Contents

1.Introduction

The BC-2000/K2 is a standalone access controller, they use the latest microprocessor technology to operate door strikes and security systems that require a momentary (timed) or latching dry contact closure.

All programming is done through the keypad. Codes and operating parameters are stored within the microprocessor and can not be lost due to power failure.

The BC-2000/K2 can store 1000 users with 4-6 digits password codes.It has one relay output with 3 Amp changeover contacts.

2.Specifications

1:Programmable Functions
Relay momentary
Relay strike time
Pulse mode,Toggle mode
Change Codes 1 master, 1000 users

2:Programmable Timers
Door relay time 1-99 seconds
Alarm time 1-3 minutes

3:Programming memory:
Non volatile EPROM memory

4:Wiring Connections
Electric lock
External bell
External Push Switch
Magnetic Contacts
Alarm

5: 12V DC
Metal shell keypad
12 keys with backlight

3.Important Information

If holes are to be drilled before mounting onto a wall, check for hidden cables and/or pipes before drilling. Use safety goggles when drilling or hammering in cable clips. Every effort has been made to provide accurate information, however slight variations can occur. We also reserve the right to make changes for product improvement at any time

NOTE: please read these instructions carefully before attempting to install the BC-2000/K2

Internal Interface Circuit

1. Alarm output interface (See Figure 1)

2. Electric lock interface (See Figure 2)

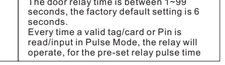


Figure 1

Figure 2

4.Mounting

1. Attach the rear plate to a single or double gang electrical box or secure to the wall firmly with at least three flat head screws.
2. When wiring has been completed, attach the front cover to the rear plate.

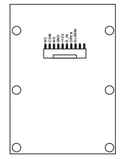


Figure 3


K2

BC-2000

Figure 4

5.Wiring

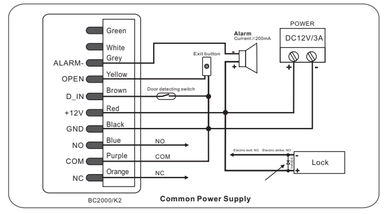
1.Unplug the cable harness and connect the necessary cables, (See Figure 3).
2.Tape any wires that are unused.

3.Plug in the cable harness on the PCB , (See Figure 3)
4.attach the front cover(See Figure 4)

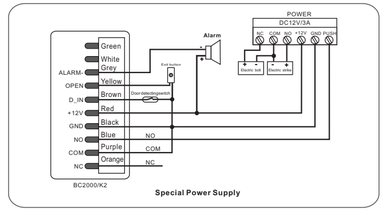
Terminal Wire Connector 1 Function

10		Green	
9		White	
8	ALARM	Grey	Alarm Switched negative when active
7	OPEN	Yellow	To Door EXIT Request Button Then Negative
6	D_IN	Brown	To Door Contact Then To Negative
5	12V	Red	(+) 12VDC Positive Regulated Power Input
4	GND	Black	(-) Negative Regulated Power Input
3	NO	Blue	Door Strike Relay NO
2	COM	Purple	Door Strike Relay Com
1	NC	Orange	Door Strike Relay NC

Do not plug the power supply or transformer into the mains until all wiring has been completed and the front cover secured.



Common Power Supply



Special Power Supply

Power on

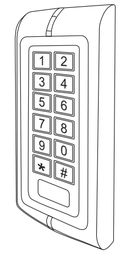
After all wiring is completed and the unit face plate is attached to the back plate,power on,the red LED will be flashing.

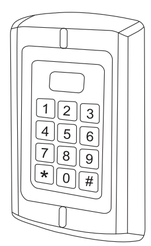
BC-2000/K2 Quick Reference Programming Guide

To enter the programming mode	* Master code # 9999 is the default factory master code
To exit from the programming mode	*
Note that to undertake the following programming the master user must be logged in	
To change the master code	0 New code # New code # The master code can be 4-6 digits long
To add a PIN user	1 User ID number # PIN # The ID number is any number between 000 ~ 999.The PIN is any 4-6 digits between 0000 ~ 999999 with the exception of 1234 which is reserved. Users can be added continuously without exiting programming mode
To add a card user	1 Read Card # Cards can be added continuously without exiting from programming mode
To delete a PIN or a card user.	2 User ID number # for a PIN user or 2 Read Card # for a card user Users can be deleted continuously without exiting from programming mode

To unlock the door	
To unlock the door for a PIN user	Enter the PIN then press #
To unlock the door for a card user	Present the card

Access Control
— User manual


K2


BC-2000

6.Detailed Programming Guide

6.1. User Settings

To enter the programming mode	* Master code # 9999 is the default factory master code
To exit from the programming mode	*
Note that to undertake the following programming the master user must be logged in	
To change the master code	0 New code # New code # The master code is any 4-6 digits
Setting the working mode: Set valid card only users Set valid card and PIN users Set valid card or PIN users	3 0 0 # Entry is by card only 3 0 1 # Entry is by card and PIN together 3 0 2 # Entry is by either card or PIN (default)
To set a user in either card or PIN mode (3 0 2 #) (Default setting)	
To add a **PIN** user	1 User ID number # PIN # The ID number is any number between 000-999. The PIN is any 4-6 digits between 0000-999999 with the exception of 1234 which is reserved. Users can be added continuously without exiting from programming mode as follows: 1 User ID no.1# PIN# User ID no.2# PIN#
To delete a **PIN** user	2 User ID number # Users can be deleted continuously without exiting programming mode
To change the **PIN** of a PIN user (This step must be done out of programming mode)	* ID number # Old PIN # New PIN # New PIN #
To add a **card** user (Method 1) This is the fastest way to enter cards using ID number auto generation.	1 Read card # Cards can be added continuously without exiting programming mode
To add a **card** user (Method 2) This is the alternative way to enter cards using User ID Allocation. In this method a User ID is allocated to a card. Only one user ID can be allocated to a single card.	1 ID number # Card #
To delete a **card** user by card number. Note users can be deleted continuously without exiting programming mode	2 Read Card #

To delete a card user by user ID. This option can be used when a user has lost their card	2 User ID #
To set a card and PIN user in card and PIN mode (3 0 1 #)	
To Add a card and Pin user (The PIN is any 4-6 digits between 0000 & 999999 with the exception of 1234 which is reserved.)	Add the card as for a card user Press * to exit from the programming mode Then allocate the card a PIN as follows: * Read card 1234 # PIN # PIN #
To change a PIN in card and PIN mode (Method 1) Note that this is done outside programming mode so the user can undertake this themselves	* Read Card Old PIN # New PIN # New PIN #
To change a PIN in card and PIN mode (Method 2) Note that this is done outside programming mode so the user can undertake this themselves	* ID number # Old PIN # New PIN # New PIN #
To delete a Card and PIN user just delete the card	2 User ID #
To set a card user in card mode (3 0 0 #)	
To Add and Delete a card user	The operating is the same as adding and deleting a card user in 3 0 1 2 #
To delete All users	
To delete ALL users. Note that this is a dangerous option so use with care	2 0000 #

To unlock the door	
For a PIN user	Enter the PIN then press #
For a card User	Read card
For a card and PIN user	Read card then enter PIN #

6.2. Relay Setting (Pulse mode, Toggle mode)

Pulse mode (Factory default)

Pulse mode - Door relay time setting	4 1~99 # The door relay time is between 1~99 seconds, the factory default setting is 6 seconds. Every time a valid tag/card or Pin is read/input in Pulse Mode, the relay will operate, for the pre-set relay pulse time

Toggle mode

Toggle mode	4 0 # Every time a valid tag/card or Pin is read/input in Toggle Mode, the relay changes state, which will not turn back until read card or input Pin again.

6.3. Alarm Settings, Door Detecting

Alarm output time	
To set the alarm output time (1~3 minutes) Factory default is 1 minute	5 1~3 #
Door Open Detection Door Open Too Long (DOTL) warning. When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened normally, but not closed after 1 minute, the inside buzzer will beep automatically to remind people to close the door and continue for 1 minute before switching off automatically. Door Forced Open warning. When used with an optional magnetic contact or built-in magnetic contact of the lock, if the door is opened by force, or if the door is opened after 20 seconds of the electro-mechanical lock not closed properly, the inside buzzer and alarm output will both operate. The Alarm Output time is adjustable between 1~3 minutes with the default being 1 minute.	
To disable door open detection. (Factory default)	6 0 0 #
To enable door open detection	6 0 1 #
Keypad Lockout & Alarm Output options. If there are 10 invalid cards or 4 incorrect PIN numbers in succession either the keypad will lockout for 10 minutes or the alarm will operate for 10 minutes, depending on the option selected below.	
Normal status: No keypad lockout or alarm (factory default)	7 0 0 # (Factory default setting)
Keypad Lockout	7 0 1 #
Alarm Output	7 0 2 #

7.To remove the alarm

To reset the Door Forced Open warning	Read valid card or Master Code #
To reset the Door Open Too Long warning	Close the door or Read valid card or Master Code #

8.Resetting To Factory Default Setting

To reset to factory default, power off, press * , hold it and power on, release it until hear three beeps(two short, one long), means reset to factory default successfully.

Remarks: Reset to factory default, the user's information is still retained.

9.Technical Specification

Supply Voltage:	12V DC
Current Consumption:	60mA @ quiescent maximum
Door Relay:	3Amp
Alarm output load:	200mA pull current
Memory:	Non volatile EPROM memory
Codes:	1000 Users
Keypad:	12 keys, 3 LED status indicators
Card Types:	EM or EM compatible
Induction Distance:	3-6cm
Wiring Connections:	Electric lock
	Remote Request to Exit
	Door open detection
	External Alarm
Tamper Protection:	Negative loop, normally closed
Keypad Housing:	Metal
Operating Temperature:	-20℃ to 60℃ (-4°F to 140°F)
Dimensions:	(BC-2000)128 mm×82 mm×28mm (K2)135 mm X 58 mm X 26 mm
Weight:	500g

10.Package Listing

Name	Model no.	Qnty	Remark
Digital Keypad	BC-2000/K2	1	
User Manual	BC-2000/K2	1	
Diode	1N4004	1	
Wall Fixing Plug	Φ6mm × 27 mm	4	Used for fixing
Self Tapping Screws	Φ4mm × 27 mm	4	Used for fixing