AXIS TA1203 Enclosure with Power Unit

User manual

Installation

⚠ WARNING

Make sure the enclosure is disconnected from power during the installation process.

To watch this video, go to the web version of this document.

The video shows an example of how to install AXIS TA1203 Enclosure with Power Unit. The steps are the same for AXIS TA1202 Enclosure with Power Unit. The video shows three different scenarios:

- Lock powered by FPO.
- Lock powered by door controller.
- Setup without fire alarm interface (FAI).

For instructions that cover all installation scenarios as well as safety information, see the installation guide:
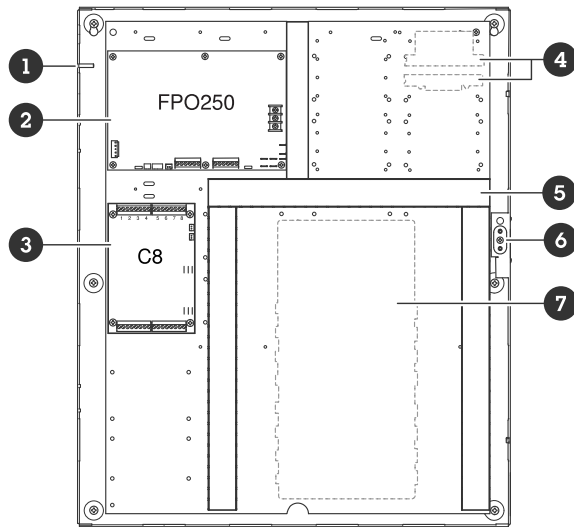
Installation guide AXIS TA1203 (PDF)

Installation steps:

1. Mount the enclosure on the wall.
2. Mount the door controller inside the enclosure.
3. Connect the included grounding wire to the enclosure and the door controller. See *Grounding, on page 5.*
4. Set the output voltage switch of the FPO to 12V. See *Output voltage switch, on page 10.*
5. Connect wires for powering the door controller. See *DC1 output, on page 9.*

6. Connect the included tampering wires in the enclosure to the alarm on the door controller. See the installation guide and *Tampering switch, on page 6*.

7. For enclosures with Fire Alarm Interface (FAI), connect the FPO to the FAI. See the installation guide.

8. For enclosures with Fire Alarm Interface (FAI), connect the FAI to the door controller. See *Zone outputs, on page 13*.

9. Wire the door controller. See the documentation for the door controller at *https://www.axis.com/products/axis-a1810-b*.

10. Optionally, install one or more AXIS TA1101-B Wiegand to OSDP Converter in the enclosure.

11. Install a backup battery set. See *Battery connector, on page 9*.

12. For 230 V AC enclosures, fasten the inductor. See the installation guide.

13. When you are done with all installations inside the enclosure, connect to power. See *AC input, on page 7*.
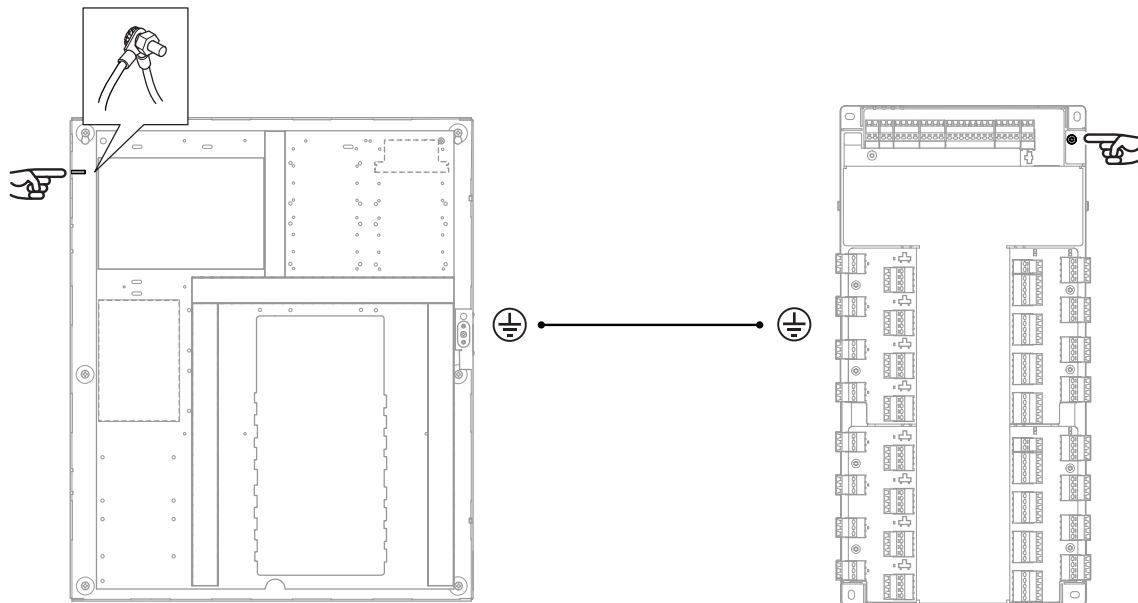
Specifications

Product overview

1   Grounding, on page 5
2   FPO250, on page 6
3   C8, on page 13 (only included in AXIS TA1203 Enclosure with Power Unit and FAI)
4   Dedicated space for AXIS TA1101-B (x 16)
5   Panduits for cable management
6   Tampering switch, on page 6
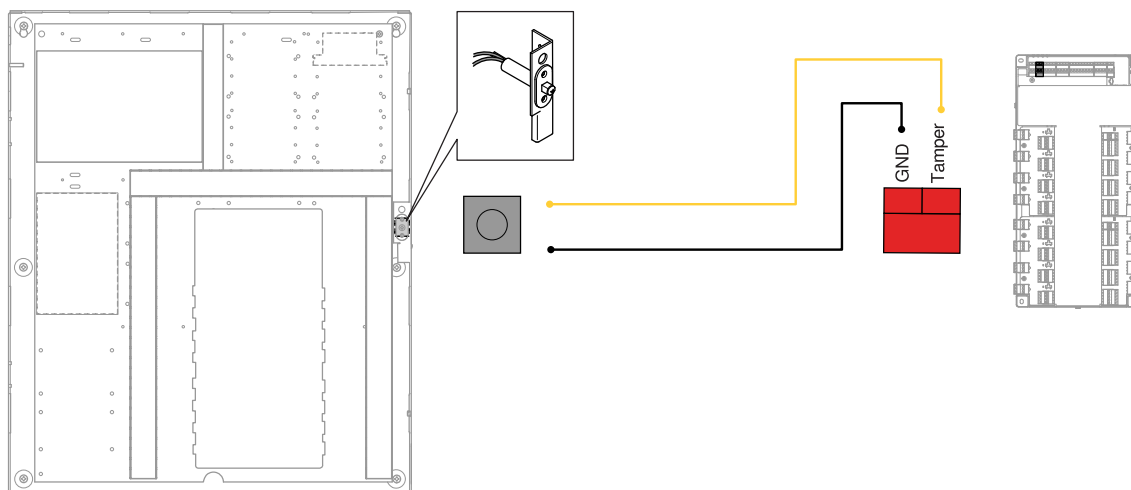7   Dedicated space for AXIS A1810-B

Grounding

Use the included grounding wire to connect the enclosure to the door controller.

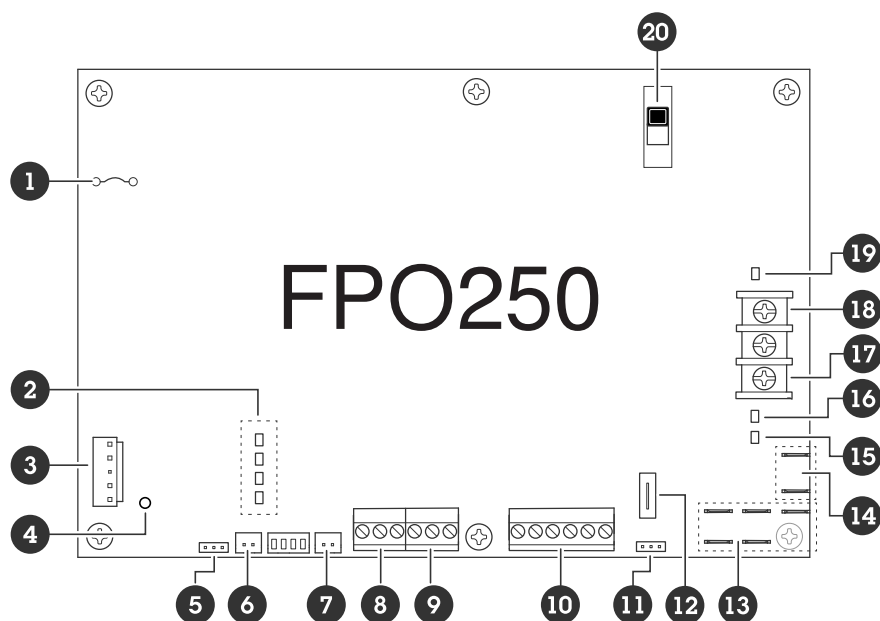*Door controller to enclosure ground*

Tampering switch

Connect wires (included) from the tampering switch in the enclosure to the door controller to detect if someone tries to cause damage.

Tampering switch to door controller

FPO250

1   *AC input voltage jumper, on page 10*
2   *FAI and fault status LEDs, on page 11*
3   *AC input, on page 7*
4   *AC input status LED, on page 11*
5   *Earth ground fault detector*
6   *External AC LED connector*
7   *FlexIO connector, on page 8*
8   *System fault contact, see Fault output connectors, on page 8*
9   *AC fault contact, see Fault output connectors, on page 8*
10 *FAI input connector*

11 Battery presence detector
12 Battery fuse, on page 11
13 FlexConnect power connector
14 Battery connector, on page 9
15 Backup battery status LED, on page 12
16 DC2 output status LED, see DC output status LEDs, on page 12
17 DC2 output, on page 10
18 DC1 output, on page 9
19 DC1 output status LED, see DC output status LEDs, on page 12
20 Output voltage switch, on page 10

For more details about the FPO board, see *LifeSafety Power®'s Installation Manual.*
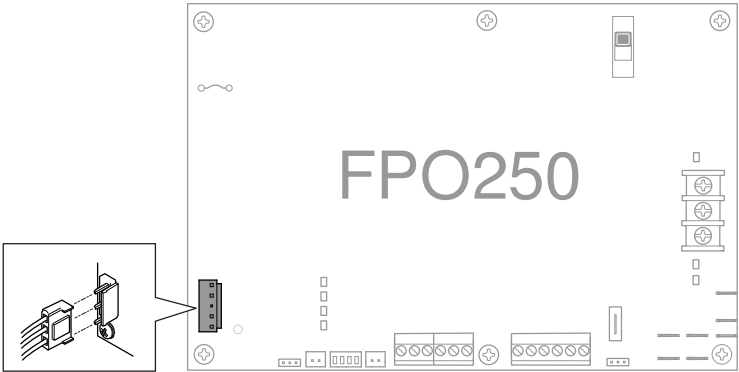
Connectors and terminals

AC input

⚠ WARNING

To avoid the risk of electric shock, make sure the enclosure is disconnected from power until you are done with all wiring inside the enclosure. Only connect the AC input as the final step of your installation.

Connector for AC power input. It accepts the included three-wire connector harness. If the FPO is powered by 230 VAC, make sure the *AC input voltage jumper, on page 10* (JP1) is cut. Connections are by wire nut:
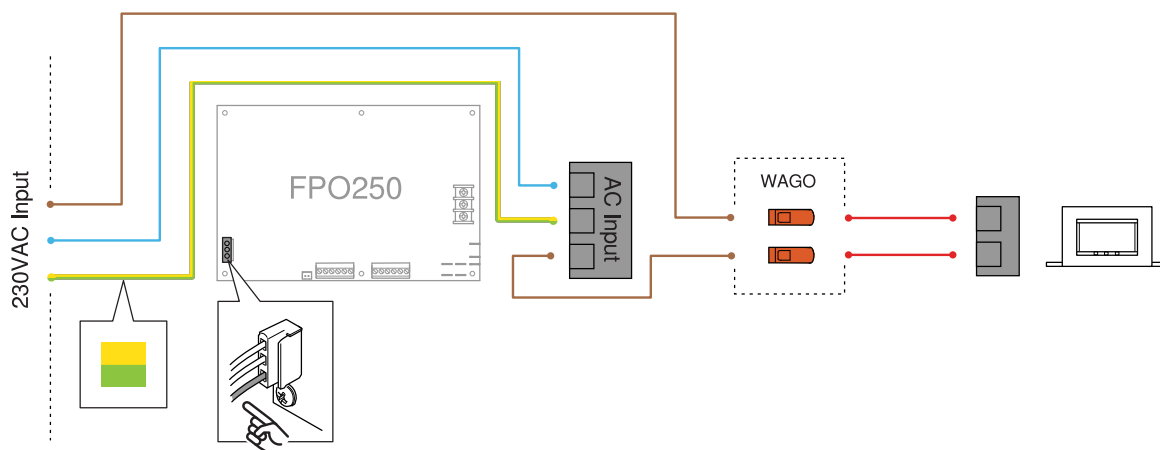
120 VAC	230 VAC
White: neutral	White: phase 2
Green: earth ground	Green: earth ground
Black: hot	Black: phase 1

AC input connection

Inductor

For the 230 VAC model, connect the included inductor to the AC input and secure it to the inside of the enclosure.
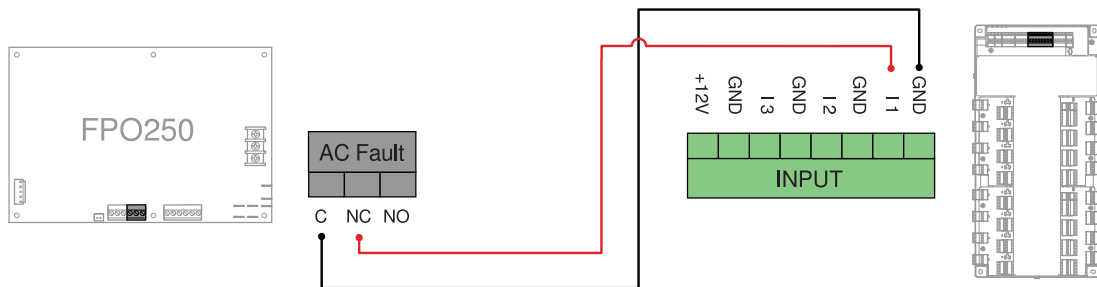
FlexIO connector

Connector supplying the FAI and fault status between the FPO power supply and any accessory boards in the system. The appropriate cable is supplied with the accessory boards.

Fault output connectors

Terminals providing the system fault and AC fault contact outputs. The terminals are removable and are labeled on the PC board in the non-powered (fault) state.
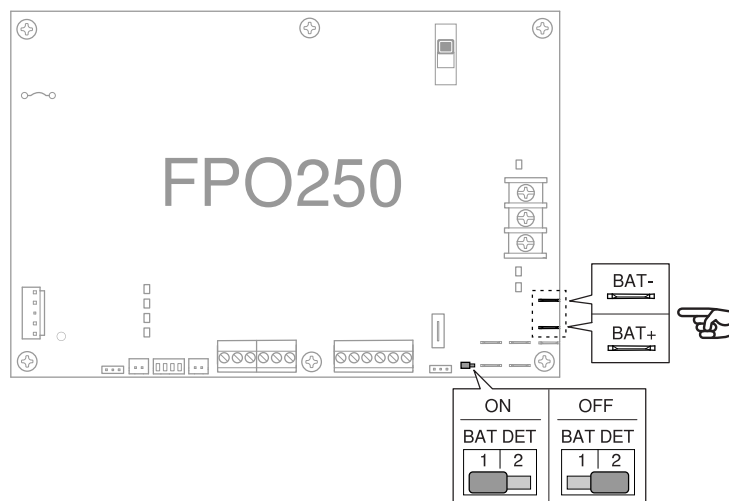
AC fault to door controller

Battery connector

Faston connectors for connecting the backup battery set. Pre-terminated battery leads are included. If you don't plan to use any battery set, make sure the battery presence detection (BAT DET) jumper is off (set to position 2) to prevent that a fault condition occurs. The FPO has built-in low battery disconnect to prevent deep discharge of the batteries and to prevent damage to sensitive equipment.
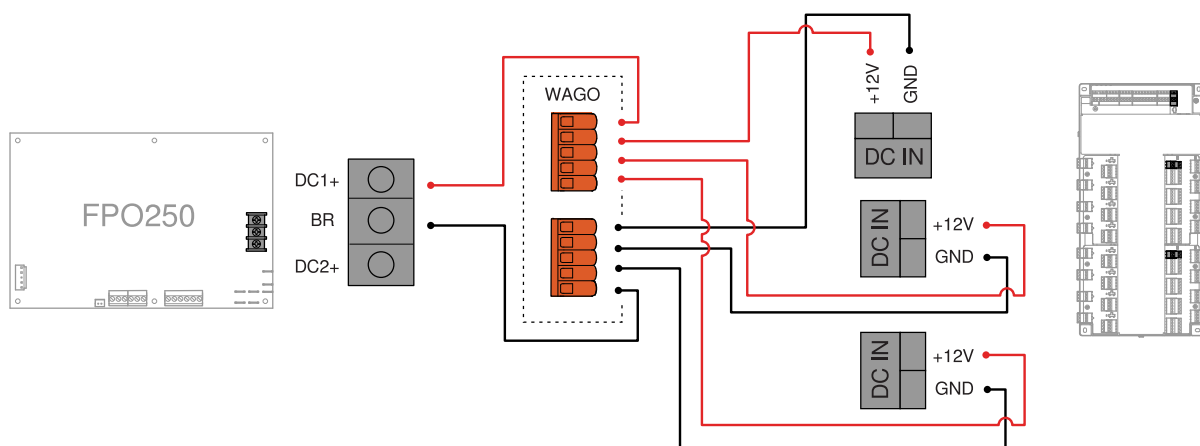
Important
- Select the proper battery type before you connect a battery set to the FPO.
- The FPO requires a 12 V battery set.
- To avoid damaging the system, observe polarity.

Battery to FPO and battery jumper

DC1 output

The main DC output of the FPO power supply. The full current of the FPO is available on this terminal at all times and is unaffected by the FAI input.

Door controller power

DC2 output

Optionally, the DC2 output can be controlled by the FAI input. The full current of the FPO is available on this terminal. If you don't use the FAI input, the DC2 output can be used to provide continuous power.
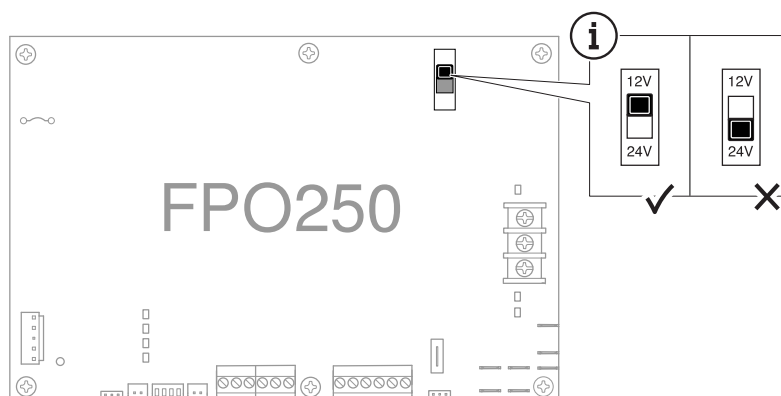
Switches

Output voltage switch

Switch for selecting the output voltage of the FPO power supply.

Important
- • Disconnect the enclosure from power before you adjust the switch.
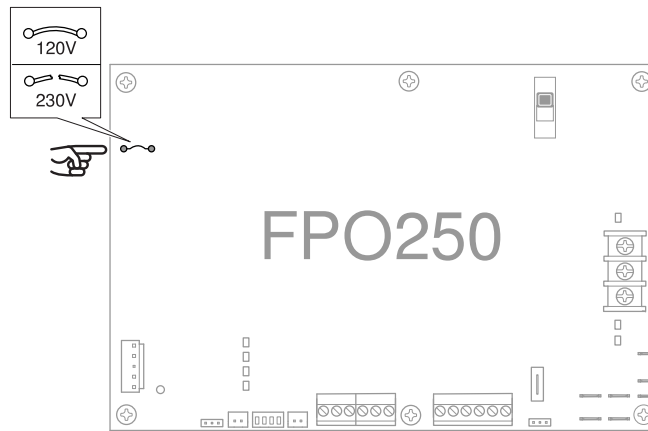- • Set the switch to **12V**.

Jumpers

AC input voltage jumper

Jumper for configuring the FPO for the AC input voltage to be used.

NOTICE

- If you have the 120 VAC enclosure, make sure the jumper is intact.

- If you have the 230 VAC enclosure, make sure the jumper is cut and removed.

Fuses

Battery fuse

Fuse in series with the battery connection.

Replace only with an ATM 30A fuse.

LED indicators

AC input status LED

Status LED	Indication
AC ON	Green when any AC voltage is present on the AC input. It doesn't indicate that the voltage is sufficient for proper operation. ⚠ WARNING To prevent electric shock, always use a meter to verify the absence of AC power before you service the equipment.

FAI and fault status LEDs

Status LED	Indication
FAI	Red when a valid FAI signal is received on the FAI input terminals.
GND FLT	Yellow when an impedance is detected between earth ground and any voltage output or DC common. A ground fault will also light the SYS FLT LED.

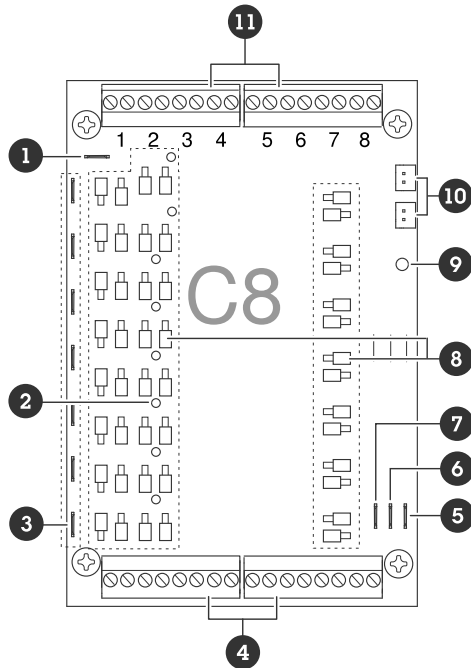| AC FLT	Yellow when the AC input voltage is low or missing
SYS FLT	Yellow when a system issue is detected by the FPO. Issues include: • missing battery (if the battery detection connection, BAT DET, jumper is ON) • earth ground fault (if the earth ground fault detection, EARTH GND DET, jumper is ON) • battery voltage out of range • DC output voltage out of range • broken fuse • accessory board fault • internal fault

Backup battery status LED

Status LED	Indication
REV BAT	Yellow if the backup battery set is connected in the reverse polarity. When lit, the battery fuse is broken and the SYS FLT LED is also lit.

DC output status LEDs

Status LED	Indication
DC1	Green when the output is set to 12V (blue if set to 24V) and when voltage is available on the output terminal.
DC2	Green when the output is set to 12V (blue if set to 24V) and when voltage is available on the output terminal. Unlit if the output is disabled through the FAI input.

C8

1   Output fuses, on page 17
2   Output status LEDs, on page 18
3   Output fuses, on page 17
4   Zone outputs, on page 13
5   B1 connectors, see Power connectors, on page 15
6   B2 connectors, see Power connectors, on page 15
7   BR connectors, see Power connectors, on page 15
8   Configuration jumpers, on page 16
9   Fault status LED, on page 18
10 FlexIO connectors, on page 15
11 Zone inputs

For more details about the C8 board, see *LifeSafety Power®'s Installation Manual*
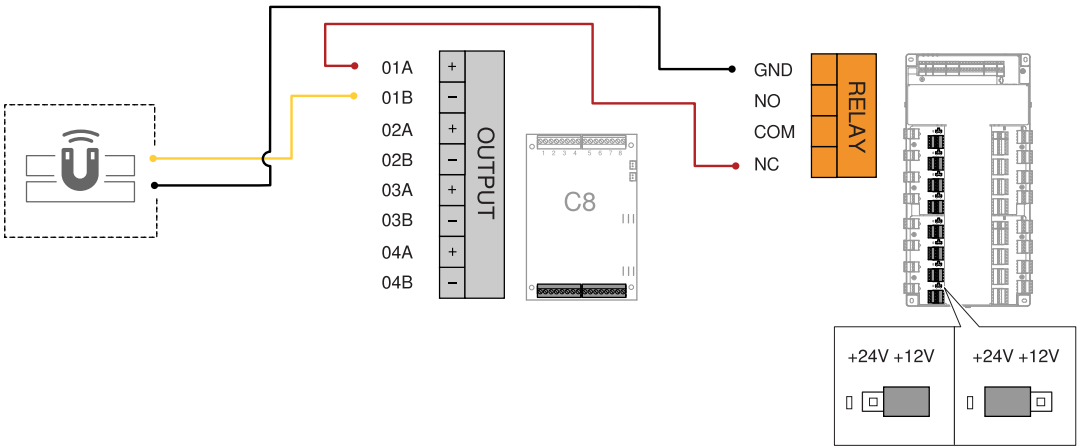
Connectors and terminals

Zone outputs

Removable output terminal strips. The terminal strips are labeled on the PC board.

Note
- Relay contact outputs are across the A and B terminals. Use the white (F) configuration jumper to set as fail-safe or fail-secure.
- Voltage (wet) outputs are across the A and B terminals. DC common is terminal A. Positive is terminal B.
- The board has reverse protection diodes across each output. If there is a delay on a lock release, or if you're using it as a dry relay contact output, you can remove the diode from the circuit.

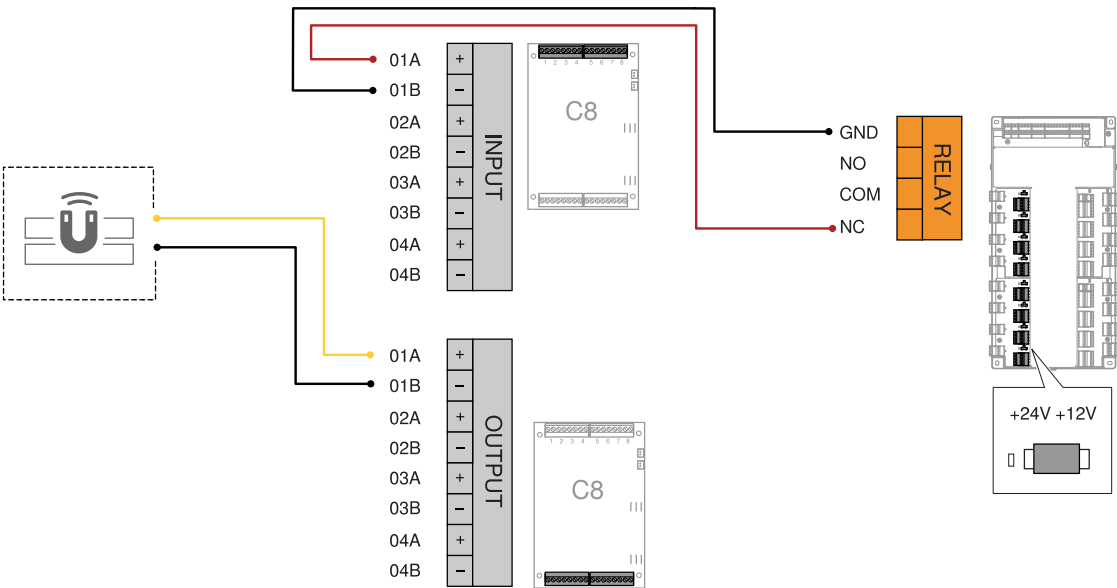**Powering the locks from the door controller:**

Door relay to C8, option 1

Jumper color	Correct position
Red	Pos 1 (FAI enabled)
Blue	Pos 2 (fail-safe setup)
Black	Pos 1 (dry contacts)
Yellow	Pos 1 (12V power supply)
White	Pos 2 (fail-safe setup)

Powering the locks from the FPO:

Important
Only 12V is available in this setup.

Door relay to C8, option 2

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Jumper color	Correct position
Red	Pos 1 (FAI enabled)
Blue	Pos 2 (fail-safe setup)
Black	Pos 2 (wet contacts)
Yellow	Pos 1 if powered through B1, Pos 2 if powered through B2
White	Pos 2 (fail-safe setup)

For information about the jumpers, see *Configuration jumpers, on page 16*

Power connectors

B1

Connector for the B1 bus in the system. The voltage on the B1 bus comes from the FPO power supply. This voltage is directed to any outputs whose yellow jumper (jumper D) is set in the B1 position.

B2

Connector for the B2 bus in the system. The voltage on the B2 bus comes from the FPO power supply or a B100 secondary supply in dual voltage systems. This voltage is directed to any outputs whose yellow jumper (jumper D) is set in the B2 position. If you use the board in a single voltage system, these fastons can be left unused.
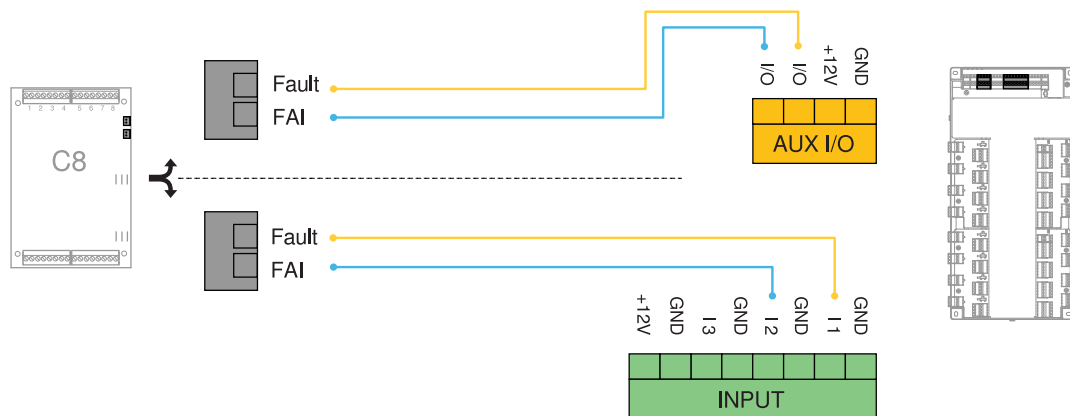
BR

The DC common bus in the system. All DC boards in the system must have their BR fastons wired together for proper operation.

FlexIO connectors

Connectors passing the FAI and fault signals to and from the C8 board and passing the FlexIO bus on to other accessory boards in the system.
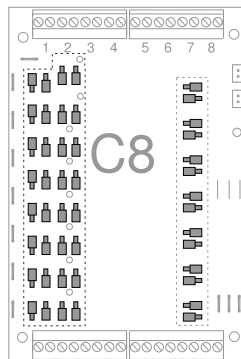
FlexIO from C8 to FPO

FlexIO from C8 to door controller

Jumpers

Configuration jumpers

Jumpers for programming each zone's input, output, and FAI operation. Jumpers are color coded and the numbers correspond to the zone numbers. For example, 1A is jumper A for zone 1.

Red (A) – zone FAI enable

Enable or disable FAI for the selected zone. The FAI control input is on the FPO power supply board.

Pos 1: FAI enabled. In this position, the zone's output inverts when the input is active. This is typically used to drop power to magnetic locks.

Pos 2: FAI disabled. In this position, the FAI won't have any effect on the zone's output.

Blue (B) – input invert

Switch between a fail-safe and a fail-secure input. Adjust the jumper so the zone's output LED flashes when the door is unlocked.

Pos 1: fail-safe. This position provides an NC contact input (contact opens to unlock door) or for a voltage input where the voltage is removed to unlock the door.

Pos 2: fail-secure. This position provides an NO contact input (contact closes to unlock door) or for a voltage input where the voltage is applied to unlock the door.

Black (C and E) – wet or dry output

Select whether the output is a relay contact output or a voltage output.

Important
> Both jumpers must be set to the same position for proper operation.

Pos 1: relay contact output. By placing both jumpers in this position, the zone's output is set as a relay contact output.

Pos 2: voltage output. By placing both jumpers in this position, the zone's output is set to output the voltage of the bus selected by the yellow jumper (D).

Yellow (D) – voltage bus selection

The board can accept up to two power supply inputs connected to B1 and B2. Use this jumper to select which of the two power supply inputs to use for the zone's output. If only a single power supply is used, set the jumper to pos 1.

Note
> If the zone's output is set as a relay contact output, this jumper has no effect.

Pos 1: B1 bus. This position selects the power supply connected to the B1 input.

Pos 2: B2 bus. This position selects the power supply connected to the B2 input.

White (F) – output invert

Select a fail-safe or fail-secure output. Adjust the jumper so the door is unlocked when the zone output LED flashes (zone active).

Pos 1: NO – voltage when input is activated. In this position, the output terminals connect through the NC contact if set for a relay contact output, or outputs a voltage when the input is activated.

Pos 2: NC – voltage when input is deactivated. In this position, the output terminals connect through the NO contact if set for a relay contact output, or doesn't output a voltage when the input is activated. This position is typically used for magnetic locks.

For the correct jumper positions, see *Zone outputs, on page 13*.

Fuses

Output fuses

Fuses for each zone output. Fuse numbers correspond to zone numbers. For example, F1 is the fuse for zone output OUT1.

LED indicators

Output status LEDs

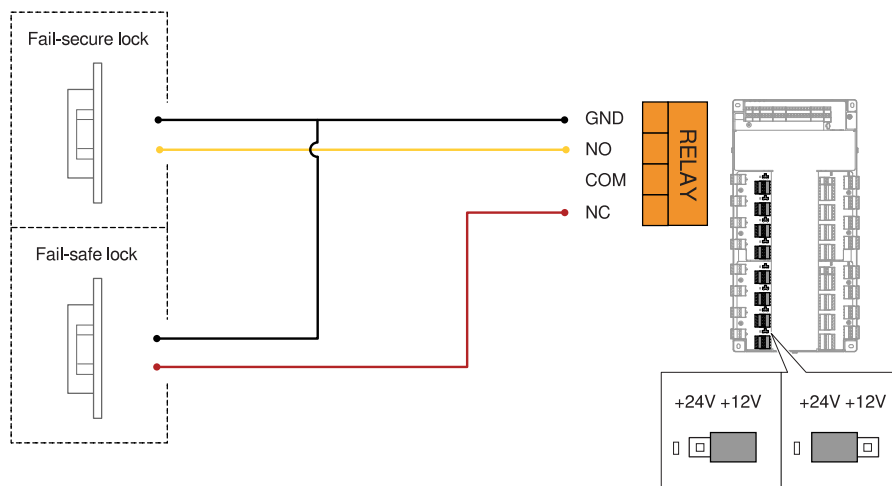| Status LED	Indication
Output (1–8)	Green when the output is set to 12V (blue if set to 24V). Steady: door locked (fuse or PTC intact). Flashing: door unlocked (either due to zone input or FAI). Unlit: fuse or PTC open. Note If an output LED operates opposite to what's expected (flashing in normal state, steady when the input is activated) but the output terminals behave as expected, then jumpers B and F should be placed into the opposite position.

Fault status LED

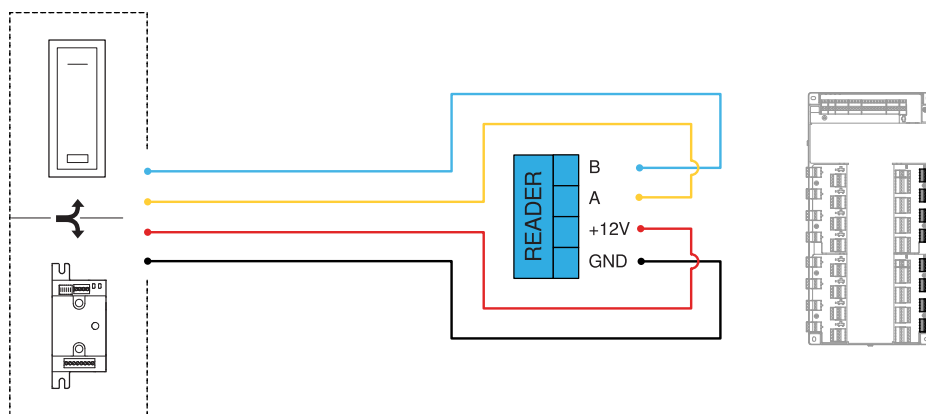| Status LED	Indication
FAULT	Yellow when the board has detected a broken output fuse. This fault condition also transmits to the FPO power supply.

Connect equipment

For electrical wiring drawings and other documentation related to AXIS A18 series, see *axis.com/products/axis-a18-series*.
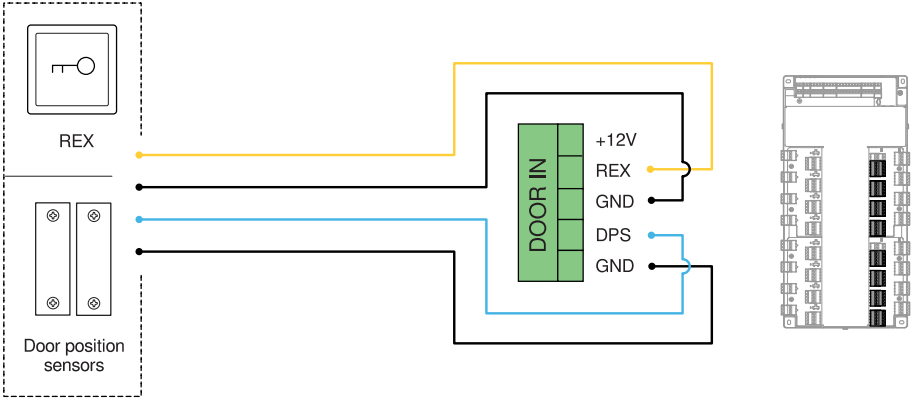
For electrical wiring drawings and other documentation related to AXIS TA1101-B Wiegand to OSDP Converter, see *axis.com/products/axis-ta1101-b-wiegand-to-osdp-converter/support#support-resources*

Door relay

Reader

Door inputs