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ZEBRA ELECTRONICS
SUSTAINABLE TECHNOLOGY SOLUTIONS

BOOST-E

USER MANUAL

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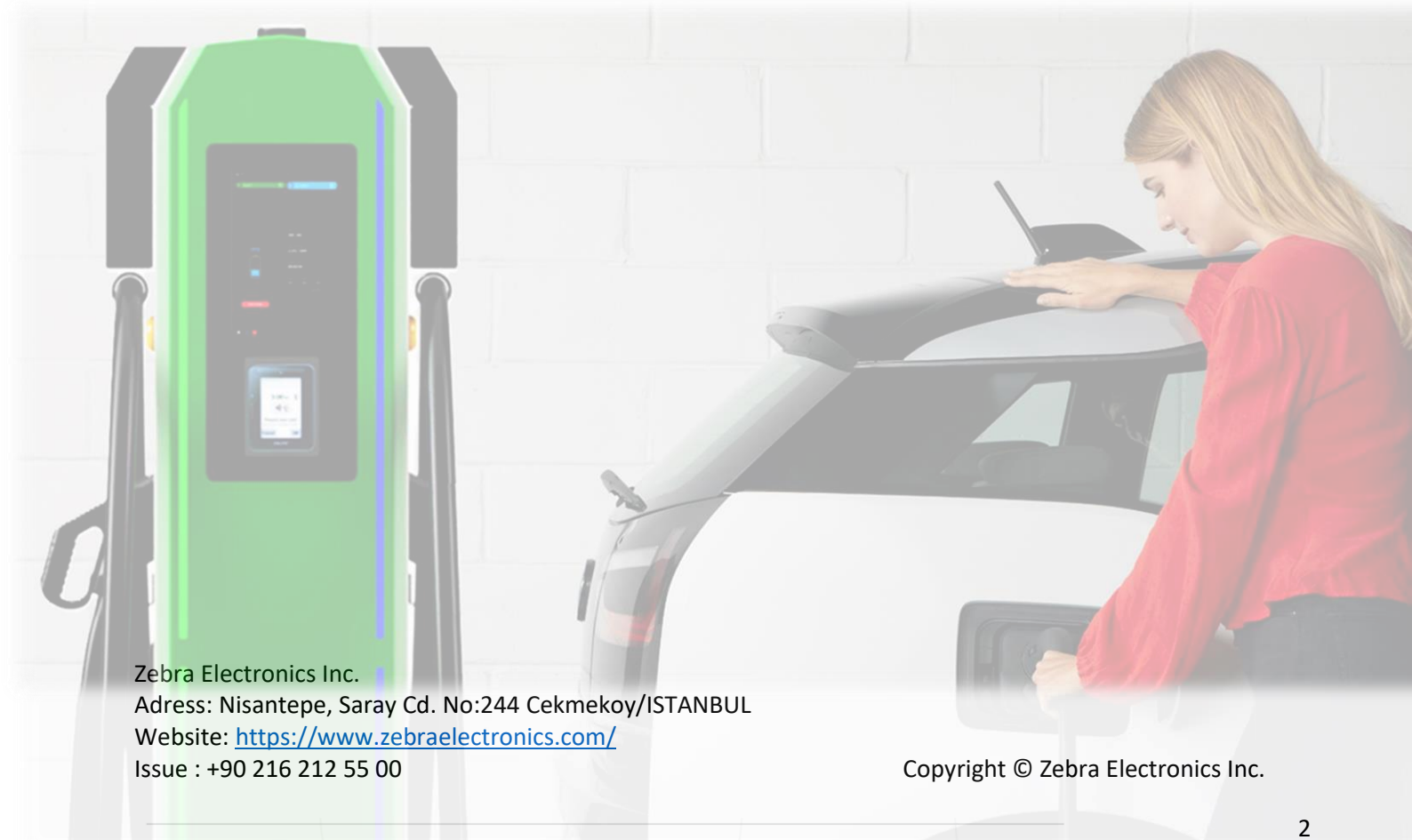

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Revision History

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FOREWORD

Overview

This document explains how to use the Boost-E DC split type charging station.

The pictures in this document are for reference only. The specific structure is subject to the actual product.

Audience

This document is intended for users who will use the device.

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1. Safety Precautions

Before transporting, storing, installing, operating, using, and/or maintaining the equipment, read this manual and follow the labels on the equipment and all safety precautions in this manual. In this manual, "equipment" refers to the products, software, components, spare parts, and/or services related to this manual. "Company" means the manufacturer (producer), seller or/and service provider of the equipment. "You" means the entity transporting, storing, installing, operating, using, or/and maintaining the Equipment.

The "danger", "warning", "cautions", and "notices" in this manual do not represent all safety precautions that should be observed. You should also comply with relevant international, national, or regional standards and industry practices. The Company shall not be liable for any violation of safe operation requirements or violation of safety standards for design, production and use of equipment.

The equipment shall be used in the environment that meets the requirements of the design specifications. Otherwise, the equipment failure, abnormal function of the equipment, or component damage may be caused, which is not within the scope of the equipment quality assurance. Otherwise, the Company shall not be liable for compensation for personal injury or loss of property that may be caused.

All operations such as transportation, storage, installation, operation, use, and maintenance shall comply with applicable laws, regulations, standards, and specifications.

It is prohibited to perform reverse engineering, decompile, disassemble, adapt, implant, or other derivative operations on the device software. It is prohibited to study the internal implementation logic of the device, obtain the source code of the device software, or infringe intellectual property rights by any means. It is prohibited to disclose the results of any device software performance test.

The Company shall not be liable for any of the following situations or the results thereof:

- By earthquakes, floods, volcanic eruptions, mudslides, lightning strikes, fires, wars, armed conflicts, typhoons,
- Equipment damage caused by wind, tornado, extreme weather, and force majeure.
- Not operated under the conditions of use described in this manual.
- The installation and use environment does not meet relevant international, national, or regional standards.
- Installation and use of equipment by unqualified personnel.
- Fail to follow the operation instructions and safety warnings in the product and documentation.
- Unauthorized disassembly, modification of the product or modification of the software code.
- Damage caused by transportation by you or by a third party commissioned by you.
- Damage caused by storage conditions that do not meet the requirements in the product documentation.
- Your materials and tools do not meet the requirements of local laws, regulations, and relevant standards.
- Damage caused by negligence, willfulness, gross negligence, misoperation, or non-Zebra Electronics reasons by you or a third party.

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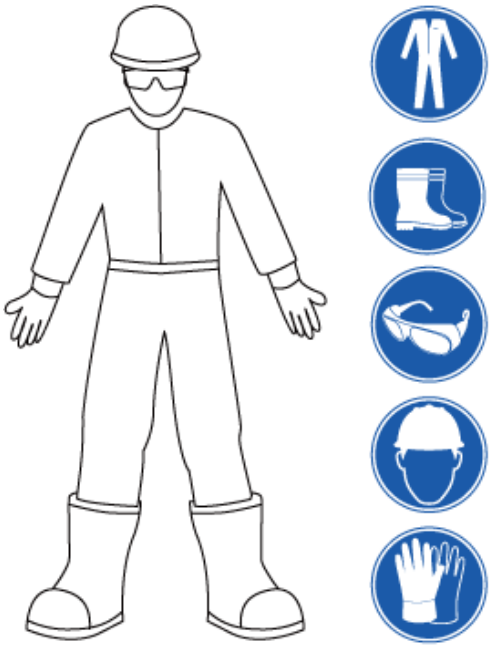
1.1 Personal Safety

	Do not operate with power on during installation. Do not install or remove cables with power on. Electric arcs or electric sparks will occur when the cable core contacts the conductor, which may cause fire or personal injury.
	When the equipment is energized, improper or incorrect operations may cause fire or electric shock, resulting in casualties or property losses.
	Do not wear conductive objects such as watches, bracelets, bracelets, rings, and necklaces during operation to avoid electric shock burns.
	Special insulation tools must be used during the operation to avoid electric shock injury or short circuit fault. The insulation withstand voltage level must meet the requirements of local laws, regulations, and specifications.
	Special protective appliances must be used during operation, such as protective clothing, insulation shoes, goggles, safety helmet, insulation gloves, etc.

Figure 1-1 Special protective equipment



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General Requirements

- Do not disable the device protection device and ignore the warnings, cautions and precautions in the manual and the device.
- During the operation of the equipment, if a fault that may cause personal injury or damage to the equipment is found, the equipment shall be terminated immediately.
- Operate, report to the person in charge and take effective protective measures.
- Do not power on the device before the device is installed or confirmed by professional personnel.
- Do not contact the power supply equipment directly, with other conductors, or indirectly through wet objects, or contact any.
- The voltage at the contact point shall be measured before the conductor surface or terminal to confirm that there is no danger of electric shock.
- Do not touch the running fan with your fingers, components, screws, tools, or boards. Otherwise, you may hurt your hands or damage the device.
  Standby.
- In case of fire, evacuate the building or equipment area and press the fire alarm bell or call the fire phone.
  Under any circumstances, it is prohibited to enter the burning building or equipment area again.

Personnel Requirements

- The personnel who operate the equipment include professionals and trained personnel.
  - Professionals: familiar with the principle and structure of equipment, have training or operation experience, can understand equipment safety.
  - People who have potential sources and levels of danger during installation, operation, and maintenance.
  - Trained personnel: personnel who have received appropriate technical and safety training and have the necessary experience and are aware.
  - To the dangers that may be caused to him when performing an operation, and to be able to take measures to himself or other.
  - The risk to personnel is minimized.
- The personnel responsible for installing and maintaining the equipment must be strictly trained to master the correct operation methods and understand the various
- Safety precautions and relevant standards in the country/region.
- Only qualified professionals or trained personnel are allowed to install, operate and maintain the equipment.
- Only qualified professionals are allowed to remove safety facilities and service equipment.
- In special scenarios, such as electrical operations, climbing operations, and special equipment operations, the personnel must have the local country/region requirements.
- Special operation qualification.
- Replacement of equipment or components, including software, must be done by authorized professionals.
- Do not approach the equipment except the personnel who operate the equipment.

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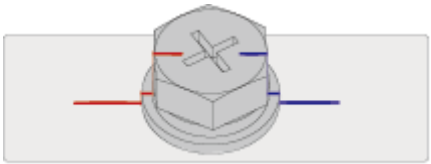
1.2 Electrical Safety

Before connecting electrical connections, ensure that the equipment is not damaged. Otherwise, electric shock or fire may occur.
Non-standard and incorrect operations may cause accidents such as fire or electric shock.
During the operation, foreign objects must be prevented from entering the equipment, otherwise the equipment may be short-circuited, faulty, damaged, and load supply. Power derating or power failure, and personal injury.
Before installing the equipment that needs grounding, install the PGND cable first. Remove the PGND cable last when removing the device.
Considering the electrochemical corrosion of copper and aluminum, it is prohibited to use aluminum wire to directly connect it.

General Requirements

- The installation, operation, and maintenance must be performed according to the sequence specified in the manual. Do not modify, add, or change the installation without permission. Do not change the installation sequence without authorization.
- Install temporary fences or warning ropes in the work area and hang "No Entry" signs. Off limits.
- Before installing or removing power cables, turn off the device and its front and rear switches.
- The charging station shall reserve the power access load capacity that meets the equipment use. The AC input voltage and current of the equipment should be Meets the technical specifications.
- In case of emergency, press the emergency stop switch immediately, do not perform other operations, and contact professional personnel Reason.
- When liquid enters the device, power off the device immediately. Do not continue to use the device.
- Before operating the equipment, carefully check that the tools used meet the requirements and register them in the book. Collect by data after the operation is complete. Back to prevent left inside the device.
- Before installing a power cable, ensure that the cable labels are correct and the cable terminals are insulated.
- When installing the equipment, use a torque tool with a proper range to tighten the screws. When tightening with a wrench, make sure the wrench is not skewed, and the torque error does not exceed 10% of the specified value.
- Screws shall be set with torque tools and double checked with red and blue marks. Installation personnel confirm the screw tightening. After tightening, paint blue marks on the screws; After the inspection personnel confirm the tightening, the red mark is painted (the line mark is required). Across the edge of the screw.



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- Ensure that boards or filler panels are installed in all slots. Prevents accidents caused by dangerous voltage and energy on the board. Damage, ensure that the air duct is normal, control electromagnetic interference, and avoid dust or other exceptions on the backplane, bottom plate, and board. Things.
- After installation, ensure that all electrical components, such as protective housings and insulating sleeves, are in place to avoid electric shock. Risk.
- After the installation is complete, clean the installation tools, metal parts, and sundries in and around the equipment in time.
- If the device has multiple inputs, disconnect all inputs to the device. After the device is powered off, perform the following operations: Operation.
- When maintaining the downstream power supply equipment or power distribution equipment, turn off the corresponding output circuit breaker of the power supply equipment.
- During equipment maintenance, hang "Do not close" signboards on the up and down switches or circuit breakers and put-up warnings. Card to prevent accidental connection. You can power on the device again only after the fault is rectified.
- During fault diagnosis and troubleshooting, the following safety measures must be completed if power failure is required: power failure > power inspection > installation Grounding wire > Hanging signboards and installing shelters.
- Check the terminal screws of the equipment periodically and ensure that they are tightened properly.
- If the cable is damaged, it must be replaced by professional personnel to avoid risks.
- Do not alter, damage, or block the labels and nameplates on the equipment. Replace the labels and nameplates in time due to long-term use. Clear signage.
- Do not clean the internal and external electrical components of the equipment with water, alcohol, or oil.

Grounding Requirements

- The grounding impedance of the equipment must meet the local electrical standards.
- The equipment should be permanently connected to the protective ground. Before operating the equipment, check the electrical connections of the equipment to ensure that the equipment has been Reliable grounding (grounding resistance is less than or equal to 4 ohms).
- Do not operate the equipment without a grounding conductor.
- Do not damage the grounding conductor.
- For the equipment that uses a three-core socket, ensure that the grounding terminal in the three-core socket is connected to the protection ground. The device is a large contact current device. Before connecting the input power supply, the protective grounding of the device shell must be performed. The terminal is grounded to prevent the leakage current of the device from causing electric shock to the human body.

Cabling Requirements

- Cable selection, installation, and cabling must comply with local laws and regulations.
- Do not twist or circle the power cable during the routing. If the length of the power cable is not enough, the weight must be Do not make connectors or solder joints in the power cables when replacing the power cables.
- After the cable is split, the cable terminal head should be made at the cable distribution position for protection.
- All cables must be securely connected, properly insulated, and of proper specifications.

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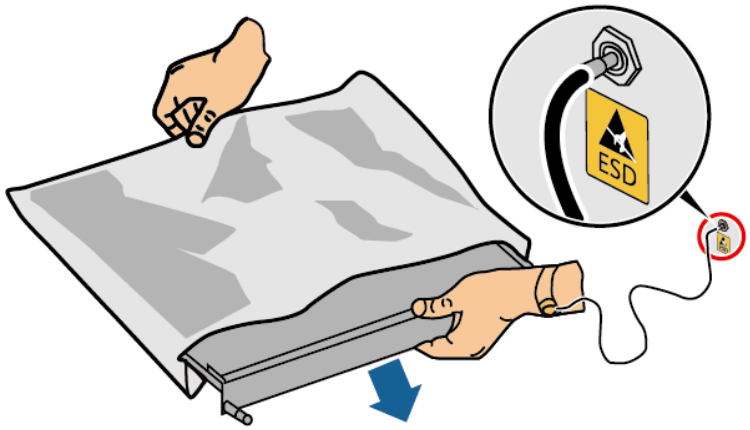
- Cable troughs and cable holes are free of sharp edges. Cables are routed through pipes and holes are protected to prevent cables from being sharp. Damage to edges, burrs, etc.
- Cables of the same type must be bound together and the appearance must be straight and tidy without damage to the sheath. Different types of cables are routed separately. Stop intertwining or cross routing.
- After the cable connection is complete or leaves the cable during the cable connection, seal the cable port with sealing mud immediately to avoid moisture and small animals.
- Use cable supports and cable clamps to securely fix buried cables. Ensure that cables in the backfill area are connected to the
- The ground is closely attached to prevent the cable from being deformed or damaged due to stress when the soil is backfilled.
- When the external conditions (such as the routing mode or ambient temperature) change, refer to GB 50217 and GB/T. 16895.6 or local laws and regulations, and check whether the current-carrying capacity meets the requirements.
- Do not push the cable directly from the vehicle to prevent the cable performance deterioration due to cable damage, affects current carrying and temperature rise.

ESD Requirements
Notices:

Static electricity generated by the human body can damage the electrostatic sensitive components on the board, such as the large-scale integrated circuit (LSI).

- When touching the equipment, hold boards, modules with exposed circuit boards, or ASIC chips.
- Wear ESD clothes, ESD gloves, or wrist strap. Ensure that the other end of the ESD wrist strap is properly grounded.
- When holding a board or a module with an exposed circuit board, hold the board or module edge that does not contain components,
- Do not touch components with your hands.
- The removed boards or modules must be packed with antistatic packing materials before storage or transportation.

Figure 1-2 Wearing the ESD wrist strap



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1.3 Environmental Requirements

	Do not place the device in an environment with flammable, explosive gases, or smoke. Do not perform any operations in this environment.
	Do not store inflammable and explosive articles in the equipment area.
	Do not place the device near heat or fire sources, such as fireworks, candles, heaters, or other heating devices. Heating the device may damage the device or cause fire.
	When the device is running, do not block the air vents, heat dissipation system, or cover the device with other objects to prevent the device from being damaged or caught on fire.

General Requirements

- The temperature and humidity of the equipment should be appropriate. Store the equipment in a clean, dry, well-ventilated area and prevent dust. And condensation.
- Do not install or operate the equipment beyond the scope specified in the technical specifications. Otherwise, the performance and safety of the equipment will be affected.
- Do not install, use, or operate outdoor equipment in bad weather such as lightning, rain, snow, and gale above Grade 6
- Cables (including but not limited to moving equipment, operating equipment and cables, inserting and removing signal ports connected to outdoors, working at heights, installing outdoors, and opening doors).
- Do not install the equipment in the radiation such as dust, smoke, volatile gas, corrosive gas, and infrared. In environments where radiation, organic solvents or salts are too high.
- Do not install the device in an environment with conductive metal dust or magnetic dust.
- Do not install the equipment in areas where fungi, molds and other microorganisms are prone to breed.
- Do not install the equipment in areas with strong vibration, strong noise, or strong electromagnetic interference.
- The site selection shall comply with local laws and regulations and relevant standards.
- The installation environment is solid ground, without rubber soil, weak soil or easy subsidence, and low-lying areas are prohibited.
- Or in areas prone to water accumulation, the site level should be higher than the historical highest water level in the area.
- During installation, operation, and maintenance, clean the water, snow, and other sundries on the top of the door before opening the door, prevent debris from falling into the equipment.
- When installing the device, ensure that the installation base is secure and meets the load-bearing requirements of the device.
- After installing the equipment, remove the empty packaging materials, such as cartons, foam, plastics, and cable ties, from the equipment area.

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1.4 Mechanical Safety

	Wear safety helmets, safety belts or waist ropes for high-altitude operation, and tie them to firm and strong structural parts. Do not hang them on moving objects or metal with sharp edges and corners to prevent hooks from sliding off and falling.
	Tools must be well prepared and qualified by professional organizations. Do not use tools with scars, unqualified inspection, or beyond the inspection validity period. Ensure that tools are firm and not overloaded.
	Before installing the device in the cabinet, ensure that the cabinet is fixed to prevent the cabinet from tilting and collapsing due to unstable center of gravity. As a result, the installation personnel are hurt and the device is damaged.
	When pulling the device out of the cabinet, take care of the unstable or heavy device installed in the cabinet to avoid being crushed or smashed.
	Do not drill holes on the equipment. Drilling can damage the sealing, electromagnetic shielding, internal components, and cables of the device. Metal scraps generated by drilling can cause short circuit boards.

General Requirements

- Paint scratches during equipment transportation and installation must be repaired in time. Long-term scratches are prohibited.
- Without the evaluation of the Company, it is prohibited to carry out arc welding and cutting on the equipment.
- Do not install other equipment on the top of the equipment without evaluation by Zebra Electronics.
- When working in the space above the top of the equipment, add protection on the top of the equipment to avoid damage to the equipment.
- Use the correct tools and master the correct methods of using the tools.

Safety for Handling Heavy Objects

- When carrying heavy objects, be prepared to bear the weight to avoid being crushed or sprained by heavy objects.

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- When multiple people carry heavy objects at the same time, consider the conditions such as height, and make reasonable personnel collocation and division of labor to ensure the weight.
- Balanced quantity distribution.
- When two or more people carry heavy objects together, one person shall direct the equipment and lift or put down the equipment at the same time.
- The pace of proof is unified.
- When moving the equipment by hand, wear protective gloves and labor protection shoes to avoid injury.
- When carrying the equipment by hand, first close to the object, squat down the body, with the strength of straightening your legs, do not use the back.
- Strength, slowly and smoothly lift the object, do not suddenly lift or twist the torso.
- When moving or lifting a device, hold the handle or bottom edge of the device, but not the installed inside the device.
- Handle of the module.
- Do not quickly lift the weight to the height above the waist. Place the weight on the worktable half waist high or on the appropriate ground.
- Square, adjust the palm position, and then move it up.
- Heavy objects must be carried with balanced and stable force. The movement speed should be uniform and low speed; The installation requires smooth and slow speed,
- Do not scratch the surface of the device or damage the components and cables of the device, such as impact or drop.
- When moving heavy objects, pay special attention to worktables, slopes, stairs and places that are prone to slipping.
- When crossing the threshold, ensure that the door is wide enough to allow the device to pass through to prevent bumping or rubbing fingers.
- When transporting heavy objects, move your feet instead of twisting your waist. When it is necessary to lift and transfer heavy objects simultaneously,
- The point your feet in the direction you want to move before moving them.
- When using a forklift truck to move the forklift truck, the forklift truck must be in the middle position to prevent overturning. Before moving, use ropes to tighten the equipment.
- Secured to the forklift; When moving, special personnel are required to take care of it.
- Sea transportation or highways with good road conditions should be selected for transportation. Railways and air transportation are not supported. During transportation, try to reduce bumps and tilts.

High-altitude Safety

- All operations carried out above 2 meters from the ground are high-altitude operations, and guardians must be set for high-altitude operations.
- Must undergo relevant training, obtain relevant qualification certificate before taking up the post, carry out high-altitude operation.
- Steel pipe rainwater is not dry or other dangerous conditions shall stop high-altitude operation. When the above situation is over, it must.
- The operation can only be carried out after the safety person in charge and relevant technical personnel check all kinds of operation equipment and confirm the safety.

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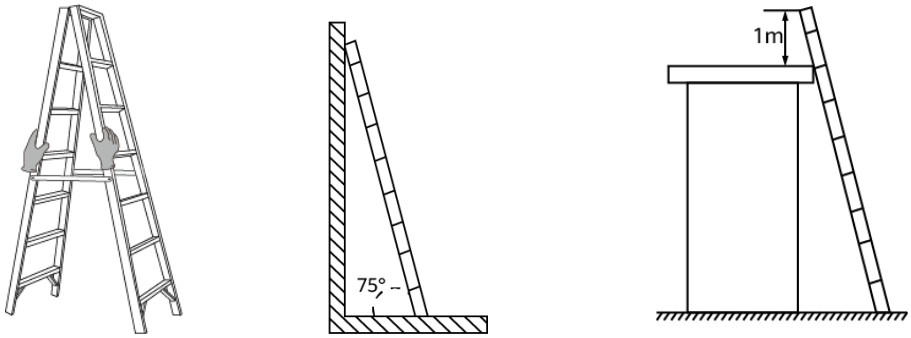
- At the site of high-altitude operation, dangerous forbidden areas shall be demarcated, obvious signs shall be set up, and irrelevant personnel shall not enter.
- Guardrails and signs shall be set at the edge and hole of high-altitude operation to prevent slipping into the air.
- Scaffolding, springboard, or other sundries are prohibited on the ground below the high-altitude operation area.
- Ground personnel are not allowed to be on high.
- Stay or pass directly below the empty work area.
- Carry the operating instruments and tools properly to prevent equipment damage or personal injury caused by falling tools.
- It is prohibited for high-altitude workers to throw objects from high altitude to the ground, and it is prohibited to throw objects from the ground to high altitude.
- Slings, baskets, elevated vehicles, or cranes, etc.
- The upper and lower layers should be avoided at the same time. If it is unavoidable, special protection must be provided between the upper and lower layers.
- Shed or other protective measures shall be taken, and tools and materials shall not be stacked on the upper layer.
- When disassembling the scaffold after the work is completed, it shall be carried out in layers from top to bottom. It is prohibited to disassemble the upper and lower layers at the same time.
- When one part is used, the other parts should be prevented from collapsing.
- High-altitude operators shall operate in strict accordance with the high-altitude safety regulations and shall cause violations of the high-altitude safety regulations.
- The company is not responsible for the accident.
- It is prohibited to laugh and play when working at height, and to rest in the working area at height.

Ladder Safety

- Wooden ladders or insulated ladders shall be used when electric climbing operations may be involved.
- Platform ladders with guardrails are preferred for climbing. Flat ladders are not recommended.
- Before using the ladder, make sure that the ladder is intact and the load-bearing capacity of the ladder meets the requirements. Do not use the ladder overweight.
- The ladder must be placed in a stable place, and the ladder must be supported by someone during the operation.
- When climbing the ladder, keep your body stable and ensure that the center of gravity of your body does not deviate from the edge of the ladder to reduce the danger and ensure Safe.
- The rope must be firm when using the step ladder.
- If a flat-head ladder is used, the inclination of the ladder should be 75°. You can use an angle ruler to measure the inclination, as shown in the following figure.



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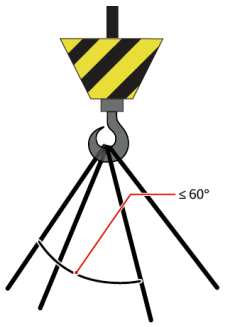
- If a flat-line ladder is used, the wide foot of the ladder shall be placed downwards, or protective measures shall be taken at the bottom of the ladder to prevent slipping.
- If a ladder is used, the maximum height of the foot standing shall not exceed the fourth step of the ladder from top to bottom.
- If the ladder is used to climb the platform, the vertical height of the ladder beyond the platform must be at least 1 meter.

Hoisting Safety

- The hoisting personnel must be trained and qualified before taking up the post. Temporary warning signs or fences shall be erected in the hoisting area for isolation.
- The foundation for hoisting must meet the load-bearing requirements of the crane.
- Before hoisting, ensure that the hoisting tool is firmly fixed on the fixed object or wall that meets the load-bearing standard.
- Do not walk under the boom and hoisting object during hoisting.
- During hoisting, do not drag steel wire ropes and spreaders, and do not use hard objects to impact.
- Ensure that the included angle between the two ropes is less than or equal to 60°, as shown in the following figure.

Drilling Safety



- Prior to drilling the holes, the consent of the Client and the Contractor shall be obtained.
- Wear safety protective appliances such as goggles and protective gloves when drilling holes.
- Avoid embedded pipelines or lines when drilling holes to avoid short circuit or other hazards.
- When drilling holes, the equipment shall be sheltered and protected to prevent debris from falling into the equipment. After drilling holes, the debris shall be cleaned in time.

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1.5 Charging Equipment Safety

General Requirements

When transporting charging devices separately, take proper protection measures to avoid device damage caused by vibration, impact, or falling. Do not allow children to approach, touch, or use the charging post.
Do not place dangerous materials such as flammable, explosive, or combustible materials, chemicals, and combustible steam near the charging pile. Do not use the device when water enters or leaks. Do not use the charging pile when the equipment is faulty. Do not operate the charging pile without permission when the charging is abnormal. If any abnormality is found, contact the personnel in time. Do not attempt to disassemble, repair, or modify the charging pile. If you need to repair or modify the charging pile, contact the staff. Improper operations may cause equipment damage, water leakage, and electricity leakage. Strictly follow the charging instructions and instructions on the device. Otherwise, electric shock and fire may occur.
The O&M personnel shall periodically check and maintain the emergency stop switch to ensure that the emergency stop switch is valid. If a fault occurs and a power failure occurs, the repair must be carried out by professional personnel or authorized O&M personnel. In case of fire or water overflowing of charging equipment, do not approach the charging equipment. Please notify professionals familiar with the equipment and emergency handling methods to handle the emergency.

Charging Safety

This device is for electric vehicle charging only.

Place the charging gun in the gun seat without using the charging post to avoid unnecessary pollution and damage. Before charging, check the charging device to ensure that the charging device is not scratched, rusted, or cracked, or the charging port, cable, and plug surface are damaged. Do not use the charging device when the charging device is damaged. Before charging, check the charging gun, gun seat insulator, pin and jack, and clean them without foreign objects. If any foreign object is found in the insulator, pin and socket of the charging gun seat, report it to the staff immediately and do not charge it. Before charging, check whether the charging gun is inserted in place and whether the hook is fully in place. Do not modify or disassemble the charging gun without permission, and do not use external cables or adapters. Otherwise, charging failures may occur and fires may occur. Do not use sharp objects such as screwdrivers and tweezers to touch the charging gun pins and gun sockets. Otherwise, the pins and sockets may be damaged. Do not put your fingers into the charging plug. Do not immerse the charging gun in water. Do not step on your feet or crush the charging gun head or gun line by the vehicle. Do not touch the charging port when the vehicle is charging. Do not pull out the gun head during charging to ensure the safety of people and vehicles during charging. It is recommended that you stop charging your vehicle in thunderstorm weather. Lightning and lightning may damage the charging device. In case of emergency, press the emergency stop switch immediately. Do not perform other operations and contact professional personnel for handling. During the charging process, the vehicle is prohibited from driving. Please charge the vehicle while the vehicle is stationary. Please turn off the engine before charging the hybrid tram. During the charging process, the charging operator must monitor the charging process. In case of typhoon, rainstorm, hail and other extreme weather, the charging process shall be terminated immediately. After charging, it is prohibited to start the vehicle without unplugging the vehicle.

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2. Product Overview

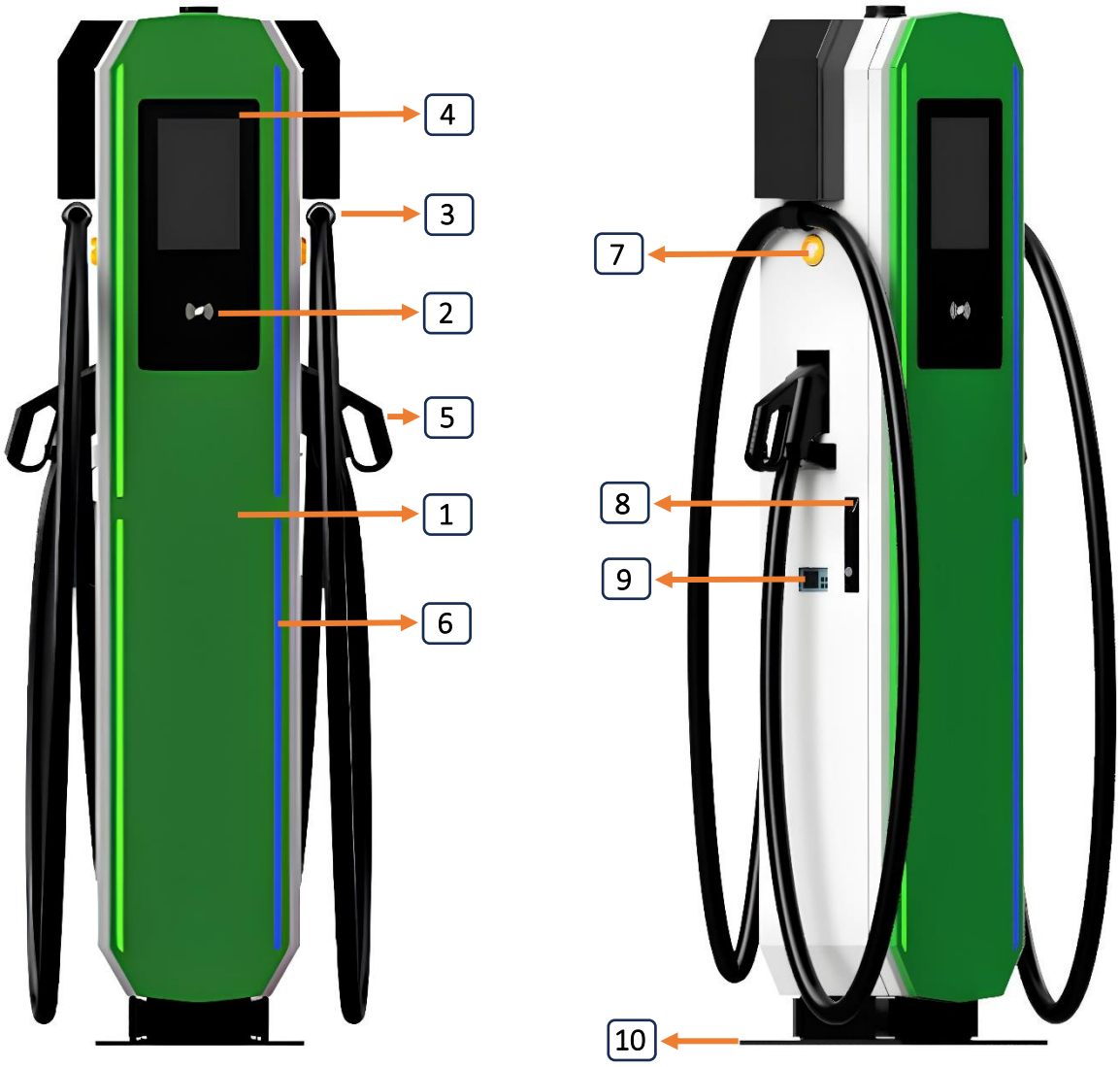

Figure 2-1 Boost-E Appearance

(1) Metal Body
(2) RFID
(3) Balancer
(4) 10.1'' Display
(5) CCS
(6) RGB Led
(7) Emergency Stop Button
(8) Energy Meter
(9) Mounting Base

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2.1 Technical Parameters

BOOST-E HIGH POWER CHARGER

There are some critical points that hardware, software and system developers as well as service providers should focus on in order to maximize the user experience in electric vehicle charging. The most important of these are the availability and sustained power performance of DC stations that offer fast charging. Distributed System architecture offers sufficiently available charging access with high power performance for up to 12 vehicles at a charging station simultaneously, maximizes efficiency, utilisation rate and consequently the station's return on investment.

BOOST-E, a distributed system high-speed charging dispenser developed by **ZEBRA ELEKTRONİK A.Ş.**, which has a significant industry experience in electric vehicle charging network operation, technical service as well as charging system R&D and production activities, improves the charging experience of users and the return on investment of investors. **BOOST-E** is a well-equipped HPC dispenser solution that takes it to the next level.

Technical Specification	
Power Input & Output	
Charge power (configurable)	60 kW - 500 kW
In/Out Voltage	200 Vdc - 1000 Vdc
In/Out Nominal Current Voltage	400 A Continues - 500A Maximum
Cable Lenght	> 4m
Connector	2
Cable Management System	Available
Vehicle Conneciton	IEC 62196 CCS 2
User Interface & Communication	
Connection Protocol	TCP \ IP
Communication Protocol	OCPP 1.6 ve OCPP 2.0.1
Communication	Wi-Fi/ Ethernet/ LTE
Display	10.1" Touchscreen Display, IK10 Anti-reflective coating
Charger Status Information	RGB LED, Mobile Application, Display
RFID Card Reader	Mifare (ISO-14443-A)
Language Support	Turkish,English and German language standart, other languages available upon request
Protection	
Isolation Monitoring Device	IMD
Overcurrent/Circuit protection	2 x 315A Fuse
Over-temperature protection	Configurable 60°C - 80°C
General Specification	
Application environment	Indoor / Outdoor
Operating Temperature Range	-35°C - +50°C
Storage Temperature	-40°C - +75°C
Relative Humidity	5% - 95% RH
Dimensions	W502 * D302 * H1884
Installation Mode	Floor-Mounted on Concrete
IP Rating	IP54
Impact Protection Level	IK10
Management Specification	
Software Update	Automatic remote update with Zebra Electronics Cloud
Dynamic Load Balancing	Active load balancing between connectors
Central Management	OCPP compatible station control and management system
Standarts	
Standarts	EN 61851-1 2019, IEC 62955:2018, IEC 61008-1 2010, IEC/EN 62196-1, IEC 62368-1, IEC61439-1, ISO 14443-A

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2.2 LED Status Indicators

LED Status Colors	Blinking	Steady On
Green	Preparing	Available
Blue	Finishing	Charging
Red	Emergency	Not Available, Faulty
Turquoise	-	Charging has been paused.

Table 2-3 RGB Led Description

3. Transactions

3.1 Charging Connection Operations

- Verify that the LED indicators on the charging unit are a steady green and that the unit's status indicates it is ready to initiate charging.
- Remove the charging socket from the socket holder and insert it into the charging socket of the electric vehicle.
- Subsequently, a charging initiation method is selected and the charging process is commenced.

3.2 User Interface

Figure 3-1: Home Page

Figure 3-2 Language Selection

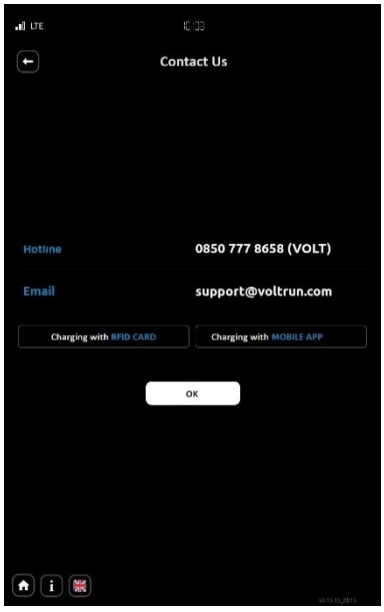

Figure 3-3 Contact Information

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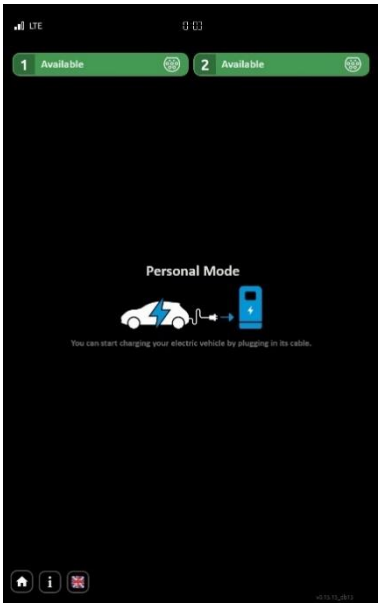

Figure 3-4: Vehicle Connection

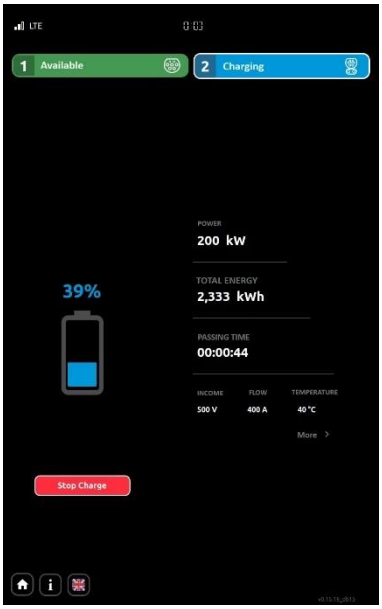

Figure 3-5: Charging Process

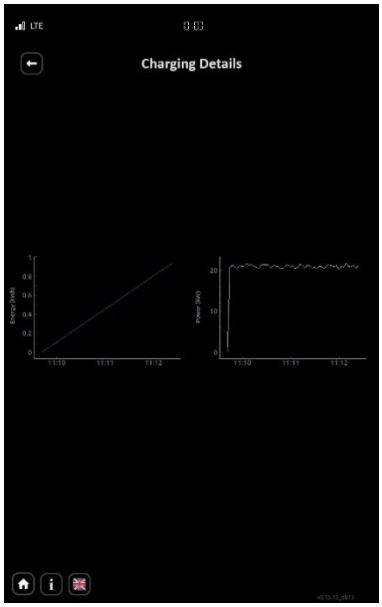

Figure 3-6: Charge Details

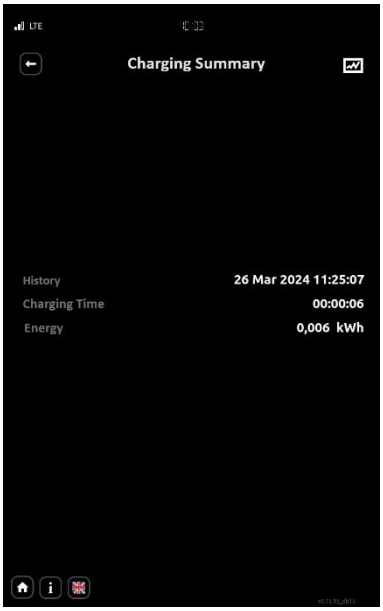

Figure 3-7: Charge Summary Interface

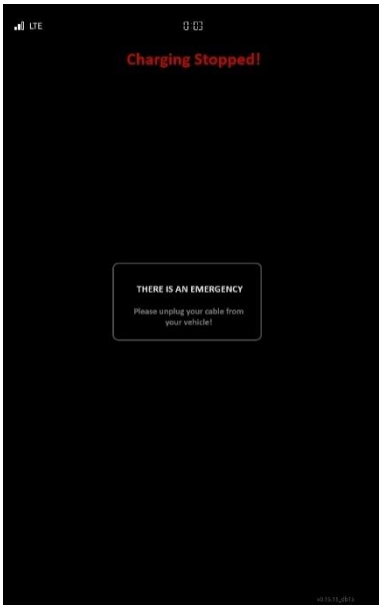

Figure 3-8: Emergency

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3.3 Charging Start Procedures

3.3.1 RFID Card

Step 1: Remove the charging socket from the socket holder and insert it into the charging socket of the electric vehicle.

Step 2: Bring your RFID card closer to the reader area on the unit.

Step 3: After reading the card, observe that the LED indicator is flashing green and communicating with the vehicle on the screen. Confirm that charging has started by verifying that the LED indicator illuminates continuously in blue.

Step 4: Upon charging completion, scan your RFID card again to end the charging session. Alternatively, press the "Stop Charging" button on the screen.

Step 5: Remove the charging socket from the vehicle socket and insert it into the connector holder.

3.3.2 QR Code / Station ID

Step 1: Remove the charging socket from the connector holder and plug it into the charging socket of the electric vehicle.

Step 2: To initiate charging, click the "Start/Finish Charging" button within the mobile application. Subsequently, select the desired charging socket by scanning the QR code or entering the unit ID number (e.g., E12345678) displayed on the screen.

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Step 3: Once selected, observe the LED indicator flashing green as the unit communicates with the vehicle. Confirm charging initiation by verifying that the LED indicator illuminates continuously in blue

Step 4: Once selected, observe the LED indicator flashing green while the unit communicates with the vehicle. Confirm charging initiation by the LED indicator illuminating steadily in blue.

Step 5: Remove the charging socket from the vehicle socket and insert it into the socket holder.

4. Troubleshooting

General Troubleshooting: If you encounter issues with the charging unit, please refer to the following solutions. For persistent problems, contact our technical support team or the manufacturer, providing detailed information about the malfunction.

Specific Issues and Solutions:

- **"Station is currently offline" error:** This indicates a lack of internet connection. Verify the network device, unit ID, server address, and port number. If the issue persists, contact technical support or the installation team.
- **"Emergency!" warning:** Immediately disconnect the charging cable from the vehicle. Contact our call center and technical support for further assistance. Do not attempt to charge until the issue is resolved.
- **No power to display or LED indicators:** Check the power supply to the unit. Ensure the switchgear is functioning correctly. Do not attempt repairs; contact technical support.
- **Red LED indicators:** The unit is malfunctioning. Charging is not possible. Contact technical support.
- **Stuck charging cable hanger:** The cable balance mechanism may be locked. Gently pull the cable downward to release it.

Note: For technical assistance, please provide the unit's identification number, charging station location, and a detailed description of the problem.

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5. Product Care

The table below outlines the unit's required periodic maintenance procedures. Maintenance intervals may vary based on environmental conditions, operational frequency, and local regulations.

Equipment	Period	Care Method
Air Filters	Monthly	Cleaning / Replacement
Charging Connectors	Monthly	Cleanup
Fans	Monthly	Cleanup
Emergency Stop Button	Monthly	Test
Contactors	Monthly	Test
Electronic Cards	Monthly	Test
Balances	Monthly	Cleanup

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6. Charging Unit Dimensions

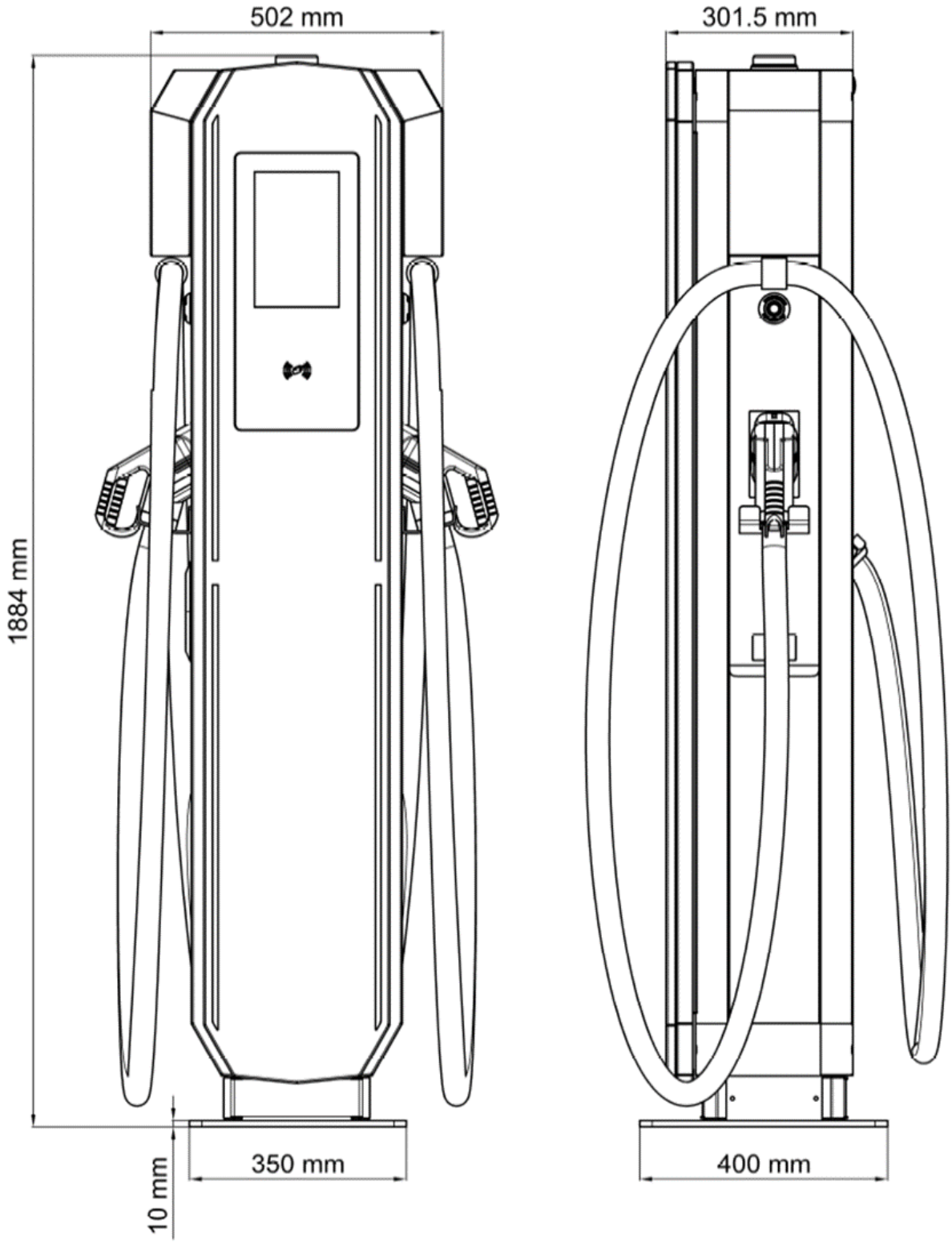

Figure 6-1 Dimensions of Charging Terminal

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7. Customer Service

If you encounter any issues or require further clarification regarding the unit or charging process, please contact the manufacturer's customer service department.

Prior to contacting customer service, kindly:

- Review the troubleshooting guidelines outlined in the "Problems and Solutions" section.
- Refer to the vehicle manufacturer's user manual and specifications for additional information.
- Record the unit's identification number, charging station details, and charging duration for reference.

8. Frequently asked Questions

You can find the questions and answers about the Voltrun Charger below.

Questions	Answer
The station does not start charging	Make sure the station is connected to the power and the internet. Check which of the Led states specified in the installation manual.
The vehicle is not charging	Make sure the vehicle battery is not full. Follow the vehicle charge indicators. Make sure that there is no delayed charge setting on the vehicle.
Charging stopped after a few minutes of charging	Make sure there is no delayed charging setting and restart charging.
RFID card is not working	Make sure your card is activated via internet portal

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Voltrun Portal (www.voltrun.com) for Station Owners

1. **Central Administration**

Charge station management and monitoring via internet portal

2. **Tariff Management**

You can set your tariffs (electricty and minute) via internet portal.

3. **Usage Reports**

Ability to view instant and past usage reports through the internet portal

4. **Payment Request**

You can request all your expenses with the instruction you can give through the portal.

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9. Abbreviations

LSI	Large-Scale Integration	Application-Specific Integrated Circuit
ASIC	Application-Specific Integrated Circuit	Application-Specific Integrated Circuit
ESD	Electrostatic Discharge	Electrostatic Discharge
O&M	Operation and Maintenance	Operation and Maintenance
AC	Alternating Current	Alternating Current
DC	Direct Current	Direct Current
Wi-Fi	Wireless Fidelity	Wireless Fidelity
4G	4th Generation	4th Generation
RGB	Red Green Blue	Red Green Blue
RFID	Radio Frequency Identification	Radio Frequency Identification
LTE	Long Term Evolution	Long Term Evolution
IMD	Insulation Monitoring Device	Insulation Monitoring Device
OCPP	Open Charge Point Protocol	Open Charge Point Protocol
CCS	Combined Charging System	Combined Charging System
FE	Fast Ethernet	Fast Ethernet
GSM	Global System for Mobile Communications	Global System for Mobile Communications
LAN	Local Area Network	Local Area Network

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