



1 Safety

The present installation instructions are intended for users with previous knowledge of automotive electrics and support safe installation of the PowAirBox II for use according to the intended application:

The PowAirBox is a plug-in system for feeding current and compressed air (type A only) into emergency vehicles.

Observe the safety instructions:

DANGER! Electric shock due to short circuit: Before operating, make sure there are no open or damaged cables. Replace defective parts or damaged cables immediately.

WARNING! Risk of burns due to cable fire: Only use the device within the specified voltage limits. (250 V/16 A)

NOTE! Reverse polarity can damage the unit: Before operating, make sure that all cables are connected correctly.

2 Package contents

Component	Type A	Type B
PowAirBox II supply unit	1 ×	1 ×
Connection cable for socket [A/ B]	1 ×	1 ×
Connection cable for socket [C]	1 ×	1 ×
Connection cable for load output	1 ×	1 ×
Compressed air hose	1 ×	—
Compressed air connector (IQS)	1 ×	—
Mounting frame	1 ×	1 ×
Body seal	1 ×	1 ×
Threaded pin	6 ×	6 ×
M4 screw (Allen 2.5 mm)	6 ×	6 ×
Adhesive tapes for mounting frame	2 ×	2 ×

3 Supply unit assembly

3.1 Preparation

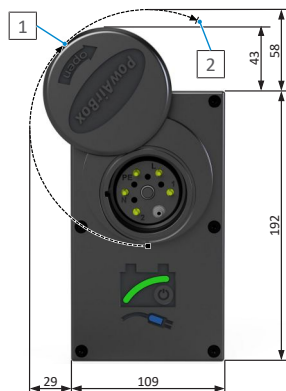
NOTE! Observe the requirements for the assembly location on the vehicle:

- Choose a vertical surface

NOTE! Ensure that the assembly location is outside the swinging and sliding range of doors.

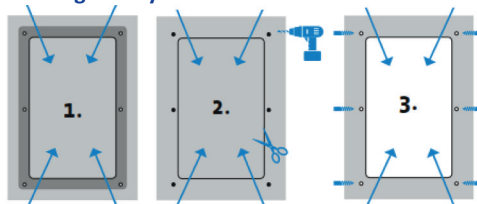
- Choose a site that has minimum dust and is protected from jet water.
- Ensure that there is sufficient space at the assembly location for the installation and subsequent operation of the unit.

NOTE! Also take into account the space required to turn the protective cover.



1	Operating position with coupling inserted	2	Maintenance position (engagement point)
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3.2 Creating a body cutout



- Place the mounting frame at the assembly site.
- Mark the inside contour of the frame and the 6 screw holes.
- Cut out the marked area and deburr the cut edges.

CAUTION! Risk of injury from sharp edges on the body cut-out.

- Drill the 6 marked holes ($\varnothing$ 4.5 mm – 5 mm).
- Check whether the supply unit fits into the body cut-out.
- Screw the 6 threaded pins by hand into the smooth side of the mounting frame.
- Check that the threaded pins screwed into the mounting frame fit through the holes from the inside.
- To prevent corrosion, seal the cut surfaces and holes.
- Glue the 2 adhesive strips to the smooth side of the mounting frame.

NOTE! The adhesive strips are used to fix the mounting frame to the inside of the body during installation.

- Remove the protective film from the adhesive strips.
- Stick the mounting frame to the cut-out from the inside so that the threaded pins protrude outwards from the body through the holes.

⇒ The body cutout is now created. You can install the supply unit.



3.3 Connection cable installation [A/B]

The PowAirBox II receives its supply voltage from the starter battery (12/24 V) as well as the start signal (12/24 V) for the automatic ejection via the connection [A/B].

There are 2 options for connecting the socket [A/B]:

Using the 3-pin connection cable

NOTE! The wires of the 3-pin connection cable are either colour-coded or numbered according to the pin assignment of the plug.

1. Route the 3-pin connection cable between the installation opening and the connection points in the vehicle.
2. Connect the yellow wire (number 1) to terminal 50 (starter control) or terminal 15 (ignition starter switch) for the transmission of the ejection signal. Protect this cable as close as possible to the connection point with a fuse (according to ISO 8820-3) (12 V/24 V: 1 A).
3. Connect the red wire (number 2) for the permanent supply voltage of the unit to the positive terminal of the starter battery. Protect this cable as close as possible to the starter battery with a fuse (according to ISO 8820-3) (12 V: 6 A / 24 V: 3 A).
4. Connect the black wire (number 3) to the negative pole of the starter battery.

⇒ The connection cable for the socket [A/B] is installed.

Using the Y-adapter

If you wish to use 2 separate cables for the ejector [A] and the supply voltage [B] or if you already have separately installed lines (e.g. when replacing a PowAirBox I with a PowAirBox II), use the Y-adapter (part number: 1549000013).

NOTE! Follow the installation instructions enclosed with the Y-adapter.

3.4 Adding a start prevention [C]

NOTE! Adding a start prevention is optional.

The pins in connection [C] are connected to the 2 auxiliary contacts of the PowAirBox II. In the PowAirBox coupling, these contacts are bridged at the factory, which means that when the coupling is plugged in, the switching state between the two pins is closed.

CAUTION! Maximum switching capacity: 24 V, 5 A

3.5 Connection to FireCAN bus / auxiliary contact 3 [D]

NOTE! Communication with other components via FireCAN or auxiliary contact 3 is optional and may require customisation. Please contact Micropower GmbH for further information.

Pin	Wire colour	Signal / Function
1	brown	Auxiliary contact 3, can be used for input or output signals. Default: Fault indication when a +12 V/+24 V signal is applied.
2	blue	CAN_HIGH
3	grey	CAN_LOW
4	black	Ground (common with pin 3 of socket A/B [5])

3.6 Load output installation

1. Route the connection cable for the load output between the installation opening and the electrical consumer (e.g. charger).
 2. Attach the connection cable to the consumers.
- ⇒ The connection cable for the load output is installed.

NOTE! For the 230 V feed, the following assignment is provided for the connection cable:

Wire	Colour
L1	Brown
N	Blue
PE	Yellow/green

3.7 Compressed air hose installation (type A only)

WARNING

Risk of injury due to loss of pressure in the compressed air tank

A loss of pressure in the compressed air tank during assembly and installation can lead to serious injuries.

1. Never heat the compressed air hose.
2. Make sure that a non-return valve is installed on the vehicle side.

NOTE! Only use the IQS connector supplied to connect the compressed air hoses.

1. Connect the enclosed compressed air hose to the compressed air hose already installed in the vehicle.
- ⇒ The compressed air hose is installed.

3.8 Assembly

- ✓ The supplied connection cables and the compressed air hose are laid and connected to the vehicle installation.

1. Place the body seal around the outside of the body cut-out. In the process, guide the set screws located in the screw holes through the corresponding holes in the sealing rubber.
2. Connect the plugs of the connection cables and the compressed air hose to the PowAirBox II.
3. Insert the PowAirBox II into the body cut-out so that the threaded pins protrude from the housing holes.
4. Replace the 6 threaded pins one after the other with the M4 screws (Allen 2.5 mm).

NOTE! To prevent accidental loosening of the screws, apply a threadlocker, e.g. Loctite 243.

5. Tighten the screws until the body seal is smooth and tight.
- ⇒ The PowAirBox II supply unit is mounted and ready to use.