

Speco Access Control System Installation Instructions for 1 Door Systems



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Notifications

Copyright

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Approvals

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates and can radiate radio frequency energy and if not installed and used in accordance with the manual, may cause harmful interference. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at their own expense.

This Access Control System is compliant with Level I UL 294 listed devices and must be installed in a controlled location.

Notice

This manual contains information regarding the basic installation and configuration of the browser-based Access Control System. It must be read and completely understood before installation or operation.

It is intended that this unit will be installed by persons trained and qualified to install access control systems and has the skills and knowledge working with electrical circuits and safety codes. Important safeguards and instructions in this manual cannot cover all possible situations and conditions that occur during installation and use and it must be understood that common sense and caution must be exercised by the person(s) installing, maintaining and operating the equipment.

Installations must conform to all national and local building and electrical codes.

This manual is for installing 1 Door Systems, Model A1.

Introduction

Access Control Overview

Access Control is the selective restriction to a place or resource such as a property, building or room to authorized persons and is a matter of who, where, and when. An access control system is used to automate access control using credentials, credential readers, electric door locks and other devices. Administrators configure the system to determine who is allowed to enter or exit, where they are allowed to exit or enter, and when they are allowed to enter or exit. When access is granted, the door is unlocked for a predetermined time and transaction is recorded. When access is denied, the door remains locked and the attempted access is recorded. Administrators can then run reports on the recorded transactions to review activity for selected dates and times.

System Overview

Controller models are available in variety of configurations starting from 1 Door models that require a separate power supply to 2 & 4 Door models that include an integrated power supply for the controller and door lock power. Most models can be upgraded after installation with enhanced features, such as enhanced reporting or more users, using software license keys. All controllers include tamper and power fault inputs, in and out readers, request to exit and door position inputs for each door and auxiliary inputs and outputs. All controllers are designed to be connected to a network using an Ethernet RJ45 connector and configured using the integrated web server.

Controllers can be configured as either a server or a client. All systems require a server controller. Some systems have the ability to add additional client controllers to increase the number of doors, inputs or outputs or control elevators. The software license key is used by the controller to determine if it is a server or a client. After logging in, the license information about a can be determined by clicking on the license icon at the bottom of the web page.

Certain models offer a mobile APP that can be used to setup and configure, view logs, lock and unlock doors and activate threat levels. In addition, some systems also offers a cloud service that provides a portal where a users or dealer can log into and manage one or many systems securely.

Client controllers communicate with the server controller via the local area network and are configured through the server using a web browser on a PC connected to the network. Once the server or client controller is configured, they will function without a network connection or the PC. The network and PC is only required for setup, configuration and reporting.

1 Door System Specifications

General Specifications	
Processor	Quad Core Cortex, 1.5 GHz
Memory	1GB DDR3 & 8 GB eMMc
Operating System	Embedded Linux
Transactions	> 45 per Second
Power Requirements (excluding door locks)	Regulated 12VDC @ 2A, Class 2 (not supplied)
Operating Temperature	50°F to 95°F (10°C to 35°C)
Enclosure Size (W x H x D)	3.2 x 3.0 x 1.3 in (81 x 78 x 32 mm)

Model	A1
Standby Power Requirement	350mA @ 12V
Number of Doors	2 Total, One In & One Reader
Readers (Wiegand)	2 Total, One In & One Out Reader
Reader Power	300 mA @ 12V Max per Reader 600 mA @ 12V Max per System
Request to Exit (REX) Input	1
Door Position (status) Input	1
Auxiliary Input	1
Tamper Digital Input	1
Power Fault Digital Input	1
Door Lock Output	1 Form C Relay, 24V @ 1.0A
Auxiliary Output	1 Form C Relay, 24V @ 1.0A

UL294 7 th Edition Rating				
Destructive Attack	Line Security	Endurance	Standby Power	Single Point Locking Device with Key Locks
Level I	Level I	Level IV	Level I	Level I

Installation of 1 Door Systems

Installation Check List

The list below provides a logical sequence for installing a system. This list cannot cover all possible situations and conditions that occur during installation and use and it must be understood that common sense and caution must be exercised by the person(s) installing, maintaining and operating the equipment.

- ✓ Calculate the systems power requirement by adding up the power required for each device connected to the system to make sure the required power can be provided by the system.
- ✓ Mount the controller in an enclosure that is located in a secure, controlled location
- ✓ Connect the inputs and outputs and tamper switch
- ✓ Connect the readers
- ✓ Connect the door lock and auxiliary output
- ✓ Connect power to the controller using a dedicated 12 VDC, 2 AMP UL294B listed power supply. Connect the power supply to an unswitched, grounded outlet
- ✓ Obtain an IP address, Subnet Mask, DNS and other information from the network administrator
- ✓ Configure the controller's network settings
- ✓ Connect the controller to the local area network
- ✓ Add optional license keys to upgrade features

Locating the Controller for Installation

Choose a centrally located, secure, clean and dry area near an AC power source. Avoid mounting the controller within 6 feet of any equipment that may generate electrical interference.

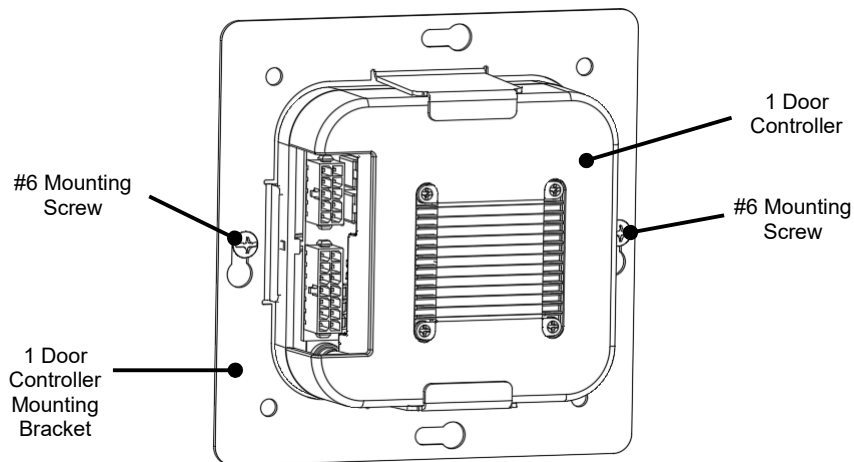
NOTICE: *The power supply used for the controller must only be connected to an unswitched, grounded, 115 VAC outlet. If an unswitched outlet is not available or within 6 feet of the controller mounting location, have a licensed electrician install an outlet per local codes. All wiring must be in accordance with the National Electrical Code, NPFA 70 and all local codes. **For UL installations, the maximum Ethernet, Input and Output cable length is 98.5 feet (30 meters).***

NOTE: *This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.*

Mounting the 1 Door System

Using the provided mounting bracket, the 1 door controller can be mounted vertically or horizontally in a UL listed enclosure with an integrated tamper switch, that is located in a secure location. The aluminum heat sink should face away from the mounting surface with a minimum of 1 inch (25.4 mm) of clearance above the heat sink. The temperature in the mounting location must be within the system's specified limits. When running wires through knockouts in enclosures, install bushings or conduit connectors as needed to protect wires from damage.

1. Run all wires to the controller's location and label the wires according to their use.
2. Locate the enclosure for the 1 door controller on the wall and level. Mark the mounting holes on the wall and remove the enclosure and install anchors appropriate for the type of wall and mounting conditions.
3. **DO NOT DRILL** the mounting holes while the enclosure is in place on the wall. Dust and debris from drilling will contaminate and damage the electronics.
4. Partially insert mounting screws into the top two mounting holes and hang the enclosure on the screws. Check for level, insert the lower screws and tighten all four mounting screws.
5. Using the provided mounting bracket as a template, locate the bracket in the enclosure and mark the location of the mounting screws. The key holes in the bracket are sized for #6 pan head self tapping screws. Drill the holes for the mounting screws and partly thread the screws into the holes. Clean any debris from drilling to prevent damage to the electronics. Place the controller into the mounting bracket and hang on the mounting screws. Check for level and tighten the mounting screws.



6. Run the wires through the knockout holes and connect to the appropriate terminals (see following sections of the manual for wiring details).
7. Connect the tamper switch to the controller's tamper inputs.

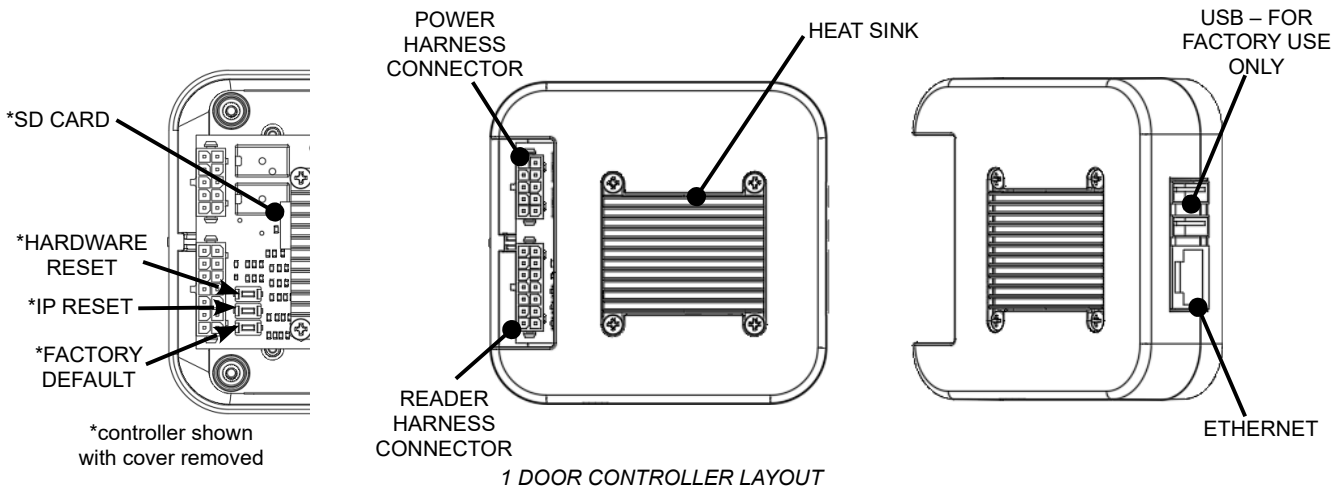
NOTICE: This equipment includes electronic components that are sensitive to static electricity. Make sure to discharge by touching an earth ground before handling this equipment.

NOTE: When locating the controller, choose a centrally located, secure, clean and dry area. Avoid mounting the controller within 6 feet (2 meters) of any equipment that generates electrical interference.

Controller Features 1 Door Systems

The following shows the controller's features and wiring components.

Controller Hardware Identification



Controller Inputs

Controllers can monitor door position, request to exit and auxiliary (general purpose) inputs. All inputs are assigned default states that can be modified as needed through the user interface. The table below shows the default state for each of the inputs.

Input Type	Default State
Door Position (status) Inputs	Disabled
Request to Exit Inputs	Normally Open, Momentary, Unsupervised
Auxiliary Inputs	Normally Open, Momentary, Unsupervised
Tamper	Normally Open, Momentary, Unsupervised
Power Fault	Normally Open, Momentary, Unsupervised

Input Circuit Configurations

The table below shows the different input configurations. These types can be independently configured for each input by the user.

Supervised	Unsupervised
<p>Normally Open</p> <p>Note: Use 1K Ohm Resistor</p>	<p>Normally Open</p>
<p>Normally Closed</p>	<p>Normally Closed</p>

Controller Wiring Harnesses

The controller is provided with two plug-in wiring harnesses for connecting field wiring. The harnesses are color coded and marked with labels to indicate the proper connection for field wiring.

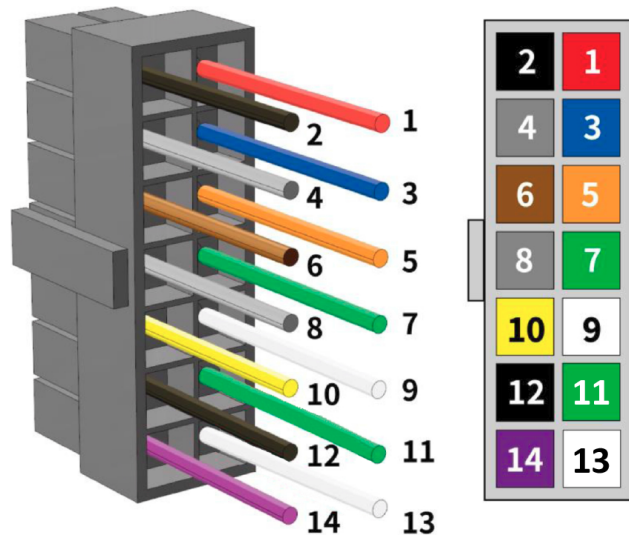
The **Minimum Cable Specifications** for the wiring of inputs is 22 AWG Belden or equivalent with a maximum distance of 98.5 feet (30 meters).

NOTE: All wiring shall conform with the National Electrical Code, NPFA70 and local building codes.

Input Wiring

All inputs may be configured for normally open or normally closed contacts. Door position, request to exit and auxiliary inputs may also be configured with for supervision to detect if wiring to the contact is broken or cut. **Wires must not be routed in parallel with or in the same conduit with any high voltage AC wiring.**

14 Pin Reader Harness		
Input Power		
PIN	Color	Description
1	RED	+12 VDC Power for In & Out Readers
3	BLUE	LED, In & Out Readers
5	ORANGE	Buzzer, In & Out Readers
7	GREEN	D0, In Reader
9	WHITE	D1, In Reader
11	GREEN	D0, Out Reader
13	WHITE	D1, In Reader
2	BLACK	Ground, In & Out Readers
Door Inputs		
14	PURPLE	Door Position Input
12	BLACK	Ground
10	YELLOW	Request to Exit Input
System Inputs		
8	GRAY	AUX Input
6	BROWN	Tamper
4	GRAY	Power Fault
12	BLACK	Ground

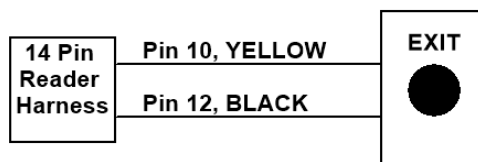


Request to Exit (REX) Input

A REX input activated the door output to unlock a door. A REX device can be a press to exit button, motion detector or other device mounted on the secured side of an entrance. REX features may be modified in Device Settings for Doors and can be set to normally open (NO), normally closed (NC) or monitored using either a series or parallel resistor. For applications where a manual unlocking device is used, such as an exit bar, REX activating the door output can be disabled.

Request to Exit Wiring

1. Disconnect power from the controller.
2. Determine if your REX device is normally open or normally closed (refer to the instructions provided by the REX manufacturer).
3. Connect the REX device as shown.
4. After power is applied to the controller, make sure to configure the controller in Device Settings for Doors and select the appropriate REX input type.
5. After power is applied to the controller, verify the input is properly working.

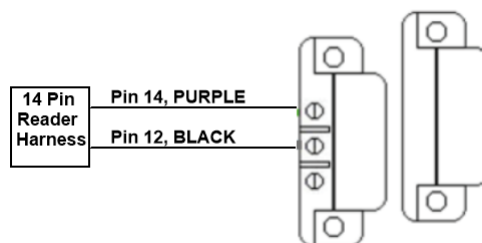


Door Position Input

Monitors if the door is open or closed. The door switch (typically a magnetic reed switch, not provided) will change state when the door is opened or closed. To use this feature, it must be enabled in Device Settings for Doors. It can be set to normally open (NO), normally closed (NC) or monitored using either a series or parallel resistor.

Door Position Wiring

1. Disconnect power from the controller.
2. Determine if your door position switch is normally open or normally closed (refer to the instructions provided by the switch manufacturer).
3. Connect the door position switch as shown.
4. After power is applied to the controller, make sure to configure the controller to use the door position switch in Device Settings for Doors and select the appropriate door contact type.
5. After power is applied to the controller, verify the input is properly working.



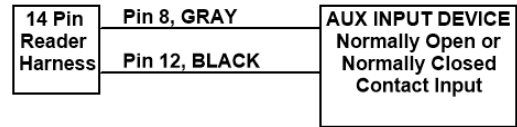
Auxiliary Inputs

Auxiliary inputs are used for general purposes and can be connected to devices such as alarms, detectors and devices that have a switched output. These inputs can be set to normally open (NO), normally closed (NC) or monitored using either a series or parallel resistor and these features may be modified in Device Settings for Aux Inputs.

Auxiliary inputs must be programmed to produce a defined action, such as activating an auxiliary output, using Event Actions.

Auxiliary Input Wiring

1. Disconnect power from the controller.
2. Determine if device you are connecting to the Auxiliary input is normally open or normally closed (refer to the instructions provided by the device manufacturer).
3. Connect the device to the Auxiliary wires as shown.
4. After power is applied to the controller, make sure to configure the controller in Device Settings for Doors and select the appropriate Auxiliary input type.
5. After power is applied to the controller, verify the input is properly working.



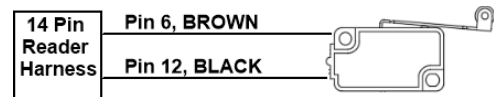
Tamper

The tamper input may be used to monitor access to the access control system and must be used for UL installations. This input can be set to normally open (NO) or normally closed (NC) in Device Settings for Controllers. Typically a tamper switch is mounted inside the enclosure containing the access control system in such a way that when the enclosure is opened, the switch is activated.

The access control system can be programmed using Event Actions to perform a system backup, activate an auxiliary output or send an email notification when a tamper input is detected.

Tamper Input Wiring

1. Disconnect power from the controller.
2. Determine if device you are connecting to the Tamper input is normally open or normally closed (refer to the instructions provided by the device manufacturer).
3. Connect the device to the Tamper wires as shown.
4. After power is applied to the controller, make sure to configure the controller in Device Settings for Controllers and select the appropriate Tamper input type.
5. After power is applied to the controller, verify the input is properly working.



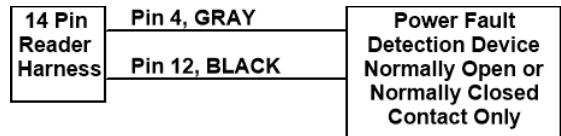
Power Fault

The power input may be used to monitor the power supply connected to the access control system. This input can be set to normally open (NO) or normally closed (NC) in Device Settings for Controllers. Typically power supplies designed for access control will have a switched output that is activated when main power is lost and changed to battery backup.

The access control system can be programmed using Event Actions to perform a system backup, activate an auxiliary output or send an email notification when a power input is detected.

Power Fault Input Wiring

1. Disconnect power from the controller.
2. Determine if device you are connecting to the Power Fault input is normally open or normally closed (refer to the instructions provided by the device manufacturer).
3. Connect the device to the Power Fault wires as shown.
4. After power is applied to the controller, make sure to configure the controller in Device Settings for Controllers and select the appropriate Power Fault input type.
5. After power is applied to the controller, verify the input is properly working.



Readers

The controller can be connected to Wiegand type readers or keypads. Each door on the controller supports a primary (entrance) In Reader and a secondary (exit) Out Reader.

The maximum power available through the controller for an individual reader is 300mA @ 12VDC with a combined maximum for the controller of 600mA. **Exceeding the maximum power for an individual reader or for the controller may damage the controller, void the warranty and will cause erratic operation.** Refer to the manufacture's documentation to determine the reader's power requirements. **Wires must not be routed in parallel with or in the same conduit with any high voltage AC wiring.**

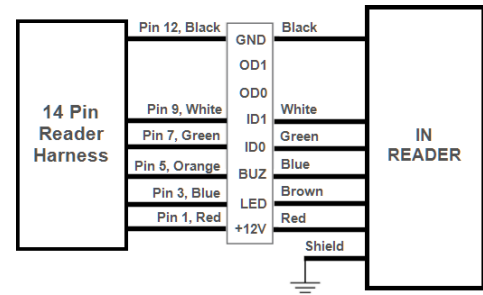
*The **Minimum Cable Specifications** for readers is a Belden shielded, twisted, 6 conductor plus ground cable, 22 AWG.*

For UL installations, the maximum cable length is 98.5 feet (30 meters).

***Note:** Use UL294 listed readers for all installations such as HID ProxPoint Plus or similar. All wiring shall conform with the National Electrical Code, NPFA70 and local building codes.*

Reader Wiring

1. Disconnect power from the controller.
2. Connect the color coded wires from the reader to the appropriate wires on the reader 14 pin harness as shown. Refer to manufacturer's instructions for exact color codes for each connection.
3. Remove excess shield from the reader cable to prevent interference with the controller's electronics or other electrical circuits. Tape off any exposed shield with electrical tape.
4. Reader shields must be grounded per the manufacturer's requirements.
5. Make sure to properly ground the reader shield.
6. After power is applied to the controller, verify the reader is properly working.



In & Out Reader Wiring				
14 Pin Reader Harness	Color	Description	Typical IN Reader Wire Color	Typical Out Reader Wire Color
12	Black	Ground	Black	Black
13	White	Out Reader, D1	X	White
11	Green	Out Reader, D0	X	Green
9	White	In Reader, D1	White	X
7	Green	In Reader, D0	Green	X
5	Orange	Buzzer Control	Blue	Blue
3	Blue	LED Control	Brown	Brown
1	Red	12 VDC	Red	Red

Controller Outputs & Power Input

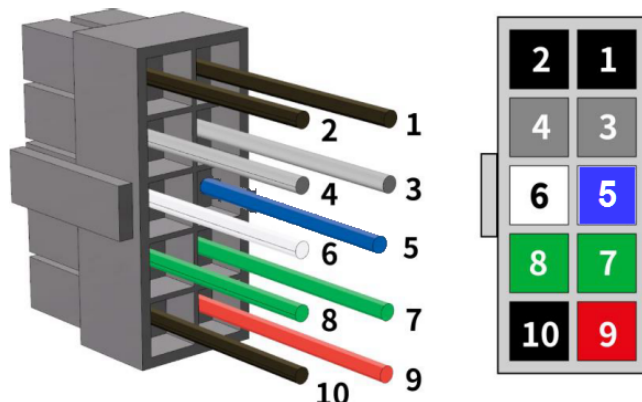
The controller has door output and auxiliary output relays that may be activated in response to reader activity, time schedules or event actions. The outputs are assigned default features that can be configured in Device Settings for Doors or Auxiliary Outputs. The table below shows the default state for each type of output.

Output	Default State	Default Response
Door Output	Not Energized, Single Pulse	3 second activation time in response to valid access credentials
Auxiliary Output	Not Energized, Single Pulse	None. Must be configured in Device Settings or Event Actions

Output Wiring Requirements

The wire used must be of the proper gauge for the load current and distance from the controller to the load. **Wires must not be routed in parallel with or in the same conduit with any high voltage AC wiring** and all wiring shall conform with the National Electrical Code, NPFA70 and local building codes. Use a minimum size of UL listed 18 AWG to a maximum distance of 98.5 feet (30 meters).

10 Position Power Harness		
Input Power		
PIN	Color	Description
10	BLACK	Ground
9	RED	+12 VDC @ 2A
Door Output		
7	GREEN	Normally Closed Dry Relay Contact
5	BLUE	Common Relay Contact
3	GRAY	Normally Open Dry Relay Contact
Auxiliary Output		
8	GREEN	Normally Closed Dry Relay Contact
6	WHITE	Common Relay Contact
4	GRAY	Normally Open Dry Relay Contact
2	BLACK	Ground
1	BLACK	Ground



Power 12 VDC & GND

The Power Input requires a dedicated Class 2, 12 VDC power supply. For UL installations, only use a UL294 listed supply such as a Linear 12VDC/24W PIP that has an indicator light that is illuminated when AC power is present with a rating of 12 VDC @ 2A.

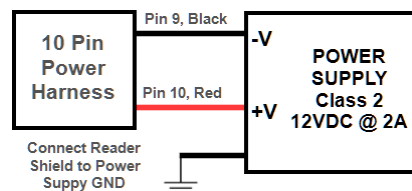
NOTICE: A 12 VDC power supply must be used. Incorrect voltage will damage the product and void the warranty.

CABLE SPECIFICATIONS: Use a minimum size of UL listed 18 AWG, 2 conductor at a maximum distance of 4 feet (1.2 meters).

NOTE: Power supplies must be plugged into a dedicated receptacle that is not controlled by a switch.

Power Wiring

1. Connect the power supply +12V and -12V terminals to 10 pin power harness as shown.
2. Power should only be applied to the system when all connections are secured and tested, and when instructed to apply power.

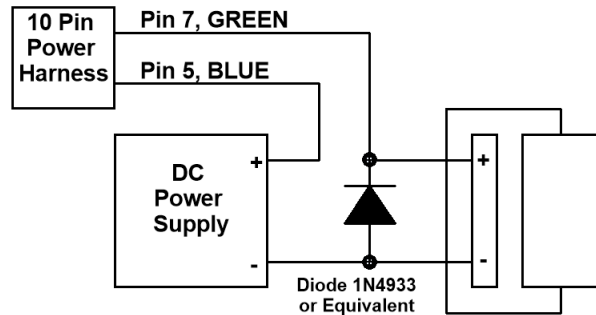


NOTE: When 12V power is applied to the controller, a blinking LED indicator next to the 14 pin reader harness will be visible.

Door outputs can be configured to operate in a fail safe or fail secure mode. Connect the door locking device to the door output connector as shown below. Refer to the manufacturer's specifications to determine the correct operating voltage, current and configuration. Use a power supply dedicated for door lock use.

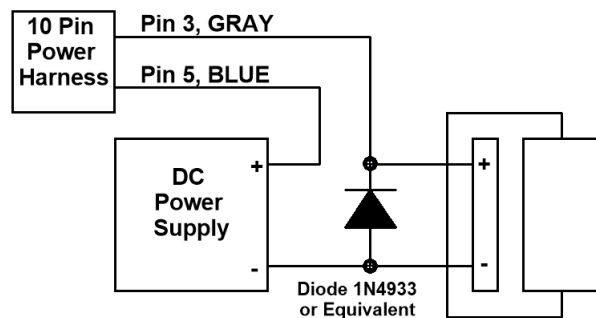
Fail Secure DC Door Strike

Without power, the door strike is locked.



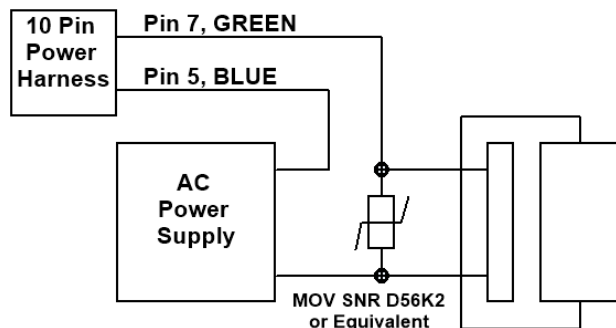
Fail Safe DC Door Strike

Without power, the door strike is unlocked.



Fail Secure AC Door Strike

Without power, the door strike is locked.



Powering On and Connecting to a Network

Controllers must be located in a secure area and connected to a network that is protected by a security system (firewall, etc.). Before connecting the controller to the network, obtain the following information from you network administrator. **Note:** a Static IP address should be used when the controller is configured as a server controller. Client controllers may use DHCP.

- ✓ IP address
- ✓ Subnet Mask
- ✓ Gateway
- ✓ DNS 1 and DNS 2

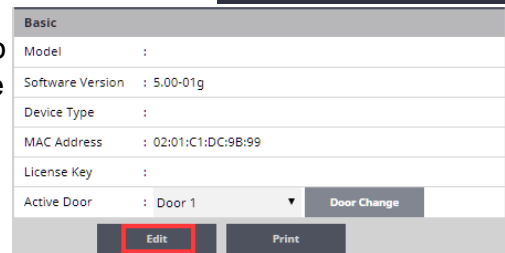
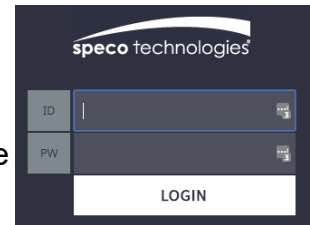
Preparing for the Network

In most cases, the controllers IP address will have to be changed to allow the controller to be recognized by the local network. The controller's IP address is changed as follows.

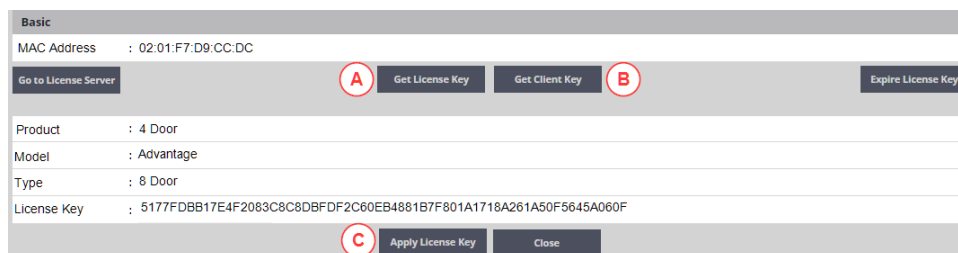
1. Connect a programming computer directly to the Ethernet port of the controller. A standard CAT-5 cable is used for direct connection. A crossover cable is not required.
2. Assign a static IP address to the computer of 192.168.0.10. For instructions on how to change the static IP address of a Windows computer visit: <https://support.microsoft.com/en-us/help/15089/windows-change-tcp-ip-settings>
3. The factory default IP address of the controller is 192.168.0.250. Open a web browser, such as Google Chrome, and enter the default IP address into the address bar.

TIP: As an alternative to directly connecting a cable, the provided IP Installer utility can be used to change the controller's IP address. See the section below on how to use the utility.

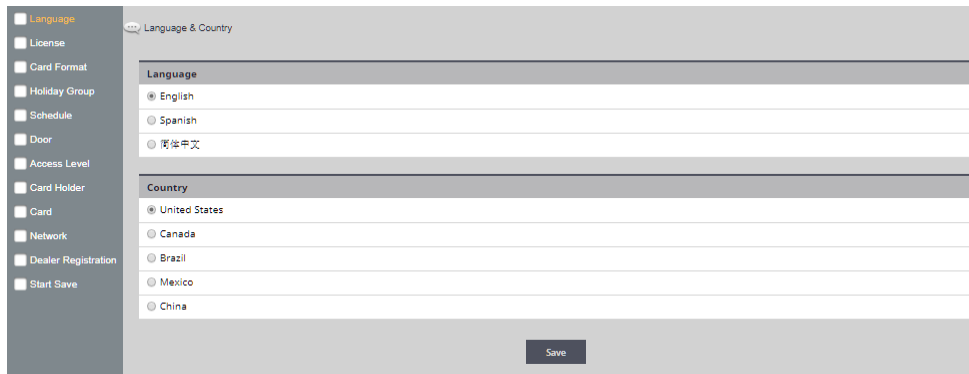
4. The controller's login page is displayed as shown. To login enter the default User ID: *admin* and default PW: *admin*
5. Controllers can be licensed as a server or a client. After first time login, the license page is displayed. To get a license key, first click on the Edit button. On the next page, click on **A**, the Get License Key for a **SERVER** or click on **B**, the Get Client Key for a **CLIENT**. Click OK to confirm and the license key will be auto populated. Finish by clicking **C**, Apply License Key and the controller will restart.



NOTE: The controller needs to access the Internet to obtain a license key.



6. When the controller is licensed for a server, after logging in, the system configuration Wizard is started. The Wizard is a guide that can be used to collect the basic information required to set up a system. The network settings can be configured in the Wizard or by browsing to the Network Configuration page as shown.



Wizard Starting Page

- The network configurations may be accessed through the Sitemap by first clicking the icon at the bottom of the page, then clicking IP Address under Network Settings.



Accessing the Site Map

- After entering the network information, click Save & Reboot and the controller will reboot. Typically rebooting will take less than 2 minutes.

Basic		
IP Type *	:	<input type="radio"/> DHCP <input checked="" type="radio"/> Static
IP Address *	:	192.168.0.200
Subnet Mask *	:	255.255.255.0
Gateway *	:	192.168.0.1
DNS Server 1	:	1.1.1.1 (Optional)
DNS Server 2	:	8.8.8.8 (Optional)
HTTP Port	:	80 (Default 80)
HTTPS	:	<input type="checkbox"/> (Check Box to Enable: Required for RMC)
HTTPS Port	:	443 (Default 443)
<input type="button" value="Save & Reboot"/> <input type="button" value="Reset"/> <input type="button" value="Cancel"/> <input type="button" value="Upload cer-key"/>		

Network Settings Page

- After disconnecting the programming computer, the controller is ready for the local network.

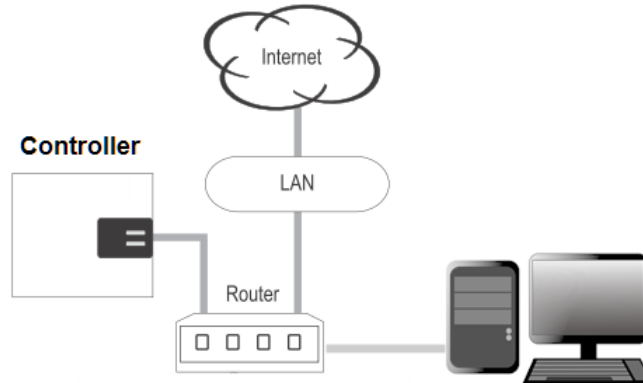
NOTE: System data may be lost if the controller is powered down without performing Save & Reboot.

Connecting to the Local Network

Plug the Ethernet cable into the port on the controller and connect to the local area network as shown below. If the network connection is functioning properly the LAN LED's on the controller will blink. Computers connected to the local network will be able to access the system using the IP address of the controller.

The Minimum Cable Specifications network connection is CAT 5 or better with an RJ-45 connector, wired straight through to a network switch or router.
Note: For UL installations, the maximum Ethernet cable length is 98.5 feet (30 meters).

NOTE: LAN connection is only required for monitoring, reporting and configuration.



Once the system is configured, it will operate without a LAN connection.

Adding Clients to Systems

Some systems have the ability to add additional controllers to increase the number of doors, inputs or outputs or control elevators. Clients are configured through the system's server, but must first be linked to the server.

Setting the Client's Network

1. Connect a programming PC directly to the controller as described in the section Preparing for the Network.
2. Login using the default ID: *admin* and default PW: *admin*
3. After login, the client's network page is displayed. Click Edit.
4. Change the IP address of the client controller. It is recommended to set this to DHCP.
5. Enter the IP address of the server controller and the server's port number (the default port number is 20000).
6. Enter the password and click Save.

Network Information	
IP Type *	: <input checked="" type="radio"/> DHCP <input type="radio"/> Static
IP Address *	: 192.168.0.250
Subnet Mask *	: 255.255.255.0
Gateway *	: 192.168.0.1
DNS Server 1	: (Optional)
DNS Server 2	: (Optional)
HTTP Port	: 80 (Default 80)

Server Information	
Server IP *	: 192.168.0.200
Port *	: 20000 (Default 20000)

ID, Password	
ID *	: admin
Password *	:


Buttons: Save, Reset, Cancel





Change IP address of Client or set to DHCP (recommended)

Enter server's IP address and Port number

Enter password and click Save

Linking the Client to the Server

1. Login to the system's server.
2. After logging in, browse to the Site Management and select Client Management.
3. The client will appear in the client management list. Click on  the button to connect the client to the server.

No	Name	Type	IP Address	MAC Address	Alive	Version	Model No	
1	Client 1	Door 1	192.168.0.55	02:01:C1:DC:9B:99	On	5.00-01d	NEPTUNE-H501	   

[1]

Click to connect Client to Server

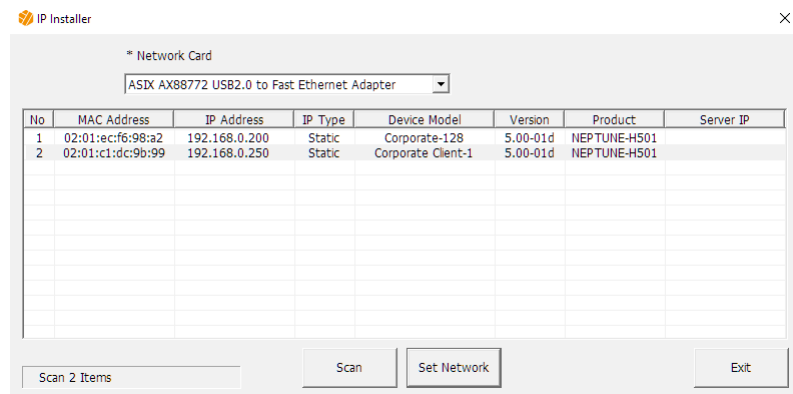
Client Management

IP Installer

IP Installer is a Microsoft Windows® PC utility that is on the USB thumb drive shipped with all systems. This utility can be used to locate a controller on the local area network. It also provides a method of changing the IP address of a server or client controller and is an alternative to directly connecting clients. To use IP Installer, follow the steps below.

1. Locate IP Installer on the USB thumb drive and install it on a Windows PC that is connected to the local network that will be used by the server and client controllers.
2. Connect all of the controllers to local network.

3. Run IP Installer. If you PC has multiple network adapters, select the adapter in the Network Card list box that is connected to the local network used by the controllers, and click Scan to locate the controllers. When controllers are located, they will be listed in IP Installer.



IP Installer

* Network Card
ASIX AX88772 USB2.0 to Fast Ethernet Adapter

No	MAC Address	IP Address	IP Type	Device Model	Version	Product	Server IP
1	02:01:ec:f6:98:a2	192.168.0.200	Static	Corporate-128	5.00-01d	NEPTUNE-H501	
2	02:01:c1:dc:9b:99	192.168.0.250	Static	Corporate Client-1	5.00-01d	NEPTUNE-H501	

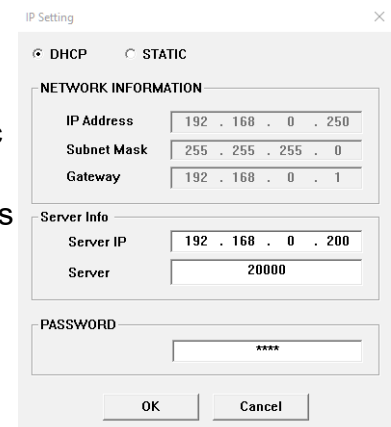
Scan 2 Items Scan Set Network Exit

4. In this example, a server controller is located at 192.168.0.200 and client controller is located at 192.168.0.250. The client's IP address can be changed and the client can be assigned to a server by first clicking on the client in the list, then click the Set Network button.

5. In the IP Setting popup, change the client's IP to static IP address or to a DHCP. Note that servers must be set to static IP address.

6. In the IP Setting popup, change the client's Server Info. In this example, the Server IP is 192.168.0.200 and the Server Port is 20000.

7. Enter the IP Installer password 1234 and click OK. This will update the client's IP address settings and assign it to a server. When the network changes are complete, the client will appear in the list with the new settings.



IP Setting

DHCP STATIC

NETWORK INFORMATION

IP Address: 192 . 168 . 0 . 250
Subnet Mask: 255 . 255 . 255 . 0
Gateway: 192 . 168 . 0 . 1

Server Info

Server IP: 192 . 168 . 0 . 200
Server: 20000

PASSWORD: *****

OK Cancel

System Configuration and Programming

The controller is programmed and managed using a web browser on any computer connected to the local area network. The controller's basic settings can be programmed using the Wizard tool. The Wizard tool helps ensure that required settings are configured for normal operation.

For specific programming instructions, refer to the Users Programming Guide, Part Number 100104-SP.

Trouble Shooting

Question	Solution
The controller does not power up.	<ul style="list-style-type: none"> – Check the AC outlet's voltage used to power the controller. – For systems using a Fire Cutout, check the status of the fire cutout input to see the power has been deactivated. – Check wiring from the power supply to the controller. – For systems using a Power Module, check for +12 VDC at the Power Input Connector. If +12 VDC is not present, the internal power supply may be damaged and need to be replaced. – Check for +12 VDC at the Power Connector for the Controller. If +12VDC is present and the RED LED's on the Controller are off, the input fuse may be blown. This fuse is not field replaceable. – If the measured voltage is less than 11 VDC, the system may be overloaded. Disconnect all readers, door and AUX outputs and check if the controller powers up.
The controller power up but does not respond to card reader inputs.	<ul style="list-style-type: none"> – Check that the card and the card reader are compatible. – Measure the power at the reader connection. If no voltage is present, the reader fuse may be blown or overloaded. Disconnect the reader wiring and check for proper voltage. – Check the wiring to the reader. Disconnect the field wires to the reader and directly wire a reader to the controller. If the reader works, the field wiring may be faulty.
No network communications with Controller.	<ul style="list-style-type: none"> – If the Ethernet LAN LED's are off or solid, then there is no physical connection to the network. Check network cabling at the Controller and at the router or switch. – Verify the correct IP, Gateway, Subnet and DNS address are being used for the network. – Have the network administrator verify that firewall rules or port restrictions are not blocking network access to the Controller. – Directly connect a programming PC to the Controller as described in the installation instructions to check Ethernet communications. Note that you may need to reset the IP address of the controller.
How to reboot the controller?	<ul style="list-style-type: none"> – For a hardware reboot, momentary press the controller's Reboot push button. – It will take approximately 1 minute for the controller to reboot and the UI can be accessed.
How to reset the IP address of the controller to factory default?	<ul style="list-style-type: none"> – Press and Hold the IP Default push button on the controller for 20 seconds. – The Controller will reboot and set the IP address to 192.168.0.250. – It will take approximately 1 minute for the controller to reboot and the UI can be accessed. – The Controller's IP address can be changed from the UI.
How to restore factory defaults to a controller?	<p>Note: <i>If the controller is factory defaulted, all configuration and user information will be lost, including the license key.</i></p> <ul style="list-style-type: none"> – Press and Hold the Factory Default push button on the controller for 20 seconds. – The Controller will reboot and the factory with the factory defaults, including the default IP address. – It will take approximately 1 minute for the controller to reboot and the UI can be accessed. – After installing the license key the controller can be reconfigured from the UI.

Trouble Shooting

Question	Solution
How to obtain a license key for an unlicensed controller?	<ul style="list-style-type: none">– The controller's MAC address is required to obtain a license key. This is printed on the controller or can be found on the license page after logging in to the UI.– Visit the License On Demand web server to obtain the license key.
Can not obtain a license key after first login.	The controller needs access to the Internet to retrieve a license key. If an Internet connection is not available, the license key can be retrieved directly from the License On Demand web server.

Testing, Maintenance and Service

A monthly test of the system and all the components is recommended.

- ✓ Check that all used inputs and outputs are correctly working with the connected devices.
- ✓ Check that the system and log backups are occurring at the scheduled times.
- ✓ Check for proper operation of the battery backup. **NOTE:** *Backup system data before performing a battery test.*

The system requires little maintenance, however it is recommend to check the following every 6 months.

- ✓ Doors on system enclosures are secure.
- ✓ Enclosures are clean and dry.
- ✓ All wires are securely connected to the terminals and proper strain relief is used.
- ✓ Proper bushings or fitting are installed in knock out for wires and wires are not cut or chaffed.
- ✓ Check date code on backup battery and replace if needed.

These systems contain Class 2 circuits. There are no serviceable parts on the controllers. Do not alter or tamper with any of the components of the system. Doing so will void the warranties and violate FCC rules.

Parts List

Order Model	Description
AMTG1DC	1 Door Controller Mounting Bracket
A1DC10PIN	10 Pin Power Harness
A1DC14PIN	14 Pin Reader Harness
A1	1 Door Replacement Controller
<i>Please contact customer service to order replacement parts.</i>	

Contact & Warranty Information

Corporate Office

Speco Technologies
200 New Highway
Amityville, NY 11701

Phone: 800.645.5516
FAX: 631.957.9142
www.specotech.com

For Technical Assistance
Phone: 800.645.5516 option 3
email: techsupport@specotech.com

Refer to our website for warranty information.

Document Number: 100116-SP REV B

