# AXIS A1601 Network Door Controller
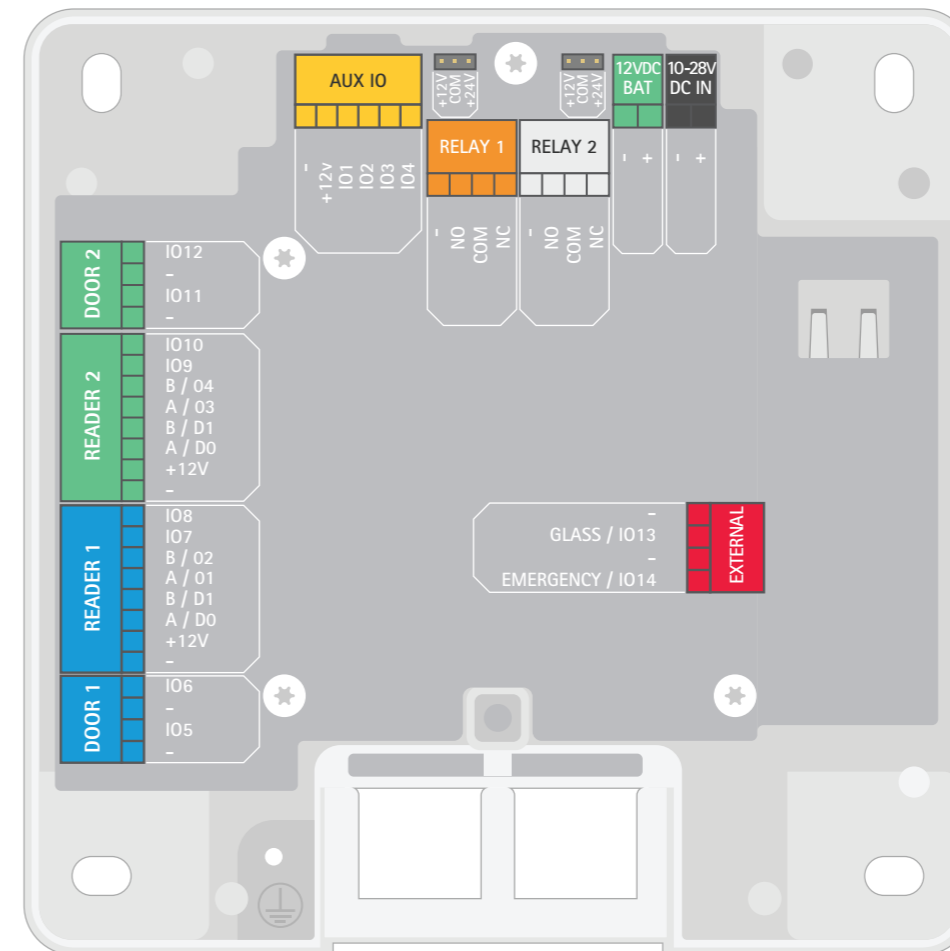


# Electrical wiring drawings
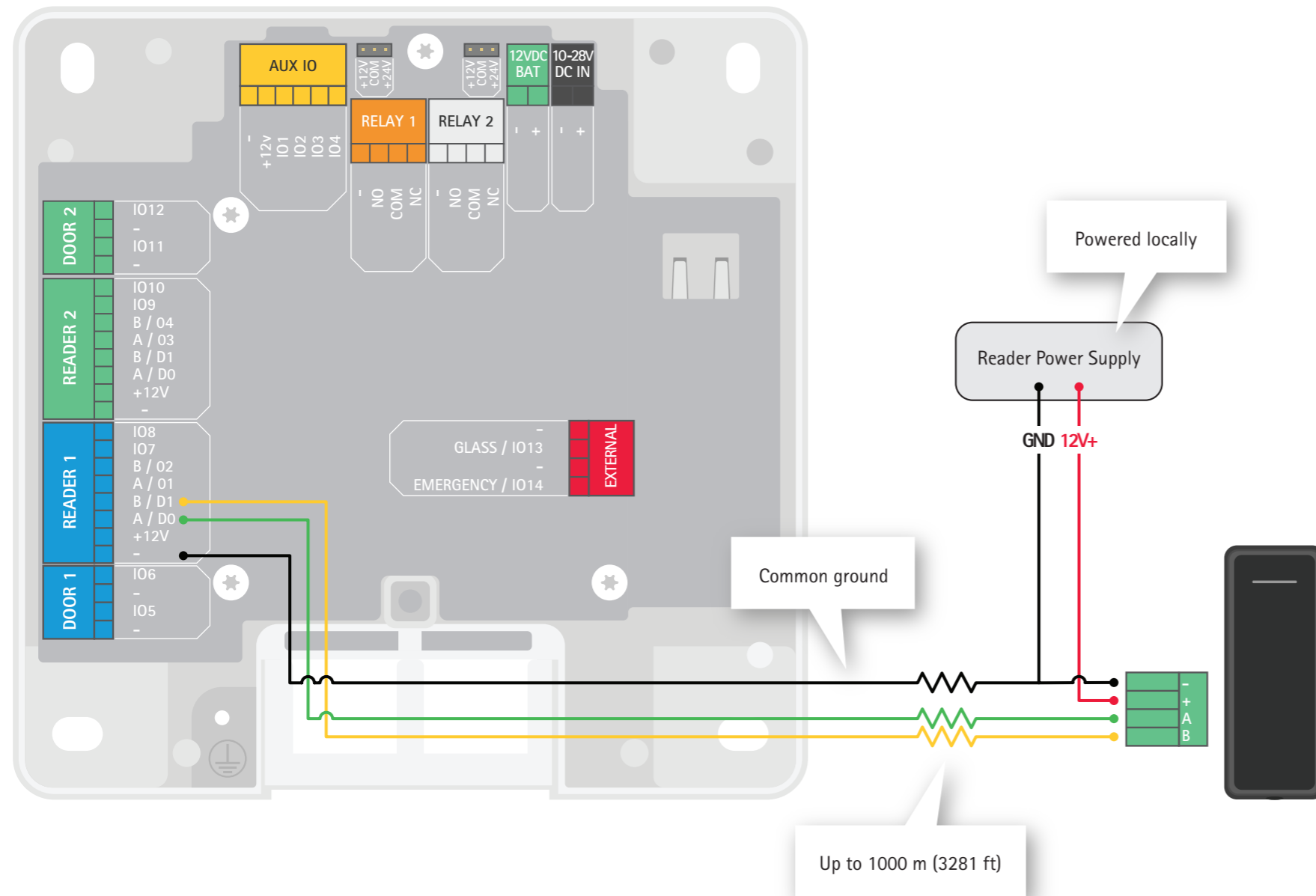
# Installation with long cable for OSDP reader

Powered locally

Reader Power Supply

GND  12V+

Common ground

Up to 1000 m (3281 ft)

AUX IO

RELAY 1   RELAY 2

12VDC   10-28V
BAT   DC IN

+12V
IO1
IO2
IO3
IO4

NO
COM
NC

NO
COM
NC

DOOR 2
IO12
–
IO11
–

READER 2
IO10
IO9
B / 04
A / 03
B / D1
A / D0
+12V
–

READER 1
IO8
IO7
B / 02
A / 01
B / D1
A / D0
+12V
–

DOOR 1
IO6
–
IO5
–

GLASS / IO13
–
–
EMERGENCY / IO14
–

EXTERNAL

– + A B

Adhere to local life safety code in all installations.
Illustration does not depict door monitors, REX devices, locks, controller power supply, network switch, battery 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 for installation.
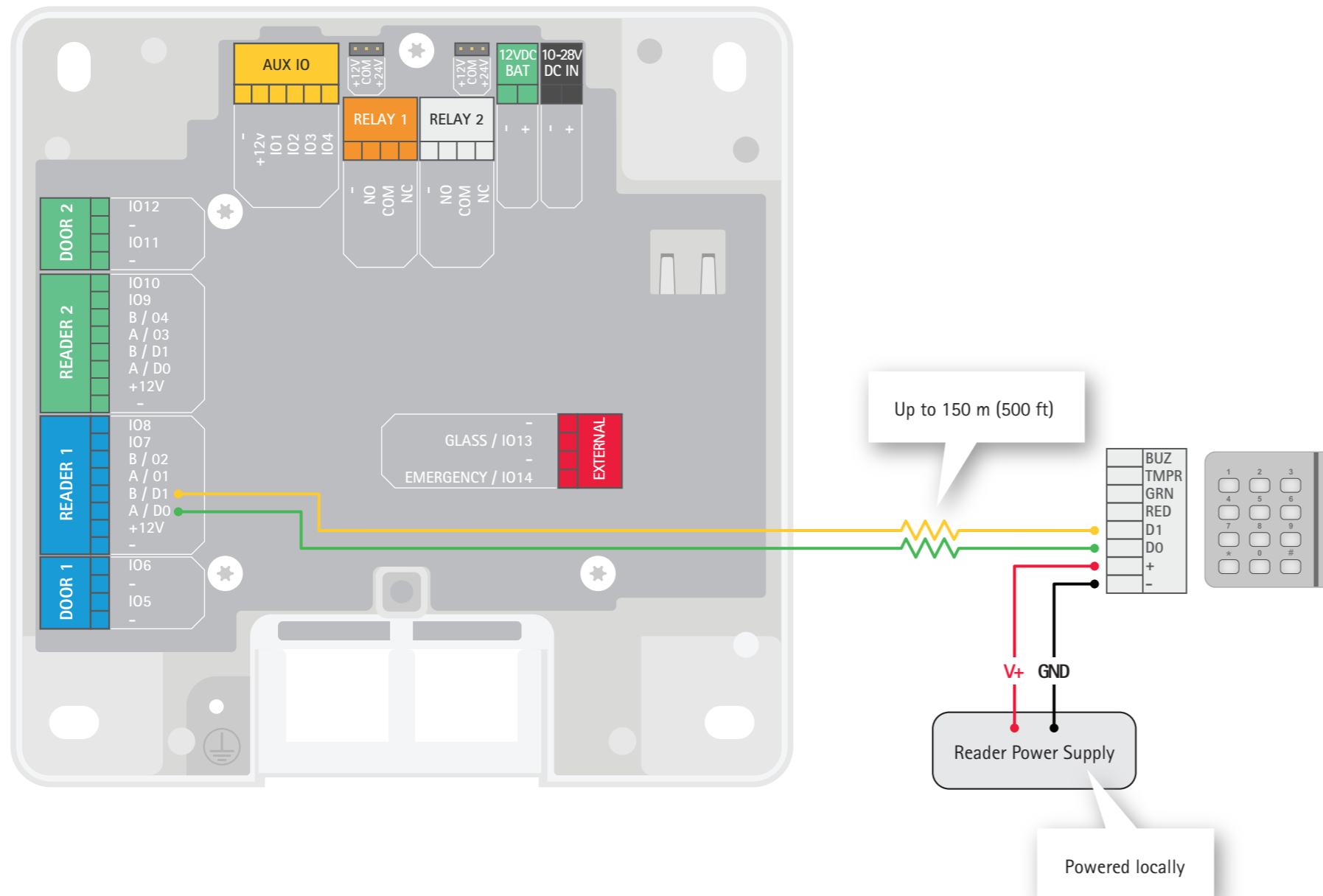
# Installation with long cable for Wiegand reader

Application

Reader cable is longer than recommended 30 m (100 ft)

Requirements

> Reader powered locally, not by controller
> Reader data wiring
  > AWG 22

AUX IO

12VDC BAT    10-28V DC IN

RELAY 1    RELAY 2

+12V IO1 IO2 IO3 IO4

NO COM NC    NO COM NC

DOOR 2
IO12
–
IO11
–

READER 2
IO10
IO9
B / O4
A / O3
B / D1
A / D0
+12V
–

READER 1
IO8
IO7
B / O2
A / O1
B / D1
A / D0
+12V
–

DOOR 1
IO6
–
IO5
–

GLASS / IO13
EMERGENCY / IO14

EXTERNAL

Up to 150 m (500 ft)

BUZ
TMPR
GRN
RED
D1
D0
+
–

1 2 3
4 5 6
7 8 9
* 0 #

V+    GND

Reader Power Supply

Powered locally

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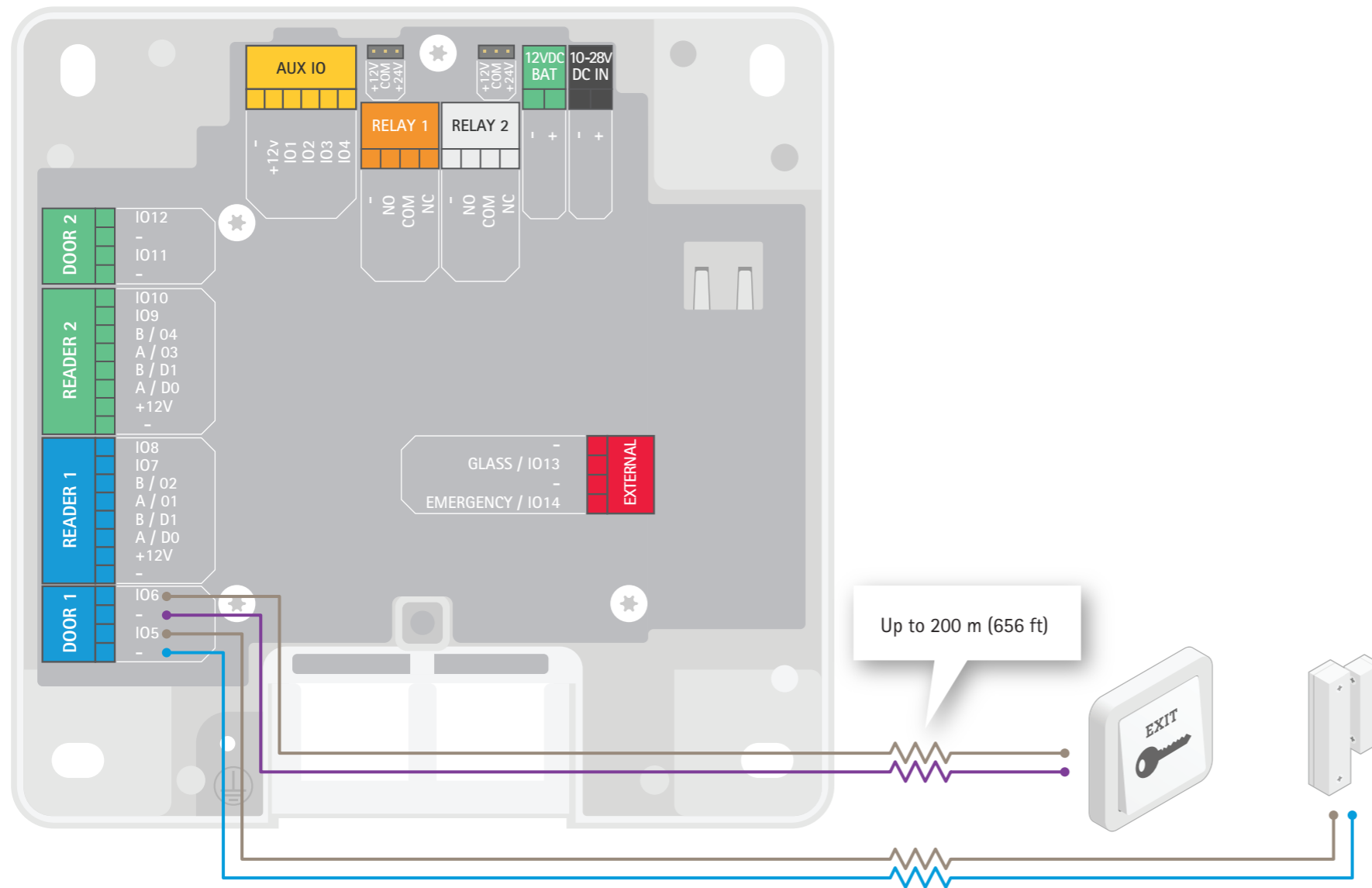
# Installation with long cable for door inputs

AUX IO

RELAY 1    RELAY 2

12VDC BAT    10-28V DC IN

+12V IO1 IO2 IO3 IO4

NO COM NC    NO COM NC

DOOR 2
IO12
–
IO11
–

READER 2
IO10
IO9
B / O4
A / O3
B / D1
A / D0
+12V
–

READER 1
IO8
IO7
B / O2
A / O1
B / D1
A / D0
+12V
–

DOOR 1
IO6
–
IO5
–

GLASS / IO13
EMERGENCY / IO14
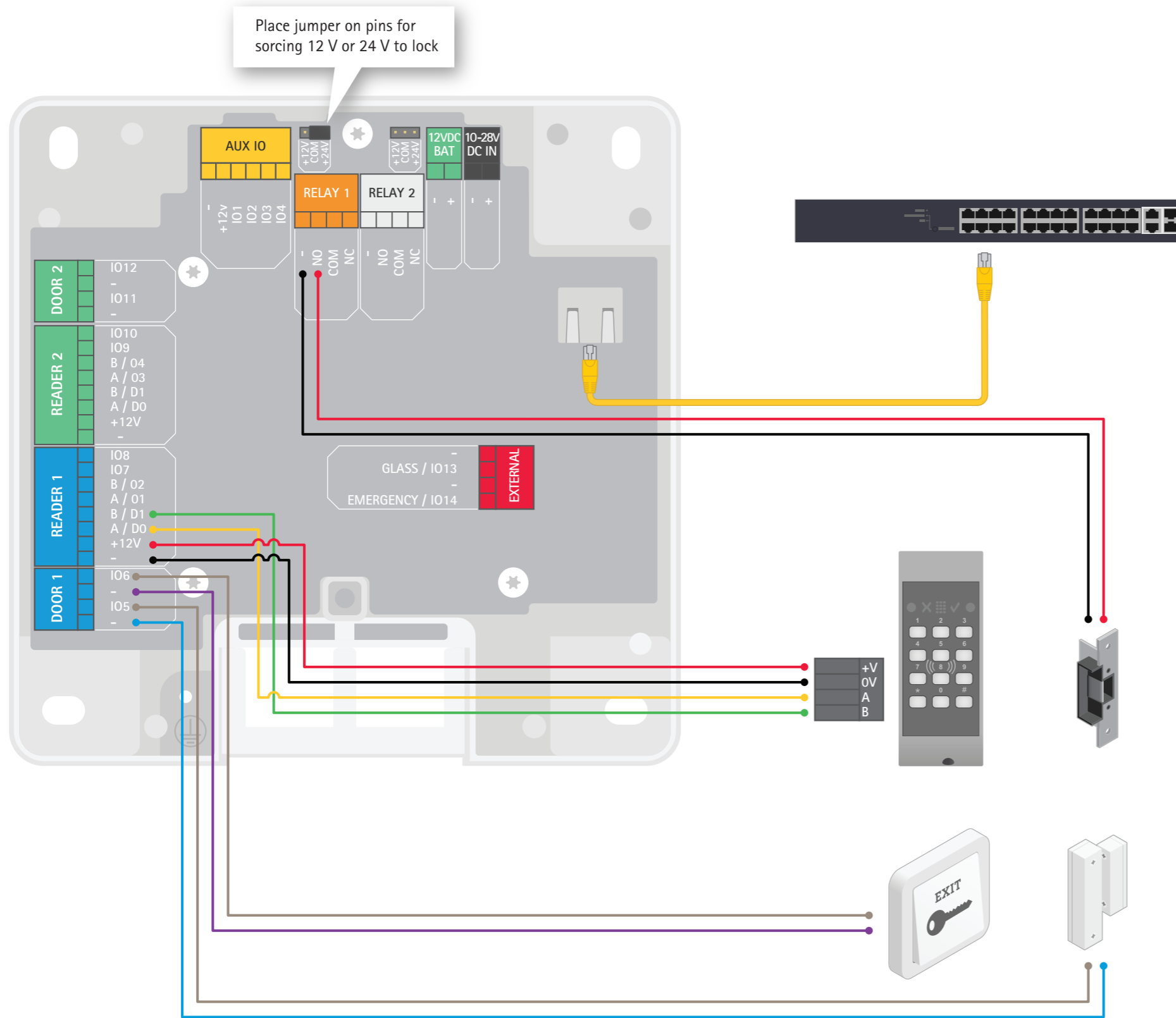EXTERNAL

Up to 200 m (656 ft)

EXIT

Adhere to local life safety code in all installations.
Illustration does not depict door monitors, REX devices, locks, controller power supply, network switch, battery 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 for installation.

# Installation with one door



Place jumper on pins for sorcing 12 V or 24 V to lock

## Application

Standard one-door installation with configuration in AXIS Camera Station

## Considerations

> 24 V fail-secure lock

> PoE Class 4 switch

> 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 Relay 1 for the first lock

   Locks

   | Relay port 1 ▼ | Not connected ▼ |

4. Add a door monitor and assign it to I/O 5

   **Door monitor** ∧

   ◉ I/O 5

5. Add an OSDP reader on door side A and assign it to Reader port 1

   **Reader** ∧

   General | Advanced

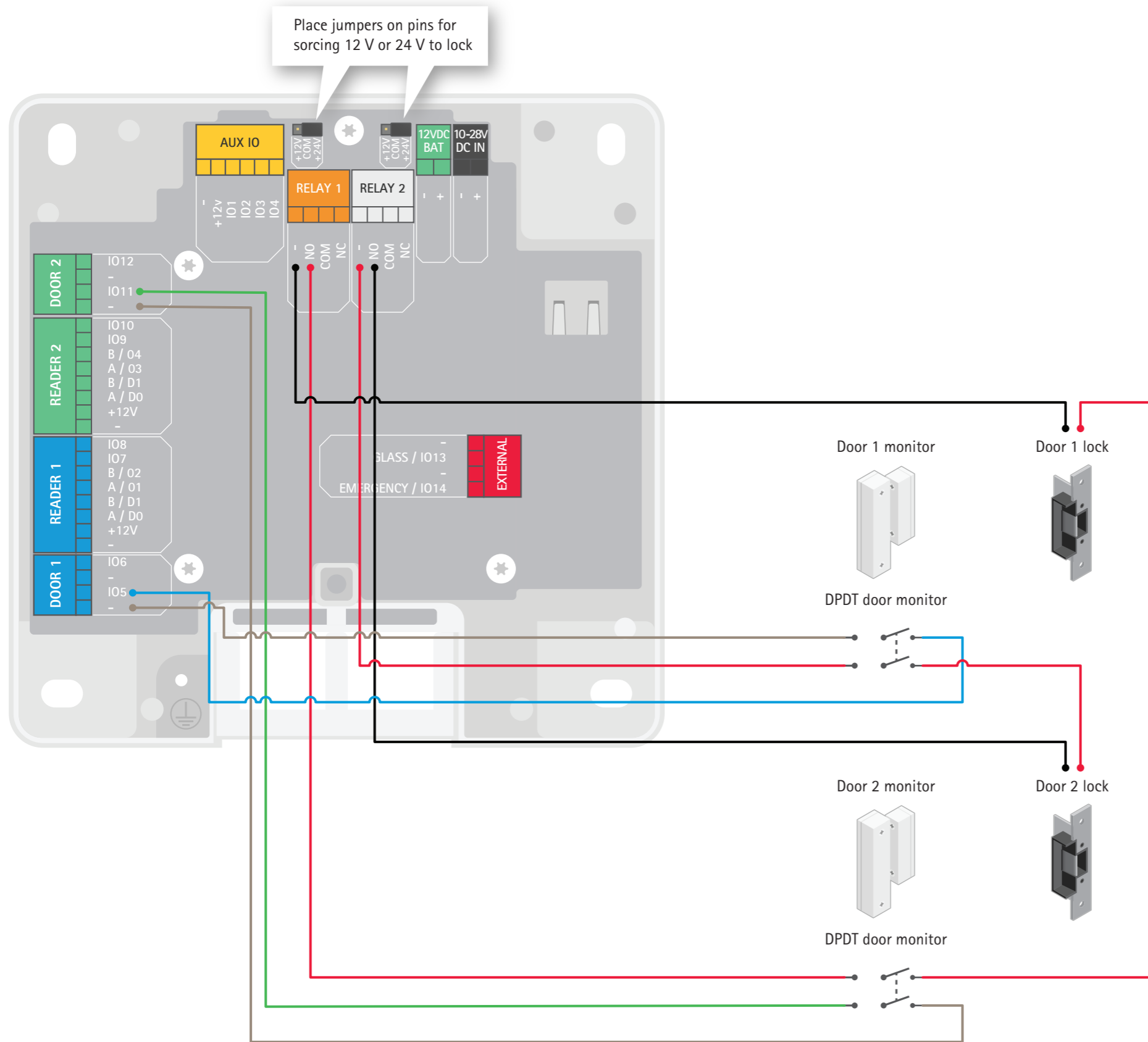   ◉ Reader port 1 on device card
   ○ Reader port 2 on device card

   ◉ OSDP RS485

6. Add a REX device on door side B and assign it to I/O 6

   **REX device** ∧

   ○ I/O 5
   ◉ I/O 6

Adhere to local life safety code in all installations.
Illustration does not depict battery 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 for installation.

# Installation with two-door interlock

Place jumpers on pins for sorcing 12 V or 24 V to lock

AUX IO

RELAY 1  RELAY 2

12VDC BAT  10-28V DC IN

+12V IO1 IO2 IO3 IO4

NO COM NC   NO COM NC

DOOR 2
IO12 – IO11 –

READER 2
IO10 IO9 B / O4 A / O3 B / D1 A / D0 +12V –

READER 1
IO8 IO7 B / O2 A / O1 B / D1 A / D0 +12V –

DOOR 1
IO6 – IO5 –

GLASS / IO13 –
EMERGENCY / IO14 –

EXTERNAL

Door 1 monitor

Door 1 lock

DPDT door monitor

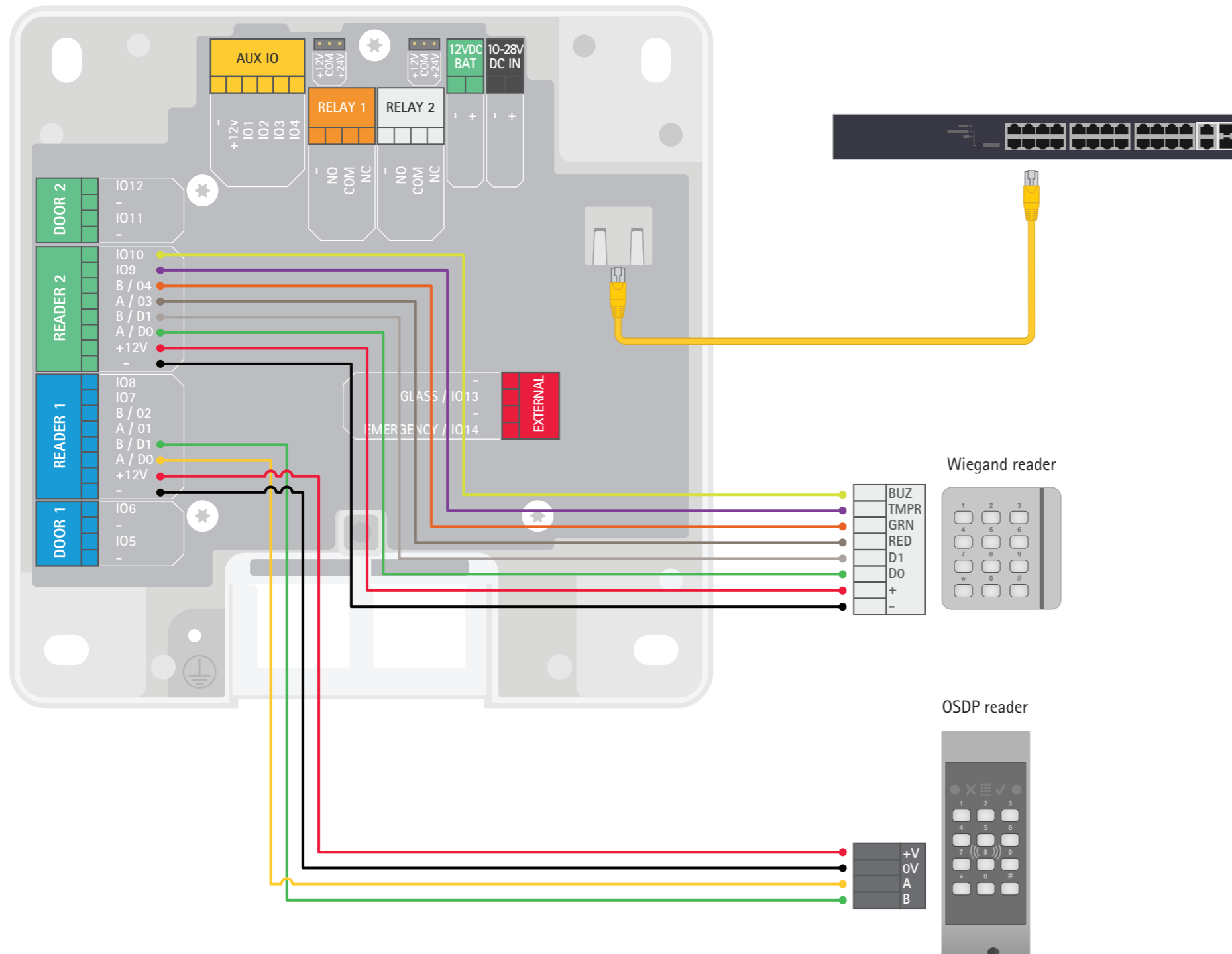Door 2 monitor

Door 2 lock

DPDT door monitor

Adhere to local life safety code in all installations.
Illustration does not depict readers, REX devices, controller power supply, network switch, battery 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 for installation.

## Application

Two-door interlock installation with configuration in AXIS Camera Station (One door can only open when the other has closed)

> two doors connected to one controller
> two doors connected to two controllers

## Considerations

> Door monitors with max current rating from lock
> Double Pole Double Throw (DPDT) door monitors
> 24 V fail-secure locks

## Setup

1. Configure one DPDT door monitor
   a. Connect one pole as input for door 1 monitor
   b. Connect the other pole in serial to door 2 lock
2. Configure the other DPDT door monitor
   a. Connect one pole as input for door 2 monitor
   b. Connect the other pole in serial to door 1 lock

## AXIS Camera Station configuration

1. Create door 1 and door 2 that connect to the same controller
2. Assign door lock to Relay 1 for door 1
3. Assign door monitor to I/O 5 for door 1
4. Assign door lock to Relay 2 for door 2
5. Assign door monitor to I/O12 for door 2

# Possible reader options
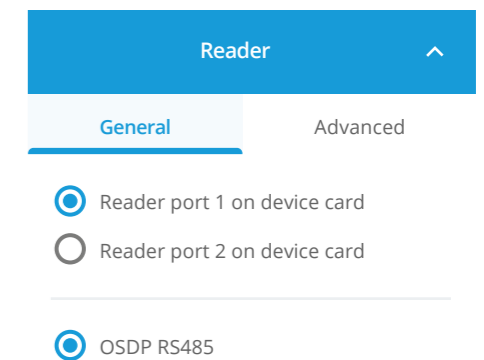


Wiegand reader

OSDP reader

## Application

Two wiring options (OSDP and Wiegand) for the controller with configuration in AXIS Camera Station
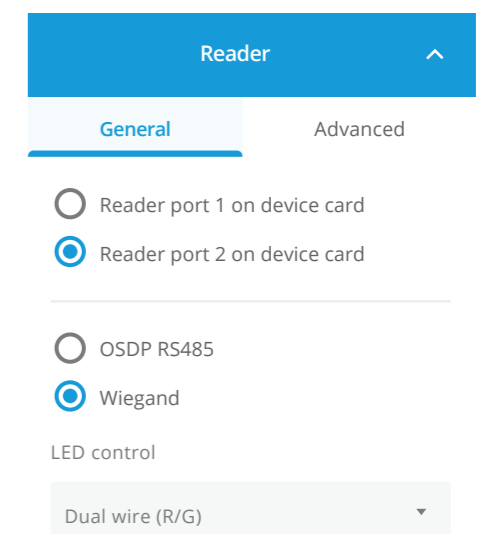
## Considerations

> PoE Class 4 switch

> All peripheral consumption within the controller's power budget

## AXIS Camera Station configuration

1. Add a door

2. Connect to a door controller

3. Add an OSDP reader on door side A and assign it to Reader port 1

   **Reader** ^

   General | Advanced

   ◉ Reader port 1 on device card
   ○ Reader port 2 on device card

   ◉ OSDP RS485

4. Add a Wiegand reader with Dual wire LED control on door side B and assign it to Reader port 2

   **Reader** ^

   General | Advanced

   ○ Reader port 1 on device card
   ◉ Reader port 2 on device card

   ○ OSDP RS485
   ◉ Wiegand

   LED control

   Dual wire (R/G) ▾

# Possible relay options for A-line products

Place jumper on pins for sorcing 24 V to lock

RELAY 1

NO COM NC

24V Fail-secure lock  24V Fail-secure lock

Place jumper on pins for sorcing 12 V to lock

RELAY 1

NO COM NC

12V Fail-secure lock  12V Fail-secure lock

Place jumper on COM pin for dry contact

RELAY 1

NO COM NC

DC

Externally powered Fail-safe lock  Externally powered Fail-safe lock
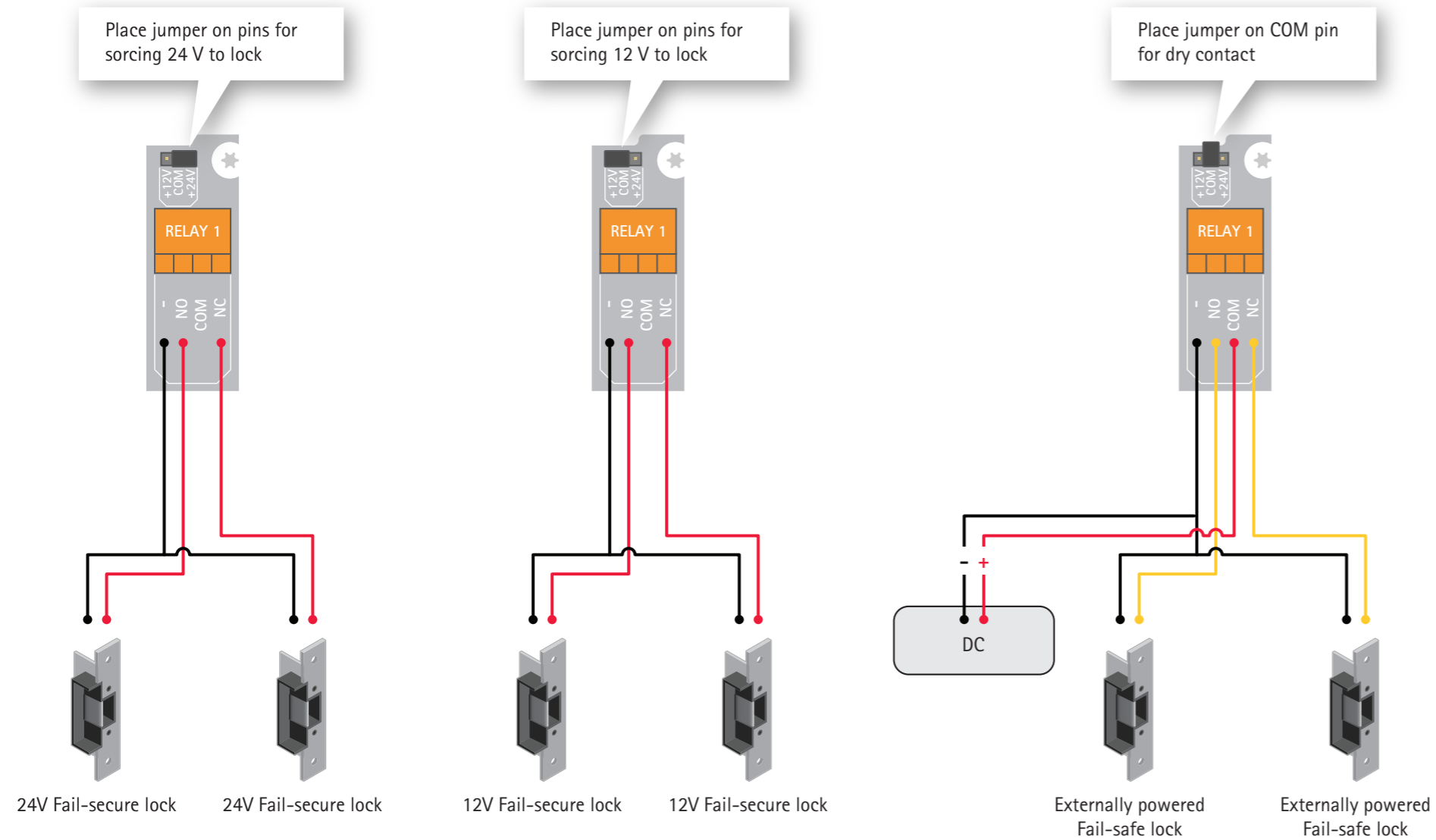
## Application

Configuration of A-line relays with jumpers

Applicable for:
- Axis door controllers
- Axis I/O relay modules

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

Adhere to local life safety code in all installations.
Ensure that your power supplies and relays are rated for the intended purposes.