



Standard Wiring Diagrams

- I. Disclaimer
 - II. Introduction
 - III. Requirements
 - IV. Notes and Warnings
 - V A Fail-Safe Lock with 1 ACTAtek unit
 - VI. A Fail-Safe Lock with 2 ACTAtek units
 - VII. A Fail-Safe Lock with 1 ACTAtek unit and a RS232 External Reader
 - VIII. A Fail-Safe Lock with 1 ACTAtek unit and a RS485 External Reader
 - IX. 2 Fail-Safe Locks with 1 ACTAtek unit and a RS485 External Reader
 - X. A Fail-Secure Lock with 1 ACTAtek unit
 - XI. A Fail-Secure Lock with 2 ACTAtek units
 - XII. A Fail-Secure Lock with an ACTAtek unit plus a RS485 External Reader
 - XIII. Installing an External Buzzer/Bell
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I. Disclaimer

The diagrams and installation instructions provided herein by ACTAtek Pte Ltd are intended for information purposes only. ACTAtek Pte Ltd is not liable for issues that may arise from a Company's attempt to complete this wiring process without a certified individual. This installation should be completed by a qualified and certified person only. This wiring may also require the Company to follow City , State and/or Federal regulations. The Company should make sure they are following all regulations



II. Introduction

The ACTAttek system may be used virtually and DC locking mechanism including electric strikes, electromagnetic locks and electric dead bolts / plunger locks. This manual details the wiring of the ACTAttek system in a variety of different configurations. Wiring diagrams for both fail-safe and fail-secure devices detailed.

Only connections that relate to the wiring of the ACTAttek, electronic locking mechanism and related accessories are dealt with in this document. The actual installation must be performed by a qualified installer with full knowledge of local laws and regulations.

III. Requirements

This document assumes that the reader is comfortable with the following terms and concepts:

- A knowledge of basic DC voltage and circuitry
- An understanding of basic wiring diagrams
- “Fail-Safe” and “Fail-Secure”

IV. Notes and Warnings

ACTAttek supports 12VDC door strikes / maglocks with a maximum current draw not exceeding 1 amp.

The door strike / maglock must not share power with the ACTAttek. Do not attempt to use the power supply included with the ACTAttek to power both an ACTAttek and a door strike / maglock. Approved centralized power supplies with isolated and filtered outputs may be used. Please contact your sales representative for a list of approved power supplies.

ALL DC STRIKE INSTALLATIONS RECOMMEND TO USE A DIODE TO PREVENT EMI DAMAGE!!

The diode should be installed on the lead wires of the strike / maglock. The following polarity should be observed when installing the diode:

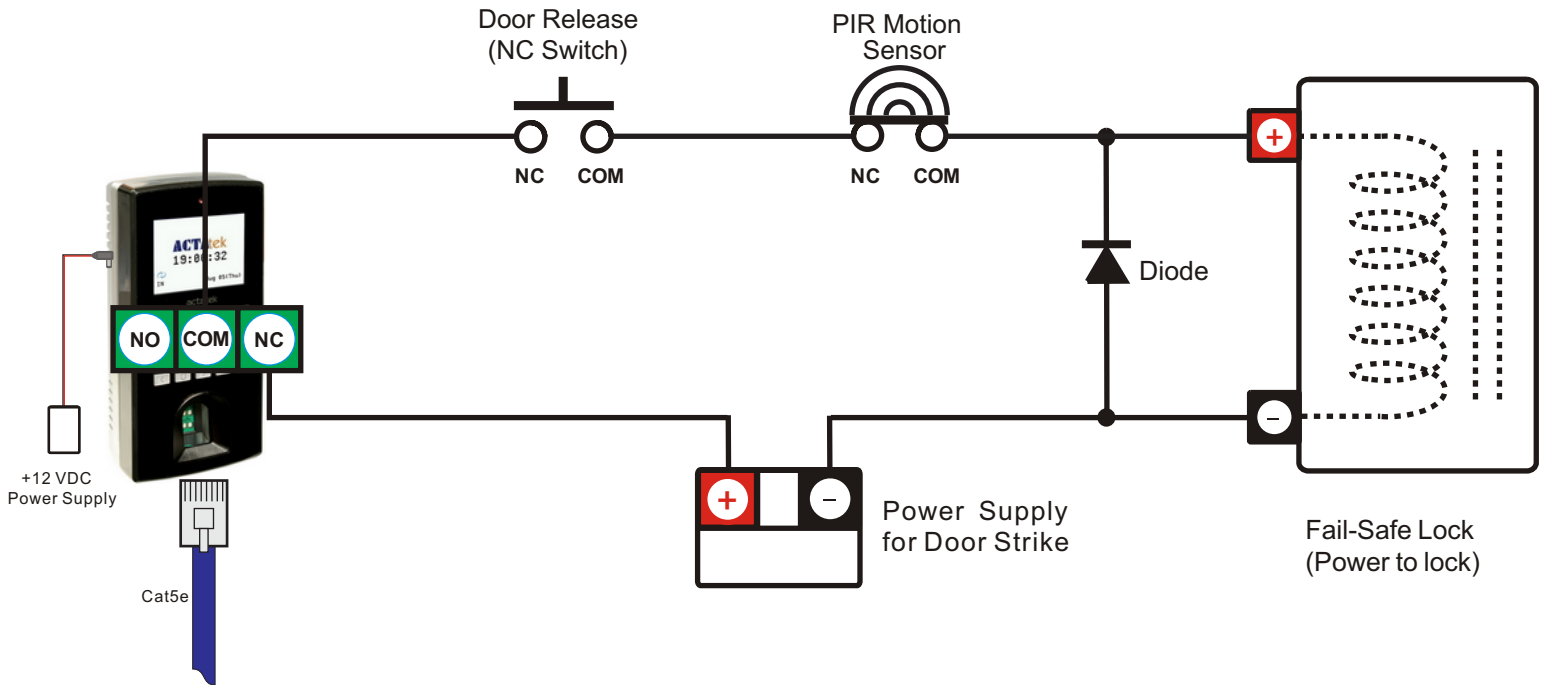
- ♦Positive DC voltage is connected to the Cathode end of the diode.
- ♦Negative DC voltage is connected to the Anode end of the diode.

- ① Diode Selection:
- a) Use P/N:1N4004, if the Door Strike rates at 12VDC/1A
 - b) Use P/N:6A1, if the Door Strike operating current is within 1 - 6A.

* Failing to comply the above installation instruction might cause severe damage to ACTAttek.



V. A Fail-Safe Lock with 1 ACTAtrek unit

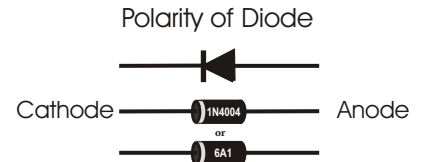


Description:

The instructions below must be followed when connecting a door strike to an ACTAtrek:

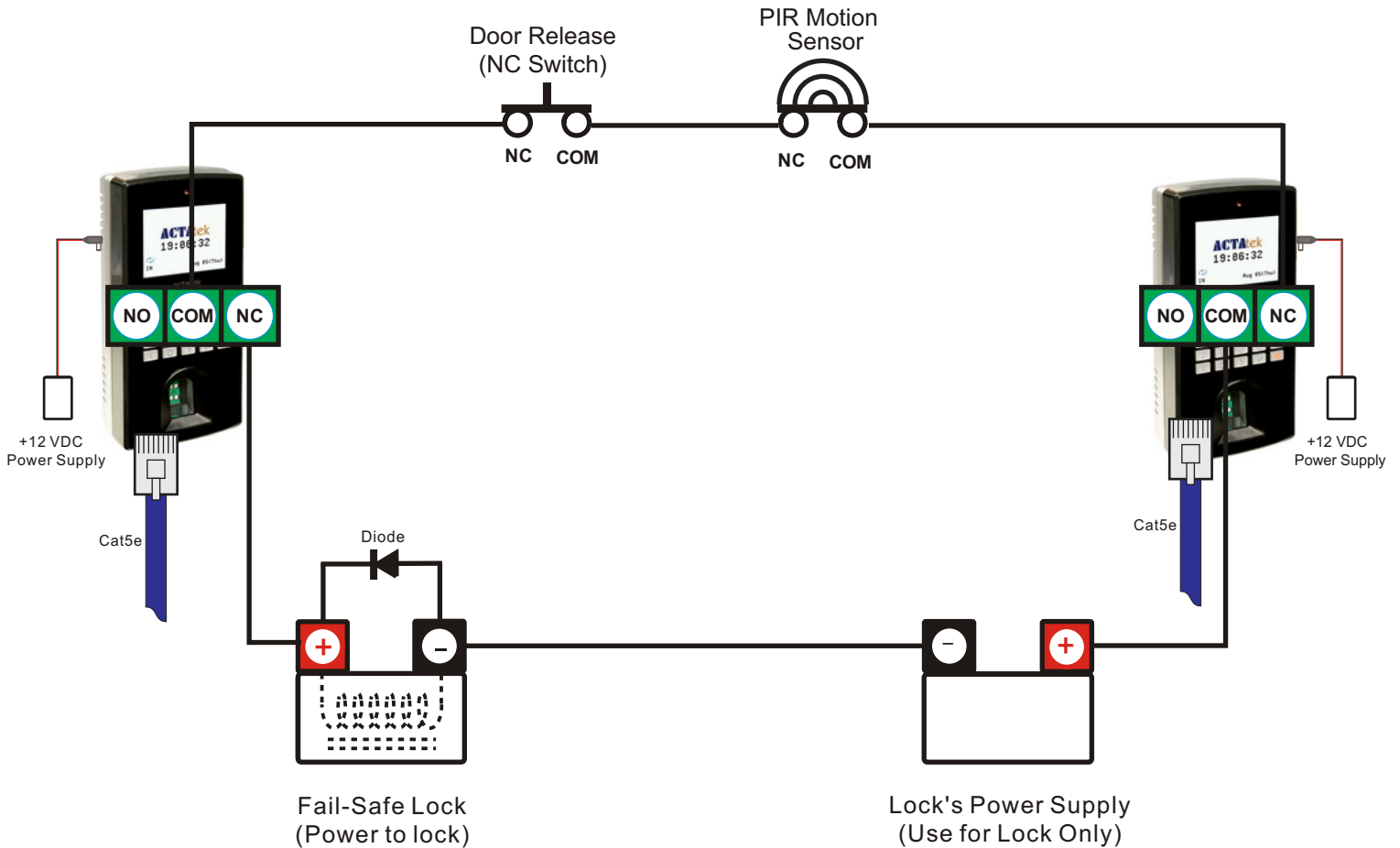
- ① ACTAtrek supports 12VDC door strikes / maglocks with a maximum current draw not exceeding 1amp.
- ② The door strike / maglock must not share power with the ACTAtrek. Do not attempt to use the power supply included with the ACTAtrek to power both an ACTAtrek and a door strike / maglock. Approved centralized power supplies with isolated and filtered outputs may be used. Please contact your sales representative for a list of approved power supplies.
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 - ◆Positive DC voltage is connected to the Cathode end of the diode.
 - ◆Negative DC voltage is connected to the Anode end of the diode.
- ⑤ Diode Selection:
 - a) Use P/N:1N4004, if the Door Strike rates at 12VDC/1A
 - b) Use P/N:6A1, if the Door Strike operating current is within 1 - 6A.

* Failing to comply the above installation instruction might cause severe damage to ACTAtrek.





VI. A Fail-Safe Lock with 2 ACTAtrek units

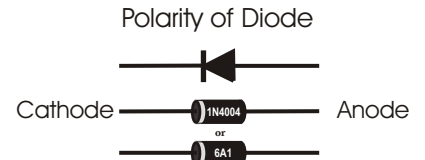


Description:

The instructions below must be followed when connecting a door strike to an ACTAtrek:

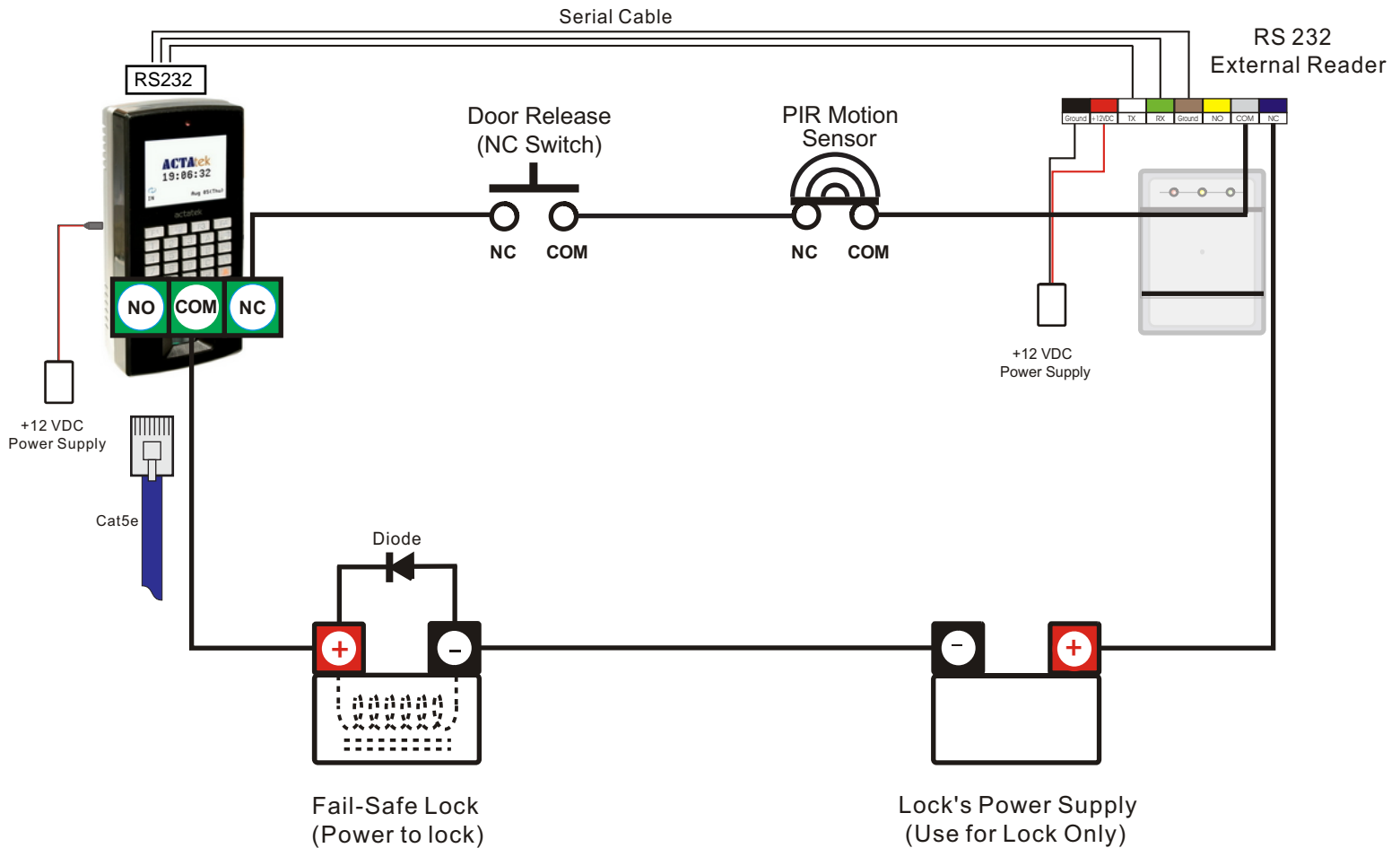
- ① ACTAtrek supports 12VDC door strikes / maglocks with a maximum current draw not exceeding 1amp.
- ② The door strike / maglock must not share power with the ACTAtrek. Do not attempt to use the power supply included with the ACTAtrek to power both an ACTAtrek and a door strike / maglock. Approved centralized power supplies with isolated and filtered outputs may be used. Please contact your sales representative for a list of approved power supplies.
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 - ◆Positive DC voltage is connected to the Cathode end of the diode.
 - ◆Negative DC voltage is connected to the Anode end of the diode.
- ⑤ Diode Selection:
 - a) Use P/N:1N4004, if the Door Strike rates at 12VDC/1A
 - b) Use P/N:6A1, if the Door Strike operating current is within 1 - 6A.

* Failing to comply the above installation instruction might cause severe damage to ACTAtrek.





VII. A Fail-Safe Lock with 1 ACTAtek unit and a RS232 External Reader

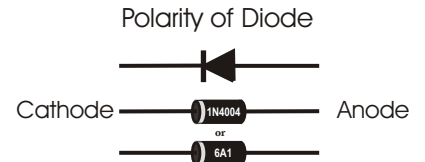


Description:

The instructions below must be followed when connecting a door strike to an ACTAtek:

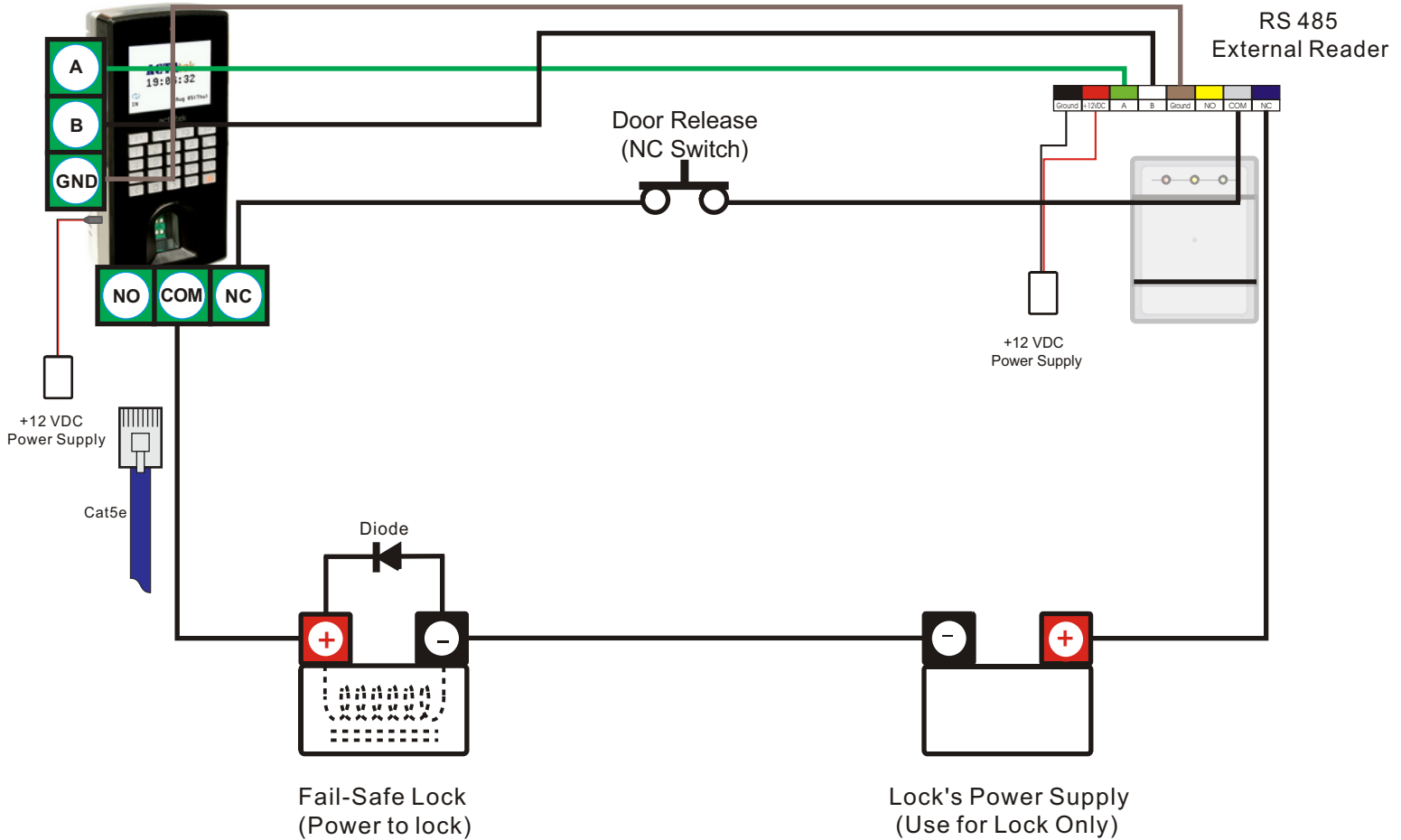
- ① ACTAtek supports 12VDC door strikes / maglocks with a maximum current draw not exceeding 1amp.
- ② The door strike / maglock must not share power with the ACTAtek. Do not attempt to use the power supply included with the ACTAtek to power both an ACTAtek and a door strike / maglock. Approved centralized power supplies with isolated and filtered outputs may be used. Please contact your sales representative for a list of approved power supplies.
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- ④ The diode should be installed on the lead wires of the strike / maglock. The following polarity should be observed when installing the diode:
 - ◆Positive DC voltage is connected to the Cathode end of the diode.
 - ◆Negative DC voltage is connected to the Anode end of the diode.
- ⑤ Diode Selection:
 - a) Use P/N:1N4004, if the Door Strike rates at 12VDC/1A
 - b) Use P/N:6A1, if the Door Strike operating current is within 1 - 6A.

* Failing to comply the above installation instruction might cause severe damage to ACTAtek.





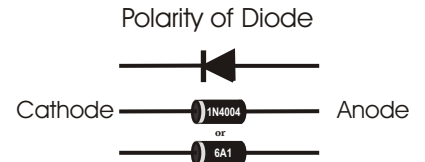
VIII. A Fail-Safe Lock with 1 ACTAtrek unit and a RS485 External Reader



Description:

The instructions below must be followed when connecting a door strike to an ACTAtrek:

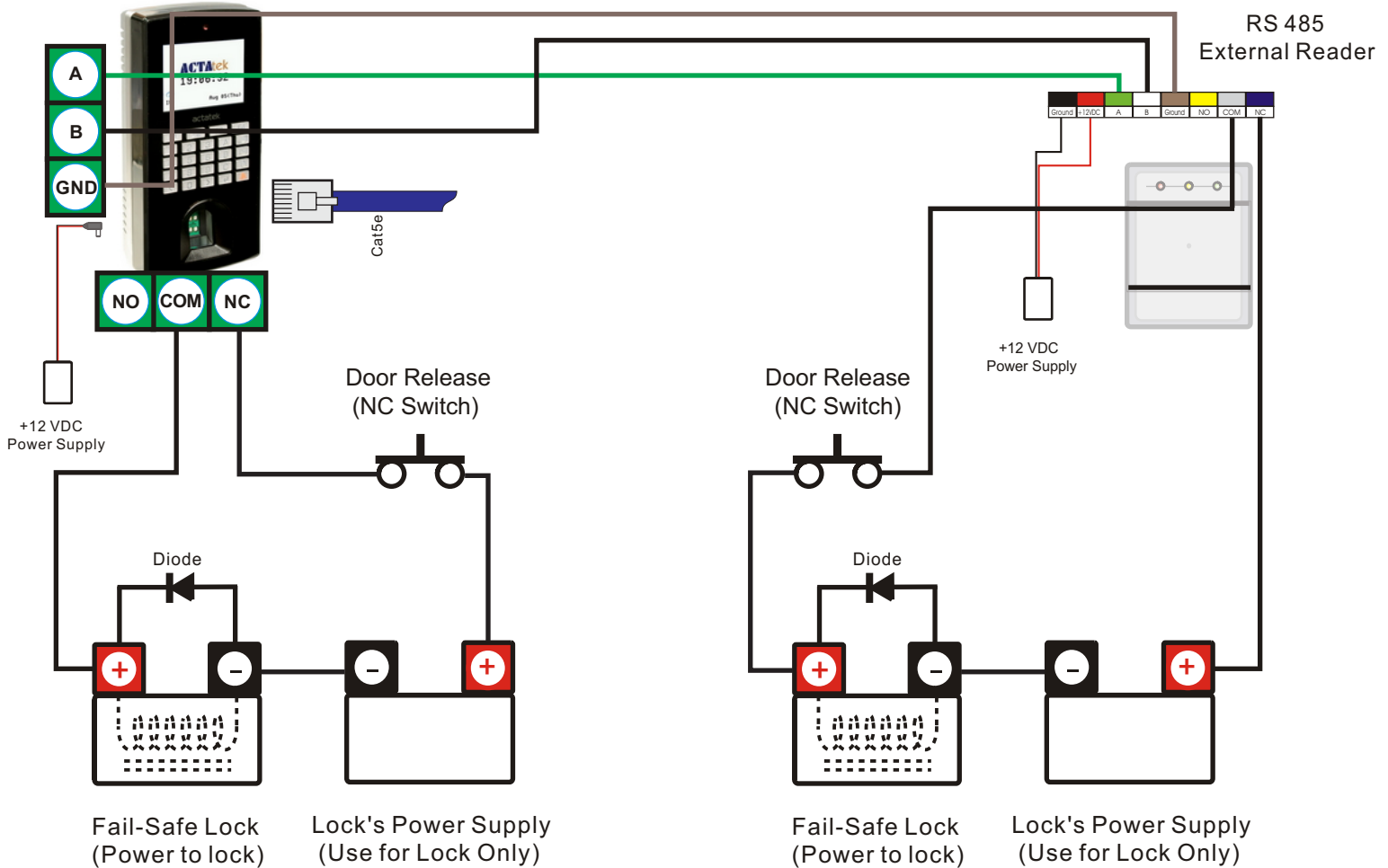
- ① ACTAtrek supports 12VDC door strikes / maglocks with a maximum current draw not exceeding 1amp.
- ② The door strike / maglock must not share power with the ACTAtrek. Do not attempt to use the power supply included with the ACTAtrek to power both an ACTAtrek and a door strike / maglock. Approved centralized power supplies with isolated and filtered outputs may be used. Please contact your sales representative for a list of approved power supplies.
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- ④ The diode should be installed on the lead wires of the strike / maglock. The following polarity should be observed when installing the diode:
 - ◆Positive DC voltage is connected to the Cathode end of the diode.
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- ⑤ Diode Selection:
 - a) Use P/N:1N4004, if the Door Strike rates at 12VDC/1A
 - b) Use P/N:6A1, if the Door Strike operating current is within 1 - 6A.



* Failing to comply the above installation instruction might cause severe damage to ACTAtrek.



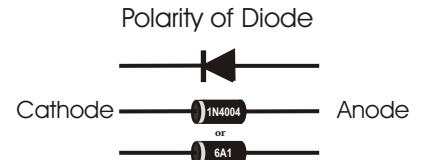
IX.2 Fail-Safe Locks with 1 ACTAtrek unit and a RS485 External Reader



Description:

The instructions below must be followed when connecting a door strike to an ACTAtrek:

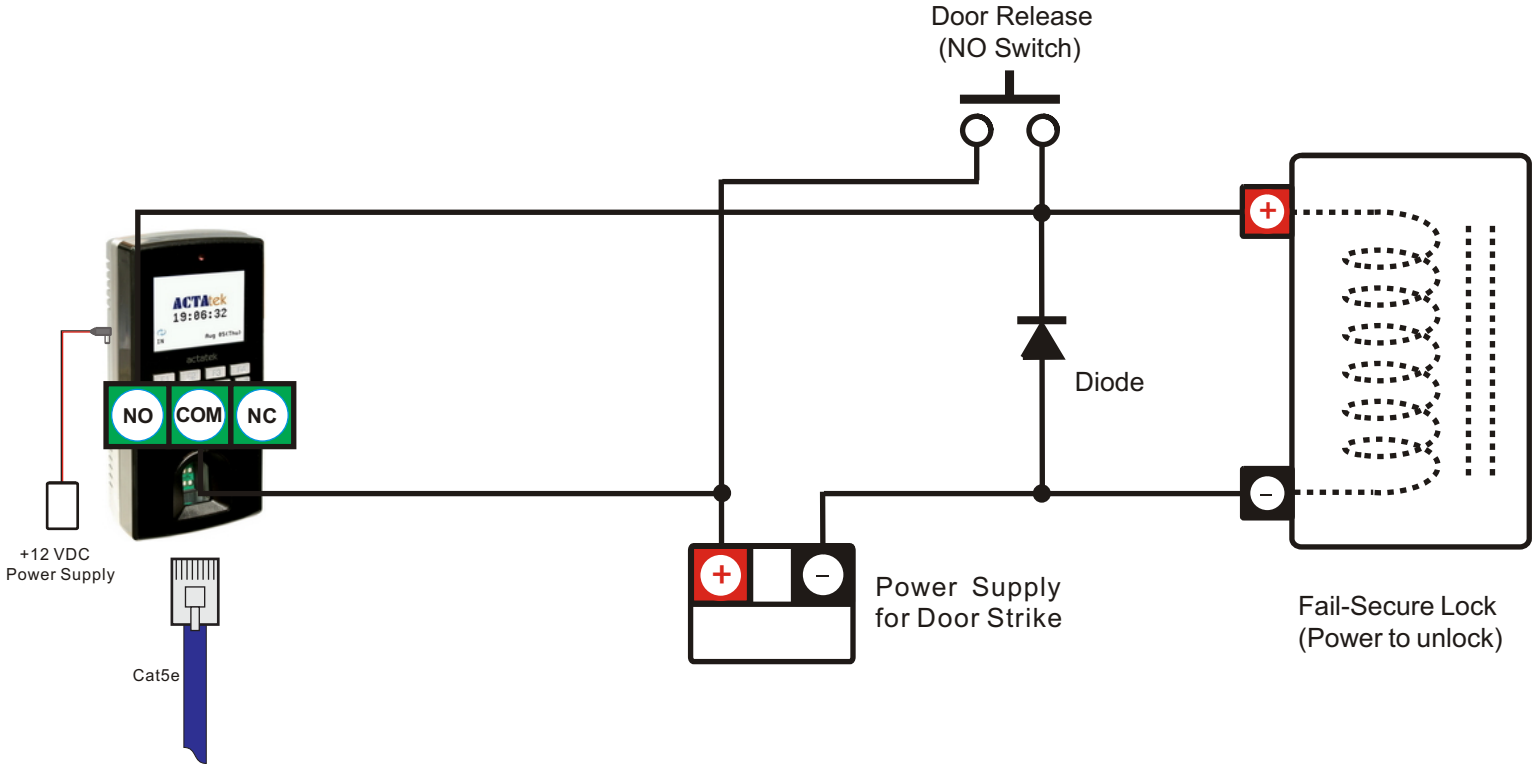
- ① ACTAtrek supports 12VDC door strikes / maglocks with a maximum current draw not exceeding 1amp.
- ② The door strike / maglock must not share power with the ACTAtrek. Do not attempt to use the power supply included with the ACTAtrek to power both an ACTAtrek and a door strike / maglock. Approved centralized power supplies with isolated and filtered outputs may be used. Please contact your sales representative for a list of approved power supplies.
- ③ ALL DC STRIKE INSTALLATIONS RECOMMENDED TO USE DIODE TO PREVENT EMI DAMAGE!!
- ④ The diode should be installed on the lead wires of the strike / maglock. The following polarity should be observed when installing the diode:
 - ◆Positive DC voltage is connected to the Cathode end of the diode.
 - ◆Negative DC voltage is connected to the Anode end of the diode.
- ⑤ Diode Selection:
 - a) Use P/N:1N4004, if the Door Strike rates at 12VDC/1A
 - b) Use P/N:6A1, if the Door Strike operating current is within 1 - 6A.



* Failing to comply the above installation instruction might cause severe damage to ACTAtrek.



X. A Fail-Secure Lock with 1 ACTAtrek unit

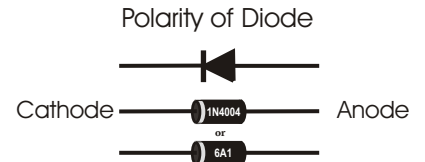


Description:

The instructions below must be followed when connecting a door strike to an ACTAtrek:

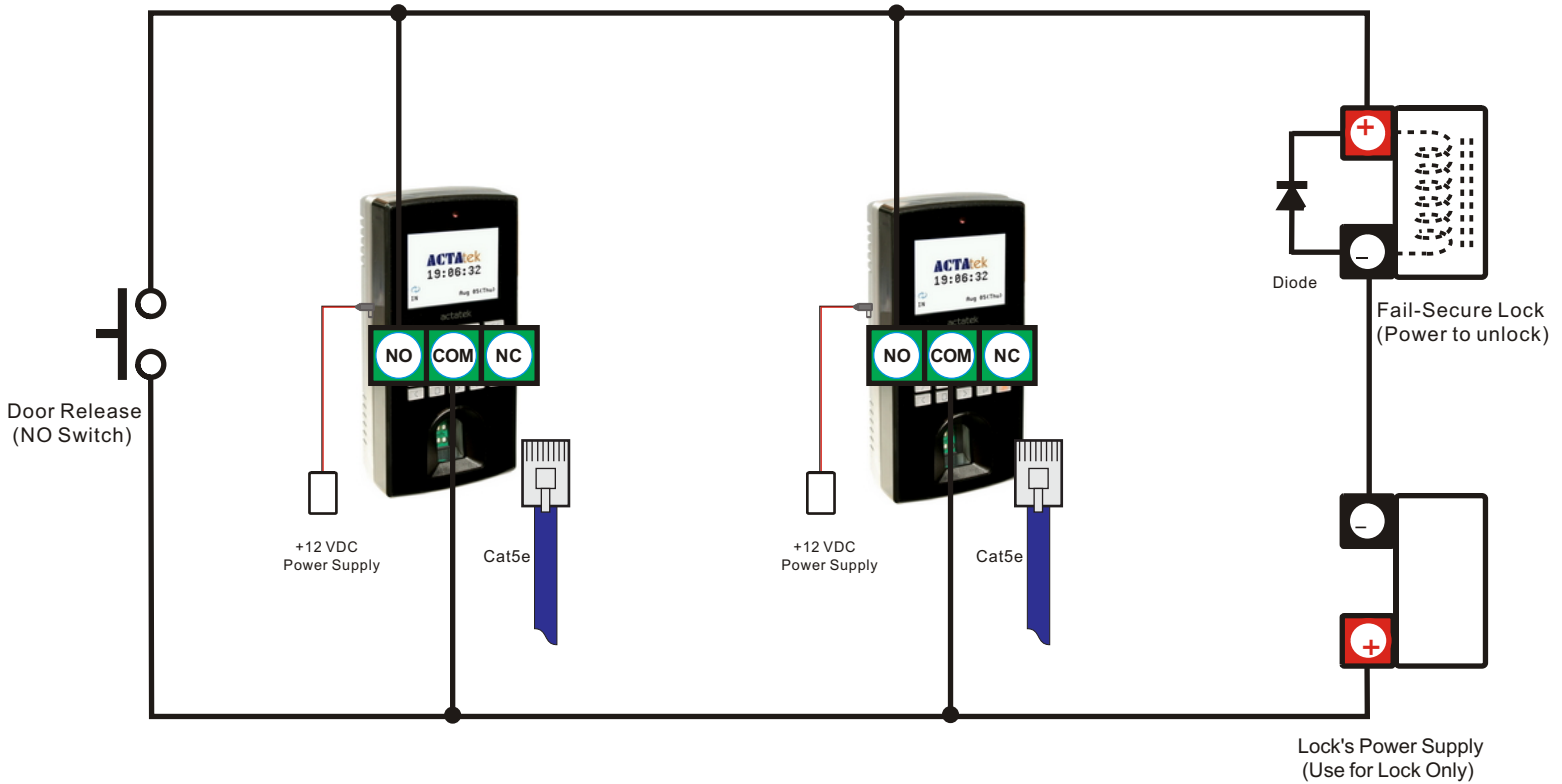
- ① ACTAtrek supports 12VDC door strikes / maglocks with a maximum current draw not exceeding 1amp.
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 - ◆Positive DC voltage is connected to the Cathode end of the diode.
 - ◆Negative DC voltage is connected to the Anode end of the diode.
- ⑤ Diode Selection:
 - a) Use P/N:1N4004, if the Door Strike rates at 12VDC/1A
 - b) Use P/N:6A1, if the Door Strike operating current is within 1 - 6A.

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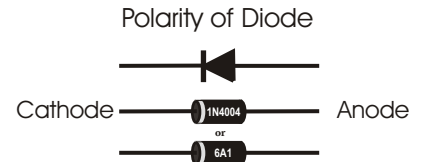
XI. A Fail-Secure Lock with 2 ACTAtrek units



Description:

The instructions below must be followed when connecting a door strike to an ACTAtrek:

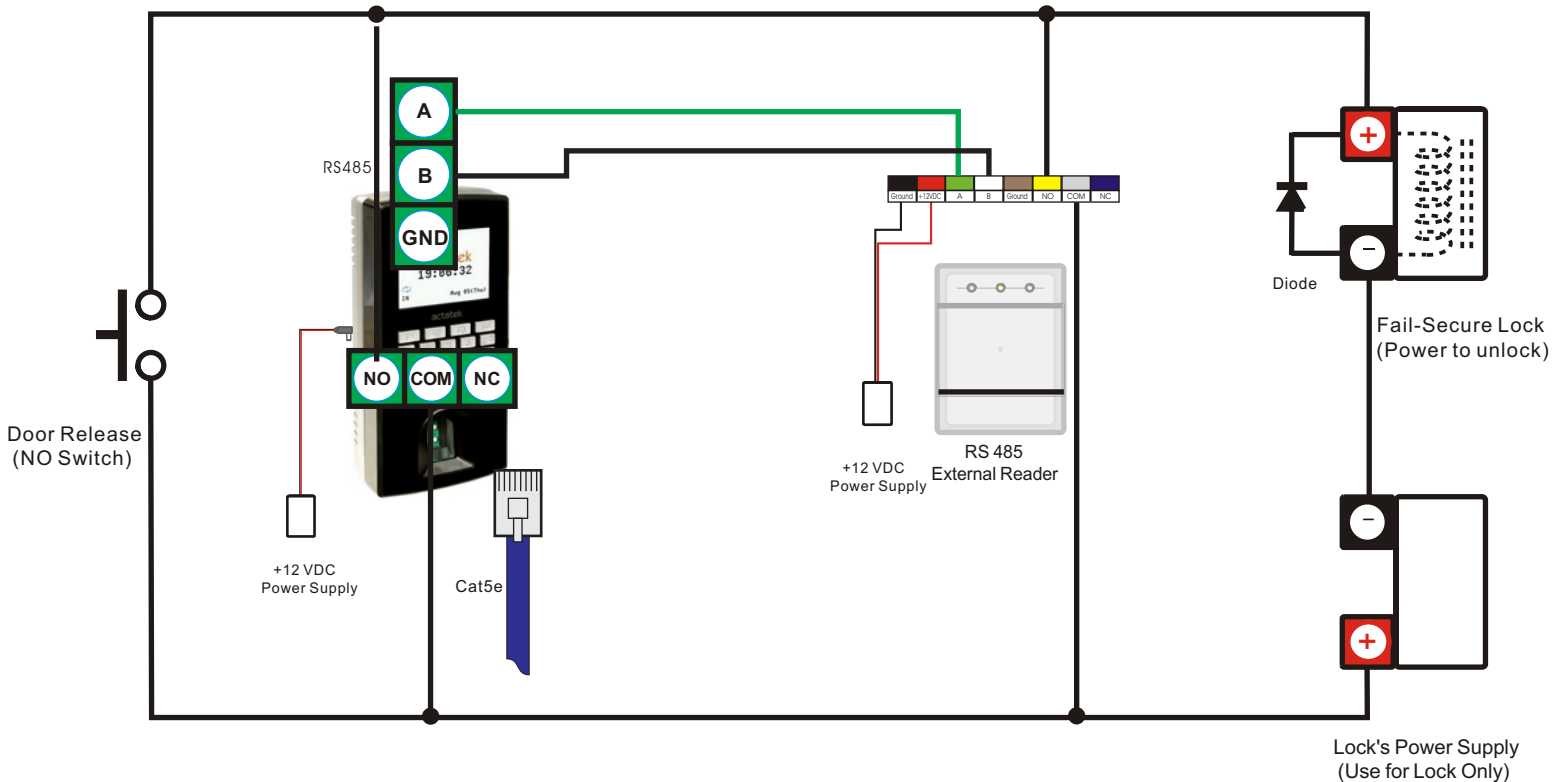
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- ⑤ Diode Selection:
 - a) Use P/N:1N4004, if the Door Strike rates at 12VDC/1A
 - b) Use P/N:6A1, if the Door Strike operating current is within 1 - 6A.



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XII. A Fail-Secure Lock with 1 ACTAttek unit and a RS485 External Reader



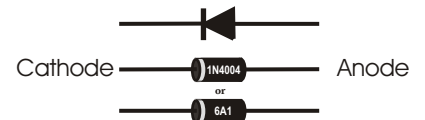
Description:

The instructions below must be followed when connecting a door strike to an ACTAttek:

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 - b) Use P/N:6A1, if the Door Strike operating current is within 1 - 6A.

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Polarity of Diode



XIII . Installing an External Buzzer/Bell

Important Notes:

- ✎ This section describes the wiring of a 12VDC external Bell, Buzzer, Strobe or other 12VDC device for use with the Door Bell option or the Bell Schedule option
- ✎ The use of an external Bell, Buzzer, Strobe or other 12VDC device is only supported using the “Door Bell” relay
- ✎ Do not attempt to operate a 12VDC device that draws more than 1 amp of current!

