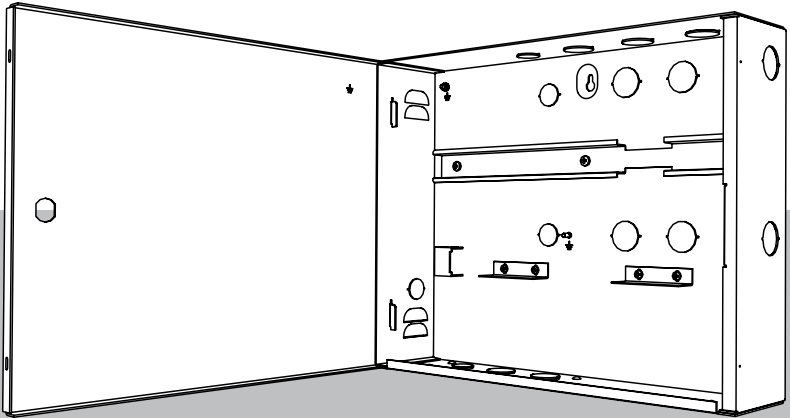


## AMC2 enclosure with 1 DIN rail

AEC-AMC2-UL01





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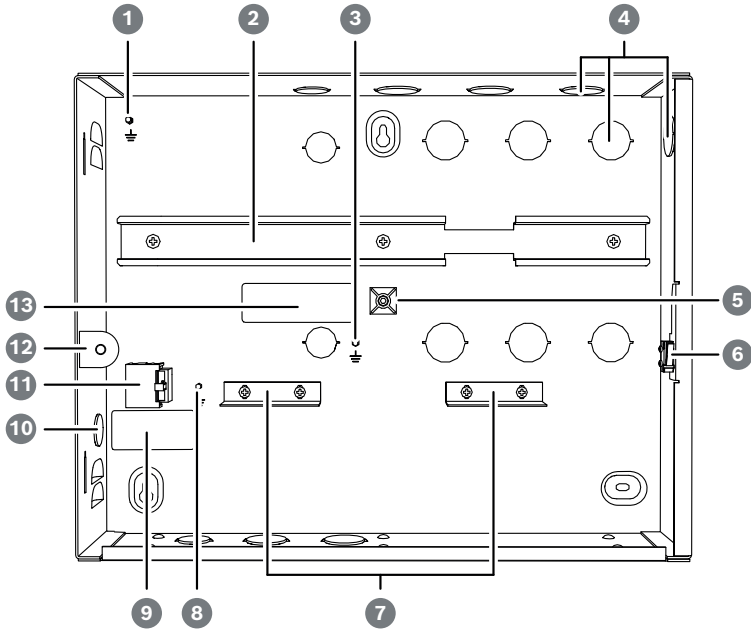
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# 1 System overview

## 1.1 Components of the enclosure

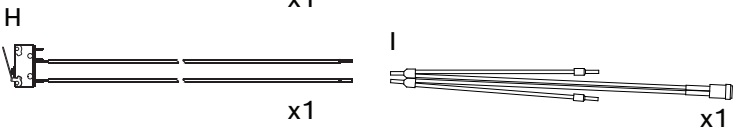
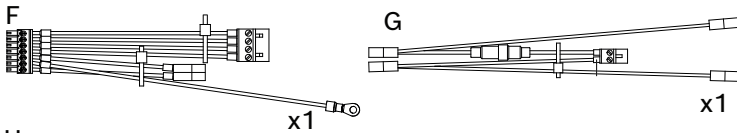
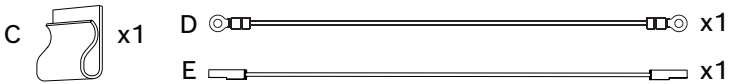
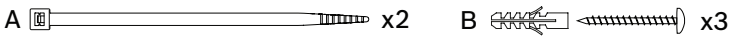
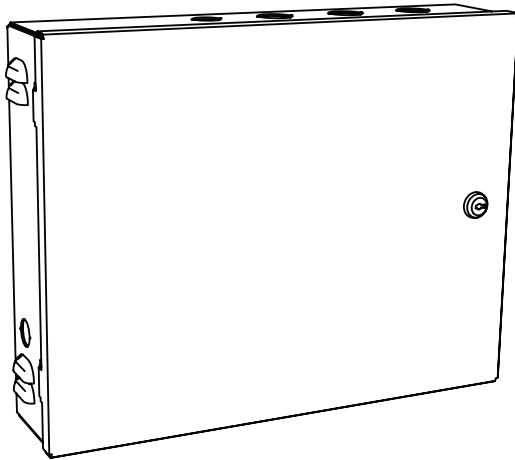


**Figure 1.1:** Components of the enclosure

Position	Description
1	Cover grounding point
2	Mounting rail for power supply unit (PSU) and Access Modular Controller (AMC2)
3	AMC2 grounding point
4	Cable knock-outs for reader and signal cables
5	Temperature sensor bracket
6	Tamper contact
7	Fixing bracket for rechargeable batteries
8	Main grounding point

<b>Position</b>	<b>Description</b>
9	Label
10	Knock-out for the power cable connection
11	Three pin connector
12	Bracket for LED
13	Name plate

## 1.2 Parts included

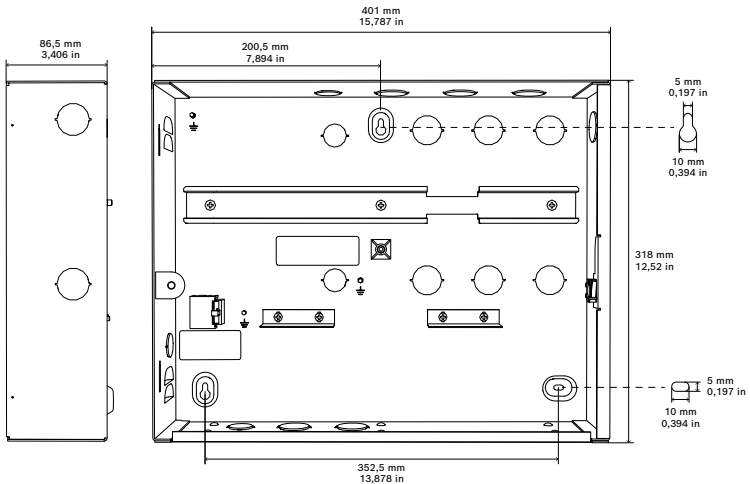


<b>Position</b>	<b>Description</b>
A	Cable ties to secure cables
B	Three screw anchors S8 and M6 × 50 screws
C	Bracket for cable fixing
D	Cover grounding cable
E	Battery cable
F	Power supply cable (AMC2)
G	Power supply cable (battery)
H	Cover contact wired
I	Power cable with LED indicator (UL required)

## 2 Mounting the enclosure

The enclosure is designed to be mounted on a wall.

1. Open the door lock of the enclosure with the provided key.
2. Hold the enclosure at the desired position against the wall.
3. Mark the mounting holes on the wall with a pencil.
4. Put the enclosure aside.
5. Drill the holes at the points that you previously marked on the wall.
6. Insert the screw anchors in the drilled holes.
7. Drive the screws halfway into the top and bottom left screw anchors.
8. Hang the enclosure on the wall, according to the position of the screw anchors.
9. Drive the third screw into the anchor on the bottom right.
10. Tighten all screws.
  - The enclosure is installed.



**Figure 2.1:** Dimensions of the enclosure





**Installing the components**

1. Mount the Access Modular Controller (AMC2) or the AMC2-Extension board on the right side of the mounting rail. Keep a distance of 15 mm between the device and the sidewall of the enclosure or other parts that can be located there, such as cable fittings.
2. Mount the power supply unit on the left-hand side of the mounting rail.
3. If you are using rechargeable batteries, install the batteries at the bottom of the enclosure and secure them with a fixing bracket.

**Notice!**

Do not use cable bushings or glands in the knockouts on the backside of the enclosure.

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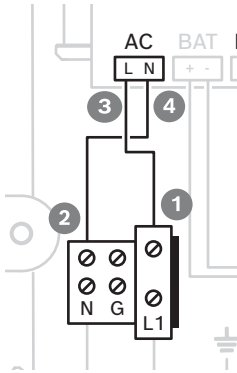
## 3.2 Connecting the cables

### Connecting the AMC2 power cable (F)

1. Connect the 7-pin plug to the AMC2 connector labeled POWER.
2. Connect the 4-pin plug to the power supply connector labeled OK.
3. Connect the 2-pin plug to the power supply connector labeled DC.
4. Connect the grounding cable to the AMC2 grounding point.

### Mounting and connecting the power cable with LED indicator (I)

1. Pass the cable end through the front of the LED bracket hole (Figure 1, position 12).
2. Carefully pull the cable through the back of the LED bracket.
3. Make sure that the LED reaches and fits the LED bracket hole.
4. Connect the single brown wire to position 3, marked with L (Figure 3.2).
5. Connect the other end from the brown wire to position 1 (Figure 3.2).
6. Connect the single blue wire to the position 4, marked with N (Figure 3.2).
7. Connect the other end from the blue wire to the position 2 (Figure 3.2).



**Figure 3.2:** Connections of the LED indicator

### Connecting the tamper contact (H)

1. Connect the loose ends of the tamper contact cable to the two-pin screw connector (marked with T) at the top of the AMC2.
2. Position the cable in the space between the housing and the mounting rail.



### Danger!

Risk of electric shock

Make sure that all wires have zero potential.

### Connecting the main AC supply (X)

1. Connect the ground cable to the main grounding point (Figure 1.1, position 8).
2. Connect the neutral wire to terminal N (Figure 3.2).
3. Connect the phase wire to terminal L1 (Figure 3.2).
4. Shorten the external supply wires so that the ground wire is a minimum of 20 mm longer than the live wires.
  - This will prevent the ground wire from being accidentally disconnected.

**Connecting the cover grounding cable (D)**

1. Connect the mounted grounding cable (see position D of *Parts included, page 6*) to the cover grounding point (Figure 1.1, position 1) and to the grounding point on the cover of the enclosure.
2. Make sure that the screws of the two earthing points are sufficiently tightened.

**Refer to**

- *Parts included, page 6*

### 3.3 Connections for supporting Universal Power Supply

Precondition: Before switching to battery operation, disconnect the AC power cable.

Use the battery cable with the fuse (G) for the battery connection.

**Notice!**

Use 12 V 7 (7,2) Ah lead batteries only.

**Notice!**

Change the lead batteries every 5 years.

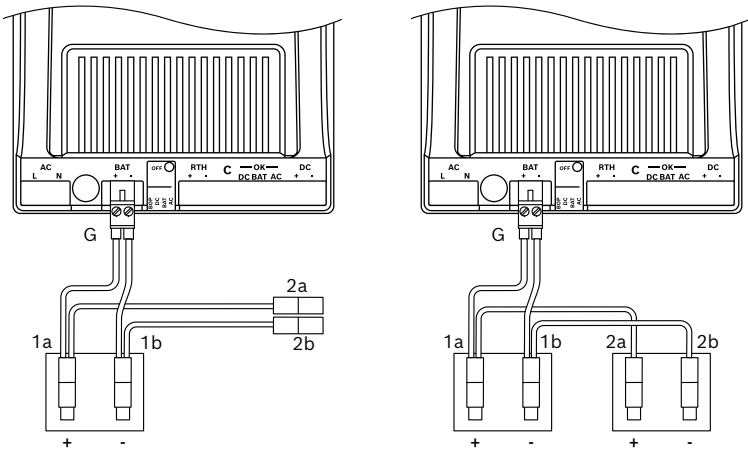
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### 3.3.1 12 V mode operation



#### Notice!

Make sure that the power supply has the correct output voltage (12 V).



**Figure 3.3:** 12 V mode with one battery (left); 12 V mode with two batteries (right)

#### 12 V mode operation using one battery

1. Set the switch of the power supply unit to 12 V.
2. Connect the 2-pin plug to the power supply interface labeled BAT.
3. Connect 1b (black) to the rechargeable negative (-) terminal of the battery.
4. Connect 1a (red) to the rechargeable positive (+) terminal of the battery.
5. Attach the bracket (C) to the back of the housing next to the batteries.
6. Attach the connectors 2a and 2b to the bracket.

#### 12 V mode operation using two batteries

1. Set the switch of the power supply unit to 12 V.

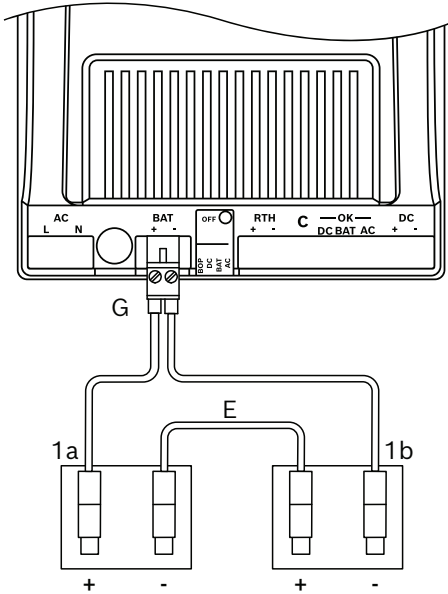
2. Connect the 2-pin plug to the power supply interface labeled BAT.
3. Connect 1b (black) to the rechargeable negative (-) terminal of the battery.
4. Connect 1a (red) to the rechargeable positive (+) terminal of the battery.
5. Connect 2b (black) to the second rechargeable negative (-) terminal.
6. Connect 2a (red) to the second rechargeable positive (+) terminal of the battery.

### 3.3.2 24 V mode operation



#### Notice!

Make sure that the power supply has the correct output voltage (24 V).



**Figure 3.4:** 24 V mode

#### Connecting the battery cables

1. Set the switch of the power supply unit to 24 V.
2. Connect the 2-pin plug to the power supply interface labeled BAT.
3. Connect 1a (red) to the positive (+) pin of the first rechargeable battery.
4. Connect 1b to the negative (-) pin of the second rechargeable battery.
5. With cable E (blue), connect the negative (-) pin of the first rechargeable battery to the positive (+) pin of the second rechargeable battery.



6. Attach the connectors 2a and 2b to the bracket.
7. Attach the bracket (C) to the back of the housing next to the batteries.



**Notice!**

After the installation of the devices and cables, keep the door of the enclosure closed.

---

## 4 Appendices

### 4.1 UL requirements



**Notice!**

All cables connected to the AMC2 modules and the power supply are classified as Class 2 conductors. The battery cable and the AC input cable are non-power limited circuits.



**Notice!**

Maintain a minimum of 6.4 mm spacing between all class 2 or 3 conductors and all electric, light, power, Class 1 conductors, non-Class 2 or 3 signaling conductors, or medium-power network-powered broadband communications-circuit conductors (Figure 3.1, position 1 and 2).



**Notice!**

When the fuse (5A) of cable B (power supply battery) is blown, replace it with a UL listed fuse and reseal the fuse holder with a heat shrink tube.



**Notice!**

If the system is to be UL294 compliant, make sure that all the cables and the respective parts are UL listed or approved.

#### Access Control Performance Levels UL 294

Line Security	Destructive Attack	Endurance	Standby Power
I	I	IV	II

## 4.2 More information

For product manufacturing dates, go to [www.boschsecurity.com/datecodes/](http://www.boschsecurity.com/datecodes/) and refer to the serial number on the product label.



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