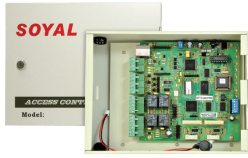
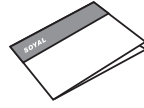


## Contents

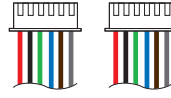
1 Products



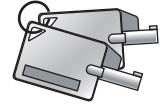
2 User Guide



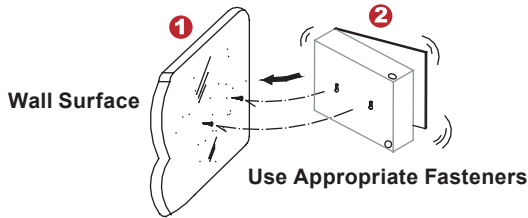
3 Terminal Cables



4 Keys

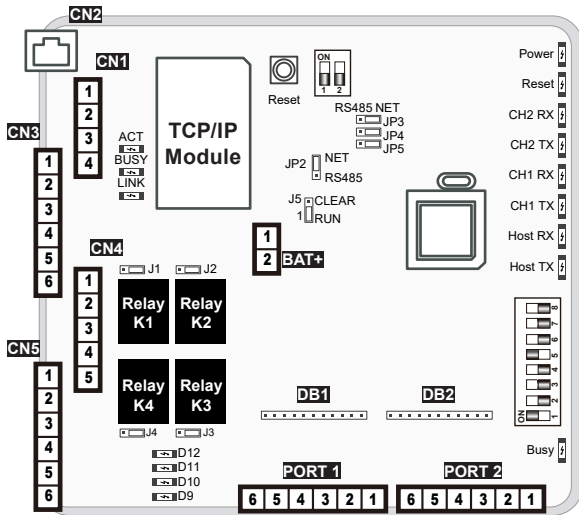


## Installation



- According to the width of two holes on the backside of housing to nail.
- Screw the mounting nails.
- Screws on the wall, and then, hang Controller on the wall.

## Connector Table



### Note:

- Optional for TCP/IP Module.
- External battery for BAT position.
- J1~J4: Set N.O. or N.C. relay output (default value is N.O.).
- J5: EEPROM Restoring.
- JP2~JP5: Select the interface is the Ethernet mode or the RS-485 mode.
- DB1&DB2: Extension Relay Board.

### CN1

Wire Application	Pin	Description
Power	1	Vin+
	2	Vin-
Battery Power	3	BV+
	4	BV-

### CN2 (Only for AR-716Ei)

Wire Application	Pin	Description
Host Interface for Ethernet	1-6	Ethernet

### CN3

Wire Application	Pin	Description
Channel 2 (RS-485 input)	1	B-
	2	A+
Channel 1 (RS-485 input)	3	B-
	4	A+
Host Interface for (RS-485 output)	5	B-
	6	A+

### CN4

Wire Application	Pin	Description
Relay Output	1	K1
	2	K2
	3	K3
	4	K4
	5	COM

### CN5

Wire Application	Pin	Description
Digital Input	1	COM
	2	DI.4
	3	DI.3
	4	DI.2
	5	DI.1
	6	12V

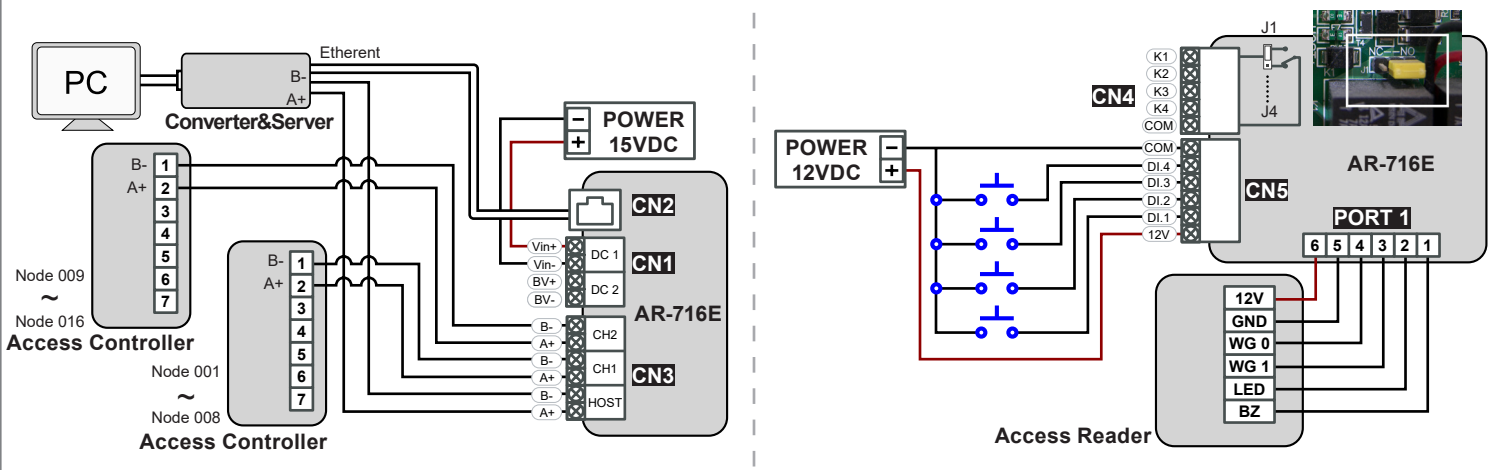
### BAT (in the case)

Wire Application	Pin	Description
Memory power	1	Vin+
	2	Vin-

### PORT 1 & PORT 2

Wire Application	Pin	Color	Description
Buzzer	1	Gray	Buzzer Output
LED	2	Brown	LED Output
Wiegand	3	Blue	WG DAT: 1 Input
	4	Green	WG DAT: 0 Input
Power	5	Black	GND
	6	Red	12V

## Wiring Diagram



## TCP/IP Module Configuration

### A. 2 PIN Dip-Switch setting



Dip-Switch	Description for ON
SW_1	DHCP Function TCP/IP module supports the auto-configuration of IP, gateway Address and subnet mask; however, must be sure the DHCP server is available.
SW_2	It will send the signal of IP address at per second.

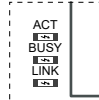
※ **Note:** After finished setting up parameter, switch DIP SW\_1 and SW\_2 to "OFF" position.

### B. IP Address Reset



- Press IP reset button more than 5 seconds, and then TCP/IP module will restore to factory default value as follows.
- ※ Factory Default: <http://192.168.1.127>

### C. Description for LED



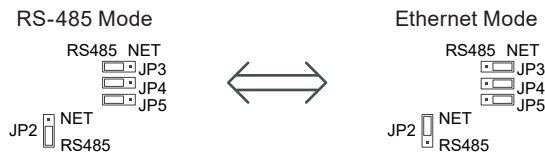
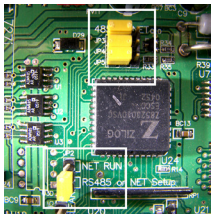
LED name	Color	Description
LINK	Yellow	Media is connected.
	Off	Media is disconnected.
ACT	Green	10/100M base T Ethernet is connected.
	Off	Ethernet cable is disconnected or has a short.
BUSY	Red	Reset the IP address.
	Off	No Action.

## Operation

### A. TCP/IP Mode

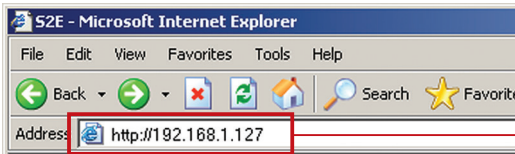
#### • Hardware

Before use the Ethernet Mode, please note that JP2 ~ JP5 is transferred to the NET position.



#### • Software

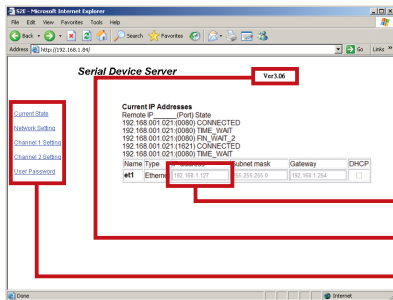
Connect the device to a computer, Then turn on your Web Browser and type "<http://192.168.1.127>" on IP address to start factory default webbrowser.



Factory Default

※ <http://192.168.1.127> is the factory default, if the IP address has been changed, the new IP address may be entered.

When you type the IP address, you will see the [Current State] page.

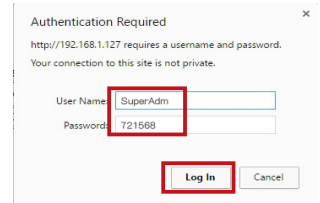


- Current IP address
- The version of ISP Firmware
- Main Menu

Login:

Type "User name" & "Password" on the pop up login window.

※ Factory Default :  
User name: SuperAdm  
Password: 721568



Main Menu:

Current State: Connected to the controller displays the current status.

Current IP Addresses					
Remote IP	(Port)	State			
192.168.0.01	021	(0080)	CONNECTED		
192.168.0.01	021	(0080)	TIME_WAIT		
192.168.0.01	021	(0080)	FIN_WAIT_2		
192.168.0.01	021	(1621)	CONNECTED		
192.168.0.01	021	(0080)	TIME_WAIT		
Name	Type	IP address	Subnet mask	Gateway	DHCP
et1	Ethernet	192.168.1.127	255.255.255.0	192.168.1.254	<input type="checkbox"/>

Network Setting: Want to set up new IP address, can click into.

#### Network Setting

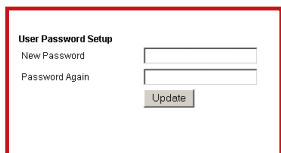
After you have changed the IP address, the device will **restart** (hardware reset). You need to change the **host IP** with new IP Address in Internet Browser to **re-connect** the target.

Item	Setting
Device Name	S2E-Device
LAN IP Address	192.168.1.84
LAN NetMask	255.255.255.0
Default Gateway	192.168.1.254
Primary DNS Server	168.95.1.1
Secondary DNS Server	168.95.192.1
MAC Address	00-13-57-FF-FF-F0
DHCP Client	<input type="checkbox"/>

a. Type the new IP address

b. Click it to update

User Password: Want to change new Account & Password, can click into.

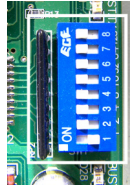
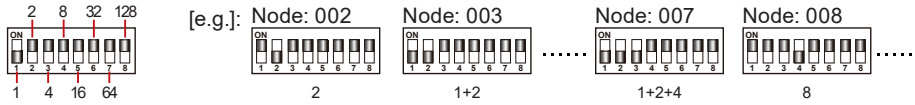


Type the new User Name & Password.

## B. Node ID setting ※ The hardware setup is complete, the software can be set.

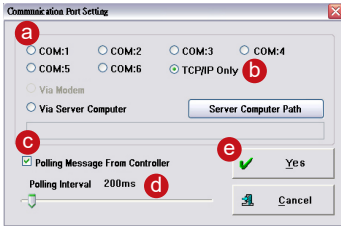
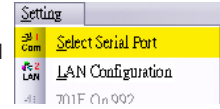
### • Hardware

Power Off → Take off the battery connector from [BAT+] socket → Set up node number by 8 dip-switch → Plug in battery connector → Re-apply the power



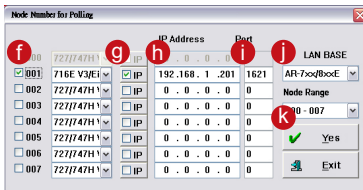
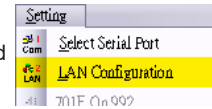
### • Software

1. Open the "701 Server" Software → There are two ways to open the Communication Port setting window: and → Communication Port Setting



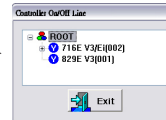
- a. By the computer Detection results to select the port. (Use the RS-485)
- b. Select [TCP/IP Only]. (Use the Ethernet)
- c. Selection the options: Polling Message From Controller.
- d. Polling Interval: 200ms, PC every 200ms inquiries once access controller's messages.
- e. Press YES

2. After COM Port setting, there are two ways to open the Node Number for Polling window: and → Node Number for Polling



- f. Selection node ID (for example:001) and access controller
- g. If use the Ethernet mode, please check the "IP"; if use the RS-485 mode don't need to check.
- h. If use the Ethernet mode, input IP in "IP Address" field. (Default value: 192.168.1.127)
- i. Input 1621 in "Port" field. (Default value: 1621; these Port number is SOYAL designed for connection to the network.)
- j. Selection LAN BASE.
- k. Press YES

3. Open Controller On/Off Line window to check the device connection status: →

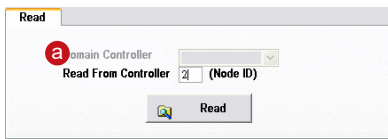
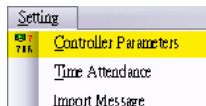


- Well: controller successfully connected to PC.
- Not connected well: recommends the following checks.

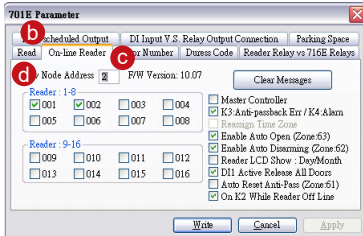
4. Download real time clock to AR-716E by clicking.

5. Setting up AR-716E parameters:

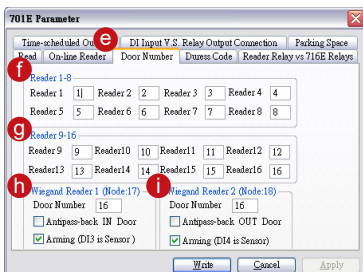
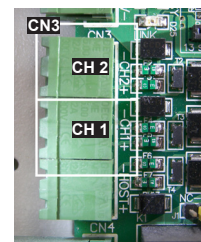
There are two ways to open the 701E Parameter window: and



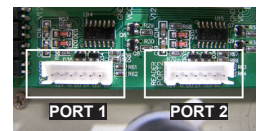
a. There is filled in AR-716E node ID to get in 716E parameter for others setting.



- b. Setting up "On-line Reader" of readers
- c. AR-716E firmware version
- d. Current readers connected with AR-716E. ※ Node ID of reader must be ticked, or it will show disconnected.



- e. Setting up "Door Number" of readers
- f. The RS-485 Access Controllers connector to the "Channel 1" of the [CN3]
- g. The RS-485 Access Controllers connector to "Channel 2" of the [CN3]
- h. The Access Reader connector to the [PORT 1]
- i. The Access Reader connector to the [PORT 2]
- ※ Setting up door number of readers Each door number should be unique.



## C. Restoring Factory Settings

### • EEPROM Restoring

Power Off → Take off the battery connector from [BAT+] socket → [J5] jumper shift to "Clear" position for **0.5 seconds** → Shift [J5] back to "RUN" position → Plug in battery connector → Re-apply the power → Done

### • IP Address Reset

Shift 2 dip-switch of TCP/IP module to "OFF" → Press IP reset button more than 5 seconds → TCP/IP module will restore to factory default value as follows

### • Factory default value of IP Address

IP Address: 192.168.1.127  
Gateway IP: 192.168.1.254  
Subnet Mask: 255.255.255.0

Serial Port: 9600, N, 8, 1  
TCP Port: 1621  
Password: None



## D. About LED (right of the PCB)

### • POWER

When the controller is connected to the power, [POWER] will turn from green LED; if no light, mean the power supply have problems.

### • RESET

After "EEPROM Restoring", [RESET] will flash the red LED and then clear the memory before the action started.

### • CH2 RX & CH2 TX

[CH2 RX] receive Access Controllers Node 9 ~ Node 16 of the information on behalf of each flash a green LED to receive a data controller.

[CH2 TX] send data to the Access Controllers Node 9 ~ Node16, will flash red LED.

### • CH1 RX & CH1 TX

[CH1 RX] receive Access Controllers Node 1 ~ Node 8 of the information on behalf of each flash a green LED to receive a data controller.

[CH1 TX] send data to the Access Controllers Node 1 ~ Node8, will flash red LED.

[e.g.] How to find the external Access Controllers have problem, from the LED.

If "Channel 1" external 6 Access Controllers, under normal circumstances [CH1 RX] will always be in twinkle.

LED flash frequency: twinkle, twinkle, twinkle, twinkle, twinkle, twinkle.....

If LED flash frequency become: twinkle, no, twinkle, no, twinkle, twinkle.....

It means the Node 2 and Node 4 have problem.

※ Because the default value [Node 1] and [Node 9] are checked, so [CH1 TX] and [CH2 TX] will continue to flash, when there are not external the Access Controller.

### • HOST RX & HOST TX

[HOST RX] sent by the host PC to receive incoming data, the connection has been blinking green LED.

[HOST TX] to send data to PC host, the connection will remain after the red LED flashes.

### • BUSY

When the red LED is lit, the memory is running clear and restores the factory default action.

※ If you do not perform "EEPROM Restoring", but the [RESET] and [BUSY] has been lit red, indicating a problem with PCB should be excluded.

## E. About LED (lift of the PCB)

### • ACT

When the Ethernet mode is successful, [ACT] will be the green LED.

### • BUSY

After "IP Address Reset", [BUSY] will be the red LED, and restore to factory default value.

### • LINK

After Ethernet connect to [CN2], [LINK] will be the yellow LED.

※ If [LINK] lit, but the [ACT] did not light up, indicating a problem with the Ethernet connection to be excluded.

### • D9~D12

Representative [CN5] DI1 ~ DI4 on the output state; if "DI1" output signal, [D9] will light green LED.

