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About Us

ALEX ORIGINAL was established in 1959 and is one of the leading automotive air-conditioning & transport refrigeration manufactured with worldwide reputation. In our R&D department, the heart and the brain of our company, our engineers and craftsmen plan and develop innovations for a wide range of products. It has been the "Magna Carta" of our company in over 50 years existence, that apart from highest quality, all of our products should be easy to install. This guideline accompanies our R&D department in every thought and step. ALEX ORIGINAL implemented, from the very first days, the unconventional and innovative concept of designing and manufacturing all components and products in-house. Each of our departments is equipped with state – of- the art machinery, enabling efficient and short manufacturing times, meeting every deadline required. All our products comply with European Union regulations. Over the decades the pioneering spirit of ALEX ORIGINAL developed a large number of technical innovations that were of major importance to the world automotive industry.

This decade - ALEX ORIGINAL expanded the development of an vast range of air conditioning units for both commercial vehicles and buses of different sizes. Transport refrigeration units were created for any kind of vehicle and are suitable for applications of almost any kind. Another milestone in our never ending search for innovations is the product line of "Electric Front Doors &Steps" for minibuses and delivery vans. Here too, as in so many other products developed and designed at ALEX ORIGINAL, it is the totally different approach that makes all the difference. (ALEX ORIGINAL is a privately owned company with a staff of 240 highly skilled employees)
2. Electric Step

Alex Original’s Electric Steps for mini and midi-busses are designed to provide quick & easy access for elderly & disabled people, and for children. The Alex Original’s electric step are equipped with several safety mechanisms that will prevent damage or injury due to human error or technical malfunction.

Alex Original’s electric steps are made from stainless steel, and are only 47 mm thick. Alex Original’s electric steps are equipped with a rough anti-skid treading pad. All the step components, including the opening and closing rails, are made of high-quality stainless steel. Alex Original's electric steps movement is performed by means of strong and durable motors, ensuring quiet operation of the step and optimal functioning with each typical load. Alex original’s electric doorsteps are available for a wide range of vehicles and are able to endure the heaviest of weather conditions.

FUNCTION OF THE ELECTRIC STEPS

Alex original's electric step is equipped with sophisticated electronics, which are responsible for the safe opening and closing of the electric doorsteps, under different conditions. When the vehicle door opens, the electric step automatically pulls out, and after the door is closed, the step returns to its place. The opening and closing of the step are performed smoothly, quietly and quickly, and take only 2 seconds.

INTEGRATED SAFETY MECHANISMS

In order to ensure safe & secure use, Alex original electric steps are equipped with a number of safety mechanisms that eliminate the risks resulting from human error and technical malfunction.

- A warning light comes on in the driver’s control panel when the electric step is opened
- To prevent un-expected opening and closing of the electric step the electric step is connected to the door opening mechanism.
- When the travel starts the step returns to its place.
- During travel the step cannot be opened.
- In order to prevent injury or damage the step is equipped with an electronic sensor designed to stop its operation and to retreat back whenever it feels resistance from an obstacle.
- To prevent slippage the surface of the step is covered with a rugged slab.

BENEFITS

- Can be adapted to any transportation vehicle according to size
- Compliance with all weather conditions and typical loads
- Fast and quiet opening and closing
- Safe to use
- Thin and powerful - does not require much space
- Strong, reliable materials, mechanisms, engines, electronics.
3. Technical Specifications

Product Description: Electric Step.
Installation: For mounting outside under the vehicle's floor at the front-middle or rear door of vehicle.
Dimensions: Step depth 230 mm: width 600, 900, 1100 mm.
For detailed dimensions please refer to the installation drawings.
Weight: Total 19, 25, 27 Kg according to the model.
Load: Maximum load 200 Kg.
Material’s Frame: Steel plate work, zinc corrosion protected.
Step: Aluminum profile with soft rubber front edge and Plastic corner pieces.
Life Cycle Tested: Life cycle of the step is 200,000 cycles with a load of 180 KG.
Electrical Connection: Waterproof 6 pin connector (IP65) on the step.
Electric Motor Drive: 12V 20W
Electric Signals: LED lights as long as the step isn’t stowed.
Control lamp indicates "Step Out".
Safety Functions: Motor switches off by current control.
Cycle Time: Time required for opening or closing the step is approx 2 Sec.

4. Safety Instructions

The operator must be aware of these safety instructions before operating the Step. Reading these safety instructions carefully and follow them.
The driver must be aware of the maximum load while entering or exiting a minibus, taxi camper or other vehicles.

- Never overload the step.
- Before you operate the step you have to stop the Vehicle.
- Before you operate the step, make sure that there is no person or obstacle close to the step or outside the vehicle in the motion direction of the step.
- The driver must have a clear view when he is operating the step.
- It is recommended to step on the middle of the step platform.
- Never drive away when the LED light is still on. The step is not stowed.
- The step platform must be kept clean and free of oil and other slippery materials.
- When you have any doubt about the safety of passenger when using the step make sure he is assisted.
- For any questions about the safe operation of the step, contact the responsible persons directly.
- Never use the step for any other use than described here.
- The step should always be operated until it is fully in or out.
- Repair and maintenance must be done by qualified persons.
- Only use original parts if you have to exchange parts of the step.
- If the anti slip surface of the step becomes slippery because of wear, it must be replaced.
- Report any unsafe condition of the step, or during it’s operation, to the steps supplier.
5. Design Targets

The Step has been designed to be functional and reliable. Environmental conditions have been taken into consideration while designing the step.

6. Controls

The Electric Step is an automatic system controlled by opening / closing of the vehicle’s door. Step Out: There should be a LED light to alarm to the driver that the step is not in the stowed position and that he cannot drive away safely. This signal will blink when the step is moving in / out. The Step has a safety control function. Functions and Measurements are compliant with the EU Bus directive 2001/85 EC. The controls comply with European 98/37 EC machine directives. Power: 12V commercial vehicle electrical system. Such a system consists of a 12V battery and an alternator/ generator system. The step performs all necessary functions when subjected to the normal fluctuations encountered in a normally functioning 12V DC, commercial vehicle’s electrical system. Note: The ECU is not protected against changing the polarity at the power lead. This will damage the ECU. All Electrical Components inside the step are water resistant to IP 65.

5. Operation

Deploy Operation procedure. The step must have clearance from the vehicle. The electronics receive a signal from the door switch/ driver switch. The step will move out automatically once the door is opened. Time for either the full deploy / out or the full stow / in cycle is approximately 2 seconds. When the step is moving the LED on the dashboard will light as long as the step isn’t in its stowed position. If the step encounters an obstacle it automatically stops.

6. Installation

The installation must be done only by a company that is well known with bodybuilding or modifying vehicles, which has the qualified technical staff to do this job. For mounting the step you do not need to make any large vehicle adaptations. The step is placed under the floor in the middle of the front, middle or rear door. Chassis modifications are not needed. Create a safe working condition. Lift the vehicle to the appropriate working height. Define the place where you want to mount the step under the vehicle. Make sure the step can be mounted on the required position without colliding with the chassis or other vehicle parts. Installation instructions available for the most common vehicles. Make sure that the step is not to close to hot parts like the exhaust system. This can damage the step.
6.1 Electrical Installation
For the correct installation and function of the step, follow these instructions:

- Find a good routing for the cable to the front of the vehicle or the area where it will be connected to the electrical system of the vehicle.
  The main idea for the routing of the cable loom is as follows:
  - Cable should run under the vehicle to the front of the vehicle.
  - Up through the engine compartment and then inside the vehicle under the dashboard. In this area you normally find the place for electrical connections.
  - The cable to the door switch should run directly to the door-pillar where the door switch is mounted.
- Look at the electrical diagrams at the manual.
- Place the door switch in the door pillar.
  When the door is closed the switch must be operated. Make sure the Switch is operated in a strait line by the door. If the switch is pushed under an angel it will block and fail.
- The door switch is as standard supplied with the cable loom.
- We recommend using the original door switch installed by the vehicle manufacturer.
  This switch is placed at the ideal place and tested.
  Just connect the ground signal of the step to the ground signal of the door switch.
  Important: Use only the original door switch, if this is used to switch direct an interior light.
  Do not interfere in computer controlled car systems as they will see the step ECU as a failure source.
- Place the LED in the dashboard in the direct view of the driver.

6.2 Using The Step:
You should test the step after installation. Follow these instructions:

- Mounting – Check if the all mounting bolts are in place and tightened.
- Mounting – Bring the step out and step on it with two persons Max 180 Kg. Check if the mounting of the step is strong enough for this weight.
- The construction of the step is such that a weight of 180 Kg weight give a deflection of the step.
  This is normal.
- Electrical Installation – Move the step out and in by electrical operation. Check if the step is moving for strange noises and unequal movements. Check if the step stops automatic at the end of the stroke.
- Check if the LED on the dashboard turns red when the step is out.
- Safety Function – Move the step out and try to stop it with your foot.
  The step should stop and should go back in after closing the door.

If this test procedure is followed with success the step is ready to be used.
If one of the tests fails the problem should be resolved before putting the step in to use.

7. Periodic Maintenance / Inspection

7.1 Cleaning
The step must be cleaned with Normal non-aggressive cleaning materials, as used for cleaning the other parts of the vehicle.
Do not use aggressive solvents, these could affect the paint, rubber and glue on the step. The use of high-pressure water cleaners is not recommended.

7.1.1 Small Maintenance
The product has low maintenance need, it is not necessary to grease any of the moving parts on a regular basis.

7.1.2 Regular Inspection
Following the vehicle inspection schedule, check following points:
- Mounting – Check if the all mounting bolts are in place and tightened.
- Mounting – Bring the step out and step on it, two persons max. 180 Kg. Check if the mounting of the step is strong enough for this weight.
  The construction of the step is such that a weight of 180Kg will give a deflection of the step. This is normal !!
- Electrical Installation – Move the step out and in by electrical operation. Check if the step is making strange noises and unequal movements. Check if the step stops automatic at the end of the stroke. Check if the LED on the dashboard turns on when the step is out.
- Safety Function – Move the step out and try to stop it with your foot.
  The step should stop moving, It should go back after closing the door.

7.1.3 Large Maintenance
Large maintenance should be done once every 2 years.
Large maintenance:
- Remove the step from the vehicle and bottom plates by removing the screws.
- Check all moving parts like, arm gears, push rods for excessive play. If there is excessive play on moving parts it is recommended to replace these parts.
- Check the adjustment of the in and out switches.
- Check wires and electrical connections for possible failures.
- Clean the inside of the step and grease moving parts shaft and plate with tooth and normal bearing grease.
- Fix the upper and bottom plates.
- Assemble the step back to the vehicle.

8. Warranty

We warrant that the equipment is free from defects in material and workmanship under normal use and service. The provisions of the warranty shall not apply to any equipment that has been subject to misuse, negligence, accident, improper installation.

i. Lack of wrong maintenance modification alteration not approved by ALEX ORIGINAL.

ii. Our obligation under this warranty is limited to repairing or replacing at our option, any product that is returned to our place of business and when in its examination shall disclosed to our reasonable satisfaction that it is defective. The repair or replacement of the defective parts under this warranty will be made without charge for parts or labor.
iii. The warranty is effective as the date of sale to the original purchaser and extends door parts on step mechanisms and one year for step finish. Since it is the responsibility of the owner to verify the original purchase date, ALEX ORIGINAL recommends that a bill of sale or sales receipt be kept for that purpose.

iv. ALEX ORIGINAL will not, under any circumstances, reimburse the cost of warranty parts purchased from sources other than ALEX ORIGINAL.

v. Our warranty doesn't cover travel time, mileage or other incidental costs. It is limits solely to the replacement of defective parts under warranty.