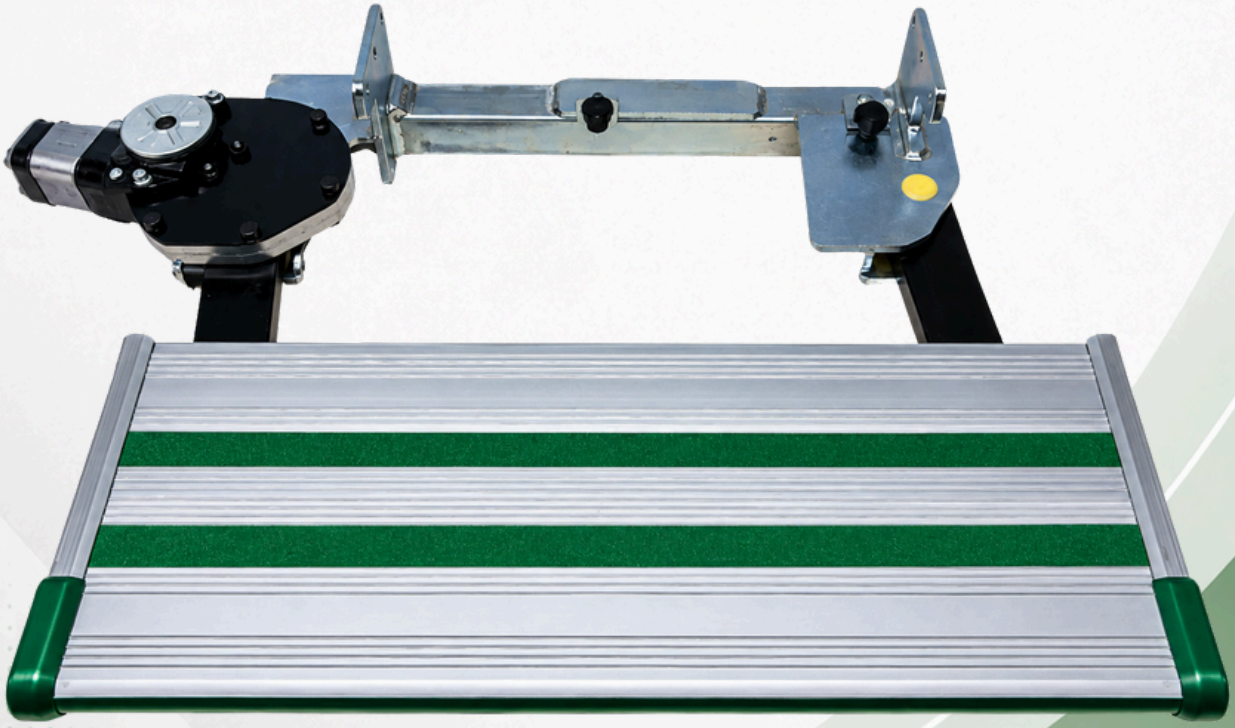
AUTOMOBILITY-X

X-STEP

CANTILEVER (CL)

INSTALLATION & USER MANUAL



SAFETY INFORMATION

Disconnect the vehicle battery before carrying out electrical work.
Always isolate the vehicle's electrical system before connecting or disconnecting wiring components. This helps prevent short circuits, accidental operation of the step and potential damage to the vehicle's electrical system.

Never work beneath an unsupported vehicle.
Before starting the installation, ensure the vehicle is securely supported using approved lifting equipment or axle stands. Never rely solely on a hydraulic jack, as this could result in serious personal injury if the vehicle becomes unstable.

Wear suitable personal protective equipment (PPE).
Safety glasses, protective gloves and appropriate safety footwear should be worn throughout the installation. PPE helps reduce the risk of injury from sharp edges, metal swarf, power tools and other hazards encountered during installation.

Do not exceed the maximum load capacity of 200 kg.
The X-STEP CL has been designed and tested to safely support a maximum load of 200 kg. Exceeding this limit may damage the step mechanism, reduce its service life and create a potential safety risk for users.

Inspect the step regularly for wear or damage.
Periodically check the step assembly, mounting brackets, fasteners and electrical connections for signs of wear, corrosion or damage. Any defective or worn components shall be replaced before the step is returned to service.

Keep the step clean and free from dirt, ice and debris.
Accumulated dirt, road salt, snow or ice can prevent the step from operating correctly and may accelerate corrosion or mechanical wear. Clean the step regularly to maintain reliable operation in all weather conditions.

Ensure all fasteners are securely tightened after installation.
Once the installation has been completed, verify that all bolts, nuts and mounting brackets are tightened correctly. Loose fasteners can lead to excessive movement, vibration or premature failure of the installation.

Keep wiring clear of moving parts and heat sources.
Route all electrical cables so they cannot become trapped, chafed or exposed to excessive heat. Secure the wiring harness using suitable clips or cable ties to prevent damage during vehicle operation.

Do not modify the step or electrical system.
Alterations to the step assembly, controller or wiring without written approval from Automobility-X may affect the safe operation of the product, invalidate the warranty and compromise compliance with applicable safety standards.

Test the step before returning the vehicle to service.
After installation, operate the step through several complete extension and retraction cycles to confirm correct operation. Ensure the step moves smoothly, all fasteners remain secure and no components interfere with the vehicle body or surrounding equipment.

INTRODUCTION

This manual describes the recommended installation procedure for the Automobility-X X-STEP CL. Installation must be carried out by suitably trained personnel using the specified tools, materials and appropriate personal protective equipment (PPE). Ensure all electrical connections comply with the applicable vehicle manufacturer's recommendations and local regulations.

REQUIRED TOOLS FOR INSTALLATION

ITEM	PART DESCRIPTION		QUANTITY
1		• Drill	1
2		• 13mm combination wrench	1
3		• 10mm open end wrench	1
4		• 13mm socket bits	1
5		• 10mm socket bits	1
6		• 6mm drill bits	1

PARTS INCLUDED



6.3 × 32 TRAPEZOIDAL BOLTS

8 UNITS



M8 × 35 FLANGE BOLTS

6 UNITS



M8 NYLON INSERT LOCK NUTS

8 UNITS



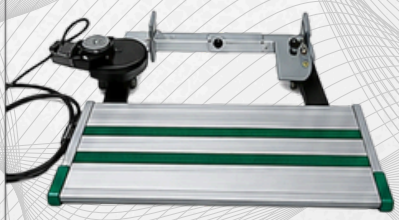
M6 × 20 FLANGE BOLTS

4 UNITS



M8 × 20 FLANGE BOLTS

2 UNITS



BOARD

1 UNIT



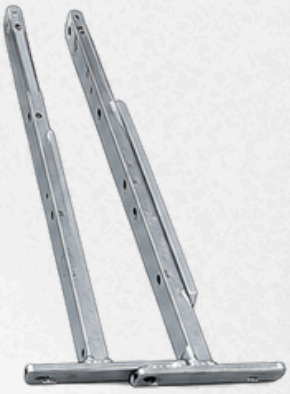
STEP MODULE

1 UNIT



REAR STEP BRACKETS

2 UNITS



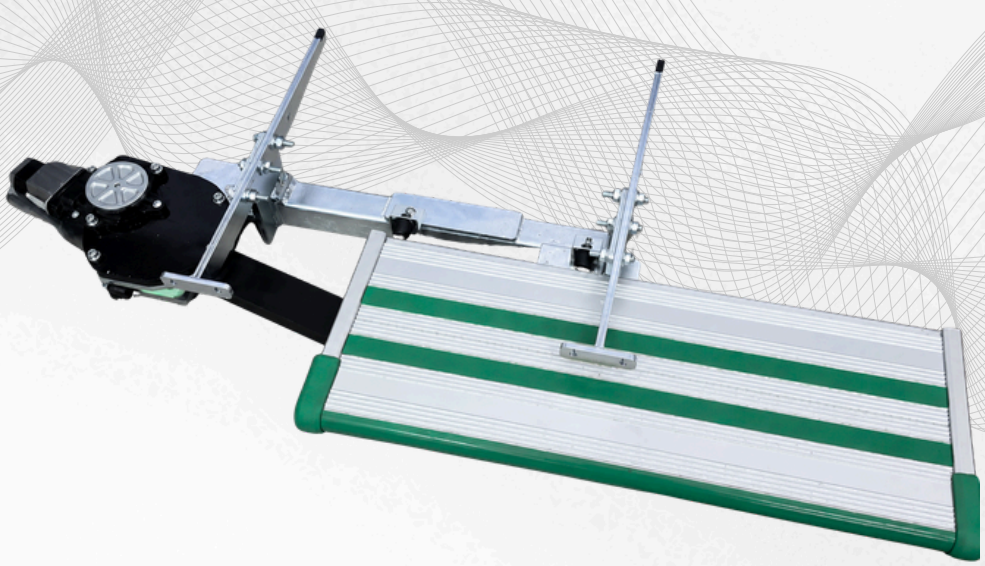
FRONT STEP BRACKETS

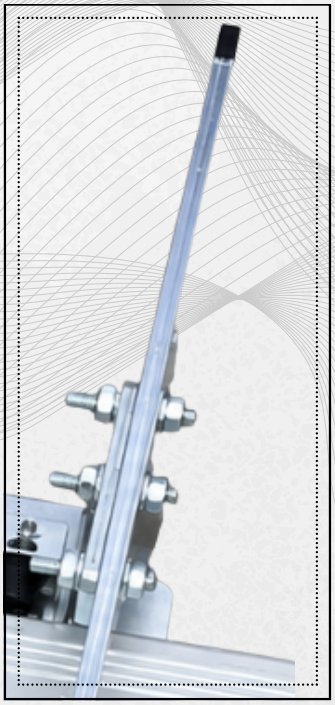
2 UNITS

INSTALL THE FRONT MOUNTING BRACKETS

PROCEDURE

1. Position the two front step brackets against the board as shown in the illustration.
2. Align the mounting holes in the brackets with the corresponding holes in the board.
3. Insert the six M8 × 35 flange bolts through the brackets and board.
4. Fit an M8 nylon insert lock nut to each bolt.
5. Tighten all six bolts evenly using a 13 mm socket and 13 mm combination wrench.
6. Check that both brackets are securely attached to the board and are correctly aligned before proceeding to the next step.







M8 × 35 FLANGE BOLTS



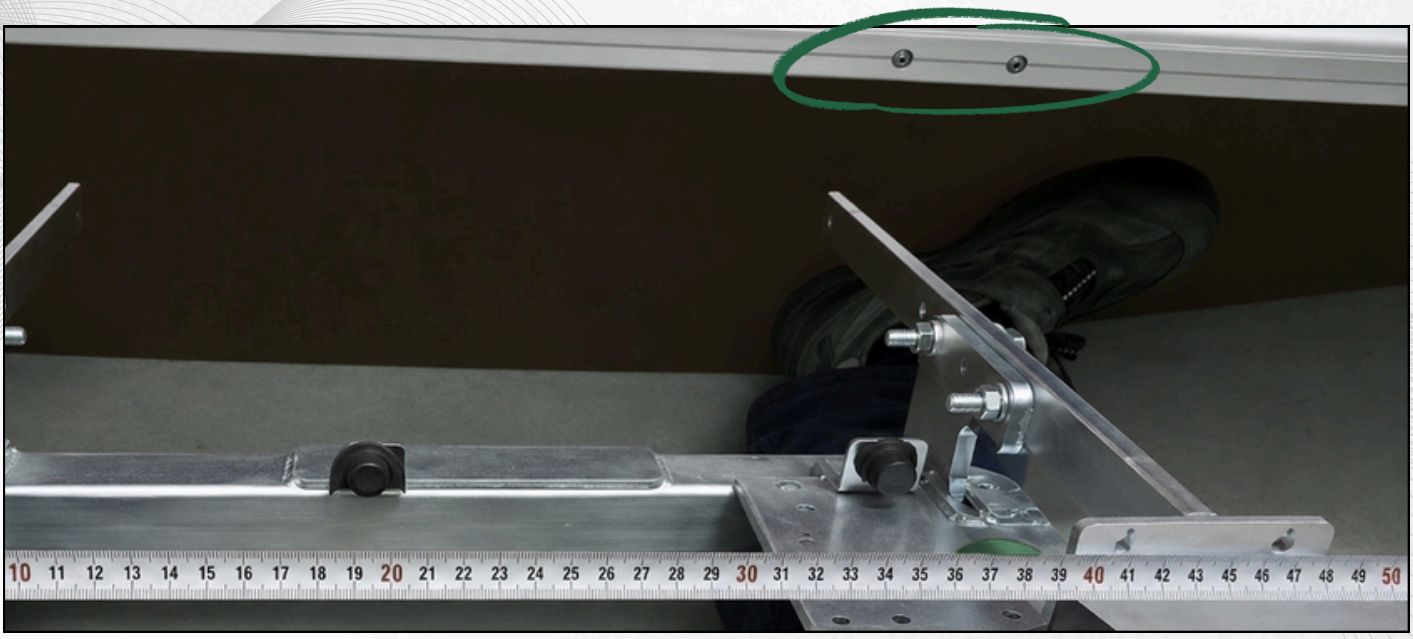
M8 NYLON INSERT LOCK NUTS

Important: Ensure that both front brackets are correctly positioned and aligned before fully tightening the bolts. The brackets must be securely fastened to the board before the step is installed on the vehicle.

MARK AND DRILL THE FRONT MOUNTING HOLES

PROCEDURE

1. Position the assembled X-STEP CL against the vehicle in the required installation position.
2. Align the front step brackets with the vehicle's side skirt.
3. Use the mounting holes in the front brackets as a guide and mark the four mounting-hole positions on the vehicle.
4. Check the marked positions before drilling to ensure they correspond with the mounting holes in the brackets.
5. Drill the four marked holes using a 6 mm drill bit.
6. Remove any swarf or debris from the drilled holes before proceeding to the next step.







M6 × 20 FLANGE BOLTS

INSTALL THE FRONT STEP BRACKETS

PROCEDURE

1. Position the two front step brackets against the vehicle chassis as shown in the illustration.
2. Align the mounting holes in each front bracket with suitable mounting points on the vehicle chassis.
3. Where suitable mounting holes are not already present, mark the required positions.
4. If required for the specific vehicle, drill the mounting holes as necessary.
5. Secure each front bracket to the chassis using four 6.3 × 32 trapezoidal bolts.
6. Check that ***both*** front brackets are securely attached and correctly positioned before continuing with the installation.





REAR STEP BRACKETS



6.3 × 32 TRAPEZOIDAL BOLTS

SECURE THE FRONT BRACKETS TO THE FRONT BRACKETS

PROCEDURE

1. Check that the front and front step brackets are correctly positioned on both sides of the vehicle.
2. Align the front hole in each front bracket with the corresponding mounting hole in the front step bracket.
3. Insert one M8 × 20 flange bolt through each connection.
4. Ensure the bolts pass fully through the aligned holes.
5. Tighten both bolts securely using the appropriate 13 mm socket or combination wrench.
6. Check that both bracket connections are secure before proceeding to the next stage of the installation





REAR STEP BRACKETS



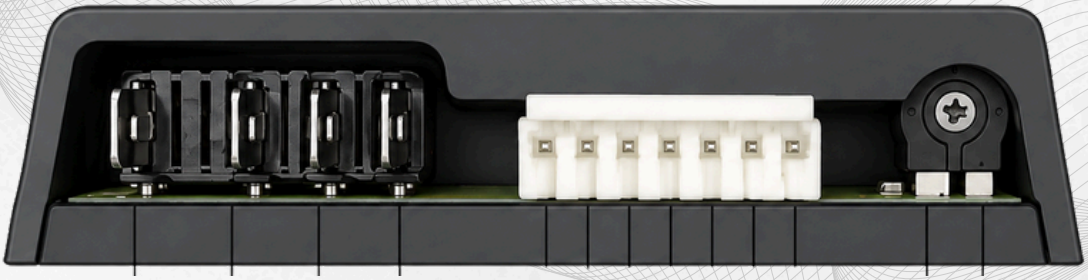
M8 × 20 FLANGE BOLTS

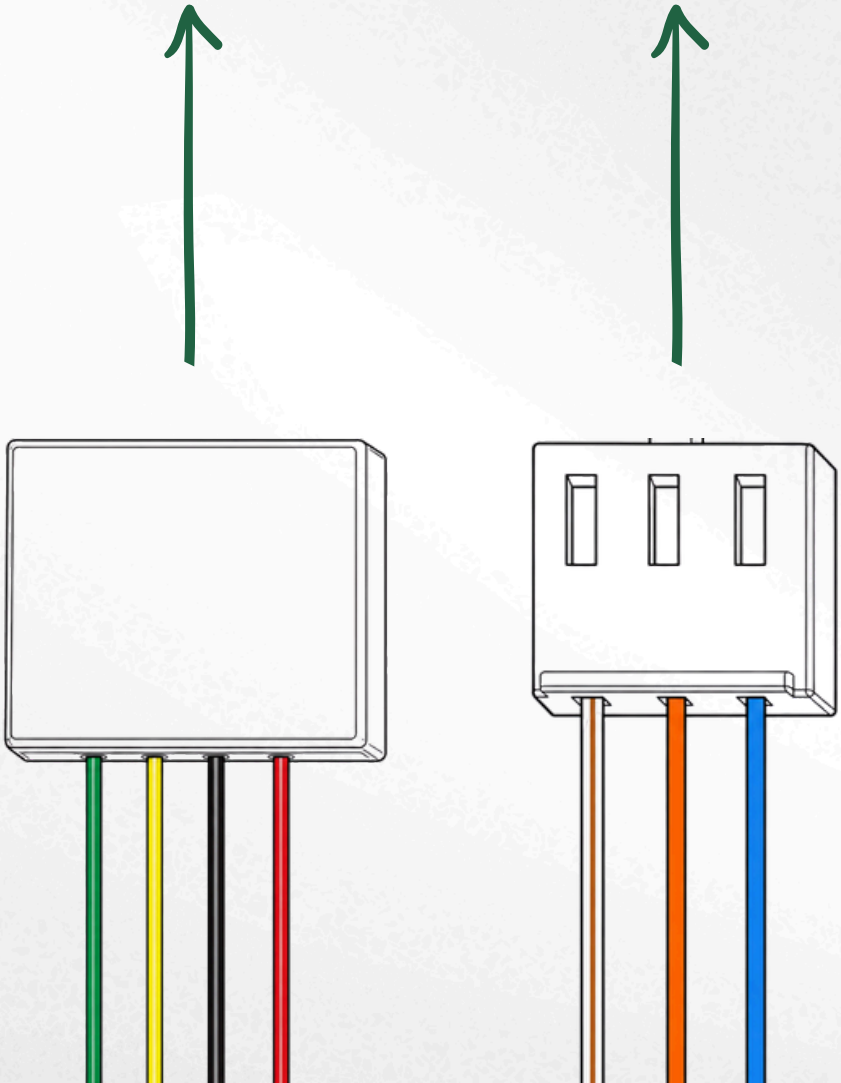
CONNECT THE CONTROL UNIT (ECU)

PROCEDURE

1. Locate the step module and the vehicle wiring connections.
2. Connect the wiring harness to the step module/control unit as shown in the wiring diagram.
3. Ensure that each connector is fully inserted and securely connected.
4. Check that the wiring is routed safely and cannot be trapped, crushed or damaged.

Important: Follow the wiring diagram carefully and make sure each connector is connected to the correct position before applying power to the system.



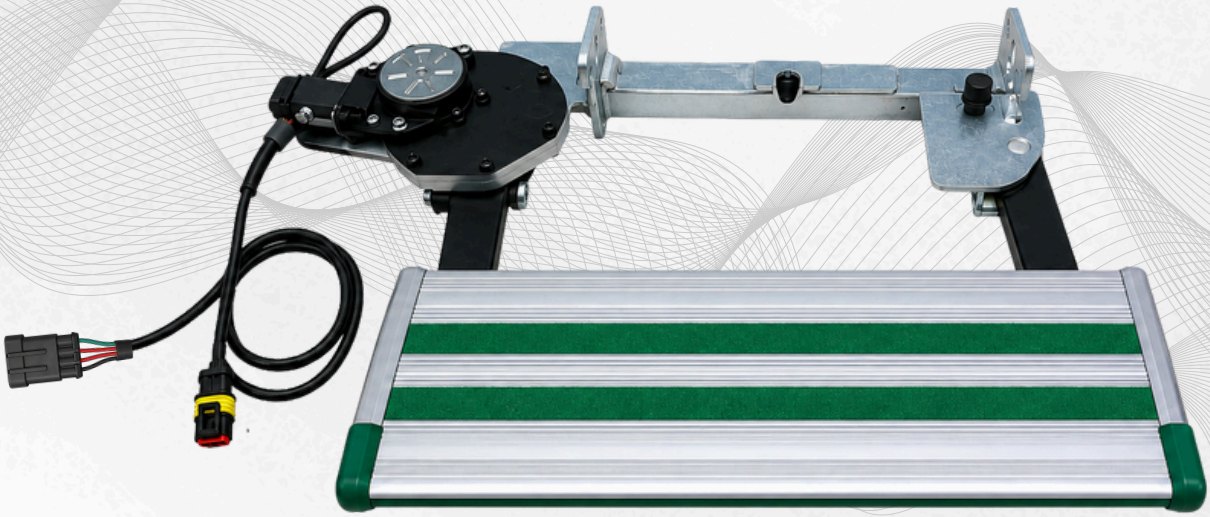


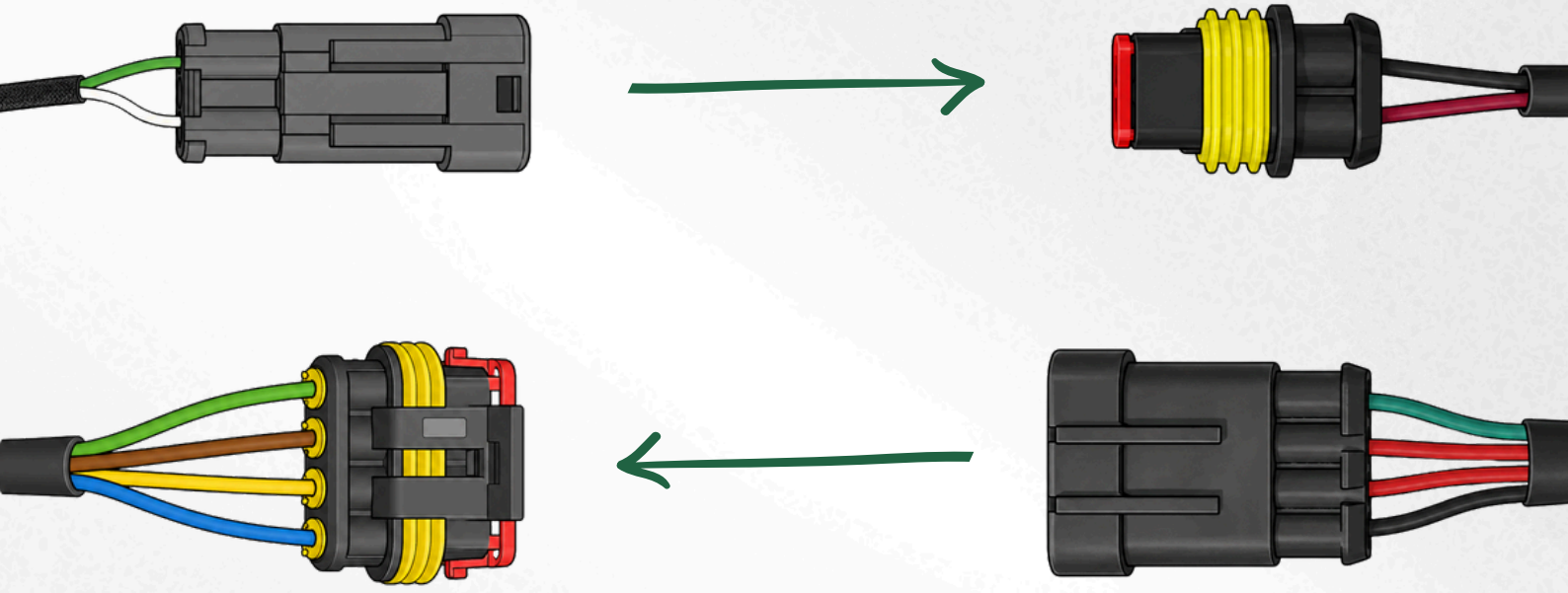
CONNECT THE CONTROL UNIT (ECU) TO THE STEP

PROCEDURE

1. Connect the motor connector to the corresponding connector on the wiring harness.
2. Ensure both connectors are fully inserted and the locking mechanisms are engaged.

Note: the control unit has to be installed inside the vehicle, as close as possible to the electrical positive (+) supply point.



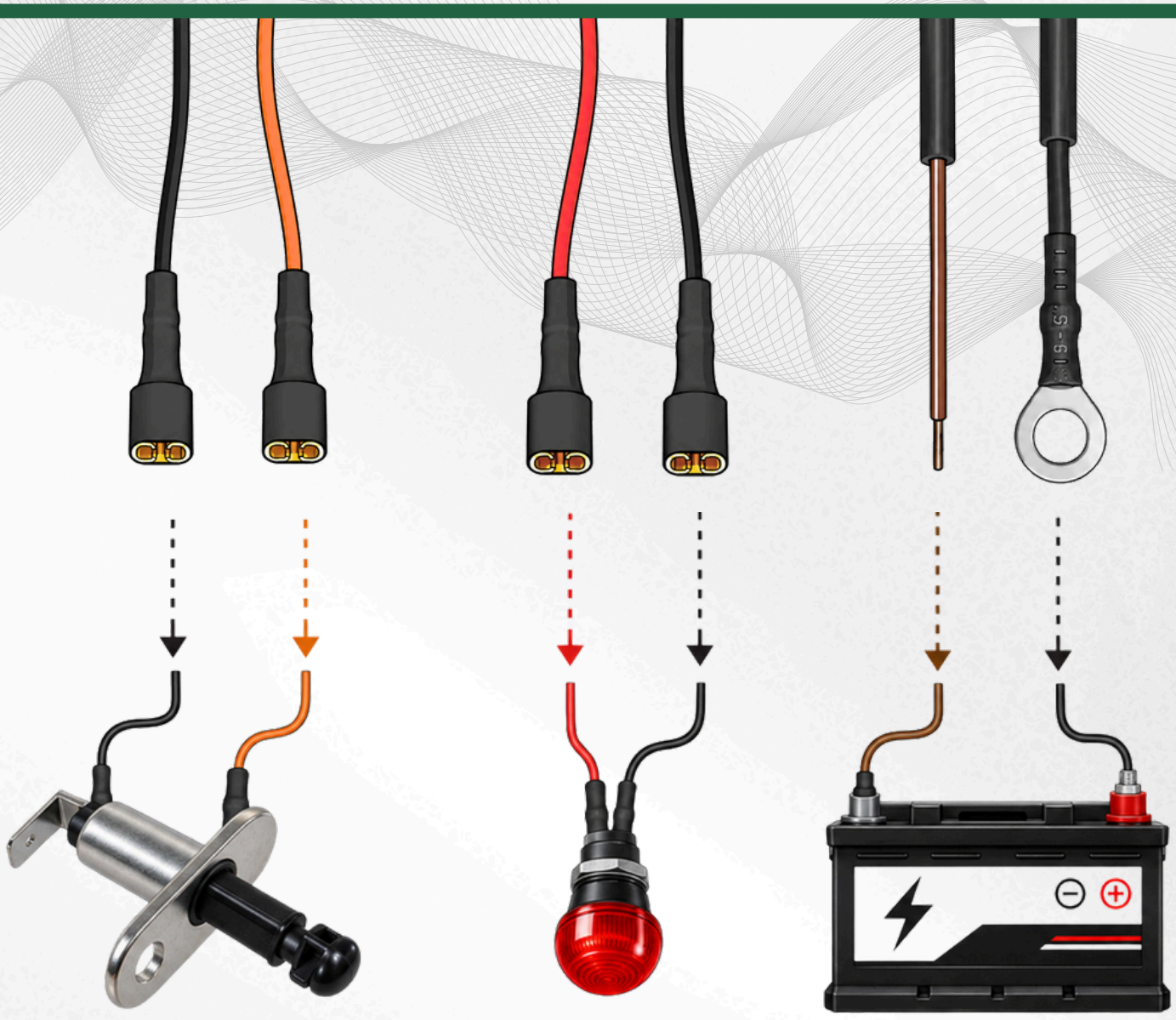


Caution: The wiring diagram is the primary reference for the electrical connections. Do not apply power until all connections have been checked.

CONNECT THE VEHICLE ELECTRICAL SYSTEM

PROCEDURE

1. Connect the power supply to the vehicle battery as shown in the wiring diagram.
2. Connect the door switch signal.
3. Connect the control lamp where fitted.
4. Check all electrical connections against the wiring diagram.
5. Ensure that all wiring is securely routed and protected from heat, sharp edges and moving components.
6. Reconnect the vehicle battery only after all connections have been checked.



OPERATION AND MAINTENANCE

OPERATION

Maximum safe load is 200 kg. Ensure that the deployed step is no more than **400 mm** above ground level. The height to the next step must not exceed 300 mm in accordance with **EN 1646-1 and EN 1645-1.**

MAINTENANCE

Inspect the step regularly for:

- Dirt and debris
- Ice or frost
- Loose fasteners
- Damaged wiring
- Smooth extension and retraction

Important: Clean the mechanism regularly and remove any debris that may affect operation. If necessary, remove the step assembly to clean internal components.

SERVICE INSPECTION

According to current legislation, a service inspection is required by law to be performed once per year. In addition to this statutory requirement, we strongly recommend carrying out a visual service inspection approximately every 6 months to ensure optimal performance, safety, and early identification of potential issues.

Automobility-X will not be held liable for claims for damage resulting from the following:

- Faulty assembly or connection
- Damage to the appliance resulting from mechanical influences and excess voltage
- Alterations to the device without express permission from the manufacturer
- Use for purposes other than those described in the operating manual

To maintain warranty coverage, the service inspection record below must be completed correctly.

DATE OF INSTALLATION	SERVICE YEAR 1
SERVICE YEAR 2	SERVICE YEAR 3
SERVICE YEAR 4	SERVICE YEAR

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