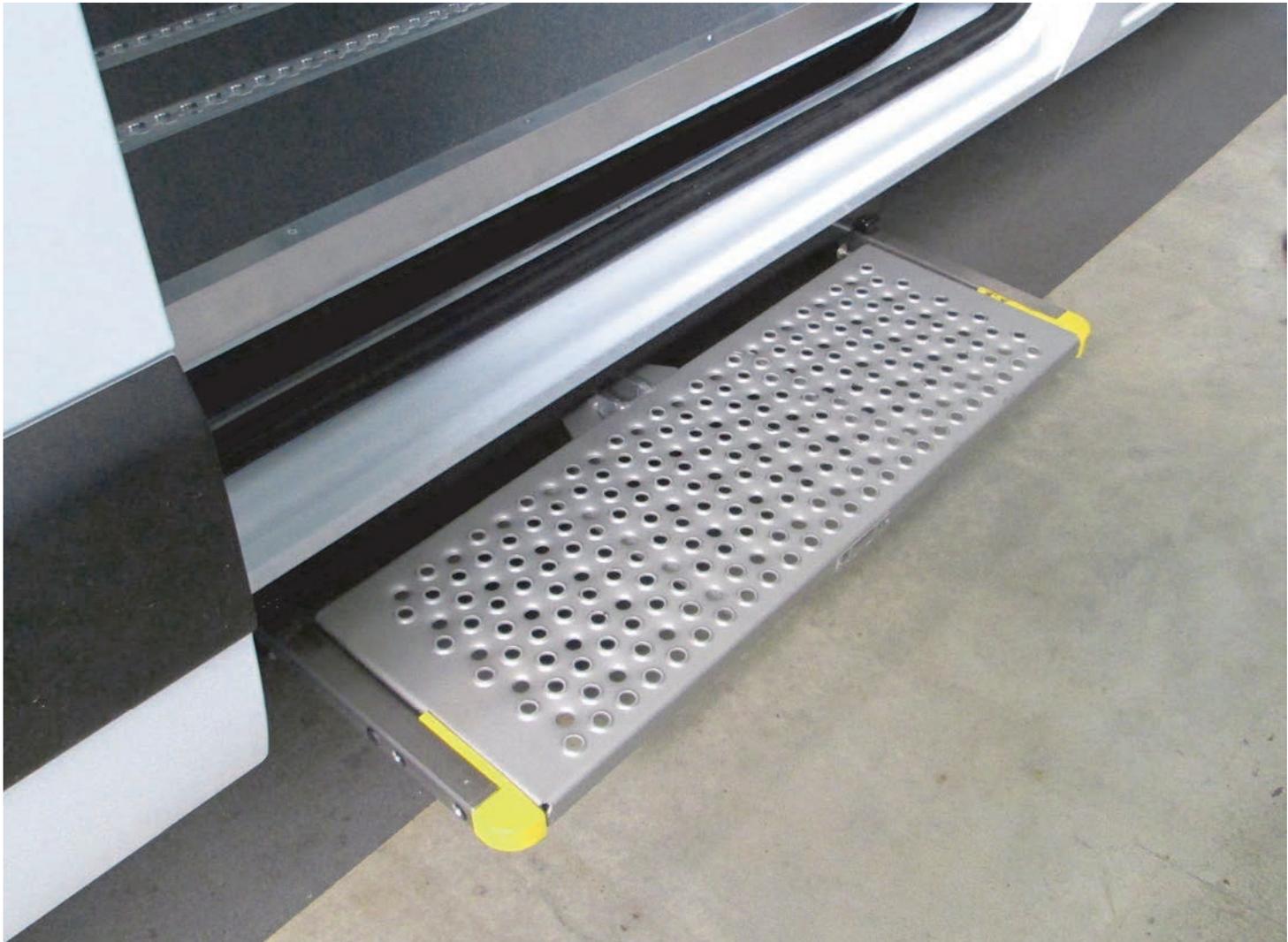




Installation Instructions

ELECTRIC STEP

Citroën Jumper | Fiat Ducato | Peugeot Boxer



The vehicle manufacturer's body fitting guidelines must be adhered to during installation !



www.amf-bruns.de

Foreword

Dear reader,

these Installation Instructions serve to provide information for the correct installation of the Electric Step.

Having read these Operating Instructions thoroughly for the first time, keep them in a safe place for the entire life of the Electric Step so that they are available for a possible future re-installation.

In case of a change of ownership of the Electric Step, the Installation Instructions must be handed over to the new owner.

This document must not be reproduced or duplicated, in full or in part, without the prior, written permission of the manufacturer.

The Electric Step must never be converted or modified in any way, without seeking the prior, written permission of the manufacturer. The manufacturer will not be held responsible in any way whatsoever if conversions or modifications are carried out without authorisation.

Explanation of symbols and signs

To improve understanding, the following conventions should be met for these Installation Instructions:

1.

The following types of special note are used to highlight text passages of an important nature.



DANGER!

- warns of a situation of immediate danger, which will lead to serious or fatal injuries, if not avoided.
-
-



WARNING!

- warns of a potentially dangerous situation, which will lead to serious or fatal injuries, if not avoided.
-
-



CAUTION!

- warns of a potentially dangerous situation, which will lead to slight or minor injuries, or material damage if not avoided.
-
-



ATTENTION!

...warns of a potentially dangerous situation, which can cause material damage, if not avoided.



...contains general notes and useful information.



...gives a reference to important information in other sections and documents.

2.

Some texts serve a particular purpose. These are identified as follows:

- Lists

⇒ Instructional text, e.g. a sequence of activities.

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1 Safety

The installation company itself is responsible for adherence to the safety regulations when installing the Electric Step.

Installation is insofar carried out at the sole risk installation company. The manufacturer will accept no liability whatsoever for damage caused during installation. Unless such damage is caused by grossly negligent or intentional breach of contract on the part of the manufacturer.

In addition to the information given in these Installation Instructions, local legislative regulations must be taken into consideration, in particular those regarding safety and accident prevention.

Detailed information regarding safety when operating the Electric Step can be found in the Operating Instructions. The Operating Instructions are also available in PDF format on our Internet platform (www.amf-bruns.de).

Personnel Requirements

The Electric Step must only be installed by specialist personnel,

- who have read and understood these Installation Instructions,
- of whom it can be expected, that they will execute the job entrusted to them in a responsible and reliable manner and
- who have been assigned to install the Electric Step by the owner of the vehicle in which it is to be installed.

2 Installation

2.1 Safety Information for Installation

WARNING!

Risk of danger through incorrect installation.

If the Electric Step is not installed correctly, it can become loose during use or when the vehicle is in motion. Faults in the electrical connection can cause the Electric Step to extend when the vehicle is in motion. This can cause serious accidents.

Therefore:



- The Electric Step must only be installed in a vehicle by specialist personnel under adherence to the applicable AMF-Brunns Installation Instructions.
 - The vehicle manufacturer's body fitting guidelines must be adhered to.
 - The installation materials provided must be used to install the Electric Step.
 - All screws/bolts must be tightened to the tightening torques specified in Section 2.5, page 13.
 - If any of the vehicle's original screws/bolts are loosened or removed to install the Electric Step, they must be re-tightened to the torque specified by the vehicle manufacturer.
 - To ensure that the Electric Step has been installed correctly, it must be inspected by a technical expert.
 - The Electric Step must not be used until this has been done.
-

CAUTION!

Material damage can be caused by incorrect installation.

Therefore:



- Read these Installation Instructions thoroughly before installation, so that you are familiar with the entire installation procedure.
 - Secure the vehicle, to prevent it from rolling away.
 - Do not start installation until this has been done.
-

2.2 Installation Work

- ⇒ Raise the vehicle on a vehicle lift.
- ⇒ Position the Electric Step under the vehicle with the aid of a suitable lifting/supporting device.



Figure 1: Positioning the Step (1)

The step is positioned correctly for installation when:

- it is parallel to the underside of the vehicle in all directions.
- the outside edge of the step is flush with the sill panel.
- It is approx. 300 mm in front of the body-work seam below the side door.

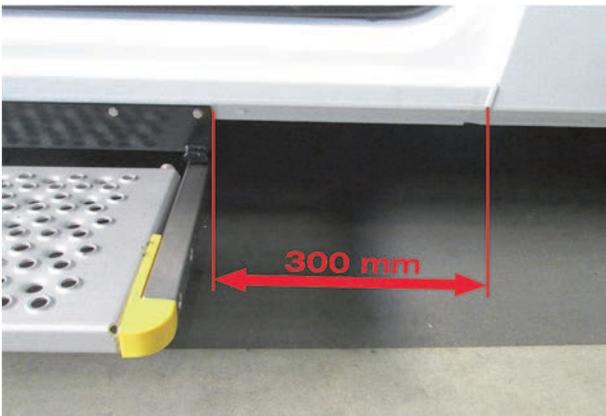


Figure 2: Positioning the Step (2)

- ⇒ Mark the position of the four step securing holes on the outside of the bottom edge of the sill panel.
- ⇒ Provisionally fit the support brackets for securing the step to the crossbeams on the underside of the vehicle. When doing so, pay attention to which of the side holes the support brackets is to be bolted to the step.



Figure 3: Support bracket

- ⇒ Mark the position of the holes for securing the support brackets on the vehicle's crossbeams.
- ⇒ Remove the step from beneath the vehicle.

- ⇒ Drill the $\varnothing = 6.5$ mm fastening holes in the edge of the sill panel.
- ⇒ Drill the $\varnothing = 10$ mm fastening holes for the support brackets in the vehicle's crossbeams.
- ⇒ Deburr all holes.
- ⇒ Remove all traces of swarf.
- ⇒ Apply anti-corrosion paint to the holes.
- ⇒ Shorten the brackets by cutting them off below the fastening hole required.
The support brackets must not protrude below the frame of the step.
- ⇒ Apply anti-corrosion paint to the support brackets.
- ⇒ Wait until the anti-corrosion paint is dry.
- ⇒ Bring the step into position beneath the vehicle.
- ⇒ Insert the flat steel $60 \times 20 \times 8$ mm plates provided into the vehicle's crossbeams.
The 8 mm threads in the flat steel plates must be aligned above the holes in the vehicle's crossbeams.
- ⇒ Bolt the step to the edge of the sill panel using the M 6×25 stainless steel bolts provided.
When doing so, insert normal washers on the outside and large diameter washers on the inside.
Use the self-locking nuts provided.



Figure 4: Securing the Step (1)



Figure 5: Securing the Step (2)



Figure 6: Securing the Step (3)

- ⇒ Bolt the support brackets on using the M 8 × 35 stainless steel bolts provided.
- ⇒ Insert washers under the bolts. Use the self-locking nuts provided.
If necessary, insert washers between the support bracket and the crossbeams so that the step is precisely aligned parallel to the underside of the vehicle.

- ⇒ Check tighten all nuts and bolts. When doing so, adhere to the tightening torques specified in Section 2.5, page 13.
- ⇒ Apply anti-corrosion paint to all fastening parts.

2.3 Electrical Connection



The Electric Step can be connected for one of two operating modes:

With the automatic mode, the step extends automatically when the side door is opened. It retracts when the side door is closed. To enable the step to be used in the automatic mode, the door contact switch and control unit provided must be installed.

With the manual mode, the step is extended and retracted by operating the rocker switch, which is installed on the B-column.

WARNING!

Risk of accident if the step is extended.

In the manual mode, the step will extend if the rocker switch is operated when the vehicle is in motion. This can cause serious accidents.

For this reason, with a step installed for the manual mode:

- Install the rocker switch in the B-column, such that it is concealed when the side door is closed.
- It must be impossible to operate the rocker switch when the side door is closed.



ATTENTION!

If the rocker switch is installed under tension it can jam. The Electrical Step drive motor can suffer irreparable damage.

Therefore:

- Make certain that the rocker switch is not distorted or under tension when fitted.
- After installation, make certain that the rocker switch automatically returns to the mid-position when it is released.



- ⇒ Make certain that the negative pole of the vehicle's battery is disconnected.
- ⇒ For automatic operation: Install the control unit and the fuse.
Select an easily accessible place for installation, e.g. in the box under the passenger seat.
- ⇒ Install the door contact switch provided.
- ⇒ For manual operation: Install the rocker switch provided in the B-column, such that it is concealed when the side door is closed.
- ⇒ Lay all cables such that they cannot chafe and are fastened securely. Use the cable conduit and fastening clips provided. Make sure that the all cables are fully insulated. The conductors in the power supply cables must not be bare.
- ⇒ Connect all cables in accordance with the circuit diagram (see Figure 7, page 12).

2.4 Electrical Circuit Diagram

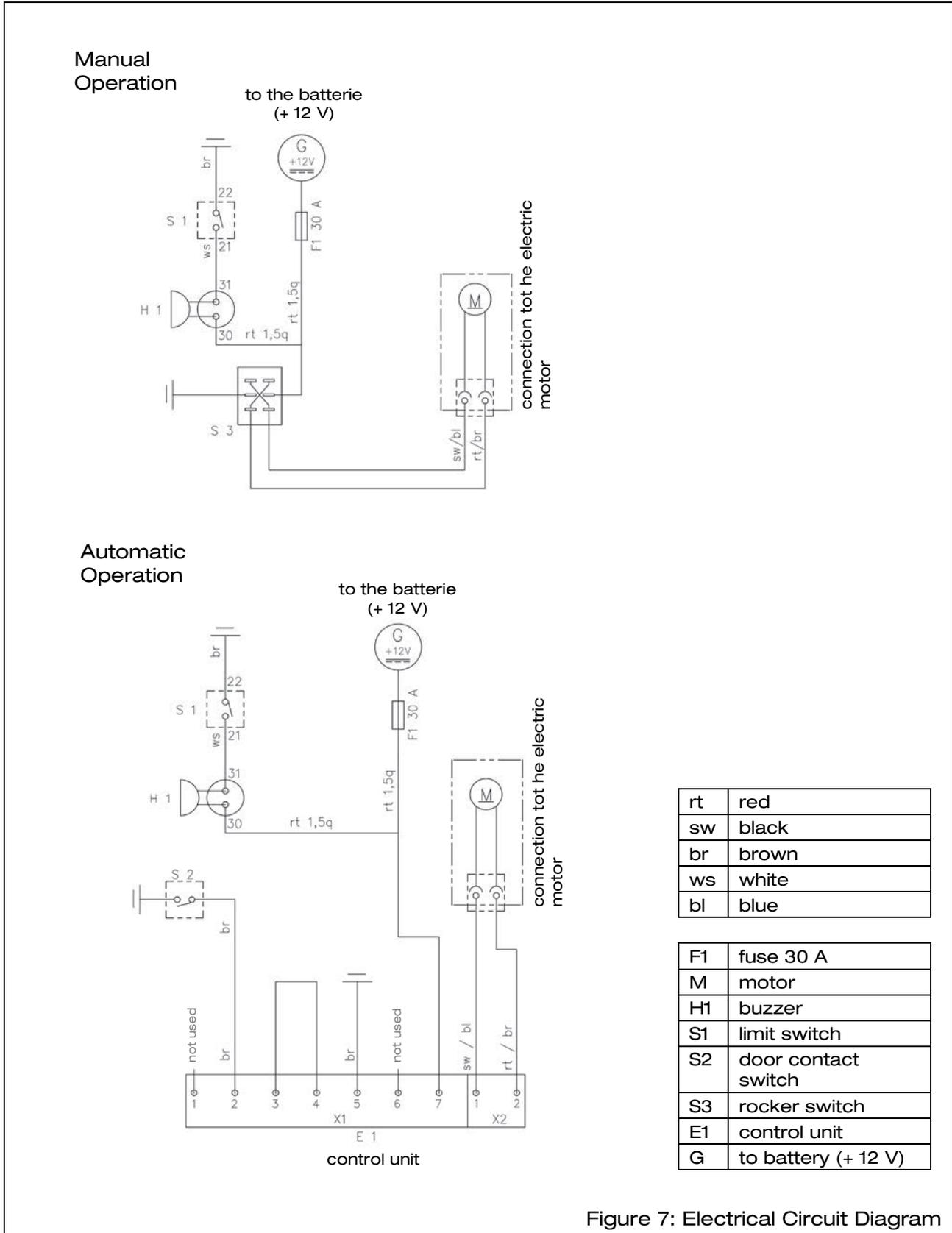


Figure 7: Electrical Circuit Diagram

2.5 Tightening Torques

NOTE

The tightening torques specified here do not apply to original vehicle-specific screws.



All screws must be tightened to the standard tightening torques (+/- 15 %).

If deviating tightening torques and tolerances are required for individual screws, a note to this effect will be included in the respective installation steps.

The specified tightening torques are recommendations. The company responsible for the conversion is also responsible for making certain that all screws are tightened to the correct tightening torque.

2.5.1 Standard Threaded Steel Screws

Property Class	8.8		10.9
Screw connection	Steel in steel	Steel in aluminium	Steel in steel
M6	10 Nm	7 Nm	15 Nm
M8	25 Nm	18 Nm	36 Nm
M10	50 Nm	30 Nm	72 Nm
M12	85 Nm	50 Nm	125 Nm
M14	135 Nm		200 Nm
M16	210 Nm		310 Nm

2.5.2 Standard Threaded Stainless-Steel Screws

Property Class	A2/A4-70
Screw connection	Steel in steel
M5	3.5 Nm
M6	10 Nm
M8	20 Nm
M10	35 Nm
M12	60 Nm
M16	135 Nm

2.5.3 Deviating Tightening Torques

Airline rails Smartfloor profile installation	M10; A2-70	18 Nm
Airline rails, floor installation	M8; A2-70	20 Nm
Mono-Fitting, (bottom part)	M12; 10.9-zn	50 Nm
Belt screws / E-belt	7/16" 20-UNF	40 Nm
Floor Pocket		47 Nm
T-Bolt	M8	25 Nm
	M10	35 Nm
AMF seat installation	M8; 10.9	36 Nm
Battery cable		8 Nm
Nuts on cable lugs and terminal blocks	M5	5 Nm
	M6	8 Nm
	M8	12 Nm
Seat fastening	Manufacturer's specifications	
Wheel nuts / bolts		



NOTE

The current tables of the tightening torques can be found under <https://www.amf-bruns-mobility.com/service/downloads/>.

3 Faults

**WARNING!**

Risk of injury and material damage if repair work is carried out incorrectly.

Therefore:

- Only allow specialist personnel to carry out repair work.
-

If faults occur when operating the Electric Step, proceed as described in the troubleshooting table in the Operating Instructions. The Operating Instructions are also available in PDF format on our Internet platform (www.amf-bruns.de). Contact the customer service department if faults are encountered which cannot be remedied using the information given there (see Chapter 4, page 16).

4 Customer Service

The AMF-Bruns customer service department will be more than pleased to assist in ordering spare parts, maintenance and repair work and help with general problems or queries.

See also the service page on our Internet platform.

The address is:

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D – 26689 Apen

Tel.: +49 (0) 44 89 / 72 72-30

Fax: +49 (0) 44 89 / 62 45

service.hubmatik@amf-bruns.de

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NOTE

Guarantee work on the Electric Step must only be carried out with the prior agreement of AMF-Bruns GmbH & Co. KG.

The costs of such work will not be accepted by AMF-Bruns without prior agreement.



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