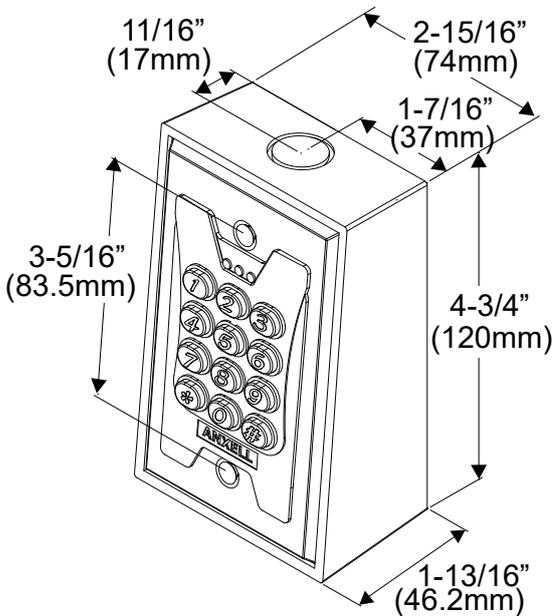
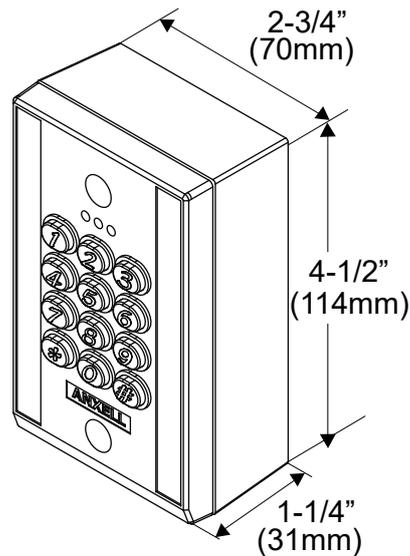


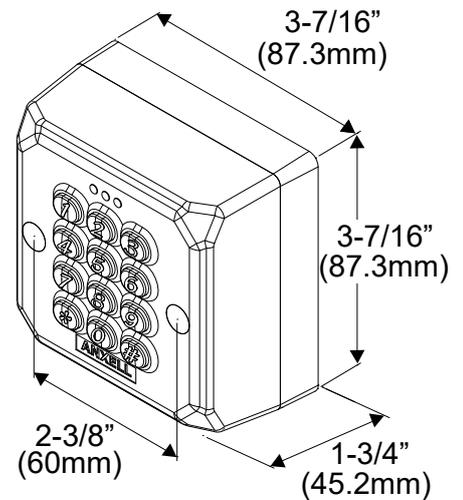
Standalone Digital Keypads DG-110/120/130 Series Operation Manual



DG-110



DG-120



DG-130

I. Features

- ◆ Memory volume up to 49+50 PINs, 5-digit codes.
- ◆ Dual relays to control door lock and other security devices.
- ◆ Additional input for anti-tailgating function to ensure high security access control.
- ◆ 3 LED indicator & buzzer for status indication.
- ◆ Fully programmable via 4X3 matrix keypad.
- ◆ Non-volatile memory allows remaining all setting codes in the event of total power failure.
- ◆ Lockout function.

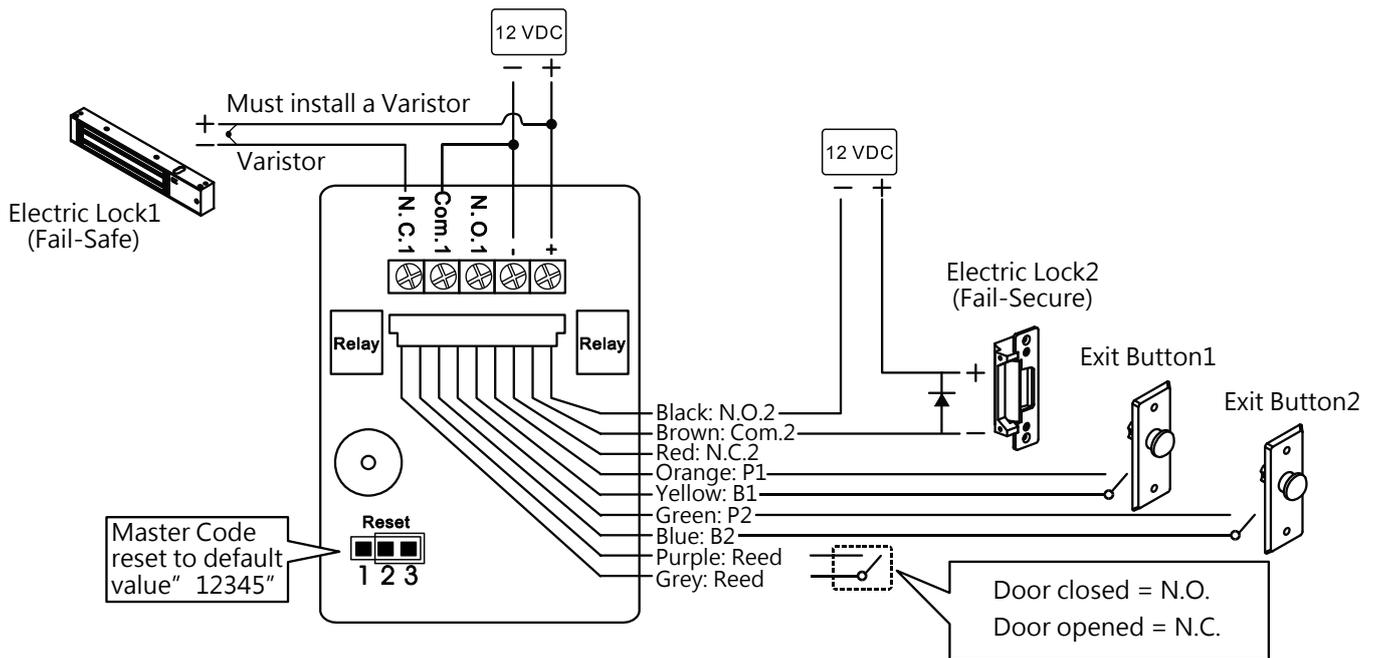
II. Specifications

| | |
|------------------------|---|
| Operating Voltage | 12~24VDC |
| Current Draw | Holding:10mA, Pull in: 40mA /12VDC |
| | Holding:10mA, Pull in: 40mA /24VDC |
| Keypad | 12 buttons (0~9, * , #) |
| LED Status Indication | 3 LED indicator display (Red/Yellow/Green) |
| Input | 1 contact for Request-To-Exit button (N.O.) |
| | 1 contact for door reed switch |
| Output | 2 relays (Dry contacts: N.O./N.C./Com.) |
| Relay Strike Time | Sign: Relay 1 (* 100) , Relay 2 (* 200) 01~99 seconds or Toggle Mode (00) |
| Relay Electric Current | 3A/120VAC or 3A/24VDC |
| Memory Volume | 49+50 PINs (* 001~ * 099) |
| | Relay 1 is controlled by user * 001~ * 049 (* 100) |
| | Relay 2 is controlled by user * 050~ * 099 (* 200) |
| EPROM | Non-volatile memory allows remaining all setting codes in the event of total power failure. |
| Casing material | DG-110: Stainless steel plate, ABS back box; DG-120/130: ABS |
| Ambient Humidity | 0%~95% (Non-condensing) |
| Operating Temperature | -20°C~+70°C |

II. Status Indication

| | | |
|------|-----------|---------------------------|
| LED | Green On | Power on, Standby |
| | Red On | First relay active |
| | Yellow On | Second relay active |
| Beep | 1 Beep | Valid key press |
| | 2 Beeps | Enter, exit setting mode |
| | 3 Beeps | Incorrect operation |
| | 5 Beeps | Master Code back to 12345 |

IV. Wiring Diagram



Note:

- ◆ The door strike or relay must have a varistor or a diode across the door strike terminals to suppress the back EMF of the strike – failure to do so will damage the relay contacts and electronic components, or even burns the controller.
- ◆ Additional input for anti-tailgating function to ensure high security access control. If the relay strike time set to 10 seconds and the door is closed in 3 seconds, the 7 seconds will be cut off automatically.

V. Operation Instruction

◆ Enter Setting Mode

Enter the master code twice (Default value: "12345") to enter setting mode (2 Beeps)

Note: 1. After 60 seconds if no data entered, it will automatically exit the setting mode.

2. The controller will be lockout for 60 seconds upon 32 consecutive master codes or invalid PINs attempt.

◆ Exit Setting Mode

Press # to exit setting mode

◆ **Add new PINs (In setting mode)**

1. Enter the master code twice (2 beeps)
2. Press * 001(slot position * 001~ * 099)
3. Enter 5-digit PINs (1 beep)
4. Repeat, or press "#" to exit setting mode

Relay 1 is controlled by the slot position * 001~ * 049

Relay 2 is controlled by the slot position * 050~ * 099

Note: "00000" , "12345" and master code cannot be used for PINs.

◆ **Set the Relay Strike Time (In setting mode)**

1. Enter the master code twice (2 beeps)
2. Press * 100 (or * 200)
3. Press 05 (01~99) (1 beep)
Press 05 will set the relay strike to 5 seconds, relay set to toggle mode
4. Press "#" to exit setting mode

In Toggle mode, the relay will switch between N.C. contact and N.O. contact upon enter PIN once.

◆ **Delete PINs (In setting mode)**

1. Press * 006 (e.g. code to delete)
2. Enter the master code twice (2 beeps)
3. Press * 006
4. Press 00000
5. Press "#" to exit setting mode

◆ **Change Master Code (In setting mode)**

1. Enter the master code twice (2 beeps)
2. Press * 000
3. Enter new 5-digit master code (1 beep)
4. Press "#" to exit setting mode

◆ **Master Code reset to default value "12345"**

1. Insert the jumper into 1-2 (5 beeps)
2. Master Code reset to default value

Warranty

The product is warranted against defects in material and workmanship while used in normal service for a period of 1 year from the date of sale to the original customer. GEM policy is one of continual development and improvement; therefore GEM reserves the right to change specifications without notice.