



Installation


Electrical installation & network connection

AMX 4

AIRMASTER

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Revision	Date	Description
01	2024-02-08	First edition



NOTICE

Read the manual thoroughly before installing the AMX 4 unit.
Keep it for later use. Manuals must be given to the owner of the unit for safekeeping

Fill out this form for future reference:

Installation information	
Type	AMX 4
Delivery date	
Serial number	
Mounting location	

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2 Introduction

This manual will give you instructions on how to install the AMX 4 unit correctly and safely.

Mounting and installing an AMX 4 is divided into two parts:

1. Electrical installation and network connection (this manual).
2. Mounting the unit on the wall/ceiling. Please refer to the Mounting manual.

Both manuals are part of the delivery. The manuals can also be downloaded from our website, see section 4.3.





2.1 Target group

This manual is addressed to qualified personnel.




2.2 Warning Symbols

This manual may contain warning symbols. The colors and symbols adhere to the ISO 3864 and ISO 7010 standards. The visual depiction may vary depending on the type of media.

The symbols are described below:

	DANGER Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.
	WARNING Flammable material.
	WARNING Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
	CAUTION Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

Continued on the next page

	<div data-bbox="285 190 1449 241">CAUTION</div> <div data-bbox="285 241 1449 356">Wear safety footwear as personal protection equipment.</div>
	<div data-bbox="285 409 1449 461">NOTICE</div> <div data-bbox="285 461 1449 575">Failure to comply with the instructions can damage the device and/or its environment.</div>
	Information, tips, and recommendations.

2.3 Liability








The manufacturer cannot be held liable for damages that occur due to usage in violation of this manual's instructions.

The manufacturer reserves the right to make changes without notice. All values stated are nominal values and may be affected by local conditions.


The warranty is voided should this manual not be followed.

3 Safety Instructions

Breaching the instructions marked with a warning symbol carries a risk of personal injury or material damage.

	<div data-bbox="288 365 1447 414">WARNING</div> <p>R290 (Propane) in the appliance - Highly Flammable Substance.</p> <p>Extremely flammable gas. Forms explosive mixtures with air. Only slightly soluble in water. Gas is heavier than air.</p>
	<div data-bbox="288 600 1447 649">WARNING</div> <p>The electrical installation of the AMX 4 may only be carried out by an authorized electrician or by Airmaster A/S.</p>
	<div data-bbox="288 819 1447 869">WARNING</div> <p>The power supply must be switched off for all connection or service work.</p> <p>Make sure nobody turns the power on (prevent use).</p>
	<div data-bbox="288 1039 1447 1088">WARNING</div> <p>Do not open the service covers before disconnecting the unit's power supply.</p>
	<div data-bbox="288 1258 1447 1308">CAUTION</div> <p>Do not start the unit before all service covers and grates on duct connections are fully installed.</p>
	<div data-bbox="288 1478 1447 1527">CAUTION</div> <p>Wear safety shoes for personal protection.</p>
	<div data-bbox="288 1697 1447 1747">NOTICE</div> <p>The unit must not operate without filters.</p>

3.1 Responsibility

	<div data-bbox="810 309 922 331">CAUTION</div> <ul style="list-style-type: none"><li data-bbox="347 405 1286 427">• The installer is responsible for installing the unit following local rules and standards.
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3.1.1 Personnel requirements

The mounting and installation of the unit must be done by qualified personnel. Laypersons should not attempt to mount and install the AMX 4 unit.

4 Product identification

4.1 Product name and type

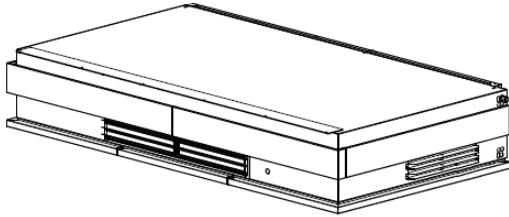
Product name	AMX 4
Unit item number	9500004001
Type	Decentral air handling unit. Stand-alone unit.
	

Figure 1: AMX 4 unit

Table 1: Product name and type

4.2 Specifications

Supply voltage	220-240V/50Hz, ~1N+PE
Maximum power; nominal power consumption at 30 dB(A) / 35 dB(A) / Boost	2560 W; 406 / 570 / 802
Maximum current; nominal current at 30 dB(A) / 35 dB(A) / Boost	11.2 A; 1.79 / 2.51 / 3.53
Power factor	0,92
Maximum fuse	16 A, 1 phase, type C
Leakage current AC / DC	6 mA / 0.04 mA
Recommended residual current circuit breaker (RCCB)	Type B

Table 2: AMX 4 specifications

Please refer to the AMX 4 datasheet for further information. The datasheet is available on our website.

4.3 Manufacturer

Airmaster A/S
Industrivej 59
9600 Aars
Denmark

Phone: +45 98 62 48 22
E-mail: info@airmaster.dk
Web site: www.airmaster.dk

5 Heating surfaces

The AMX 4 unit has two electric heating surfaces.

The heating surfaces are protected against overheating by thermal circuit breakers, each heating surface has two thermal circuit breakers. The thermal circuit breakers disconnect the heating surfaces in the event of overheating.

The thermal circuit breakers are installed in the heating surface.

6 Unit control

The AMX 4 unit does not have a single control box like the 'AM' units from Airmaster. The AMX 4 has up to five PCB boards that control the unit.

- CCM: customer connection module (optional)
- CM: control module
- HPM: heat pump module
- IOM: IO module
- PM: power module

Only the optional CCM module may be used when doing the installation, the other boards are for internal use only.

7 Electrical installation

Pay strict attention to section 3 before performing any type of electrical installation!

Electrical equipment must be connected according to the wiring diagram in Appendix A on page 17.

Electrical connections are located on the right-hand side of the AMX, see Figure 2 below.

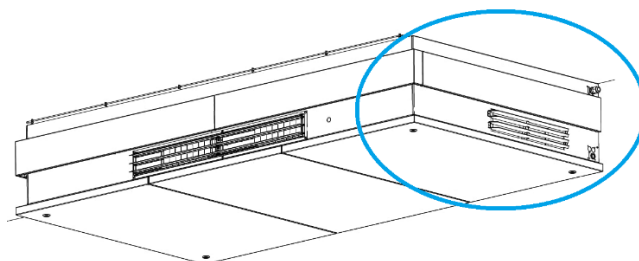


Figure 2: Connections on the AMX 4

The connections are hidden behind the side cover.

To access them you need to open the right-hand service cover and the right-hand bottom metal plate, see number 1+2 in Figure 3 below.

Once this is done, carefully remove the panel on the side cover and the panel on the right-hand side of the front, see number 3 below. Please note: the panels may not be part of the delivery, they are optional. Place the panels on a protective surface to avoid scratching them.

Finally, remove the side plate, see number 4.

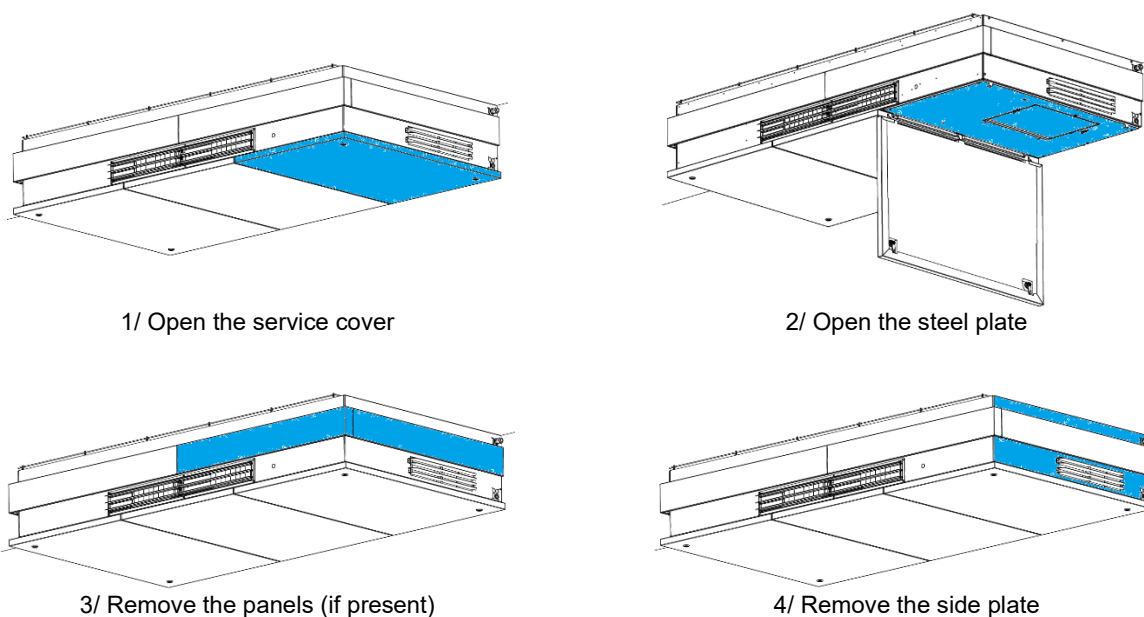



Figure 3: Gain access to connections

Please refer to section 7 in the AMX 4 Mounting manual for more detailed information. Once all the connections are established reverse the steps above to close off the unit.

7.1 Supply voltage

CAUTION	
	<ul style="list-style-type: none">• Depending on the unit's power consumption and the existing electrical system it may be necessary to set up at least one new power circuit.• A pre-fuse and safety switch disconnecter must be fitted as part of the unit's permanent installation. The pre-fuse and safety switch are not part of Airmasters' delivery.• The permitted leakage current per unit must be considered if more than one unit is installed.• The supply cable must be dimensioned correctly. The conditions at the installation site must be taken into account.• The installer is responsible for making sure that all cables used for the installation are adjusted to the correct length/fit.• Any optional items, sensors, and switches must be fitted before the supply voltage is connected.

The supply cable lead-in is located in the upper right-hand corner, see Figure 4 below.

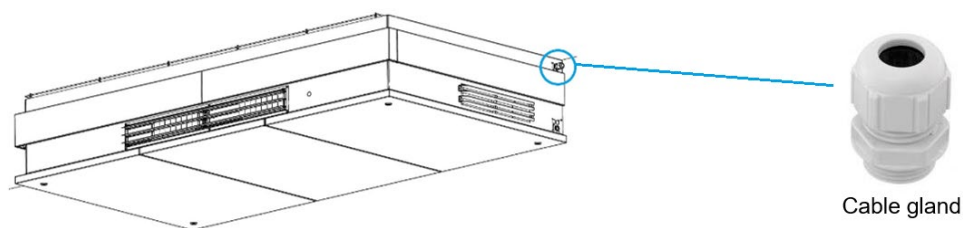


Figure 4: Supply cable lead-in and cable gland

Figure 5 below is a picture of an AMX 4 unit with the side plate removed. The supply cable must be connected to the terminal block located at the bottom, see Figure 6.



Figure 5: AMX 4 with side plate removed

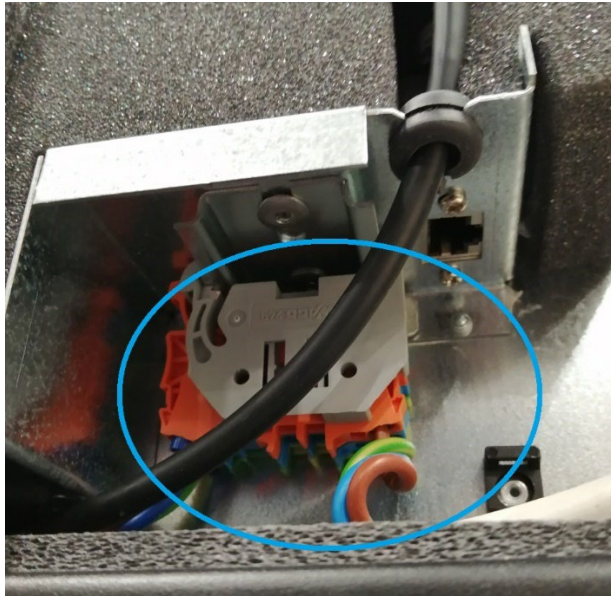


Figure 6: Supply terminal block

Use a cable tie to attach the cable to the cable tie mount, see Figure 7. This prevents the cable from hanging loose inside the unit.

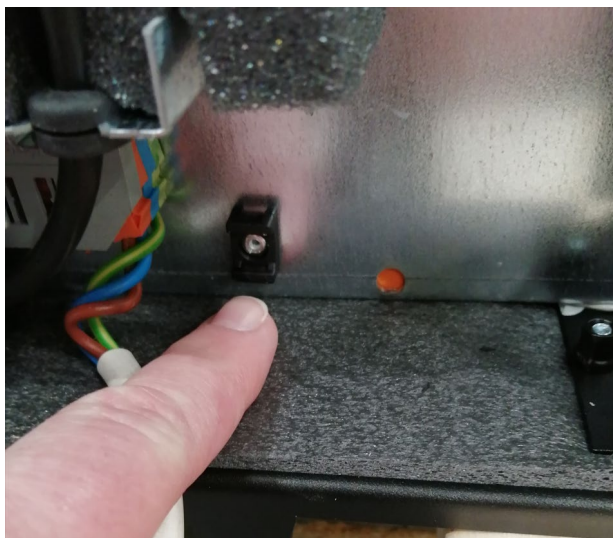


Figure 7: Cable tie mount

7.2 External start (requires CCM module)

The CCM module makes it possible to connect an external start contact, e.g. a circuit breaker. Connect the external start contact according to the wiring diagram in Appendix A on page 17.

The cable lead-in is located in the lower right-hand corner, see Figure 8 below.

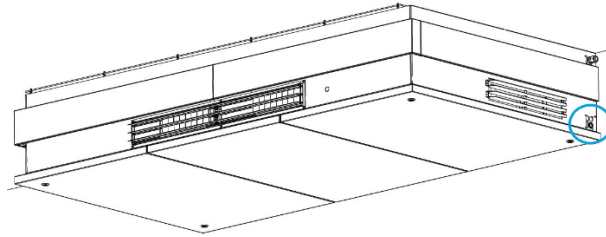


Figure 8: Cable lead-in

Figure 9 below is a picture of an AMX 4 unit with the side plate removed. The CCM module is located to the left, see the blue marking.



Figure 9: AMX 4 with side plate removed

You can pass cables to the CCM module through the passage at the bottom of the unit, see Figure 10.



Terminal side



CCM module side

Figure 10: Cable passage

8 Network connection

8.1 Ethernet connection (for Airlinq® Online)

The ethernet cable lead-in is located in the lower right-hand corner, see Figure 11 below.

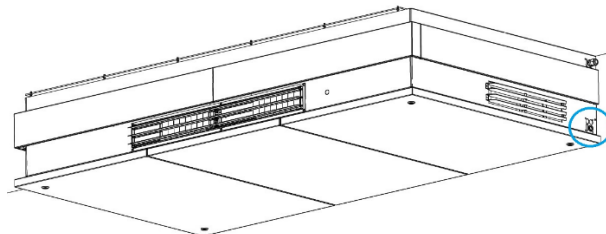


Figure 11: Ethernet cable lead-in

The RJ45 connection is located next to the supply terminal block, see Figure 12 below.

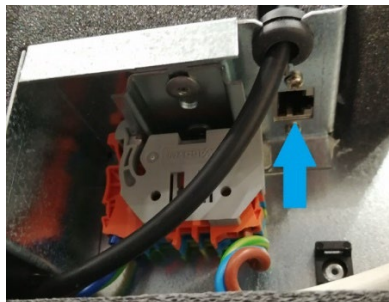


Figure 12: Ethernet connection, RJ45

8.1.1 Cable recommendation

We recommend using a CAT 5e STP (Shielded Twisted Pair) data cable with an RJ45 connector. The maximum recommended cable length is 70 meters.

8.1.2 Identification

Each network module has a unique MAC address on delivery.

The MAC address always starts with the digits shown below, the 'x' is the unique number for the network module.

Ethernet MAC

38:1F:26:4x:xx:xx

The MAC address is printed on a label next to the RJ45 connector. You can also find a label on the PCB behind the CCM module, see Figure 13.

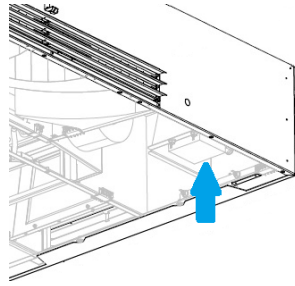
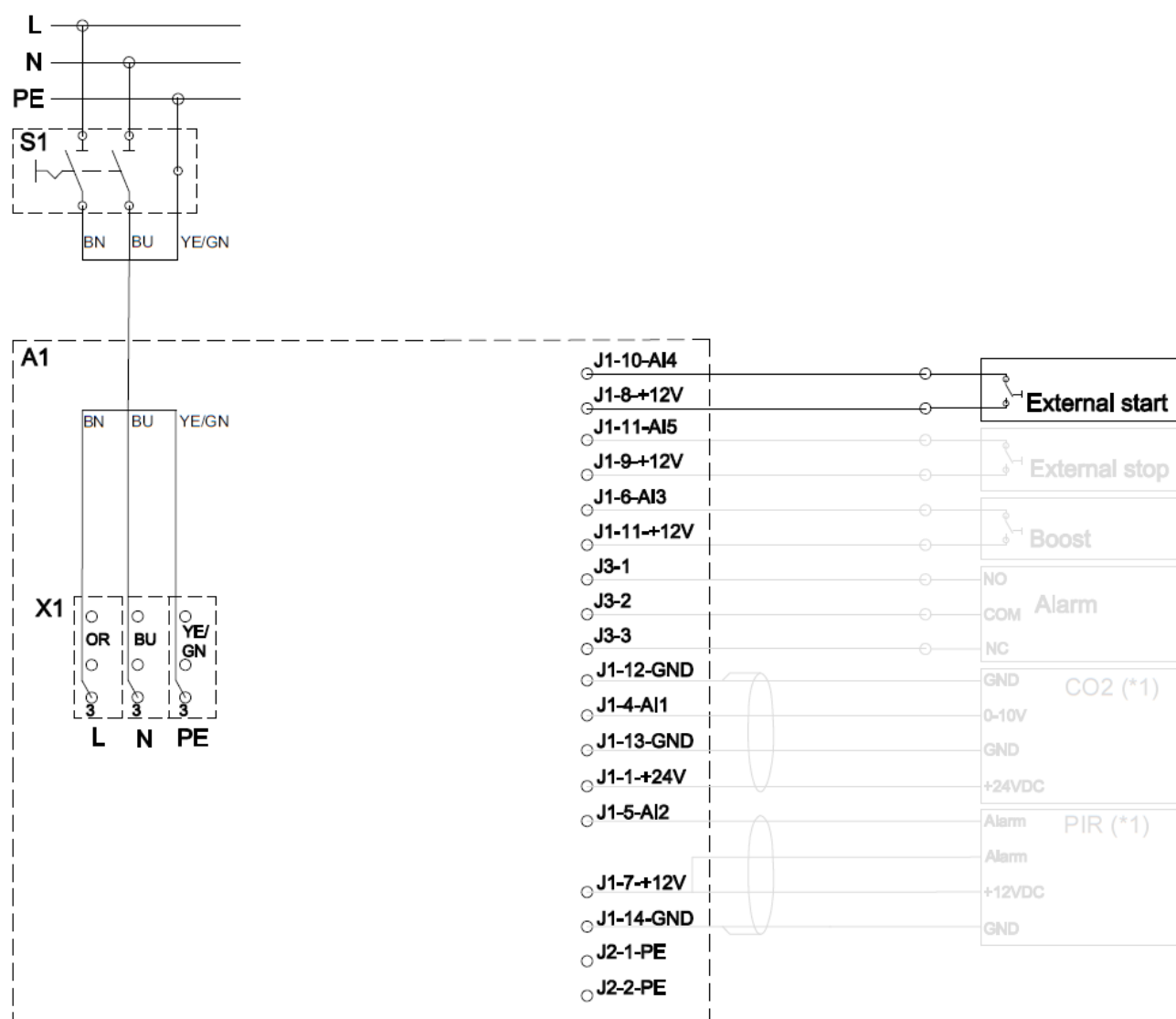


Figure 13: MAC address label on PCB

The ethernet connection should be connected to a switch/hub to establish a connection to the internet, once this is done, you can communicate with the unit via Airlinq® Online.

Appendix A Wiring diagram, standard connection



A1 Air handling unit
S1 Supply separator (not supplied by Airmaster)
X1 Terminal clamps, power supply

J1-10-AI4 13.5 VDC output - located on the CCM module
J1-8-+12V External start (AI#4) - located on the CCM module

BK Black
BN Brown
BU Blue
GN Green
OR Orange
YE Yellow

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Errors and omissions excepted. Subject to change without notice. Original user instruction.