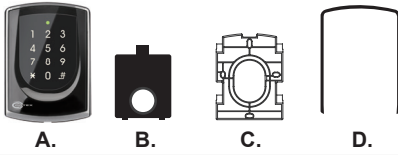
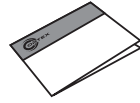


## Contents

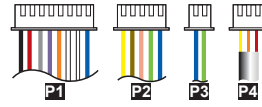
### 1 Products



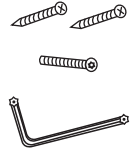
### 2 User Guide



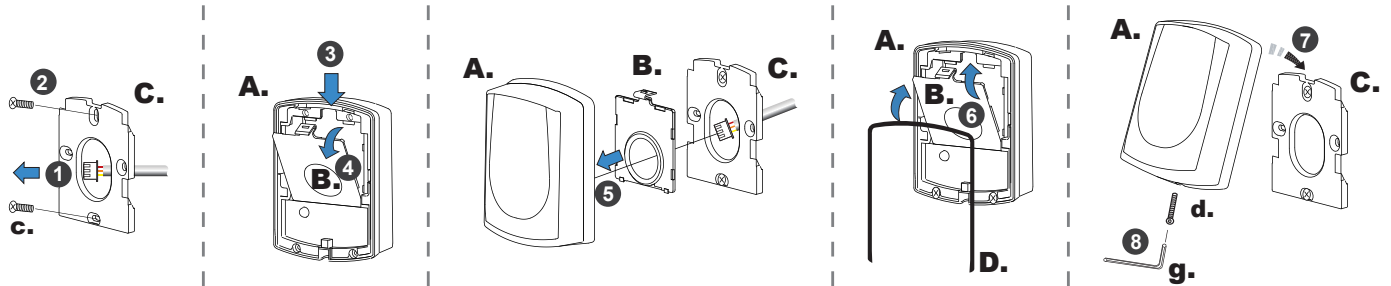
### 3 Terminal Cables



### 4 Allen Key and Screws



## Installation



- Using a screwdriver, screw the metal mounting plate **C.** to the wall.
- Take off the plastic mounting plate **B.** from reader **A.**; and then, pull cable ends through the access holes of **C.** and **B.** and attach **B.** back to reader **A.** .
- Put on the elastic band **D.** embedded into the plastic frame.
- Install Security Torx screw (supplied) into the hole of ACC980 at bottom with the Allen Key (supplied).
- Apply power. Green and read Led will light up at the same time, and a beep sound.

## Notice

### 1.Tubing:

The communication wires and power line should not be housed in the same electrical conduit or tubing. They should always be installed in separate tubes.

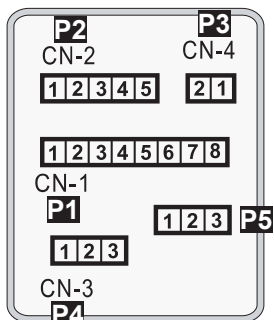
### 2.Cable selection:

Use AWG 22-24 "Shielded twisted Pair" to avoid star wiring.

### 3.Power supply:

Do Not connect the reader and lock to the same power supply. While the lock activating will case the reader's power unstable and might affect the reader function. The standard connection of power supply is the door relay and the lock use the same power supply; the reader use independent power supply.

## Connector Table



### P1.

Wire Application	Wire	Color	Description
Door Relay	1	Blue White	(N.O.) DC24V1Amp
	2	Purple White	(N.C.) DC24V1Amp
	3	White	(COM) DC24V1Amp
Door Sensor	4	Orange	Negative Trigger Input
Exit Switch	5	Purple	Negative Trigger Input
Alarm Output	6	Gray	N.O. or N.C. shift by JP1 jumper and Shared Com with Door Relay
	7		Thick Red
Power	8	Thick Black	DC Power 0V

### P2.

Wire Application	Wire	Color	Description
Wiegand	1	Thin Blue	Wiegand DAT:1 Input
	2	Thin Green	Wiegand DAT:0 Input
Beeper	3	Pink	Beeper Output 5V /100mA, Low
	4	Brown	
LED	4	Yellow	LED Green Output 5V /20mA, Max
	5		LED Red Output 5V /20mA, Max

### P3.

Wire Application	Wire	Color	Description
Networking Module	1	Thick Green	RS-485(B-)
	2	Thick Blue	RS-485(A+)

### P4.Contact Rating: 1A 125VAC/24VDC

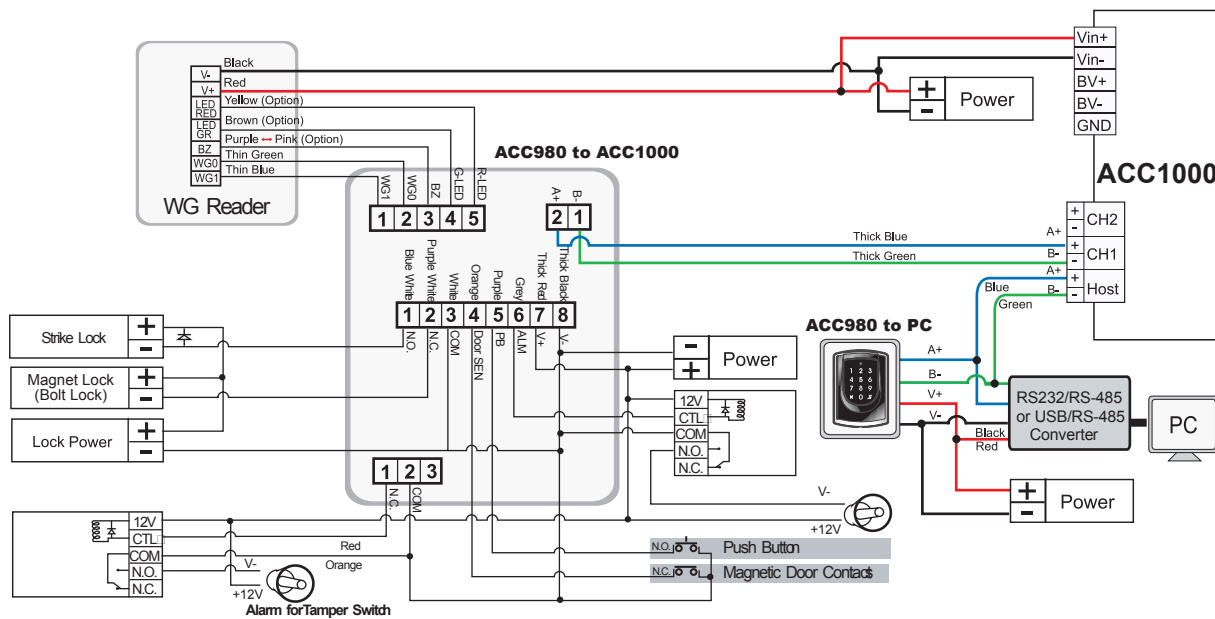
Wire Application	Wire	Color	Description
Tamper Switch	1	Red	N.C.
	2	Orange	COM
	3	Yellow	N.O.

※After S/N: 0706-XXXXXX

### P5.(Optional)

Wire Application	Wire	Color	Description
3-PIN Connector	1	Black	GND.
	2	White	Duress
	3	Purple	Arming

## Diagram



## Command List

Function	Command	Description	Mode
Entering programming mode	* PPPPPP #	PPPPPP=Master Code, default value=123456	M4/M6/M8
Exiting programming mode	* #		M4/M6/M8
Exiting programming mode and enabling arming status	* * #		M4/M6/M8
Node ID setting (Connecting to ACC1000, or total unit is ≤ 254)	00 * NNN #	NNN=Node ID Node ID: 001~254	M4/M8
Node ID setting (Connecting to PC directly without via ACC1000 and > 254)	00 * NNN * VVV * nnn #	NNN=Node ID of ACC980, VVV=Virtual ACC1000 Node ID, nnn=Door number	M4/M8
Mifare tag / card format (Optional)	01 * N #	N: 0=ISO14443A; 1=ISO14443B; 2=ISO156896; 3=I Code1; 4=I Code2 PS.1. Please select the compliance, firstly. 2. Make sure reader and card using the same compliance.	M4/M8
Door relay time setting	02 * TTT #	TTT=Door relay time 000=Normal open 001~600=1~600 sec.; 601~609=0.1~0.9 sec.	M4/M6/M8
Alarm relay time setting	03 * TTT #	TTT=Alarm relay time 001~600=1~600 sec.	M4/M6/M8
Control mode setting	04 * N #	N=Mode 4=Mode4 ; 6=Mode6 ; 8=Mode8	M4/M6/M8
Arming delay time setting	05 * TTT #	TTT=Arming delay time 001~600=1~600 sec.	M4/M6/M8
Alarm delay time set	06 * TTT #	TTT=Alarm delay time 001~600=1~600 sec.	M4/M6/M8
Master card setting	07 * SSSSS * EEEEE #	SSSSS-EEEEEE=00000-01023; SSSSS=Starting user address; EEEEE=Ending user address	M4/M8
Auto-open zone setting	08 * N * HHMMhmm * FFFFFFF #	N: 2 sets of auto-open zone (0: 1st set; 1: 2nd set) HHMMhmm=Starting time to ending time (i.e.: 08301200=08:30 to 12:00) FFFFFFF= 7 days of week (Sat/Fri/Thu/Wed/Tue/Mon/Sun) (F= 0: disable; 1: enable)	M4/M6/M8
Master code setting	09 * PPPPPRRRRR #	PPPPPP=New master code RRRRRR=Repeat the new master code	M4/M6/M8
Suspend or delete tag	10 * SSSSS * EEEEE # 10 * SSSSS 9 EEEEE #	* =Suspend 9 =Delete; SSSSS=Starting user address, EEEEE=Ending user address	M4/M6/M8
Recover tag	11 * SSSSS * EEEEE #	SSSSS=Starting user address EEEEEE=Ending user address	M6
Setting up a batch of user to access by card only (M6 only)	11 * SSSSS * EEEEE #	SSSSS=Starting user address EEEEEE=Ending user address	M4/M8
Setting up the PWD/PIN (Access mode: Card or PIN)	12 * UUUUU * PPPP #	Access mode: <b>Card or PIN</b> ; UUUUU=user address; PPPP=4-digit individual PWD	M4/M8
Setting up the PWD/PIN (Access mode: Card and PIN)	13 * UUUUU * PPPP #	Access mode: <b>Card and PIN</b> ; UUUUU=user address; PPPP=4-digit individual PWD	M4/M8
Arming output time setting	14 * TTT #	TTT=Arming output time; 001~250=1~250 sec.	M4/M6/M8
M4/M8: Duress code setting	15 * PPPP #	PPPP=4-digit individual PWD (default value=4321) PS. Duress code will be unavailable and become a public PIN at access mode 'Card or PIN' of M6	M4/M6/M8
M6: Public PIN setting (Card or PIN)	16 * UUUUU * SSSSSCCCC #	UUUUU= User address; SSSSS=5-digit site code; CCCC=5-digit card code	M4/M8
M4/M8: Arming PWD setting	17 * PPPP #	PPPP=4-digit individual PWD (default value=1234; disable Arming PWD=0000) PS. Arming PWD code will be unavailable and become a public PIN at access mode 'Card PIN' and of M6	M4/M6/M8
Door close time	18 * TTT #	TTT=Door close time: 001~600=1~600 sec.; default value: 15 sec.	M4/M6/M8
Adding tag	19 * UUUUU * QQQQ #	UUUUU=User address; QQQQ=Pieces of card(00001=Continuous sensing)	M4/M8
Factory setting-1(Function default value)	20 * DDD #	Please refer to function default value for details.	M4/M6/M8
Lift control setting: multi-doors	21 * UUUUU * S * FFFFFFFF #	UUUUU=User address, S=4 sets of lift control; FFFFFFFF=8 floors/stop setting (F=0: Disable; 1: Enable)	M4/M8
Add/Delete tag by RF (M6 only)	22 * N #	N=0/Delete tag; N=1/Add tag	M6

Relay time of lift controller setting	23 * NNN * TTT #	NNN=Node ID of lift controller, TTT= relay time: 000~600=1~600 sec.	M4/M8
Factory setting-2 (Function default value)	24 * DDD #	Please refer to function default value for details.	M4/M6/M8
Real time clock setting (Stand-Alone)	25 * YYMMDDHHmmss #	YYMMDDHHmmss: Year/ Month/ Day/ Hour/ Min./ Sec.	M4/M6/M8
Anti-pass-back (Enable user)	26 * SSSSS * EEEEE * N #	SSSSS=Starting user address; EEEEE=Ending user address; N=0/Enable; N=1/Disable; N=2/Initial	M4/M8
Lift control setting: single door	27 * UUUUU * FF #	UUUUU=User Address; FF=Floor number (01~32 floor/stop)	M4/M8
Force open alarm setting	28 * NNN #	Please refer to function default value for details.	M4/M6/M8
Delete all tag	29 * 29 * #		M4/M6/M8

## Function Default Value

20 * DDD #		※Default Value		
Function	Option	Value	Application	
Time Attendance	※0: Yes	1: No	001	Networking
Auto Re-lock	※0: Disable	1: Enable	002	Networking/Stand-Alone
Auto Open	※0: Disable	1: Enable	004	Networking/Stand-Alone
Exit by Push Button	0: Disable	※1: Enable	016	Networking/Stand-Alone
Master Reader of Network	※0: Slave	1: Mater	032	Networking
Access/Exit Reader	※0: Exit	1: Access	064	Networking
Anti-pass-back	※0: Disable	1: Enable	128	Networking

Option 0= none value; Option 1= 1 x each value

(i.e. DDD value of Enable "Auto Open" + "Exit by Push Button" + "Anti-pass-back"  
=004+016+128=148; As a result of that, the command will be 20 \* 148 #.)

24 * DDD #		※Default Value		
Function	Option	Value	Application	
Auto-open door without presenting card at auto open zone	※0: Disable	1: Enable	001	Networking/Stand-Alone
Alarm Output/Lift Control	※0: Alarm Output	1: Lift Control	002	Networking/Stand-Alone
Stop Alarm by...	0: None	※1: Push Button/ Door Closed	064	Networking/Stand-Alone
Door bell	※0: Disable	1: Enable	128	Networking/Stand-Alone

28 * NNN #		※Default Value		
Function	Option	Value	Application	
Dual Door Open	※0: Disable	1: Enable	064	Networking/Stand-Alone
Force Open	※0: Disable	1: Enable	128	Networking/Stand-Alone
Alarm Output				

## Adding and Deleting Tag

### Mode4/Mode8

#### • Adding the Single Tag or the Random tags

Input \*123456 # (or Master Code) → 19 \* UUUUU \* 00001 # → Close Tag into RF Area (Present the tag to the controller.) → OK (Memory location number)  
[i.e.] User Address NO.100 and NO.101 have 2 pcs of random tags:

Access programming mode → 19 \* 00100 \* 00001 # → Close Tag into RF Area → OK

P.S. The First tag has now been added, present the rest of the tags one after the other to add them to the system as well.

#### • Adding the Sequential tags

Input \*123456 # (or Master Code) → 19 \* UUUUU \* QQQQQ # → Close Tag into RF Area (Present the tag with the **lowest number** to the controller.) → OK (Memory location number)  
[i.e.] User Address NO.101 to NO.120 have 20 pcs of sequential tags:(62312~62332):

Access programming mode → 19 \* 00101 \* 00120 # → Close Tag into RF Area(only use the tag **NO.62312**) → OK

#### • Deleting the Single Tag

Input \*123456 # (or Master Code) → 10 \* SSSSS 9 EEEEE #  
[i.e.] Delete User Address: 00058

Access programming mode → 10 \* 00058 9 00058 #

#### • Deleting a batch of Tags

Input \*123456 # (or Master Code) → 10 \* SSSSS 9 EEEEE #  
[i.e.] Delete User Address: 00101~00245

Access programming mode → 10 \* 00101 9 00245 #

#### • Deleting All Tags

Input \*123456 # (or Master Code) → 29 \* 29 \* #

#### Tag Information



### Mode6

#### ※At the Mode 6, User Address = Card Code

#### • Adding Tag

Input \*123456 # (or Master Code) → 11 \* SSSSS \* EEEEE # → OK  
[i.e.] Add User Address: 00100~01254

Access programming mode → 11 \* 00100 \* 01254 # → OK

#### • Deleting Tag

Input \*123456 # (or Master Code) → 10 \* SSSSS \* EEEEE # → OK  
[i.e.] Delete a tag with card code 62362

Access programming mode → 10 \* 62362 \* 62362 # → OK

## Programming

### A. Entering and Exiting Programming Mode

#### • Entering

Input \*123456 # or \*PPPPPP #  
[i.e.] The Default Value= 123456, if already changed the Master Code= 876112, input \*876112 # → Access programming mode

#### • Changing the Master Code

Access programming mode → 09 \* PPPPPRRRRR # [Input the 6-digit new master code twice.]  
[i.e.] If want to changing the Master Code= 876112, input \*123456 # → 09 \* 876112876112 #

#### • Exiting

Input \* #

### B. Changing the Node ID of Reader

Access programming mode → 00 \* NNN # [Node ID: 001~254]

### C. Setting up the password

#### • Individual PWD (M4/M8)

Card or PIN: Access programming mode → 12 \* UUUUU \* PPPP # [i.e. User address: 00001 and PWD: 1234, input 12 \* 00001 \* 1234 #]

Card and PIN: Access programming mode → 13 \* UUUUU \* PPPP # [i.e. User address: 00001 and PWD: 1234, input 13 \* 00001 \* 1234 #]

#### • Public PWD (M6)

PIN only: Access programming mode → 15 \* PPPP # [Input 4-digit PWD, default value: 4321]

Card and PIN: Access programming mode → 17 \* PPPP # [Input 4-digit PWD, default value: 1234]

## D. Setting up the control mode (M4/M6/M8)

Access programming mode → 04 \*N# [N=4/6/8]

Mode	Support	User Capacity	Access Mode	Auto-show Duty time	Event Capacity	120 Holidays	Duress	Time Zone	Lift Control	Anti-pass-back
M4	Networking/ Stand-Alone	3,000	1.Card only 2.Card and PIN (4-digit individual PIN) 3.Card or PIN (if access by PIN only, user should press 9-digit PIN = 5-digit user address + 4-digit individual PIN)	V	1,500	V	V	11	32	V
M6	Stand-Alone	65,535	1.Card only 2.Card and PIN (4-digit public PIN= Arming PWD) 3.Card or PIN (4-digit public PIN= Duress code) P.S. Duress code is unavailable under M6 and as PWD of PIN only	X	X	X	X	X	X	X
M8	Networking/ Stand-Alone	3,000	1.Card only 2.Card and PIN (4-digit individual PIN) 3.Card or PIN (if access by PIN only, user could just press 4-digit individual PIN)	V	1,500	V	V	11	32	V

※ Mode 6 the number of users up to 65535, largely because of its read-only **CARD CODE**, unlike Mode4/Mode8 shall read the **SITE CODE** and **CARD CODE**.

## E. Dual Door Open(M4/M8)

Need the other Reader to do this Function

Access programming mode → 28 \*064# [064= Dual Door Open]

## F. Anti-pass-back(M4/M8)

Usually, anti-pass-back is commonly applied to parking areas in order to prevent from multi-entry with one card at a time, or somewhere wants to monitor not only the access but also exit condition.

### • Device enable

Access programming mode → 20 \*128# [Please refer to function default value for details.]

### • Card user enable

Access programming mode → 26 \*SSSS \*EEEE \*N#

[i.e.] User address from 00152 to 00684 enable the anti-pass-back function: 26 \*00152 \*00684 \*0#

## G. Auto Open Zone

Door will keep opening after first man flashing card. When Stand-Alone, support only two sets of auto-open zone by device setting, but auto-open zone can extend up to 63 sets by Networking.

### • Enable/Disable auto open zone

Access programming mode → 20 \*004# [Please refer to function default value for details.]

### • Enable/Disable auto open door without presenting card

Access programming mode → 24 \*001# [Please refer to function default value for details.]

### • Setting up open time

Access programming mode → 08 \*N \*HHMMhmm \*FFFFFF#

N: 2 sets of auto-open zone (N=0=1st set; N=1=2nd set); HHMMhmm=Staring time to ending time (i.e.: 08301200=08:30 to 12:00);

FFFFFF= 7 days of week (Sat/Fri/Thu/Wed/Tue/Mon/Sun) (F= 0: disable; 1: enable)

## H. Lift control

Connect with **ACC1040** to control which floors the user will be able to access.

### • Device Enable

Access programming mode → 24 \*002# [Please refer to function default value for details.]

### • Single floor

Access programming mode → 27 \*UUUUU \*FF# [UUUU=User Address FF=Floor number (01~32 floor/stop)]

[i.e.] User address NO. 45, only can reach the elevator to the 24th floor: 27 \*00045 \*24#

### • Multi floors

Access programming mode → 21 \*UUUUU \*S \*FFFFFFF#

[UUUUU=User address S: 4 sets of lift control (Input: 0~3) FFFFFFFF: 8 floors/stop setting (F=0=Disable, F=1=Enable)]

[i.e.] User address NO. 45, only to the six floor, with the 20th floor:

Access programming mode → 21 \*00168 \*0 \*0010000# → 21 \*00168 \*2 \*00001000#

Please refer to below floor chart

Set	Floor/ Stop							
	F	F	F	F	F	F	F	F
0	8	7	6	5	4	3	2	1
1	16	15	14	13	12	11	10	9
2	24	23	22	21	20	19	18	17
3	32	31	30	29	28	27	26	25

## I. Restoring Factory Settings

### • Only a function of factory default value. (At Stand-Alone)

Access programming mode → 20 \*016# → 24 \*064# → 26 \*00000 \*01023 \*1# → 28 \*000# → 29 \*29 \*#

※If Master Code already changed, it can not revert to the default value.

## About Alarm System

### Setting up the alarm

#### • Enable

Access programming mode → \* \*#

#### • Disable

Access programming mode → \* \*#

### Under what conditions would trigger alarm systems

#### • Conditions:

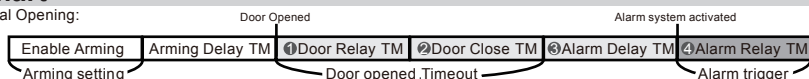
- Arming enabled
- Alarm system connected

#### • Application:

- Door opened too long** (After Normal Opening): Door Opened over the time of door relay time and door close time.
- Door sensor error**: Door sensor is open loop.
- Force open** (Opened without a valid user card being show): Access by force open and illegal procedure.

## Flow chart

A. Normal Opening:



B. Abnormal Opening:



Function	Command
Door Relay TM ①	02
Door Close TM ②	18
Alarm Relay TM ③②	03
Alarm Delay TM ④①	06
Arming Delay TM	05
Force Open	28

## Enable/ Disable the arming status(M4/M8)

### • By flashing card + Arming PWD

Enable/Disable: Flash card +press 4 digit arming PWD **PPPP#** (default: 1234)

## Enable/ Disable the arming status(M6)

1. Arming PWD= 0000: Cancel Arming PWD

2. Arming PWD≠ 0000: Flash card +press 4 digit arming PWD + #