blink

# Pedestal Charging System
# Installation Manual


**Simply Smart.**

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# Contents

# Figures

# IMPORTANT SAFETY INSTRUCTIONS

## SAVE THESE INSTRUCTIONS

Before using the **blink** charging system, read all of these instructions, as well as the **WARNING** and **CAUTION** markings in this document, on the **blink** unit, and on your vehicle.

Consult the following symbols and related instructions for the actions necessary to avoid hazards.

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**WARNING:** Used when there is a risk of personal injury

**WARNING: RISK OF ELECTRIC SHOCK** – Used when there is a risk of electric shock

**WARNING: RISK OF FIRE** – Used when there is a risk of fire

**CAUTION:** Used when there is a risk of damage to the equipment

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**WARNING: RISK OF ELECTRIC SHOCK**

Basic precautions should always be followed when using electrical products, including the following:

a. Read all the instructions before using this product.

b. This device should be supervised when used around children.

c. Do not put fingers into the electric vehicle connector.

d. Do not use this product if the flexible power cord or EV cable is frayed, has broken insulation, or any other signs of damage.

e. Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.

**WARNING: RISK OF ELECTRIC SHOCK**

Improper connection of the equipment-grounding conductor can result in a risk of electric shock. Check with a qualified electrician or serviceman if you are in doubt as to whether the product is properly grounded. Do not modify the plug provided with the product – if it will not fit the outlet, have a proper outlet installed by a qualified electrician.

**MODEL PE-30/48 GROUNDING INSTRUCTIONS:** This product must be connected to a grounded, metal, permanent wiring system; or an equipment-grounding conductor must be run with the circuit conductors and connected to the equipment grounding terminal or lead on the product.

**WARNING: RISK OF ELECTRIC SHOCK**

- Do not touch live electrical parts.
- Properly install and ground this equipment according to this installation manual, as well as national, state, and local codes.
- Incorrect connections may cause electric shock.
- Disconnect input power before installing or servicing the equipment.

**WARNING:** This equipment is intended only for charging vehicles that do not require ventilation during charging. Please refer to your vehicle's owner's manual to determine its ventilation requirements.

**CAUTION: Incorrect connection may cause damage to the blink charging system.**

Use wire size and temperature rating as required by local code. Ground **blink** properly using equipment ground lug. Refer to the label in charger housing identifying service wiring terminal connections.

# Federal Communications Commission (FCC) Statement/Déclaration de Federal Communications Commission (FCC)

**NOTE:** This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy, and if not installed and used in accordance with these instructions, may cause harmful interference to radio communications. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

This device complies with Part 15 of the FCC Rules. Operation is subject to the following conditions:

1. This device may not cause harmful interference.
2. This device must accept any interference received, including interference that may cause undesired operation.
3. Changes or modifications not expressly approved by the manufacturer could void the user's authority to operate the equipment.

**NOTE**: Cet équipement a été testé et trouvé conforme aux limites pour un dispositif numérique de classe B, conformément à la Partie 15 des règlements de la FCC. Ces limites sont conçues pour fournir une protection raisonnable contre les interférences nuisibles dans une installation résidentielle. Cet équipement génère, utilise et peut émettre des fréquences radio, et s'il n'est pas installé et utilisé conformément à ces instructions, peut causer des interférences nuisibles aux communications radio. Si cet équipement provoque des interférences nuisibles à la réception radio ou de télévision, qui peut être déterminé en mettant l'équipement hors tension, l'utilisateur est encouragé à essayer de corriger l'interférence par un ou plusieurs des mesures suivantes:

- Réorienter ou déplacer l'antenne.
- Augmenter la distance entre l'équipement et le récepteur.
- Connecter l'équipement à une sortie sur un circuit différent de celui auquel le récepteur est connecté.
- Consulter le revendeur ou un technicien radio / TV.

Cet appareil est conforme à la Partie 15 des règlements de la FCC. Son fonctionnement est soumis aux conditions suivantes:

1. Ce dispositif ne doit pas causer d'interférences nuisibles, et
2. Cet appareil doit accepter toute interférence reçue, y compris les interférences qui peuvent perturber le fonctionnement.
3. Les changements ou modifications non expressément approuvés par le fabricant pourrait annuler l'autorité de l'utilisateur de faire fonctionner l'équipement.

## Industry Canada Statement/ Déclaration d'Industrie Canada

This Class B digital apparatus complies with Canadian ICES-003.
Cet appareil numérique de la classe B est conformé à la norme NMB-003 du Canada.

# Guidelines and specifications

This Installation Manual describes how to properly install **blink** Model PE-30 and PE-48 Electric Vehicle Supply Equipment (EVSE), referred to as the "**blink**" throughout this document.

## Applicable codes and standards

The installer or contractor is responsible for obtaining and becoming familiar with the following publications. Installer or contractor work and material shall comply with the local municipality's currently adopted versions of:

- National Electric Code
- Municipal, county, and state building codes and standards
- Occupational Safety and Health Administration (OSHA)
- Uniform Building Code
- Other relevant codes and standards that apply to the installation of structural components and electrical equipment

## Installer/contractor notes

The installer or contractor selected to install the **blink** Model PE-30 and PE-48 charging systems, including electrical connections, shall conform to the following general notes:

- Installation shall be performed as described in the electrical plans and approved drawings.
- All work shall comply with the local municipality's currently adopted version of the National Electric Code and Building Code.
- Labor and materials not specifically described, which are incidental to installations and without which a satisfactory job cannot reasonably be completed, are a part of this installation work.
- All materials used in the installation shall be new and UL-listed and labeled where required.
- The installation of AC power circuits and circuit disconnects is not included in this work. Such work must be performed by a certified electrical contractor.
- It shall be the installer's or contractor's responsibility to carefully read this entire installation manual and associated drawings and sketches to determine his/her responsibilities. Failure to do so shall not release the installer or contractor from doing the work in complete accordance with this document.

- During performance of the work and after all requirements of this installation manual and associated details are fully completed, ECOtality NA and/or the customer shall have the option to inspect the work.
- The installer or contractor shall not modify or otherwise alter **blink** equipment in any manner other than specifically authorized by this installation manual. Unauthorized modification to the **blink** equipment voids the manufacturer's warranty.

# Customer responsibility

The customer is responsible for contracting with a certified electrical contractor to perform all electrical work, including connections at the **blink**, supply circuit, and main service panel.

# Tools required for installation

### Meters

- Current Clamp Meter (with 600 A MAX AC/DC) (Recommended: Fluke® 336)
- Digital Multimeter (1000V MAX DC/AC) (Recommended: Fluke 87V)

### Hand tools

- Drill bit, 3/16-inch
- Hammer
- Pencil/marker
- Slotted and TORX®-head screwdrivers
- Wrench, 10 mm
- Torque wrench

### Installer-supplied items

- Service wiring to **blink**
- Conduit and fittings (1-inch trade size), except for cord-connected units

# blink features and specifications

### Features

- Certified to UL 2594 – Electric Vehicle Supply Equipment
- Charge circuit interruption device (CCID20)
- Ground monitoring circuit
- Nuisance-tripping avoidance and auto re-closure
- Cold load pickup (randomized auto-restart following power outage)
- Certified energy and demand metering

- Wireless IEEE 802.11g
- LAN capable
- RFID-based user verification system
- Web-based bi-directional data flow
- Cord management system

## Specifications

| Model | PE-30 | PE-48 |
|---|---|---|
| **Input Voltage** | 208-240 VAC +/-10% (120 VAC to GND) | |
| **Input Phase** | Single (3-wire) | |
| **Frequency** | 60 Hz | |
| **Input Current** | 30 Amps (maximum); configurable to 12A, 16A, or 24A | 48 Amps (maximum); configurable to 12A, 16A, 24A, or 30A |
| **Breaker Size** | 40 Amps; Available settings: 15A, 20A, 30A, or 40A | 48 Amps; Available settings: 15A, 20A, 30A, 40A, or 60A |
| **Output Voltage** | 208-240 VAC +/-10% | |
| **Output Phase** | Single | |
| **Pilot** | SAE J1772™ compliant | |
| **Connector/Cable** | SAE J1772 compliant; UL-rated at 30A maximum | |
| **Cord Length (output)** | 18 feet (approximate) | |
| **Exterior Dimensions** | Charger assembly: 19″ wide x 67-1/2″ high x 5″ deep<br>Base: 24″ wide x 1-1/2″ high x 8″ deep<br>Cord reel: 18″ diameter | |
| **Temperature Rating** | -22 °F (-30 °C) to +122 °F (+50 °C) | |
| **Enclosure** | NEMA type 3R sun- and heat-resistant | |
| **Mounting** | Pedestal | |

# Charger assembly layout

The charger assembly should be mounted in close proximity to the vehicle stall and at a location where the 18-foot charging cord can be easily connected to the vehicle charging port without the cord stretching taut and/or presenting a trip hazard.

**WARNING: RISK OF FIRE**
This equipment has arcing or sparking parts that must not be exposed to flammable vapors.
This equipment must be located at least 18 inches (460 mm) above the floor.

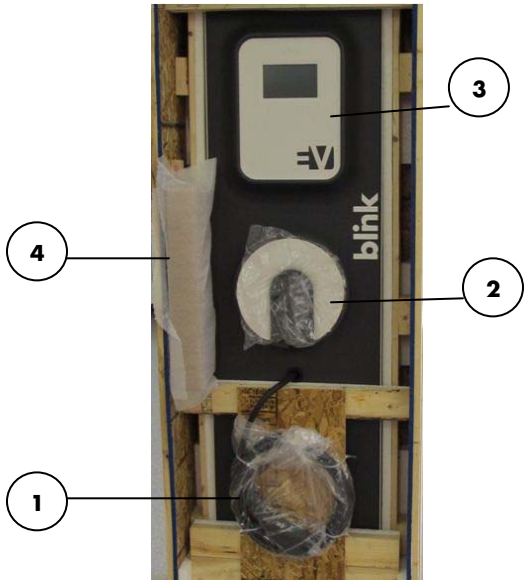
**Figure to come**

**Figure 1 – blink Installations, Typical**

# Installation

**WARNING: RISK OF FIRE**
To reduce the risk of fire, install **blink** on a fire resistant surface, clear of flammable fluids and substances.

## Shipping box contents




| | |
|---|---|
| 1. Cord reel | 3. Charger housing assembly |
| 2. Cord reel cover | 4. Beacon Light (in box) |

**Figure 2 — Shipping Box Contents**

- The **blink** is shipped in a crate (29"W x 16"H x 73 ½"L) containing all of the components already assembled and the 18-foot charging cord..

# Charger housing assembly

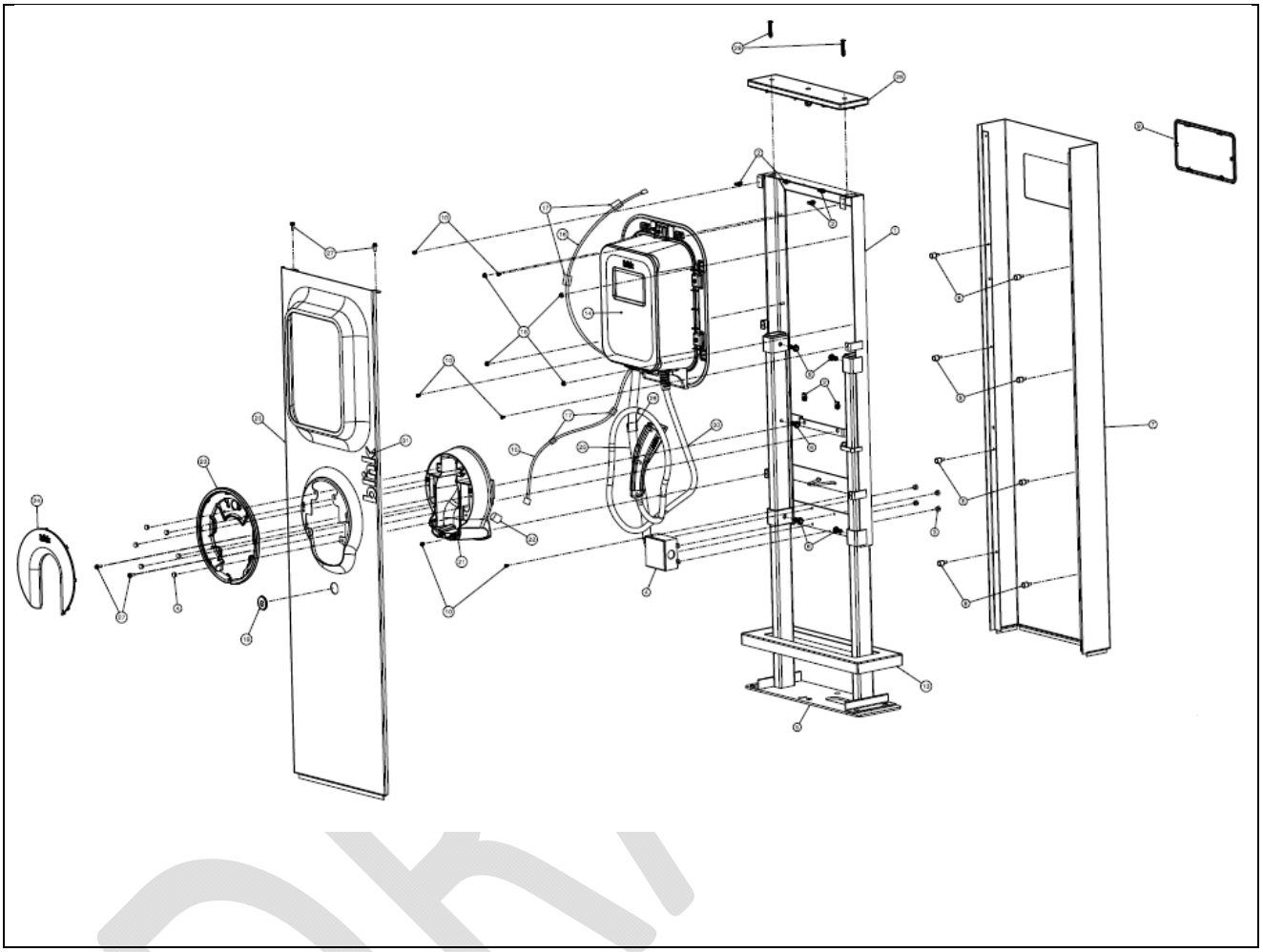


**Figure 3 – Charger Housing Assembly**

| Item # | Part Number | Description | Qty |
|---|---|---|---|
| 1 | RT-109133-057 | Frame Ay – Upper Weldment | 1 |
| 3 | RT-109133-030 | Junction box | 1 |
| 5 | RT-109133-067 | Base Asy Frame | 1 |
| 7 | RT-109133-072 | Panel – Rear Large | 1 |
| 8 | RT-109133-206 | Isolator – Rear Panel | 8 |
| 9 | RT-109133-205 | Cover – Rear Panel WiFi | 1 |
| 13 | RT-109133-012 | Base Cover | 1 |
| 14 | RT-109133-086 | EVSE Enclosure | 1 |
| 15 | RT-109133-207 | Jumper Wire – Proximity Sensor | 1 |
| 16 | RT-109133-209 | Jumper Wire – Power Supply to Beacon Light | 1 |

| Item # | Part Number | Description | Qty |
|---|---|---|---|
| 17 | RT-109133-210 | Wire Ties – 4" Secure to Fram and Cord Reel | 4 |
| 19 | RT-109133-097 | Grommet – Passthru | 1 |
| 20 | RT-109133-064 | Anel Asy – Front Weld Large | 1 |
| 21 | RT-109133-010 | Cord Reel Base Machined | 1 |
| 22 | RT-109133-208 | Proximity Sensor | 1 |
| 23 | 20-305-0001 | Cord Reel Front Panel | 1 |
| 24 | 20-071-0001 | Cord Reel Cover | 1 |
| 25 | RT-109133-058 | Conduit Asy – Liquidtight | 1 |
| 26 | RT-109133-211 | Wire Ties – 8" Secure to Frame | 1 |
| 28 | RT-109133-201 | Light Asy – Beacon | 1 |
| 30 | RT-109133-051 | Power Cord Out | 1 |
| 31 | RT-109133-226 | Blink Logo (Adhesive Back Decal) | 1 |
| 2 | RT-108408-103 | Nut – M6 X 1 U-Type | 6 |
| 4 | RT-108408-104 | Rivet – 3/16" Aluminum | 10 |
| 6 | RT-109133-124 | Bolt – 3/8" X 1" Thread Rolling | 5 |
| 10 | RT-109133-119 | Screw – #10 X 3/8" | 6 |
| 18 | RT-109133-107 | Nut – M6 X 1 Hex Flange Head | 4 |
| 27 | RT-109133-121 | Screw – M6 X 1 X 20 Hex Head w/Spinning Washer | 4 |
| 29 | RT-109133-122 | Screw – M6 X 1 X 50 flat HD Pin-In Allen | 2 |

# Charger housing installation

To install the **blink** charger housing:

1. Open the **blink** shipping box and remove the carton containing the beacon light. Check for all contents as listed in the section on *Shipping box contents* on page 9.
2. Remove the screws (4) holding the lower shipping supports and the cord.
3. Remove the ties (4) holding the J1772 cord in place.
4. Remove the lower shipping support.
5. Remove the upper shipping support screws (2).
6. Remove the cord reel cover and set aside.
7. Carefully lift the **blink** unit from the crate and lay flat.
8. Remove the top bolts on the front cover.
9. Remove the bolts in the recessed area in the cord reel.
10. Feed the EV cable through the rubber grommet on the front panel with enough slack so that you can set the front cover aside..
11. Remove the mounting foot screws (4)
12. Slide out the mounting foot and set upright. Note the base cover will be loose.

# Mounting the Pedestal

To mount the pedestal to concrete:

1. While the Pedestal is lying on its back on a protective surface, remove the four 3/8" bolts from the frame.
2. Slide the entire upper frame and back panel up 12" until the bottom frame strap is aligned with the middle hole in the bottom frame post
3. Keep the upper frame and back panel in the raised position until one of the 3/8" bolts can be installed through the bottom strap and the middle hole
4. Position and place the assembly over the six pre-installed concrete bolts.
5. Raise and support the base cover while the six ½ "washer and numbers are put in place and secured.
6. Lower the base cover and upper frame including the rear panel and electronics while the four 3/8" mounting holes line up.

⚠

**CAUTION:** Do not over-tighten the lag screws. Over-tightening can deform and damage the housing base plate.

# Connecting power to the blink

## Input power

**IMPORTANT:** Electrical power to the **blink** must be installed by a certified electrical contractor who is familiar with local codes and standards that apply to the installation of structural components and electrical equipment. Minimum size and color-coding requirements must be in accordance with any applicable state or local code, and the National Electrical Code.

| | |
|---|---|
| **Voltage/Phase** | 208-240 VAC/1 phase (120 VAC to GND) |
| **Rated Current** | 30 Amps (maximum); 12A, 16A, and 24A available (PE-30)<br>48 Amps (maximum); 12A, 16A, 24A, and 30A available (PE-48) |
| **Circuit Rating** | 40 Amps; settings at 15A, 20A, and 30A available |

**CAUTION:** The **blink** EVSE's factory default current setting is 30 amps. If the device is connected to a lower current setting, a qualified **blink** technician must adjust the device settings and reset the unit before use.

# Connecting the blink

**WARNING: RISK OF ELECTRIC SHOCK**
Verify that electrical power to the **blink** input power wiring is disconnected. Electric shock can kill!

To connect the **blink** to the power supply:

1.

Figure to come.

**Figure 4 – Power Supply Connections**

2. Slide a 1-inch trade-size fitting (not provided), appropriate to the conduit type used, over the end of the service wiring.

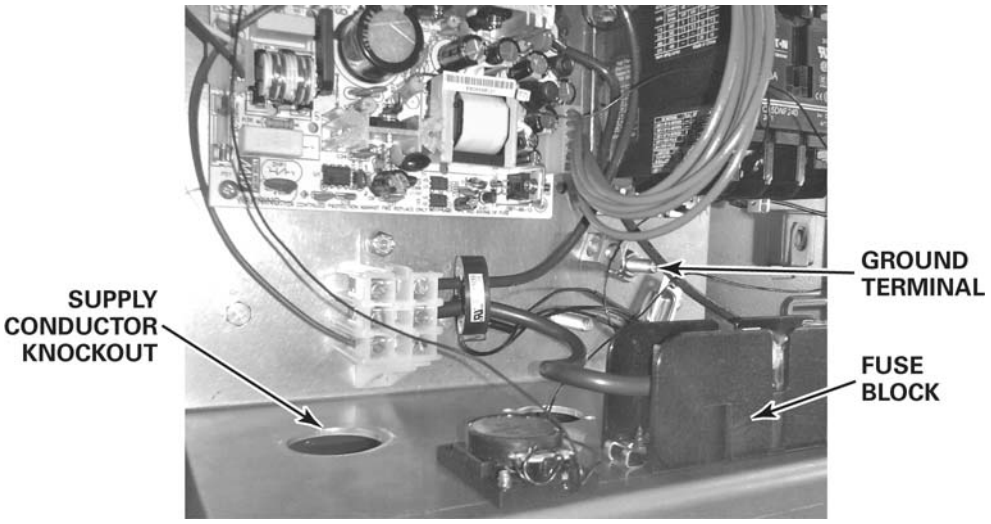



**Figure 5 – Supply Circuit Port**

3. Insert the supply circuit conductors through the knockout in the metal housing bracket. Pull enough wiring through to allow for connection to the knockout and ground terminals.
4. Position the 1-inch fitting in the knockout and secure in place using a metal lock ring.

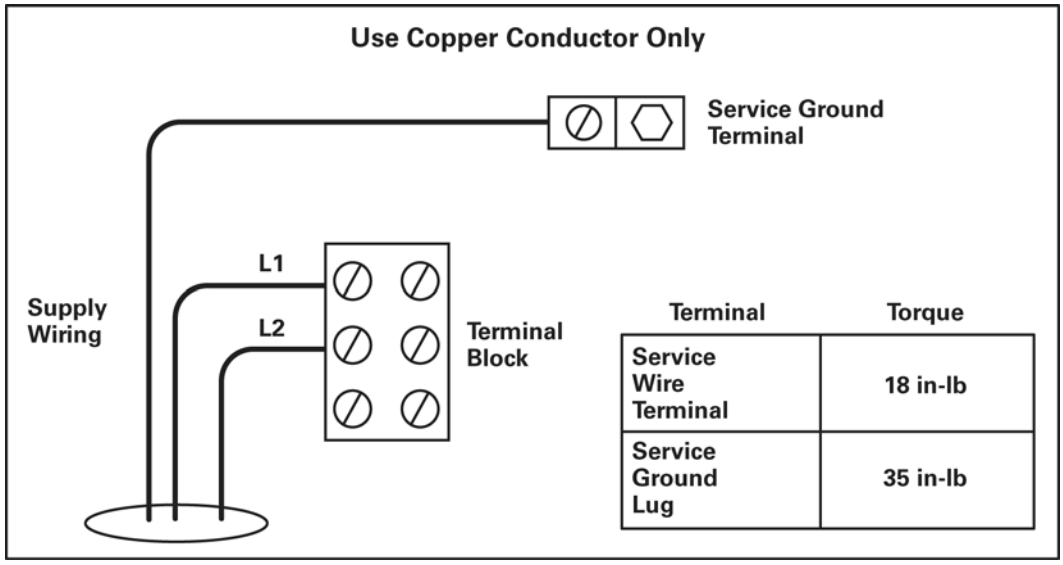



**Figure 6 – Service Wiring Terminals**

**CAUTION:** Be careful to not disturb factory wiring when making supply circuit wiring connections within the charger housing.

5. Connect the AC supply conductors (L1 and L2) to the upper two terminals in the terminal block (Figure 6) at the lower left of the charger assembly.
6. Connect the ground wire to the service ground terminal (Figure 6) at the lower right of the charger assembly.
7. Remove and discard the protective film on the touch screen.
8. Test the **blink** using ECOtality's Car-in-a-Box equipment. Refer to the **blink** *Car-in-a-Box Operator's Manual* (OM0002_CIB) for more information.

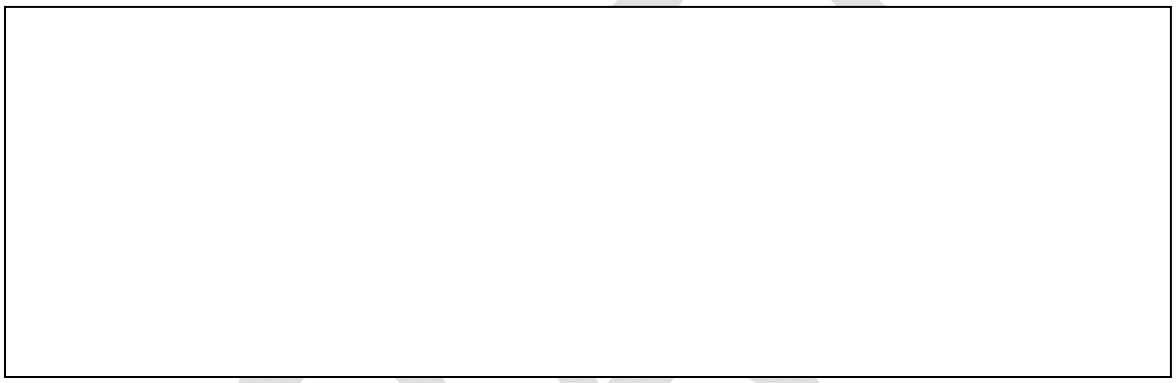


Figure to come.

**Figure 7 – Security Seal**

**Note:** The **blink** will make an audible "click" each time that power starts flowing from the **blink** to the Car-in-a-Box, and again when power stops flowing. This is a normal sound for the **blink** to make.

9. When the test is successfully completed and if required, install a security seal (not provided) at the bottom of the housing cover.

# Connecting the blink to a LAN via Ethernet (optional)

A small percentage of **blink** owners will choose to connect their **blink** to the Internet over a local area network (LAN). The **blink** includes an RJ45 (Ethernet) port for the physical connection; the connection is then configured during the Network Setup process, which will generally be performed by the **blink** owner. Refer to the **blink** *Wall Mount Charging System Owner's Manual* for more information about configuring a **blink** network connection.


**Figure 8 – Location of RJ45 (Ethernet) Port**

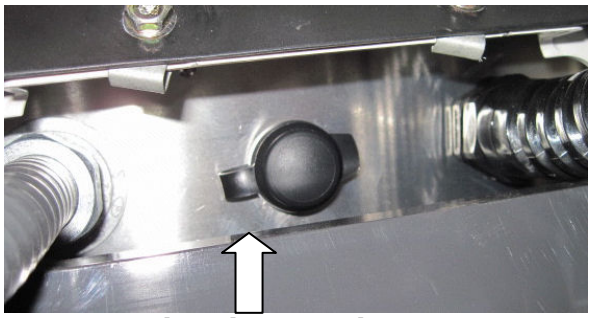


**Figure 9 – Closed RJ45 (Ethernet) Port**

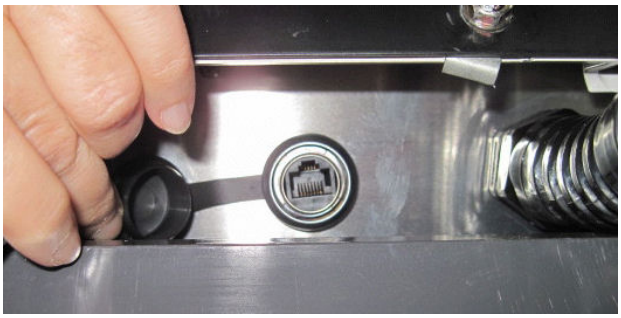


**Figure 10 – Open RJ45 (Ethernet) Port**

To physically connect the **blink** to a LAN via Ethernet:

1. Unplug the black plastic cap on the RJ45 port, located on the bottom of the charger assembly between the two knockouts. Refer to the figures above.
2. Plug in the customer-supplied Ethernet cable.

# Calibrating the blink touch screen

The first time you start up the **blink** charging system, a calibration screen appears, with a small plus sign (+) in one corner.

To calibrate the touch screen:

1. Touch the plus sign (+).
   A plus sign (+) appears in the next corner.
2. Touch the plus sign (+) and repeat three more times as the plus sign moves to the next two corners and then to the center of the screen.
3. A circle (O) appears in one corner. Touch the circle. Repeat this step three times as the circle moves to each corner.
4. A *Calibration Complete* message appears in the center of the screen. Touch this message to continue.

   The **Welcome to blink** screen appears.

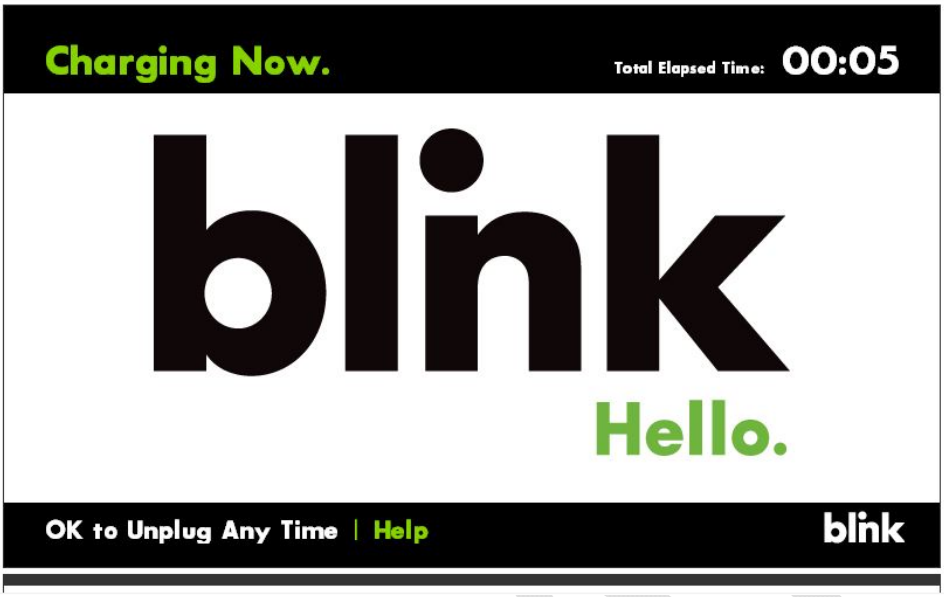

Refer to the **blink** *Pedestal Charging System Owner's Manual* to learn how to configure and use the **blink** charging system.

## Using RFID

To use the RFID feature, the message “Hold blink card directly below screen to start” is displayed on the bottom of the touch screen.


If the vehicle is not plugged in, bring the blink RFID below the touch screen and hold until the messages “Hello” and “Please Plug In Now” appear at the top of the screen.

If the vehicle is plugged in, bring the blink RFID card below the touch screen and hold until the messages “Charging Now”, “ Total Elapsed Time:”with a timer tracking the charge even time are shown at the top of the screen, and “OK to Unplug Any Time” are shown at the bottom of the touch screen.



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3/1/2011