



AX 300

installation quick guide

*integrated access control &
environmental monitoring*



Introduction

This Installation Quick Guide is suitable for standard wall-mountable AX300 controllers. Illustrative technical connection diagrams are shown at the back of this document.

Technical Specifications

Power and Current Consumption

Lock output (x 2):	12 volts DC 1.5 Amps maximum each lock output—3 Amps total
Auxiliary output:	12 volts DC at 1 Amp maximum
Sensor ports:	500mA
Readers & peripherals:	500mA
Mains Supply Rating:	5 Amps
Current Consumption:	14W
Mains Input Voltage:	100 to 240 volts AC 50/60 Hz.
Replacement glass fuses on the mains fused input block are 3.15 Amps slow-blow	

Based on typical example on the AX300 controller with 2 standard magnet locks and two proximity readers
BTU = 182.49

It is advised to leave 20mm spacing between adjacent controllers at the vents

Watts = 52.14 at 237VAC @ 0.22Aac

Dimensions:	300 x 260 x 75mm (11.81 x 10.25 x 3.15") - <i>actual</i> 305 x 260 x 80mm (12.00 x 10.25 x 3.15") - <i>with space for vents</i>
Nett Weight:	2.5kg (5.51lb) <i>controller</i> 2.3kg (5.07lb) <i>optional battery</i>

Battery Monitoring

The AX300 has an integrated power and battery monitoring circuit—if mains power is lost, it is indicated on the controller unit and the server software. If installed, the 7 Ampere battery will automatically initiate without any power interruption. The battery low alarm indicates prior to the battery being automatically cut-off to prevent battery drainage damage. In addition, on a daily basis, the power circuit and battery are tested and the transactions stored in the server software for diagnostic purposes.

If during installation no mains power is available, the controller unit can be installed, tested and commissioned by activating the battery start button on the controller. If this method of test is used, the battery must be disconnected and reconnected to reset the unit ready for standard mains operation.

Cable Specifications

Description	Cable Type	Maximum Length
AX300 Ethernet Connection 10mbps	Cat 5/Cat 5E	100 metres (328ft)
AX300 to AX Reader	6 Core >22 Awg	50 metres (164ft)
AX300 to REX/Door Contact	2 Core 24 Awg	50 metres (164ft)
AX300 to Lock	2 Core > 22 Awg	50 metres (164ft)
Sensors	4 core 26 Awg	15 metres (49ft)

Configuring the AX300 IP Address using the Navigation Keys

Note – The IP address can only be configured using the keypad whilst the AX300 controller is offline.

The general display will scroll between system offline and the AX300 name which is blank by default

1. Press ↓ the display will show **Sensor present -----**
2. Press ← the display will show **Reset all**
3. Press ← the display will show **Network settings**
4. Press ↓ to enter the network settings menu
5. The first option is the **local IP address**, and is by default 0.0.0.0 the local IP address is the address for the AX300 controller.
6. Press OK to change the IP address. Use ↑ and ↓ to scroll between the range of 0-255, when the number on the display is correct press → to move to the next part of the address. When the full IP address is on the screen press OK to return to the menu.
7. Press ← to move to **Gateway IP**, repeat step 6 to enter a valid Gateway IP address, if this is not required then leave the gateway address at 0.0.0.0
8. Press ← to move to **Subnet mask**, the default subnet mask is 255.255.255.0 if this needs to be changed repeat step 6
9. Press ← to move to **Host IP address**, this needs to be set to the IP address of the PC running the AX software.
10. Press ↑ to exit the **Network Settings** menu
11. Press ↑ to return to the main menu
12. Plug the AX300 controller into the network and add the controller into the software.

LCD Menu Structure

```
>System Online>
>300-1>
>Other System Messages>
  >Sensors Present 123456>
  >System Online>
  >Battery OK>
  >Power Status>
    >Power OK – Lock 1>
    >Power OK – Lock 2>
    >Power OK – Readers>
    >Power OK – Sensors 1-3>
    >Power OK – Sensors 4-6>
  >Network Settings> *
    >Local IP 0.0.0.0>
    >Host IP 0.0.0.0>
    >Subnet Mast 255.255.255.0>
    >Gateway IP 0.0.0.0>
  >Reset All> **
    >Confirm Reset>
    >Cancel Reset>
```

* Network address settings can only be set / amended whilst the unit is offline

** Only displayed when the unit is offline

AX300 Controller—Front Panel LED Indication

Identifier	Description	Colour	Indicates
	Cable Link	Green	ON = Ethernet link OFF = Ethernet link incorrect or missing connection (check network cable)
	Network Activity	Amber	Flashing—network data / activity
12V	Output Power OK	Green	ON = on-board power supply OK
~ AC	Power Input	Green	ON = mains power supply OK
	Battery Fault	Red	ON = low battery indicator
	Access Point 1	Green/Red	Green Flashing = normal mode Green ON= door unlocked Red Flashing = high security mode Red ON = deadlock mode
	Access Point 2	Green/ Red	
	Alarm	Red	ON = warning alarm, read LCD display for detailed information. To clear alarm press OK



Left—standard wall-mounted AX300 controller shown with optional battery backup

AX300 Software Setup

1. Install the standard AX200. The software is provided on the CD supplied with the controller, alternatively, this can be downloaded from the website <http://www.axxessidsoftware.co.uk>. To install the software click on the file **setup.exe** and follow the on screen prompts.
2. Ensure that the PC is connected to the network and has a static IP address
3. Start the software.
Enter the user name and password:-
Default user name: **1**
Default password: **1**
Then click **OK**.
Allow the software to initialise.
4. On the transaction screen check for any error messages and address these before proceeding—eg. duplicate IP address—refer to the Technical Manual for additional details.
5. The AX300 controller can be powered up and connected to the network.



Installing a New Device

There are two methods of installing new devices—setup using the Device Wizard, or Manual Configuration—to configure the new device manually proceed to step 13.

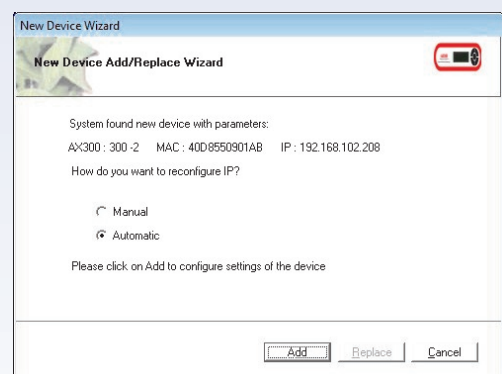
Using the Device Wizard

The Device Wizard icon appears when an AX300 controller is connected on the same LAN network and has not been configured.

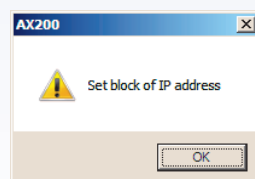
6. Select the Device Wizard Icon.



7. Ensure the New Device Wizard set to automatic (default) then select **Add**.



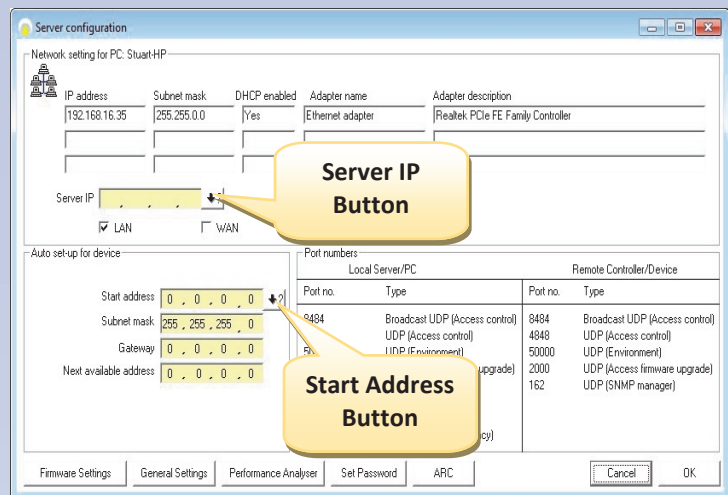
In the dialog box that appears Set block of IP address select **OK**.



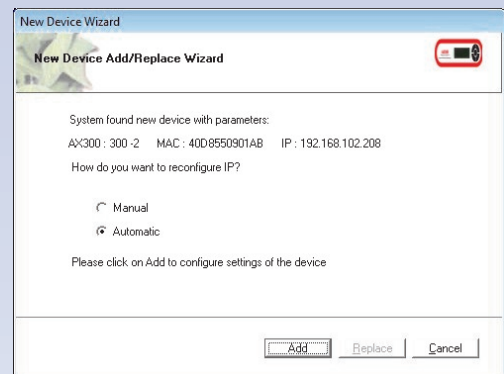
Note after this has been initially completed, this step will no longer appear.

8. Configure the Server by selecting the **Server IP button** or by manually entering the IP address provided by your IT Department.

9. Configure the start address by selecting the **start address button** or entering the IP address manually provided by your IT Department, then select **OK**.

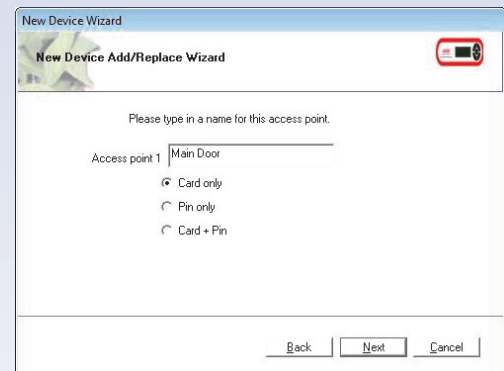


10. In the Device Manager window ensure the set device remains on the default setting (automatic) and select **Add**.



11. Enter the name of your first access point—access point reader 1 (eg. Main Door) . Select the mode of use. (eg Card only), then select **Next**.

12. Repeat step 11 for the second access point—access point reader 2, then select **OK**.



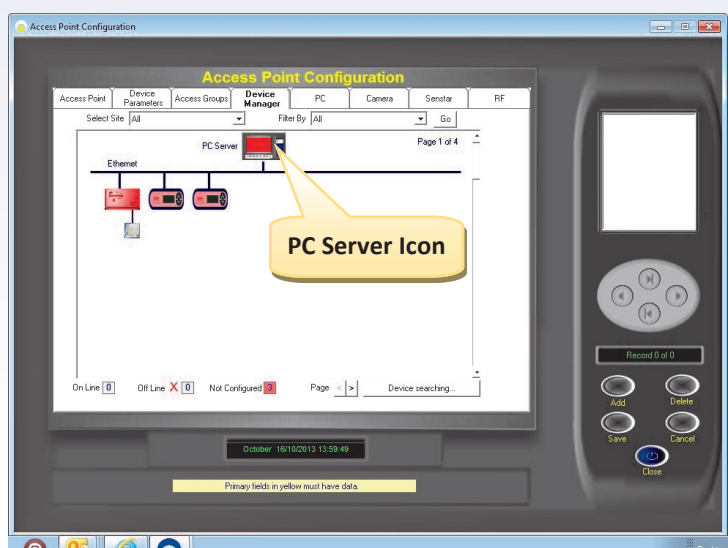
When the controller has been successfully added proceed to step 22.

Manual Configuration of an AX300

If you have configured the AX300 using the Device Wizard proceed to step 22.

13. From the Main Screen select the **Access Point button** at the bottom of the
14. Select the **Device Manager** tab.
15. Wait approximately 10 seconds, whilst the Device Manager searches the network for AX300 controllers powered on. It is recommended to configure one controller at a time.

AX300 controllers not configured are displayed in red, whilst AX300 controllers configured are displayed in grey.

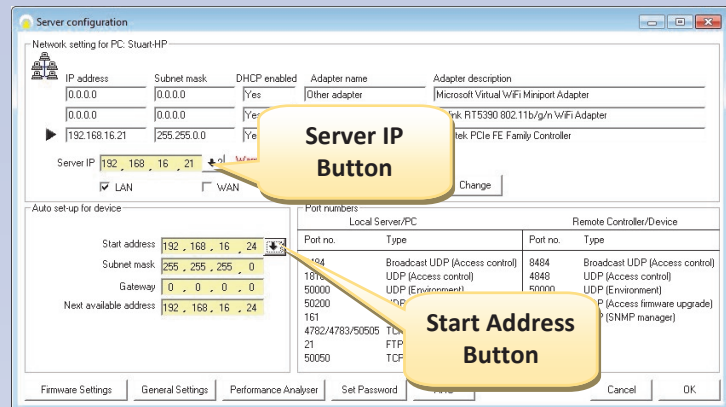


Previously configured AX300 controllers that are not online are displayed in grey with a red cross through.

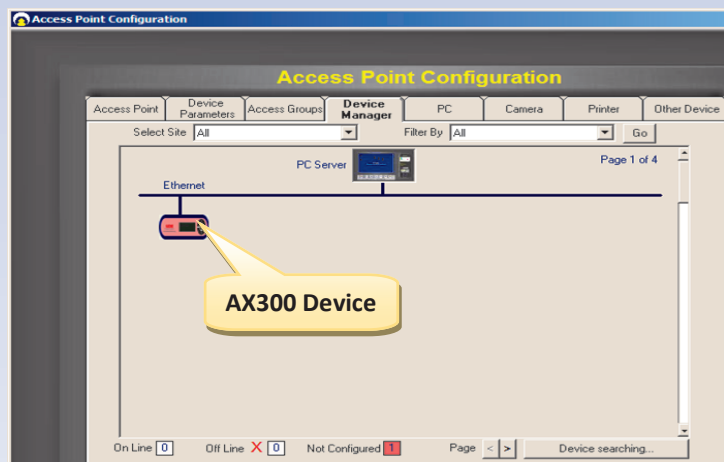
16. Double click on the **PC Server** icon, located at the top of the image tree.
17. Select the **Server IP** button to toggle between server address (if more than one is available).

18. In the Auto set up for device box. Select the **Start address** button to obtain the next available IP address or manually enter the IP range provided by your IT department, then select **OK**.

The PC Server icon will now be displayed in blue indicating that it has been configured.

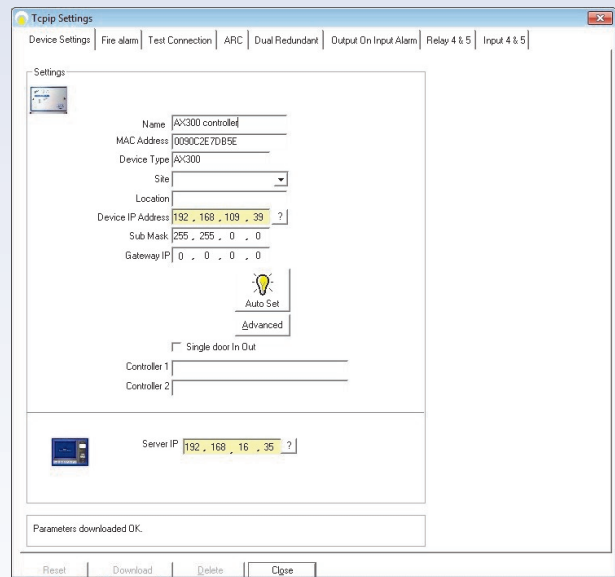


19. Double click on the AX300 device, displayed in red.

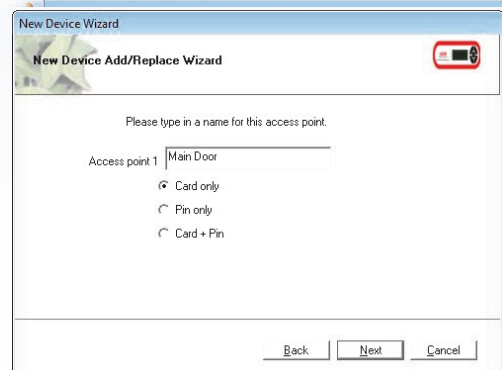


20. Type in a name for the AX300 controller. Select the **Auto Set** button to automatically add the IP address or alternatively manually enter the IP address, then select **Download**.

Select **Yes** in the "Are you sure?" dialog box.

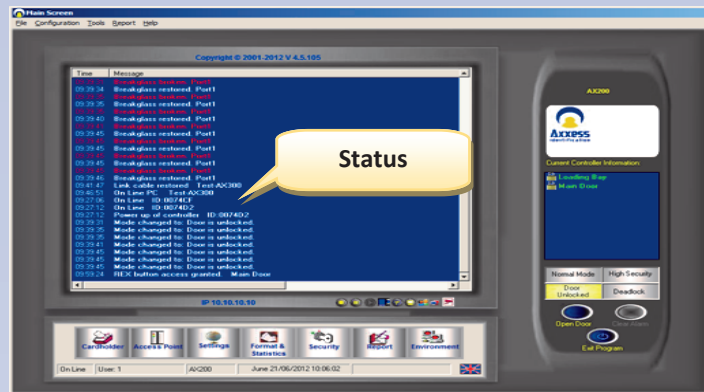


21. After approximately 15 seconds the New Device Wizard will be displayed, select **Add**. Type in the name of the Access Point into the text box and select type of access required. (eg. Card only), then select **Next**. Repeat step 21 for the second Access Point. The TCP/IP setting screen can now be closed.



Online Status

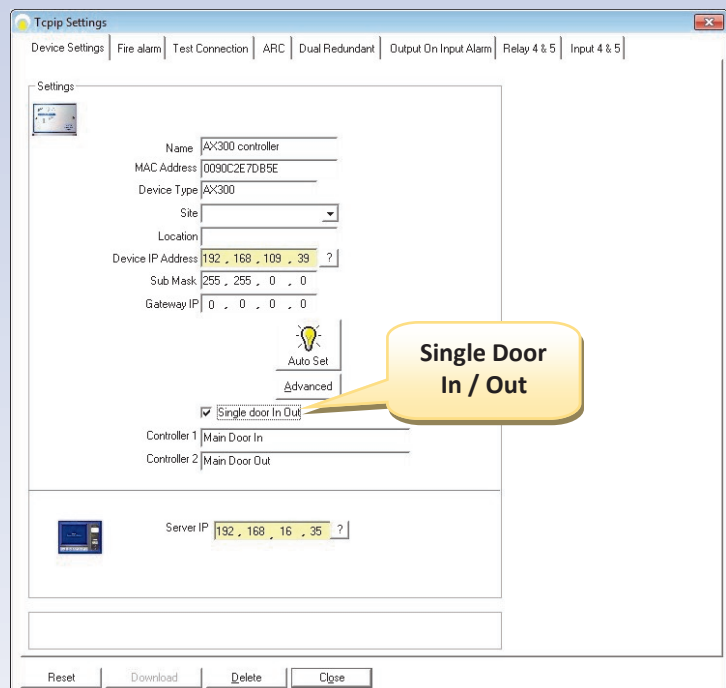
22. The Main Screen displays the AX300 controller and peripheral status data, including the two access point names.



AX300 Set-up for Single Door Access Point (In/Out Readers)

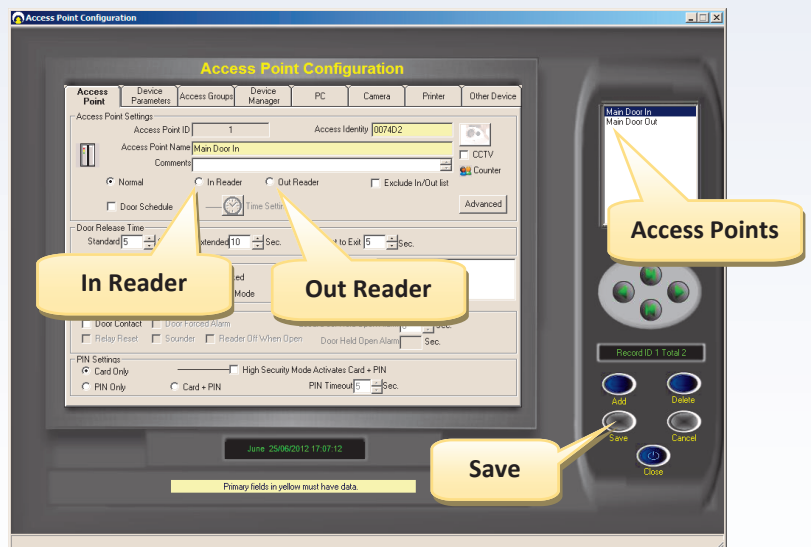
To set-up the AX300 controller for a single door with In and Out readers follow these settings:

23. Select the Access Point shown at the bottom of the screen. Select the **Device Manager** tab.
24. Double click on the device that you want to configure.
25. Ensure the Single door In Out option is checked.



Close the TCPIP Settings window.

26. Set the first access point to either In Reader or Out Reader. Select **Save**. Select the second access point and set it to the opposite of the first access point In Reader or Out Reader. Select **Save** and then **Close**.



Add a Card or Keyfob for Testing

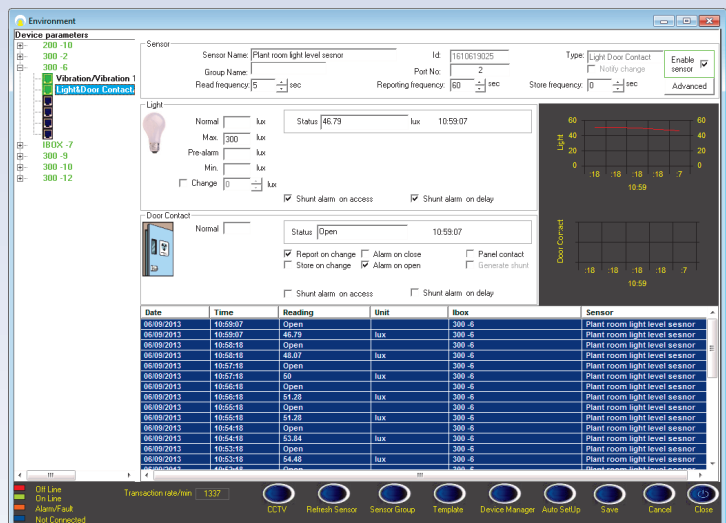
27. From the Main Screen select **Cardholder** button. Then select the blue **Add** button. Enter the **Card number**, together with cardholders details. Fields highlighted in Yellow are mandatory, these include Card Number, Access Group and Time Zone. Select **Save**. These details will now appear in the table at the bottom of the screen. Select **Close**. This will download the cardholder data.
28. The AX300 controller is now ready for testing.



Adding Sensors on the AX300 Controller

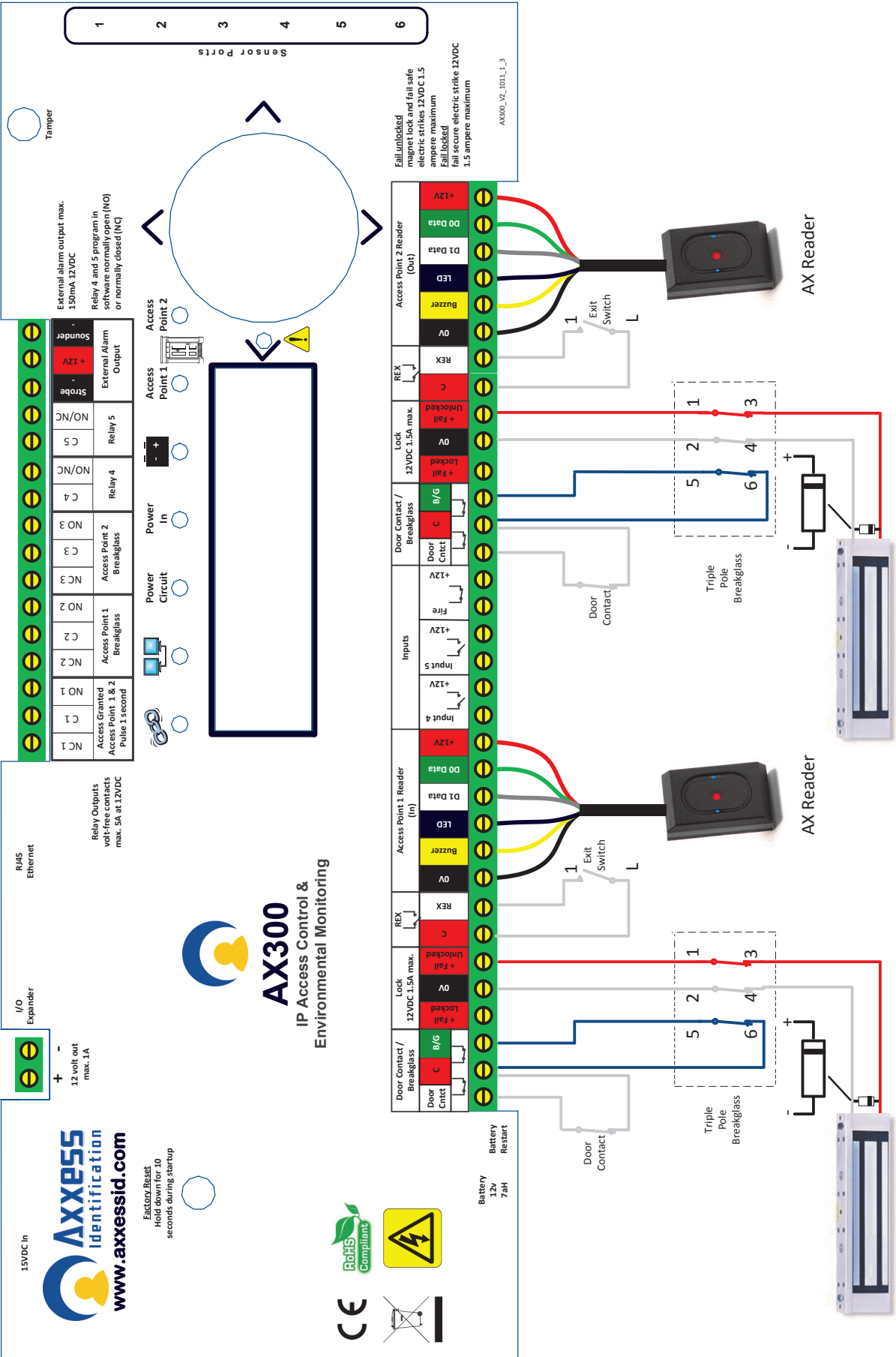
The AX300 has six sensor ports, with a wide range of sensors available—including temperature, humidity, flood, current, vibration, smoke, dust, and additional inputs /outputs.

1. Plug the sensor to one of the 6 sensor ports on the AX300 controller.
2. From the software, the Add Device Wizard will start automatically, select **Add**.
3. Specify default settings and select **next**.
4. Enter an appropriate name for the sensor and select **OK**.
5. The sensor will be added to the system.
6. To review and edit the settings go to the environment screen and select the sensor from the controller tree view.

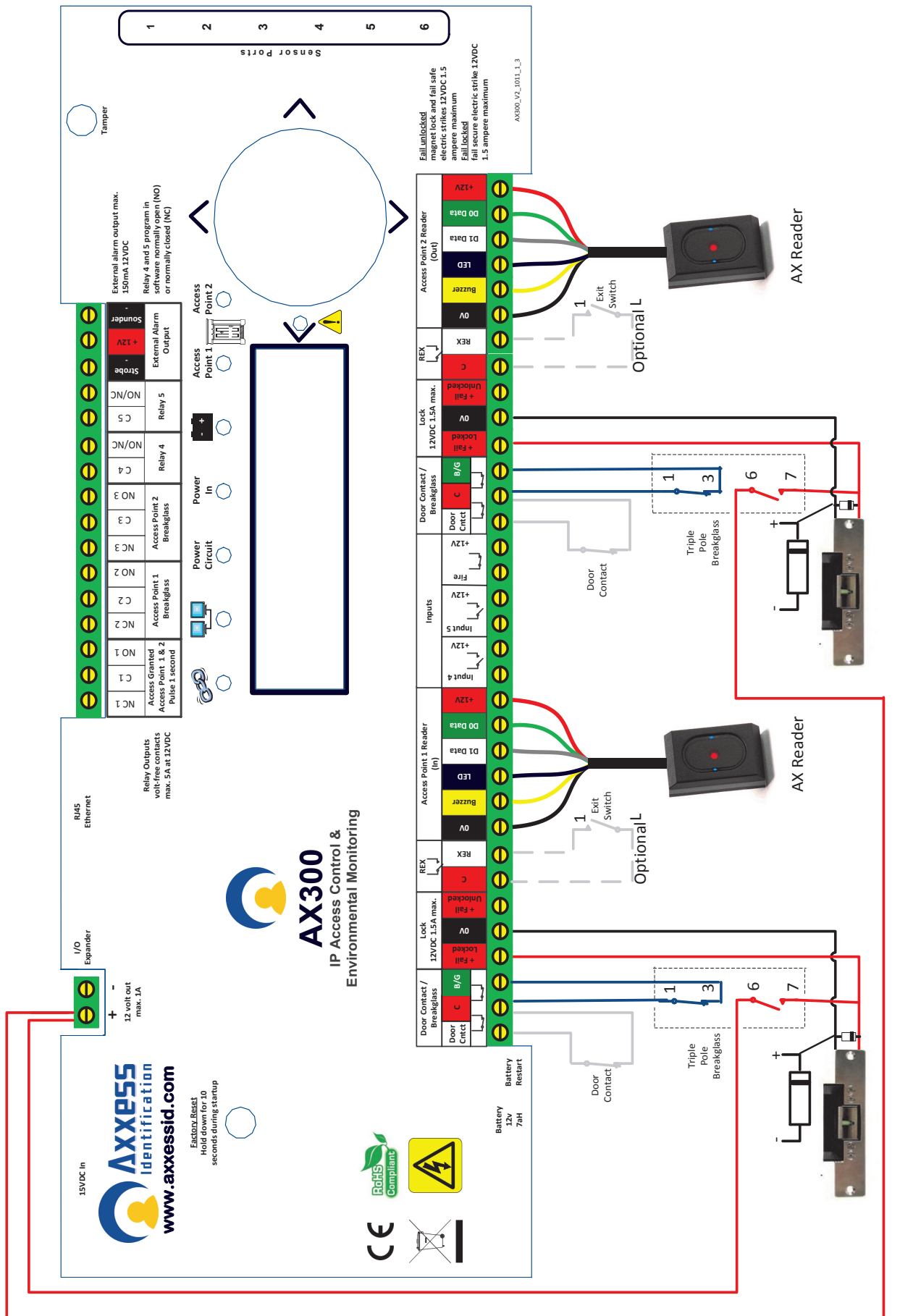


Read frequency	The interval in seconds for the sensor to read its value
Reporting frequency	The interval in seconds for the sensor to report the reading
Status / Time	last reading from the sensor
Normal	Enter the normal or average reading for future reference
Max	High limit value for sensor to generate an alarm
Pre-Alarm	Pre-alarm limit value for the sensor
Min	Low limit value for sensor to generate an alarm
Change / Value	Select change and enter a value. If the reading changes and exceeds the value entered between the reporting interval, an alarm will occur. For example on a temperature sensor if the temperature increases by 2 degrees in 60 seconds an alarm will occur.

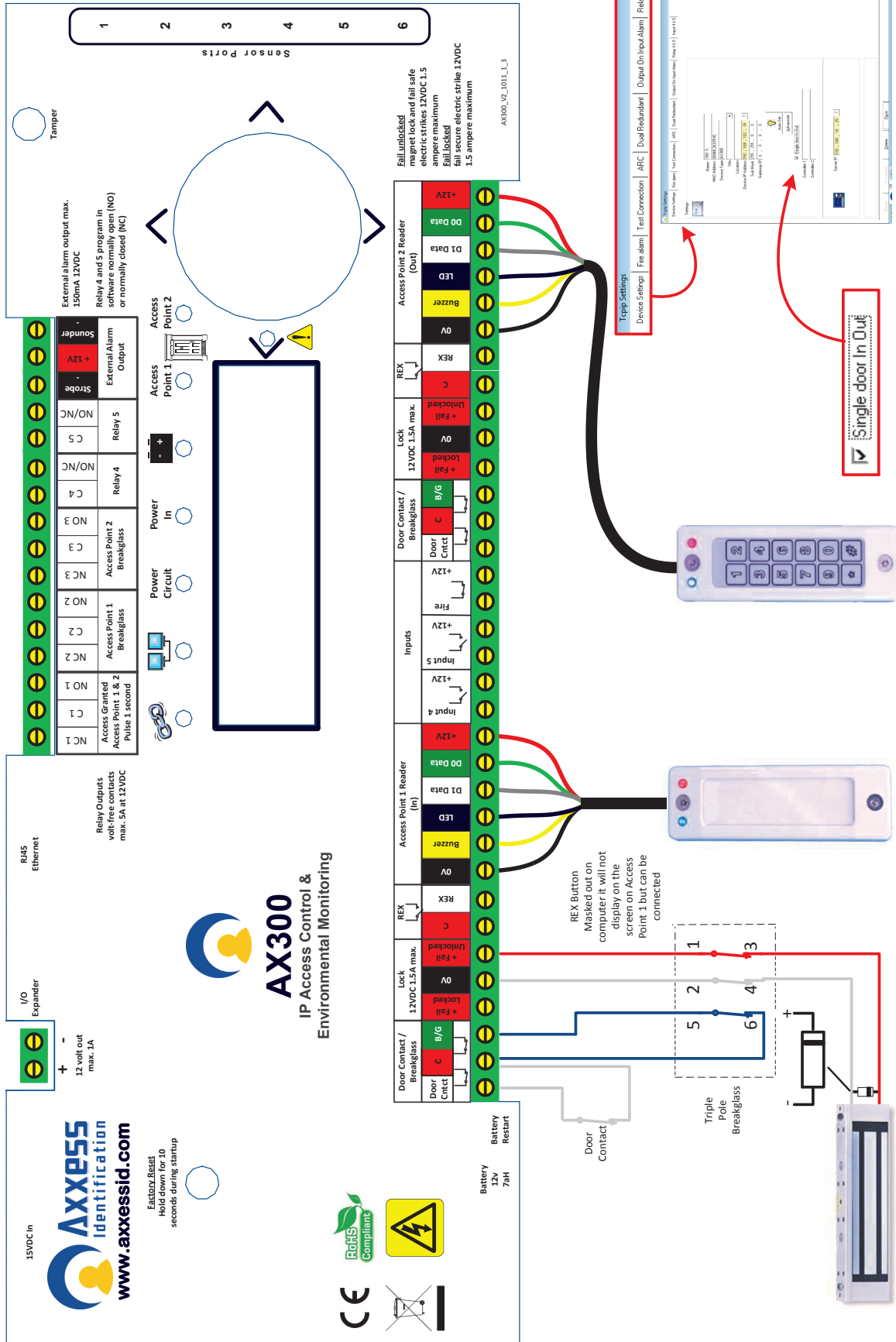
AX300 Fail Safe Connections



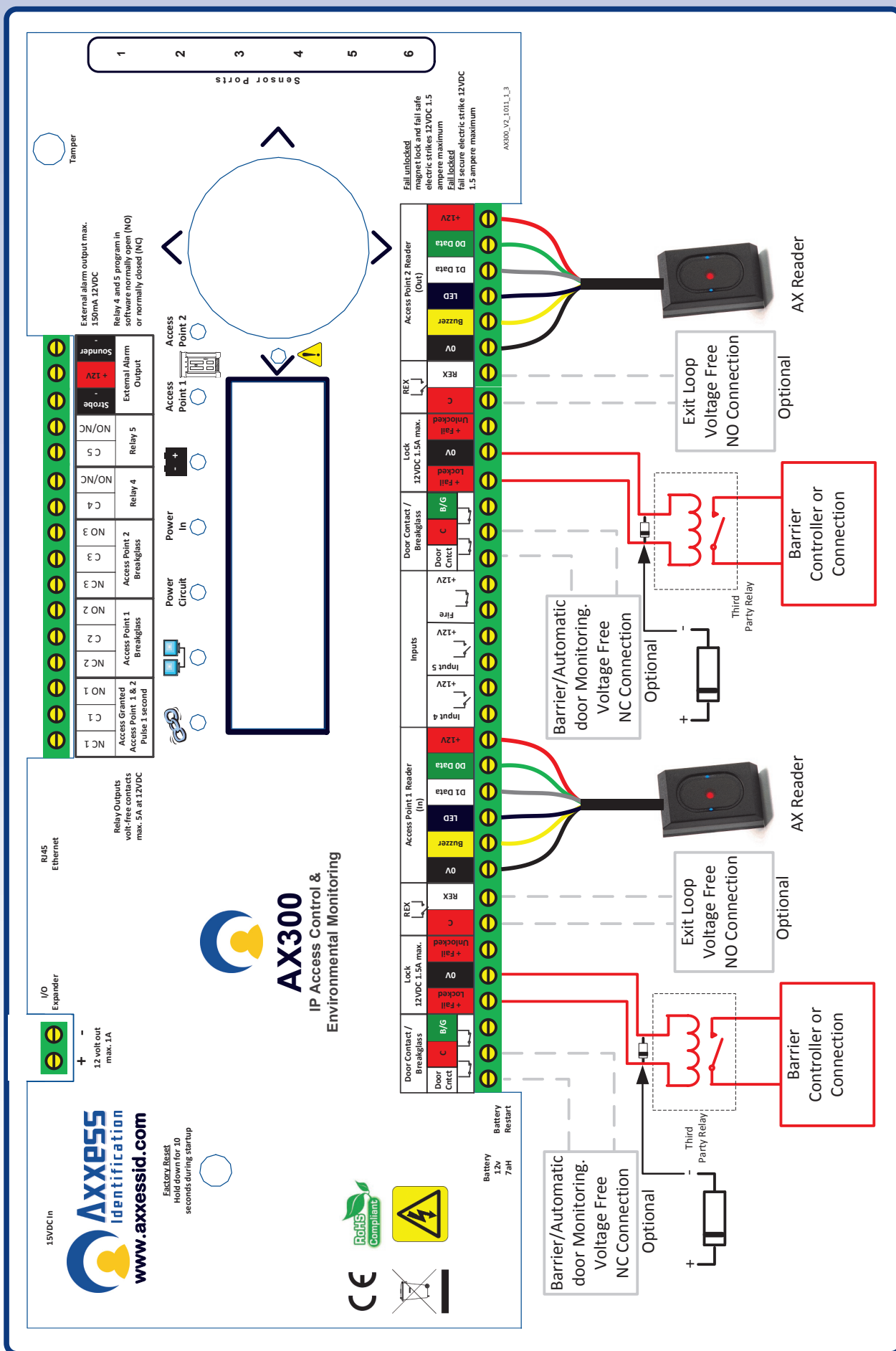
AX300 Fail Secure Connections



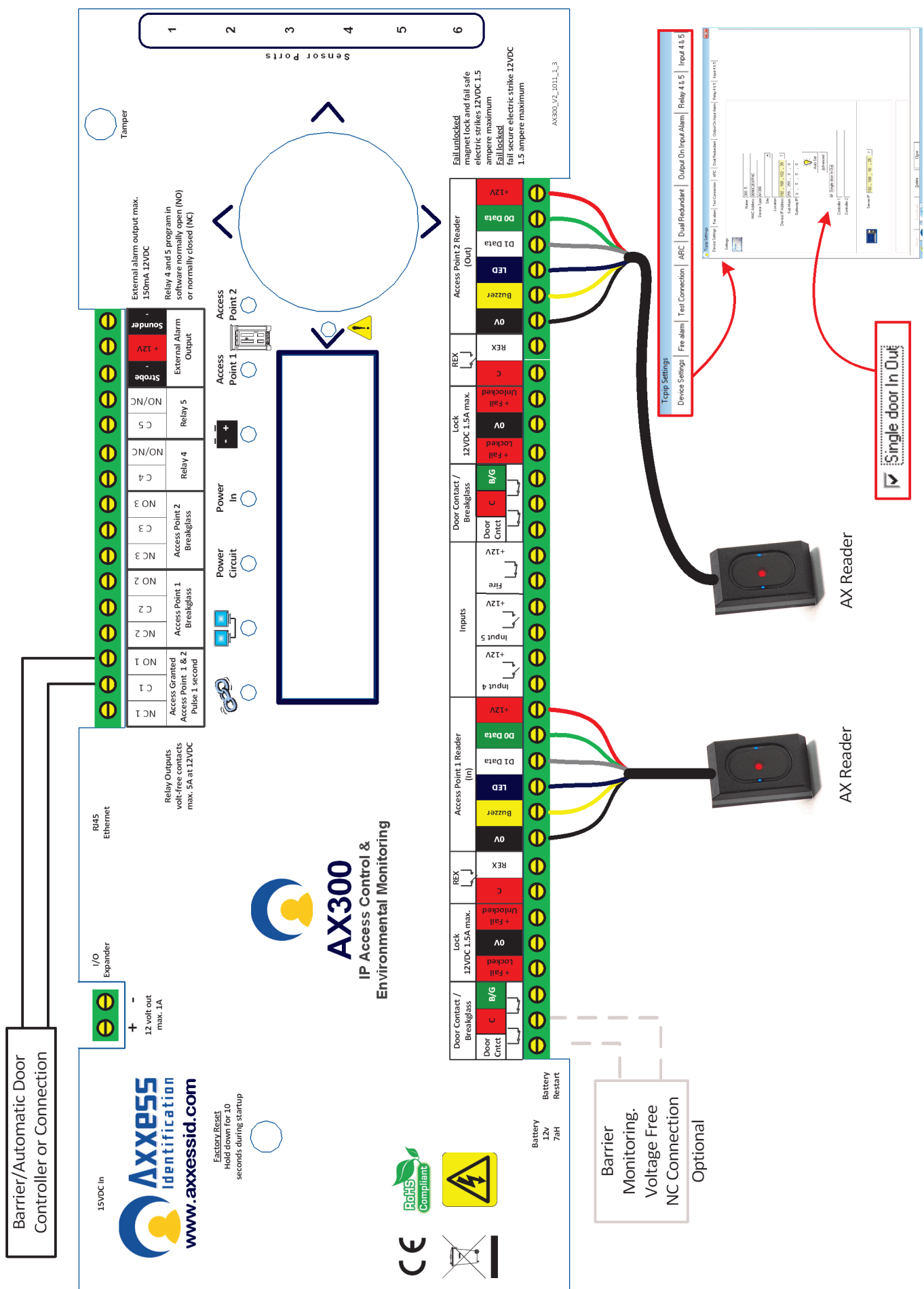
AX300 In and Out Reader Connection



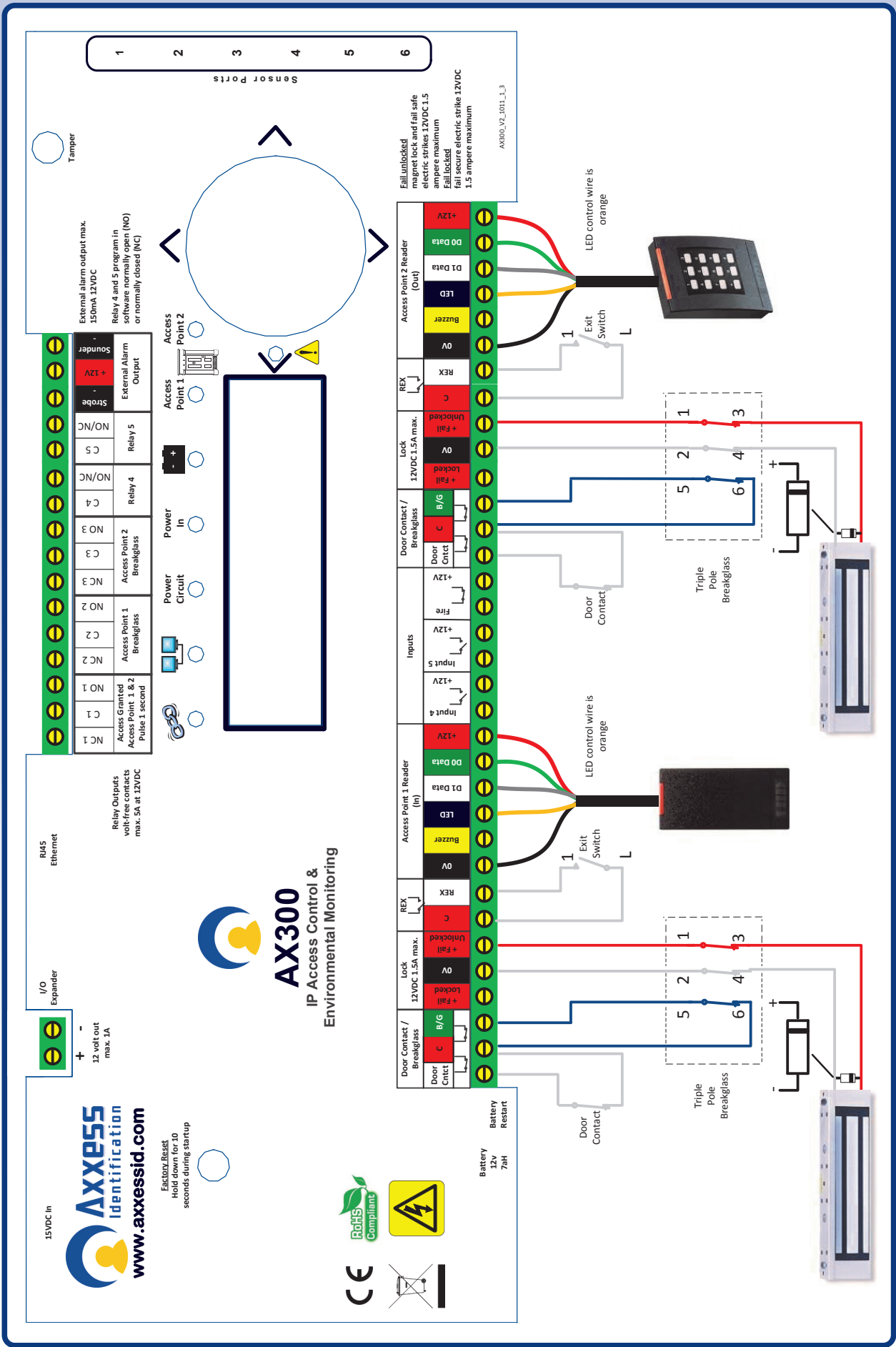
AX300 Barrier / Automatic Door Control In and Out Connection



AX300 Barrier Control / Automatic Door



AX300 Third Party HID Readers Fail Safe Connection

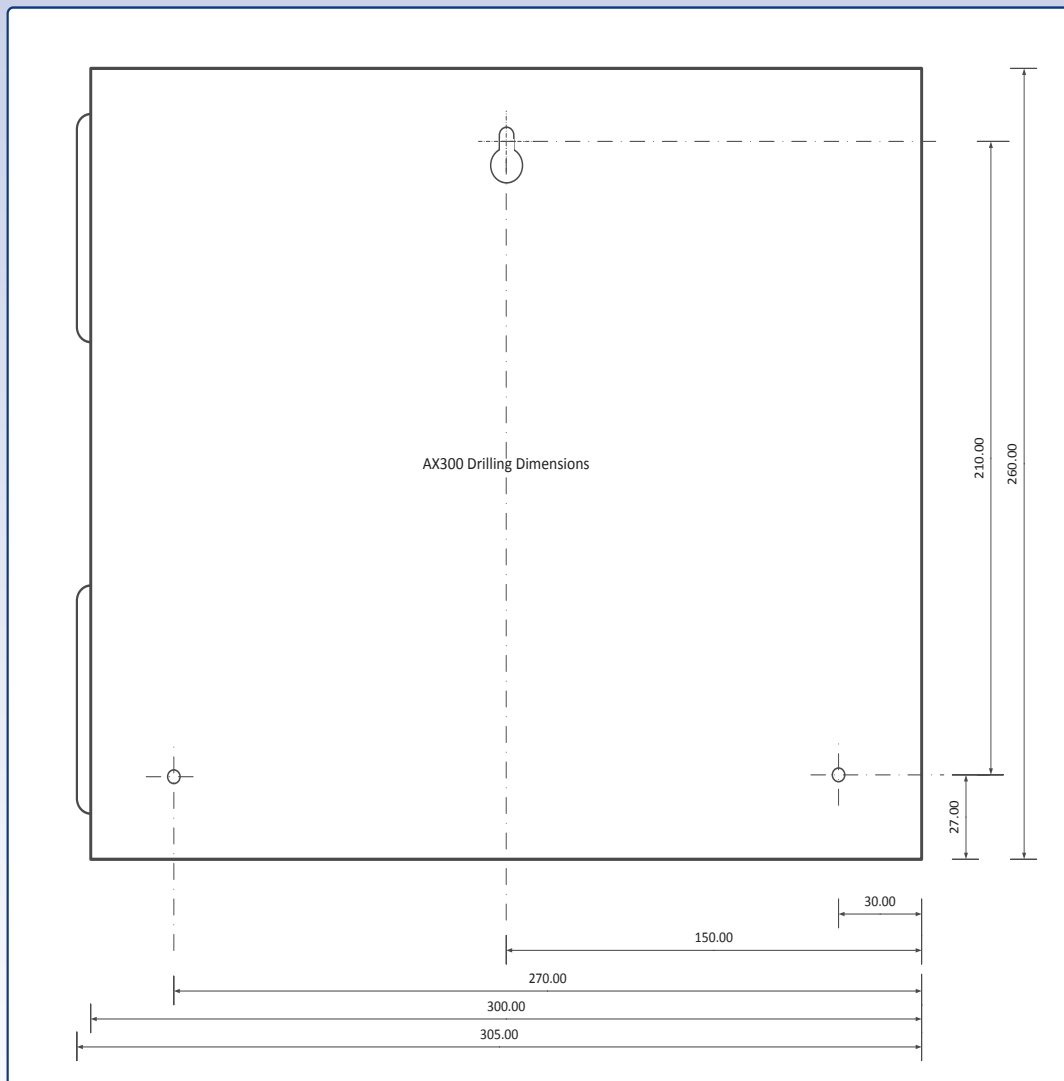


Installation Instructions

The AX300 controller includes a fixing kit for installation onto brick or plasterboard walls.

Please note the controller is not suitable for outdoor use and should be installed in an area protected from the elements of rain/ water.

1. Drill top centre hole using a 6mm drill bit. Insert rawl plug and insert screw, do not over tighten the screw in the plug until all the holes have been drilled.
2. Hang the unit on the screw, ensure the unit is hanging inline horizontally, mark the two bottom fixing holes with a marker pen.
3. Remove the unit from the screw. Drill the two additional mounting holes, inserting a rawl plug in each.
4. Hang the unit back on the top centre screw and hand tighten. Insert and hand-tighten the two bottom fixing screws.
5. Before finishing, ensure the unit is straight, then tighten all three screws.



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