CL-80

Outdoor/Indoor Access Control Keypad

Visonic Technologies
Enterprise Protection Solutions

Installation Instructions

1. INTRODUCTION

The CL-80 is a versatile, weather-resistant digital keypad, designed for outdoor and indoor use. Possible applications include access control, electrical switching, and security system arming and disarming.

User access codes ensure that all functions controlled by the CL-80 are restricted to authorized persons only, and each code can be assigned its own privilege level.

To improve access management, the CL-80 responds to 56 different access codes - each allocated to a single user or a group of users.

Each of the 56 different access codes may be programmed to energize either the built-in relay, or the auxiliary output, or both.

Programming is easily carried out via the keypad, and access codes can be individually added, deleted, or the levels of control revised at any time. Only the MASTER CODE holder has the privilege to program the unit.

In addition to a 10 A on-board relay, an auxiliary open-collector output with 7 operating modes can be programmed to control additional devices.

A simultaneous dual keystroke action activates the PANIC output, which can be used to trigger a silent alarm in emergency situations.

2. SPECIFICATIONS

Code composition: Any combination, 1 to 8 digits

Keypad type: 12 keys in 3 X 4 matrix, tactile operation

Operating voltage: 9 -16 or 22 - 26 V AC/DC - selectable

Current drain: 15 ma standby, 55 ma with relay and AUX. Output active

Power failure immunity: EEPROM retains all programmed information even during total power loss

Relay contact rating: 10 A/28 VAC or DC

Relay pull-in: Programmable 1 – 98 seconds, or toggle mode (latch / unlatch)

Current sinking capability of AUX. and PANIC outputs: Up to 100 ma (protected by an 18 ohm series resistor)

LEDs: Green indicates keypad status

Red and yellow are available for optional indication (as required) and have 1 k ohm series resistors connected.

Operating temperature:
-20°C to 65°C (-4°F to 149°F)

Index of Protection: Meets IEC529:1989 requirements for IP54 (protection against dust and sprinkled water)

Dimensions: (W X H X D)**:** 8.2 X 12.2 X 3.1 cm
(3-1/2 x 4-13/16 x 1-1/4 in)

Weight: 200 g (7.14 oz) including rubber gasket

Tamper switch: The dual function tamper switch is designed to detect attempts to open the unit, or remove it from wall.

3. INSTALLATION

3.1 Mounting

Select a suitable mounting location with a stable flat surface. Remove the case closure screw from the bottom edge of the keypad, and remove the keypad assembly from the base. Hold the base in position and mark the 3 screw locations for drilling.

Note: The Tamper switch will be activated if the front part of the keypad is removed and also if the base is forced away from the wall. This is achieved by incorporating a breakaway tab at the bottom right corner of the base (see Figure 1). It is therefore especially important to firmly attach this tab to the wall with a long screw.

Fit the base into the rubber gasket and use the 3 mounting screws to attach the base and gasket to the selected surface.
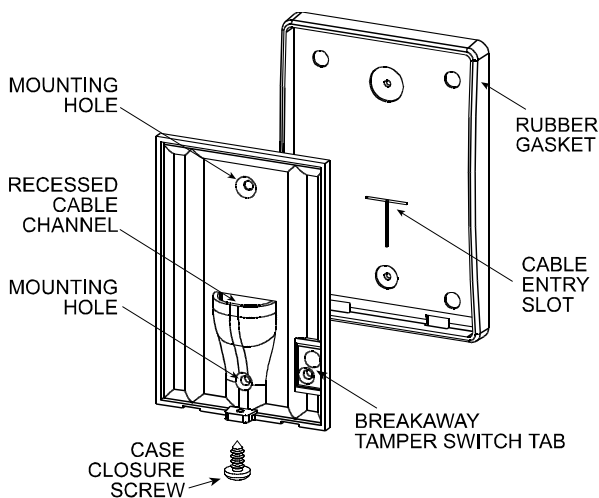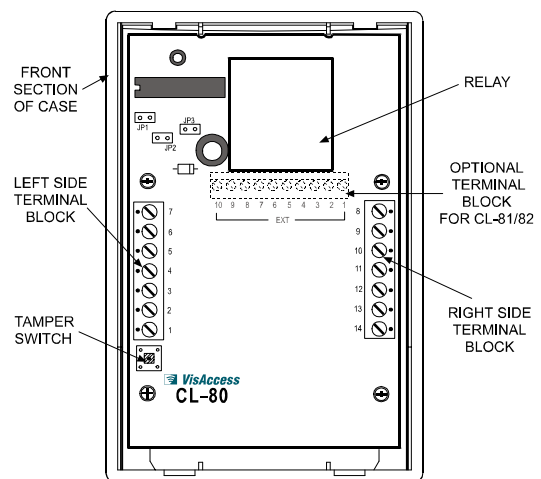

Figure 1. Base and Rear Sealing Gasket

Figure 2. Front Casing and Circuit Board

3.2 Wire Gauges and Routing

Use # 20 AWG or larger for connections between relay and door strike, control panel or other switching devices. All other connections are to be made with # 22 AWG or larger. Route the wires through the slot in the rubber sealing gasket and the recessed entry channel in the keypads base. Avoid contact between uninsulated wires and the printed circuit board.

3.3 Connections

IMPORTANT! Before wiring, set jumper JP3 in the position that corresponds with the power source you are using:
Voltage Selection:
 9 - 16 V AC/DC - mount the jumper across the two pins of JP3
22 - 26 V AC/DC - remove the jumper or mount it on a single pin of JP3

The connections to the terminal block are shown in Figure 3, with each terminal duly identified. Proceed as follows:

A. Connect one lead of the door strike to one of the hardware (door strike) power supply terminals. Connect the other lead from the door strike to terminal No. 9 (N.O.) of the CL-80.

   Note: If you are using a magnetic door lock, connect one of the leads to one of the hardware power supply terminals. Connect the other lead to terminal No. 8 (N.C.) of the CL-80.

B. Connect the other terminal of the door strike or magnetic lock power supply to terminal 10 (COM).

C. Connect the panic buzzer or relay between terminals 3 (PANIC) and 7. Observe polarity when using a DC power source.

D. Connect the auxiliary buzzer or relay between terminals 5 (AUX) and 7. Observe polarity when using a DC power source.

E. Connect the CL-80 power supply leads across terminals 6(–) and 7(+). Observe polarity

F. Connect the remote **request-to-exit** pushbutton or PIR contacts across terminals 4 and 6

G. LED indicators. - to light the red LED, connect 12 VDC across terminal 11 (+) and 12 (–). To light the yellow LED, connect 12 VDC between terminals 13 (+) and 14 (–).

H. Connect the tamper terminals 1 and 2 to a control panel's normally-closed, 24-hour protection zone, or any other system used to monitor the tamper contacts.

Table 1. Terminal Assignments

Term.	Description	Term.	Description
1	Tamper Switch	8	Relay N/C
2	Tamper Switch	9	Relay N/O
3	Panic Output	10	Relay Common
4	Request to Exit	11	+ Red LED
5	Aux. Output	12	– Red LED
6	-12 / 24 V (Common)	13	+ Yellow LED
7	+12 / 24 Volt	14	– Yellow LED

Notes:

1. The red and yellow LEDs can be connected to the AUX and PANIC output terminals regardless of the power supplied to the unit (12 or 24 Volts, AC or DC).

2. The PANIC and AUXILIARY outputs each include an 18 ohm resistor in series with the terminal. The maximum permissible current for each output is 100 mA.

3. If the CL-80 is powered from a 24 VDC supply, make sure that all external relays used are 24-Volt units.

Caution! When operating the CL-80 from AC power, disregard polarity, but note that external buzzers connected to the AUX or PANIC outputs will require a separate DC power supply. For proper operation, the buzzer circuit should be wired as follows:
DC Power supply [–] to **CL-80 terminal 6**
DC Power supply [+] to **Buzzer [+]**
Buzzer [–] to **AUX or PANIC output** (as required).
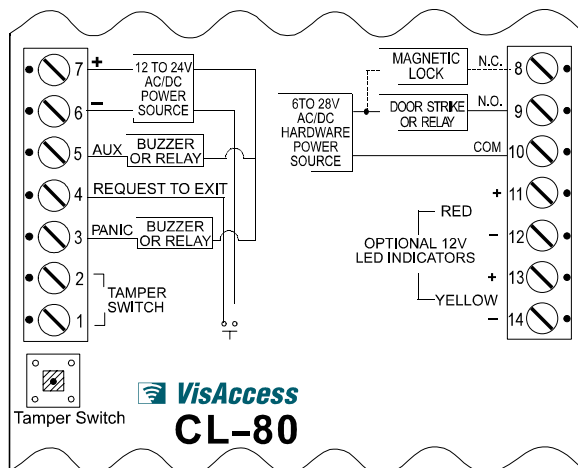

Figure 3. Terminal Connections

4. OPERATION

The main function of the CL-80 is to recognize valid user codes and respond according to pre-programmed instructions.

4.1 Keying Format

The user code is always followed by **[#]**   ☞ [user code] [#]

4.2 Keypad Response

When a valid access code is keyed, the keypad responds by activating the on-board relay (usually allocated to unlocking the door), and/or activating the auxiliary circuit. Each of the 56 different access codes may be programmed to operate the on-board relay, the auxiliary output or both. The green LED illuminates for as long as the internal relay remains energized.

4.3 Latching the Relay

For special applications, the relay may be toggled, so that keying the code once causes the relay to latch, and keying the code again unlatches the relay.

4.4 Request to Exit

The REQUEST TO EXIT input activates the access control relay to open the door from inside without keying a code, thereby facilitating quick and simple exit from the protected area.

4.5 Automatic Reset

When keying user codes, the intervals between digits must not exceed 5 seconds. Should the user exceed this time, or enter a wrong code, an automatic reset results, requiring the user to wait a few seconds and then to repeat entry of the security code again.

4.6 Lockout

A penalty lockout is provided to defeat "code-crackers". Three wrong entries result in a 10 minute lockout, during which an auxiliary output is activated, **but** can be reset after 30 seconds by entering a valid user code.

4.7 Access under Duress

If you are forced to access under threat, press the programmed **AMBUSH** digit after the last digit of your code. This activates the **PANIC** output without arousing suspicion.
Enter the user code followed by the ambush digit

☞ [user code] [ambush digit]

4.8 Operating Tips

A. Do not wait more than 5 seconds between successive keystrokes, or else the keypad will reset.

B. To initiate an alarm without opening the door, press [✳][#] simultaneously. This activates the **PANIC** circuit which is usually connected to a silent alarm.

5. PROGRAMMING

Programming should be carried out as soon as installation is completed. This provides a set of "instructions" which determines how the keypad will react to various code inputs.

Programming changes can be made as many times as necessary, but for security reasons, this operation is restricted to the "**master code**" holder (the master user).

5.1 Accessing the Programming Menu

The programming menu is accessible only by the master user

The factory default user code is ☐1☐2☐3☐4

As soon as code programming takes place, this default code is automatically replaced by the first newly allocated code - No. 01.

Because user code No. 01 will become the new master code, it should be assigned to the person in charge of security.

All code allocations should be recorded, and a User Code Programming Chart - Appendix A, is supplied for this purpose.

Remember! To prevent unauthorized programming it is important to assign a new master code which should be used for programming only.

To access the programming menu

☞ ✻ ✻ master code ✻ ✻

The green LED will start flashing slowly, indicating that the programming menu is active.

While the programming menu is active (green LED flashes slowly), you can select various programming functions by pressing a number from 1 to 5 (see Table 2).

Table 2. Programming Menu

Func.	Activity	Value to enter	Description
1	Programming user codes	Any combination of 1 to 8 digits	Assigns access codes to an individual or group of users (see Programming)
2	Setting the relay timing	**01 to 98**	Sets relay closure duration between 1 and 98 seconds
	Latching the relay	**99**	Converts relay to toggle mode (latch/unlatch)
3	Selecting an **AUXILIARY** output mode	**1 to 7**	The number entered determines the operating mode (see Table 3)
4	Deleting a single user code	User number, **02 - 56** + [master code]	User code corresponding to the user number entered is deleted
	Deleting all user codes	& & # + [master code]	All user codes are deleted in a single operation, except for master code 01
5	Ambush digit	**0 to 9**	The programmed digit will be valid until deleted or replaced
	Delete ambush digit	&	The ambush digit is canceled

Notes:

*1: If the CL-80 detects an **error** during programming, the green LED goes out for 3 seconds after the [#] is pressed and then reverts to slow flashing. This indicates that the data has not been accepted and the entire programming sequence should be repeated.*

2: If you make an error while programming, press [&] for instant return to the programming menu.

5.2 Deleting all User Codes

IMPORTANT! Besides the default master code (code No.1), a specific test code is programmed in the factory as code No. 2. It is therefore important, before initial programming, to delete all user codes that may remain in the memory!

☞ ④ ✻ ✻ # master code #

The response will be as follows:

After entering the first **[4]** – The green LED starts to flash rapidly

After entering **[& &]** followed by **[#]** – The green LED lights steadily for 2 seconds, and resumes rapid flashing.

After entering the **[master code]** followed by **[#]** – the LED remains lit for 2 seconds and then reverts to slow flashing.

5.3 Programming New User Codes and Their Extent of Control

A. ☞ ①user number #

The user number is the number assigned to this user in the user list, not the code.

- The green LED lights steadily for two seconds and starts to flash rapidly

B. ☞ user code # then repeat ☞ user code # to verify

- The green LED lights steadily for 2 seconds and resumes rapid flashing

C. Select a **trip code** from the list below. This determines which outputs will be tripped by the new master code.

  ☐1 to trip the relay only

  ☐2 to trip the auxiliary output only

  ☐3 to trip both the relay and the auxiliary output

D. ☞ # to return to the programming menu

- The green LED lights steadily for 2 seconds and then flashes slowly, indicating that the new code has been programmed successfully and that the keypad has returned to the programming menu. To continue programming user codes, follow the sequence A through D above, or quit by ⌐ #.

Caution! Code No. 01 will now become the master code, and will provide the only access to future programming.

Prepare a list of user codes you want to program and record them in your **Programming Chart** (see Appendix A).

5.4 Deleting Selected User Codes

☞ ④ user no. # master code #

The response will be as follows:

After entering the first **[4]** – the green LED starts to flash rapidly
After entering **[user number]** followed by **[#]** – the green LED lights steadily for 2 seconds, then resumes rapid flashing.
Entering the **[master code]** followed by **[#]** – the LED remains lit for 2 seconds and then begins flashing slowly.

5.5 Setting the Relay Timer

☞ ② T T #

[TT] is the relay contact closure time

Set duration from 1 to 98 seconds, enter a number from **01** to **98**
Convert the relay to toggle mode (latch/unlatch), enter **99**

5.6 Selecting the AUX Output Mode

☞ ③ M #

[M] is expressed by a number selected from the mode column in Table 3. **User codes must be authorized to activate the AUX output.**

Table 3. Auxiliary Output Operating Modes

Mode	Description
1	Output is pulsed for 1 second.
2	Output is toggled (latch/unlatch).
3	Output operates concurrently with the relay timer, but stays enabled for 5 seconds longer than the relay. If toggle mode has been selected for the relay, the auxiliary output will be enabled for 5 sec. each time the relay is toggled. *This mode does not work for user codes that are not programmed to operate the relay.*
4	Output latches by user codes authorized to trip the auxiliary output, unlatches by pressing &.
5	Output enabled for ten seconds by pressing any key.
6	Output oscillates at the rate of 1 Hz after 3 consecutive code errors. This condition will persist for 10 minutes, and may be reset only by entering a valid user code (resetting is possible only after the first 30 seconds).
7	Output turned on by pressing the 1 and 3 keys -simultaneously. Remains on until both keys are released.

5.7 Deleting the Ambush Digit

☞ 5 ✳ #

If you <u>do not</u> intend to use an **ambush digit**, it is imperative that you delete the ambush digit code – to ensure that no previously programmed digit remains in memory.

5.8 Selecting an Ambush Digit

☞ 5 A #

[A] is the desired ambush digit, chosen from **0** to **9**.

> **IMPORTANT:** If you have programmed an ambush digit, you must restrict user codes to seven digits each (or less) and you must avoid choosing user codes ending with that same digit as the ambush one.

5.9 How to Quit Programming

☞ # while the green LED is flashing slowly

The LED will extinguish.

6. RESETTING THE DEFAULT MASTER CODE

If you forgot or lost the master code (code No.01) and it becomes necessary to reprogram the keypad, you will have to reset the master code to the factory default (1234) as follows:

A. Open the keypad's case, uncovering the printed circuit board.

B. Install the jumper across the two pins labeled **JP2** (see Fig. 2).

C. Momentarily short circuit the pins labeled **JP1** using a screwdriver or jumper wire.

D. Wait ten seconds, remove the jumper from JP2, and immediately press **1234#**. The green LED will light steadily for two seconds and will then start flashing slowly, indicating that the programming menu is active.

Important Note: The master code has temporarily reverted to 1234. Remember, however, that all other data programmed previously remains intact!

E. Program a new master code (user code No. 01) immediately, and record it in a secret, safe place.

If you choose to quit programming at this stage, press **#** while the green LED is flashing slowly.

Appendix A. User Code Programming Chart

Date	User Name	1	User No.	#	New code 1-8 digits	#	Repeat Code	#	Trip Code	#	Date	User Name	1	User No.	#	New code 1-8 digits	#	Repeat Code	#	Trip Code	#
26/6	John K	1	01	#	43182307	#	43182307	#	3	#			1	28	#		#		#		#
26/6	Mark D EXAMPLE	1	02	#	1283046	#	1283046	#	1	#			1	29	#		#		#		#
		1	01	#		#		#		#			1	30	#		#		#		#
		1	02	#		#		#		#			1	31	#		#		#		#
		1	03	#		#		#		#			1	32	#		#		#		#
		1	04	#		#		#		#			1	33	#		#		#		#
		1	05	#		#		#		#			1	34	#		#		#		#
		1	06	#		#		#		#			1	35	#		#		#		#
		1	07	#		#		#		#			1	36	#		#		#		#
		1	08	#		#		#		#			1	37	#		#		#		#
		1	09	#		#		#		#			1	38	#		#		#		#
		1	10	#		#		#		#			1	39	#		#		#		#
		1	11	#		#		#		#			1	40	#		#		#		#
		1	12	#		#		#		#			1	41	#		#		#		#
		1	13	#		#		#		#			1	42	#		#		#		#
		1	14	#		#		#		#			1	43	#		#		#		#
		1	15	#		#		#		#			1	44	#		#		#		#
		1	16	#		#		#		#			1	45	#		#		#		#
		1	17	#		#		#		#			1	46	#		#		#		#
		1	18	#		#		#		#			1	47	#		#		#		#
		1	19	#		#		#		#			1	48	#		#		#		#
		1	20	#		#		#		#			1	49	#		#		#		#
		1	21	#		#		#		#			1	50	#		#		#		#
		1	22	#		#		#		#			1	51	#		#		#		#
		1	23	#		#		#		#			1	52	#		#		#		#
		1	24	#		#		#		#			1	53	#		#		#		#
		1	25	#		#		#		#			1	54	#		#		#		#
		1	26	#		#		#		#			1	55	#		#		#		#
		1	27	#		#		#		#			1	56	#		#		#		#

CE

MADE IN ISRAEL