MODEL KP-400
VANDAL RESISTANT
WEATHERPROOF DIGITAL KEYPAD
OPERATING INSTRUCTIONS



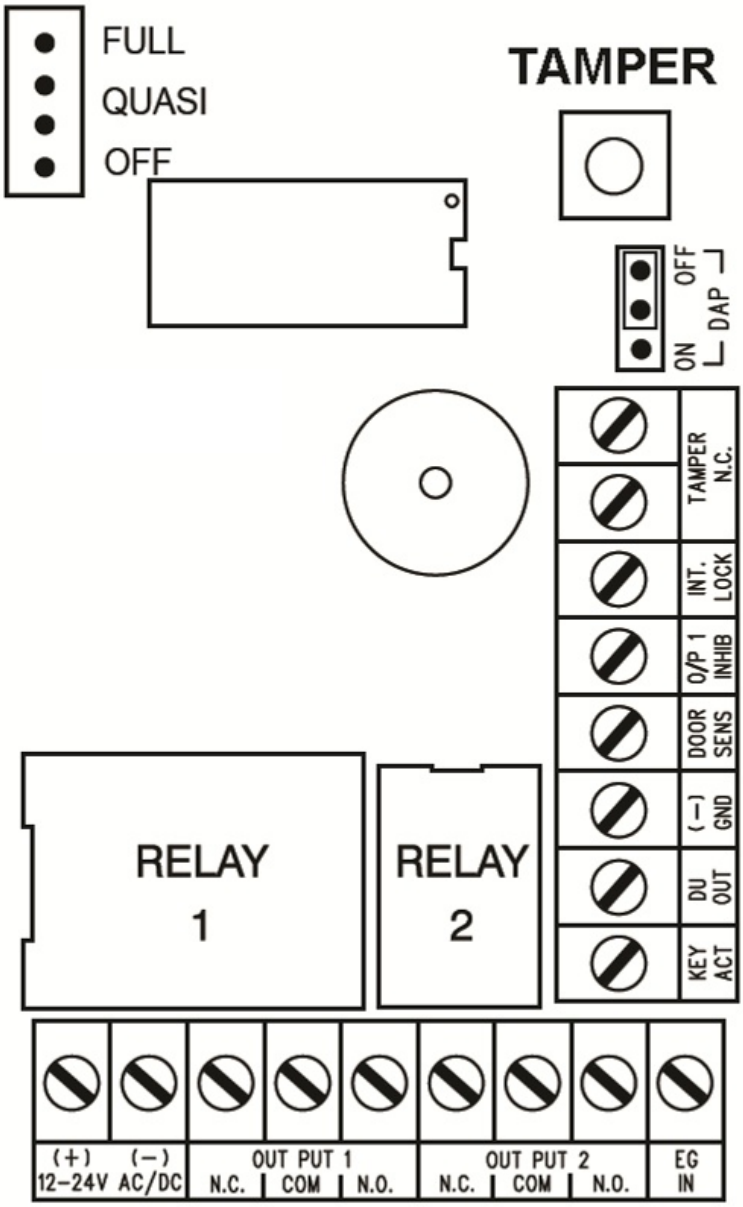
Model KP-400 is a self-contained vandal resistant digital keypad. This dual-relay output keypad is suitable for residential, industrial, and commercial installations. It is compatible with all electric locking devices. Durable backlit metal keys and a rugged metal housing protect the keypad from harsh environments.

ALARM CONTROLS
ASSA ABLOY

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INSTALLATION



1. Remove tamper proof screws from the front of the keypad with the provided tool.
2. Pass the wire harness through the opening in the back box.
3. Mount the back box to the door frame or wall.
4. Make all required wiring connections to the terminal blocks.
5. Place the keypad faceplate on the back box and secure with the tamper proof screws.

WIRING	
Power Input (12-24V AC/DC)	12 or 24 AC or DC. AC power can be connected without observing polarity requirement. Connect DC power with polarity as indicated.
Output 1, Output 2	SPDT dry contacts. Outputs can be programmed for latching or momentary operation.
Egress Input (EG IN)	A normally-open request to exit station can be connected to this terminal and ground (-). Connecting the terminal to ground will operated output 1 in the same manner as a valid user code.
Key Active Output (KEY ACT)	NPN transistor open collector output that switches to ground (-) for 10 seconds with each key press. Output rating Ic max: 100mA sink, Vc max: 24VDC.
Duress Output (DU OUT)	NPN transistor open collector output that switches to ground (-) after the duress code has been entered. Output rating Ic max: 100mA sink, Vc max: 24VDC.
Ground (-) (GND)	System ground (-).
Door Position Sensor Input (DOOR SENS)	A normally-closed contact connected to this terminal and ground (-) will provide a door position monitor. This terminal must be connected to ground (-) if not used. The factory installed jumper must be removed if using this input.
Output 1 Inhibit (O/P 1 INHIB)	Normally-open input terminal used in a cross wire connection in an interlock application.
Interlock Control Output (INT. Lock)	NPN transistor open collector output that switches to ground (-) for 5 seconds after entering a valid user code. Use this output to control a second keypad in a “Mantrap” application.
Normally-closed Tamper (Tamper N.C.)	Normally-closed output pair activated by the tamper switch if the keypad faceplate is removed from the back box.

KEYPAD INITIATION

Keypad initiation must be done at the initial turn-on of the keypad.

1. Connect power to the keypad.
2. Put the keypad in *Program Mode* by entering "**0 0 0 0 ✱**". The keypad will beep twice and the yellow LED will be on and not blinking.
3. Enter "**8 9 0 1** #".
4. The keypad will beep twice and the keypad initiation is complete.
5. Enter "**✱**" to exit Program Mode. The yellow LED will begin blinking.

ENTERING A NEW INSTALLER CODE

It is strongly recommended that the *Installer Code* be changed from the default "**0 0 0 0**". If the *Installer Code* is not known, please refer to the section on *Direct Access to Programming*.

1. Put the keypad in *Program Mode* by entering "**0 0 0 0 ✱**" or the current installer code. The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**0 (4 to 8 digit new installer code)** #". For example, to change the *Installer Code* to 1 2 3 4 you would enter "**0 1 2 3 4** #".
3. The keypad will beep twice indicating that the new *Installer Code* has been accepted.
4. Enter "**✱**" to exit Program Mode. The yellow LED will begin blinking.

PROGRAMMING MODE

It is necessary to put the keypad in *Programming Mode* in order to access all keypad configuration settings.

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "**✱**". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**✱**" to exit Program Mode. The yellow LED will begin blinking.

PROGRAMMING USER CODES

User Codes are 4 to 8 digits long and must not be the same as the *Installer Code*.

A *User Code* can be assigned to operate either Output 1 or Output 2. The keypad can store up to 100 *User Codes* for Output 1 and up to 10 *User Codes* for Output 2.

Each *User Code* has a *Code Number*. Output 1 *Code Numbers* are two digits ranging from "**00**" to "**99**". Output 2 *Code Numbers* are one digit ranging from "**0**" to "**9**".

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "**✱**". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "(**Output) (Code Number) (User Code)** #".

   For example, if you wish to assign a *User Code* of "6 7 8 9" to *Code Number* "00" to operate Output 1 you would enter "**1 0 0 6 7 8 9** #".

   If you wish to assign a *User Code* of "3 4 3 3" to *Code Number* "1" to operate Output 2 you would enter "**2 1 3 4 3 3** #".
3. Enter "**✱**" to exit Program Mode. The yellow LED will begin blinking.

OPERATION

Enter a valid *User Code* to activate the associated Output. The keypad must be in standby mode (yellow LED blinking).

1. Enter "**(User Code)** #".

   For example, if the *User Code* is "1234" you would enter "**1 2 3 4** #".

DELETING USER CODES

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**(Output) (Code Number)** #".

   For example, if you wish to delete the *User Code* in *Code Number* "02" for Output 1 you would enter "**1 0 2** #".

   If you wish to delete the *User Code* in *Code Number* "3" for Output 3 you would enter "**2 3** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

To delete all *User Codes* enter "**8 9 0 1** #".

FALSE CODE LOCKOUT

The keypad can be programmed to be disabled for 15 minutes after 5 successive false code entries.

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**7 2 5** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

To disable the *False Code Lockout* feature -

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**7 6 0 0** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

DOOR FORCED OPEN ALARM

The keypad will generate an alarm instantly if the door is opened without a valid User Code or Egress Input. The alarm will last for 60 seconds. Door position is monitored via the *Door Position Sensor Input*. The alarm will be turned off immediately with any valid Output 1 User Code entry.

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**8 0 1** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

DOOR FORCED OPEN ALARM (CONTINUED)

To disable the *Door Forced Open Alarm* feature -

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**8 0 0** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

DOOR PROPPED OPEN ALARM

If the door is left open for longer than a preset time, the keypad will generate an alarm until the door is closed. The door open time can be programmed from 1 to 999 seconds. Door position is monitored via the *Door Position Sensor Input*.

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**9 (door open time 1-999)** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

To disable the *Door Propped Open Alarm* feature -

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**9 0** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

MOMENTARY OR LATCHING OUTPUT MODES

Outputs 1 and 2 can be programmed for either momentary or latching operation. Momentary operation time can be set for between 1 and 999 seconds. The factory default momentary operation time is 2 seconds.

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Output 1 *Momentary Mode* -

   Enter "**4 0 (output active time 1-999)** #**"**

   Output 2 *Momentary Mode* -

   Enter "**5 0 (output active time 1-999)** #**"**

   Output 1 *Latching Mode* -

   Enter "**4 1 #"**

   Output 2 *Latching Mode* -

   Enter "**5 1 #"**
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

KEYPAD SILENT MODE

The keypad beeper can be silenced.

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**8 3 0** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

To return the keypad to audible mode -

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**8 3 1** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

AUTO OR MANUAL CODE ENTRY MODE

When the keypad is programmed for *Auto Entry Mode* it is not necessary to terminate *User Codes* with the "#" during operation. However, in *Auto Entry Mode* the *User Code* must be the same length (4 to 8 digits) as the *Installer Code*.

To put the keypad in *Auto Entry Mode* -

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**8 2 1** #".
3. Enter "✱" to exit Program Mode. The yellow LED will begin blinking.

To return the keypad to *Manual Entry Mode* -

1. Put the keypad in *Program Mode* by entering the *Installer Code* followed by the "✱". The keypad will beep twice and the yellow LED will be on and not blinking.
2. Enter "**8 2 0** #".
3. Enter "✱" to exit *Program Mode*. The yellow LED will begin blinking.

DURESS OUTPUT

The *Duress Output* is not a programmable feature. The keypad automatically creates a *Duress Code* based on *User Codes*. The *Duress Code* is the *User Code* with the first digit increase by 2. For example: If a *User Code* is "1234" then the *Duress Code* is "3234". There are no *Duress Codes* created for Output 2 *User Codes*.

When a *Duress Code* is entered, Output 1 will activate and the Duress Output will go to ground (-) and will not return to it's normal state until a valid *User Code* is entered.

The keypad does not allow *User Codes* to be duplicates of *Duress Codes*. For example: If the *User Code* is "1234" then the *Duress Code* is "3234" and the keypad will not allow a *User Code* of "3234".

DIRECT ACCESS TO PROGRAMMING (DAP)

If the *Installer Code* is forgotten, the *Direct Access to Programming (DAP)* utility can be used to put the keypad in *Programming Mode*.

1. Disconnect the power supply from the keypad.
2. Move the DAP jumper from the OFF to the ON position.
3. Reconnect the power supply to the keypad (keypad will start beeping).
4. Move the DAP jumper from the ON to the OFF position (keypad will stop beeping and the yellow LED will be on and not blinking. The keypad is now in *Programming Mode*.
5. A new *Installer Code* must now be entered.
6. Enter "**0 (4 to 8 digit new installer code)** #". For example, if you wish to change the *Installer Code* to 1 2 3 4 you would enter "**0 1 2 3 4** #".
7. The keypad will beep twice indicating that the new *Installer Code* has been accepted.
8. Enter "✱" to exit *Program Mode*. The yellow LED will begin blinking.

LED AND TONE INDICATORS

The Green LED is on while Output 1 is activated.

The Red LED is on while Output 2 is activated.

The Yellow LED is described in the table below -

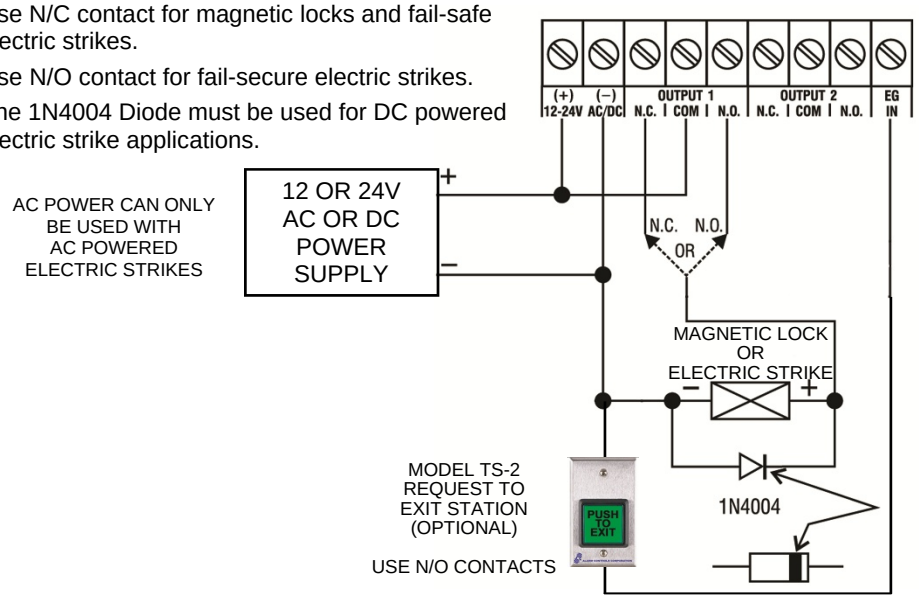
Yellow LED	Keypad Status	Tone Indicator
On	Programming Mode	None
1 Blink	Successful Key Press	1 Beep
2 Blinks	Successful Code Entry	2 Beeps
5 Blinks	Error in Code Entry	5 Beeps
Continuous Blinking	Standby Mode	None
Continuous Blinking	DAP Jumper not replaced	Continuous Tone

BASIC WIRING DIAGRAM

Use N/C contact for magnetic locks and fail-safe electric strikes.

Use N/O contact for fail-secure electric strikes.

The 1N4004 Diode must be used for DC powered electric strike applications.



DOOR LOCK INHIBIT WIRING DIAGRAM

Output 2 is used to control access of Output 1 users. Output 2 must be in *Latching Mode*. Activating Output 2 will lock out Output 1 users.

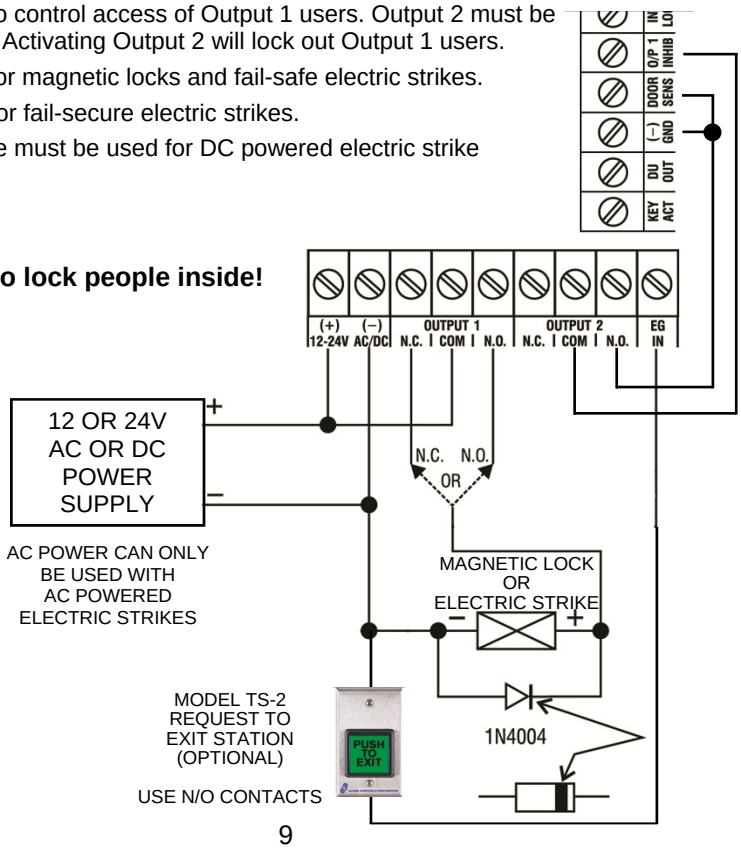
Use N/C contact for magnetic locks and fail-safe electric strikes.

Use N/O contact for fail-secure electric strikes.

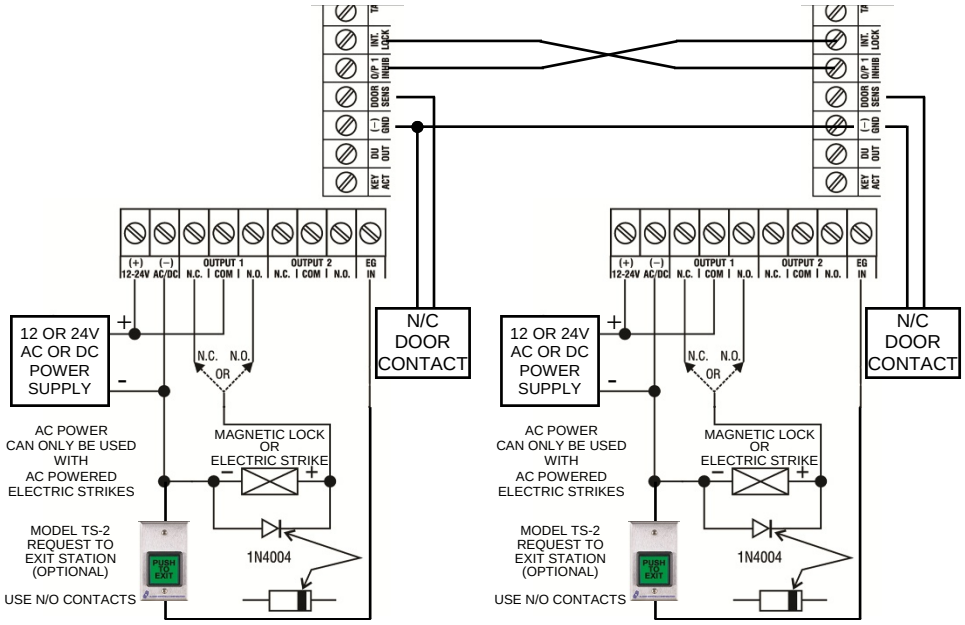
The 1N4004 Diode must be used for DC powered electric strike applications.

Warning!

Be careful not to lock people inside!



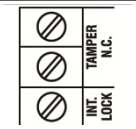
INTER-LOCK SYSTEM WIRING DIAGRAM



Two keypads are required for an inter-lock system. If either door is open, the other door will remain locked.

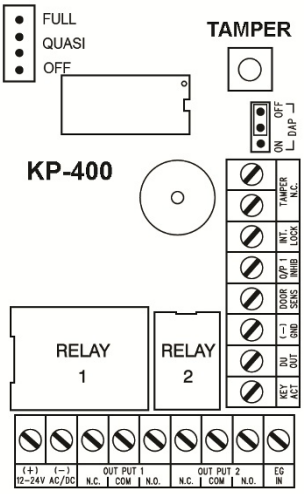
TAMPER SWITCH

The Tamper Switch is Normally-closed when the keypad face plate is securely attached to the back box. Connect these terminals to an alarm panel if desired.



BACKLIGHT ADJUSTMENT

The keypad has an adjustable backlight feature. The backlight illumination can be set to “FULL”, “QUASI”, and “OFF” using the jumper located in the upper left hand corner of the PCB assembly behind the front plate.



SPECIFICATIONS

Operating Voltage	12 or 24 Volts AC or DC Auto-sensing
Active Current Draw	100 mA maximum @12VDC 120 mA maximum @24VDC
Idle Current Draw	10 mA maximum @12VDC 22 mA maximum @24VDC
Output 1 Contact Rating	5A@28VDC
Output 2 Contact Rating	1A@28VDC
Output Contact Arrangement	Single Pole Double Throw
Operating Temperature	-4°F to 158°F (-20°C to +70°C)
Ambient Humidity	5% to 95% Relative Humidity (Non-condensing)
Environmental Rating	Conforms to IP66
Dimensions	3.125”W x 4.5”L x 1.75” to 2.5”D

CODES

It is recommended that the *Installer Code* and *User Codes* be noted here for reference.

Installer Code	
User Code _____	
User Code _____	
User Code _____	
User Code _____	
User Code _____	
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