INSTALLATION GUIDE AND USER MANUAL

Model: Electric Vehicle Charging Station with Retractable Reel Assembly
Model Number: EV072-100-001A
Description: SAE J1772 AC Level 2, 30A Continuous Rated with Retractable Reel
IMPORTANT

Read this manual thoroughly and make sure you understand the procedures before you attempt to install or operate this equipment. The purpose of this manual is to provide you with information necessary to safely install, operate and maintain this equipment. Keep this manual for future reference.

EVoCharge recommends the EVoReel Charging Station be installed by a qualified electrician, and installation must be in accordance with all applicable state, local and national electrical codes and standards. Failure to observe this precaution could result in death or severe injury.

Warranty: The EVoReel Charging Station is covered by a one year limited warranty. For a detailed description of this warranty, contact EVoCharge:

   Email: sales@evocharge.com
   Telephone: (800) 930-9450
CONTENTS

SAFETY INFORMATION........................................................................................................... 4-5
IMPORTANT REFERENCE INFORMATION................................................................. 6
SPECIFICATIONS......................................................................................................................... 7
FEATURES............................................................................................................................... 8
INSTALL PLANNING AND SERVICE WIRING............................................................. 9
INSTALLATION......................................................................................................................... 10-27
OPERATION............................................................................................................................... 28-31
SAVE THESE SAFETY INSTRUCTIONS
This document contains important instructions and warnings that must be followed when installing and maintaining the EVoReel Charging Station

Warning

- The EVoReel Charging Station must be grounded through a permanent wiring system or an equipment grounding conductor.
- Do not install or use the EVoReel Charging Station near flammable, explosive, harsh, or combustible materials, chemicals, or vapors.
- Turn off input power at the circuit breaker before installing or cleaning the EVoReel Charging Station.
- Use the EVoReel Charging Station only within the specified operating parameters.
- The EVoReel Charging Station is designed only for vehicles that are compatible with the SAE J1772 AC Level 2 charging standard.
- Do not use the EVoReel Charging Station if it is defective, appears cracked, frayed, broken or otherwise damaged, or fails to operate.
- Do not attempt to open, disassemble, repair, tamper with, or modify the EVoReel Charging Station. The EVoReel Charging Station is not user serviceable. Contact EVoCharge for any repairs.
- Do not use the EVoReel Charging Station when either you, the vehicle, or the EVoReel Charging Station is exposed to severe rain, snow, electrical storm or other severe weather.
- When transporting the EVoReel Charging Station, handle with care and do not subject it to strong force, drag or step on the EVoReel Charging Station.
- Do not touch the EVoReel Charging Station end terminals with sharp metallic objects.
- Do not forcefully pull the charge cable or damage it with sharp objects.
- Do not insert foreign objects into any part of the EVoReel Charging Station vehicle connector.
- Using with a worn or damaged AC outlet may cause burns or start a fire.
- If the AC wall plug feels hot while charging, unplug the unit and replace the AC outlet.
- To avoid a risk of fire or electric shock, do not use this device with an extension cord.
- Risk of explosion. This equipment has arcing or sparking parts that should not be exposed to flammable vapors. This equipment should be located at least 18 inches (460mm) above the floor.
- Pull entire cable from the reel when charging vehicle.
- Risk of electric shock. Do not remove cover or attempt to open the enclosure of the retractable reel or the charger unit. No user serviceable parts inside. Refer servicing to qualified service personnel.
- Unit will attempt to reset in fault conditions.
- This device is intended only for charging vehicles not requiring ventilation during charging.

-Continued on next page-
SAVE THESE SAFETY INSTRUCTIONS
This document contains important instructions and warnings that must be followed when installing and maintaining the EVOReel Charging Station

Caution

• Incorrect installation and testing of the EVOReel Charging Station could potentially damage either the vehicle’s Battery and/or the EVOReel Charging Station itself. Any resulting damage is excluded of the warranty for the EVOReel Charging Station.
• Do not operate the EVOReel Charging Station in temperatures outside its operating range of -13F (-25C) to 122F (50C).
• Ensure that the charge cable is positioned so it will not be stepped on, tripped over, or subjected to damage or stress.
• To reduce the risk of electrical shock, connect only to properly grounded outlets.
• Weight of retractable reel is heavy and may require qualified personal to safely install the retractable reel on the wall or overhead location.
• Never leave children unattended while the vehicle is charging and never allow children to play with the charge cable.
• If the plug provided does not fit the outlet, do not modify the plug, arrange for a qualified electrician to inspect the outlet.
• Do not put fingers into the electric vehicle connector.
• Verify that the retractable reel is locked in position prior to installing connector into the vehicle.
• This equipment should be installed, adjusted, and serviced by qualified electrical personnel familiar with the construction and operation of this type of equipment and the hazards involved. Failure to observe this precaution could result in death or severe injury. The user is responsible for conforming to all local and national electrical codes and standards applicable in the jurisdiction in which this equipment is installed.
• Confirm with the local electrical requirements for the gauge, temperature rating, and type of wire material used for the overcurrent rating to support a dedicated circuit of 208/240 VAC 40A upstream of two-pole circuit breaker.
• Do not use this product if the EV Cable is frayed, has damaged insulation, or any other sign of damage.
• Do not use this product if the enclosure or the EV connector is broken, cracked, open, or shows any other indication of damage.
• Lockout all electrical source circuit feeding he charging unit In the open position before beginning wiring or terminations. Failure To follow the instructions could result in server bodily injury or death.
• This unit is rated for indoor or outdoor installation. If this unit is mounted outdoors, the hardware for connecting the conduits to the unit must be rated for outdoor installation and be installed properly to maintain the proper NEMA rating on the unit.
• It is important that power wires are routed through an approved conduit or jacket from the circuit panel to the unit.

For more information on how to charge your specific vehicle, refer to the owners manual provided with your vehicle.
The EVoReel Charging Station does not require routine maintenance however, periodic inspections should be conducted to ensure that all parts remain in good working order and no damage exists. Do not attempt to open, disassemble, repair, tamper with, or modify any components of the EVoReel Charging Station. The EVoReel Charging Station is not user serviceable. Contact EVoCharge for any repairs.

Periodic cleaning may be required, depending on local conditions. To avoid damaging the finish of the EVoReel Charging Station, only use an automotive grade soft cleaning cloth and a mild soap and water mixture to remove accumulation of dirt and dust. Do not use cleaning solvents to clean any of the EVoReel Charging Station components.

When moving or lifting the unit, always grasp the unit charger enclosure or the mounting bracket of the retractable reel. Never attempt to lift, move, or carry the unit by any of the electrical cables. Improper handling may cause damage to the unit.

To ENABLE charging, the Ready Indicator (Green Color) is present once the charging unit is ready to initiate vehicle charging. Retract charge cable from retractable reel and install charge connector into vehicle. The Charging Indicator (Blue Color) will begin FLASHING once the vehicle is charging and discontinues once the vehicle is fully charged.

To DISABLE charging, remove charge connector from vehicle and pull slightly on the charge cable to activate the retractable reel and place charge connector in its stow position. The Ready Indicator (Green Color) is present and the charging unit is ready for the next charge cycle.
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EVSE Level</strong></td>
<td>AC Level 2</td>
</tr>
<tr>
<td>Max Current Output</td>
<td>30A</td>
</tr>
<tr>
<td>Voltage Rating</td>
<td>208-240VAC</td>
</tr>
<tr>
<td>Max Power Output</td>
<td>7.20 kW</td>
</tr>
<tr>
<td>Vehicle Connector</td>
<td>SAE J1772</td>
</tr>
<tr>
<td>Frequency</td>
<td>50/60 Hz</td>
</tr>
<tr>
<td>Operating Temperature</td>
<td>-25°C to 50°C (-13°F to 122°F)</td>
</tr>
<tr>
<td>Storage/Transit Temperature</td>
<td>-40°C to 60°C (-40°F to 140°F)</td>
</tr>
<tr>
<td>Cord Length</td>
<td>Up to 9.14m (30.0ft)</td>
</tr>
<tr>
<td>Installation</td>
<td>Indoor/Outdoor Rated; per NEMA 3R</td>
</tr>
<tr>
<td>Mounting</td>
<td>Wall, Ceiling, and Pedestal Options</td>
</tr>
<tr>
<td>CCID/Ground Fault</td>
<td>Automatic Supervisory Circuit: Auto-Test &amp; Reset</td>
</tr>
<tr>
<td>Charge Status Indicators</td>
<td>Power/Ready, Charging, Fault</td>
</tr>
<tr>
<td>Cable Management System</td>
<td>Retractable Reel</td>
</tr>
<tr>
<td>Standards &amp; Codes Compliance</td>
<td>SAE J1772, UL Subject 2594, UL Subject 355</td>
</tr>
</tbody>
</table>
FEATURES

Retractable Reel
All EVoReel Charging Stations provide added convenience to the user by utilizing a retractable reel for charge cable management. The retractable reel includes a vehicle charge cable up to 30 feet in length.

Indoor/Outdoor Rated Enclosures (NEMA 3R)
The EVoReel Charging Stations are rated for both indoor and outdoor charging and comply with NEMA 3R standards.

Versatile Mounting
The retractable reel mounting bracket allows for mounting on the wall, ceiling, or pedestal.
INSTALL PLANNING AND SERVICE WIRING

• Prior to mounting, determine location of an acceptable mounting support. The Wall or Ceiling mount unit must be anchored into a mounting support such as a 2” x 4” stud or a solid concrete wall, using mounting hardware that is appropriate for the surface on which you are mounting. DO NOT mount this unit directly to a stucco/drywall/wall board. If installing on a wood stud use the lag screws provided and ensure the mounting plate is positioned on the centerline of the stud. If mounting onto a concrete, block, or brick wall, use an appropriate anchor for the type of wall on which you are installing the unit.

• Prior to mounting, locate an available electrical source that can support the following Input Requirements for the EVoReel Charging Station
  • Per National Electric Code (NEC) requirements, to support 30A continuous output current, a DEDICATED CIRCUIT rated for 40A; 208-240 VAC, 60 Hz, must be used. It is recommended to utilize a 40A upstream circuit breaker, located either in a panel board or load center.
  • The Charging Unit has a built in GFCI protection; do not provide any additional GFCI protection upstream of the charging unit.
  • The EVoReel Charging Stations provide the option to connect to either a NEMA 6-50 Receptacle the units can be hardwired.

Important: The service wiring in this section are specific to North America only.

Warning: Before installing the EVoReel Charging Station, identify the type of utility service connection available onsite. If you have unsure about the type of connection available at the service panel, contact your utility service provider.
INSTALLATION

STEP 1 – Verify Received Content

Interconnect Support Strap
Quantity (2 – 4)
(Depending on Interconnect Length)

3/8” Lag Screws
Quantity: (3)
(For use when mounting reel to wall/ceiling stud)

1/4” Lag Screws
Quantity: (2)
(For use when mounting Charging Unit Wall Mounting Bracket)

1/4” Fastener and Lock Nut
Quantity: (1)
(For use when locking the Charging Unit to the mounting bracket)
1. Prior to mounting retractable reel, determine the preferred position of the roller guide arm based on installation orientation of the reel. The roller guide arm can be adjusted into (12) different locations based on your installation method. The roller guide arm can be adjusted by removing the 5/16 hex head screw and lock washer. The guide position should be selected and secured prior to making any electrical connections.
1. Determine preferred height and orientation of retractable reel. It is recommended to install retractable reel at the maximum height based on interconnect cable length. The retractable reel can be mounted to a single stud using mounting option A or B.
1. Locate a secure wall stud and drill a 1/4” pilot hole for each mounting hole. The (3) mounting holes are positioned 1.625” away from each other.

2. Prepare mounting hole by Fastening 3/8” lag screw into top of each mounting hole until lag screw enters partially into wall stud.

3. Remove all lag screws from mounting holes.

WARNING: All lag screws MUST be used to install the charging unit to the vertical wall stud. Each lag screw MUST be securely fastened to THE CENTER of the wall studs. Please contact and use a professional installer if necessary, or consult a licensed contractor for acceptable anchoring options. Failure to properly anchor and mount the retractable reel may result in severe injury or death.
INSTALLATION

STEP 5 – Install Retractable Reel

1. Place reel mounting bracket over mounting holes and fasten 3/8” lag screw.
2. Continue fastening 3/8” lag screws into each mounting hole.

WARNING: All lag screws MUST be used to install the charging unit to the vertical wall stud. Each lag screw MUST be securely fastened to THE CENTER of the wall studs. Please contact and use a professional installer if necessary, or consult a licensed contractor for acceptable anchoring options. Failure to properly anchor and mount the retractable reel may result in severe injury or death.
**INSTALLATION**

**STEP 6 – Adjust Vehicle Connector Position**

1. Adjust retractable reel ball stop position by using a screwdriver to loosen both fasteners.

2. Adjust the ball stop to a position that enables a convenient vehicle connector rest position.

3. Fasten and secure the ball stop to vehicle charge cable.
1. Depending on the cable stop placement from installation step 6, the retraction rate of the reel may need adjustment. This can be accomplished by manually adjusting the number of charge cable wraps around the reel. Add additional charge cable wraps to the reel to increase the retraction rate. Remove charge cable wraps from the reel to reduce the retraction rate.
INSTALLATION

STEP 8 – Remove Mounting Bracket from Shipped Position

1. Remove charging unit wall mount bracket by removing the fastener and lock-nut at the bottom of the mount.

2. Slide the charging unit wall mount bracket downward.

3. Remove charging unit wall mount bracket from mounting hooks.
INSTALLATION

STEP 9 – Install Wall Mounting Bracket for Charging Unit

1. Determine preferred height of charging unit. Locate a vertical wall stud and drill a 1/8” pilot hole, approximately 2-½” deep, for the top mounting hole.
2. Fasten 1/4” lag screw into top mounting hole.
3. Place a level at the top or side of the bracket and align until the bracket is level. Once level, drill a 1/8” pilot hole, approximately 2-½” deep, for the lower mounting hole.
4. Fasten 1/4” lag screw into bottom mounting hole.

WARNING: All lag screws MUST be used to install the charging unit to the vertical wall stud. Each lag screw MUST be securely fastened to THE CENTER of the wall studs. Please contact and use a professional installer if necessary, or consult a licensed contractor for the best anchoring options.
INSTALLATION

STEP 10 – Attach Interconnect to Charging Unit
(Proceed to Step 17 if Interconnect is supplied as factory connected)

1. Ensure no Electrical Power is present at the Charging Unit (charging unit disconnected from electrical supply source).

2. Place the Charging Unit on a work bench or table.

3. Remove Enclosure from the Charging Unit by removing (10) Torx screws.

WARNING: To reduce the risk of fire or electric shock, this step is intended to be completed by a certified electrician and must be in accordance with all applicable state, local and national electrical codes and standards. Failure to observe this precaution could result in death or severe injury.

NOTE: To avoid damaging (scratching) of the exterior finish of the charging unit, use appropriate surface protection to avoid damage to exterior of the Charging Unit.
INSTALLATION

STEP 11 – Attach Interconnect to Charging Unit
(Proceed to Step 17 if Interconnect is supplied as factory connected)

1 – 4. Insert Interconnect Through Charging unit Cable Gland.

Interconnect Wire Color Chart

<table>
<thead>
<tr>
<th>Wire Color</th>
<th>Conductor</th>
</tr>
</thead>
<tbody>
<tr>
<td>Black</td>
<td>L1</td>
</tr>
<tr>
<td>White</td>
<td>L2</td>
</tr>
<tr>
<td>Green</td>
<td>Ground</td>
</tr>
<tr>
<td>Blue</td>
<td>Pilot Control</td>
</tr>
</tbody>
</table>

WARNING: To reduce the risk of fire or electric shock, this step is intended to be completed by a certified electrician and must be in accordance with all applicable state, local and national electrical codes and standards. Failure to observe this precaution could result in death or severe injury.
INSTALLATION

STEP 12 – Attach Interconnect to Charging Unit
(Proceed to Step 17 if Interconnect is supplied as factory connected)

1. Make L1 Connection – Black Wire to Left Relay Screw.


IMPORTANT: Ensure All Connections are Secure.

WARNING: To reduce the risk of fire or electric shock, this step is intended to be completed by a certified electrician and must be in accordance with all applicable state, local and national electrical codes and standards. Failure to observe this precaution could result in death or severe injury.
INSTALLATION

STEP 13 – Attach Interconnect to Charging Unit
(Proceed to Step 17 if Interconnect is supplied as factory connected)

1. Ensure Tooth (Lock) Washer is positioned on bottom of Ground Connection.

2. Secure Ground Connection.

IMPORTANT: Ensure All Connections are Secure.

WARNING: To reduce the risk of fire or electric shock, this step is intended to be completed by a certified electrician and must be in accordance with all applicable state, local and national electrical codes and standards. Failure to observe this precaution could result in death or severe injury.
STEP 14 – Attach Interconnect to Charging Unit
(Proceed to Step 17 if Interconnect is supplied as factory connected)

1. Make Control Pilot Connection – Blue Wire to Orange Wire by pressing the (2) terminal together until the terminals bottom-out.

IMPORTANT: Ensure All Connections are Secure.

WARNING: To reduce the risk of fire or electric shock, this step is intended to be completed by a certified electrician and must be in accordance with all applicable state, local and national electrical codes and standards. Failure to observe this precaution could result in death or severe injury.
INSTALLATION

STEP 15 – Attach Interconnect to Charging Unit
(Proceed to Step 17 if Interconnect is supplied as factory connected)

1. Install (1) Wire Tie to Interconnect Cable for Strain Relief.

WARNING: To reduce the risk of fire or electric shock, this step is intended to be completed by a certified electrician and must be in accordance with all applicable state, local and national electrical codes and standards. Failure to observe this precaution could result in death or severe injury.
INSTALLATION

STEP 16 – Attach Interconnect to Charging Unit
(Proceed to Step 17 if Interconnect is supplied as factory connected)

1. Reinstall Enclosure to Charging Unit by fastening (10) Torx screws.

WARNING: To reduce the risk of fire or electric shock, this step is intended to be completed by a certified electrician and must be in accordance with all applicable state, local and national electrical codes and standards. Failure to observe this precaution could result in death or severe injury.
INSTALLATION

STEP 17 – Mount Charging Unit

1. Slide charging unit hooks into mounting bracket openings.

2. Charging unit is secure once the lock holes align.

3. Install the fastener and lock nut provided with the charging unit, or use an optional padlock to secure the charging station to the mount.
INSTALLATION

STEP 18 – OPTIONAL Hardwire Connection to Charging Unit

1. The charging units come standard with a NEMA 6-50 inlet cable and connector. If hardwire connection is preferred, follow the instructions below.

2. Remove the bottom cover from the charging unit by using a screwdriver to disengage (2) fasteners.

3. Remove NEMA 6-50 inlet cable and connector.

4. Connect the power supply wiring to the (L)[L1] and (N)[L2] Hot Line locations, as well as the Ground location marked on the unit. The chassis ground is dependent on your installation method and may not be required.

5. Re-install bottom cover of charging unit and fasten screws.

WARNING: To reduce the risk of fire or electric shock, this step is to be completed by a certified electrician and must be in accordance with all applicable state, local and national electrical codes and standards. Failure to observe this precaution could result in death or severe injury.
IMPORTANT: Once the charging unit is connected to supply-power, turn on the charging unit by placing the toggle switch towards the front of the charging unit. The toggle switch is located at the bottom of the charging unit.
OPERATION – Enable Charging

1. Ready Indicator (Green Color) is present once the charging unit is ready to initiate vehicle charging.
2. Retract charge cable from retractable reel and install charge connector into vehicle.
3. Charging Indicator (Blue Color) will begin FLASHING once the vehicle is charging and discontinues once the vehicle is fully charged.

WARNING: Extend and retract the charge cable by applying force to the cable only; do not apply force to the vehicle connector.
OPERATION – Disable Charging

1. Remove charge connector from vehicle and pull slightly on the charge cable to activate the retractable reel and place charge connector in its stow position.
2. Ready Indicator (Green Color) is present and the charging unit is ready for the next charge cycle.

WARNING: When retracting the charge cable into its stowed position, it is recommended to control the speed of the cable and connector retraction by keeping tension on the cable and guiding onto the retractable reel.

Extend and retract the charge cable by applying force to the cable only; do not apply force to the vehicle connector.
OPERATION – Disable Charging and Clearing Faults

IMPORTANT: If a Fault Indicator (Red Color) is present with the charge connector removed from the vehicle, reset the charging unit by manually turning-off the toggle switch and then turning the toggle switch back-on. The ON position is with the toggle switch positioned toward the front of the charging unit.

Contact a qualified electrical personnel if resetting the charging unit does not clear the fault.