DG-600
Outdoor Stand-Alone Keypad Controller

FEATUERS

- Accept power from a 12 or 24 Volt AC/DC supply
- Up to 1,000 user codes (000~999) programmable for Output #1 and 10 (00~09) for Output #2
- 2 Form C Relays, each rated 1A@30VDC
- Each relay has programmable output time from 1~99 seconds or toggle
- Output #2 can be programmed for use with a door bell
- 2 Egress inputs for exiting the premises without keying in the code
- Tactile key feel and blue backlit 3×4 keypad for easy nighttime use
- All features are programmed entirely from the keypad.
- Non-volatile EEPROM protects codes and instructions in case of power loss
- High strength design, epoxy potted, fully sealed within a zinc alloy housing
- Built-in RFID proximity reader

TECHNICAL SPECIFICATIONS

Operating Voltage		12~24 VAC/VDC	
		12VDC	24VDC
Current Draw	Holding	17mA	12mA
	Keypad light on	45mA	27mA
	1 Relay active	90mA	53mA
	2 Relay active	110mA	63mA
Relay Outputs	Total Max. Current Draw	2A, Form C, NO/NC/COM	
Egress Inputs	Total Max. Current Draw	N.O. Ground	
Operating Temperature		-20°~50 °C (-4°F~122°F)	
Proximity Reader Frequency		125KHZ	
Proximity Reader Distance		20mm (0.8")	
Product Dimension		123 (L) x 79 (W) x 23 (D) mm	
Finish		Zinc Alloy	
IP Rating		IP65	

PART LIST

Flat head phillips screws, Cone point x4

Tri-point screw 3x8mm x1

Tri-point screwdriver (special tool) x1

Anchor bolts x4

Crimp connectors x12

Proximity EM cards x2

Proximity key fob x1

USING THE KEYPAD

- To activate either Output #1 or Output #2, swipe the programmed user card or enter the programmed user code.
- If Output #1 is programmed to accept a user card with a user code, swipe the user card and enter the user code immediately.
- The keypad will go into lockout for 1 minute, if an invalid card is swiped or a wrong code is entered 5 consecutive times.

FACTORY DEFAULT

Master Code	1 2 3 4
Code Length	4 digits
Output #1 Timer	1 second
Output #2 Timer	1 second
Output #2 Function	User codes

LED INDICATORS

Operation Function	DG-600
Power ON	Blue Backlit Keypad
Enter Programming Mode	Solid Amber
Wait to programming entry	Flashing Amber
Wait to program card / code User ID is available	Solid Green
Wait to program card / code User ID is NOT available	Solid Red
Output #1 activated	Solid Green
Output #2 activated	Solid Red

AUDIBLE INDICATORS

Audible Tone	Keypad Status
1 long tone	Confirmation
1 short tone	Key press
3 short tone	User code denied
6 short + 1 long tone	All user codes deleted

KEYPADS INSTALLATION

Template

=(0.3″)8mm =(0.3″)8mm =(0.3″)8mm

3.31″ 84.00mm 3.31″ 84.00mm 3.31″ 84.00mm

=(0.3″)8mm =(0.3″)8mm =(0.3″)8mm

Flat head phillips screws

Anchor bolts

System wiring

Torx screw

① Open DG-600 Keypad by loosening and removing the back case torx screw at the bottom with the torx wrench.

② Use the provided drilling template to accurately locate and drill the required holes.

③ Use the screws provided to mount the back case on the wall. Be sure to draw the wiring through the large centre hole in back case, and keep level.

④ Connect accurately the system wiring following the label enclosed on the rear.

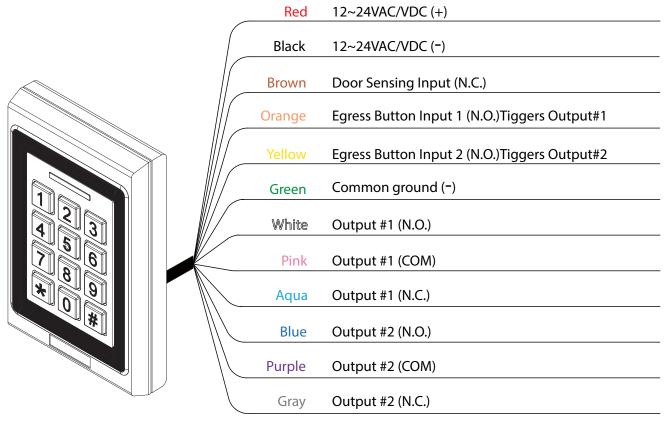⑤ Put the unit back and screw it on by using the torx wrench.

Important Notes :

⚠️ IF USING THE KEYPAD WITH A MECHANICALLY OPERATED DOOR OR GATE, MOUNT THE KEYPAD AT LEAST 5'(15m) FROM THE DOOR OR GATE TO PREVENT USERS FROM BEING CRUSHED OR PINNED. FAILURE TO DO SO MAY RESULT IN SERIOUS INJURY OR DEATH. ⚠️
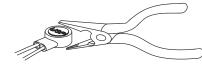
1. Always disconnect power before servicing the keypad.
2. The keypad must be properly grounded. Use a minimum 22AWG wire connected to the Uninsulated Chassis Ground wire. Failure to do so may damage the keypad.
3. All wiring and programming should be done by a professional installer to reduce the risk of improper installation.
4. Basic keypad functions are located on pg. 13 of this manual. Be sure to store this manual in a safe place for future reference.
5. If using VAC, use the Green Common Ground wire for all sensor input.

Wiring Diagram :

Wire	Function
Red	12~24VAC/VDC (+)
Black	12~24VAC/VDC (-)
Brown	Door Sensing Input (N.C.)
Orange	Egress Button Input 1 (N.O.)Tiggers Output#1
Yellow	Egress Button Input 2 (N.O.)Tiggers Output#2
Green	Common ground (-)
White	Output #1 (N.O.)
Pink	Output #1 (COM)
Aqua	Output #1 (N.C.)
Blue	Output #2 (N.O.)
Purple	Output #2 (COM)
Gray	Output #2 (N.C.)

INSTALL CRIMP CONNECTORS
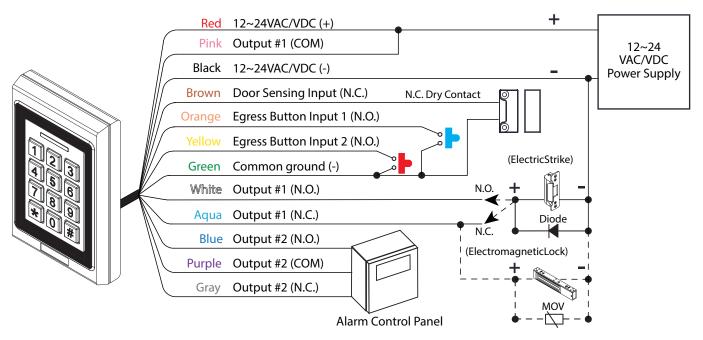
Crimp connectors included:

Crimp connectors

Use a pair of crimping pliers designed to crimp insulated connectors. Place the crimp connector into the compression slot. Be sure the crimping jaws are positioned over the stripped portion of the wire. Squeeze the handles together with enough force to crush the end of the butt splice.
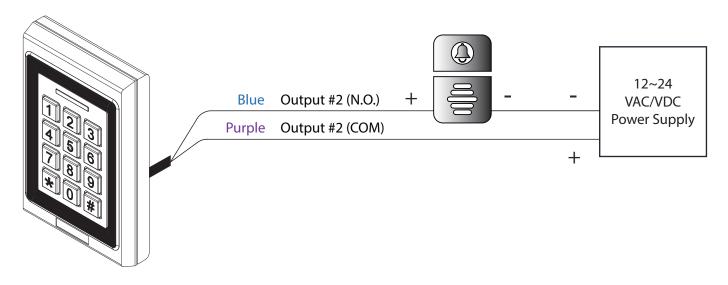
SAMPLE WIRING AND APPLICATIONS

◆ Connection to Lock Device and Alarm System Arm/Disarm Control

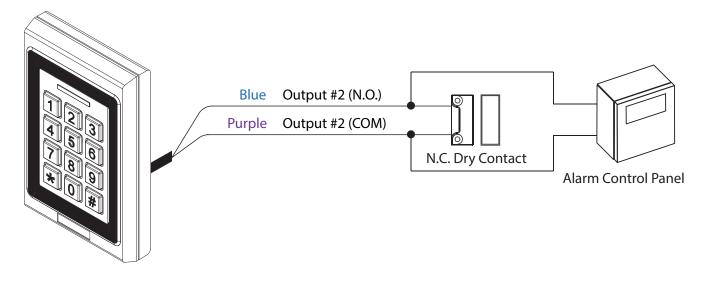|	
Red	12~24VAC/VDC (+)
Pink	Output #1 (COM)
Black	12~24VAC/VDC (-)
Brown	Door Sensing Input (N.C.)
Orange	Egress Button Input 1 (N.O.)
Yellow	Egress Button Input 2 (N.O.)
Green	Common ground (-)
White	Output #1 (N.O.)
Aqua	Output #1 (N.C.)
Blue	Output #2 (N.O.)
Purple	Output #2 (COM)
Gray	Output #2 (N.C.)

1. Connect included diode and metal oxide varistor (MOV) as close as possible and in parallel with an electric strike. This absorbs possible electromagnetic interference to prevent operation of the strike from damaging the keypad. Do not connect a diode or MOV when using electromagnetic locks.

2. Output #2 controls the arm/disarm of the alarm control panel. Consult the alarm control panel manual for more information.

Connecting to a Doorbell

If the keypad is connected to a doorbell, press to activate the doorbell. The doorbell output lasts for 1 second. For instructions on how to program the keypad for doorbell, see pg. 11, Programming the Output #2 Function.
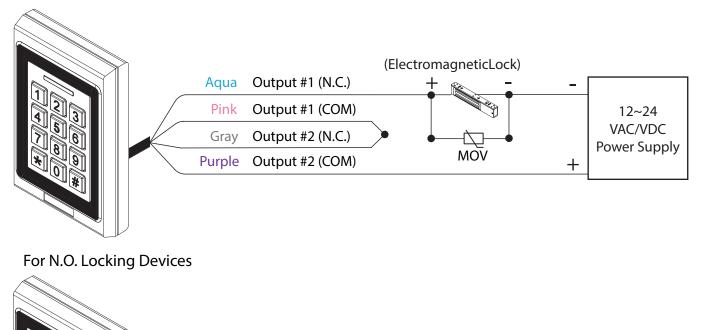

Blue	Output #2 (N.O.)
Purple	Output #2 (COM)

◆ Shunting an Alarm N.C. Zone

Blue — Output #2 (N.O.)

Purple — Output #2 (COM)
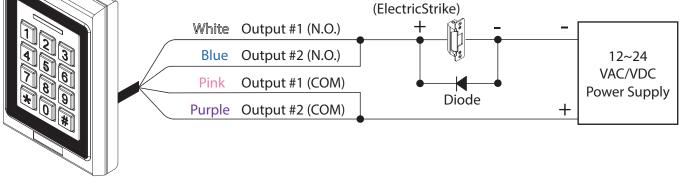
N.C. Dry Contact

Alarm Control Panel

◆ Door-Hold-Open Code

Output #1 and Output #2 can be wired together in such a way that electric lock devices remain unlocked as long as Output #2 is activated.

For N.C. Locking Devices

Aqua — Output #1 (N.C.)

Pink — Output #1 (COM)

Gray — Output #2 (N.C.)

Purple — Output #2 (COM)

(ElectromagneticLock)

MOV

12~24 VAC/VDC Power Supply

For N.O. Locking Devices

White — Output #1 (N.O.)

Blue — Output #2 (N.O.)

Pink — Output #1 (COM)

Purple — Output #2 (COM)

(ElectricStrike)

Diode

12~24 VAC/VDC Power Supply

◆ FIRST TIME KEYPAD USE

Take these steps the first time the keypad is programmed.

A. Enter Programming Mode

Enter Programming Mode by entering the Master Code twice 1 2 3 4 1 2 3 4 (The default Master Code is 1234).

B. Program Code Length

NOTE: To keep the default 4-digit code length, skip to step C, Program the Master Code.

WARNING: The master code will be reset and all user codes will be deleted, after a new code length is programmed.

1. Enter Programming Mode by entering the Master Code twice 1 2 3 4 1 2 3 4 (Default Master Code is 1234).
2. Enter ✳ 9 0 4
3. Enter 5 , if the desire code length is 5 digits, this must be a number from 4 to 6.
4. Exit Programming Mode by pres the # key.
5. The new Master Code will be as the following table after entry and reset.

Code Length	New Master Code
4 digits	1234
5 digits	12345
6 digits	123456

C. Program the Master Code

1. Enter Programming Mode by entering the Master Code twice 1 2 3 4 1 2 3 4 (Default Master Code is 1234).
2. Enter ✳ 3
3. Enter the new Master Code twice. The Master Code may not be the same as a user code.
   Example: If the desired new Master Code is 4321, enter 4 3 2 1 4 3 2 1
4. Exit Programming Mode by pres the # key.

D. Program the Master Card

In addition to a Master Code, a Master Card can also be programmed. Swiping a Master Card will give direct access to Programming Mode.

1. Enter Programming Mode by entering the Master Code twice 1 2 3 4 1 2 3 4 (The default Master Code is 1234).
2. Enter ✳ 7 .
3. Swipe a proximity card, and this card is now the Master Card.
4. Exit Programming Mode by press the # key.

Note: If a Master Card is already programmed. Clear it first by entering . ✳ ✳ The keypad will beep in confirmation.

E. Program the Output #1 Access Mode

　　DEFAULT: User card OR user code.

　　1. Enter Programming Mode by entering the Master Code twice
　　　 (The default Master Code is 1234).

　　2. Enter ✱ 0

　　3. Enter 0 0 for User Card only
　　　　　　　 0 1 for User Card or User Code (Default)
　　　　　　　 0 2 for User Card and User Code

　　4. Exit Programming Mode by press the # key.

◆ PROGRAMMING OUTPUT #1:

　　User can be programmed to have a user card, a user code, or both user card
　　and code for the Output # 1.

　　 Enter Programming Mode by entering the Master Code twice
　　(The default Master Code is 1234).

A. Program User Cards

　　1. Enter a user ID number (0 0 0 to 9 9 9)

　　2. If the LED is red, previous user data exists. Clear it by entering ✱ ✱ .
　　　 The keypad will beep in confirmation and the LED will turn green.

　　3. Swipe a new user card.

　　4. To program the next user, repeat from step 1.

　　5. Exit Programming Mode by pressing # .

B. Program User Codes

　　1. Enter a user ID number (0 0 0 to 9 9 9)

　　2. If the LED is red, previous user data exists. Clear it by entering ✱ ✱ .
　　　 The keypad will beep in confirmation and the LED will turn green.

　　3. Enter a new user code.

　　4. To program the next user, repeat from step 1.

　　5. Exit Programming Mode by pressing # .

C. Program Both User Cards and Codes

　　1. Enter a user ID number (0 0 0 to 9 9 9)

　　2. If the LED is red, previous user data exists. Clear it by entering ✱ ✱ .
　　　 The keypad will beep in confirmation and the LED will turn green.

　　3. Swipe a new user card.

　　4. Enter a new user code.

　　5. To program the next user, repeat from step 1.

　　6. Exit Programming Mode by pressing # .

D. Deleting or Changing a Output # 1 User

1. Enter a user ID number ($\boxed{0}\boxed{0}\boxed{0}$ to $\boxed{9}\boxed{9}\boxed{9}$)
2. Delete exiting user by entering $\boxed{*}\boxed{*}$.
3. Swipe a new user card or enter a new user code.
4. To program the next user, repeat from step 1.
5. Exit Programming Mode by pressing $\boxed{\#}$.

◆ PROGRAMMING OUTPUT #2:

User can only be programmed to have a user card or user code for Output # 2.

Enter Programming Mode by entering the Master Code twice
(The default Master Code is 1234).

A. Program User Codes

1. Enter $\boxed{*}\boxed{4}$
2. Enter a user ID number ($\boxed{0}\boxed{0}$ to $\boxed{0}\boxed{9}$)
3. If the LED is red, previous user data exists. Clear it by entering $\boxed{*}\boxed{*}$.
   The keypad will beep in confirmation and the LED will turn green.
4. Enter a new user code $\boxed{?}\boxed{?}\boxed{?}\boxed{?}$.
5. To program the next user, repeat from step 2.
6. Return to Programming Mode by pressing $\boxed{\#}$.
7. Exit Programming Mode by pressing $\boxed{\#}$ again.

B. Program User Cards

1. Enter $\boxed{*}\boxed{4}$
2. Enter a user ID number ($\boxed{0}\boxed{0}$ to $\boxed{0}\boxed{9}$)
3. If the LED is red, previous user data exists. Clear it by entering $\boxed{*}\boxed{*}$.
   The keypad will beep in confirmation and the LED will turn green.
4. Swipe a new user card.
5. To program the next user, repeat from step 2.
6. Return to Programming Mode by pressing $\boxed{\#}$.
7. Exit Programming Mode by pressing $\boxed{\#}$ again.

C. Deleting or Changing a Output # 2

1. Enter $\boxed{*}\boxed{4}$
2. Enter a user ID number ($\boxed{0}\boxed{0}$ to $\boxed{0}\boxed{9}$)
3. Delete exiting user by entering $\boxed{*}\boxed{*}$.
4. Enter a new user code $\boxed{?}\boxed{?}\boxed{?}\boxed{?}$ or swipe a new user card.
5. To program the next user, repeat from step 2.
6. Return to Programming Mode by pressing $\boxed{\#}$.
7. Exit Programming Mode by pressing $\boxed{\#}$ again.

◆ ADDITIONAL PROGRAMMING

Before doing any of programming as follow, enter Programming Mode
by entering the Master Code twice.

Enter Programming Mode by entering the Master Code twice
(The default Master Code is 1234).

◆ SET AUTO-RELOCK TIME FOR OUTPUT # 1

Default is 1 second. Auto-relock can be set to operate between 1 to 99 seconds.
1. Enter ✱ 1 .
2. Enter 0 1 to 9 9 for Latch Mode (Auto-relock Time Output # 1 will activate).
3. Enter 0 0 Toggle Mode.

◆ SET AUTO-RELOCK TIME FOR OUTPUT # 2

Default is 1 second. Auto-relock can be set to operate between 1 to 99 seconds.
1. Enter ✱ 5 .
2. Enter 0 1 to 9 9 for Latch Mode (Auto-relock Time Output # 2 will activate).
3. Enter 0 0 Toggle Mode.

◆ SET FUNCTION FOR OUTPUT # 2

Default is User Code. Output # 2 can be activated by user code or via ✱ .
1. Enter ✱ 2 .
2. Enter 0 1 for user code.
3. Enter 0 2 for door bell.

Note: Door bell is activated by pressing ✱, each activated time lasts 1 second.

◆ RESET THE MASTER CODE

Reset the Master Code in case the Master Code is lost.
1. Disconnect power from the device.
2. Reconnect the power, while holding down the # key.
3. The device will sound a beep to confirm a successful reset after
   retrieving the power.
4. Enter six "0" (000000) first and check if the master code length is
   4, 5 or 6 digits.
   e.g. 4 digits (12341234), 5 digits (1234512345), 6 digits (123456123456)

◆ ADDING SEQUENTIAL CARDS OR KEY FOBS IN SEQUENCE,
 ONE AFTER THE OTHER.
   Where blocks of sequential cards or key fobs need to be added, you can
   save time by using this programming feature.
   1. Enter ✳ 9 .
   2. Enter 0 1 .
   3. Enter a starting user ID number (0 0 0 to 9 9 9).
   4. Enter the number of cards or key fobs (0 0 0 to 9 9 9).
   5. Swipe new user cards or key fobs in sequence.

◆ ENABLE / DISABLE ANTI-TAMPER ALARM
   1. Enter ✳ 6 .
   2. Enter 0 1 to disable Anti-Tamper Alarm.
   3. Enter 0 2 to enable Anti-Tamper Alarm.

◆ ANTI BREAK OPEN FUNCTION

   When photoresistor detects the light, the buzzer goes off.
   The buzzer would stop beeping when there's no detection
   of light or the master code is entered.

◆ DELETE ALL USERS
1. Enter Programming Mode by entering the Master Code twice.
   2. Enter ✳ 8 8 8
   3. 6 short beeps and 1 long beep, and return to Programming Mode.
   Note: All user cards and user codes will be deleted after key entry.
        Other programming settings and the master remain the same.

◆ RESTORE FACTORY SETTINGS
   1. Enter Programming Mode by entering the Master Code twice.
   2. Enter ✳ 8 9 9
   3. 1 long beep, and return to Programming Mode.
   Note: A factory restore erases all the user information and settings
        after the key entry. The master code will be 1234.

◆ PROGRAMMING QUICK REFERENCE GUIDE

Operation Function	Step 1	Step 2	Step 3
Enter Programming Mode	Enter Master Code twice 1 2 3 4 1 2 3 4		
Exit Programming Mode	Press #		
Add a new user code for Output **#1**	Enter a 3 digit user ID (from 0 0 0 to 9 9 9)	Enter a 4 digit user code ? ? ? ?	
Add a new user code for Output **#2**	Enter ✶ 4	Enter a 2 digit user ID (from 0 0 to 0 9)	Enter a user code ? ? ? ?
Delete a user code for Output **#1**	Enter a 3 digit user ID (from 0 0 0 to 9 9 9)	Enter ✶ ✶	
Delete a user code for Output **#2**	Enter ✶ 4	Enter a 2 digit user ID (from 0 0 to 0 9)	Enter ✶ ✶
Set Auto-Relock Timer for Output **#1**	Enter ✶ 1	Enter number of seconds (from 0 0 to 9 9)	
Set Auto-Relock Timer for Output **#2**	Enter ✶ 5	Enter number of seconds (from 0 0 to 9 9)	
Set Function for Output **#2**	Enter ✶ 2	Enter 0 1 for user codes Enter 0 2 for door bell	
Enable /Disable Anti-Tamper Alarm	Enter ✶ 6	Enter 0 1 for disable Enter 0 2 for enable	
Delete all users	Enter ✶ 8 8 8		
Restore to Factory Setting	Enter ✶ 8 9 9		