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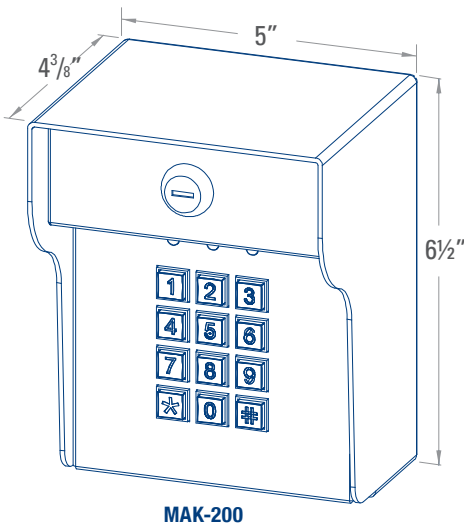
MAK-200

ACCESS KEYPAD

INSTRUCTION MANUAL

Specifications:
- Operating Voltage is 12~24 VAC/DC
- Current Draw: Holding: 22mA, Pull-In: 66mA@12VAC/DC
          Holding: 12mA, Pull-In: 32mA@24VAC/DC
- Relays Electric Current: 12A@14VDC, 7A@120VAC
- Optimal Operating Temperature: -20 to +70 °C (-4 to +158 °F)
- Invalid Code Lock Out: The system will shut down for 60 seconds after 5 invalid PIN are attempted.
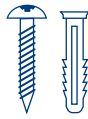
Dimensions & Contents

5″

4³⁄₈″

6½″

MAK-200

GASKET
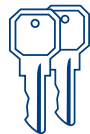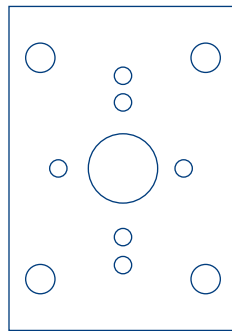
KEYS X 2

SCREWS & PLASTIC WALL ANCHORS X 4
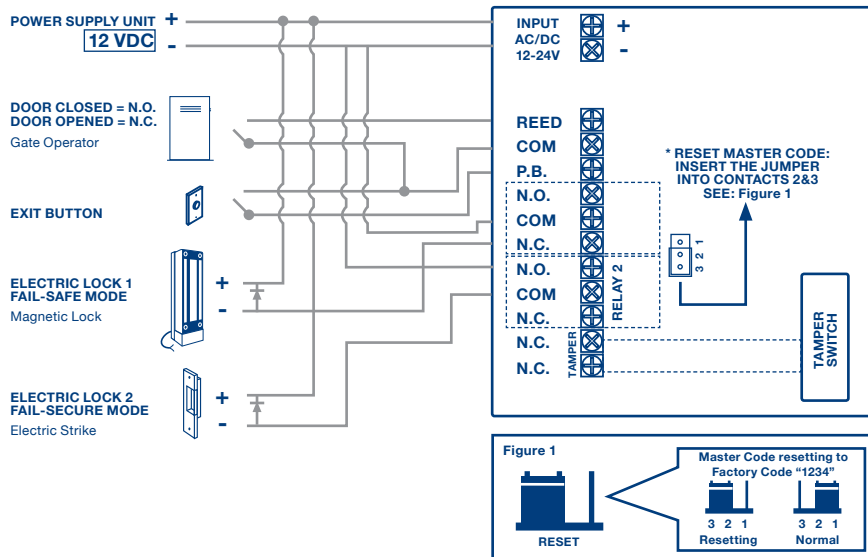
System Signals

SOUND SIGNAL
- 1 Short Beep: Key In
- 1 Long Beep: Valid PINs
- 2 Beeps: Enter / Exit Programming Mode
- 3 Beeps: Incorrect Input
- 5 Beeps: Reset master code to default value (1234), clear all PINs

LED SIGNAL
- 🟢 Green LED: First Relay Active
- 🔴 Red LED: Second Relay Active
- 🟡 Yellow LED: Normal (Power On)

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Installation and Wiring Instructions & Diagrams

POWER SUPPLY UNIT +
12 VDC −

DOOR CLOSED = N.O.
DOOR OPENED = N.C.
Gate Operator

EXIT BUTTON

ELECTRIC LOCK 1
FAIL-SAFE MODE
Magnetic Lock

ELECTRIC LOCK 2
FAIL-SECURE MODE
Electric Strike

INPUT AC/DC 12-24V + −
REED
COM
P.B.
N.O.
COM
N.C.
N.O.
COM
N.C.
N.C.
N.C.

RELAY 2
TAMPER

* RESET MASTER CODE: INSERT THE JUMPER INTO CONTACTS 2&3 SEE: Figure 1

3 2 1

TAMPER SWITCH

FACTORY DEFAULT SETTINGS	
Master Code	1234 (4 digits)
Relay Strike Time (Time Delay Setting)	5 sec.
Pressed Key Time Delay	5 sec. (fixed)
Programming Mode Time Delay	25 sec. (fixed)
PIN Digits	4 digits

For DC use only
For AC/DC

IMPORTANT!
1. It is suggested to use #22~26 AWG insulation wire
2. The door strike or relay must have a varistor or a diode across the door strike terminals to suppress back the EMF of the strike - failure to do so will damage the relay contacts and electronic components, or even burn the controller.

Figure 1

Master Code resetting to Factory Code "1234"

RESET

3 2 1
Resetting

3 2 1
Normal

Programming Guide

The master code comprises of a five-digit number and is used to access programming functions of the digital keypad and cannot be used for access i.e. It cannot be the same as other PINs. The default master code is set to 12345. Under normal operation the keypad is used for entering PIN to gain access. In the programming mode, the keypad can be used to add/delete PINs, set relay strike time and other operation functions.

1. ENTERING PROGRAMMING MODE:
- Enter the master code twice **1234 1234** to enter programming mode (1 beep, rapid yellow LED flash).
- Press **#** to exit programming mode (If no data is entered within 50 seconds, the system will exit programming mode).

2. SETTING RELAY TIME:
The relay strike time determines the amount of time that the door remains unlocked after a valid PIN is entered.
NOTE: Enter 00 will set the relay strike time to 0 second (relay set to toggle mode)
1. Enter Programming Mode
2. Press ★300 for Relay 1 (rapid green LED flash) → Enter 00~99 (1 beep, green LED stays on) Press ★400 for Relay 2 (rapid red LED flash) → Enter 00~99 (1 beep, red LED stays on)
3. Press # (1 beep) back to programming mode
4. Press # again (1 beep) back to standby mode (slow yellow LED flash)

3. CLEAR MEMORY OF ALL PINs OF RELAY 1:
1. Enter Programming Mode
2. Press ★888 (green LED stays on)
3. Press 00 (rapid green LED flash, 5 beeps)
4. Press # (1 beep) back to programming mode
5. Press # (1 beep) back to standby mode (slow yellow LED flash)

4. CLEAR MEMORY OF ALL PINs OF RELAY 2:
1. Enter Programming Mode
2. Press ★999 (red LED stays on)
3. Press 00 (rapid red LED flash, 5 beeps)
4. Press # (1 beep) back to programming mode
5. Press # (1 beep) back to standby mode (slow yellow LED flash)

5. ADDING PINs TO RELAY 1
a:
1. Enter programming mode to select slot position ★001 ~ ★200 (rapid green LED flashes to indicate the slot position is available)
2. Enter new PIN (1 beep, green LED stays on)
3. Press # (1 beep) back to programming mode
4. Press # (1 beep) back to standby mode (slow yellow LED flash)

b:
1. Enter programming mode to select slot position ★001 ~ ★200 (green LED stays on to indicate the slot position is unavailable)
2. Press 00000 (1 beep) delete the data from the slot position (rapid green LED flash)
3. Repeat steps of **5a** to add new PINs.

6. ADDING PINs TO RELAY 2
a:
1. Enter programming mode to select slot position ★201 ~ ★210 (rapid red LED flashes to indicate the slot position is available)
2. Enter new PIN (1 beep, red LED stays on)
3. Press # (1 beep) back to programming mode
4. Press # (1 beep) back to standby mode (slow yellow LED flash)

b:
1. Enter programming mode to select slot position ★201 ~ ★210 (red LED stays on to indicate the slot position is unavailable)
2. Press 00000 (1 beep) delete the data from the slot position (rapid red LED flash)
3. Repeat steps of **6a** to add new PINs.

7. CHANGE MASTER CODE:
1. Enter Programming Mode
2. Press ★000 + 1234 (4-digit master code) (1 beep, yellow LED Stays on).
3. Press # (1 beep) back to programming mode
4. Press # (1 beep) back to standby mode (slow yellow LED flash)

Additional Information

FEATURES
- Allows up to 200+10 PINs.
- 29-digit-code password protected design.
- Lockout for 60 seconds after entering 5 times invalid PINs (The keypad stays without beep sound during the period of time).
- 3 LED indicators & buzzer for status indication (Keypad with beep sound).
- Metal case & stainless steel panel with mechanical key lock designed for easy wiring and maintenance, enhanced safety, and durability.
- Weather resistance for outdoor applications.
- Additional input for anti-tailgating function to ensure high security access control.
- Non-volatile memory stores all code settings for a long time, even in the event of total power failure.
- Dual relays to control door lock and other security devices.
- Built-in tamper switch.

MAK-200
ACCESS KEYPAD

DETAILED SPECIFICATIONS

OPERATING VOLTAGE	12~24 VAC/DC
CURRENT DRAW	Holding: 22mA, Pull-In: 66mA@12VAC/DC
	Holding: 12mA, Pull-In: 32mA@24VAC/DC
KEYPAD	4x3 matrix backlit 12-digit (0-9, ∗, #)
INPUT	1 contact for Request-To-Exit button
	1 contact for Door Reed Switch
OUTPUT	2 relays (N.O. / N.C. / Com. Dry Contacts)
RELAY ELECTRIC CURRENT	Max. 12A@14VDC, 7A@120VAC
MEMORY VOLUME	200+10 PINs
RELAY STRIKE TIME	01-99 seconds, Toggle mode (00)
LED STATUS INDICATION	3 LED indicators (red / yellow / green)
AMBIENT HUMIDITY	5%-95% (Non-condensing)
OPERATING TEMPERATURE	-20°C to +70°C (-4 to +158 °F)

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