PDK-RDC-2 Red 2 Two Door Controller User Guide

Contents

PDK-RDC-2 Red 2 Two Door Controller

Product Information

The Red 2 Two Door Controller package includes one controller, battery leads, key lock, jumpers, and diodes. The controller has ports for power, Ethernet, POE in/out, OSDP, and two bus ports. It also has inputs for door position switches, requests to exit, and locking relays. The controller can be mounted securely to a wall and is compatible with main and secondary readers.

Mounting Controller

Mount the Red 2 enclosure securely to a wall.

Reader Connection

Mount the main reader at the door with a 22/5 or 22/6 wire run to the door controller. Wire the reader to the controller as shown in the wiring diagram above. Be sure to check polarity and voltage prior to powering the controller. For secondary readers, wire them to the controller as shown in the wiring diagram above.

Input A / DPS Connection

The DPS is mounted on the door frame in the desired location with a 22/2 wire running from the DPS to the controller. Wire the DPS to the controller as shown in the wiring diagram above. When using two DPS sensors for double doors, wire them in series with only two conductors running back to the controller for connection.

Input B / REX Connection

When installing a Maglock, it is typical to install a REX (Request to Exit) at the door for free egress. Run an 18/2 wire from the Maglock to the Door Controller, connecting to the Maglock as shown in the wiring diagram above. The REX is mounted in the desired location with an 18/5 wire ran from the REX to the controller. Wire the REX to the controller and maglock as shown in the wiring diagram above. If reporting is not needed in the system, simply eliminate the green labeled wire.

Locking Relay

The provided diode must be installed when using a strike. Install it at the strike with the grey stripe of a diode on positive and the black on negative. Use NC for maglocks (or strikes in fail-safe configuration) and NO for strikes in fail-secure configuration. Connect the negative (-) of the maglock or strike to NC or NO on the door controller. Use the designated jumper(s) to energize the relay output NO and NC to utilize the output as a wet contact.

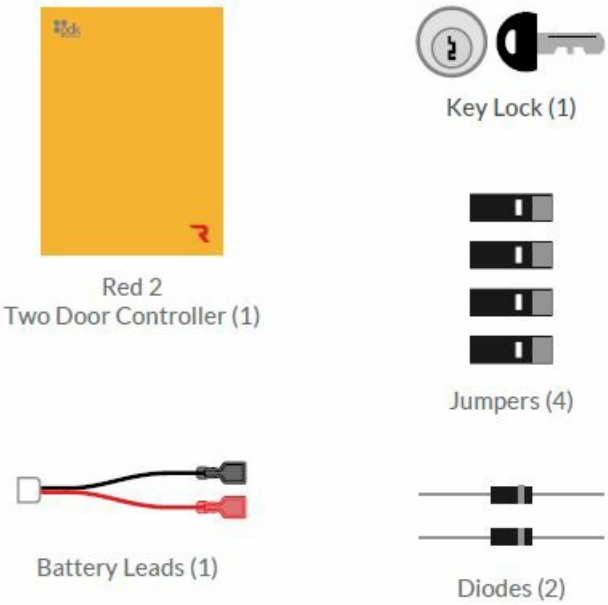
Communication Connections

The Red controllers accept RJ45 connections. The Red 2 controller will be Self-Discoverable from Pdk io software. You have the option to assign a Static IP address but is not required.

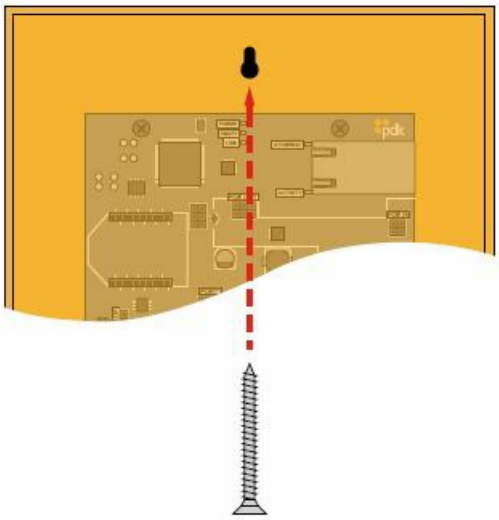
Power Connection

The Red 2 controller has ports for power, Ethernet, POE in/out, OSDP, and two bus ports. Wireless (PN: RMW) and PoE (PN: RMPOE) module kits can be purchased as optional.

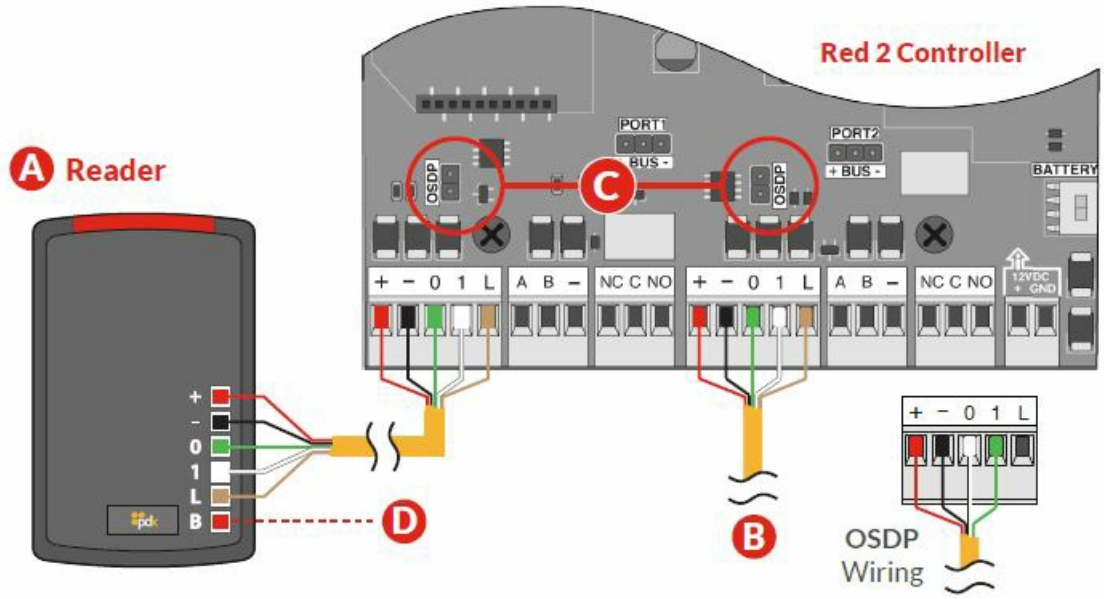
Package Contents



Mounting Controller

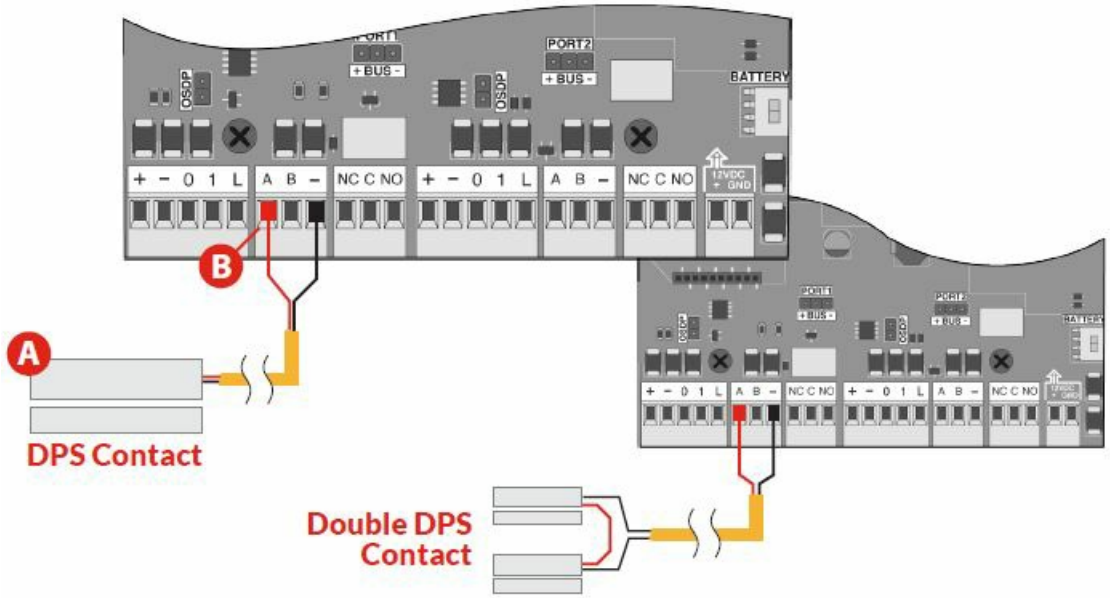


Reader Connection



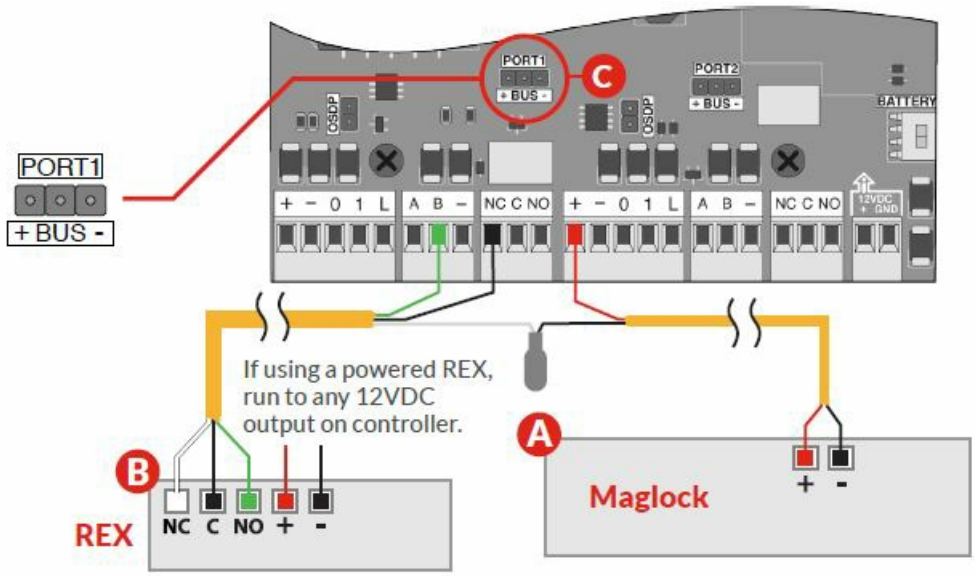
- **A Main Reader –** The main reader is mounted at the door with a 22/5 or 22/6 wire running to the door controller. Wire the reader to the controller as shown above. Be sure to check polarity and voltage prior to powering the controller.
- **B Secondary Reader –** Wire the second reader to the controller as shown above. Be sure to check polarity and voltage prior to powering the controller.
- **C OSDP –** Place jumper(s) to enable OSDP (see OSDP reference guide at the end of this guide for more info).
- **D Piezo –** Can be connected to available relay and configured with software.

Input A / DPS Connection



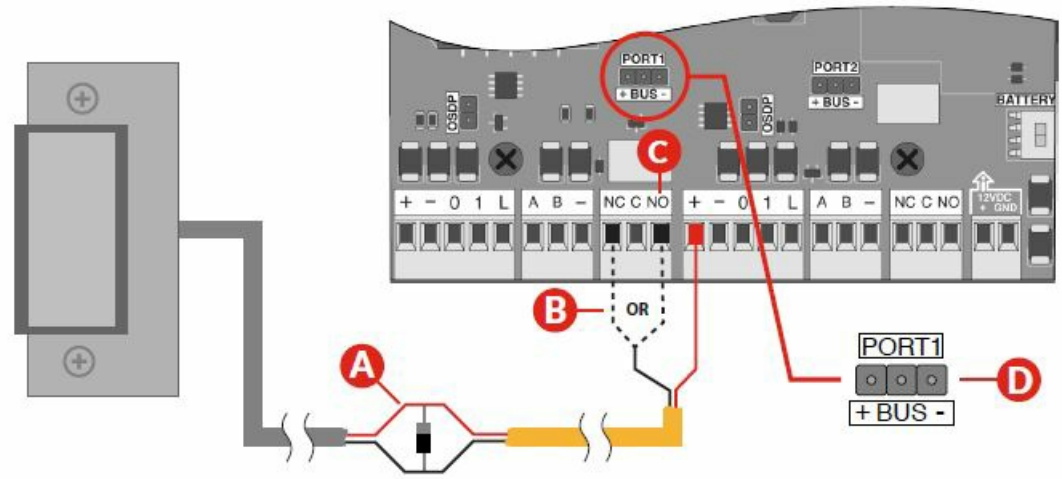
- **A DPS (Door Position Switch) –** The DPS is mounted on the door frame in the desired location with a 22/2 wire running from the DPS to the controller. Wire the DPS to the controller as shown above. When using two DPS sensors for double doors you will wire them in series with only two conductors running back to the controller for connection.
- **B AUX Input –** A rule can be set up to trigger events or outputs based on this input trigger.

Input B / REX Connection



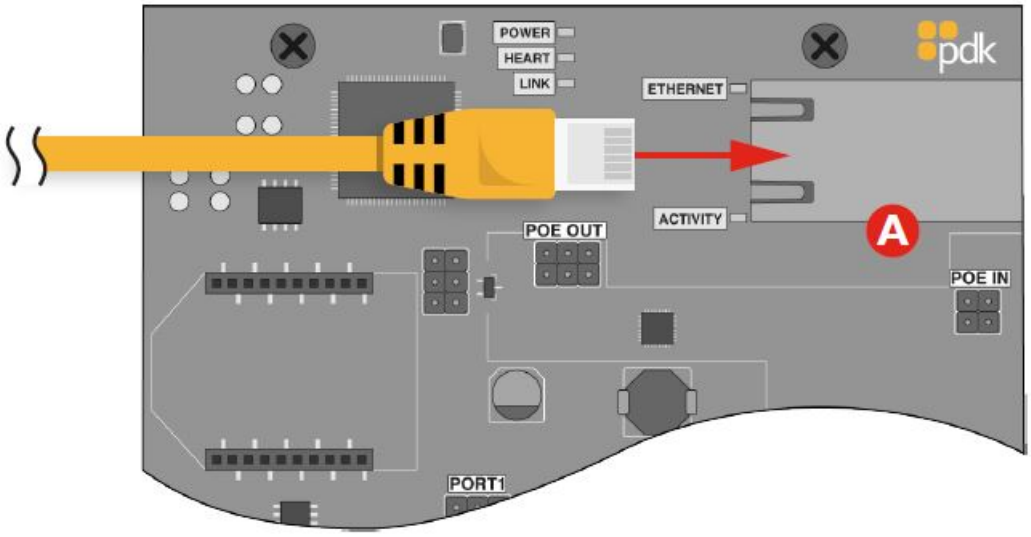
- **A Maglock –** When installing a Maglock it is typical to install a REX (Request to Exit) at the door for free egress. Run an 18/2 wire from the Maglock to the Door Controller, connecting to the Maglock as shown.
- **B REX (Request to Exit) –** The REX is mounted in the desired location with an 18/5 wire run from the REX to the controller. Wire the REX to the controller and maglock as shown above. If reporting is not needed in the system, simply eliminate the green labeled wire.
- **C Jumper –** Use the designated jumper(s) to energize the relay output NO and NC to utilize the output as a wet contact.

Locking Relay

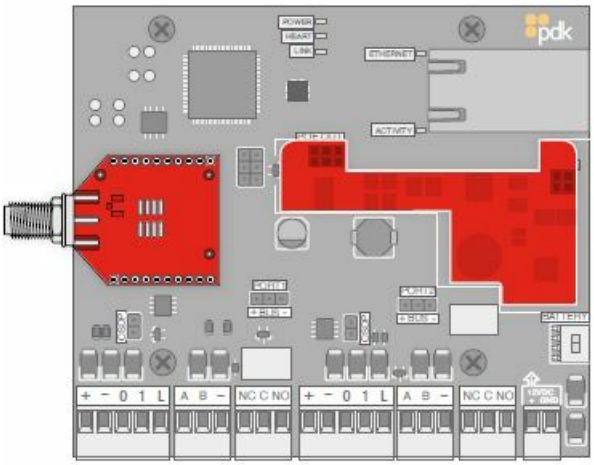


- **A Diode –** The provided diode must be installed when using a strike. Install at the strike with the grey stripe of a diode on positive and the black on negative.
- **B NC –** Used for maglocks (or strikes in fail-safe configuration). Connect the negative (-) of the maglock or strike to NC on the door controller.
- **C NO –** Used for strikes in fail-secure configuration. Connect the negative (-) of the strike to the NO on the door controller.
- **D Jumper –** Use the designated jumper(s) to energize the relay output NO and NC to utilize the output as a wet contact.

Communication Connections

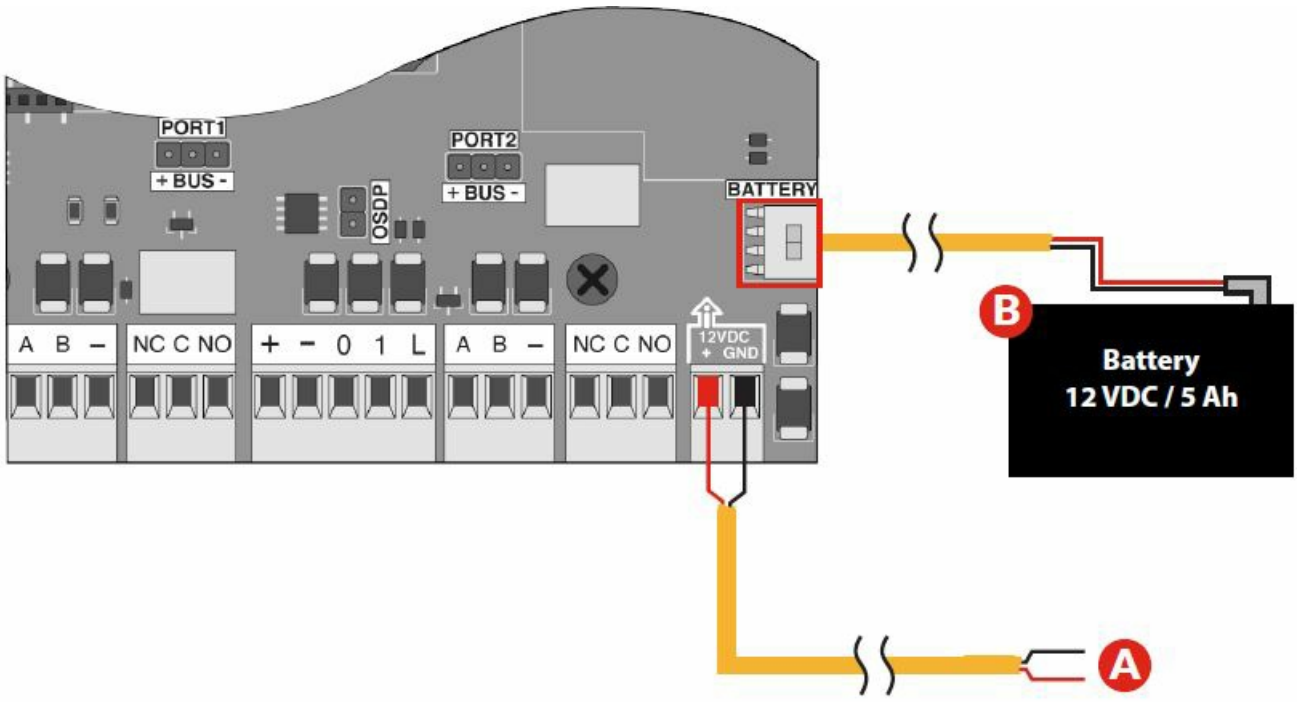


- **A: Ethernet –** Red controllers accept RJ45 connections. The Red 2 controller will be Self-Discoverable from Pdk io software. You have the option to assign a Static IP address but is not required.



Wireless (PN: RMW) and PoE (PN: RMPOE) module kits can be purchased for optional communication add-ons.

Power Connection



- **A: DC INPUT –** Use included 14 VDC, 2 Amp transformer for DC power input. It is recommended to use 18/2 wire. For high-voltage applications, use the HV Converter (PN: HVC).
- **B: BATTERY –** The enclosure will fit most 12 VDC 5 Ah batteries. The battery is connected with supplied leads and is polarity sensitive. Receive up to 8 hrs of battery backup using a strike in fail-secure.

Reference Guide

- **Fire Input –** To integrate the fire system using a Red 2-door controller, refer to wiring diagrams in the Partner Portal at www.prodatakey.com/resources.
- **Programming –** After the Red 2 door controller has been connected back to the Cloud Node, access the configuration software as instructed in the programming manual. This manual is available for download through the Partner Portal at www.prodatakey.com/pdkio.
- **Reader Compatibility –** ProdataKey does not require proprietary readers. Door controllers accept a Wiegand

input, including biometric readers and keypads. OSDP readers are supported by using an included jumper (see OSDP reference guide). Contact support for details.

- **UL 294 Compliance –** All equipment must meet appropriate UL certifications. For UL-listed installations, all cable runs must be less than 30 meters (98.5') Part Number – R2 PDK Technical Support Phone: 801.317.8802 option #2 Email: **support@prodatakey.com**. PDK Knowledge Base: **prodatakey.zendesk.com**.

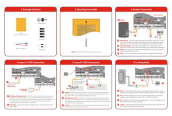
OSDP Reference Guide

- **What is OSDP –** Open Supervised Device Protocol (OSDP) is an access control communications standard developed by the Security Industry Association to improve interoperability among access control and security products. OSDP brings heightened security and improved functionality. It is more secure than Wiegand and supports AES-128 encryption.
- **OSDP Wire Specification –** Four (4) conductor twisted pair overall shield is recommended to remain fully TIA-485 compliant at maximum supported baud rates and cable distances.
- **NOTE** – It's possible to reuse existing Wiegand wiring for OSDP, however, using simple stranded cable typical of Wiegand readers generally does not meet the RS485 twisted pair recommendations.
- **OSDP Multi-Drop –** Multi-drop gives you the capability to accommodate many readers by running one length of 4-conductor cable, eliminating the need to run wire for each wire.
- **NOTE** – Four (4) is the maximum number of readers each port can support.

NOTE – Wiegand readers will not work when OSDP jumpers are installed.

View the user manual here: **prodatakey.zendesk.com**.

Documents / Resources

	**pdk PDK-RDC-2 Red 2 Two Door Controller** [pdf] User Guide PDK-RDC-2 Red 2 Two Door Controller, PDK-RDC-2, Red 2 Two Door Controller, Door Controller, Controller

References

- **Cloud-based Access Control | ProdataKey | United States**
- **Partner Resources | ProdataKey**