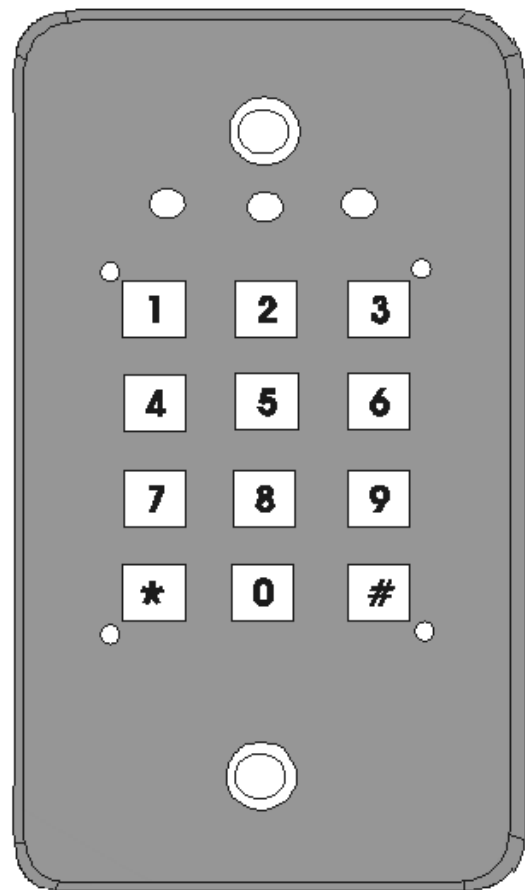
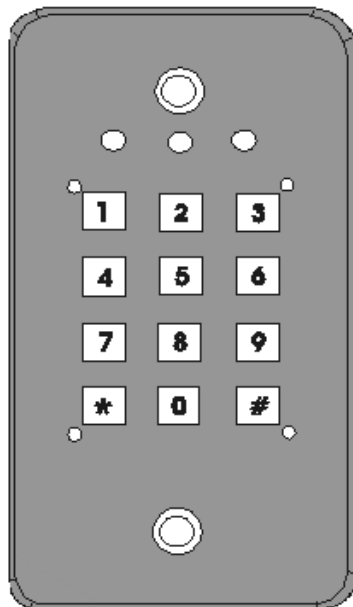
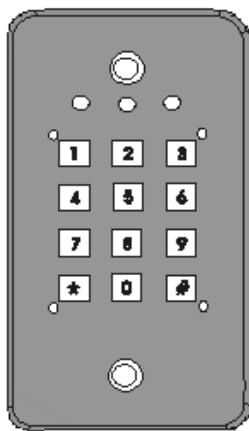


EDS - 18P

Programmable Access Keypad



IntelliSense[®]

The EDS – 18P is designed for door strike applications and remote control of a security control panel.

1. Features

- Microprocessor controlled.
- EEPROM protects all security codes and settings during complete power loss.
- Four programmable security codes: Master, User codes 1,2,3.
- 10,000 different combinations for each 4-digit security code.
- Two relay outputs: Key & Auxiliary Relay.
- Three LEDs indicate the status of the relays or external devices.
- Relays can be programmed in latching or momentary mode (0.001 – 99.99 sec).
- Built in panic key (pressing * and # simultaneously).
- Master code can be restored to the default value of 1234.
- Five different security levels.
- A remote button can be connected to the EDS – 18P to directly control the key relay output.
- Built in tamper switch and piezo buzzer.

2. Operation

➤ 2.1 Security Codes

USER CODE 1 - activates the Key Relay.

USER CODE 2 -activates the Auxiliary Relay.

USER CODE 3 - activates BOTH the Key & Auxiliary Relays

MASTER CODE - allows the user to change any program settings and security code.

➤ 2.2 Operation Modes

There are 2 programmable operation modes: Internal LED Mode and External LED Mode. In Internal Mode, the LEDs show the proper status and the different activation's of the relays; in External LED Mode, the LEDs show the status of external devices (EDS – 18P is factory programmed in Internal Mode).

➤ Table 2.2 : LED indications in Internal/External LED Modes

	Red LED	Yellow LED	Green LED
Internal LED Mode	Key Relay activated	Aux Relay activated	Power On
External LED Mode	All LEDs controlled by external device		

➤ **2.3 Activate the Key Relay**

Either (a) or (b):

- (a) Enter User Code 1 (default value 2 2 2 2);
- (b) Press the remote control button (Section 2.8)

➤ **2.4 Activate the Auxiliary Relay**

Enter User Code 2 (default value 2 2 2 2).

➤ **2.5 Activate BOTH the Key & Auxiliary Relays**

Enter User Code 3 (default value 3 3 3 3)

➤ **Activate the Panic Key**

Press * and # simultaneously.

As long as the Panic Key is pressed, the Auxiliary Relay is activated. BEFORE USING THE PANIC KEY, REMEMBER TO SET ACCESS KEY 8 TO 0001 (Section 3).

➔ Note on entering the Master Code or User Codes

- If you have entered a wrong digit and wish to enter a code again, enter # to clear the previous entries, and re-enter.
- If you have entered a wrong code (4-digit), a second short beep will occur, and you are to enter a correct code again.
- If you have stopped entering for more than 7 seconds, all previous entries will be cleared; enter the code again.
- If you have entered an invalid code 4 times consecutively (16 digits), a 10 – second short beep will occur, and the keypad will run a preset security level routine (Table 3.1)

➤ **2.7 Restore the Master Code**

If the Master Code is forgotten, the user can still restore the Master Code to its default value of 1 2 3 4. To do that

- (1) Disconnect the power supply.
- (2) Move the restore jumper from NORMAL to RESTORE position (Figure 4.1).
- (3) Connect the power supply again.
- (4) Move the restore jumper back to NORMAL position.

Now the Master Code is 1 2 3 4 again, but the values of all the other program settings will remain unchanged.

➔ **CAUTION:** If you forget to switch the jumper back to NORMAL, the keypad will stop functioning.

➤ **2.8 Activate the Key Relay by Remote Control**

Connecting a press button to the EDS –18P (Section 4) allows user to activate Key Relay without entering User Code 1 or 3.

The button can be connected to terminals TB3-1 and TB1-2 (signal ground).

When the Key Relay is in momentary mode, it will change state as long as the switch is closed (pressed); when the switch is opened (released), the Key Relay restarts timing. When the Key Relay is in latch mode, the switch toggles the Key Relay.

3. Programming.....

➤ Procedures

- (1) Enter Master Code (default value 1 2 3 4).
- (2) Enter the * Key. 3 long beeps will be heard, and the green LED will flash, indicating that the keypad is in Program Mode. Both the relays are now deactivated.
- (3) To program a desired setting, enter the corresponding Access Key number (Table 3.1). The LEDs will indicate the Access Key chosen (Table 3.2)
- (4) Enter the # key.
- (5) Enter the desired value (4-digit) of the function selected.
- (6) Enter the # key.
- (7) Enter the desired value again.
- (8) Enter the # key. If the two entries of the desired value are identical, 2 long beeps will be heard, the red and yellow LEDs will go off. The green LED will keep flashing.

(Page 9 in the original manual)

If the two entries are mismatched, or if you have entered a wrong sequence of keys, a second short beep will be heard, and the keypad will stay in the Program Mode.

- (9) Enter the * key and then the # key to end programming. 2 long beeps will be heard. The LEDs will return to their original states.

- Note: to program another setting, repeat steps (2) – (8).

➤ **Table 3.1 : Programmable Functions of the EDS - 18**

Access Key	Function	Default Value	Allowed Values
0	Master Code	1 2 3 4	0000 - 9999
1	User Code 1	1 1 1 1	0000 – 9999 except Master Code
2	User Code 2	2 2 2 2	0000 – 9999 except Master Code & User Code 1
3	User Code 3	3 3 3 3	0000 – 9999 except Master Code & User Code 1, 2
4	Key Relay Time (0.01 – 99.99 sec)	0500	0000 Latch mode 0500 5.00 sec 9999 99.99 sec
5	Aux Relay Time (0.01 – 99.00 sec)	0050	0000 Latch mode 0500 5.00 sec 9999 99.99 sec
6	System Mode	0100 (X=0 or 1)	0110 (Internal LED Mode, User Codes 1,2 enabled, User Code 3 disabled) 0XXX Internal LED Mode 1XXX External LED Mode X0XX Disable User Code 1 XX0X Disable User Code 2 XXX0 Disable User Code 3 X1XX Enable User Code 1 XX1X Enable User Code 2 XXX1 Enable User Code
7	LED Trigger Polarity	0000	0000 Negative Level Trigger 0001 Positive Level Trigger

Access Key	Function	Default Value	Allowed Values
8	Panic Key Enable	0000	0000 Disable 0001 Enable
9	Security Level	0001	0000 No safety level set.
			0001 After 4 successive wrong codes, stay idle 30 sec.
			0002 After 4 successive wrong codes, stay idle 60 sec.
			0003 After 4 successive wrong codes, stay idle until Master Code is entered.
			0004 After 4 successive wrong codes, Aux Relay opens.

➤ **Table 3.2 : Programmable Functions of the EDS – 18P**

Access Key	Yellow LED	Red LED	Access Key	Yellow LED	Red LED
-	OFF	OFF	6	ON	1 Flash
1	OFF	1 Flash	7	ON	2 Flash
2	OFF	2 Flashes	8	ON	3 Flashes
3	OFF	3 Flashes	9	ON	4 Flashes
4	OFF	4 Flashes	0	ON	ON
5	OFF	OFF	➔ (Note : Green LED always flash).		

(above on page 11 of the original manual)

(page 12 of the original manual)

4. Installation.....

➤ Surface Mounting Procedures :

- (1) Use the mounting box as a template to mark holes for the 2 mounting screws. Remove the mounting box and drill the screw holes.
- (2) 3 knockouts are available on the mounting box for wiring. Cut the appropriate knockout hole on the mounting box.
- (3) Mount the mounting box on the wall using the 2 pan head screws provided.

➤ Power Requirements :

A 10 – 15 volt dc source should be used.

(Page 13 of the original manual)

➤ Wiring :

All I/O connections will be via terminated blocks shown in figure 4.1. A list of all terminals is shown below.

Terminal (TB1)	Description	Terminal (TB2)	Description
1	Power (+)	1	Red LED control
2	Power (-)	2	Yellow LED control
3	Tamper	3	Green LED control
4	Tamper		
Terminal (TB3)	Description		
1	Key Relay Remote control		
2	Key Relay N.C		
3	Key Relay COM		
4	Key Relay N.O		
5	Aux Relay COM		
6	Aux Relay N.O		

(Page 14 of the original manual)

➤ **Power Input (TB1-1, TB1-2)**

A 10 – 15 volt dc should be connected to these 2 terminals.

➤ **Tamper Switch (TB1-3, TB1-4)**

The tamper switch is normally closed. It will be opened when one attempts to open the keypad.

➤ **LED external control inputs (TB2-1, TB2-2, TB2-3)**

In External LED mode, connect these terminals to the respective outputs of a device. At positive trigger polarity, a 5-12 Volt signal turns on the LEDs (*1), while a 0-1 volt signal turns off the LEDs; at negative polarity, a 0-1 volt signal turns on the LEDs, while a 5-12 volt signal turns on the LEDs.

➤ **Key Relay Remote Control (TB3-1)**

Connect a switch between this terminal and signal ground. When the Key Relay is set in momentary mode, close the switch will keep Key Relay activated, open the switch afterwards will start timing; when the Key Relay is set in latching mode, the switch toggles the key relay Contacts.

(Page 15 of original manual)

➤ **Key Relay (TB3-2, TB3-3, TB3-4)**

There are 3 output terminals (NC, C, NO). When the Key Relay is activated, the NC, NO terminals will exchange their states. The duration of the activation is programmable.

➤ **Auxiliary Relay (TB3-5, TB3-6)**

When the Auxiliary Relay is activated, these terminals are closed. The duration of the activation is programmable.

*1 At positive trigger polarity, one of the following cases can cause the LEDs to remain lit

A) The LED controls (TB2-1, 2, 3) are not connected to any external device; OR

B) The external device does not provide a 0-1 volt output to the LED controls.

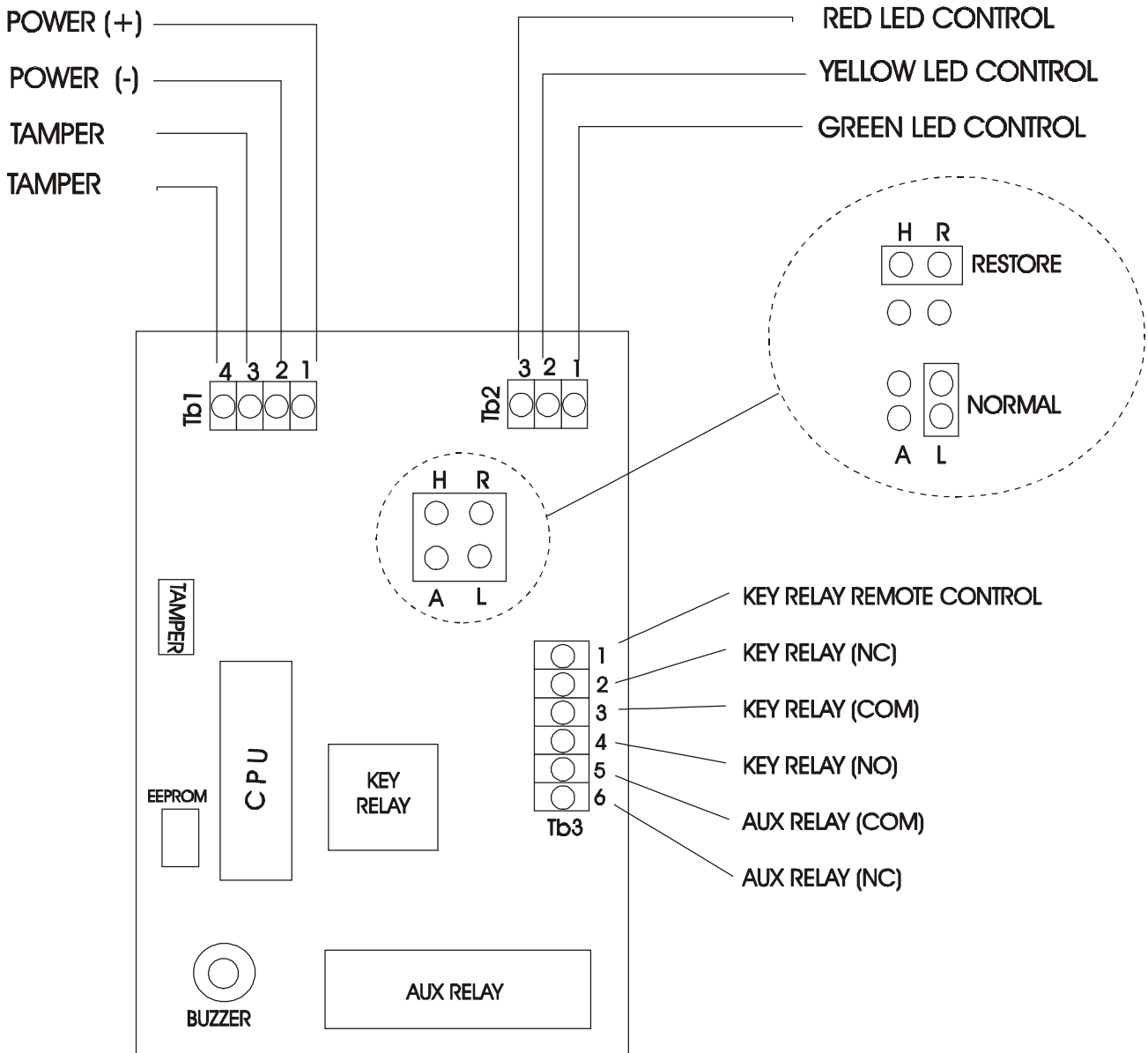
To solve the problem, just simply add a 2.2k resistor between TB2-1 and TB1-2 for the red LED, between TB2-2 and TB1-2 for the yellow led, between TB2-3 and TB1-2 for the green LED.

(Page 16 of the original manual)

➤ **Specifications of the EDS – 18P**

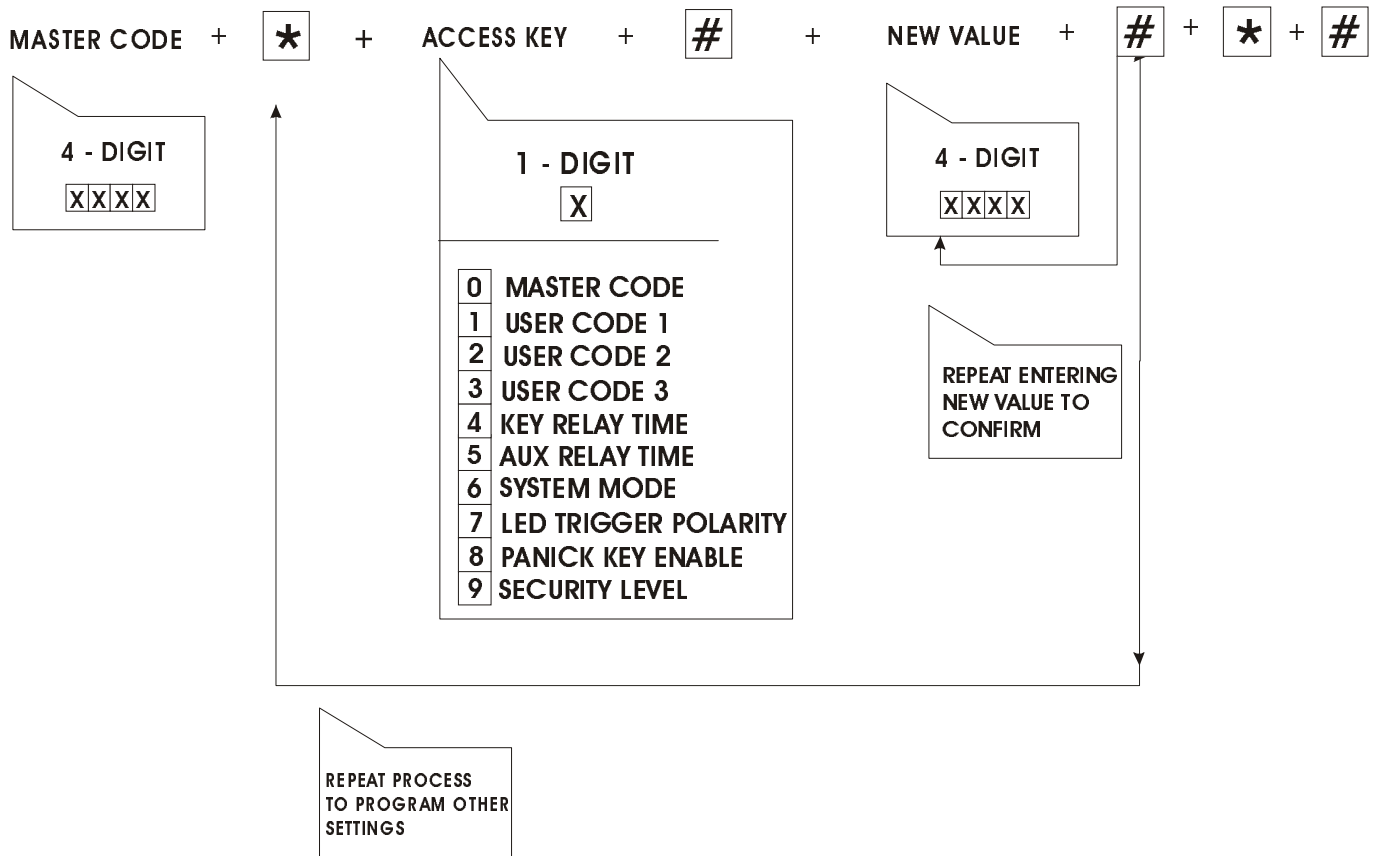
Operational Voltage Range:		10 – 15V dc
Current consumption (nominal):		Normal – 10mA Key Relay on – 42mA Auxiliary Relay on – 27mA Both Relays on – 58mA
Key Relay contact ratings:		24V dc, 5A maximum 120V ac, 5A maximum
Auxiliary Relay ratings:		24V dc, 1A maximum 120V ac, 0.5A maximum
Tamper switch:		N.C when pressed 40mA @ 100V dc
Security code combinations:		10,000 (4-digit/code)
On plate LED:		1 red, 1 yellow, 1 green
LED indication:	Internal LED mode	Green – power Red – Key Relay activated Yellow – Aux Relay activated
	External LED mode	The 3 LEDs are triggered by 3 external control inputs (positive trigger 5-12V, negative trigger 0-1V)
Key/Auxiliary Relays activation times:		Latch or 0.01 – 99.99s momentary
Keyboard:		0-9, #, *, 12 button tactile – feel keypad
Dimensions:		114mm(H) x 70mm(W) x 36mm(D)
Weight:		150g
Operating Temperatures:		-20 deg to 50 deg C

FIGURE 4.1: CONNECTION TERMINALS AND ALLOWED JUMPER POSITIONS



EDS 18P

Quick reference guide for the EDS 18P Programming



IMPORTANT NOTICE

READ THE FOLLOWING INSTRUCTIONS IF YOU WANT TO CONNECT AN ELECTRIC DOOR LOCK TO EITHER RELAY OF THE EDS – 18P.

An electric door lock is essentially a solenoid controlled door strike. When the lock is turned on/off, electromagnetic induction causes noise and transient voltage to be generated which can feedback into the EDS 18P and cause damage. To eliminate this feedback, make either one of these connections:

1. IF YOU USE A DC POWER SUPPLY

Connect the diode (supplied with your EDS –18P) **CLOSE** to the door lock in parallel as shown in figure A1. Beware of polarities.

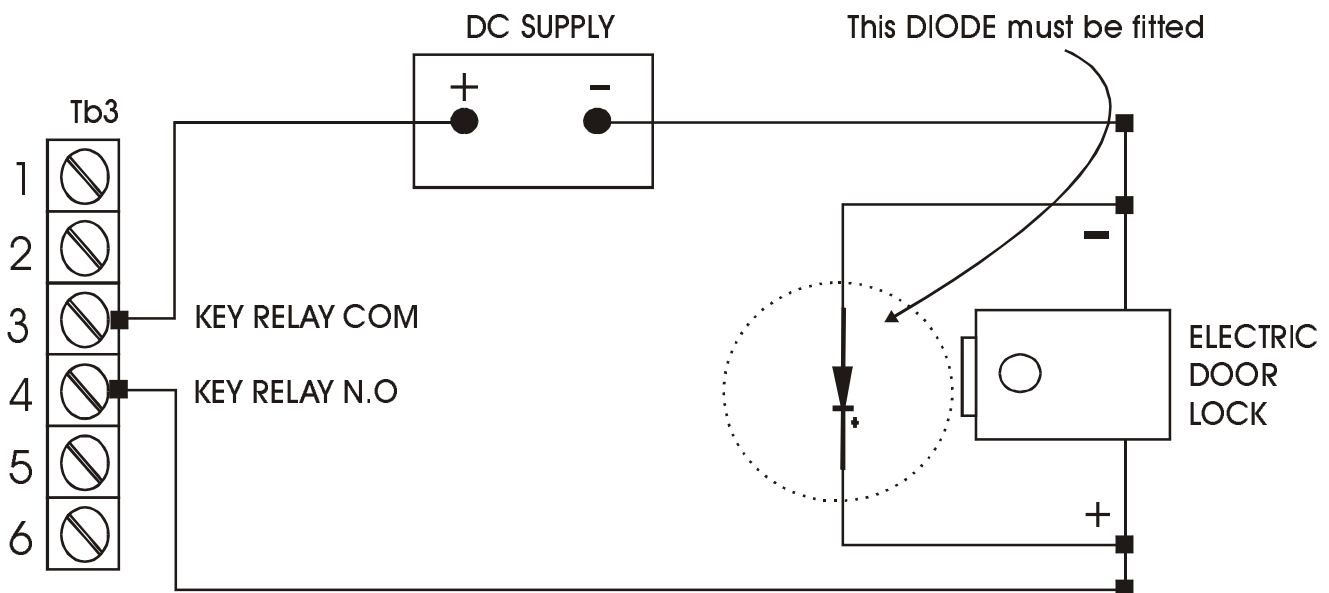


Figure A1 : Connecting a DC electric door lock to the EDS – 18P.

2. IF YOU USE AN AC POWER SUPPLY

Connect a 18Vrms varistor *CLOSE* to the door lock in parallel, as shown in Figure A2. Beware that the AC supply voltage cannot exceed the varistor voltage. If your door lock needs an AC voltage higher than 18Vrms, use a varistor with a higher voltage.

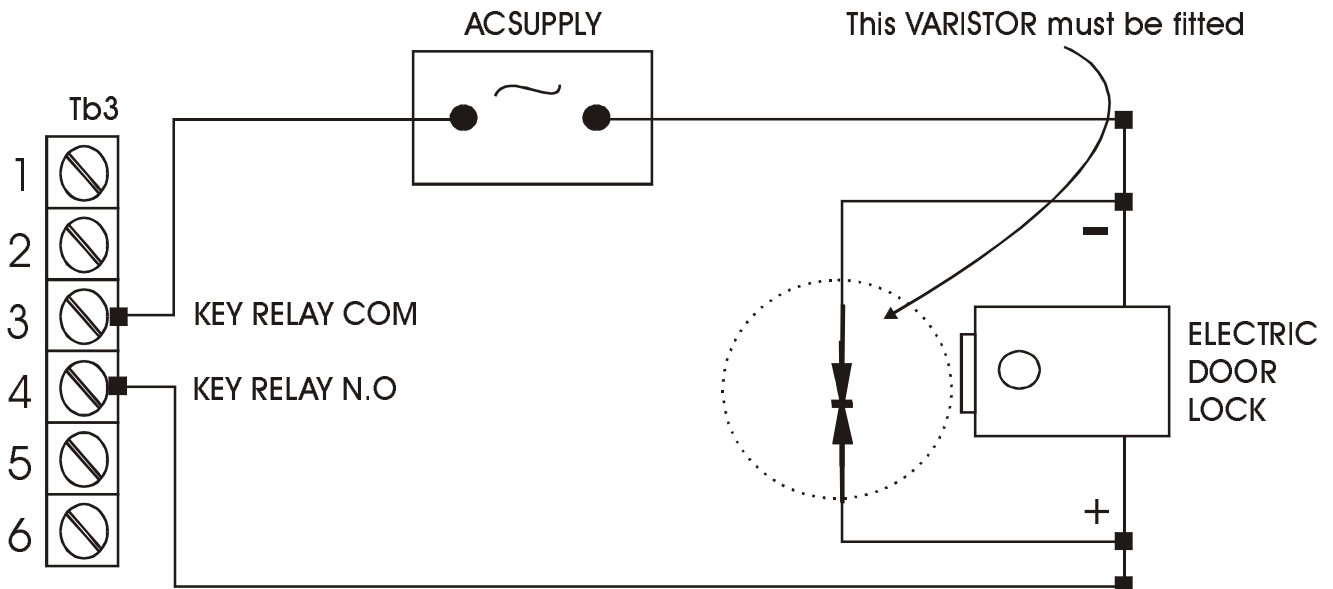


Figure A2 : Connecting an AC electric door lock to the EDS – 18P.



Contact Sales on 01527 68111.
Contact Technical Support on 08457 660533