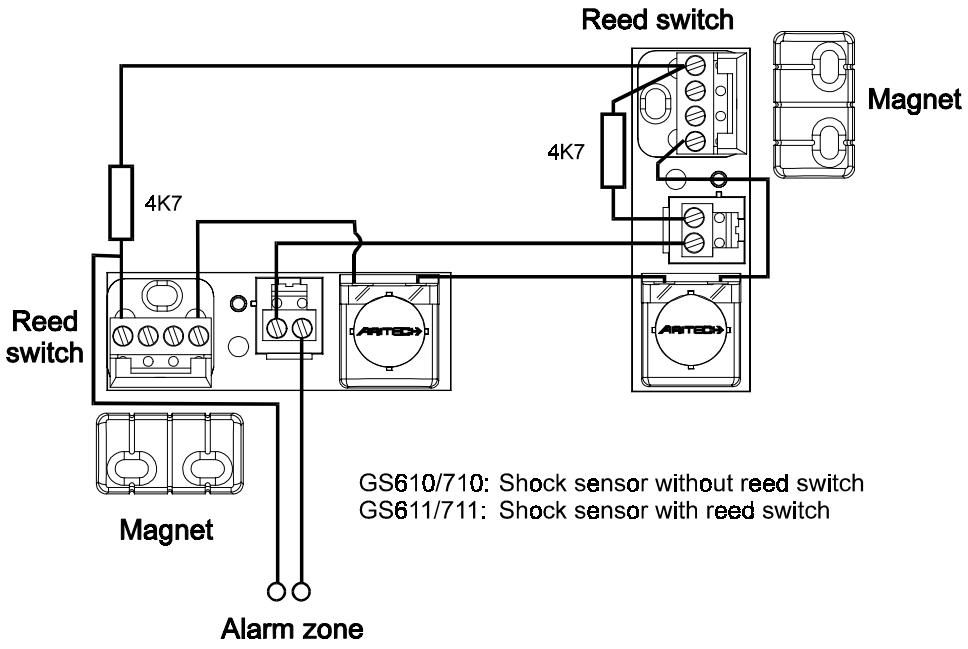



*Figure 15.* ***Connecting the GS710/711 with combined alarm & tamper loops***

# ZONES

| Zone Types | | Zone Options |
|---|---|---|
| **No.** | **Standard** | **Standard** |
| **1** | Exit/Entry 1 | InCh |
| **2 to 10** | Alarm | In |

*Table 4.* ***Input default settings***

Zones 7 to 10 are only available when the panel is expanded using the plug-in CD3004 expander or the CD3048/3049 keypads.

# OUTPUT

**The outputs can be represented as switches that connect the output to 'Negative.'**

**If you program an output for activation as '-', the switch is closed on activation and the output is negative. If it programmed as '+', on activation the switch is open and the output is +12 Vdc via the 4k7 resistor.**

Alternations to output programming only takes effect after leaving programming mode.

Outputs 1 to 4 can provide **100mA**, the outputs of the internal siren (5) and external siren (6) can switch **1A.**

***ATTENTION:*** *Outputs are switched to negative. Connect* ***devices*** *between +12V and the output.*

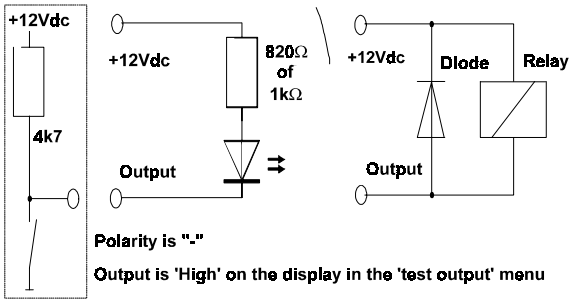



*Figure 16.* ***LED or relay connection to outputs (dotted box shows the principle of an output)***

| Output | | |
|---|---|---|
| **No.** | **Standard** | |
| **1** | PA | + |
| **2** | Fire | + |
| **3** | Alarm | + |
| **4** | Disarm/Arm | - |
| **5** | Internal siren | - |
| **6** | External siren | |

*Table 5.* ***Default output settings***

Keypad buzzers are preprogrammed and cannot be accessed. Keypad output OB on CD3048/3049 keypads cannot be used.

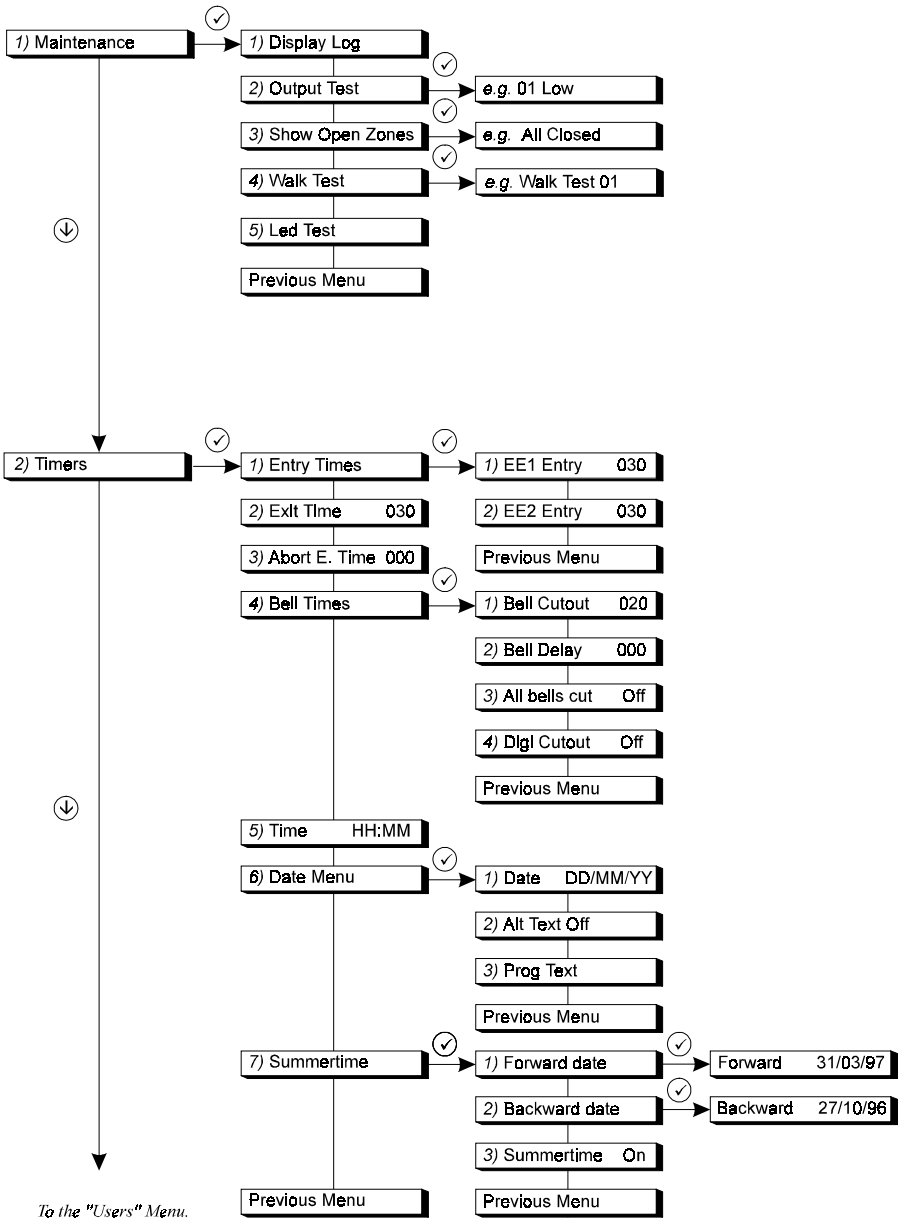
# TECHNICAL SPECIFICATIONS

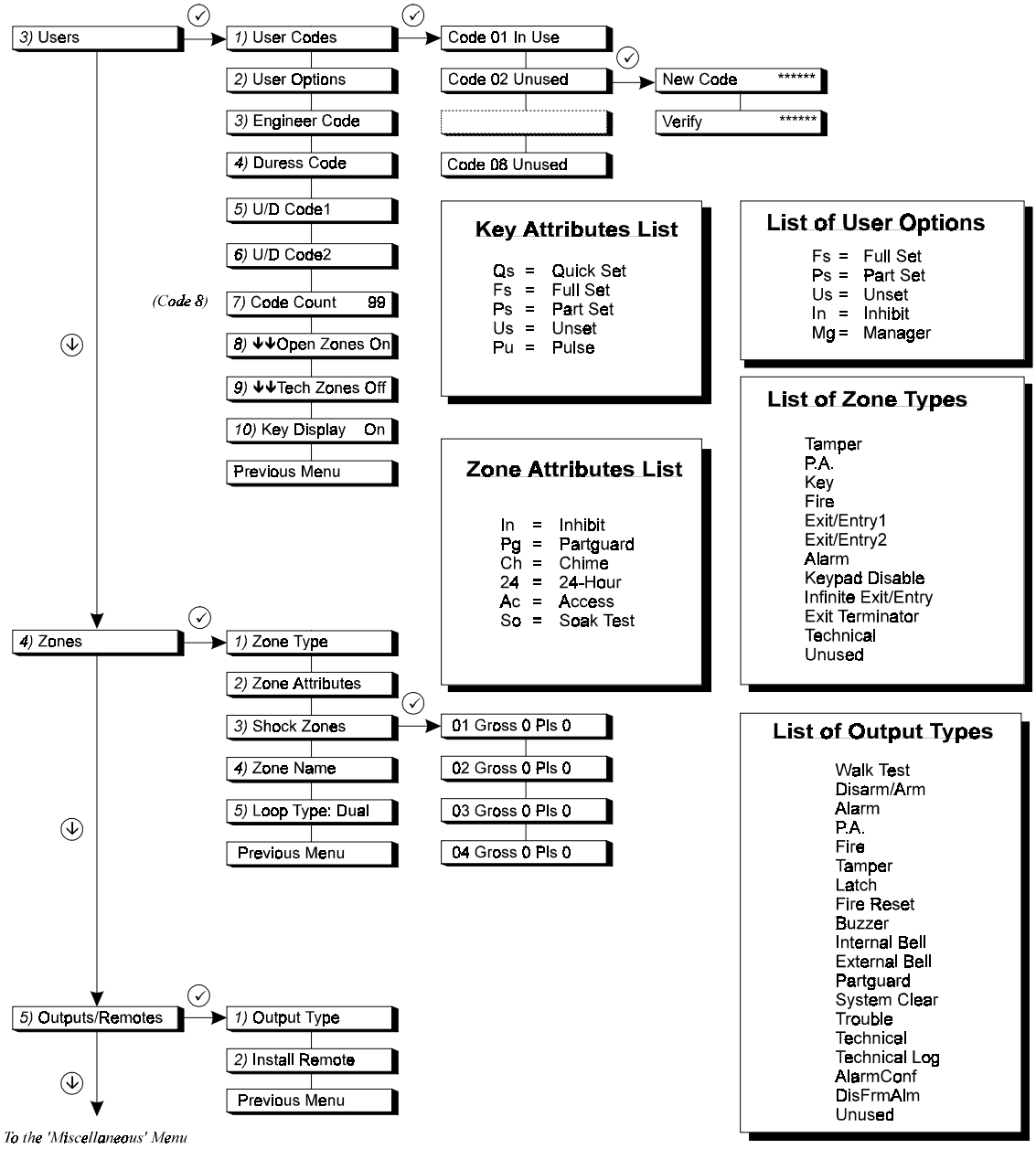
| Fuses | | | | Other | | |
|---|---|---|---|---|---|---|
| F1 | Internal siren | 800 mA, fast | 20x5 | Type | Average | Max. |
| F2 | External siren | 800 mA, fast | 20x5 | CD3008/CD3009 | 26 mA | 52 mA |
| F3 | Auxiliary power | 800 mA, fast | 20x5 | CD3048/CD3049 | 30 mA | 55 mA |
| F4 | Battery | 3,15 A, slow | 20x5 | RD6203 | 45 mA | 95 mA |
| | 220VAC | 315 mA, fast | 20x5 | CD3403 | 80 mA | |

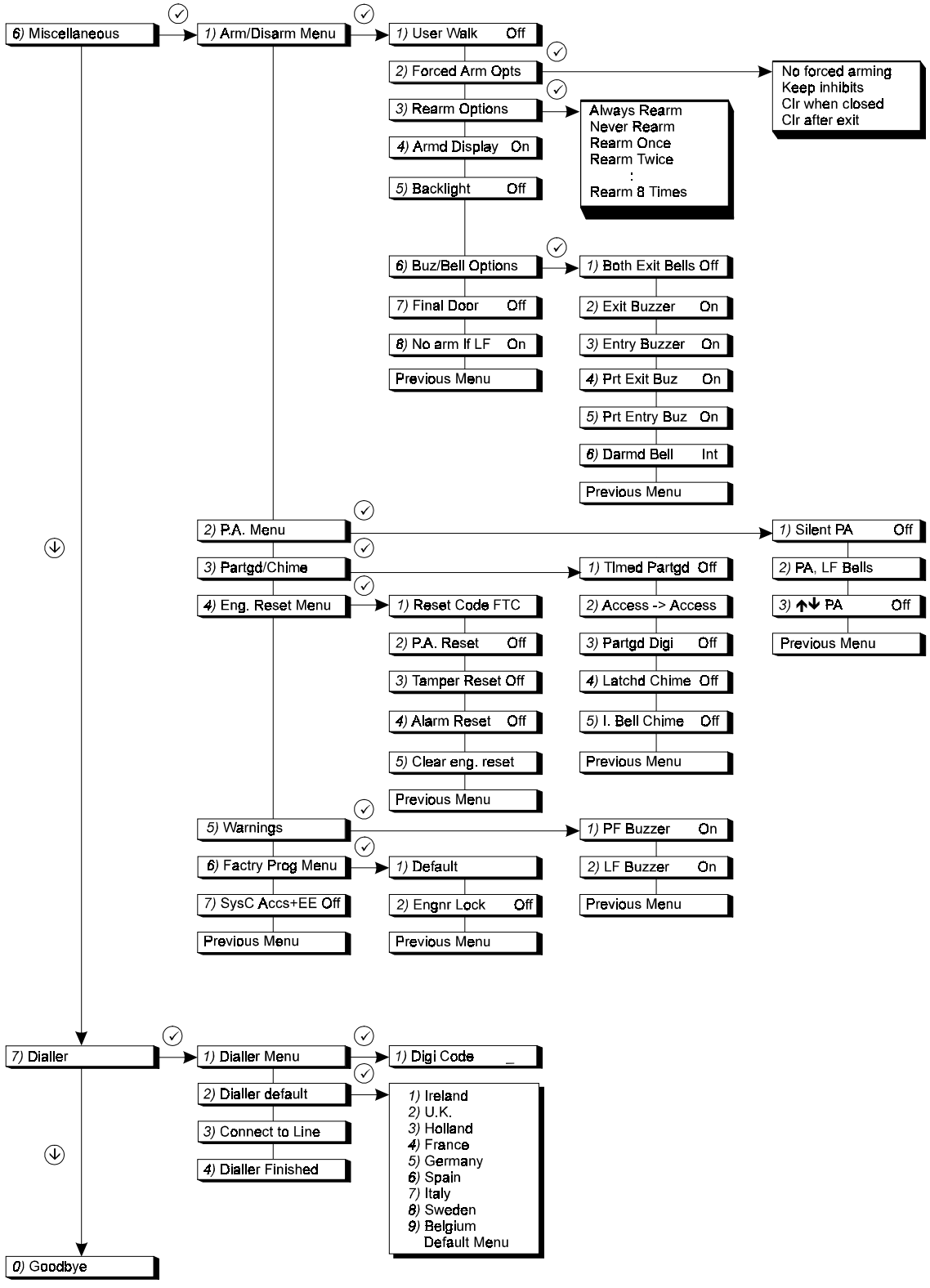
*Table 6.* ***CD34 fuse specifications***

| | |
|---|---|
| Battery | 12 VDC, 7.2 Ah |
| End of line resistors | 4k7, 0.25W, 5% |

# PROGRAMMING MAP CD3403




3) Users
1) User Codes
2) User Options
3) Engineer Code
4) Duress Code
5) U/D Code1
6) U/D Code2
(Code 8)
7) Code Count 99
8) ↓↓Open Zones On
9) ↓↓Tech Zones Off
10) Key Display On
Previous Menu
Code 01 In Use
Code 02 Unused
New Code ******
Verify ******
Code 08 Unused
Key Attributes List
Qs = Quick Set
Fs = Full Set
Ps = Part Set
Us = Unset
Pu = Pulse
List of User Options
Fs = Full Set
Ps = Part Set
Us = Unset
In = Inhibit
Mg = Manager
Zone Attributes List
In = Inhibit
Pg = Partguard
Ch = Chime
24 = 24-Hour
Ac = Access
So = Soak Test
List of Zone Types
Tamper
P.A.
Key
Fire
Exit/Entry1
Exit/Entry2
Alarm
Keypad Disable
Infinite Exit/Entry
Exit Terminator
Technical
Unused
4) Zones
1) Zone Type
2) Zone Attributes
3) Shock Zones
4) Zone Name
5) Loop Type: Dual
Previous Menu
01 Gross 0 Pls 0
02 Gross 0 Pls 0
03 Gross 0 Pls 0
04 Gross 0 Pls 0
List of Output Types
Walk Test
Disarm/Arm
Alarm
P.A.
Fire
Tamper
Latch
Fire Reset
Buzzer
Internal Bell
External Bell
Partguard
System Clear
Trouble
Technical
Technical Log
AlarmConf
DisFrmAlm
Unused
5) Outputs/Remotes
1) Output Type
2) Install Remote
Previous Menu
To the 'Miscellaneous' Menu


6) Miscellaneous
1) Arm/Disarm Menu
1) User Walk Off
2) Forced Arm Opts
No forced arming
Keep inhibits
Clr when closed
Clr after exit
3) Rearm Options
Always Rearm
Never Rearm
Rearm Once
Rearm Twice
:
Rearm 8 Times
4) Armd Display On
5) Backlight Off
6) Buz/Bell Options
1) Both Exit Bells Off
2) Exit Buzzer On
3) Entry Buzzer On
4) Prt Exit Buz On
5) Prt Entry Buz On
6) Darmd Bell Int
Previous Menu
7) Final Door Off
8) No arm If LF On
Previous Menu
2) P.A. Menu
1) Silent PA Off
2) PA, LF Bells
3) ↑↓ PA Off
Previous Menu
3) Partgd/Chime
1) Timed Partgd Off
2) Access -> Access
3) Partgd Digi Off
4) Latchd Chime Off
5) I. Bell Chime Off
Previous Menu
4) Eng. Reset Menu
1) Reset Code FTC
2) P.A. Reset Off
3) Tamper Reset Off
4) Alarm Reset Off
5) Clear eng. reset
Previous Menu
5) Warnings
1) PF Buzzer On
2) LF Buzzer On
Previous Menu
6) Factry Prog Menu
1) Default
2) Engnr Lock Off
Previous Menu
7) SysC Accs+EE Off
Previous Menu
7) Dialler
1) Dialler Menu
1) Digi Code _
2) Dialler default
1) Ireland
2) U.K.
3) Holland
4) France
5) Germany
6) Spain
7) Italy
8) Sweden
9) Belgium
Default Menu
3) Connect to Line
4) Dialler Finished
0) Goodbye