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A. Reader



B. User Guide



C. Terminal Cables



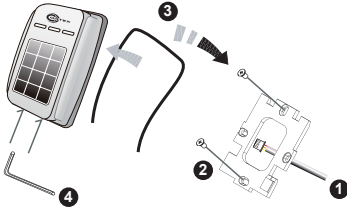
D. Allen Key and Screws



E. Water Resisting Strip



Installation



Steps

- Pull the cables from the square hole of the mounting plate.
- Use a screwdriver to screw the mounting plate onto the wall.
- Attach the water proof strip to the body, then connect the terminal cables to the body and attach the body to the mounting plate.
- Use the Allen key and screws (accessories supplied) to assemble the body onto the mounting plate.
- Turn on the power, and LED will light and beep will sound.

Notice

- 1. Tubing:** The communication wires and power line should NOT be bound in the same conduit or tubing.
- 2. Wire selection:** Use AWG 22-24 Shielded Twist Pair to avoid star wiring.
- 3. Power supply:** Don't equip controller and lock with the same power supply. The power for controller may be unstable when the lock is activating, that may make the controller malfunction.

The standard installation: Door relay and lock use the same power supply, and controller use independent power supply.

Installation Diagram

Cable: P1

Wire Application	Pin	Color	Description
Lock Relay	1	Blue White	(N.O.) DC24V1Amp
	2	Purple White	(N.C.) DC24V1Amp
Common-COM-Point	3	White	(COM) DC24V1Amp
Door contact	4	Orange	Negative Trigger Input
Exit Switch	5	Purple	Negative Trigger Input
Alarm Relay	6	Gray	Low output; Max 12V/100mA (Open Collector)
Power	7	Thick Red	DC Power 12V
	8	Thick Black	DC Power 0V

Cable: P2

Wire Application	Pin	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
LED	4	Brown	LED Green Output 5V/20mA, Max
	5	Yellow	LED Red Output 5V/20mA, Max

Cable: P3

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

Cable: P4 Contact Rating: 1A 125VAC/24VDC

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

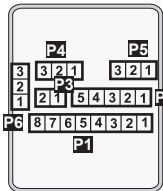
※After S/N: 0706-XXXXXX

Cable: P5 (Optional)

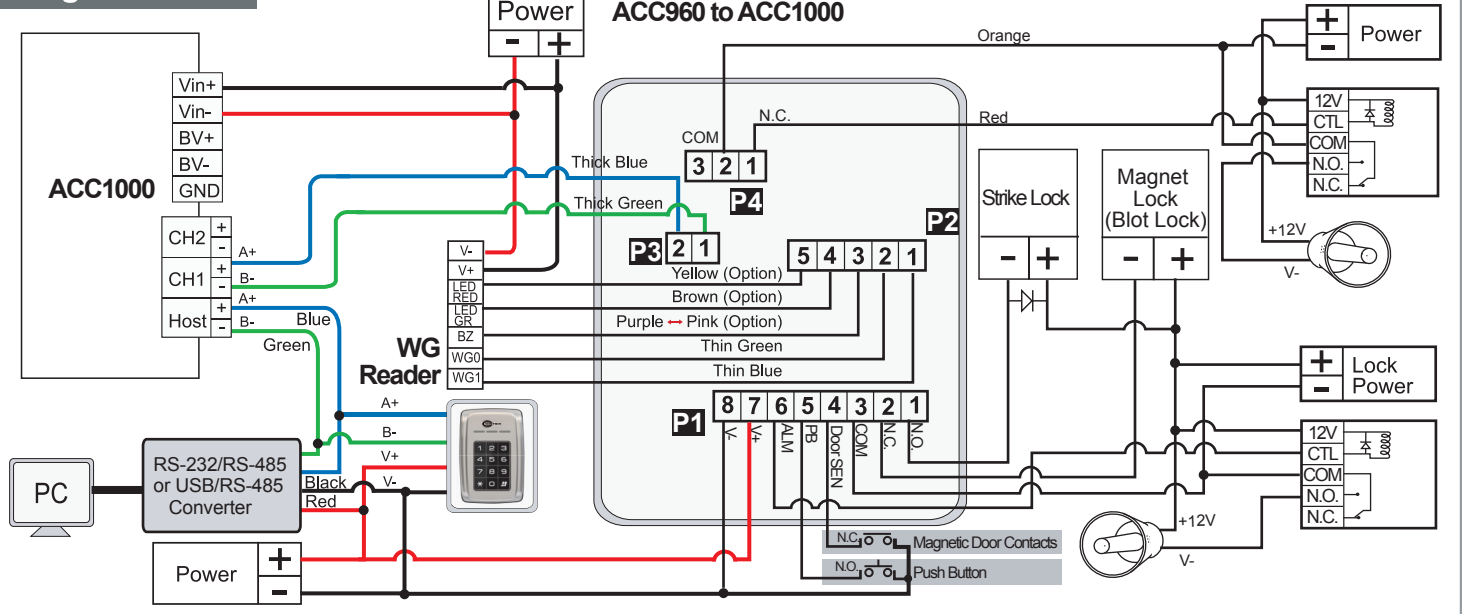
Wire Application	Pin	Color	Description
3-PIN Connector	1	Black	GND.
	2	White	Duress
	3	Purple	Arming/ Security trigger signal

Cable: P6 (Optional)

Wire Application	Pin	Color	Description
3-PIN Connector	1	Black	GND.
	2	White	DC 12V
	3	Purple	Security trigger signal



Diagram



**Command List**

Entering programming mode	*123456# or *Master Code# (If already changed)	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 ≤ 254)	00*NNN# (Node ID: 001~254)	M4/M8
Node ID setting (Connecting to PC directly without ACC1000 and total unit > 254)	00*NNN*VVV*nnn# NNN = Node ID of ACC960 · VVV = Virtual ACC1000 Node ID · nnn = Door number	M4/M8
Mifare tag / card format (Optional)	01*N# N=0: ISO 14443A / N=1: ISO 14443B / N=2: ISO 15693 / N=3: I Code 1 / N=4: I Code 2 PS: 1.Please select the compliance first. 2.Make sure reader and card use the same compliance.	M4/M6/M8
Door relay time setting	02*TTT# (Door relay time: 000=Normal open) (Door relay time: 001~600=1~600 sec.) (Door relay time: 601~609=0.1~0.9 sec.)	M4/M6/M8
Alarm relay time setting	03*TTT# (Door relay time: 000=Normal open) (Door relay time: 001~600=1~600 sec.)	M4/M6/M8
Control mode setting	04*N# (Mode: 4/6/8)	M4/M6/M8
Arming delay time setting	05*TTT# (Arming delay time: 001~600=1~600 sec.)	M4/M6/M8
Alarm delay time setting	06*TTT# (Alarm delay time: 001~600=1~600 sec.)	M4/M6/M8
Master card setting	07*SSSS*EEEE# (Input a user or a batch of user as the master card: 00000~01023) SSSS=Starting user address · EEEEE=Ending user address	M4/M8
Auto-open zone setting	08*N*HHMMHHMM*111111# N: 2 sets of auto-open zone (0: 1st set; 1: 2nd set) HHMMHHMM=Starting time to ending time (i.e.: 08301200=08:30 to 12:00) 111111: 7 days of week (Sun/Mon/Tue/Wed/Thu/Fri/Sat) (0: disable; 1: enable)	M4/M6/M8
Master code setting	09*PPPPRRRRR# PPPPP=New master code RRRRR=Repeat the new master code	M4/M6/M8
Suspend or delete tag (* = Suspend) (9 = Delete)	Suspend: 10*SSSS*EEEE# Delete: 10*SSSS9EEEE# SSSS=Starting user address · EEEEE=Ending user address	M4/M6/M8
Recover tag	11*SSSS*EEEE# recover the suspended tag SSSS=Starting user address · EEEEE=Ending user address	M4/M8
Setting up a batch of user to access by card only (M6 only)	11*SSSS*EEEE# SSSS=Starting user address · EEEEE=Ending user address	M6
Setting up the PWD/PIN (Access mode: Card or PIN)	12*UUUU*PPPP# UUUU= User address PPPP=4-digit individual PWD	M4/M8
Setting up the PWD/PIN (Access mode: Card and PIN)	13*UUUU*PPPP# UUUU= User address PPPP=4-digit individual PWD	M4/M8
Arming output time setting	14*TTT# (Arming output time: 001~250=1~250 sec.)	M4/M6/M8
M4/M8: Duress code setting M6: Public PIN setting (Card or PIN)	15*PPPP# PPPP=4-digit individual PWD P.S. Duress code will be unavailable and become a public PIN at access mode M6 "Card or PIN"	M4/M6/M8
Card number modification	16*UUUU*SSSSCCCC# UUUU= User address · SSSS=5-digit site code CCCC=5-digit card code	M4/M8
M4/M8: Arming PWD setting M6: Public PIN setting (Card and PIN)	17*PPPP# PPPP=4-digit individual PWD (default value=1234; disable Arming PWD=0000) P.S. Arming PWD code will be unavailable and become a public PIN at access mode M6 "Card and PIN"	M4/M6/M8
Door close time	18*TTT# (Door close time: 001~600=1~600 sec.; default value: 15 sec.)	M4/M6/M8
Adding tag	19*UUUU*QQQQ# UUUU=User address · QQQQ=Pieces of card	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-floors	21*UUUU*S*FFFFFFF# UUUU=User address S: 4 sets of lift control (Input: 0~3) · FFFFFFFF: 8 floors/stop setting (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*SSSS*EEEE*N# SSSS=Starting user address · EEEEE=Ending user address N=0=Enable; N=1=Disable; N=2=Initial	M4/M8
Lift control setting: single door	27*UUUU*FF# UUUU=User Address · FF=Floor number (01~32 floors/stops)	M4/M6/M8
Force open alarm setting	28*NNN# NNN=000=Disable · NNN=128=Enable	M4/M8
Delete all tag	29*29*#	M4/M6/M8
Enable the security trigger signal (with ACC899)	34*128# To Change the "Arming" become the security trigger signal, when controller is connected with ACC899.	M4/M6/M8

Function Default Value

A · 20*DDD#

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

Remarks:

*: default value

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, the command will be [20*148#].)

B · 24*DDD#

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

C · 28*DDD#

Function	Option		Value	Application
	0	1		
Dual Door Open	Disable*	Enable	64	Networking / Stand-Alone
Force Open Alarm Output	Disable*	Enable	128	Networking / Stand-Alone

Programming

A · Entering and Exiting Programming Mode

Entering	Exiting
[*123456#] or [*Master Code#] (If already changed)	[*#]

B · Initial Setup

1. Restoring Factory Settings

Access programming mode [*123456#] or [*Master Code#]

(If already changed) → [20*016#] → [24*000#] →

[26*0000*01023*2#] → [28*000#] → [29*29*#] → Changing

the Master Code to default value:123456 → [*#] (done)

2. Changing the Master Code

Access programming mode [*123456#] or [*Master Code#]

(If already changed) → [09*PPPPPPRRRRR#] (Input the

6-digit new master code twice)

3. Changing the Node ID of Reader

Access programming mode [*123456#] or [*Master Code#]

(If already changed) → [00*NNN#] (Node ID: 001~254)

C · Setting up the control mode (M4/M6/M8)

Access programming mode [*123456#] or [*Master Code#] (If already changed) → [04*N#]

(Input: 4/6/8)

Mode Application	M4	M6	M8
Support	Stand-Alone Networking	Stand-Alone	Stand-Alone Networking
User Capacity	3,000(0~2,999)	65,535(1~65,535)	3,000(0~2,999)
Access Mode	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)	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.	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)
Event Capacity	1,500	X	1,500
120 Holidays	V	X	V
Duress	V	X	V
Time Zone	11	X	11
Lift Control	32	X	32
Anti-pass-back	V	X	V

D · Setting up the password

1. Individual PWD (M4/M8)

a. Card or PIN

Access programming mode [*123456#] or [*Master Code#]

(If already changed) → [12*UUUUU*PPPP#] (i.e. User

address: 00001 and PWD: 1234, input 12*00001*1234#)

b. Card and PIN

Access programming mode [*123456#] or [*Master Code#]

(If already changed) → [13*UUUUU*PPPP#] (i.e. User address:

00001 and PWD: 1234, input 13*00001*1234#)

2. Public PWD (M6)

a. Card and PIN

Access programming mode [*123456#] or [*Master Code#]

(If already changed) → [17*PPPP#]

(Input 4-digit PWD, default value: 1234)

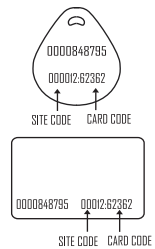
b. PIN only

Access programming mode [*123456#] or [*Master Code#]

(If already changed) → [15*PPPP#]

(Input 4-digit PWD)

Tag Information



E · Anti-pass-back

Usually, anti-pass-back is commonly applied to parking areas or elsewhere user wants to monitor not only the access but also exit condition.

• Enable device

■ Access programming mode → [20*128#] please refer to "20*DDD#" function default value for additional function value

• Enable card user

■ Access programming mode → [26*SSSS*EEEE*0#]

(i.e. User address from 00001 to 00005 enable the anti-pass-back

function: [26*00001*00005*0#]

F · Auto Open Zone

Door will remain opening after first person flashes card. ACC960 only supports two sets of auto-open zone by device setting, but auto-open zone can be extended up to 63 sets if connected to ACC1000.

• Enable/Disable auto open zone

■ Access programming mode [20*004#] please refer to "20*DDD#" function default value for additional function value

• Enable/Disable auto open door without presenting card

■ Access programming mode [24*001#] please refer to "24*DDD#" function default value for additional function value

• Setting up open time

■ Access programming mode → [08*N*HHMMHHMM*111111#]

N: 2 sets of auto-open zone (N=0=1st set; N=1=2nd set)

HHMMHHMM=starting time to ending time (i.e.: 08301200=08:30 to 12:00)

Adding and Deleting Tag

Adding Tag (M4/M8)			Deleting Tag (M4/M8)		
Single Tag	A Batch of Tags		Single Tag	A Batch of Tags	Delete All Tags
RF Learn Function	Sequential Tag NO.	Random Tag NO.	Memory Location	Memory Location	Access programming mode
Access programming mode *123456# or *Master Code# (If already changed) ↓ 19*UUUUU*QQQQQ# UUUUU=5-digit User Address: 00000~02999 QQQQQ: Input 00001 (Only one tag) (i.e. 19*00001*00001) ↓ Close Tag into RF Area Present the tag to the controller. ↓ OK (Memory location number)	Access programming mode *123456# or *Master Code# (If already changed) ↓ 19*UUUUU*QQQQQ# UUUUU=5-digit User Address: 00000~02999 QQQQQ: Input 5-digit tag units: Enter the quantity of tags to be added. (i.e.: 10 pcs of sequential tag=00010) ↓ Close Tag into RF Area Present the tag with the lowest number to the controller. ↓ OK (Memory location number)	Access programming mode *123456# or *Master Code# (If already changed) ↓ 19*UUUUU*QQQQQ# UUUUU=5-digit User Address: 00000~02999 QQQQQ: Input 00001 ↓ Close Tag into RF Area Present the tag to the controller. ↓ OK (Memory location number) 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.	Access programming mode *123456# or *Master Code# (If already changed) ↓ 10*SSSSS9EEEE# 9=Delete SSSSS=starting user address EEEEE=ending user address (i.e. Delete User Address: 00004~00010=10*00004900010) ↓ Done	Access programming mode *123456# or *Master Code# (If already changed) ↓ 10*SSSSS9EEEE# 9=Delete SSSSS=starting user address EEEEE=ending user address (i.e. Delete User Address: 00004~00010=10*00004900010) ↓ Done	Access programming mode *123456# or *Master Code# (If already changed) ↓ 29*29*# ↓ Done

M6					
Adding Tag (M6)	Deleting Tag (M6)				
Access programming mode *123456# or *Master Code# (If already changed) ↓ 11*SSSSS*EEEE# SSSSS=starting user address=5-digit card code EEEEE=ending user address=5-digit card code (i.e. Add a tag with card code 15031=11*15031*15031) (i.e. Add a batch of tag with card code 15031~15038=11*15031*15038) ↓ Done	<table border="1"> <thead> <tr> <th>Delete Single/A Batch Tag</th> <th>Delete All Tag</th> </tr> </thead> <tbody> <tr> <td> Access programming mode *123456# or *Master Code# (If already changed) ↓ 10*SSSSS*EEEE# or 10*SSSSS9EEEE# SSSSS=starting user address=5-digit card code EEEEE=ending user address=5-digit card code (i.e. Delete a tag with card code 15031=11*15031*15031) (i.e. Delete a batch of tag with card code 15031~15038=11*15031*15038) ↓ Done </td> <td> Access programming mode *123456# or *Master Code# (If already changed) ↓ 29*29*# ↓ Done </td> </tr> </tbody> </table>	Delete Single/A Batch Tag	Delete All Tag	Access programming mode *123456# or *Master Code# (If already changed) ↓ 10*SSSSS*EEEE# or 10*SSSSS9EEEE# SSSSS=starting user address=5-digit card code EEEEE=ending user address=5-digit card code (i.e. Delete a tag with card code 15031=11*15031*15031) (i.e. Delete a batch of tag with card code 15031~15038=11*15031*15038) ↓ Done	Access programming mode *123456# or *Master Code# (If already changed) ↓ 29*29*# ↓ Done
Delete Single/A Batch Tag	Delete All Tag				
Access programming mode *123456# or *Master Code# (If already changed) ↓ 10*SSSSS*EEEE# or 10*SSSSS9EEEE# SSSSS=starting user address=5-digit card code EEEEE=ending user address=5-digit card code (i.e. Delete a tag with card code 15031=11*15031*15031) (i.e. Delete a batch of tag with card code 15031~15038=11*15031*15038) ↓ Done	Access programming mode *123456# or *Master Code# (If already changed) ↓ 29*29*# ↓ Done				

G · Lift control

Connect to lift controller to control which floor(s) the user will be allowed to access.

Enable Device

- Access programming mode **24*002#** please refer to "24*DDD#" function default value for detail.

Single floor

- Access programming mode → **27*UUUUU*FF#**
 UUUUU=User Address
 FF=Floor number (01~32 floors/stops)

Multi floors

- Access programming mode → **21*UUUUU*S*FFFFFFF#**
 UUUUU=User address
 S: 4 sets of lift control (Input: 0~3)
 FFFFFFFF: 8 floors/stops setting (F=0=Disable, F=1=Enable)
 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

H · Setting up the alarm

1. Conditions:

- Arming enabled
- Alarm system connected

Q: How to enable/disable the arming status?

A: By Keypad

Enable: Access programming mode → press *** * #**
 Disable: Access programming mode → press *** #**

By flashing card + Arming PWD

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

3. Flow chart:

Normal Open:

Abnormal Open:

2. Application:

- Door open too long after normal opening
- Door sensor error
- Forced open (access by force open or illegal procedure)

Function	Command
Door Relay TM ①	02
Door Close TM ②	18
Alarm Relay TM ④ ②	03
Alarm Delay TM ⑤ ①	06
Arming Delay TM	05
Force Open	28