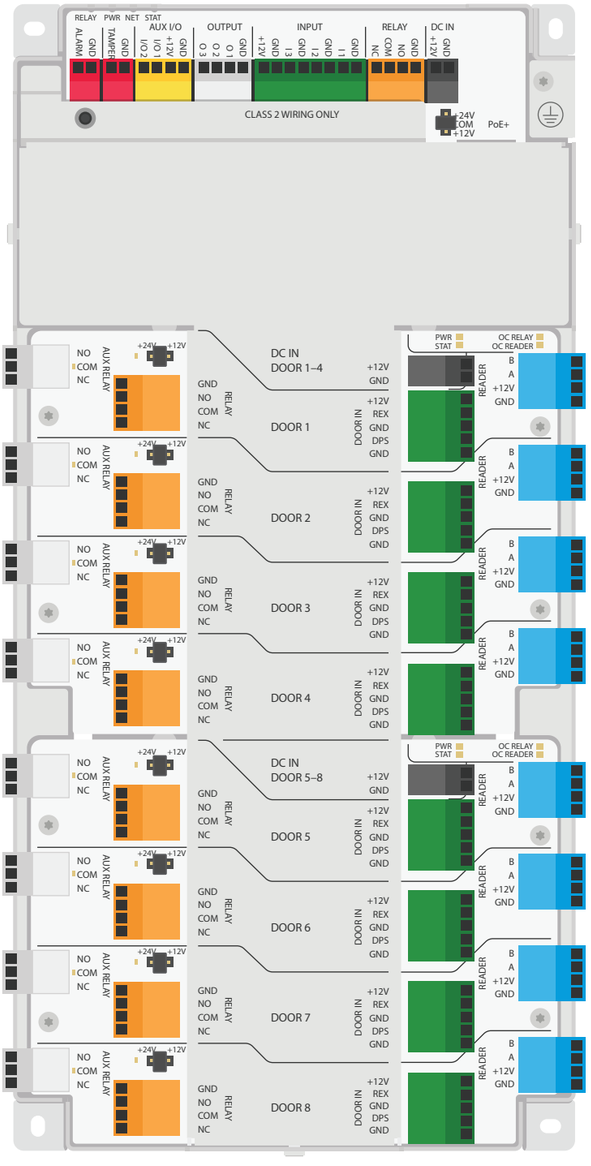
AXIS A1810-B Network Door Controller

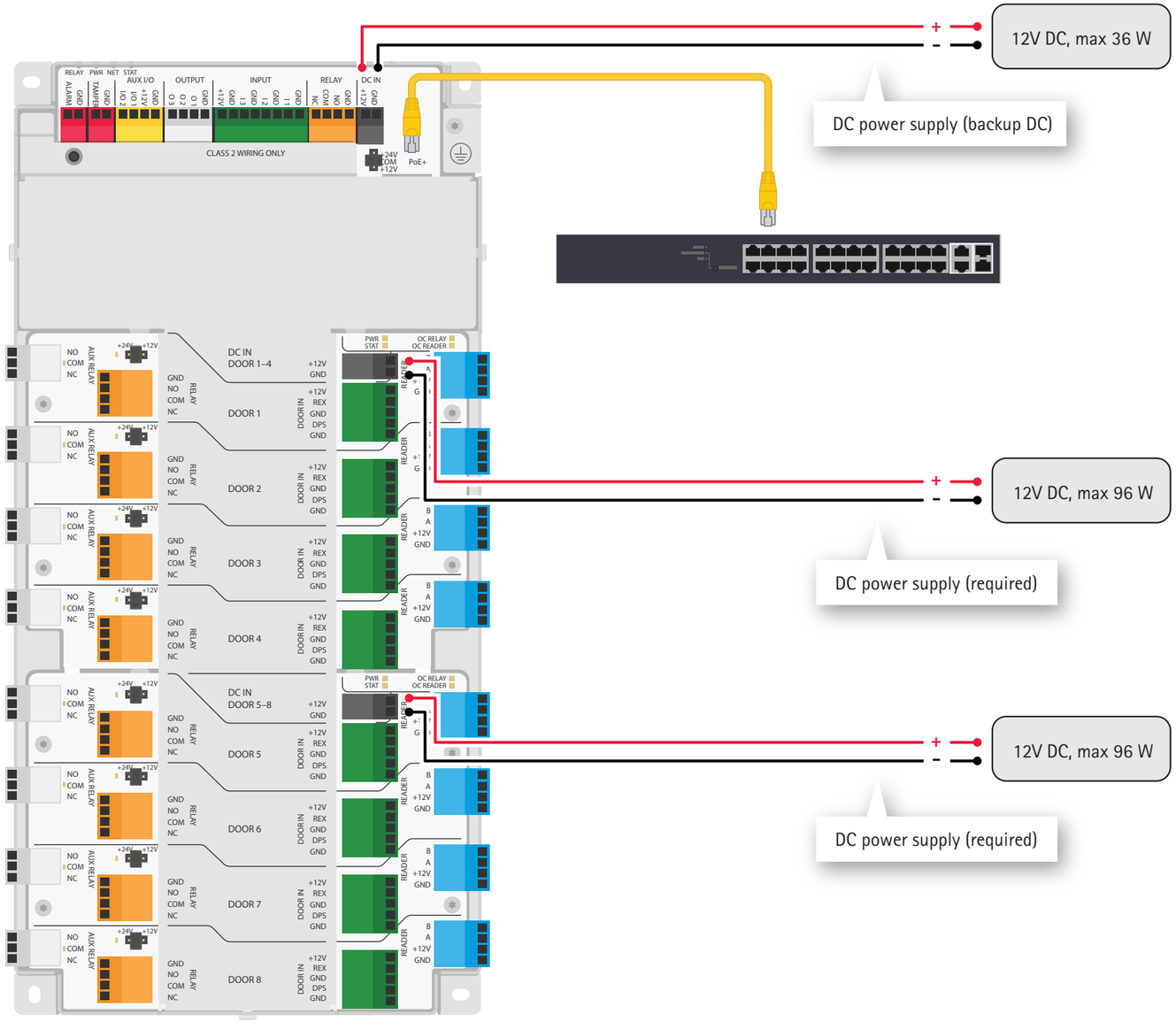


Electrical wiring drawings

Electrical wiring drawings
AXIS A1810-B Network Door Controller

Date: January 2026

Power supply – separate power supply



Application

Door 1-4 and Door 5-8 require separate power

Requirements

> Class 2 power supply: Separate power
  > Main: max 36 W
  > Door 1-4: max 96 W*
  > Door 5-8: max 96 W*

  *to fullfill the power budget for door peripherals

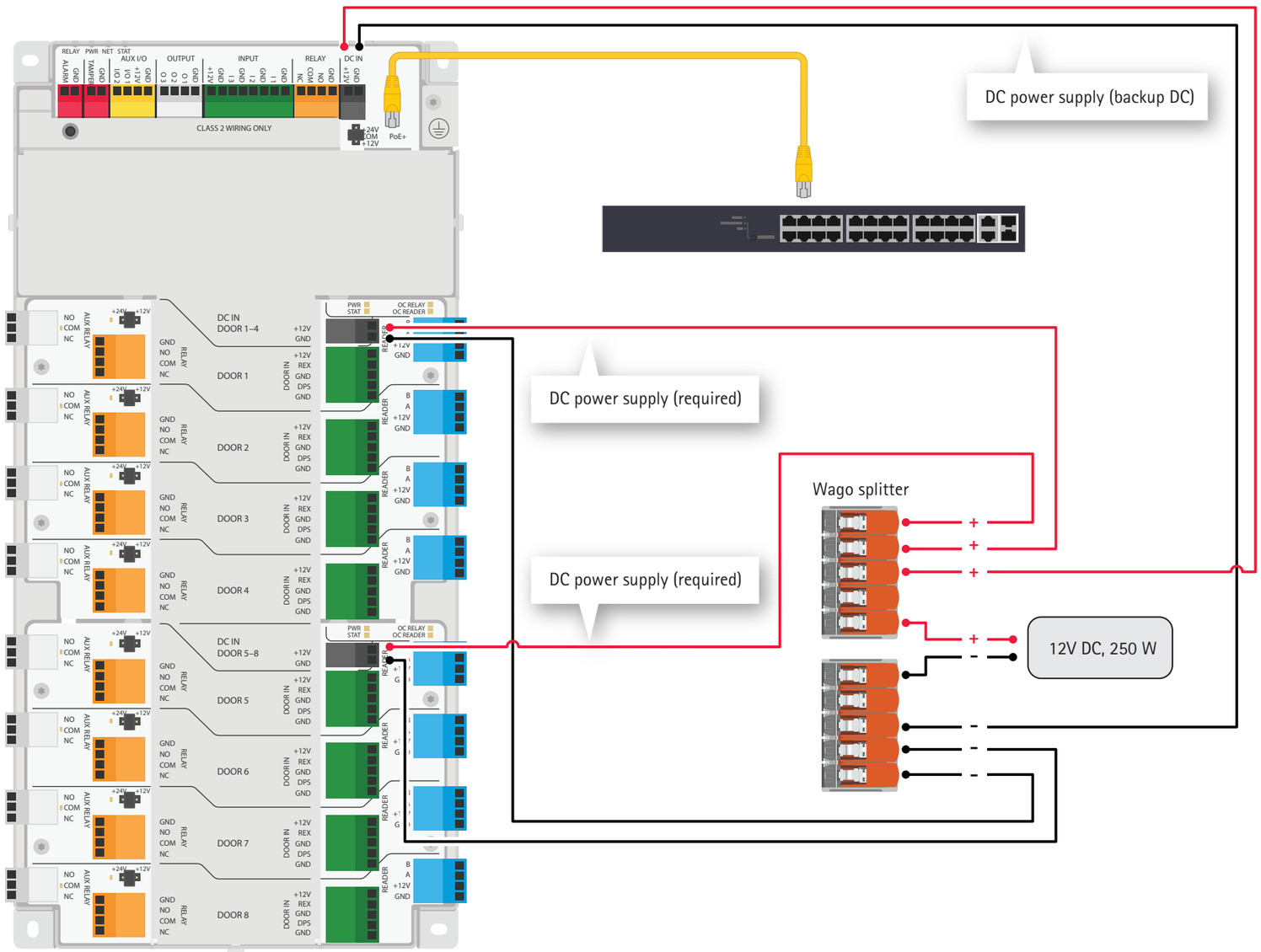
> Wiring:
  > DC AWG 16-14

Considerations

> PoE Class 3 or PoE Class 4

Adhere to local life safety code in all installations.
Illustration does not depict readers, door monitors, REX devices, locks Power backups and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Power supply – single power supply



Application

Door 1-4 and Door 5-8 require separate power

Requirements

> Class 3 power supply: Split the power using Wago splitters*
  > Main/Door 1-4/Door 5-8: 250 W shared**

  *included in the product box
  **to fullfill the power budget for door peripherals

> Wiring:
  > DC AWG 16-14

Considerations

> PoE Class 3 or PoE Class 4

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Illustration does not depict readers, door monitors, REX devices, locks Power backups and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
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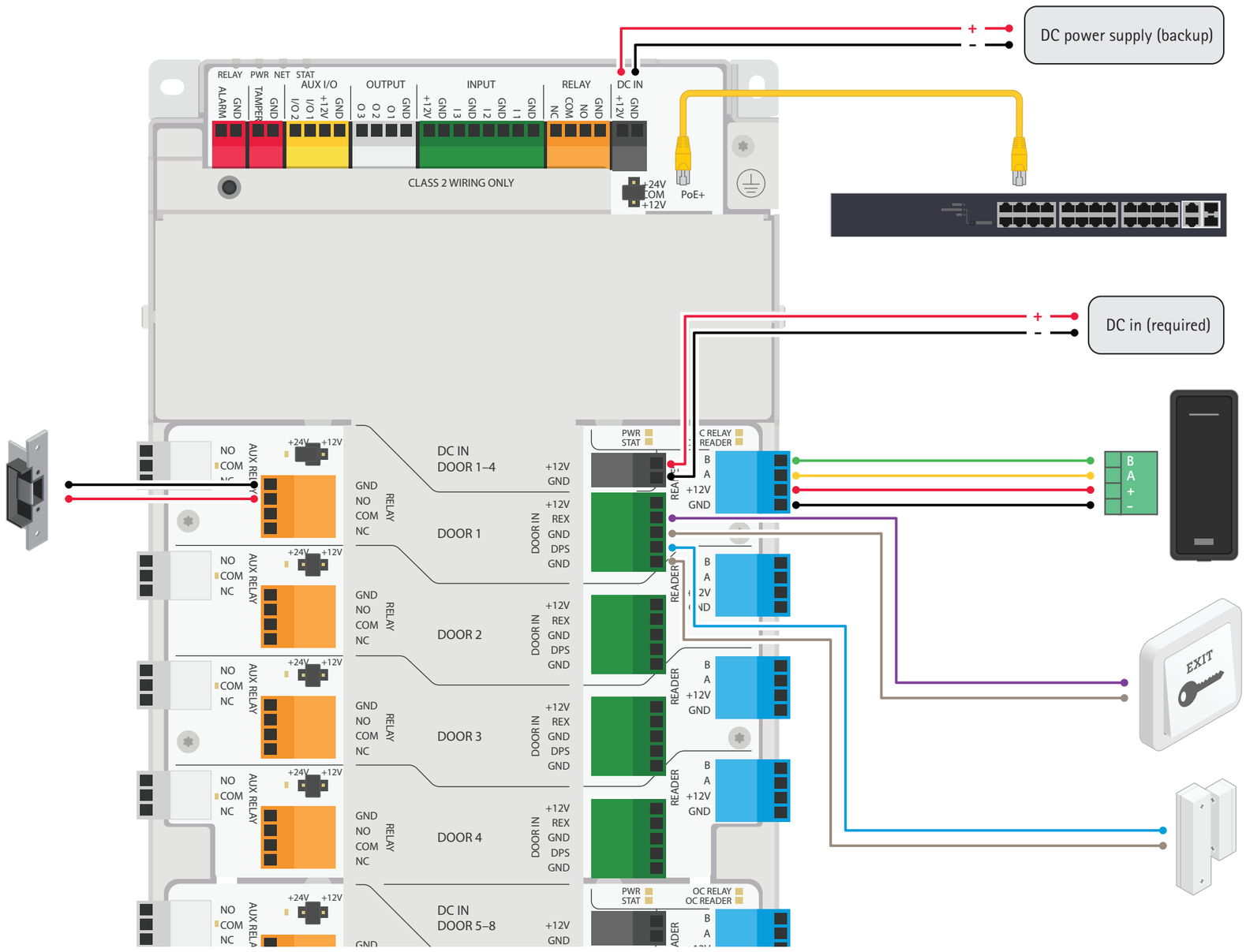
Standard one door installation



Application

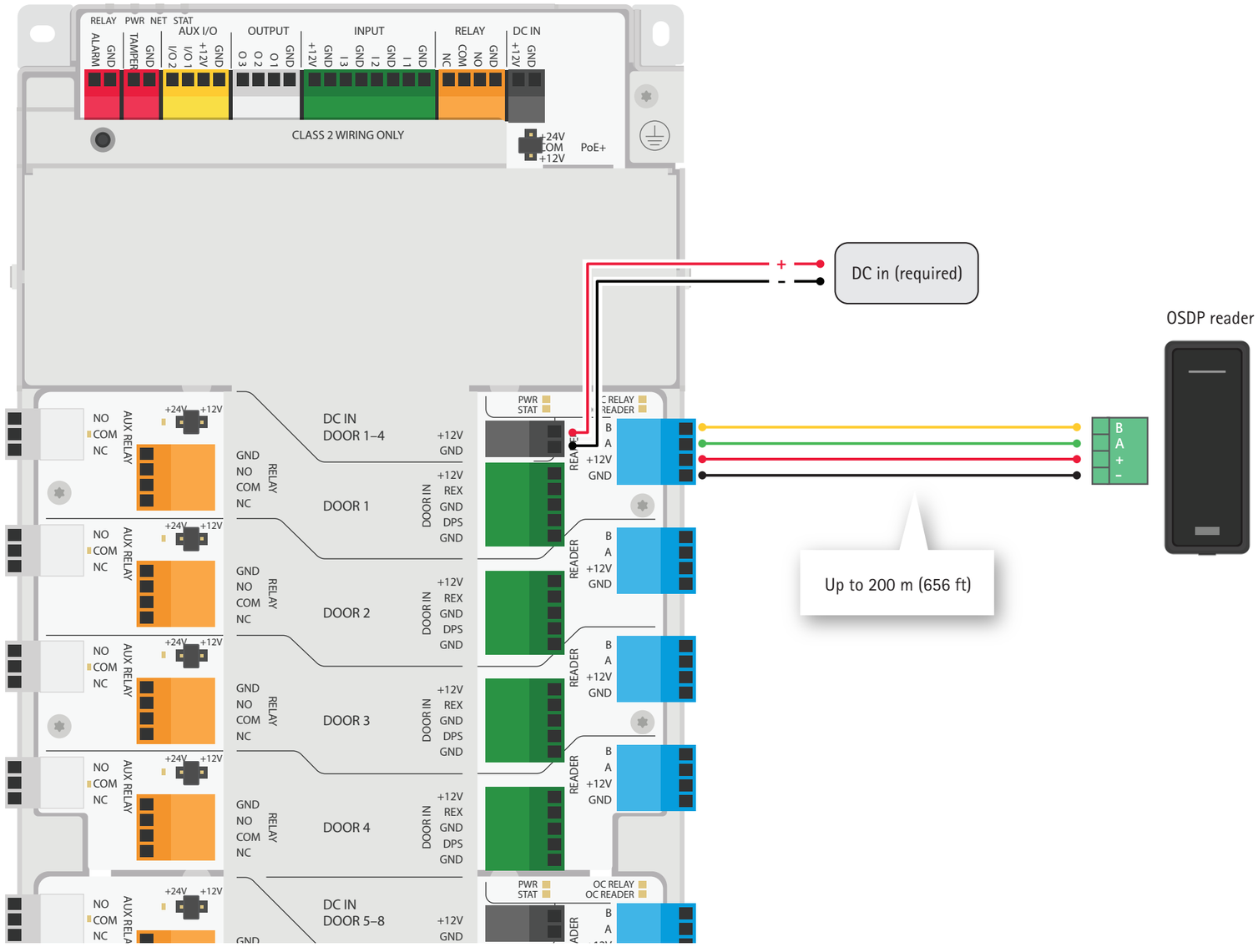
Standard one-door installation with configuration in AXIS Camera Station

Considerations

- 12 V or 24 V fail-secure lock
- PoE Class 3 or PoE Class 4
- All peripheral consumption within the controller's power budget

Adhere to local life safety code in all installations.
Illustration does not depict DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

OSDP reader – powered by the controller



Application

One OSDP reader for the controller with configuration in AXIS Camera Station

Requirements

> Reader wiring:
  > AWG 22-14

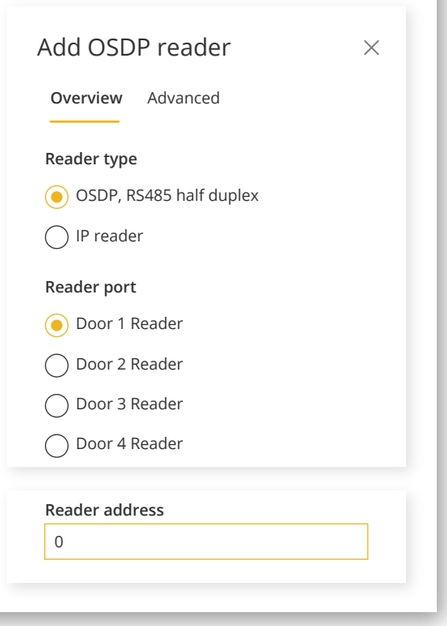
Considerations

> DC power on door section required

> All peripheral consumption within the controller's power budget

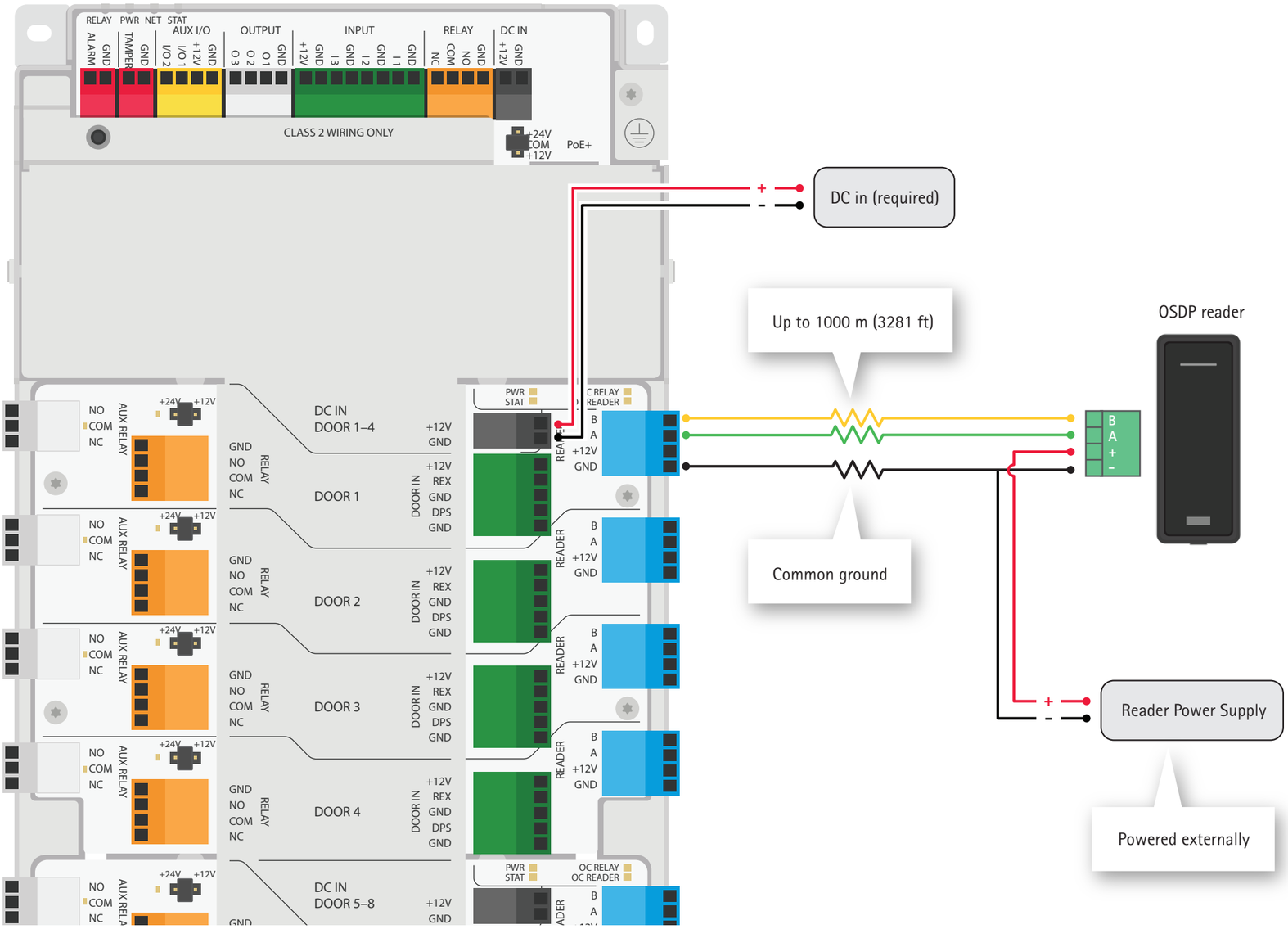
AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select the relevant reader



Adhere to local life safety code in all installations.
Illustration does not depict door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

OSDP reader – powered externally



Application

One OSDP reader for the controller with configuration in AXIS Camera Station

Requirements

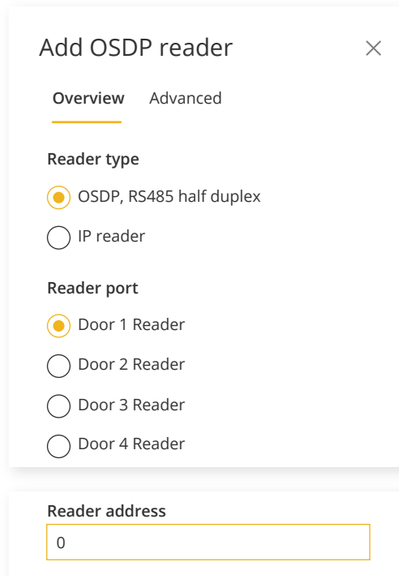
- Reader powered externally, not by controller
- Reader wiring: RS485
  - Twisted pair
  - AWG 26-14
  - 120 ohm impedance

Considerations

- DC power on door section required
- All peripheral consumption within the controller's power budget

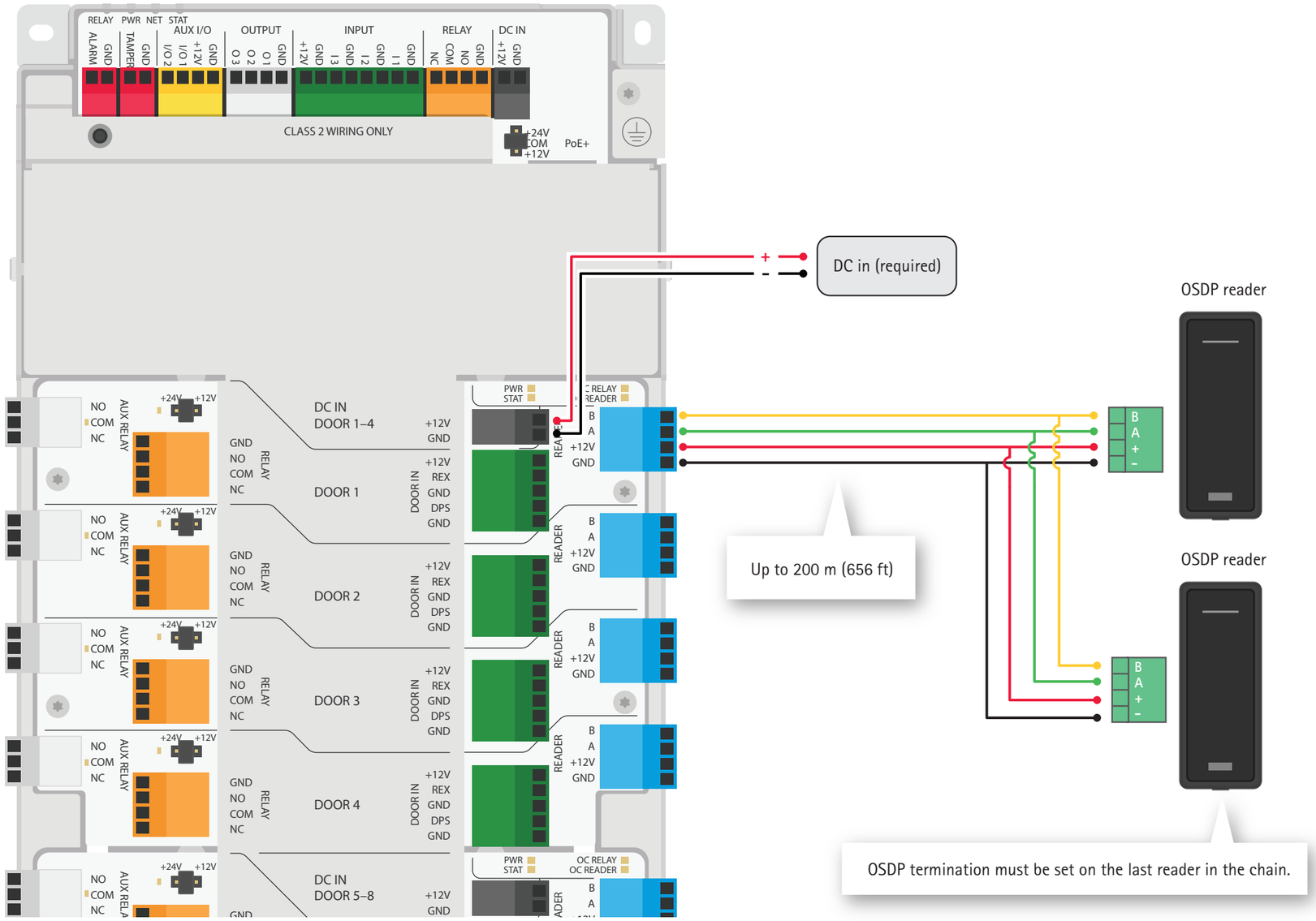
AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select the relevant reader



Adhere to local life safety code in all installations.
Illustration does not depict door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

OSDP reader – multi-drop



Application

Two OSDP readers (multi-drop) for the controller with configuration in AXIS Camera Station

Requirements

> Reader wiring:
  > AWG 22-14

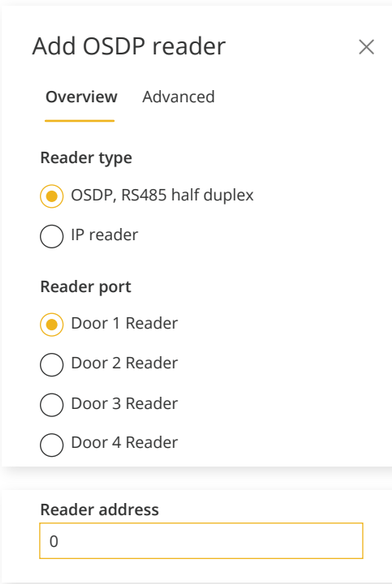
Considerations

> DC power on door section required

> All peripheral consumption within the controller's power budget

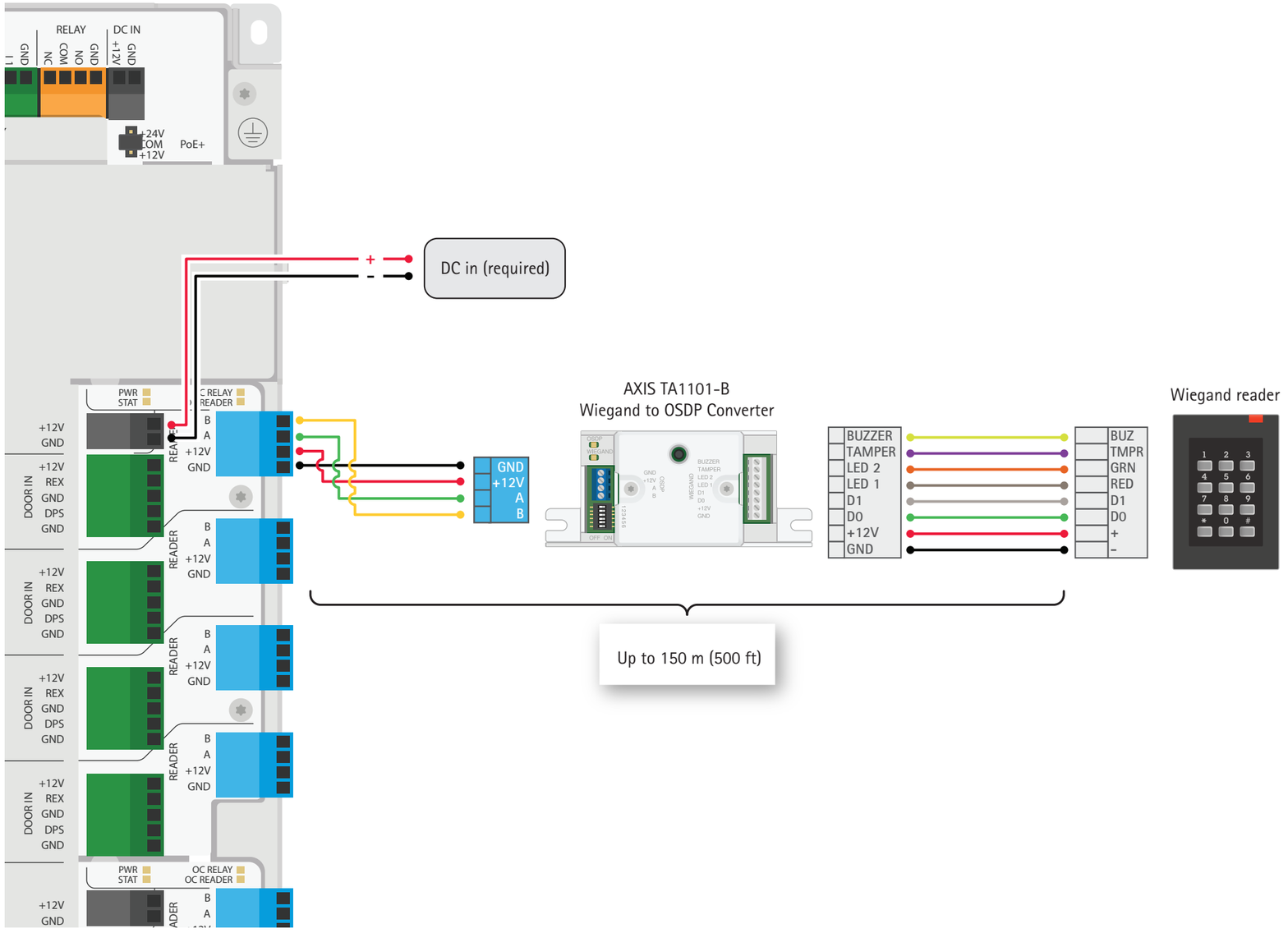
AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select the relevant reader
4. Set the address on the DIP switch and add address in the Reader address field.



Adhere to local life safety code in all installations.
Illustration does not depict door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Wiegand reader – powered by the controller



Application

One Wiegand reader for the controller with configuration in AXIS Camera Station

Requirements

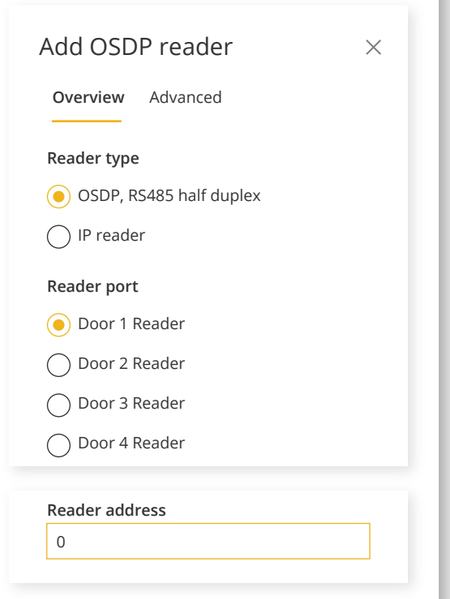
- AXIS TA1101-B unit required
- AXIS TA1101-B wiring:
  - AWG 22-16

Considerations

- DC power on door section required
- All peripheral consumption within the controller's power budget

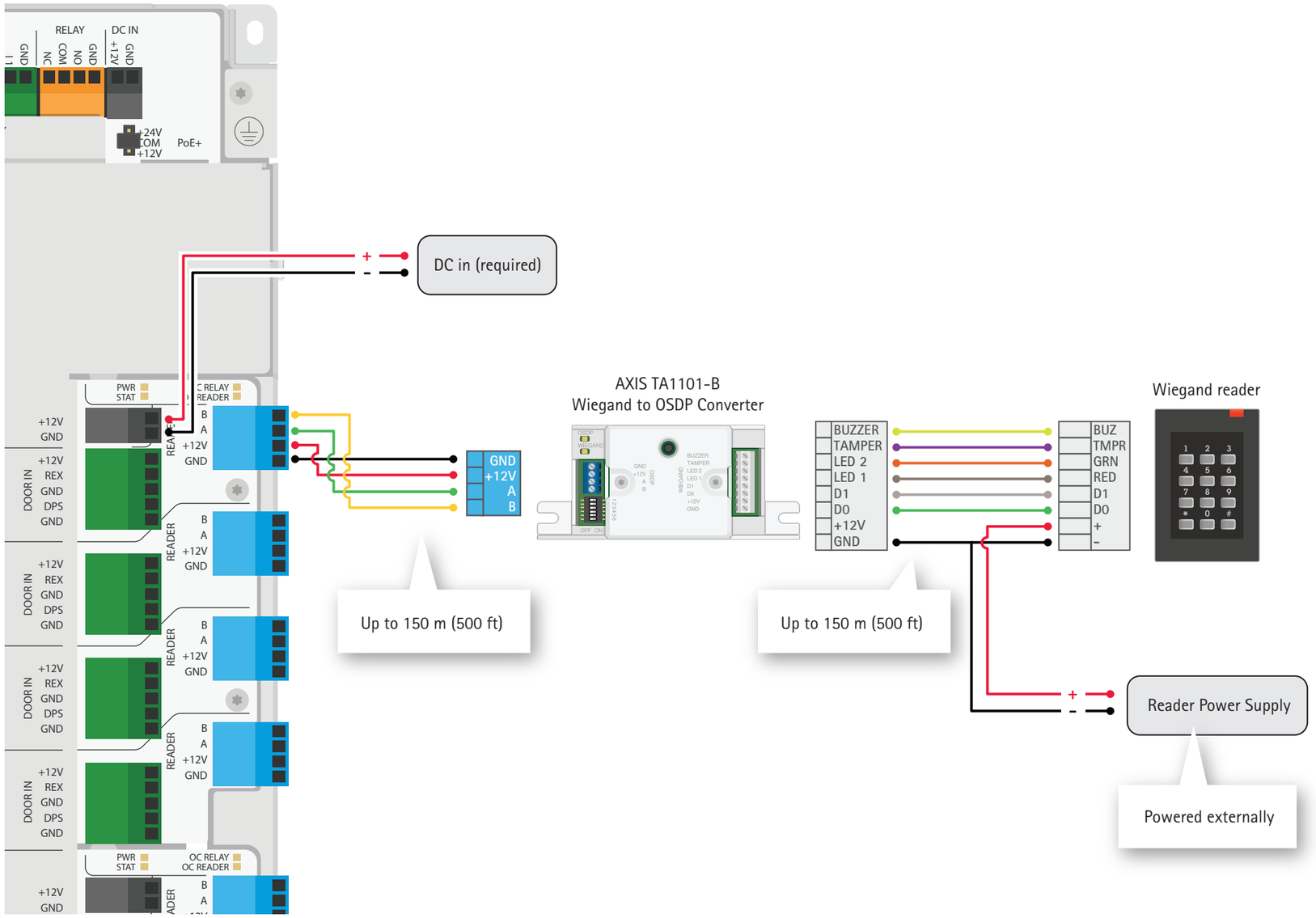
AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select the relevant reader



Adhere to local life safety code in all installations.
Illustration does not depict door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Wiegand reader – powered externally



Application

One Wiegand reader for the controller with configuration in AXIS Camera Station

Requirements

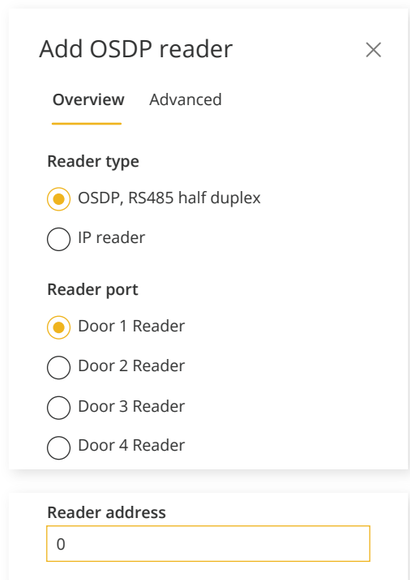
- Reader powered externally, not by controller
- AXIS TA1101-B unit required
- AXIS TA1101-B wiring:
  - AWG 22-16

Considerations

- DC power on door section required
- All peripheral consumption within the controller's power budget

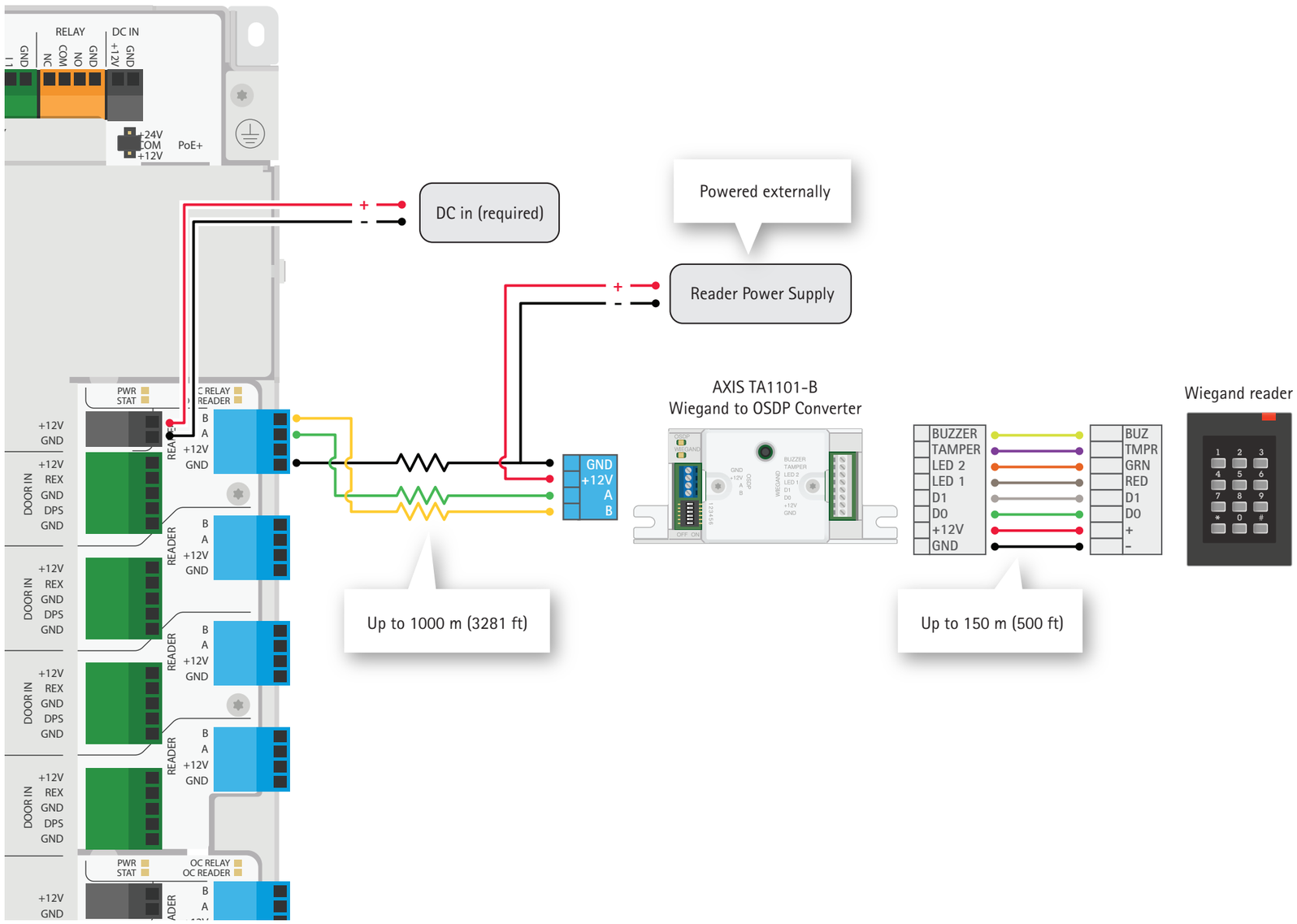
AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select the relevant reader



Adhere to local life safety code in all installations.
Illustration does not depict door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Wiegand reader – powered externally, long cable



Application

One Wiegand reader for the controller with configuration in AXIS Camera Station

Requirements

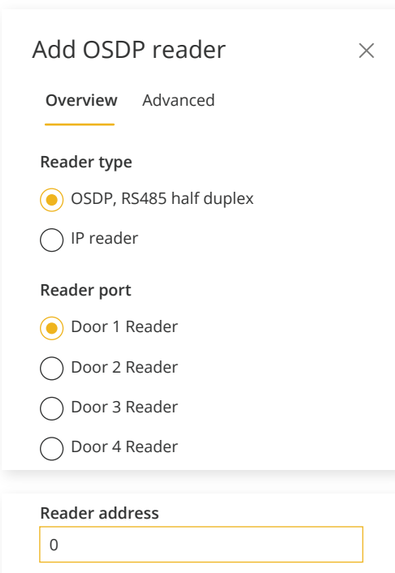
- Reader powered externally, not by controller
- AXIS TA1101-B unit required
- AXIS TA1101-B wiring:
  - AWG 22-16

Considerations

- DC power on door section required
- All peripheral consumption within the controller's power budget
- We recommend connecting AXIS TA1101-B closer to the controller or closer to the reader

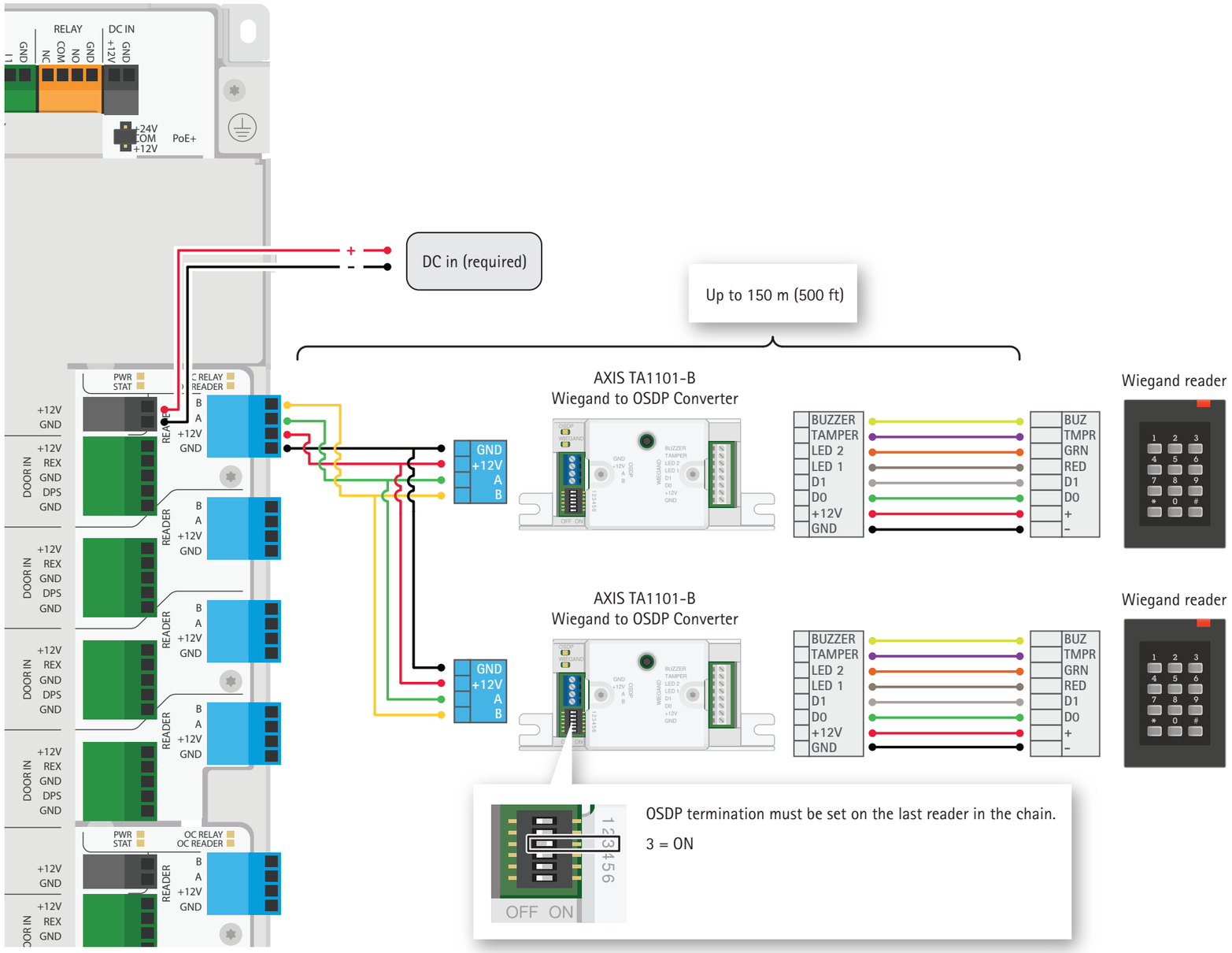
AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select the relevant reader



Adhere to local life safety code in all installations.
Illustration does not depict door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Wiegand reader – multi-drop



Application

Two Wiegand readers (multi-drop) for the controller with configuration in AXIS Camera Station

Requirements

> AXIS TA1101-B unit required

> AXIS TA1101-B wiring:
> > AWG 22-16

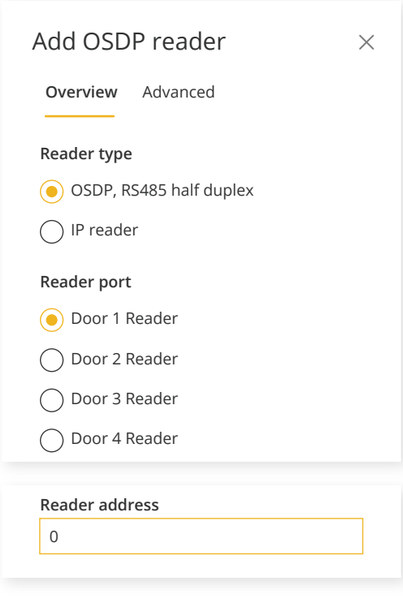
Considerations

> DC power on door section required

> All peripheral consumption within the controller's power budget

AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select the relevant reader
4. Set the address on the DIP switch and add address in the Reader address field.



Adhere to local life safety code in all installations.
Illustration does not depict door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Wiegand and OSDP reader – multi-drop

Application

Two readers (multi-drop) for the controller with configuration in AXIS Camera Station

Requirements

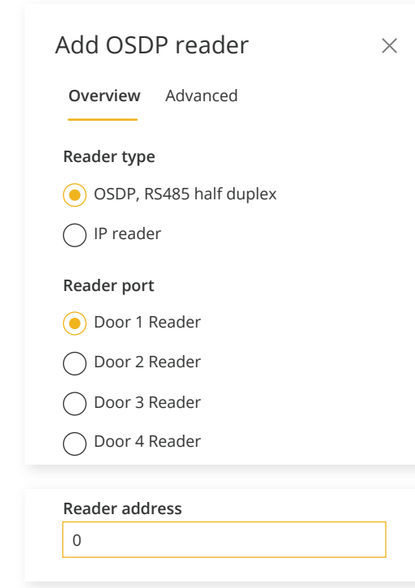
- AXIS TA1101-B unit required
- AXIS TA1101-B wiring:
  - AWG 22-16
- OSDP reader wiring:
  - AWG 22-14

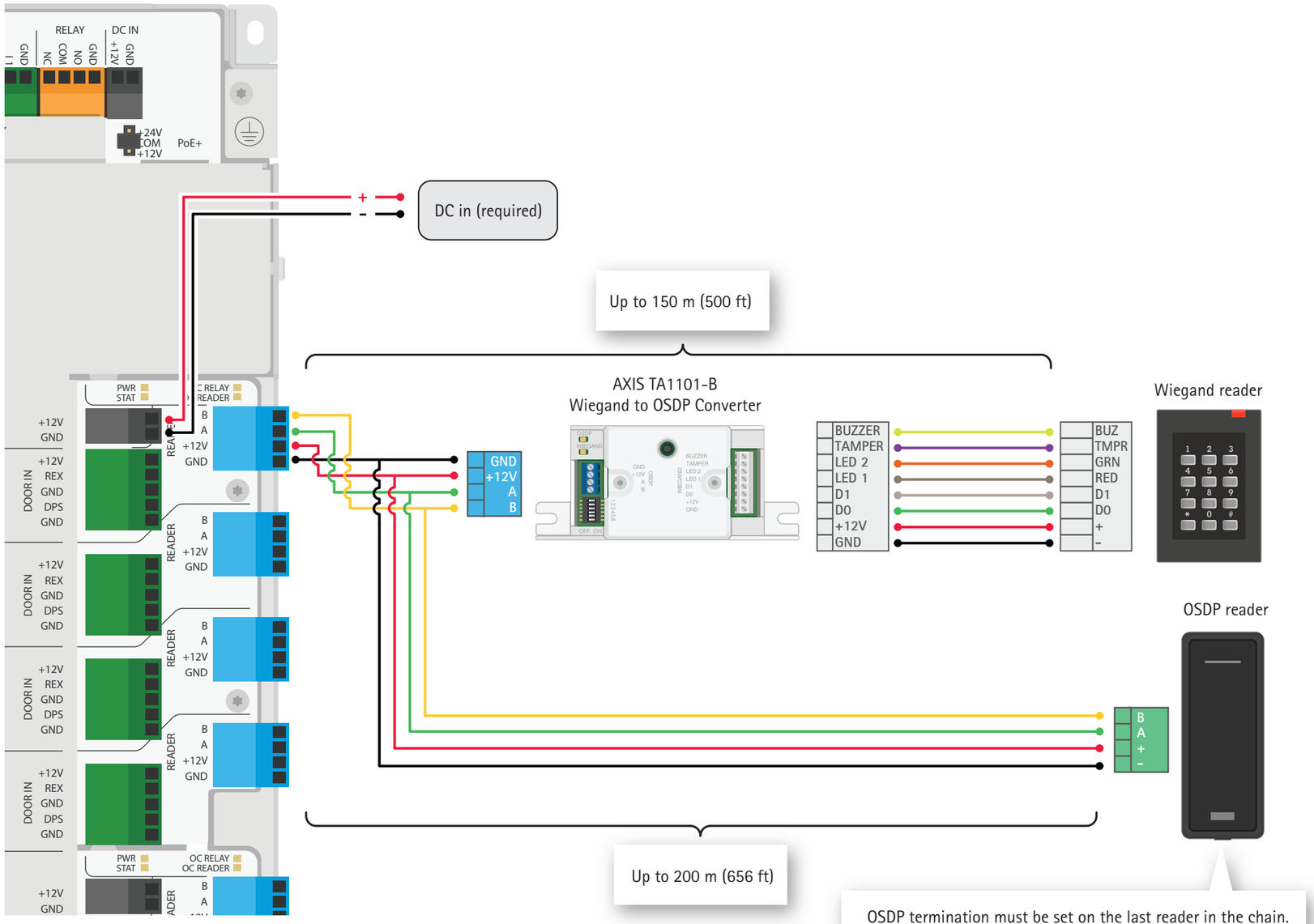
Considerations

- DC power on door section required
- All peripheral consumption within the controller's power budget

AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select the relevant reader
4. Set the address on the DIP switch and add address in the Reader address field.





Adhere to local life safety code in all installations.
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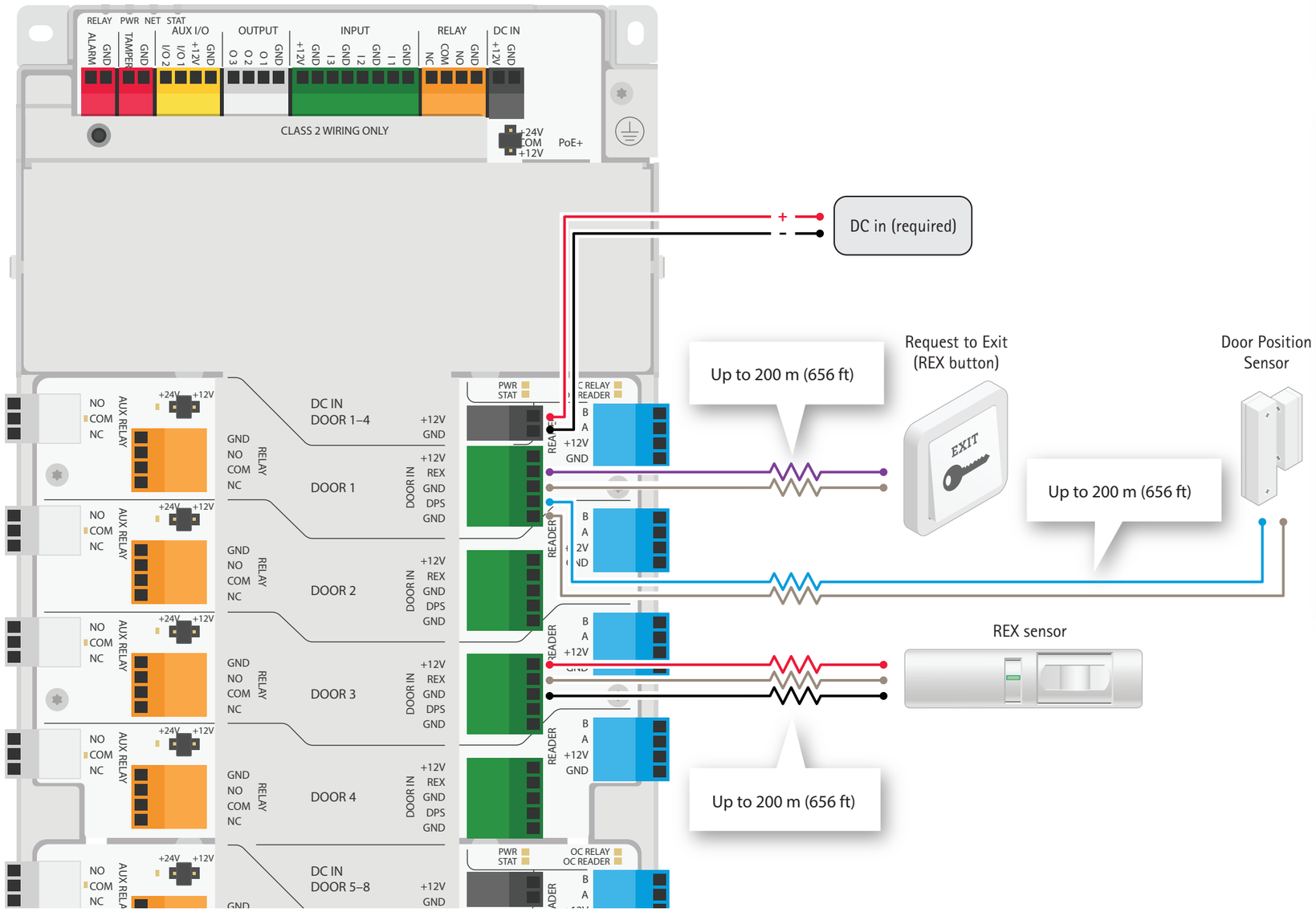
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Installation for door inputs



Requirements

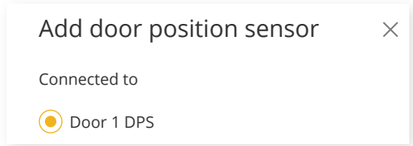
> Wiring:
  > AWG 24-14

Considerations

> REX sensor:
  > Door 1-4 combined 400 mA at 12V DC
  > Door 5-8 combined 400 mA at 12V DC

AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Add a door position sensor and assign it to DPS 1



5. Add a REX device on door side B and assign it to REX 1

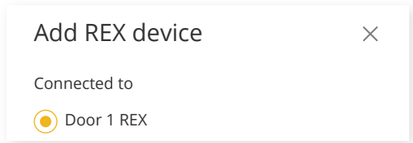


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Illustration does not depict readers, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
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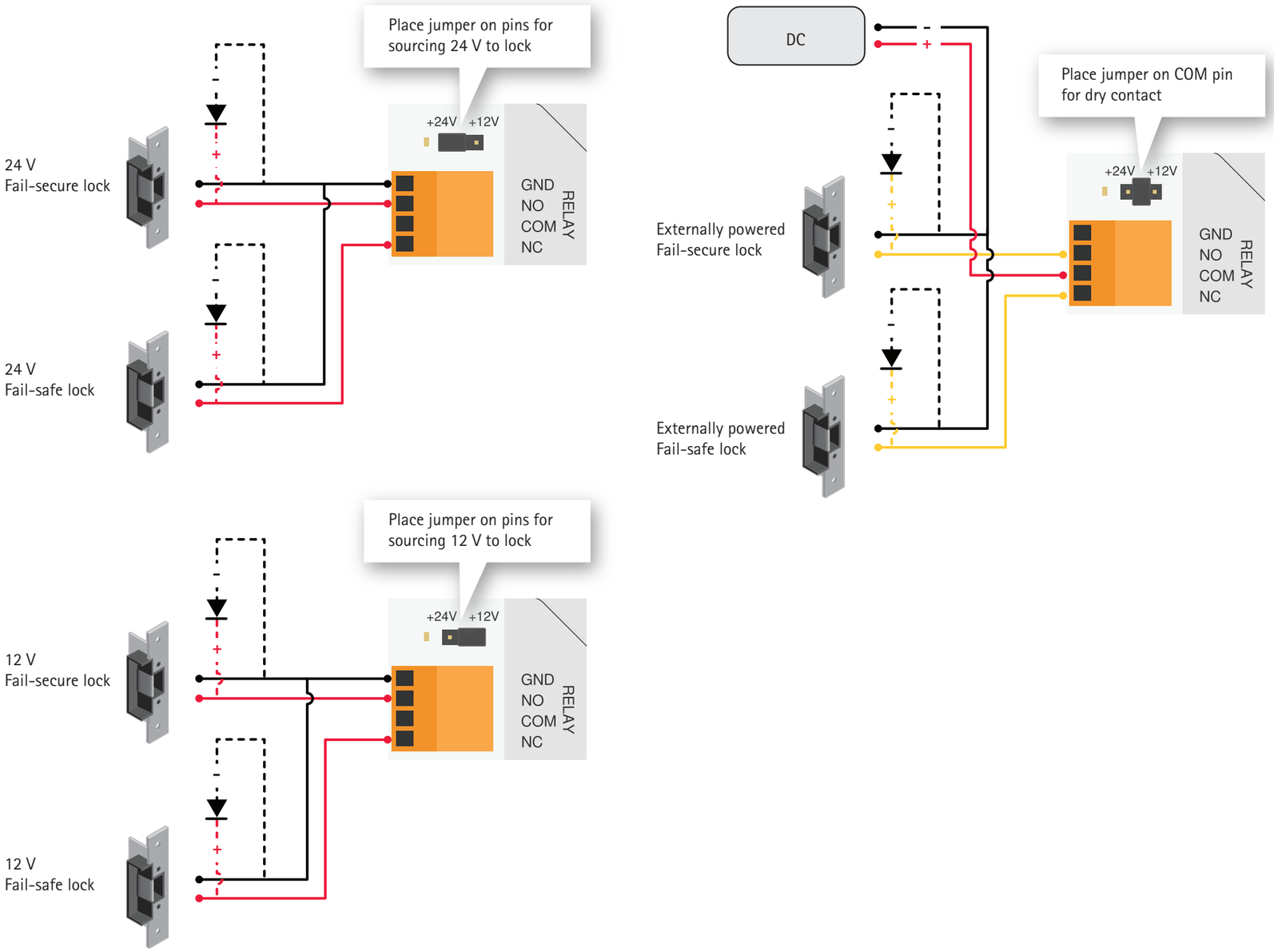
Door relay



Application

For product-specific voltage and specification for the relay, see the product datasheet.

Requirements

- Door relay 1-4:
  - 3.8 A combined at 12 V DC
  - 1.5 A combined at 24 V DC
- Door relay 5-8:
  - 3.8 A combined at 12 V DC
  - 1.5 A combined at 24 V DC
- Dry:
  - 4 A at 30 V DC
- Wiring:
  - AWG 16-14

Considerations

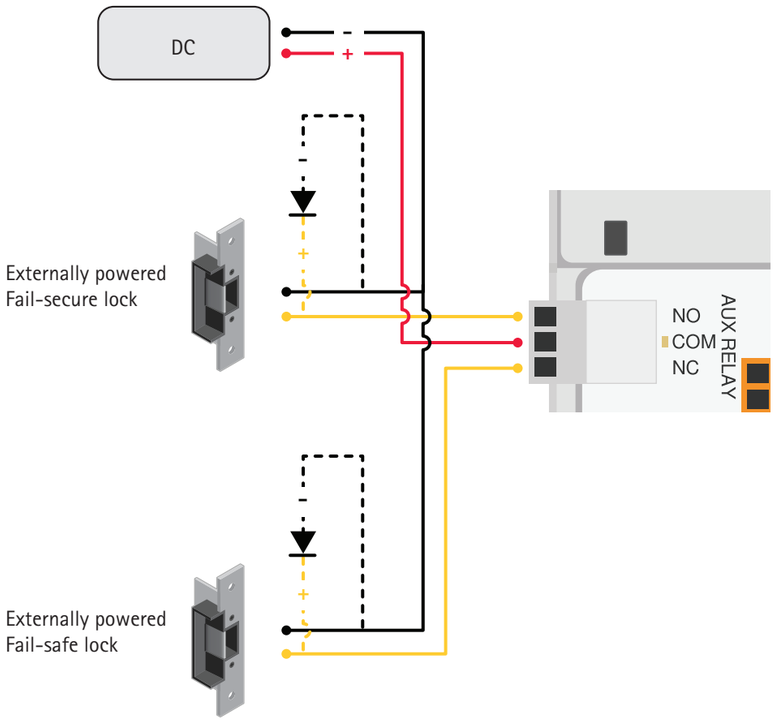
- 12 V or 24 V fail-secure or fail-safe lock
- If the lock is non-polarized, we recommend you to add an external flyback diode.

AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select Relay 1 for the first lock

Adhere to local life safety code in all installations.
Illustration does not depict readers, door inputs, REX devices, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

AUX relay



Application

For product-specific voltage and specification for the relay, see the product datasheet.

Requirements

> AUX relay:
> > 2A at 30V DC

> Wiring:
> > AWG 16-14

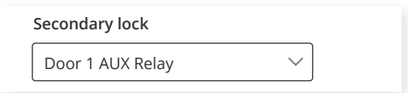
Considerations

> Externally powered fail-secure or fail-safe lock

> If the lock is non-polarized, we recommend you to add an external flyback diode.

AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Select AUX Relay 1 for the primary or secondary lock



Adhere to local life safety code in all installations.
Illustration does not depict readers, door inputs, REX devices, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
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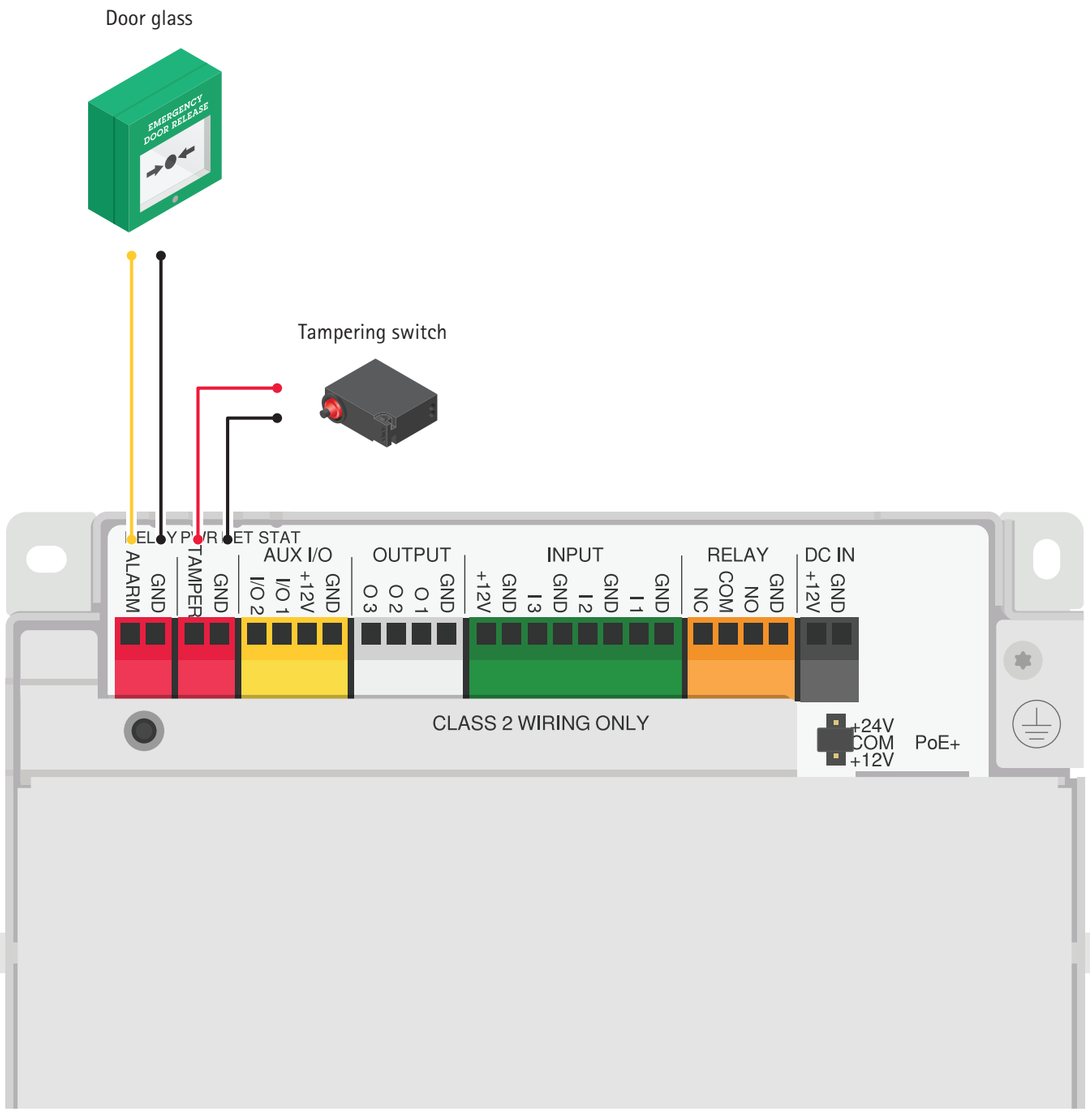
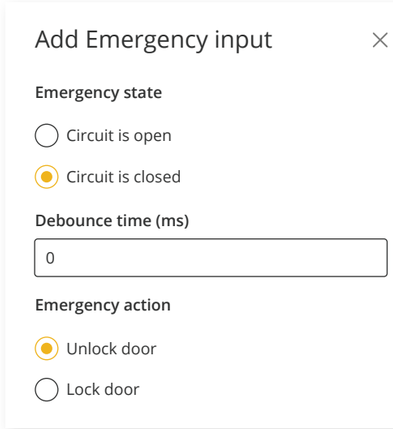
External tamper and emergency input connections



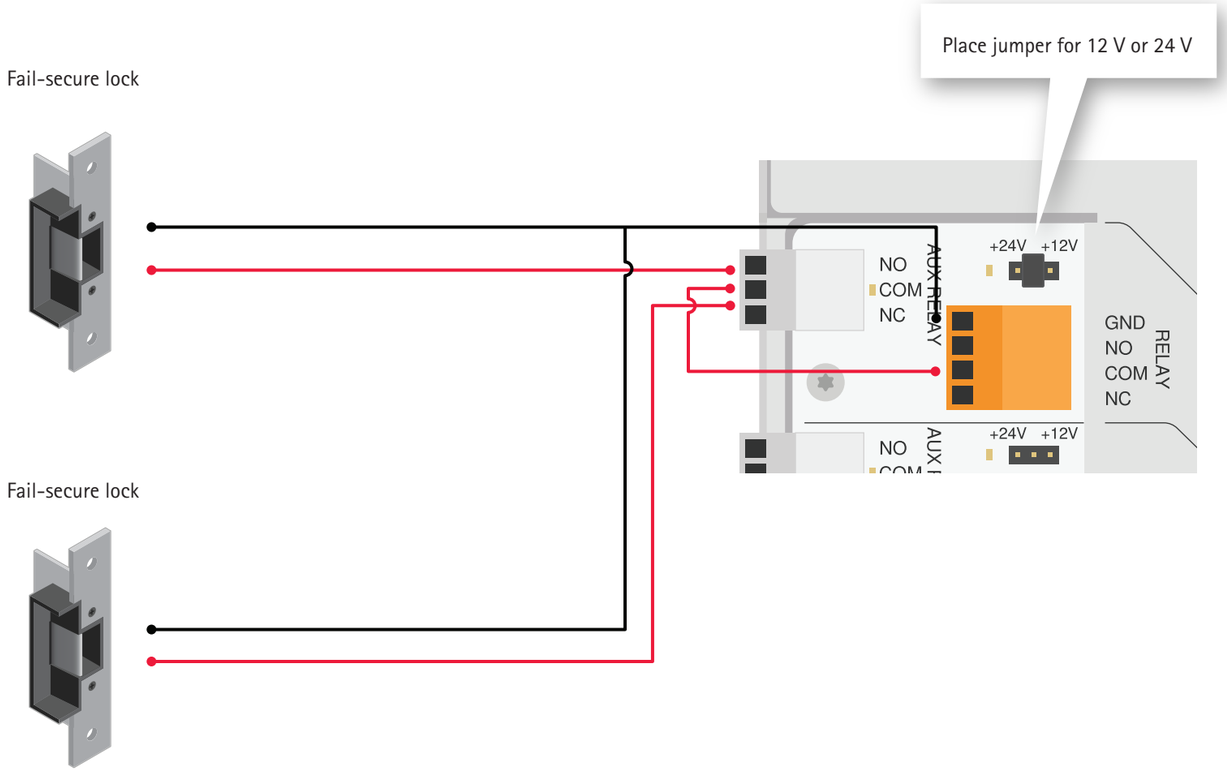
AXIS Camera Station configuration

1. Add a door
2. Connect to a door controller
3. Add Emergency input and choose configuration



Adhere to local life safety code in all installations.
Illustration does not depict readers, door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

AUX relay



Application

Powering the AUX relay (Dry relay) using the Door relay (Wet relay)

Requirements

- AUX relay:
  - 2A at 30V DC
- Door relay:
  - 3.8 A combined at 12 V DC
  - 1.5 A combined at 24 V DC
- Door relay jumper have to be set to 12 V or 24 V depending on the lock

Adhere to local life safety code in all installations.
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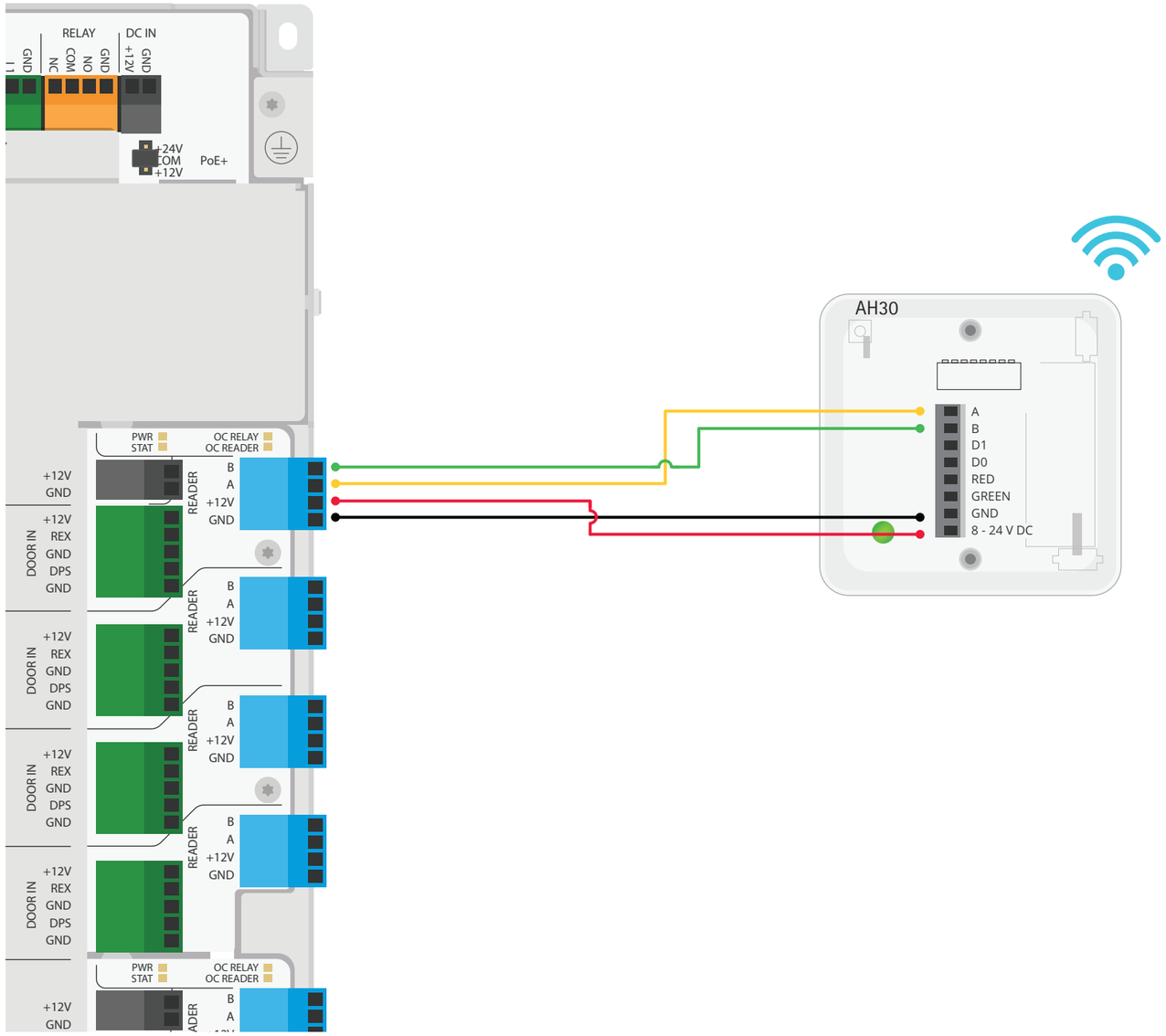
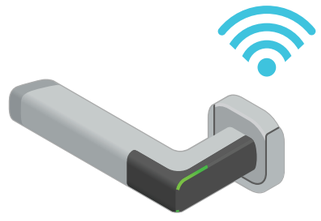
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Wireless lock AH30

Application

Connecting Aperio Hub AH30 to the controller. Additional licenses are required





Adhere to local life safety code in all installations.
Illustration does not depict readers, door inputs, REX devices, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Elevator Control - Reader

Application

Elevator control Reader connection

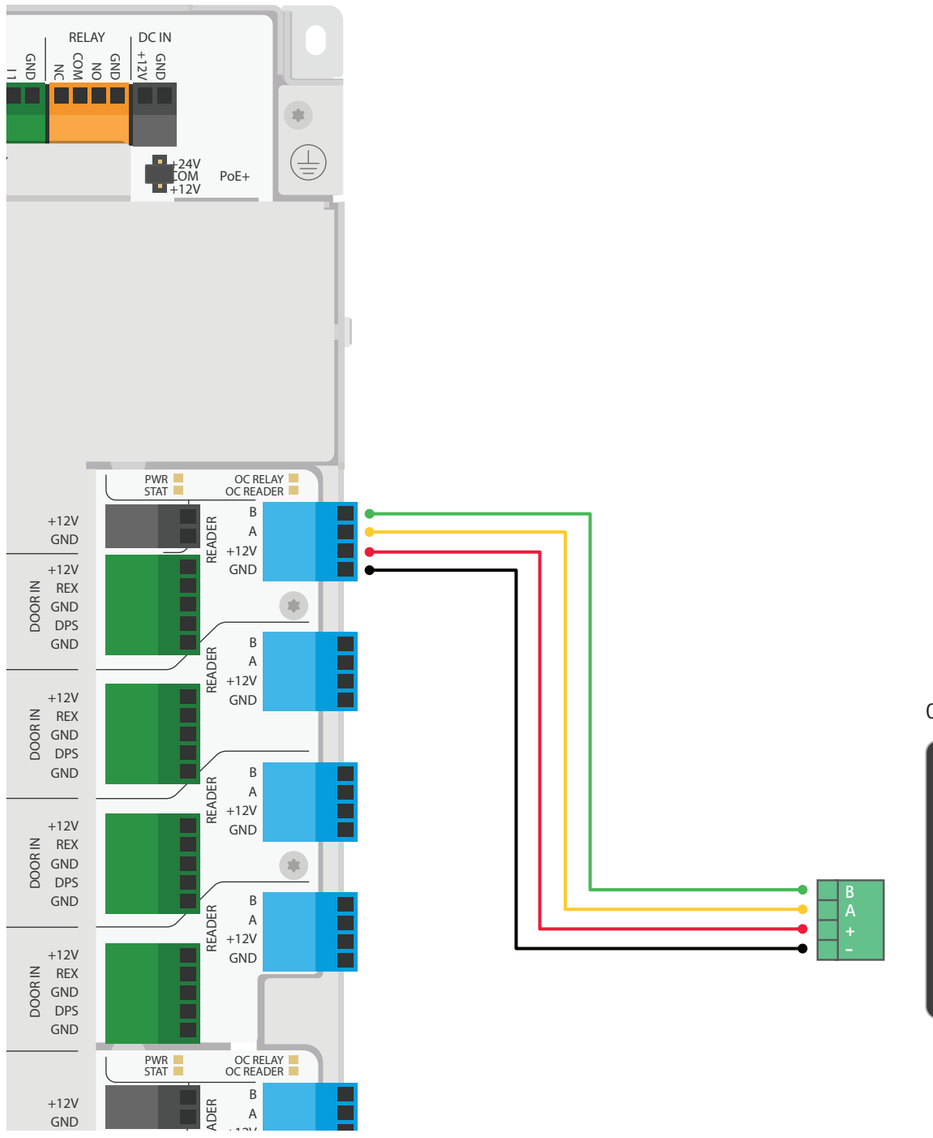
Requirements

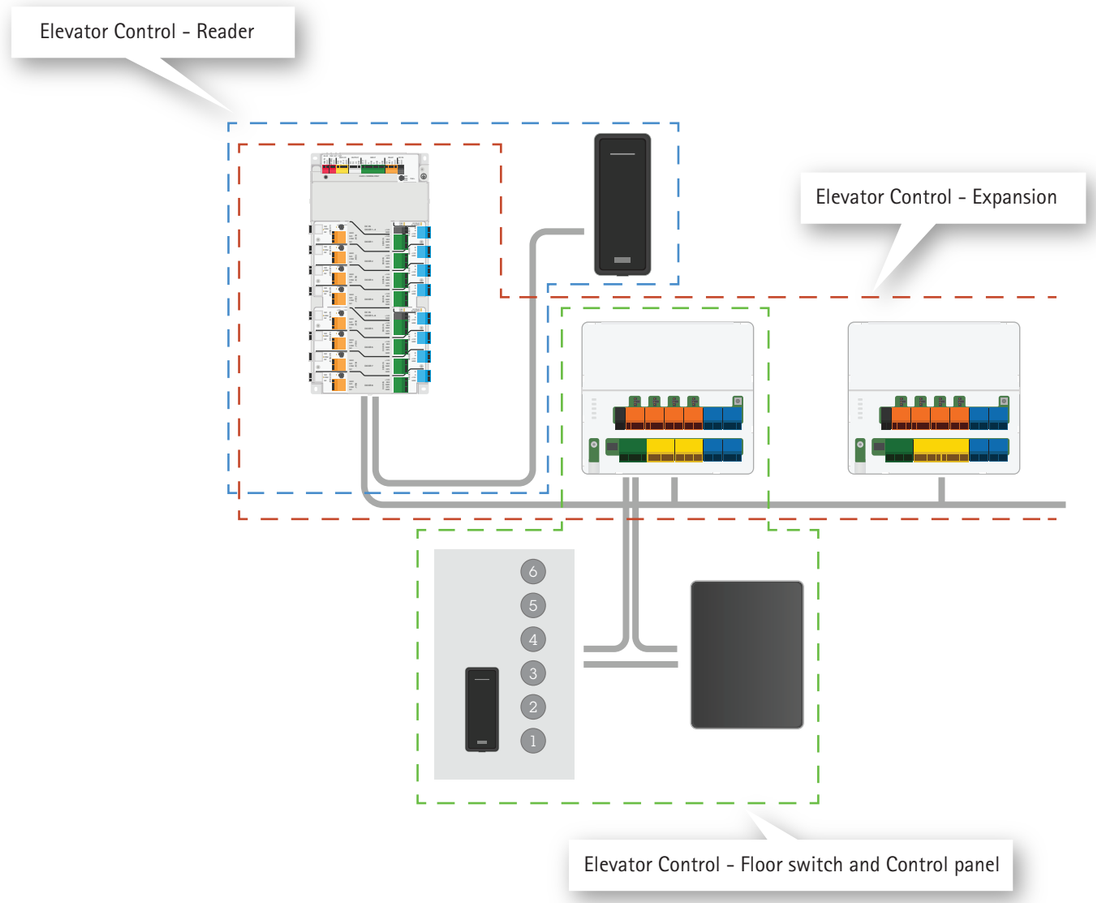
> Only OSDP reader

> Reader port 1 or 2

> Not possible to multidrop with A9910

> Reader Cable length:
- 200m Powered by the controller
- 1000m When powered externally





Adhere to local life safety code in all installations.
Illustration does not depict readers, door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

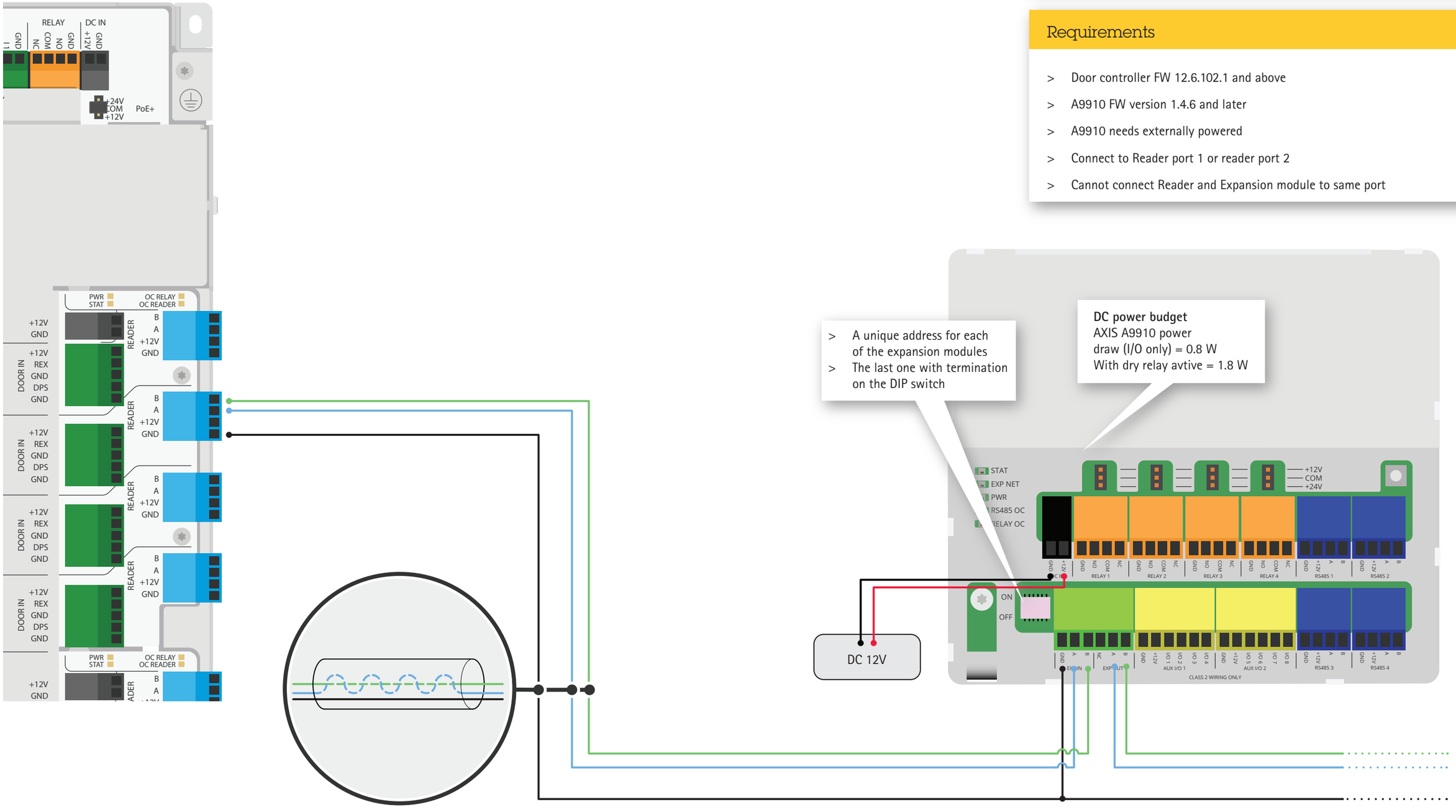
Elevator Control - Expansion

Application

Connecting expansion modules to the door controller for Elevator control

Requirements

- > Door controller FW 12.6.102.1 and above
- > A9910 FW version 1.4.6 and later
- > A9910 needs externally powered
- > Connect to Reader port 1 or reader port 2
- > Cannot connect Reader and Expansion module to same port



Adhere to local life safety code in all installations.
Illustration does not depict readers, door inputs, REX devices, locks, controller power supply, network switch, DC power backup and UPS.
Ensure that your power supplies and relays are rated for the intended purposes.
This is just an example. Always refer to the pin chart provided from AXIS Camera Station or 3rd party access control management system for installation.

Elevator Control - Floor switch and Control panel

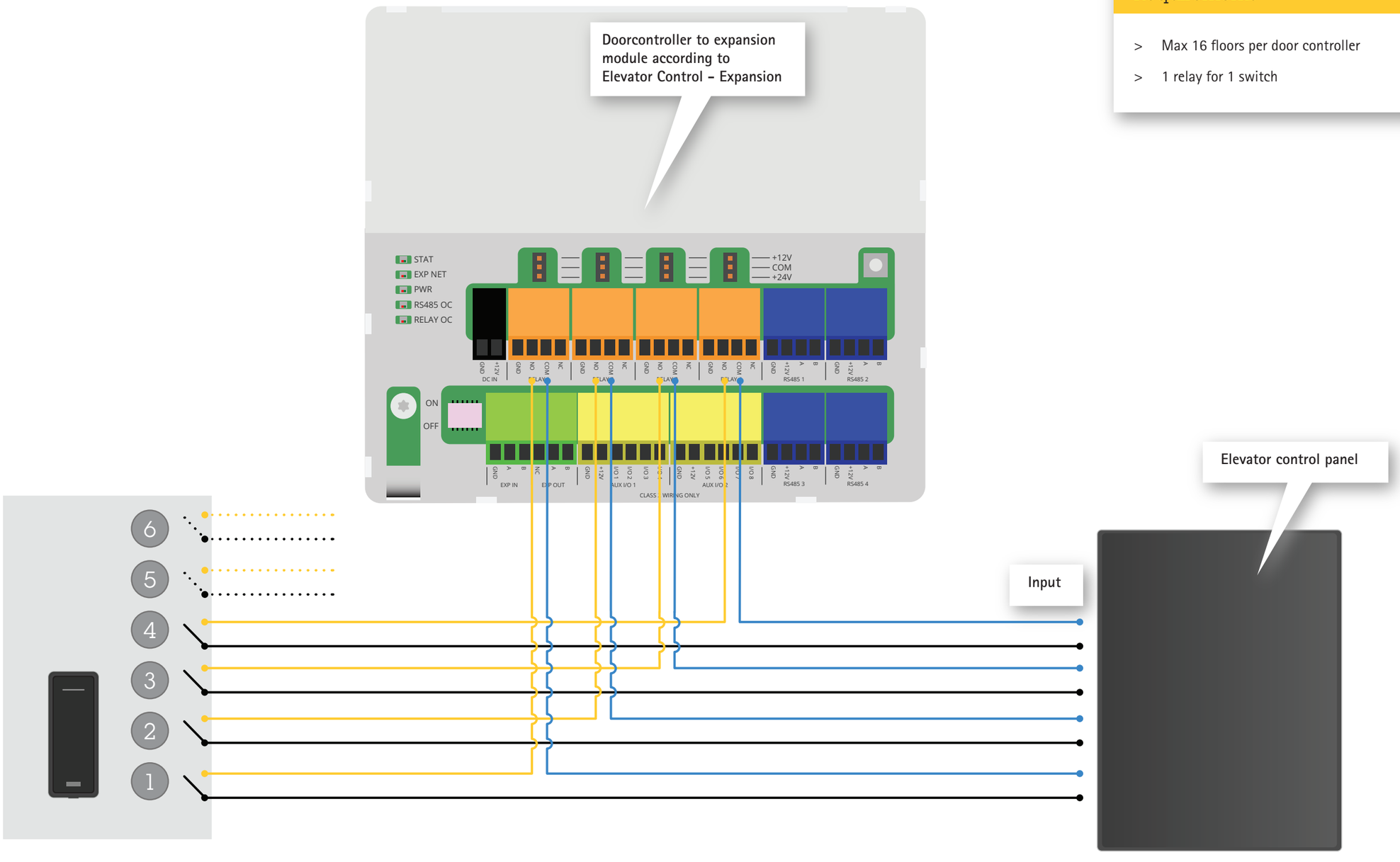
Application

Expansion unit connection to the floor switch and elevator control panel

Requirements

> Max 16 floors per door controller

> 1 relay for 1 switch



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