

2-Door Controller Wiring Guides

Common Configurations

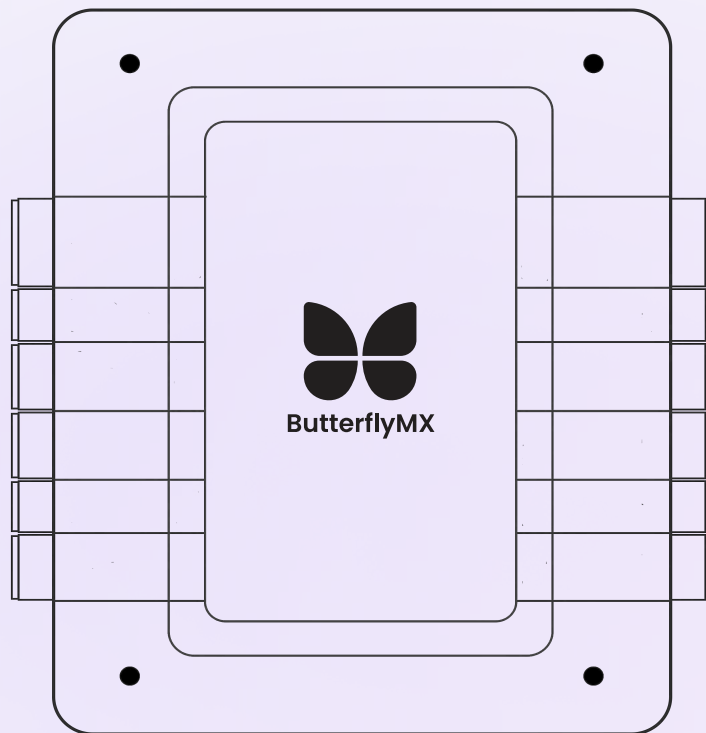


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These are examples of some of the most common configurations, not a limit of what is possible.

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Next-Gen

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Motion Sensor + Push-to-Exit + Locking Hardware

Push-to-Exit + Maglock

Motion Sensor + Maglock

Motion Sensor + Postal Lock + Maglock

Motion Sensor + Postal Lock + Push-to-Exit + Maglock

09 ADA (Accessible entry)

ADA Buttons + Motion Sensor + Door Strike

ADA Buttons + Motion Sensor + Maglock

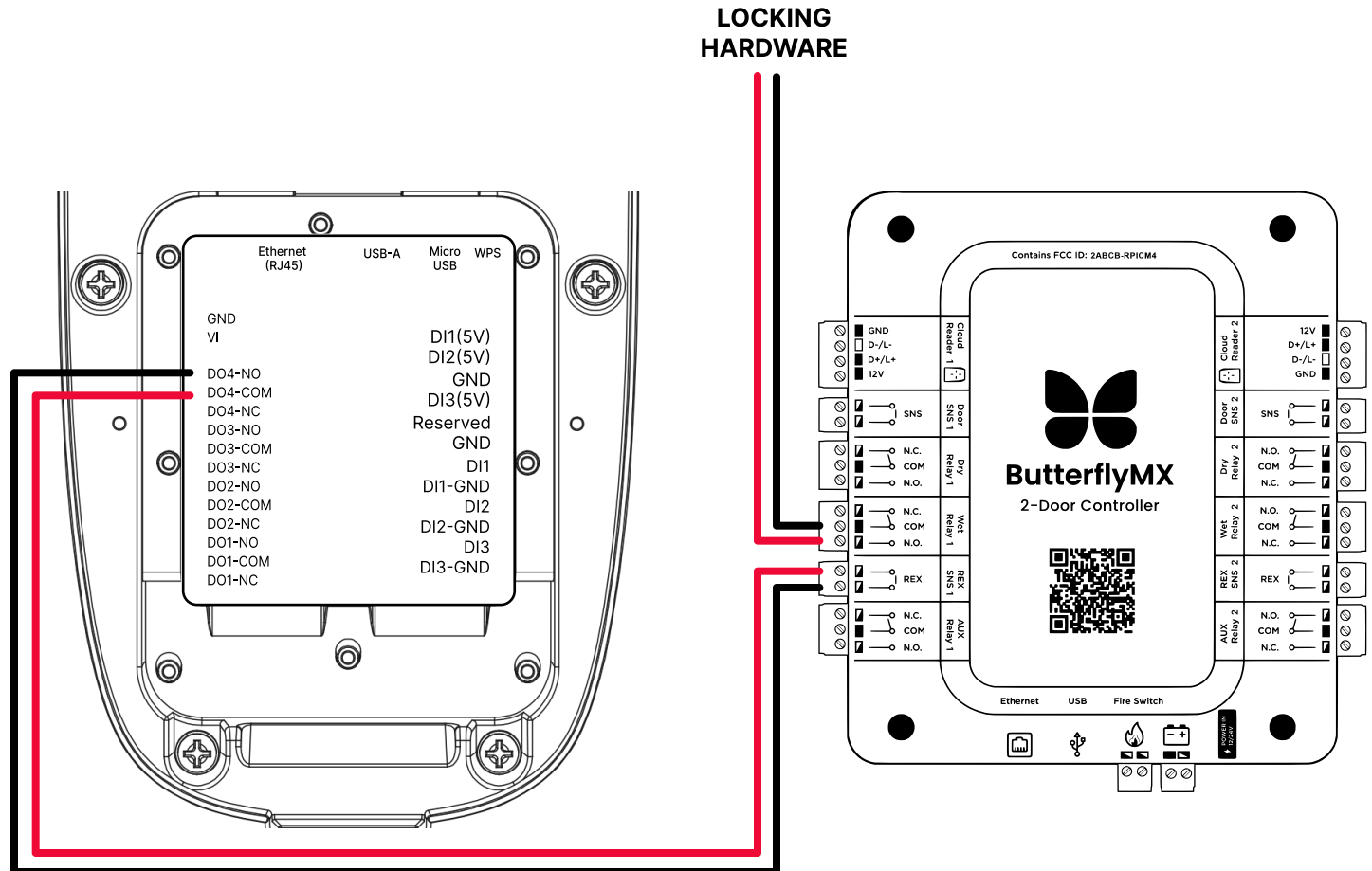
ADA Buttons + Push-to-Exit + Door Strike

ADA Buttons + Push-to-Exit + Maglock

2-Door Controller

With Next-Gen Intercom

 Images are not to scale.



Important

- All connections must be hardwired.
- Do not apply voltage to the REX terminals

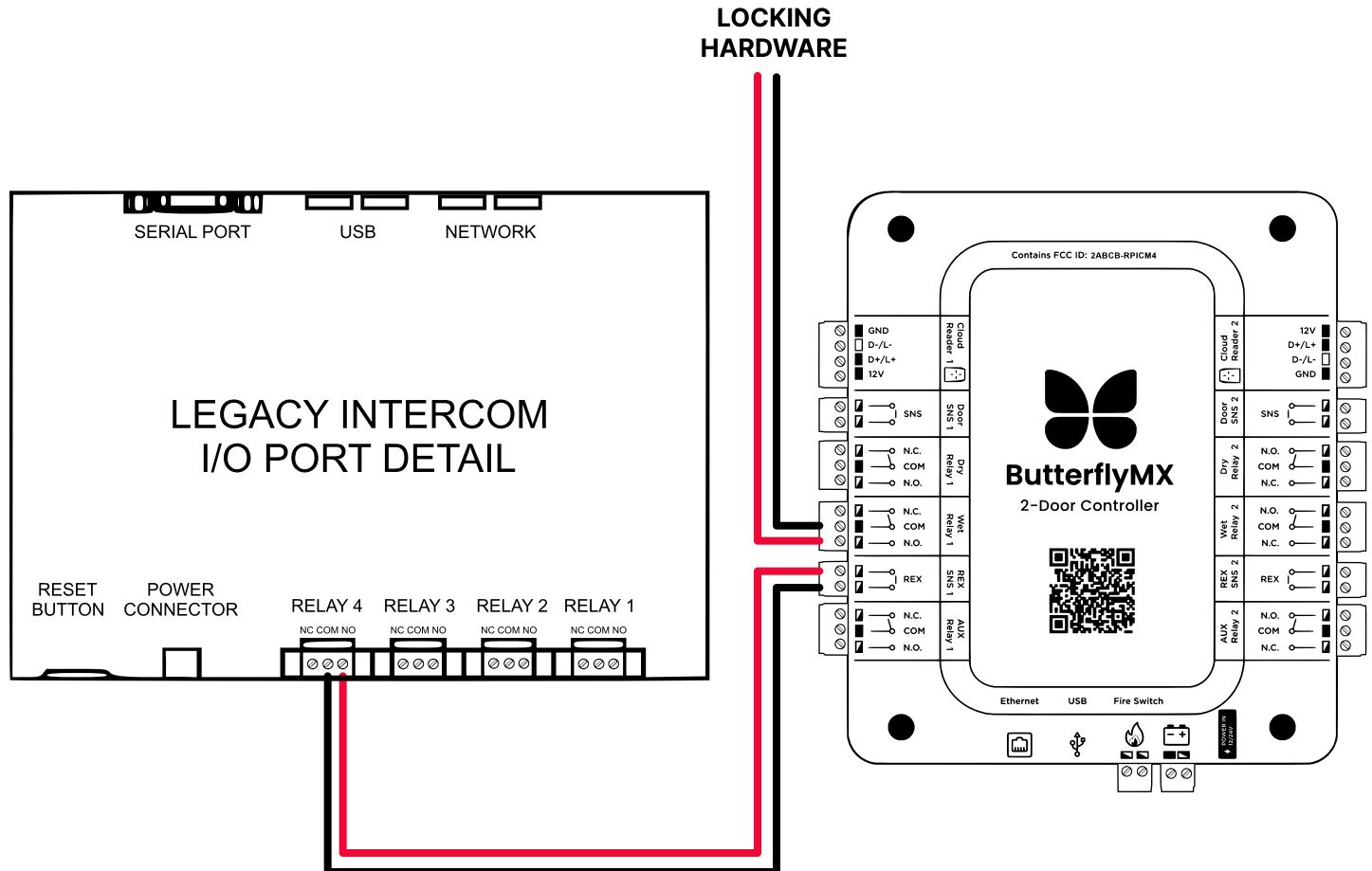
Wiring Summary

- The Next-Gen intercom relay output is connected to the REX input on the 2-door controller via dry contact wiring.
- REX device low-voltage wiring (18-22 AWG recommended)
- Locking hardware wiring (14-18 AWG recommended)

2-Door Controller

With Legacy Intercom

 Images are not to scale.



Important

- All connections must be hardwired.
- Do not apply voltage to the REX terminals

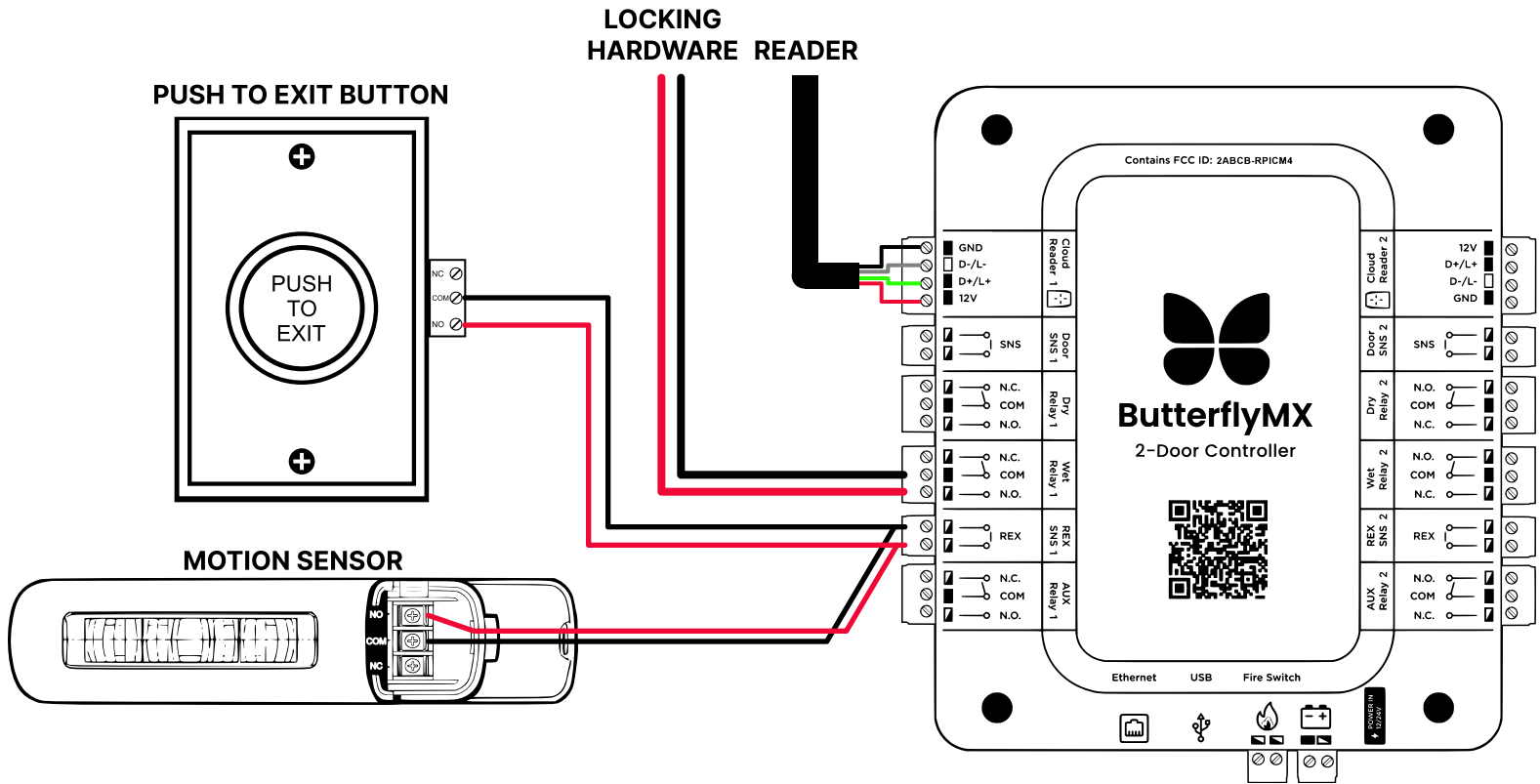
Wiring Summary

- The Legacy intercom relay output is connected to the REX input on the 2-door controller via dry contact wiring.
- REX device low-voltage wiring (18-22 AWG recommended)
- Locking hardware wiring (14-18 AWG recommended)

2-Door Controller

With Motion Sensor + Push-to-Exit + Locking Hardware

 Images are not to scale.



Important

- All connections must be hardwired.
- Both devices must provide dry contact outputs (NO/COM).
- Do not apply voltage to the REX terminals

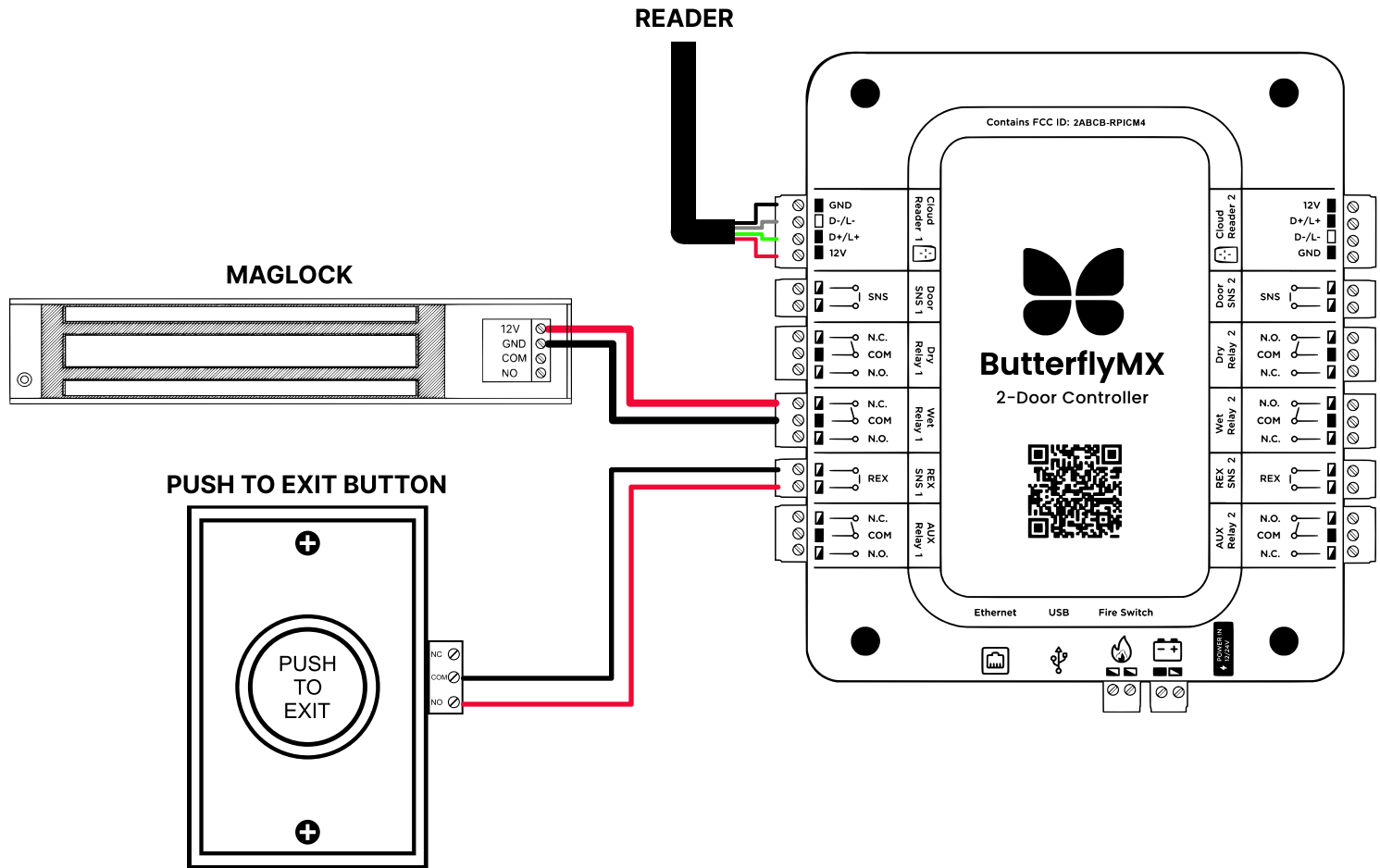
Wiring Summary

- Both devices are wired in parallel to the same REX input terminals on the controller.
- REX devices low-voltage wiring (18-22 AWG recommended)
- Locking hardware wiring (14-18 AWG recommended)

2-Door Controller

With Push-to-Exit + Maglock

 Images are not to scale.



Important

- All connections must be hardwired.
- A Maglock with voltage greater than 12VDC or current draw greater than 1 Amp cannot be powered from the WET Relay and must use a dedicated power supply instead.
- Do not apply voltage to the REX terminals

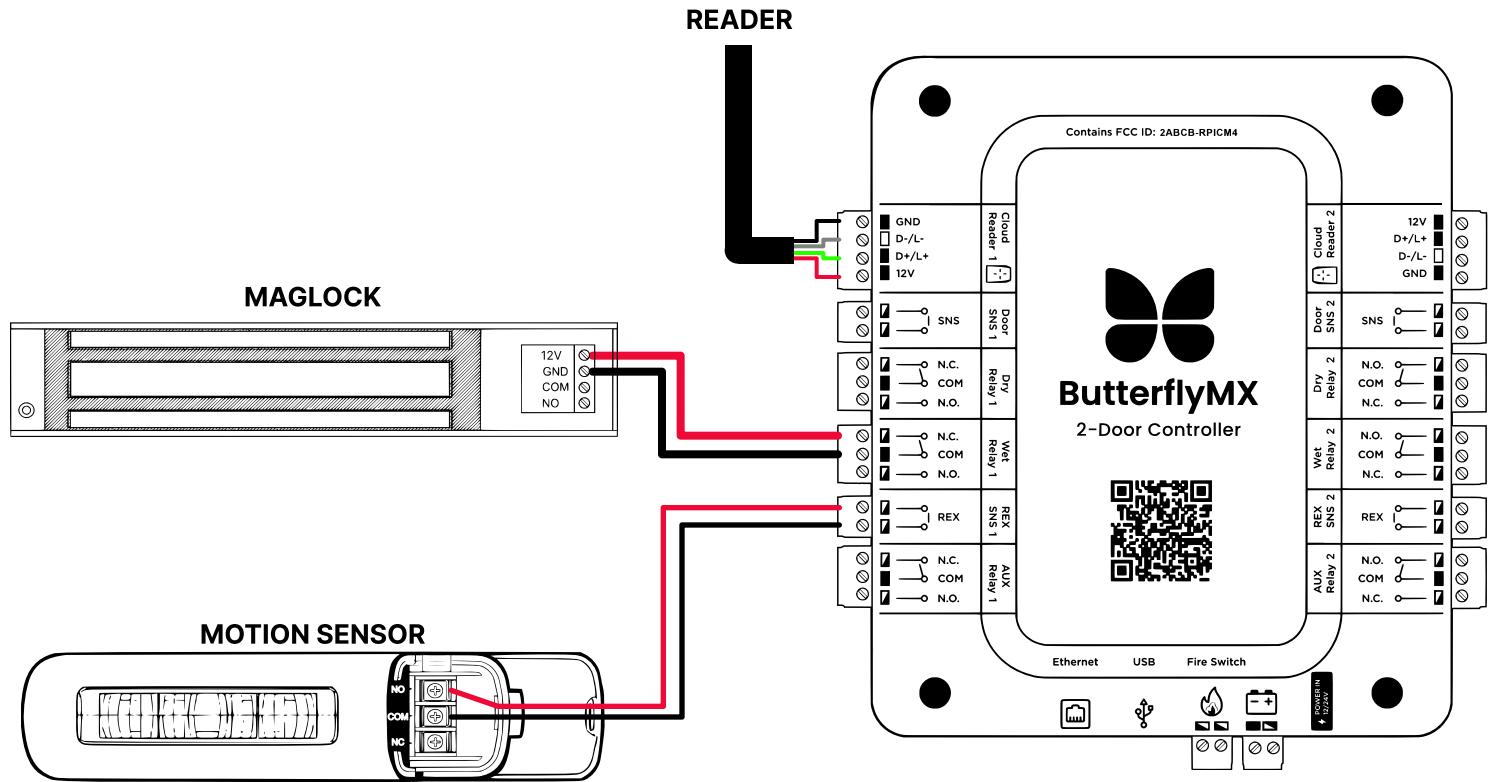
Wiring Summary

- Maglock is powered by WET relay
- REX device low-voltage wiring (18-22 AWG recommended)
- Locking hardware wiring (14-18 AWG recommended)

2-Door Controller

With Motion Sensor + Maglock

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Important

- All connections must be hardwired.
- A Maglock with voltage greater than 12VDC or current draw greater than 1 Amp cannot be powered from the WET Relay and must use a dedicated power supply instead.
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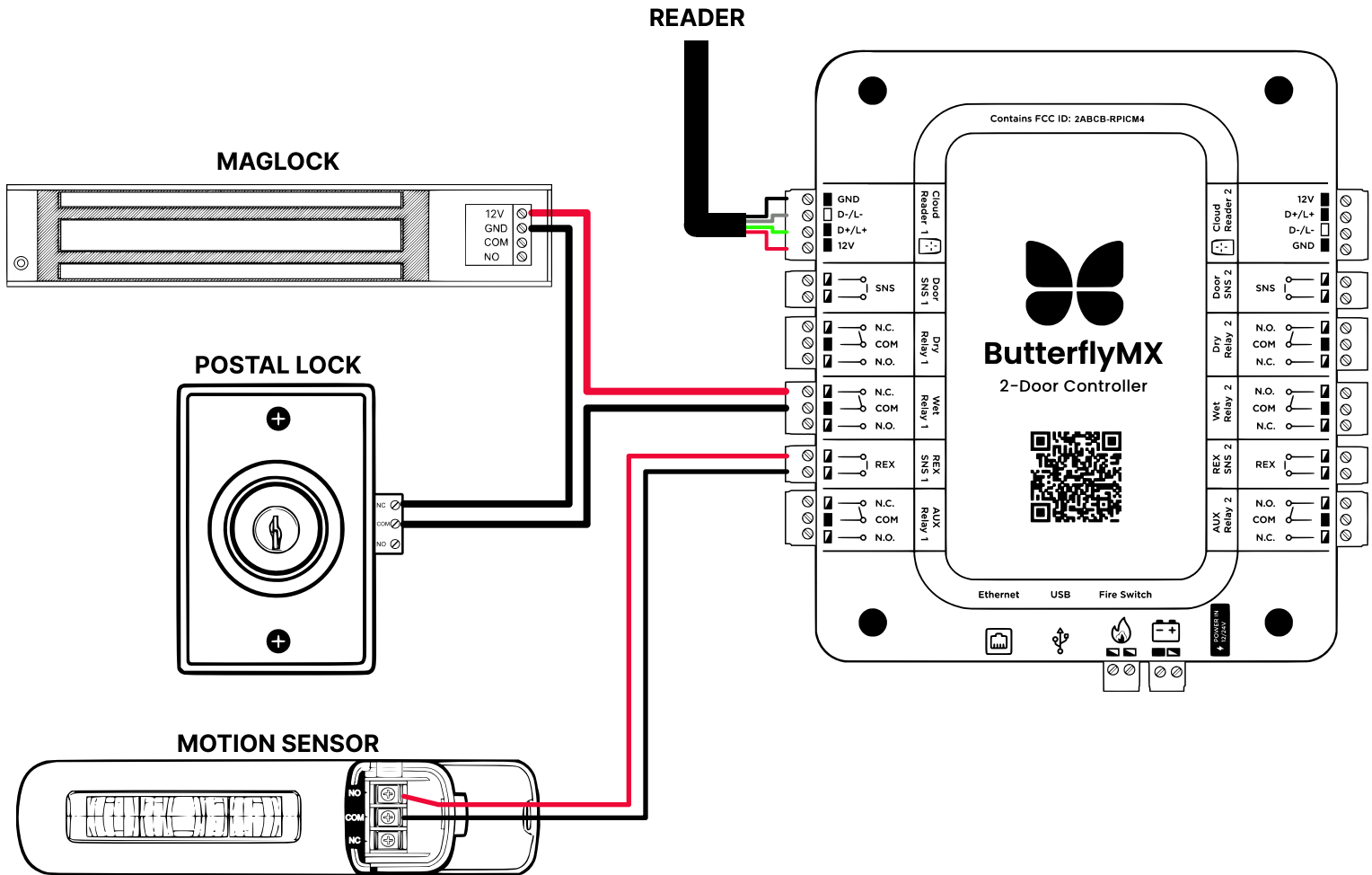
Wiring Summary

- Maglock is powered by WET relay
- REX device low-voltage wiring (18-22 AWG recommended)
- Locking hardware wiring (14-18 AWG recommended)

2-Door Controller

With Motion Sensor + Postal Lock + Maglock

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Important

- All connections must be hardwired.
- A Maglock with voltage greater than 12VDC or current draw greater than 1 Amp cannot be powered from the WET Relay and must use a dedicated power supply instead.
- Do not apply voltage to the REX terminals

Wiring Summary

- Maglock is powered by WET relay
- REX device low-voltage wiring (18-22 AWG recommended)
- Locking hardware wiring (14-18 AWG recommended)
- Postal lock connected in series connection with maglock so the unlock time does not depend on relay duration time.

 Images are not to scale.

The diagram illustrates the wiring for the ButterflyMX 2-Door Controller. The controller is a central unit with a terminal block on the left and a terminal block on the right. The terminal block on the left has the following labels: GND, D-/L-, D+/L+, 12V, SNS, N.C., COM, N.O., REX, N.C., COM, N.O., and AUX. The terminal block on the right has the following labels: Cloud Reader 1, Door SNS 1, Dry Relay 1, Wet Relay 1, REX SNS 1, AUX Relay 1, Cloud Reader 2, Door SNS 2, Dry Relay 2, Wet Relay 2, REX SNS 2, and AUX Relay 2. The controller also features a QR code, a Fire Switch, and a Power Switch.

The components and their connections are as follows:

- MAGLOCK:** A magnetic lock with terminals for 12V, GND, COM, and NO. The 12V terminal is connected to the D+/L+ terminal on the controller. The GND terminal is connected to the GND terminal on the controller. The COM terminal is connected to the COM terminal on the controller. The NO terminal is connected to the COM terminal on the controller.
- POSTAL LOCK:** A lock with terminals for NC, COM, and NO. The COM terminal is connected to the COM terminal on the controller. The NO terminal is connected to the COM terminal on the controller.
- PUSH TO EXIT BUTTON:** A button with terminals for NC, COM, and NO. The COM terminal is connected to the COM terminal on the controller. The NO terminal is connected to the COM terminal on the controller.
- READER:** A reader with terminals for GND, D-/L-, D+/L+, and 12V. The GND terminal is connected to the GND terminal on the controller. The D-/L- terminal is connected to the D-/L- terminal on the controller. The D+/L+ terminal is connected to the D+/L+ terminal on the controller. The 12V terminal is connected to the 12V terminal on the controller.

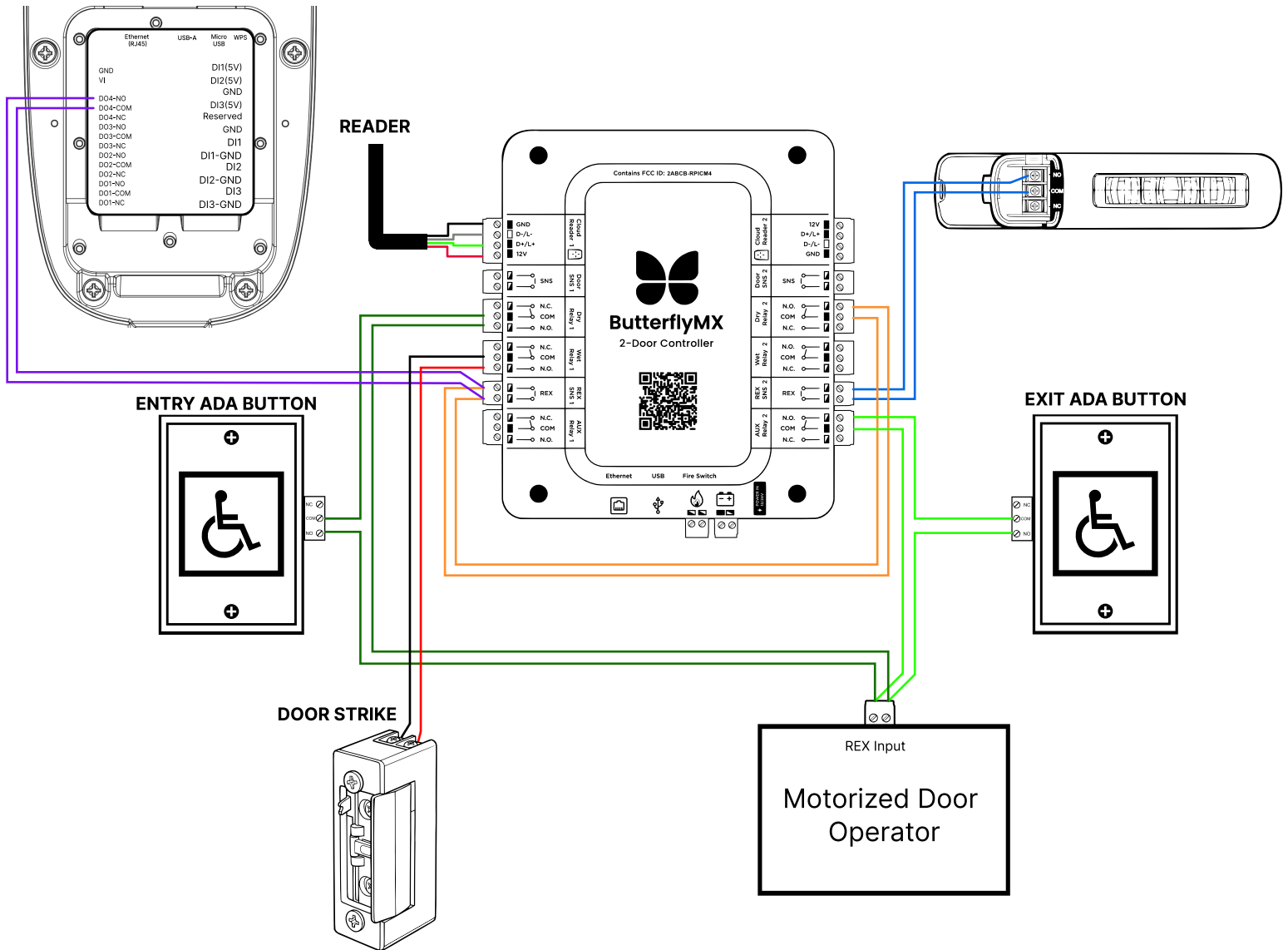
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- Do not apply voltage to the REX terminals

- Maglock is powered by WET relay
- REX device low-voltage wiring (18-22 AWG)
- Locking hardware wiring (14-18 AWG)
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2-Door Controller

With ADA Buttons + Motion Sensor + Door Strike

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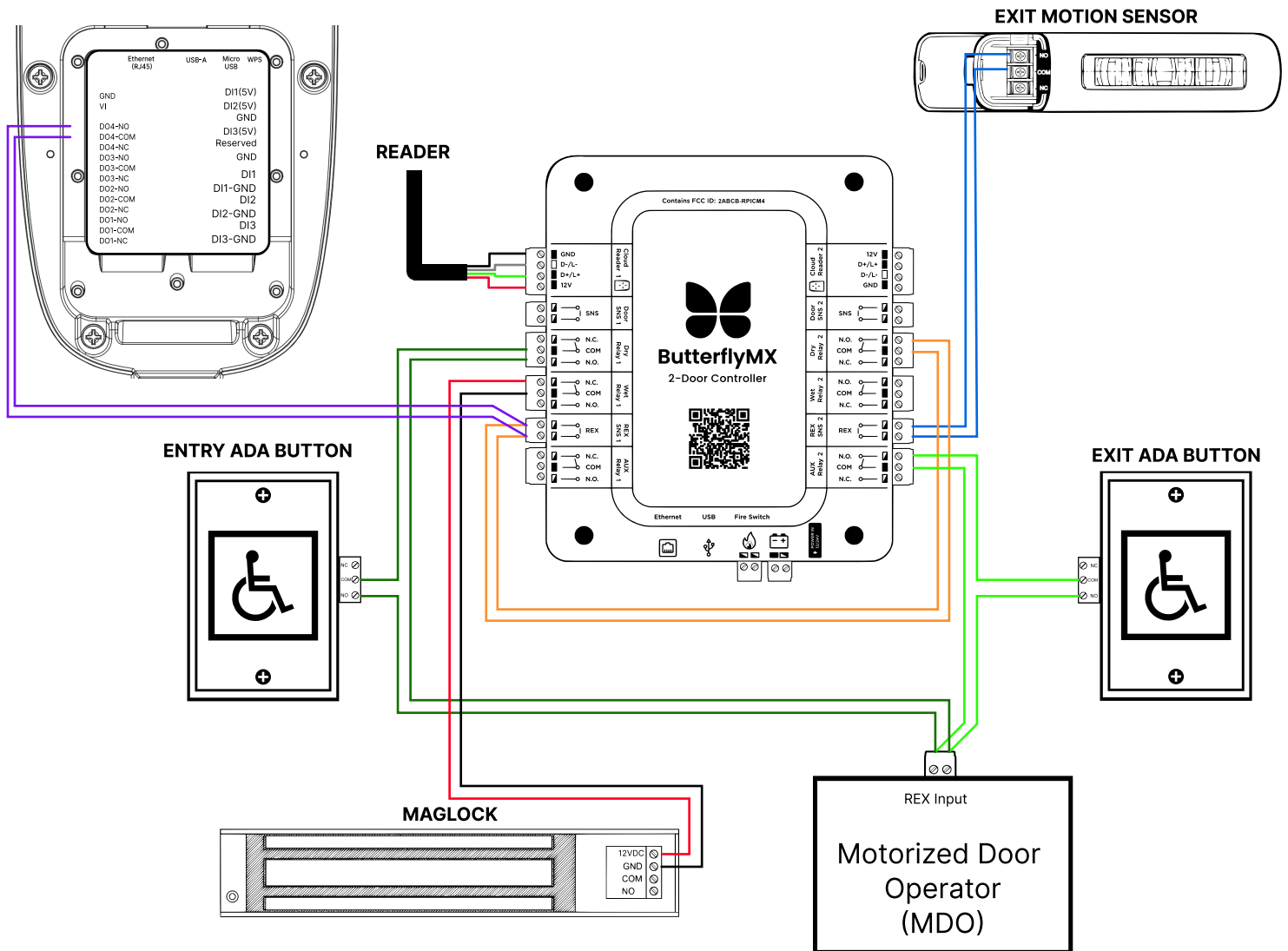
Important

- All connections must be hardwired
- An external device is optional, or if the intercom is used as an external device, the reader isn't required.
- Contact ButterflyMX Support Team to enable AUX Relay 2
- Both sides of 2-Door Controller will be used for a single door

2-Door Controller

With ADA Buttons + Motion Sensor + Maglock

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Important

- All connections must be hardwired
- An external device is optional, or if the intercom is used as an external device, the reader isn't required.
- Contact ButterflyMX Support Team to enable AUX Relay 2
- ADA buttons only work after a valid trigger - Entry ADA Button requires DRY Relay 1 to already be active (valid credential used), and Exit ADA Button requires AUX Relay 2 to already be active (motion detected). Pressing either button alone will not open the door.

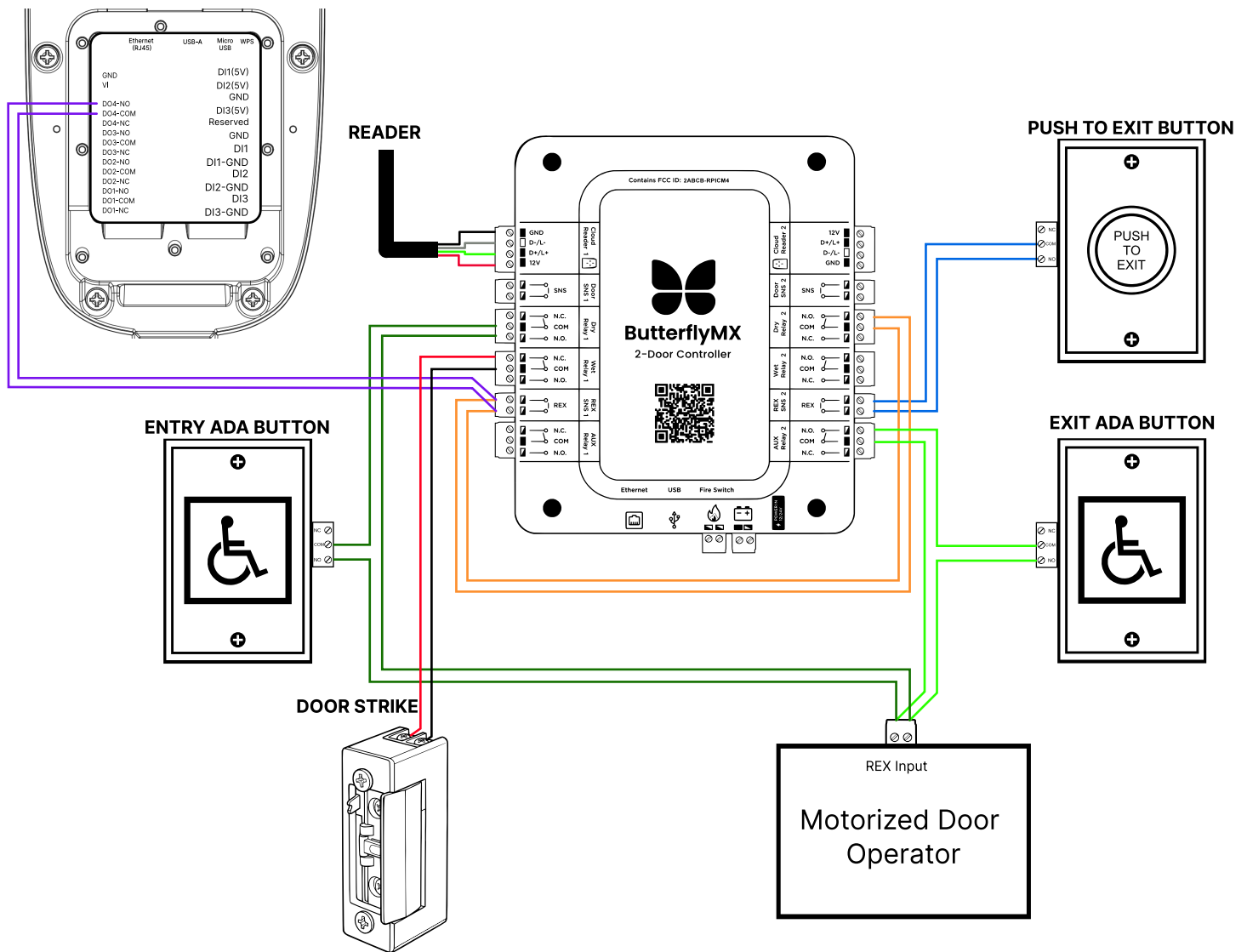
Wiring Summary

- External device triggers REX SNS 1, activating DRY Relay 1 and WET Relay 1 to unlock the Maglock.
- Entry ADA Button is wired in series with DRY Relay 1 and MDO REX Input - opens the door only after valid entry.
- Exit Motion Sensor triggers REX SNS 2, activating DRY Relay 2 (wired to REX SNS 1), unlocking the Maglock.
- Exit ADA Button is wired in series with AUX Relay 2 and MDO REX Input - opens the door only after motion is detected.

2-Door Controller

With ADA Buttons + Push-to-Exit + Door Strike

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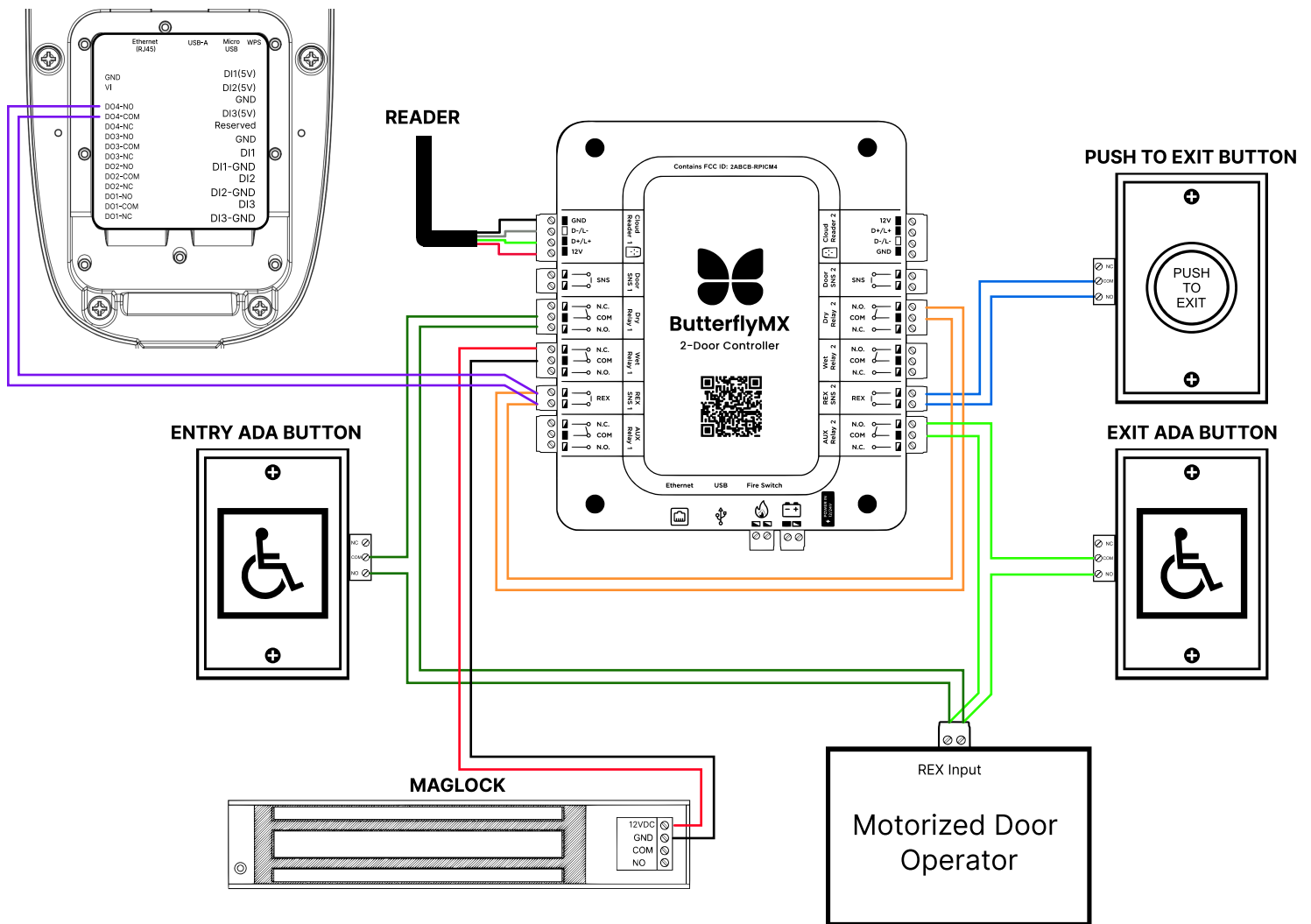
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2-Door Controller

With ADA Buttons + Push-to-Exit + Maglock

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Wiring Summary

- External device triggers entry unlock: intercom → REX SNS 1, or reader → Cloud Reader 1 port, activating DRY Relay 1 and WET Relay 1 to unlock the Maglock.
- Entry ADA Button is wired in series with DRY Relay 1 and MDO REX Input - opens the door only after valid entry.
- Push to Exit Button triggers REX SNS 2, activating DRY Relay 2 (wired to REX SNS 1) and AUX Relay 2, unlocking the Maglock.
- Exit ADA Button is wired in series with AUX Relay 2 and MDO REX Input - opens the door only after the Push to Exit Button is pressed.