

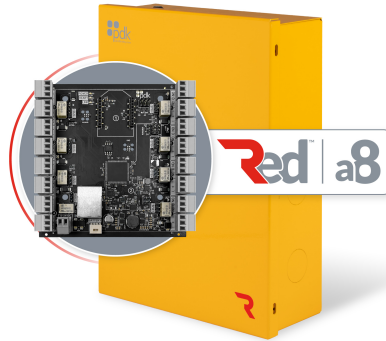
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Red Aux 8 User
Manual

Red Aux 8 User Manual

4 months ago · Updated



Red Aux 8 User Manual

Rev: 1.0.0

8-Port Auxiliary Controller - Part Number: **Aux 8**

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Installation

This manual provides instructions for installing the ProdataKey **Red Aux 8** controller. Before you begin the installation, read the instructions thoroughly. Make sure you have read and understood the Safety Information.

WARNING: Disconnect power before working with the ProdataKey product. DO NOT mount the product while power is applied. Always apply power at the *end* of the installation after verifying wiring connections are correct; incorrect wiring could cause damage to the product.

IMPORTANT: A ProdataKey **Cloud Node** is required to operate the **Red Aux 8** controller.

IMPORTANT NOTICES:

1: Unless the HV Converter (HVC) hardware is used, do not connect the power supply Transformer to a receptacle controlled by a switch.

2: The wiring shall be in accordance with the National Electrical Code, ANSI/NFPA 70.

Package Contents

The Red Aux 8 Controller comes standard with Ethernet as well as an onboard power supply that is built into the Controller. Optional wireless and PoE modules are also available and may be purchased separately.

Red Aux 8 Auxiliary Controller (1) Can Lock (1) Battery Leads (1) Jumpers (8) Enclosure Screws (2) QuickStart Guide (1) Diodes (8) Transformer (1) 14VDC, 2 Amp	• Red Aux 8 Controller • Battery Leads (1) • Jumpers (8) • Diodes (8) • Can Lock (1) • Enclosure Screws (2) • QuickStart Guide (1) • 14VDC 5A Transformer (1)
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Recommended Tools

- Drill and the appropriate size drill bit
- Phillips / Slotted screwdriver (to match screw heads)
- Wall anchors (2) if mounting to drywall
- Pencil (to mark hole positions on the mounting surface)
- Wire crimper/stripper

Specifications

Connections

- Removable screw-down terminals
- Polarized DC-only Power Supply Input
- Industrial-grade 2Amp Form-C Relay (8)
- Input I (8)

Communication Options

- Ethernet
- WIMAC wireless mesh (2.4 GHz / 802.15.4)
- Encryption: AES 128-bit
- Wireless Range: 1-mile line of sight / 450 ft. indoor average

Environmental

- Temperature: -20°C ~ +60°C / -4°F ~ +140°F
- Humidity: 0%–95% relative humidity noncondensing

Enclosure

- Dimensions (W x H x D) 10.4375" x 7.625" x 3"
- Metal lockable security can (indoor use only)

Weight

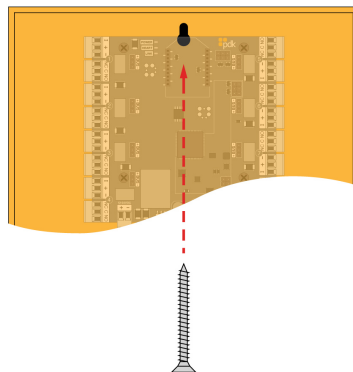
- 3 lbs

Requirements

Power

- 12V–24V DC Input
- 14 VDC 5 Amp 70 Watt Class-2 power supply (Input supply to the board)

Mounting Instructions



- Mount the **Red Aux 8** and Cloud Node above the door frame or higher where possible.
- Install the **Red Aux 8** and Cloud Node in an environmentally controlled and secure area.

These instructions allow you to easily fasten the box properly and securely to a wall surface. Prior to beginning, ensure you have the package contents, tools, and necessary materials for the installation on an appropriate surface (i.e., drywall, wood).

- Use the **Red Aux 8** enclosure to mark the hole positions on the wall, and drill holes into the surface. If mounting onto drywall, insert the anchors into the holes to secure the screws to the surface.
- Align the enclosure's holes to the holes in the wall surface and mount the controller box with the screws so the box is securely fastened to the wall.

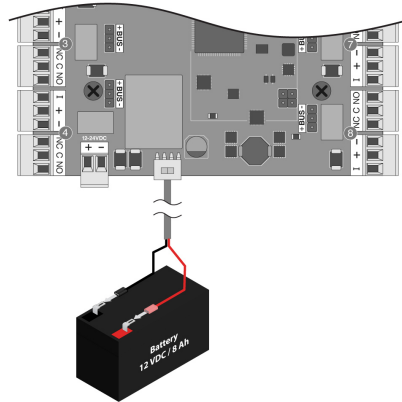
Power / Battery

Using a battery that meets the following specifications will provide at least 30 minutes of backup power in the event of an AC power loss:

- **Recommended Battery Type:** 12 VDC 8 Ah lead-acid battery
- **Recommended Battery Size:** 4" x 3.5" x 3" (L H W)
- **Max Battery Dimensions:** 6" x 5" x 4" (L H W)

A backup battery is HIGHLY recommended to prevent system failure in the event of an AC power loss. When a backup battery is not used, a loss of AC power will cause a loss of output voltage.

Add the 12V DC 8 Ah battery, attaching the wires from the battery to the circuit board battery terminal (illustration below).



The included power supply is a 14.0V 5A 70-watt, class-2 power supply. This connection is polarity sensitive, meaning that it has fixed positive and negative connections. From the onboard power supply, connect a red 18/2 wire from the positive (+) DC terminal to the positive (+) of the **Red Aux 8** connector. Connect a black 18/2 wire from the onboard power supply negative (-) DC terminal to the negative (-) of the **Red Aux 8** connector.

NOTE: DO NOT connect the backup battery until ALL wiring is completed and verified; incorrect wiring could cause damage to the product.

For information about connecting other wiring, such as power wires to third-party locks, readers, and other devices, see the respective manufacturers' instructions.

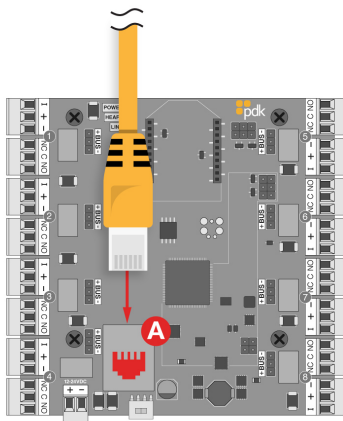
Battery Maintenance, Replacement, & Disposal

The Red Aux 8 controller features a battery charger and constantly monitors the battery's health and statistics.

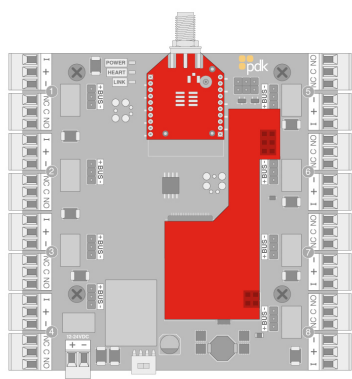
Check the battery regularly and replace it only with an identical battery or a ProdataKey recommended battery. Dispose of used batteries according to local regulations or the battery manufacturer's instructions.

IMPORTANT: There is a risk of a battery explosion if the battery is incorrectly replaced.

Connections



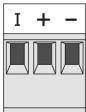
Standard Ethernet Board - An Ethernet connection is the standard default Red Aux 8 communication option.



Optional Connections - Either of the optional Red Module Kits, RMPOE (POE++) and RMW (WIMAC communication), can be added to the Red Aux 8 controller.

Connectors

This section describes the Red Aux 8 connector's technical specifications.



3-Pin Connector	Port	PIN	Notes
Aux Input	I	1	Auxiliary Input, assignable in programming.
12VDC Positive	+	2	12VDC Positive
12VDC Negative	-	3	12VDC Negative



3-Pin Connector	Port	PIN	Notes
Normally Closed	NC	1	Normally closed connection for main form C relay with optional jumper configuration for wet positive (+) or negative (-) output.
Common	C	2	Common connection for main form C relay.
Normally Open	NO	3	Normally open connection for main form C relay with optional jumper configuration for wet positive (+) or negative (-) output.

Power Port Connector

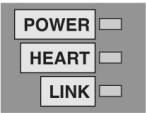
Power into the controller board is polarity sensitive, meaning that it has fixed positive and negative connections.



2-Pin Connector	Port	PIN	Notes
Controller Power Input	+	1	12/24 VDC Positive
Controller Power Input	-	2	12/24 VDC Negative

Board Systems LED Indicators

LED indicators are shown on the controller board for POWER, HEART, LINK, and ethernet LEDS located on the ethernet port.



LED	Light	Status
POWER	On	Board is powered up
POWER	Off	No power to board.
HEART	Flashing	Normal operation.
HEART	Solid On	Possible serious hardware function. Call Support.
LINK	Solid On	No connection.
LINK	Solid Off	The connection is good.
Ethernet Speed	Orange	The connection is communicating at 100mbps
Ethernet Speed	Green	The connection is communicating at 1000mbps/1gbps
Ethernet Activity	Off	There is no connection to a network through the cable.
Ethernet Activity	Green	There is an active connection to a network through the cable.

When a relay is triggered, an LED near the appropriate relay will turn on, showing the relay has changed state.

Wiring

NOTE: For UL-certified wire installations, all wire running from a **Red Aux 8** Controller to a lock, strike, or reader device must be less than 98.5 feet (30 meters).

- Strip the wire ends as required.
- Connect the wires between the auxiliary controller and devices.

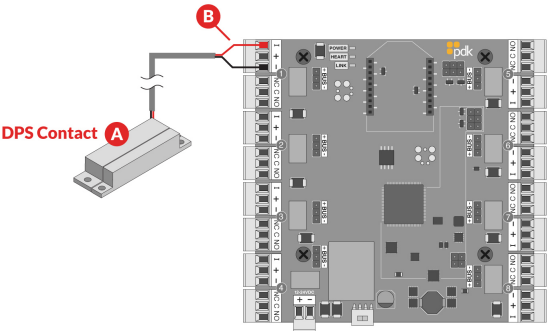
NOTE: For information about the connectors and their specifications and diagrams, refer to the appropriate wiring diagrams: Maglock, Door Strike (Fail-Secure), and Door Strike (Fail-Safe).

Recommended Wiring Dimensions

Use 26 gauge minimum, 18 gauge maximum, stranded for general wiring. Wiring methods shall be in accordance with the National Electrical Code, ANSI/NFPA 70. Follow these recommended wiring sizes.

Wiring For	Recommended Size
Power Input	18 gauge 2 conductors (18/2) wire
Input Trigger	22 gauge 2 conductors (22/2) wire
Elevator Control	18 gauge 2 conductors (18/2) wire
Wet Contact Output	18 gauge 2 conductors (18/2) wire
Dry Contact Output	18 gauge 2 conductors (18/2) wire

Input Wiring Diagram

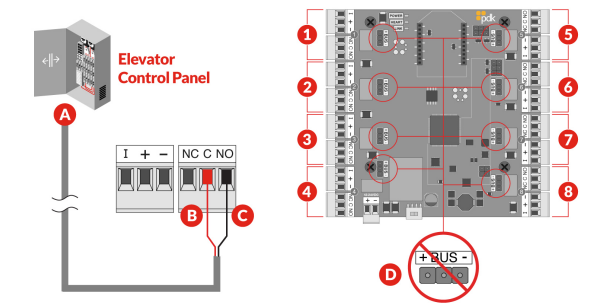


(A) DPS: The Door Position Switch is mounted on the door frame in the desired location with a 22/2 wire running from the DPS to the controller. When using two DPS sensors for double doors, wire them in series with only two conductors running back to the controller.

(B) Input I: Rule-based inputs can be triggered by using the DPS (A) input in programming. The input must be connected between the I and -.

NOTE: When the input receives a negative (-) connection from the controller, the input is triggered until the negative is dropped. A rule can be set up to trigger any output based on this input trigger.

Elevator Floor Control Wiring Diagram



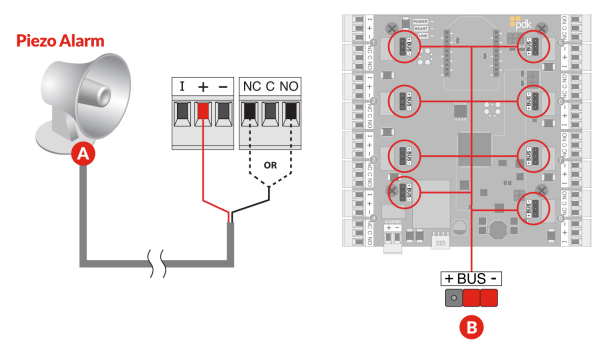
(A) Elevator Control Panel - Wire each floor control trigger to the Red Aux 8 relay ports using 18/2 wire.

(B) Common - Connect one of the wires from the elevator control panel (A) output into the Common for the appropriate elevator control relay.

(C) NO - Normally Open - Connect the other leg from the elevator control panel (A) output into Normally Open on the same elevator control relay as where common was connected..

(D) Jumper Block - Because elevators connections are wired as a dry contact, **DO NOT** place jumpers on the jumper blocks for elevator connections.

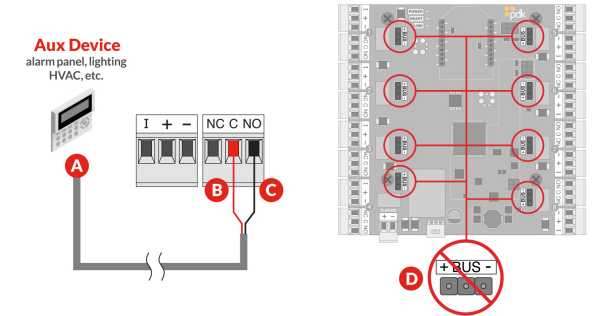
Wet Contact Output Wiring Diagram



(A) Auxiliary Device - An auxiliary device can be connected to the Red Aux 8, so it can be triggered based on various Event rules (System, Group, or Person). Connect a powered auxiliary device as shown above.

(B) Jumper Block - Used to designate (+) or (-) board voltage out of NO and NC. If the jumper is off, the relay is a standard "dry contact" needing input into common. In this diagram, the jumper is placed on (-) side to operate the auxiliary device.

Dry Contact Output Wiring Diagram



Certifications

FCC Compliance Statement: 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.
2. This device must accept any interference received, including interference that may cause undesired operation.

Product can be used without license conditions or restrictions in all European Union countries, including Austria, Belgium, Denmark, Finland, France, Germany, Greece, Ireland, Luxembourg, The Netherlands, Portugal, Spain, Sweden, and the United Kingdom, as well as other non-EU countries, including Iceland, Norway, and Switzerland.

Safety, Maintenance, & Operational Information

Requirements

This manual is intended for trained and authorized installers of ProdataKey access control products.

Updated versions of this document will be posted to the ProdataKey website, as required. Other user manuals are also available on the ProdataKey website's Document Library.

In this manual, ProdataKey and its door controllers are referred to (but not limited to) as the PDK products, **Red Aux 8**, Eight io, product, network door controller, device, device controller, and Cloud Node.

Liability

Every care has been taken in the preparation of this document. Please feel free to inform ProdataKey Support of any inaccuracies or omissions in this documentation. We welcome your feedback and suggestions. ProdataKey cannot be held responsible for any technical or typographical errors and reserves the right to make changes to the product and documentation without prior notice.

ProdataKey makes no warranty of any kind with regard to the material contained within this document, including, but not limited to, the implied warranties of merchantability and fitness for a particular purpose. ProdataKey shall not be liable nor responsible for incidental or consequential damages in connection with the furnishing, performance, or use of this material. This product is only to be used for its intended purpose.

Intellectual Property Rights

Patents Pending - ProdataKey has intellectual property rights relating to technology embodied in the product described in this document.

Equipment

This equipment must be installed and used in strict accordance with the instructions given in the user documentation. This equipment contains no user-serviceable components. Wiring methods shall be in accordance with the National Electrical Code, ANSI/NFPA 70. Unauthorized equipment changes or modifications will invalidate all applicable regulatory certifications and approvals.

Use only accessories that comply with the technical specification of the product. These can be provided by ProdataKey or an approved third party. Use only spare parts provided by or recommended by ProdataKey.

After the system is installed and working properly, no further maintenance or testing is required.

Do not attempt to repair the product by yourself. Contact ProdataKey Support or your ProdataKey authorized distributor for service matters.

Trademark Acknowledgments

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Regulatory Information

Electromagnetic Compatibility (EMC)

This equipment has been designed and tested to fulfill applicable standards for:

- Radio-frequency emissions when installed according to the instructions and used in its intended environment.
- Immunity to electrical and electromagnetic phenomena when installed according to the instructions and used in its intended environment.

Safety

This manual has been prepared to help you install the product. Read through the installation instructions carefully before installing the product. Keep the guide for future installation and maintenance references.

This product complies with IEC/EN/UL 60950-1, Safety of Information Technology Equipment. If your connecting cables are routed outdoors, the product shall be grounded either through a shielded network cable (shielded twisted pair) or another appropriate method.

The power supply used with this product shall fulfill the requirements for Safety Extra Low Voltage (SELV) and Limited Power Source (LPS) according to IEC/ EN/UL 60950-1.

Disposal and Recycling

When this product has reached the end of its useful life, dispose of it according to local laws and regulations. For information about your nearest designated collection point, contact your local authority responsible for waste disposal. In accordance with local legislation, penalties may be applicable for incorrect disposal of this waste.

Supported Readers

See the available product data sheets at <https://www.prodatakey.com/products>

Learn More

Visit ProdataKey's [accesscontrol101.com](https://www.prodatakey.com/accesscontrol101.com) for certification training and tutorials.

Notice

- The ProdataKey **Red Aux 8** Door Controller is intended for indoor use only.
- The ProdataKey product shall be installed by a trained professional.
- The ProdataKey product shall be used in compliance with local laws and regulations.
- The ProdataKey product shall be installed within a secured area.
- The power supply used must be equipped with a power indicator visible from the exterior.
- Mount in a dry and well-ventilated environment.
- To provide the best conditions and proper operation of the product, the auxiliary controller must be securely mounted in accordance with the installation instructions.
- Do not install the auxiliary controller box on unstable brackets, surfaces, or walls.
- Use only applicable tools when installing the ProdataKey product. Using excessive force while mounting the product could cause damage.
- Avoid exposing ProdataKey product to shocks or heavy pressure.
- Do not use chemicals, caustic agents, or aerosol cleaners to clean the product. Use a clean cloth dampened with pure water for cleaning the exterior of the enclosure.
- Use only accessories that comply with the technical specification of the product. These can be provided by ProdataKey or a ProdataKey authorized third-party vendor.
- Use only spare parts provided by or recommended by ProdataKey Support or a product reseller.
- Do not attempt to repair the product by yourself. Contact ProdataKey Support or your ProdataKey authorized distributor for service matters.
- Use a can lock to ensure secure enclosures and prevent tampering.
- Protect the power cord, Ethernet cable, and transformer wires from being walked on or pinched, particularly where the wiring exits the box.
- For UL- certified installations, all cable runs to the door controllers must be less than 98.5 feet (30 meters).

Manufacturer's Limited Warranty

One to five-year warranty against defects in materials and workmanship. Full details at [prodatakey.com](https://www.prodatakey.com).

Support / Sales

Technical Support:

- **Phone:** 801.317.8802 option #2
- **Email:** support@prodatakey.com
- **Direct Dealer Support Line:** 801.206.4086

Sales:

- **Phone:** 801.317.8802 option #1
- **Email:** sales@prodatakey.com

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