



INSTALLATION MANUAL

**LEVEL 2 COMMERCIAL EVCHARGING STATION Level 2
40 Amp Single Port/Level 2 40 Amp Dual Port Level 2
50 Amp Single Port/Level 2 50 Amp Dual Port**

**MODELS: DH-L2C401-NET, DH-L2C402-NET, DH-L2C401-NONET,
DH-L2C402-NONET, DH-L2C501-NET, DH-L2C502-NET, DH-L2C501-NONET,
DH-L2C502-NONET**

**also referred to as DUNAMIS COMMERCIAL CHARGE STATION
Models L2C40S/L2C40D/L2C50S/L2C50D**

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Installation must be performed by a licensed, qualified electrician.

For all questions regarding customer support, warranty, and installation please visit:

www.diehardevcharging.com/support

Manufactured by: Dunamis Charge, Inc.

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1 Introduction

This installation manual for the Dunamis Commercial Charge Station Model L2C40S/L2C40D/L2C50S/L2C40D contains all the information required to prepare for, install, and troubleshoot the charge station unit. This Installation Manual includes different installation scenarios based on the type of unit that is being installed.

1.1 Purpose of this document

The purpose of this document is to provide the safe installation procedures for installing the Dunamis Commercial Charge Station Models L2C40S / L2C40D / L2C50S / L2C50D.

SAVE THESE INSTRUCTIONS. This manual contains important instructions that should be followed during installation, troubleshooting, and maintenance.

Safe and efficient operation can be achieved only if the equipment is properly inspected, operated, and maintained. Many accidents are caused by failure to follow fundamental rules and precautions.

1.2 WARNING, Caution, and Note Styles Used in This Manual

The following safety styles and symbols found throughout this manual indicate potentially hazardous conditions to the operator, service personnel, or equipment.

IMPORTANT SAFETY INSTRUCTIONS



Indicates a hazardous situation that, if not avoided, will result in death or serious injury.

⚠ WARNING

Indicates a hazardous situation that, if not avoided, could result in death or serious injury.

⚠ CAUTION

Indicates a hazardous situation that, if not avoided, could result in minor or moderate injury.

NOTICE

Indicates information considered important, but not hazard-related (e.g., messages relating to property damage)

SAVE THESE INSTRUCTIONS

1.3 Safety and Compliance

This document provides instructions for installing the Dunamis Commercial Charge station, Model L2C40S/L2C40D/ L2C50S/L2C50D. Before installation of the charging station by licensed professionals, this manual should be reviewed carefully. Consult with a licensed contractor, licensed electrician, and trained installation personnel to ensure compliance with local building practices, climate conditions, safety standards, and national, state, and local codes.

SAVE THESE INSTRUCTIONS

NOTICE

READ ALL INSTRUCTIONS BEFORE INSTALLING THIS PRODUCT

The Charging Station should be inspected by a qualified installer prior to initial use. Under no circumstances will compliance with the information in this manual relieve the user of responsibility to comply with all applicable codes or safety standards. This document describes the most used installation and mounting scenarios. If situations arise in which it is not possible to perform an installation following the procedures provided in this document, contact Dunamis Charge at info@dunamischarge.com. Dunamis Charge is not responsible for any damages that may occur resulting from custom installations that are not described in this document.

⚠ WARNING

- This device should be supervised when used around children 12 years old or younger.
- Do not put fingers into the electric vehicle connector.
- Do not use this product if the flexible power cord or EV cable is frayed, has broken insulation, or any other signs 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.

- Please refer to sections 4.5, 4.6 and 4.7 of this document for terminal connectors, wiring size, and terminal torques instructions.
- The Dunamis Commercial Charging System 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.
- These products are rated at 40A/50C and 50A/50C ambient temperature.

1.4 Instructions Pertaining to A Risk of Fire or Electric Shock

Please consider the following hazards before installing the charge station.

 DANGER
<i>Electric Shock Can Kill</i> <i>Touching live electrical parts can cause fatal shocks and severe burns. The input power circuitry and internal circuit are live whenever input power is on.</i>

 WARNING
<i>When installing and using this charge station, basic precautions should always be followed. This manual contains important instructions for Model L2C40S/L2C40D/ L2C50S/L2C40D that should be followed during installation, operation, and maintenance of the unit.</i>

 WARNING
<i>Risk of Fire or Electric Shock</i> <i>Use of incorrect components in the installation can cause fires and/or electric shock injuries. Only use the specified components and follow all instructions. Obey local electrical building codes and ordinances.</i>

See Chapter 3, Installation Instructions for component specifications.

1.5 Safety

Safety is one of our main priorities. Please consider the following hazards before installing the Dunamis Charge L2C40S/L2C40D/ L2C50S/L2C40D Commercial Charge stations.

 **WARNING**

Make sure electrical power has been shut-off at the source before starting any electrical work. Follow state and local codes.

 **WARNING**

Only qualified personnel should perform the installation. This installation must be performed in accordance with all local electrical building codes and ordinances. Follow lockout/tagout procedures.

 **CAUTION**

The charging dock requires 208-240V AC 50-amp, single phase dedicated circuit. This circuit must be routed directly from the power distribution panel to the charging station.

The two phases must each measure 120 volts AC to neutral earth ground and must be connected to neutral at only one point. The connection is typically at the utility entry power distribution panel.

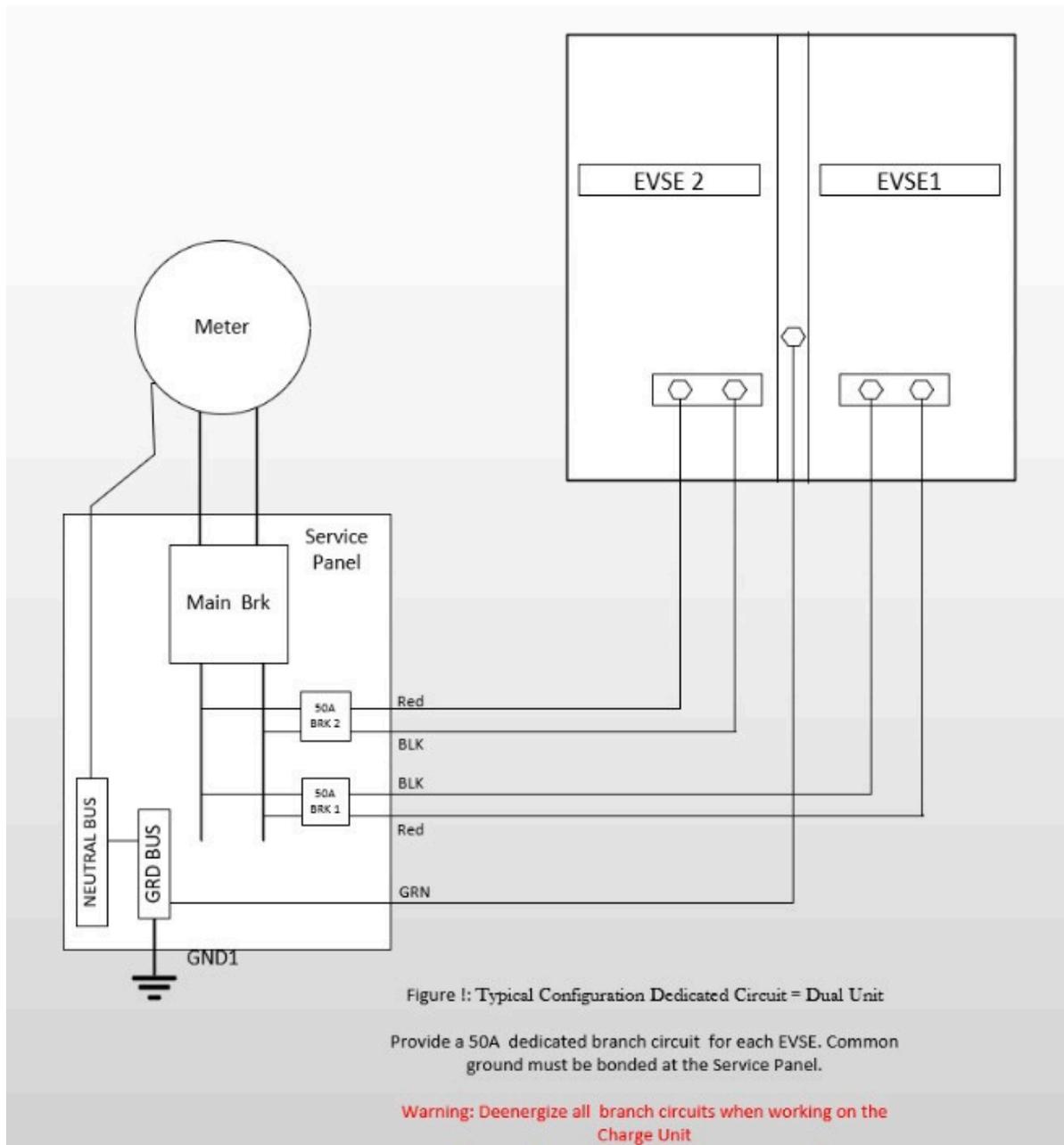


Figure 1: Typical Configuration Dedicated Circuit Dual 40A Unit

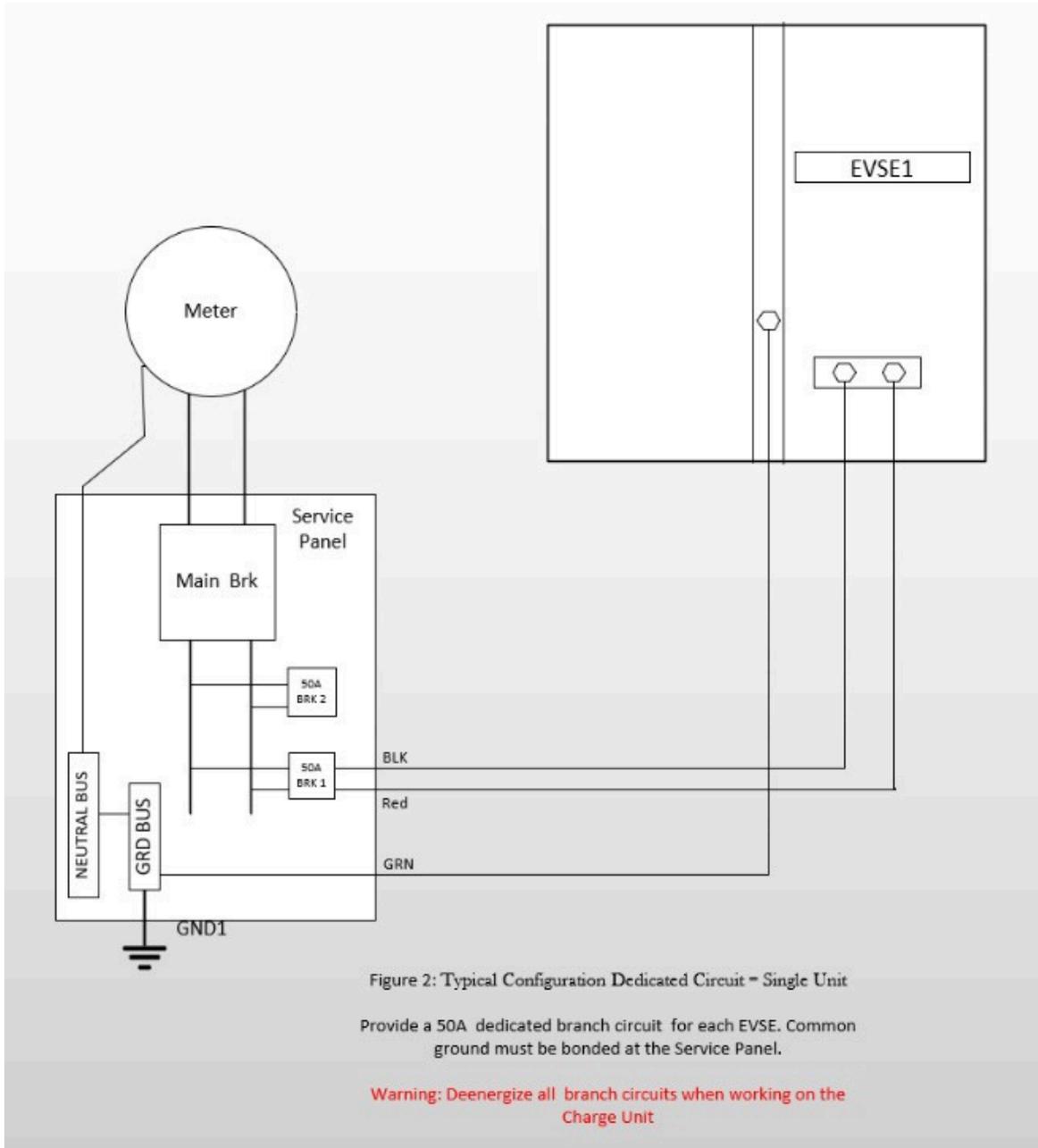


Figure 2: Typical Configuration Dedicated Circuit Single 40A Unit

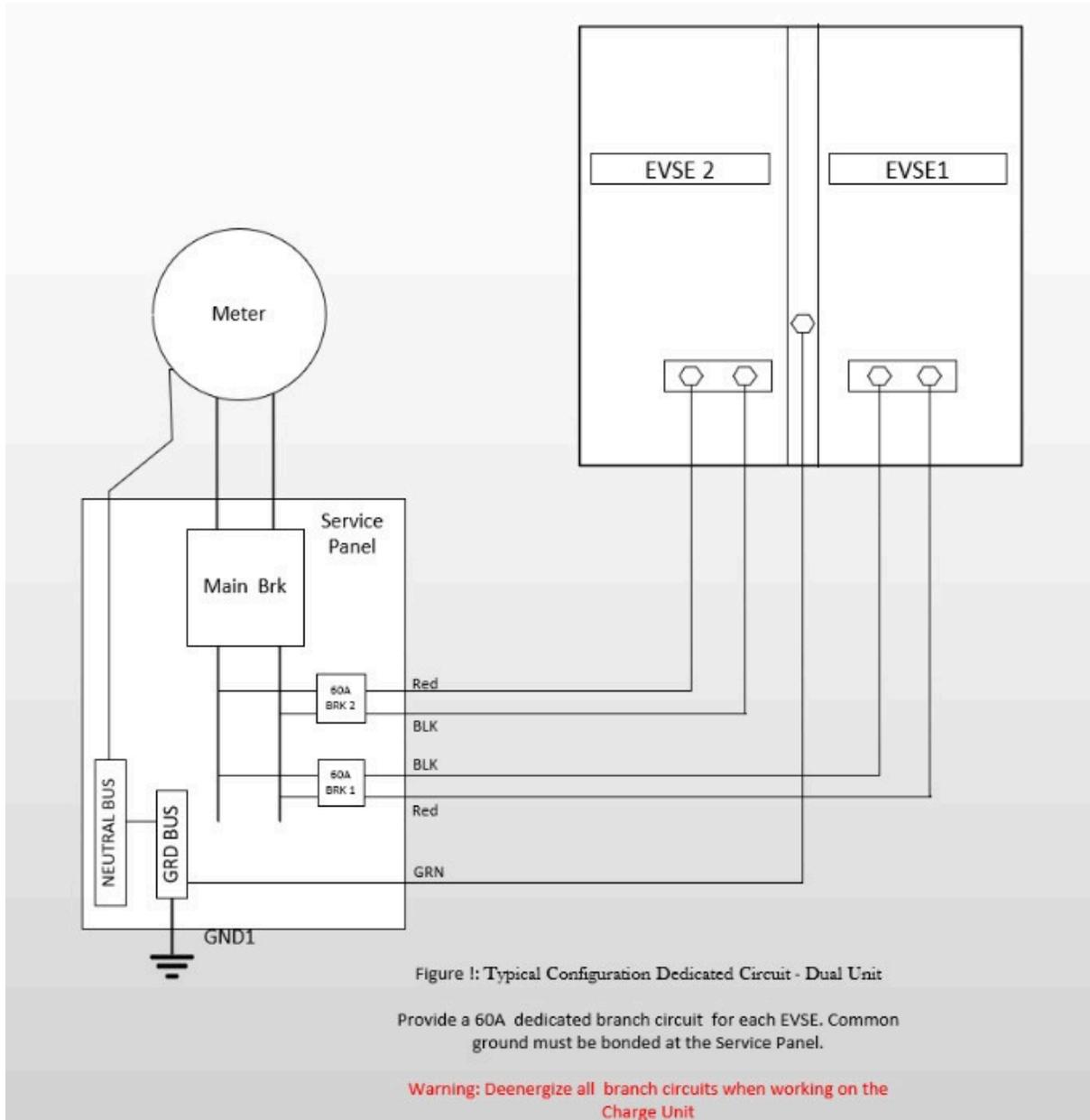


Figure 3: Typical Configuration Dedicated Circuit Dual 50A Unit

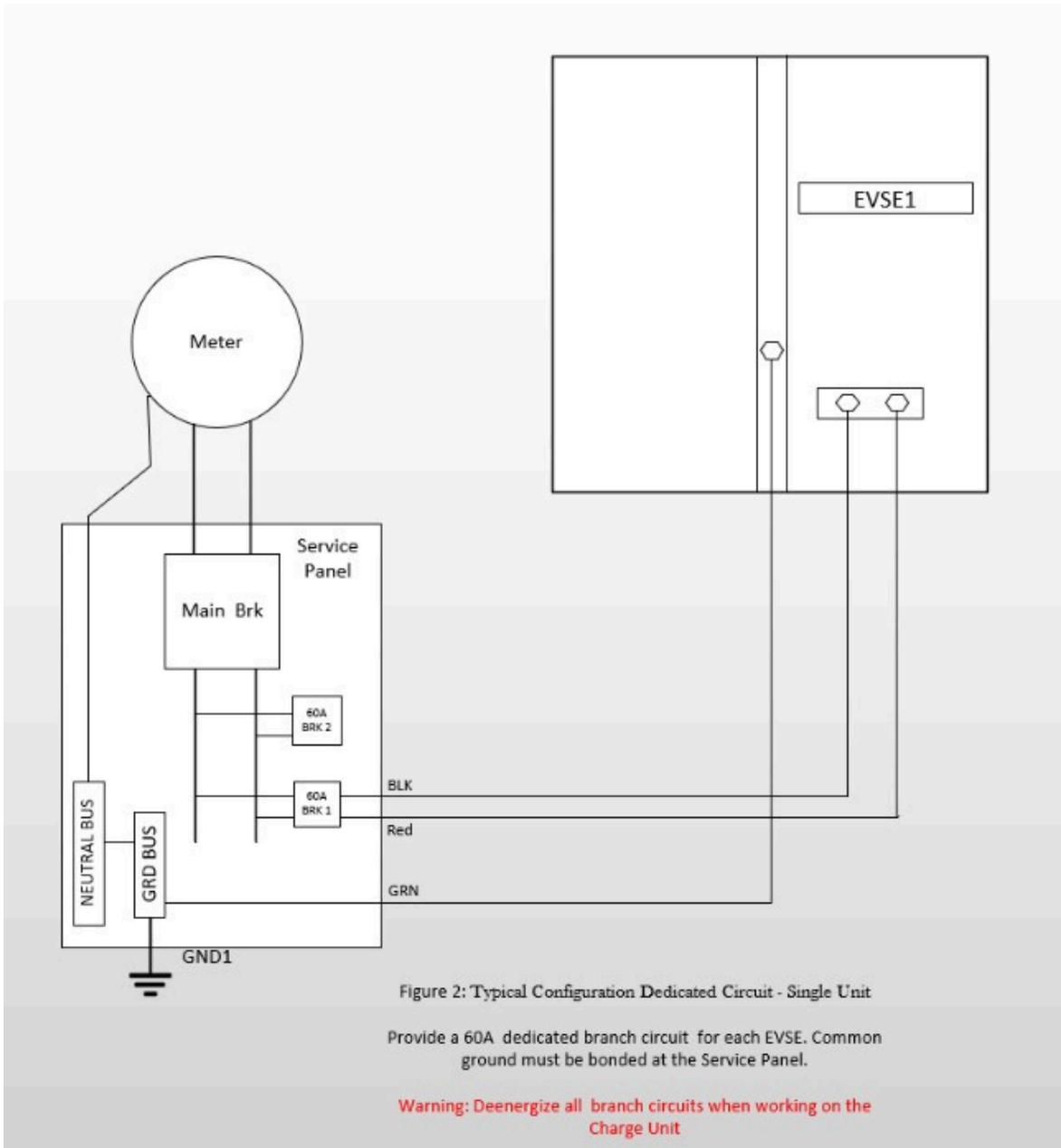


Figure 4: Typical Configuration Dedicated Circuit Single 50A Unit

1.6 Product Identification Information

The following label must be attached to every commercial charger product. If it is not attached, please contact Dunamis Charge at info@dunamischarge.com.

Single Charger L2C40S



FOR USE WITH ELECTRIC VEHICLES
VENTILATION NOT REQUIRED
INDOOR/OUTDOOR USE

POUR UTILISATION AVEC DES VÉHICULES ÉLECTRIQUES
AUCUNE VENTILATION REQUISE
UTILISATION INTÉRIEURE/EXTÉRIEURE

TYPE 4 ENCLOSURE / BOÎTIER DE TYPE 4
MADE IN USA

OPERATING TEMP: -30°C to 50°C
INPUT: 208 to 240V~, 40A, 60HZ, SINGLE PHASE
OUTPUT: 208 to 240V~, 40A

Conf. to UL STD 2594
Cert to CSA STD
C22.2#280

MODEL NUMBER: L2C40S			
SERIAL NUMBER: 23110000500			

 PLACEHOLDER 

CAUTION: Do not use this product if there is any damage to the unit. Risk of electric shock. Do not remove cover or attempt to open the enclosure. No user serviceable parts inside. Refer servicing to qualified service personnel. To reduce the risk of electric shock, connect only to properly grounded outlets. To reduce the risk of electric shock and fire, do not connect to a circuit operating at more than 150 volts to ground.

WARNING: 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. This device is intended only for charging vehicles not requiring ventilation during charging.

ATTENTION: Ne pas utiliser ce produit si l'appareil est endommagé. Risque de choc électrique. Ne pas retirer le couvercle ni essayer d'ouvrir le boîtier. Aucune pièce interne réparable par l'utilisateur. Confier tout travail d'entretien ou de réparation à un technicien qualifié. Pour réduire le risque de choc électrique, brancher sur une prise correctement mise à la terre. Pour réduire le risque de choc électrique et d'incendie – Ne pas brancher à un circuit dont la tension est supérieure à 150 volts à la terre.

AVERTISSEMENT: Pour réduire le risque de choc électrique ou d'incendie, ne pas utiliser de rallonge avec cet appareil. Risque d'explosion. L'appareil comporte des pièces internes pouvant produire des arcs électriques ou des étincelles qui ne devraient pas être exposées aux vapeurs inflammables. Cet appareil devrait être installé à au moins 460 mm (18 pouces) au-dessus du plancher. Ce dispositif est destiné au chargement des véhicules ne nécessitant pas de ventilation au cours du chargement.

Dual Charger L2C40D



FOR USE WITH ELECTRIC VEHICLES
VENTILATION NOT REQUIRED
INDOOR/OUTDOOR USE

POUR UTILISATION AVEC DES VÉHICULES ÉLECTRIQUES
AUCUNE VENTILATION REQUISE
UTILISATION INTÉRIEURE/EXTÉRIEURE

TYPE 4 ENCLOSURE / BOÎTIER DE TYPE 4
MADE IN USA

OPERATING TEMP: -30°C to 50°C
INPUT: 208 to 240V~, 2 x 40A, 60HZ, SINGLE PHASE
OUTPUT: 208 to 240V~, 2 x 40A

Conf. to UL STD 2594
Cert to CSA STD
C22.2#280

MODEL NUMBER: L2C40D			
SERIAL NUMBER: 23110000500			

 PLACEHOLDER 

CAUTION: Do not use this product if there is any damage to the unit. Risk of electric shock. Do not remove cover or attempt to open the enclosure. No user serviceable parts inside. Refer servicing to qualified service personnel. To reduce the risk of electric shock, connect only to properly grounded outlets. To reduce the risk of electric shock and fire, do not connect to a circuit operating at more than 150 volts to ground.

WARNING: 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. This device is intended only for charging vehicles not requiring ventilation during charging.

ATTENTION: Ne pas utiliser ce produit si l'appareil est endommagé. Risque de choc électrique. Ne pas retirer le couvercle ni essayer d'ouvrir le boîtier. Aucune pièce interne réparable par l'utilisateur. Confier tout travail d'entretien ou de réparation à un technicien qualifié. Pour réduire le risque de choc électrique, brancher sur une prise correctement mise à la terre. Pour réduire le risque de choc électrique et d'incendie – Ne pas brancher à un circuit dont la tension est supérieure à 150 volts à la terre.

AVERTISSEMENT: Pour réduire le risque de choc électrique ou d'incendie, ne pas utiliser de rallonge avec cet appareil. Risque d'explosion. L'appareil comporte des pièces internes pouvant produire des arcs électriques ou des étincelles qui ne devraient pas être exposées aux vapeurs inflammables. Cet appareil devrait être installé à au moins 460 mm (18 pouces) au-dessus du plancher. Ce dispositif est destiné au chargement des véhicules ne nécessitant pas de ventilation au cours du chargement.

Single Charger L2C50S



FOR USE WITH ELECTRIC VEHICLES
VENTILATION NOT REQUIRED
INDOOR/OUTDOOR USE

POUR UTILISATION AVEC DES VÉHICULES ÉLECTRIQUES
AUCUNE VENTILATION REQUISE
UTILISATION INTÉRIEURE/EXTÉRIEURE

TYPE 4 ENCLOSURE / BOÎTIER DE TYPE 4
MADE IN USA

OPERATING TEMP: -30°C to 50°C
INPUT: 208 to 240V~, 50A, 60Hz, SINGLE PHASE
OUTPUT: 208 to 240V~, 50A

Conf. to UL STD 2594
Cert to CSA STD
C22.2#280

MODEL NUMBER:
L2C50S

SERIAL NUMBER:
231100000500





Intertek
5028046



CAUTION: Do not use this product if there is any damage to the unit. Risk of electric shock. Do not remove cover or attempt to open the enclosure. No user serviceable parts inside. Refer servicing to qualified service personnel. To reduce the risk of electric shock, connect only to properly grounded outlets. To reduce the risk of electric shock and fire, do not connect to a circuit operating at more than 150 volts to ground.

WARNING: 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. This device is intended only for charging vehicles not requiring ventilation during charging.

ATTENTION: Ne pas utiliser ce produit si l'appareil est endommagé. Risque de choc électrique. Ne pas retirer le couvercle ni essayer d'ouvrir le boîtier. Aucune pièce interne réparable par l'utilisateur. Confier tout travail d'entretien ou de réparation à un technicien qualifié. Pour réduire le risque de choc électrique, brancher sur une prise correctement mise à la terre. Pour réduire le risque de choc électrique et d'incendie – Ne pas brancher à un circuit dont la tension est supérieure à 150 volts à la terre.

AVERTISSEMENT: Pour réduire le risque de choc électrique ou d'incendie, ne pas utiliser de rallonge avec cet appareil. Risque d'explosion. L'appareil comporte des pièces internes pouvant produire des arcs électriques ou des étincelles qui ne devraient pas être exposées aux vapeurs inflammables. Cet appareil devrait être installé à au moins 460 mm (18 pouces) au-dessus du plancher. Ce dispositif est destiné au chargement des véhicules ne nécessitant pas de ventilation au cours du chargement.

Dual Charger L2C50D



FOR USE WITH ELECTRIC VEHICLES
VENTILATION NOT REQUIRED
INDOOR/OUTDOOR USE

POUR UTILISATION AVEC DES VÉHICULES ÉLECTRIQUES
AUCUNE VENTILATION REQUISE
UTILISATION INTÉRIEURE/EXTÉRIEURE

TYPE 4 ENCLOSURE / BOÎTIER DE TYPE 4
MADE IN USA

OPERATING TEMP: -30°C to 50°C
INPUT: 208 to 240V~, 2 x 50A, 60Hz, SINGLE PHASE
OUTPUT: 208 to 240V~, 2 x 50A

Conf. to UL STD 2594
Cert to CSA STD
C22.2#280

MODEL NUMBER:
L2C50D

SERIAL NUMBER:
231100000500





Intertek
5028046



CAUTION: Do not use this product if there is any damage to the unit. Risk of electric shock. Do not remove cover or attempt to open the enclosure. No user serviceable parts inside. Refer servicing to qualified service personnel. To reduce the risk of electric shock, connect only to properly grounded outlets. To reduce the risk of electric shock and fire, do not connect to a circuit operating at more than 150 volts to ground.

WARNING: 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. This device is intended only for charging vehicles not requiring ventilation during charging.

ATTENTION: Ne pas utiliser ce produit si l'appareil est endommagé. Risque de choc électrique. Ne pas retirer le couvercle ni essayer d'ouvrir le boîtier. Aucune pièce interne réparable par l'utilisateur. Confier tout travail d'entretien ou de réparation à un technicien qualifié. Pour réduire le risque de choc électrique, brancher sur une prise correctement mise à la terre. Pour réduire le risque de choc électrique et d'incendie – Ne pas brancher à un circuit dont la tension est supérieure à 150 volts à la terre.

AVERTISSEMENT: Pour réduire le risque de choc électrique ou d'incendie, ne pas utiliser de rallonge avec cet appareil. Risque d'explosion. L'appareil comporte des pièces internes pouvant produire des arcs électriques ou des étincelles qui ne devraient pas être exposées aux vapeurs inflammables. Cet appareil devrait être installé à au moins 460 mm (18 pouces) au-dessus du plancher. Ce dispositif est destiné au chargement des véhicules ne nécessitant pas de ventilation au cours du chargement.

The label can be found on the top of the Commercial Charge Station unit as seen in Figure 5: Commercial Charger Label Location.

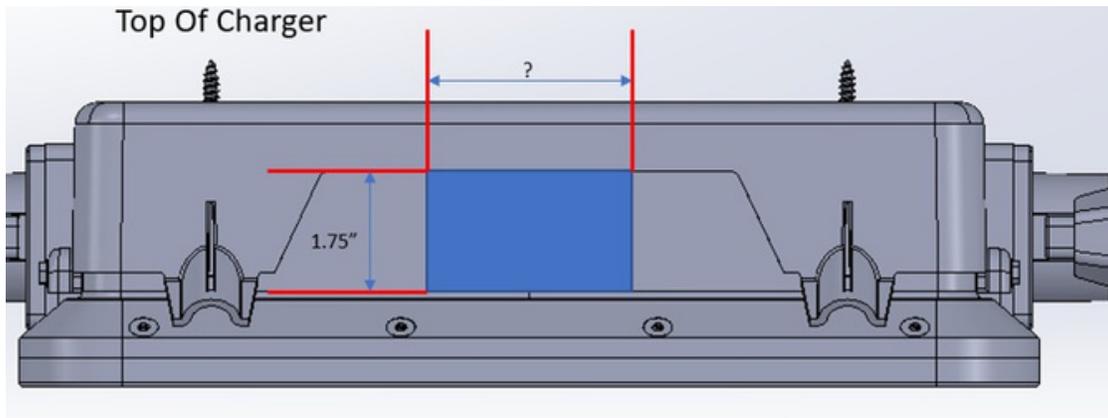


Figure 5: Commercial Charger Label Location

2 General Installation Instructions

This chapter describes how to plan, manage, scope, and define the installation tasks. It is recommended that you allocate some time to this section of these installation instructions. Failure to identify potential issues may result in unstable implementations, schedule conflicts and budgetary impacts, for example, if the charge station must be reinstalled.

Consider these questions when planning an installation:

- Do you have access to all necessary tools and resources (e.g. electrical codes)?
- Do you have to coordinate system availability with other teams (e.g. municipalities)?
- Is there any network, database, or server maintenance scheduled which would impact the installation process?
- Are there firewall, security, connectivity, availability, or performance issues that you need to consider?

2.1 Items Included with the Dunamis Commercial Charge Station for Installation

The hardware listed in Table 1 is supplied with the unit for installation of the Dunamis Commercial Charge Station (L2C40S/L2C40D/ L2C50S/L2C40D). Please ensure you have all hardware before you begin installation. Pictures the parts provided can be found in Appendix B: Pictures of Included Items.

Table 1: List of Hardware supplied with the Dunamis Commercial Charge Station

P/N	Description	Quantity
95526A100	McMaster Flanged Hex Head Screw for Wood	4
91870A480	McMaster Tamper-Resistant Torx Flat Head Screws, M5 x 0.8 mm Thread Size, 8 mm Long	14
92400A290	McMaster #10 x 1/2-inch Thread Forming, Zinc Plated, Hex Head	2
DAC-0020-C	Wall Mounting Bracket	1

DAC-0018-C	Enclosure Housing	1
DAC-0019-C	Enclosure Cover Assembly	1
08910010600	J1772 Charging Port	2
1.209.1001.70	Hummel Plastic Submersible Cord Grips	2

2.2 Equipment and Tools Required for Installation

- Fluke Electric Vehicle Charging Station EVSE Tester (See [Appendix B: Pictures of Included Items and Required Installation Equipment](#) for description)
- Voltage meter (e.g. Fluke)
- Tool to insert tamper resistant screws
- Phillips and standard screwdrivers
- Laptop, cell phone, or tablet for networked unit initial configuration

2.3 General Requirements

- All Electrical Vehicle Charging Systems shall comply with the applicable sections of the National Electrical Code (NEC), including Article 625.
- All Electric Vehicle Supply Equipment shall be listed by a nationally recognized testing laboratory.
- Level 2 Electric Vehicle Supply Equipment must be permanently connected and fastened in place in accordance with the manufacturer's installation instructions (Reference: NEC Article 625.13).
- All wiring that is intended to be used for connecting the Dunamis Commercial Charging System must have a temperature rating of 75 degrees Celsius (75°C)
- The charging station is supplied with lag bolts for wood stud mounting. Therefore, a wood frame wall with suitable masonry or optional post mount must be in place before installation can begin.
- The wall mounting bracket must be located at a height that meets ADA compliance at 42 inches above grade.
- The Dunamis Commercial Charging System must be connected to a grounded, metal, permanent wiring system, or an equipment grounding conductor must be run

with the circuit conductions and connected to the equipment grounding terminal or lead on the product.

2.4 Equipment Height

The coupling means of the Electric Vehicle Supply Equipment shall be stored at a height of 24–48 inches above the finished floor (Reference: NEC Article 625.29(B)).

2.5 Installation Checklist

This manual contains a checklist for installation, see [Appendix D: Installation Checklist](#). Please use it to ensure all steps have been completed before hand-off to the customer.

2.6 Tasks

The chart below describes in general terms each task to be completed during installation. Before installation of the charging station by licensed professionals, this manual should be reviewed carefully. Consult with a licensed contractor, licensed electrician, and trained installation personnel to ensure compliance with local building practices, climate conditions, safety standards, national, state, and local codes. See Section 3.0 for additional requirements that must occur in advance of installing the Dunamis Commercial Charge Station Model L2C40S/L2C40D/ L2C50S/L2C40D.

Ref 	Task	Role
Section 2.8	Ensure your Charge Station mounting location has been approved by the necessary local utility company(ies).	Installer
Sections 3.3 , 4.2	All electrical work must comply with local, state, and national standards and codes.	Installer
Section 4.2	Install the wall mounting bracket on a vertical stud in a wood frame wall with suitable masonry or optional post mount.	Installer
Section 4.2	Ground the unit or ensure it is grounded.	Installer
Section 4.9	Install the wall mounting bracket and enclosure housing, and cord grips	Installer
Section 4.9	Install power leads, connect appropriate wires to their respective terminal studs.	Installer
Section 4.10	Inspect the power connectors routings before closing the charging station.	Installer

Ref 	Task	Role
Section 4.11	Close the Charging Station with Enclosure Cover and Power on the charging station unit.	Installer
Section 6	Configure the system for use by the end user.	Installer
Appendix D	Confirm installation and sign the checklist found in Appendix D.	Installer

2.7 Environment

The Dunamis Charge station shall be protected against vehicle impact damage when located in the path of a vehicle. To avoid the installation of a substantial pipe bollard as an equipment guard, locate the charge station on a garage side wall, out of vehicular path (NEC Article 110.27(B)).

2.8 Electrical Disconnect

When EV charging equipment is rated at more than 60 Amps, the disconnect means shall be provided and installed in a readily accessible location and shall be capable of being locked in the open position (NEC Article 625.23).

3 System Requirements

This section describes the hardware, software and systems required to install the Dunamis Commercial Charge Station, Model L2C40S/L2C40D/ L2C50S/L2C40D. This chapter includes the following sections:

- Overview of Dunamis Commercial Charge Station, Model L2C40S/L2C40D/ L2C50S/L2C40D installation
- Software requirements
- Hardware requirements
- Operating systems and software
- Error Message Definitions

3.1 Overview of Dunamis Commercial Charge Station, Model L2C40S/L2C40D/ L2C50S/L2C40D Installation Requirements

- All Electrical Vehicle Charging Systems shall comply with the applicable sections of the National Electrical Code (NEC), including Article 625.
- The coupling means of the Electric Vehicle Supply Equipment shall be stored at a height of 24–48 inches above the finished floor (NEC Article 625.29(B)).
- All Electric Vehicle Supply Equipment shall be listed by a nationally recognized testing laboratory.
- Level 2 Electric Vehicle Supply Equipment must be permanently connected and fastened in place in accordance with the manufacturer’s installation instructions (NEC Article 625.13).
- Electrical Vehicle Supply Equipment shall be protected against vehicle impact damage when located in the path of a vehicle. To avoid the installation of a substantial pipe bollard as an equipment guard, locate the Electrical Vehicle Supply Equipment on a garage side wall, out of vehicular path (NEC Article 110.27(B)).
- When EV charging equipment is rated at more than 60 Amps, the disconnect means shall be provided and installed in a readily accessible location and shall be capable of being locked on the open position (NEC Article 625.23).

3.2 Software Requirements

The following software is required to install the charge station:

- There are no incremental software requirements to install the charge station.

3.3 Hardware Requirements

The recommended minimum requirements for the EV Charge station include the following:

Charge Station

- All Electrical Vehicle Charging Systems shall comply with the applicable sections of the National Electrical Code (NEC), including Article 625.
- The coupling means of the Electric Vehicle Supply Equipment shall be stored at a height of 24–48 inches above the finished floor (NEC Article 625.29(B)). All Electric Vehicle Supply Equipment shall be listed by a nationally recognized testing laboratory.
- Level 2 Electric Vehicle Supply Equipment must be permanently connected and fastened in place in accordance with the manufacturer’s installation instructions (NEC Article 625.13).
- Electrical Vehicle Supply Equipment shall be protected against vehicle impact damage when located in the path of a vehicle. To avoid the installation of a substantial pipe bollard as an equipment guard, locate the Electrical Vehicle Supply Equipment on a garage side wall, out of vehicular path (NEC Article 110.27(B)).
- When EV charging equipment is rated at more than 60 Amps, the disconnect means shall be provided and installed in a readily accessible location and shall be capable of being locked on the open position (NEC Article 625.23).
-

3.4 Operating Systems

The Dunamis Commercial Charge station operates on the following operating systems:

- OCPP (Open Charge Point Protocol) 1.6

3.5 Error Messages Definitions

This section describes known error messages that will be shown on the Dunamis Commercial Charge Station display if there is an issue. These error messages will occur if there is any

abnormal operation of the charge station or the connection to the electric vehicle. The display will show "Please wait" with the respective error message.

Error #	Display	Reason for Error
1	Error: Input Voltage	Voltage into the unit is lower than the expected value
2	Error: Output Voltage	Voltage leaving the unit is lower than the expected
3	Error: GFCI Activated	value
4	Error: Pilot voltage	Ground Fault has occurred
5	Error: Overcurrent	The pilot pin voltage is invalid
6	Error: GFCI Failure	The unit is experiencing a higher-than-expected current
7	Error: Contactor Weld	draw
		The Ground fault circuit test failed
		The main relay has a welded contactor

If you encounter any of these error messages during the installation process, please contact the Dunamis Charge team at info@dunamischarge.com.

Installing the Dunamis

L2C40S/L2C40D/L2C50S/L2C40D

The following section provides the installation instructions for the Dunamis Commercial Charge Station L2C40S/L2C40D L2C50S/L2C40D unit.

Before charge station installation, read this manual thoroughly and make sure you have the necessary tools and resources available to complete the installation.

4.1 Prerequisites

Before you install the Dunamis Commercial Charge Station L2C40S/L2C40D/L2C50S/L2C40D, you must complete several pre-installation tasks. This section outlines the steps and provides the details that you need to complete these tasks. The Charging Station should be inspected by a qualified installer prior to initial use. Under no circumstances will compliance with the information in this manual relieve the user of responsibility to comply with all applicable codes or safety standards. This document describes the most used installation and mounting scenarios. If situations arise in which it is not possible to perform an installation following the procedures provided in this document, contact Dunamis Charge. Dunamis Charge is not responsible for any damages that may occur resulting from custom installations that are not described in this document.

NOTICE

READ ALL INSTRUCTIONS BEFORE INSTALLING OR USING THIS PRODUCT

- This device should be supervised when used around children 12 years old or younger.
- Do not put fingers into the electric vehicle connector.
- Do not use this product if the flexible power cord or EV cable is frayed, has broken insulation, or any other signs 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.

Charge Station

- All Electrical Vehicle Charging Systems shall comply with the applicable sections of the National Electrical Code (NEC), including Article 625.
- The coupling means of the Electric Vehicle Supply Equipment shall be stored at a height of 24–48 inches above the finished floor (NEC Article 625.29(B)).
- All Electric Vehicle Supply Equipment shall be listed by a nationally recognized testing laboratory.

- Level 2 Electric Vehicle Supply Equipment must be permanently connected and fastened in place in accordance with the manufacturer’s installation instructions (NEC Article 625.13).
- Electrical Vehicle Supply Equipment shall be protected against vehicle impact damage when located in the path of a vehicle. To avoid the installation of a substantial pipe bollard as an equipment guard, locate the Electrical Vehicle Supply Equipment on a garage side wall, out of vehicular path (NEC Article 110.27(B)).
- When EV charging equipment is rated at more than 60 Amps, the disconnect means shall be provided and installed in a readily accessible location and shall be capable of being locked on the open position (NEC Article 625.23).

4.1.1 Installation problems

If problems occur, the installation may halt before it completes. If situations arise in which it is not possible to perform an installation following the procedures provided in this document, contact Dunamis Charge at info@dunamischarge.com.

4.2 Preparing to Install

The following sections describe the components and provide important installation details that you should understand before installing the charge station, as shown in Table 2: General Installation Details.

Table 2: General Installation Details

Table category	Explanation	Reference
General Requirements	All Electrical Vehicle Charging Systems shall comply with the applicable sections of the National Electrical Code (NEC), including Article 625.	National Electrical Code, including Article 625
Equipment Height	The coupling means of the Electric Vehicle Supply Equipment shall be stored at a height of 24–48 inches above the finished floor (NEC Article 625.29(B))	NEC Article 625.29(B)

Table category	Explanation	Reference
Listed Equipment	All Electric Vehicle Supply Equipment shall be listed by a nationally recognized testing laboratory.	
Fastened in Place	Level 2 Electric Vehicle Supply Equipment must be permanently connected and fastened in place in accordance with the manufacturer's installation instructions (NEC Art. 625.13).	NEC Article 625.13
Protection from Physical Damage	Electrical Vehicle Supply Equipment shall be protected against vehicle impact damage when located in the path of a vehicle. To avoid the installation of a substantial pipe bollard as an equipment guard, locate the Electrical Vehicle Supply Equipment on a garage side wall, out of vehicular path (NEC Article 110.27(B))	NEC Article 110.27(B)
Means for Disconnect	When EV charging equipment is rated at more than 60 Amps, the disconnect means shall be provided and installed in a readily accessible location and shall be capable of being locked in the open position (NEC Article 625.23).	NEC Article 625.23
Mounting Location	Install the wall mounting bracket on a vertical stud in a wood frame wall with suitable masonry or optional post mount. The charging station is supplied with lag bolts for wood stud mounting. For other mounting types, suitable fasteners may be needed and are not supplied.	
Grounding	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.	

4.3 Installation Requirements and Instructions

The following sections provide the components, requirements, and necessary steps for the installing the Dunamis Commercial Charge Station:

- Supplied Hardware
- Torque Requirements
- Wire Requirements
- Ring Terminal Requirements
- Mounting Location
- Grounding Instructions
- Single Phase Installation
- Complete Inspection
- Enclosure Cover Installation
- Power On Self-Test
-
-
-
-

4.4. Supplied Hardware

See Appendix B: Pictures of Included Items for a list of hardware that is supplied with the Dunamis Commercial Charge Station Model L2C40S/L2C40D/ L2C50S/L2C40D.

4.5 Torque Requirements

Description	Driver (Not Included)	Assembly Torque (Nm)	Connection Point
Flanged Hex Head Screw for Wood	1/4	3	Wall mount to wood structure
M5x0.8 x 8mm Machine Thread, 18-8SS, Flat Head	T25	2.5	Cover to enclosure
#10 x 1/2-inch Thread Forming, Zinc Plated, Hex Head	5/16-inch Socket	2.5	Wall mount to enclosure
Ring Terminal		2.5	L1, L2 Internal to EVSE

4.6 Wire Requirements

Temperature rating of wire that is intended to be used for connection of the device	Copper conductors only	Location
90 °C	Use minimum 1C#6 AWG, 90 °C copper wire	Appendix 9.5

4.7 Ring Terminal Requirements

Shown below in Figure 6: Ring Terminal Requirements for the 40A Charge Station Unit are the requirements for the 40A charge station unit ring terminal.

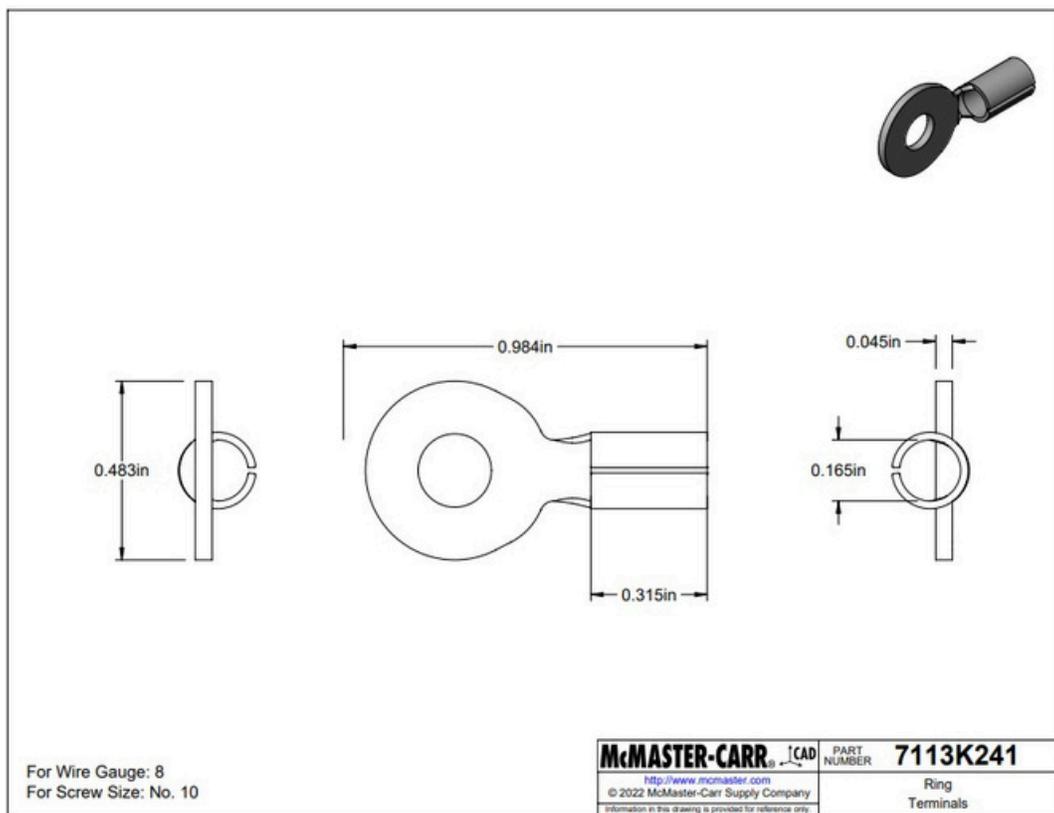
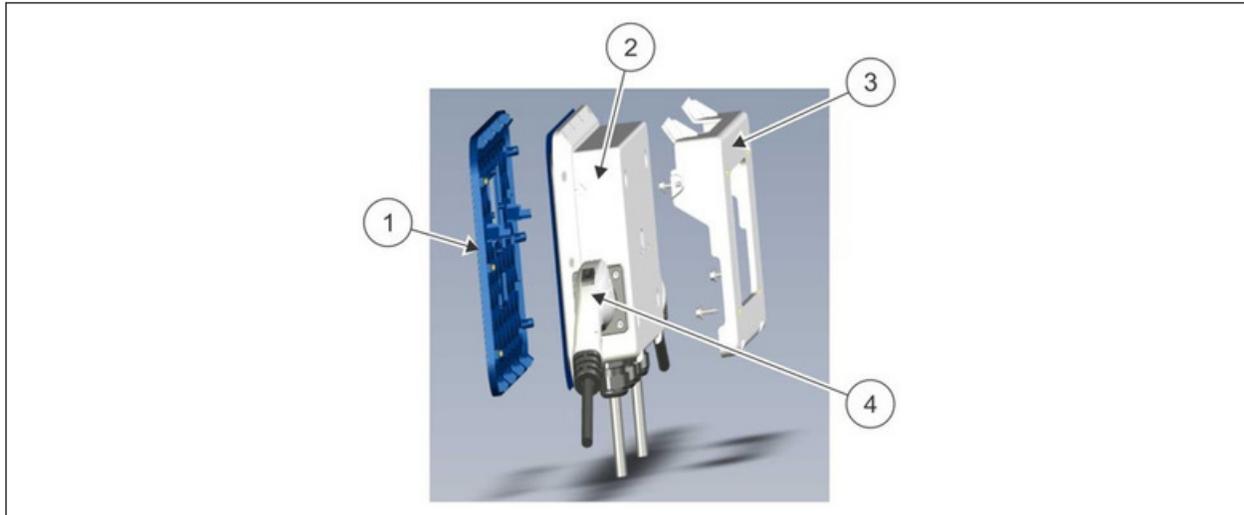


Figure 6: Ring Terminal Requirements for the 40A Charge Station Unit

4.8 Charge Station Main Components



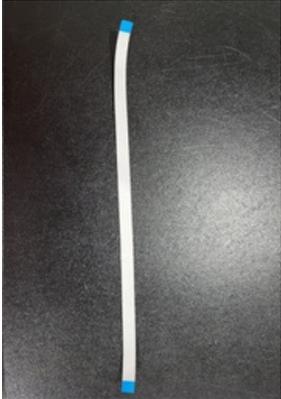
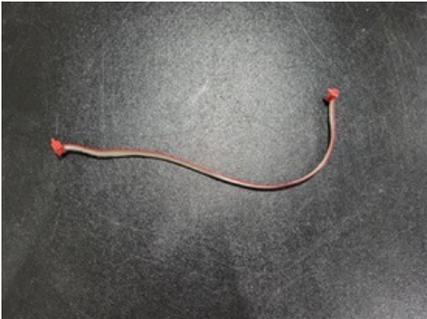
No.	Description	No.	Description
1	Enclosure Cover Assembly	3	Wall Mounting Bracket
2	Enclosure Housing	4	J1772 Charging Port

4.9 Charge Station Installation

1. Separate the wall mounting bracket from the enclosure housing.
2. Remove the tamper resistant hold down screws from the back of the enclosure cover assembly and remove the assembly.

NOTICE

The enclosure cover LCD and NFC ribbon cable are connected. Hold the front of the cover and carefully remove the LCD ribbon cable and the NFC connector from the main motherboard.

LCD Ribbon Cable	NFC Connector Cable
	

3. Install the flanged hex head screw for wood through the mounting holes of the wall mounting bracket into the stud. Tighten to 3 Nm.

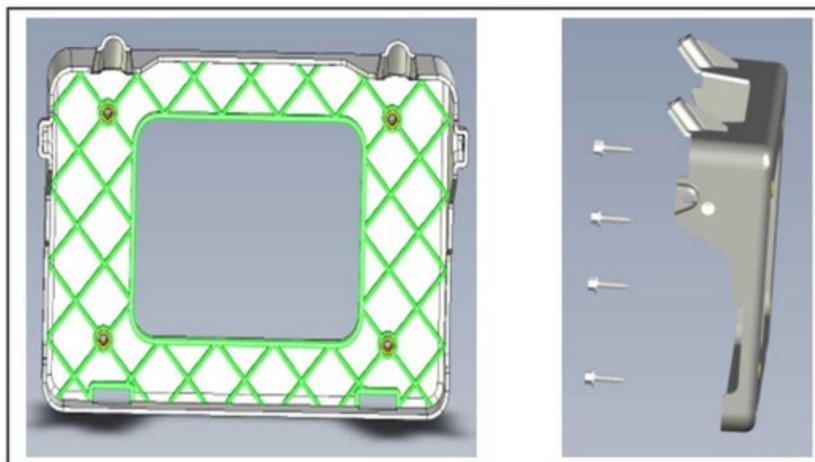


Figure 7: Wall Mounting Bracket Installation

4. Install the enclosure housing to the wall mounting bracket by inserting the enclosure housing base into the mounting tab holder and rotating enclosure housing back to align the enclosure connector at the top.

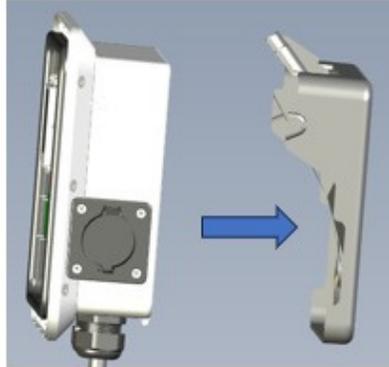


Figure 8: Enclosure Housing Installation

5. Make sure the locking tabs at the base of the enclosure are engaged in the tab holders at the base of the wall mounting bracket.

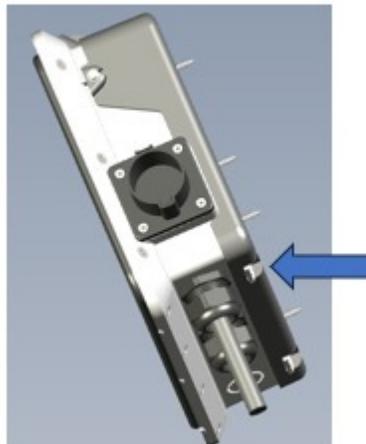


Figure 9: Locking Tab Engagement

6. Connect the enclosure to the wall mounting bracket using the thread forming screws provided (#10 x 1/2-inch thread forming, zinc plated, hex head). Tighten to 2.5 Nm.

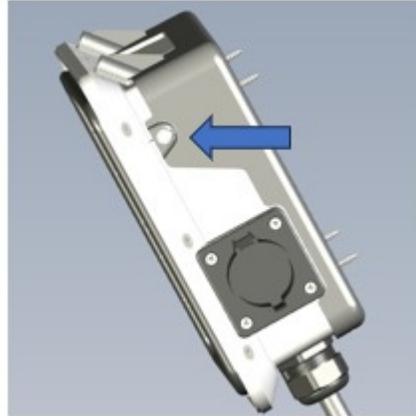


Figure 10: Connecting the Enclosure to Wall Mounting Bracket

7. Connect liquid tight and/or cord grip to enclosure using appropriate hardware. Hardware and cord grip are not supplied. The following is recommended.
 - Plastic Submersible Cord Grip – Recommended for multi conductor power input installation applications (3C#8 AWG SO Cord).

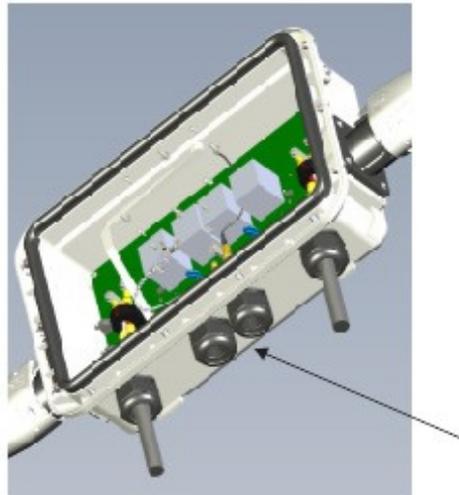


Figure 11: Connecting cord grip to Enclosure

- **Recommended – Liquid-Tight Flexible Metal Conduit for single conductor installations (single phase (3) 3C#8AWG) power input connectors.**

See Appendix C: Connector and Cable Specification Sheets for additional connector specifications.

8. Install power conductors



Electric Shock Hazard

Turn off power at the charging station dedicated circuit breaker at the power distribution panel to avoid electrical shock. Observe all safety precautions.

Stow enclosure cover in cover mounts for hands free power lead installation as shown in Figure 12: Stowing enclosure cover in cover mounts.

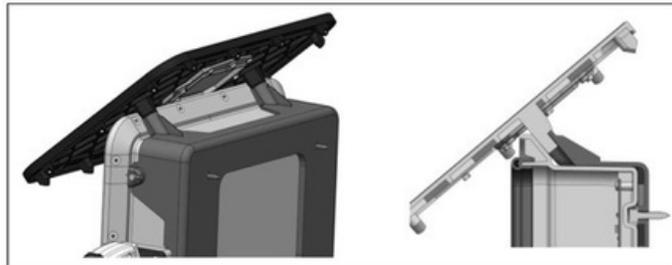


Figure 12: Stowing enclosure cover in cover mounts

- a. Install power leads for dual port configurations as shown in Figure 13:

Install Power Leads for Dual Port Configuration. Provide dedicated 50A branch circuits per port for 40A units; provide dedicated 60A branch circuits per port for 50A units. Remove screws located on terminal studs.

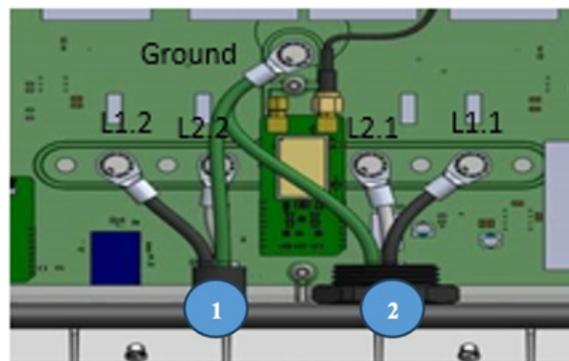


Figure 13: Install Power Leads for Dual Port Configuration

- a. Circuit 1 – Connect L1.2 to ACIN3 and L2.2 to ACIN4 Ground to common Ground Post. Tighten to 2.5 Nm.
- b. Circuit 2 – Connect L1.1 to ACIN1 and L2.1 to ACIN2 Ground to common Ground Post. Tighten to 2.5 Nm.

4.10 Complete Inspection



Fire Hazard

A phase to phase or phase to ground condition can cause an ark and cause a fire.

1. Verify all power connectors are routed to prevent stress, pitching, phase to phase or ground condition to prevent the need to reopen the charging station.

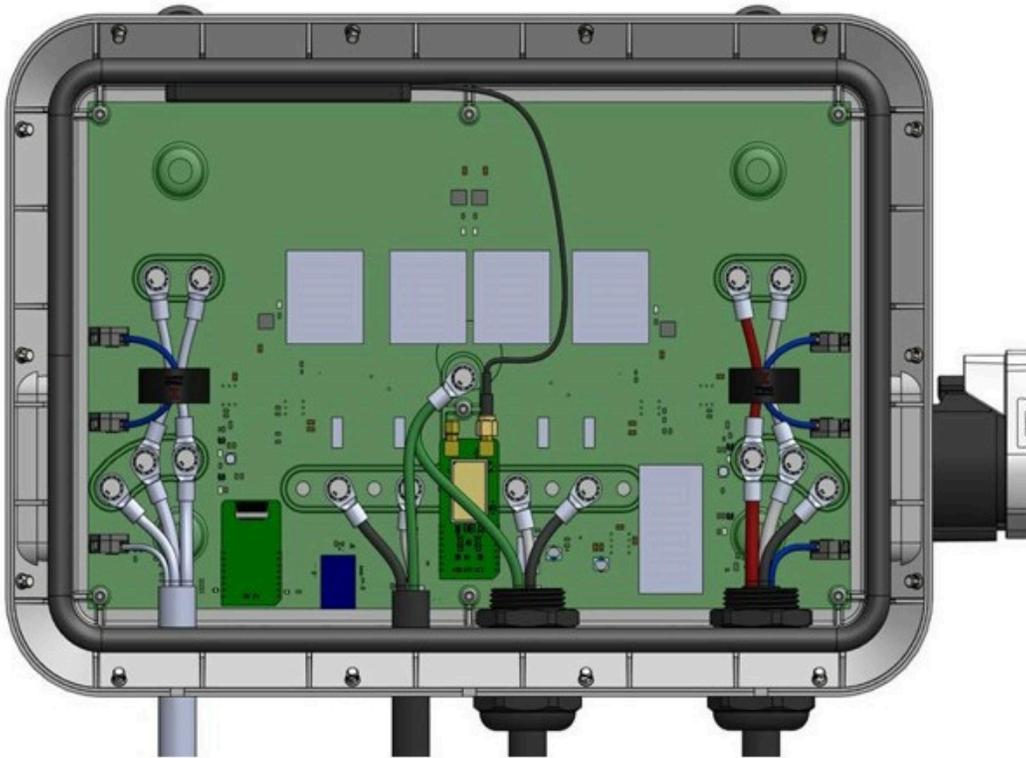


Figure 14: Typical Finished Assembly for 2 Single Phase Feeds

4.11 Enclosure Cover Installation

1. Hold front enclosure cover within 12 inches of enclosure housing and connect:

- LCD ribbon cable (white with blue tip), blue tip facing up.

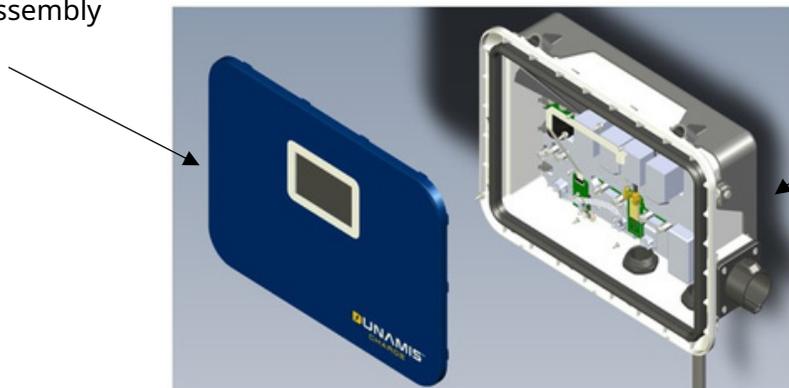


- NFC connector (tan, red stripe and connectors), red stripe on top.



2. Install cover with hardware provided.

Enclosure Cover Assembly



Mounted Enclosure Assembly

Figure 15: Install Cover to Enclosure Assembly

3. Install tamper resistant cover screws provided (M5x0.8mm) to back of enclosure cover with T25H driver as shown in Figure 16: Installing Tamper Resistant Cover Screws to Completed assembly.

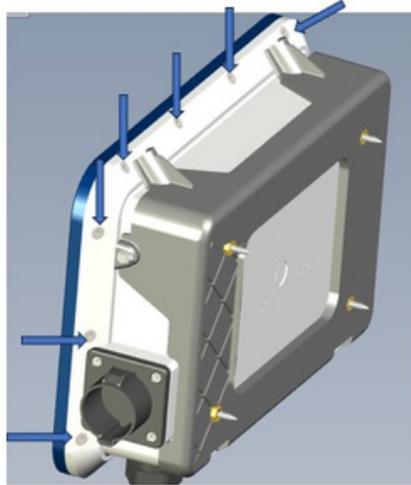


Figure 16: Installing Tamper Resistant Cover Screws to Completed assembly

4.12 Power On Self-Test



Electric Shock Can Kill

Touching live electrical parts can cause fatal shocks and severe burns. The input power circuitry and internal circuit are live whenever input power is on.

Turn on power at the circuitbreaker to make sure the system runs a self-test and is Ready for Charge. If an error occurs, contact Dunamis Charge for support at info@dunamischarge.com.

5 Post Installation Instructions

5.1 Self-Diagnostics Test – Networked Unit

Step Number	Step Description /Visual	Status
Step 1	If Dual Port unit, select the left port by pressing the AVAILABLE button on the screen. Display should show Scan to Pay or Tap Card to Activate.	AVAILABLE Scan to Pay or Tap Card to Activate.
Step 2	Use your cell phone to connect to the respective Network provider by scanning the QR code on the charger or by presenting the NFC card at the charge station.	
Step 3	For QR code option: Once connected to network choose the respective port on a single port or dual port Charging unit. Press Start Charge then follow Instructions on the screen. For NFC, the display will skip to Step 4.	Plug to Begin Charging
Step 4	Display should show	READY
Step 5	Ensure Fluke CP Setting is set to "A" Single Port: Connect Fluke Tester to the Right port of the charge station (Connector of Dunamis Charge Charging Station.) Dual Port: Connect the Fluke Tester Left port of the charge station and repeat for the Right port of the charge station.	READY -< Waiting
Step 6	Turn Fluke CP Setting to "B"	Waiting for Vehicle to Start Charging
Step 7	Turn Fluke CP Setting to "C"	CHARGING
Step 8	Press the GFCI button on the Fluke Charge Station should stop charging and the display shows Error Unplug Charger	DISABLED Charging

	DISABLED Charging Error Unplug Charger . Reset Fluke .	
Step 9	Press the PE button on the Fluke Charge Station. Charging should stop charging and the display shows Error Unplug Charger DISABLED Charging Error Unplug Charger . Reset Fluke .	
Step 10	The Charge station display will go back to the home screen . For a Single Port Unit . Skip to Step 12 .	AVAILABLE Scan to Pay or Tap Card to Activate .
Step 11	For a Dual port unit , repeat Steps 9 – 10 with the Right Port .	
Step 12	Disconnect Fluke from Charger	

The Dunamis Charge Station is now READY FOR USE .

5.2 Self-Diagnostics Test – Non-Networked Unit

You will need the Fluke meter tool to complete this task.

Step Number	Step Description /Visual	Status
Step 1	If Dual Port unit, select the left port by pressing	READY
	READY button on the screen.	
Step 2	Ensure Fluke CP Setting is set to "A" Single Port: Connect Fluke Tester to the Right port for Vehicle to Start on the charge station (Connector of Dunamis Charge Charging Station.) Dual Port: Connect the Fluke Tester Left port of the charge station and repeat for the Right port of the charge station.	READY ← Waiting
Step 3	Turn Fluke CP Setting to "B"	Waiting for Vehicle to Start Charging
Step 4	Turn Fluke CP Setting to "C"	CHARGING
Step 5	Press the GFCI button on the Fluke, Charge Station should stop charging and the display shows Error Unplug Charger DISABLED Charging Error Unplug Charger. Reset Fluke.	DISABLED Charging
Step 6	Press the PE button on the Fluke, Charge Station should stop charging and the display shows Error Unplug Charger DISABLED Charging Error Unplug Charger. Reset Fluke.	DISABLED Charging
Step 7	The Charge station display will go back to the home screen. For a Single Port Unit, Skip to Step 9.	READY

Step 8	For a Dual port unit, repeat Steps 1 – 7 with the Right Port.	For a Dual port unit, repeat Steps 1 – 7 with the Right Port.
Step 9	Disconnect Fluke from Charger	Disconnect Fluke from Charger

The Dunamis Charge Station is now READY FOR USE.

6 Troubleshooting

This chapter offers suggestions about debugging methods, tools, techniques, and where the pertinent information for troubleshooting resides. There are typical procedures to be followed whenever problems crop up during an installation. As with any application, most of these steps employ methods, practices, and routines commonly used by skilled electrician and charge stations installers.

These steps are:

- Take note of the system failure's characteristics, including the exact time when the problem occurred.
- Contact Dunamis Charge at info@dunamischarge.com for additional troubleshooting support.

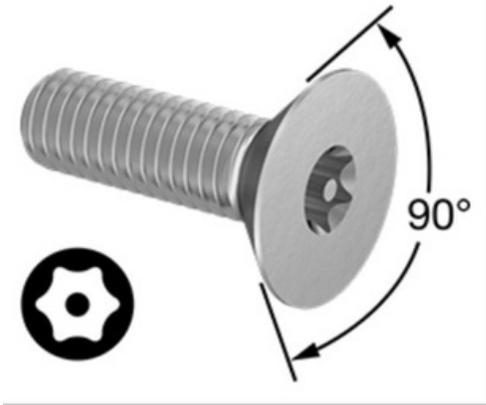
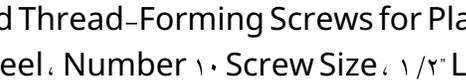
7 Appendix A: Acronyms, Abbreviations & Definitions

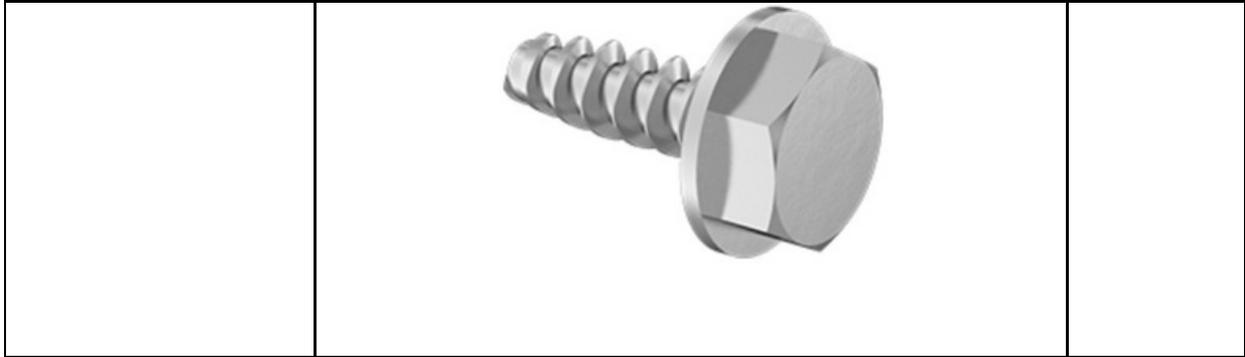
This section provides details of terms, acronyms, and abbreviations required to properly interpret this document.

Term	Meaning
EVSE	Electric Vehicle Supply Equipment, also Electric Vehicle Charging Station, the unit to be installed.
NEC	National Electrical Code – The National Electrical Code (NEC), or NFPA 70, is a United States standard for the safe installation of electrical wiring and equipment. It is part of the National Fire Codes series published by the National Fire Protection Association (NFPA). While the NEC is not itself a U.S. law, NEC use is commonly mandated by state or local law, as well as in many jurisdictions outside of the United States. The NEC codifies the requirements for safe electrical installations into a single, standardized source. The “authority having jurisdiction” inspects for compliance with these minimum standards.
Installer	The certified or licensed professional that has been contracted or assigned to install the Dunamis Charge Station.
End user	The person or people that will use the Dunamis Commercial Charge Station to plug in and charge their compatible electric vehicle.
AWG	American Wire Gauge - American Wire Gauge (AWG) is the standard way to denote wire size in North America. In AWG, the larger the number, the smaller the wire diameter and thickness. The largest standard size is 0000 AWG, and 40 AWG is the smallest standard size. It may also be called <i>Brown & Sharpe wire gauge</i> or simply the <i>gauge of the wire</i> .
ACIN	Applied Communications and Information Networking
OCPP	Open Charge Point Protocol - The Open Charge Point Protocol (OCPP) is an application protocol for communication between Electric vehicle (EV) charging stations and a central management system, also known as a charging station network, similar to cell phones and cell phone networks.
GFCI	Ground Fault Circuit Interrupter - a fast-acting circuit breaker designed to shut off electric power in the event of a ground-fault within as little as 1/40 of a second.
	The lightning flash with arrowhead within a triangle is intended to tell the user that parts inside the product are a risk of shock to persons.

8 Appendix B: Pictures of Included Items and Required Installation Equipment

Components included with the Dunamis Commercial Charge Station L₂C₄0S/L₂C₄0D/L₂C₅0S/L₂C₅0D:

P/N (McMaster)	Description	Quantity
90026A100	Flanged Hex Head Screws for Wood, Hot-Dipped Galvanized Steel, 1/8" Size, 1" Long 	4
91870A480	Tamper-Resistant Torx Flat Head Screws, M6x0.8mm Thread Size, 8mm Long 	14
92400A290	Hex Head Thread-Forming Screws for Plastic, Zinc-Plated Steel, Number 10, Screw Size, 1/2" Long 	2



Required Installation Equipment



Figure 17: Fluke FEV100 EV Charging Station EVSE Tester

9 Appendix C: Connector and Cable Specification Sheets

Enclosure Connection

9.1

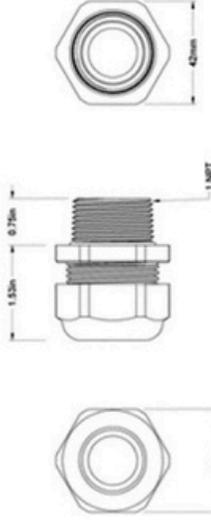
Spec Sheet

Shape	Straight
For Cord OD	0.51"-0.79"
Mounting Location	Knockout
For Knockout Trade Size	1
Knockout Connection Type	Threaded
Pipe Size	1
Thread Type	NPT
For Cord Shape	Round
Material	Black Nylon Plastic
Cord Holding Type	Bushing
Bushing Material	Rubber
Temperature Range	-20° to 210° F
Flexibility	Rigid
Features	Nylon Plastic Locknut, Rubber O-Ring
Environment	Corrosive, Outdoor, Submersible, Washdown, Wet
Environmental Rating	IP68, IP69K, NEMA 4X, NEMA 6, NEMA 12
Specifications Met	UL Listed, CSA Certified, UL 746C f1, UL 94 V-0, CE Marked
RoHS	RoHS 3 (2015/863/EU) Compliant
REACH	Not Compliant
DFARS	Specialty Metals COTS-Exempt
Country of Origin	Germany
Schedule B	392690 9988
ECCN	EAR99

These grips are sized to fit in tight areas. They are rated IP68 and 69K for protection from continuous submersion and high-pressure, high-temperature jets of water. They are also rated NEMA 4X, 6, and 12 for indoor and outdoor protection against corrosion, water projected from a hose, and dripping oils and lubricants. A rubber bushing and O-ring create a tight seal to prevent liquid from entering the connection. For the strongest hold and most secure seal around a cord, select cord grips with the smallest cord OD range that will work with your cord.

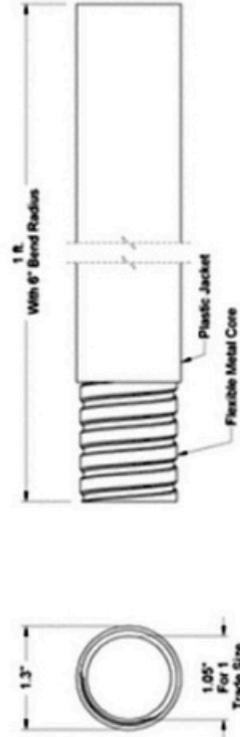
Enclosure Connection

Plastic Submersible Cord Grip, Recommended for multi conductor power input installation applications (#C#8 AWG SO Cord)

9.2 Liquid-Tight Flexible Metal Conduit

Recommended Liquid-Tight Flexible Metal Conduit for single conductor installations (single phase (3) 1C#8AWG) power input



Spec Sheet

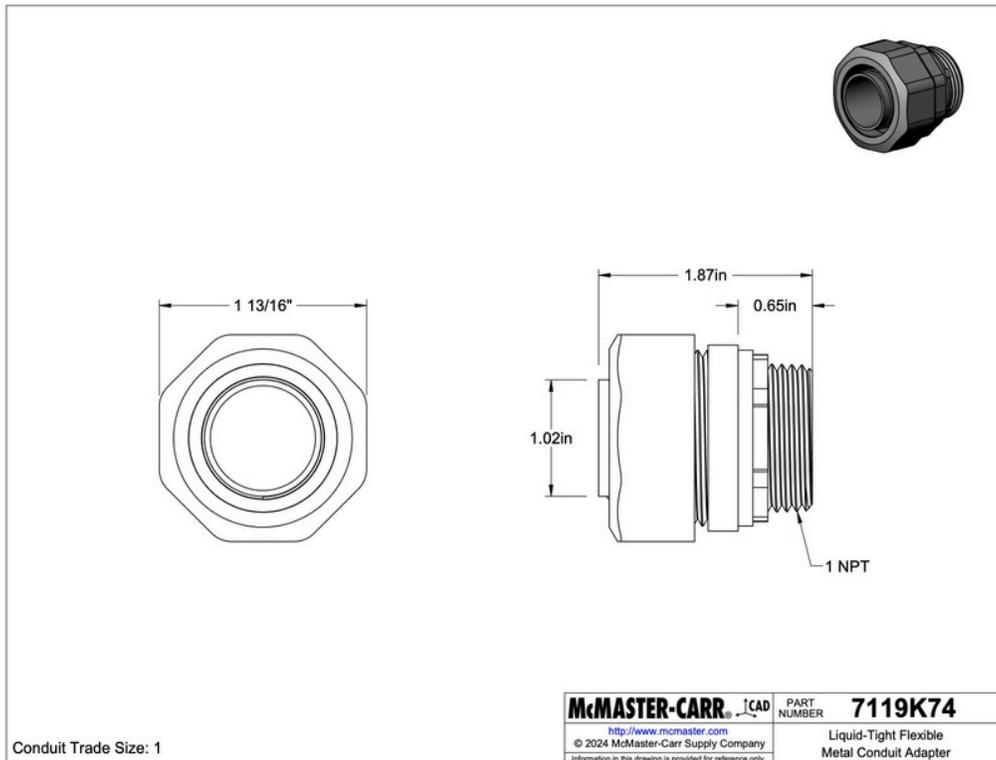
Type	Conduit
Conduit Type	LFMC
Flexibility	Flexible
Conduit Texture	Smooth
Conduit Trade Size	1
ID	1.05"
OD	1.3"
Bend Radius	6"
Gender	Male
Material	Steel
Cover Material	PVC
Color	Gray
Includes	Copper Ground Wire
Temperature Range	-50° to 220° F
Environment	Washdown, Underground
Specifications Met	UL Listed
RoHS	RoHS 3 (2015/863/EU) compliant with exemption 6(c) - Lead in copper alloy
REACH	REACH (EC 1907/2006) (07/06/2021, 219 SVHC) Compliant
DFARS	Specialty Metals COTS-Exempt
Country of Origin	United States
USMCA Qualifying	No
Schedule B	830710.0000
ECCN	EAR99

Even in very high and very low temperatures, this conduit stays flexible. It also seals out liquid when used with liquid-tight fittings. The steel core provides crush resistance, and the cover is UV light resistant. Use this bendable conduit for connections to motors and other equipment in tight areas.

UL listed conduit can be used underground.

9.3 Straight Electrical Connector Adapter w/Locknut

Electrical Connector Component	Adapter Straight LFMC
Shape	Flexible, Ultra Flexible
For Conduit Type	
For Conduit Flexibility	
Conduit Connection	
Conduit Trade Size	1
Conduit Connection Type	Twist-In
Gender	Female
Electrical Box Connection	
Pipe Size	1
Thread Type	NPT
Electrical Box Connection Type	Knockout
Knockout Connection Type	Threaded
Gender	Male
Material	Zinc
Includes	Locknut
Environment	Washdown
Specifications Met	UL Listed, C-UL Listed
RoHS	RoHS 3 (2015/863/EU) Compliant
REACH	Not Compliant
DFARS	Specialty Metals COTS-Exempt
Country of Origin	Peoples Republic of China
Schedule B	790700.2000
ECCN	EAR99



9.4 6 AWG Bare Copper Wire

Cable Type	THHN/THWN-2
Wire Size	6 AWG
# of Conductors	1 Conductor
Conductor Material	Bare Copper
Stranded or Solid	Stranded
Number of Strands	19
O.D. (Inches)	0.249
Ampacity	75
Voltage	600V
Temp. Rating	90°C or greater
Insulation Material	PVC - Polyvinyl Chloride
Jacket Material	Nylon
Direct Burial	No
Location Use	Wet, Dry
Indoor/Outdoor Use	Indoor, Outdoor
Standards	UL Listed, CSA Certified



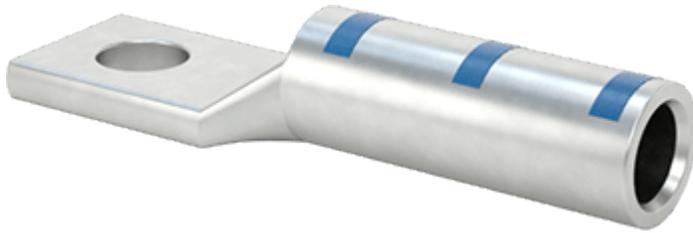
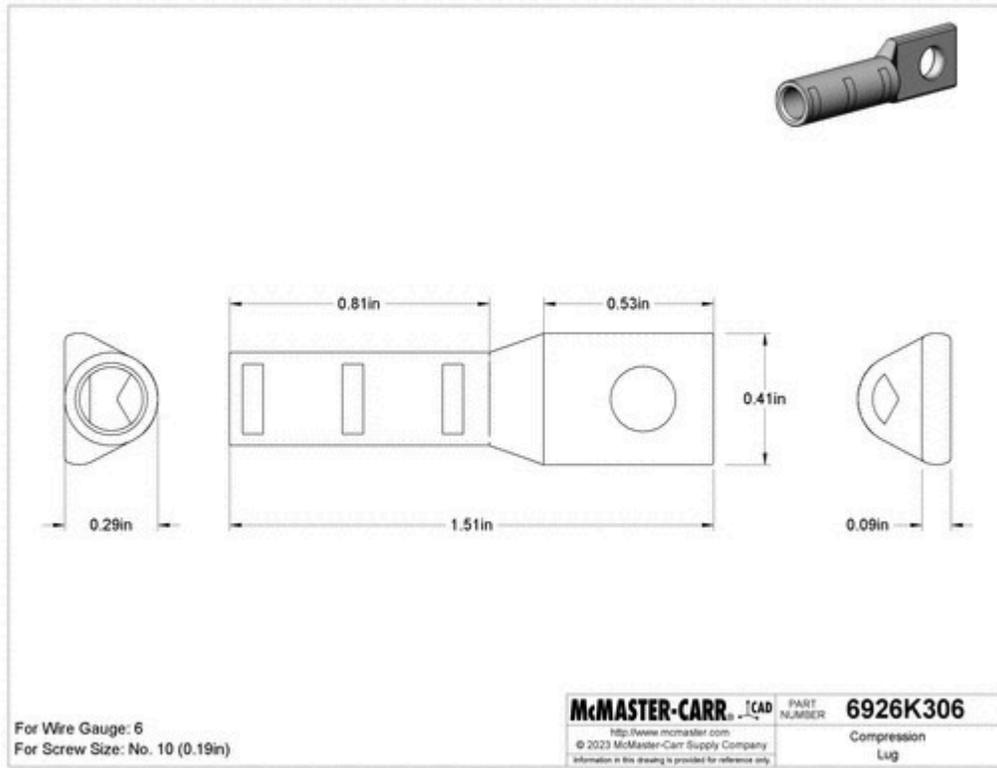
9.5 Compression Terminal Lug – Straight for 6 AWG Wire

Application	Electrical Connector
Component	Terminal Type Wire
Connection	Type Shape
Number of Holes	1
For Wire Gauge	No. 10
For Screw Size	.19"
For Screw Size	Decimal
Equivalent	Blue Copper
Color	Stranded
For Wire Material	Tin-Plated Copper
For Wire Type	1.010"
Material	.410"
Length	.290"
Width	.09"
Height	Noninsulated
Thickness	190°F
Insulation	600VAC
Maximum Temperature	UL Listed, CSA
Maximum Voltage	Certified
Specifications Met	

Tin-Plated Copper Compression Lug

with 1 Hole, for 6 Wire Gauge and Number 10 Screw Size





10 Appendix D: Installation Checklist

Please place a checkmark or X next to each task that must be completed.

Complete	Task	Task	Responsibilit
	1	Read the entire Installation Manual	Installer
	2	All utilities have been evaluated and signed off	Installer
	3	All Parts required For Installation are here	Installer
	4	A licensed electrician has evaluated and approved the unit and the electrical wiring for a safe and reliable connection	
	5	All tools required for installation are available	Installer Installer
	6	Installation is complete and meets local, state and national codes	Installer
	7	Post Installation is complete; unit is Ready for Use	Installer /
	8	End user /customer has received instructions on how to use and operate the unit	Customer
	9	User guide has been provided to the end user /customer	

Date: _____

Installer: _____ Initials _____

Customer: _____ Initials _____

Received User guide and Instruction: _____

11 Appendix E: Related Documentation

This section lists all documents referenced in the preparation of this document.

	Document Title	Version	 Location	Author
\	Dunamis Commercial Charge Station User Guide	1.0		

11.1 Obtaining Documentation

The following sections provide sources for obtaining documentation from Dunamis Charge.

11.1.1 Website

You can access the most current Dunamis documentation on internet at the following site: <http://www.dunamischarge.com>.

11.1.2 Ordering Documentation

Customers can obtain the latest Installation Manual from www.dunamischarge.com.

11.1.3 Documentation Feedback

If you are reading Dunamis Charge product documentation on the Internet, you can submit technical comments on the support website. You can e-mail your comments to info@dunamischarge.com.

We appreciate your comments.

12 Appendix F: Specification Sheet

Description	Version	Commercial	Commercial
	Model	40A	50A
	Dimensions	L2C40S/L2C40 H11" W15"D4.5" L2C50S/L2C50	
Input	Voltage	D L+N+PE;240/208VAC 50/60HZ	
	Current	40A	48A
Output	Voltage	240/ 208 VAC +/- 10%	
	Current	0 to 40A	0 to 48A
	Power	9.6kW	11kW
Protection	Voltage	350VAC	
	Undervoltage	75VAC	
	Overcurrent	44A	55A
	Leak Current Protection	30mA	
HMI Interface	Charge Interface	SAE J1772 25ft Cable	
	Display	4.3 inch LCD Touch Screen Display	
Communication	OCPP	OCPP1.6	
	Network	WiFi or 4G	
	RFID	NFC	
Charge Method	RFID Card Reader	Yes	Yes
	Smart Phone App	Yes	Yes
	QR Code	Yes	Yes
Environmental	Enclosure Rating	Yes	IP65/NEMA4
	Operating Temperature	Yes	- 30C to 50C
	Storage Temperature	Yes	- 40C to 70C
	Operating Humidity	5%-95%, non-condensation	
Standards	Mounting Type	Wall -Mount or Pedestal	
	Certifications	cETLus, UL, Energy Star, FCC	

Charge Station Installation Instructions - Brief

NOTICE
READ ALL INSTRUCTIONS BEFORE INSTALLING THIS PRODUCT

⚡ DANGER
Electric Shock Can Kill
Touching live electrical parts can cause fatal shocks and severe burns. The input power circuitry and internal circuit are live whenever input power is on.

⚠ WARNING
When installing and using this charge station, basic precautions should always be followed. This manual contains important instructions for Model L2C40S/L2C40D/ L2C50S/L2C40D that should be followed during installation, operation, and maintenance of the unit.

⚠ WARNING
Risk of Fire or Electric Shock
Use of incorrect components in the installation can cause fires and/or electric shock injuries. Only use the specified components and follow all instructions. Obey local electrical building codes and ordinances.

Equipment Height

The coupling means of the Electric Vehicle Supply Equipment shall be stored at a height of 24–48 inches above the finished floor (Reference: NEC Article 625.29(B)).

Electrical Disconnect

When EV charging equipment is rated at more than 60 Amps, the disconnect means shall be provided and installed in a readily accessible location and shall be capable of being locked in the open position (NEC Article 625.23).

Installation Instructions

Charge Station Installation

1. Separate the wall mounting bracket from the enclosure housing.
2. Remove the tamper resistant hold down screws from the back of the enclosure cover assembly and remove the assembly.
3. Install the flanged hex head screw for wood through the mounting holes of the wall mounting bracket into the stud. Tighten to 3 Nm.

4. Install the enclosure housing to the wall mounting bracket by inserting the enclosure housing base into the mounting tab holder and rotating enclosure housing back to align the enclosure connector at the top.

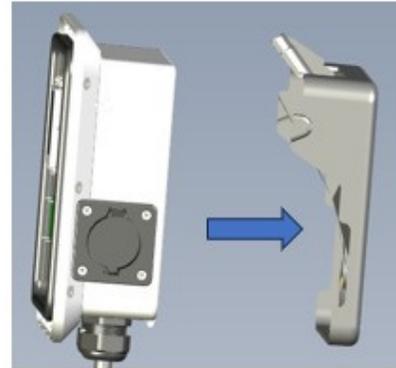


Figure 18: Enclosure Housing Installation

5. Make sure the locking tabs at the base of the enclosure are engaged in the tab holders at the base of the wall mounting bracket.

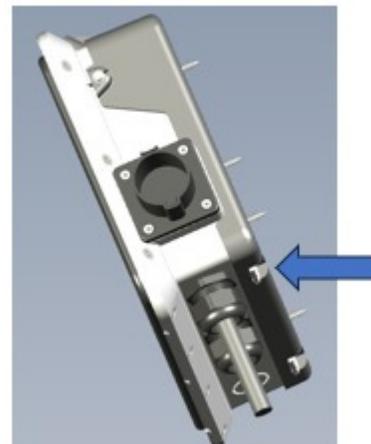


Figure 19: Locking Tab Engagement

6. Connect the enclosure to the wall mounting bracket using the thread forming screws provided (#10 x 1/2-inch thread forming, zinc plated, hex head). Tighten to 2.5 Nm.



Figure 20: Connecting the Enclosure to Wall Mounting Bracket

7. Connect liquid tight and/or cord grip to enclosure using appropriate hardware. Hardware and cord grip are not supplied. The following is recommended.
 - Plastic Submersible Cord Grip – Recommended for multi conductor power input installation applications (#C#8 AWG SO Cord).

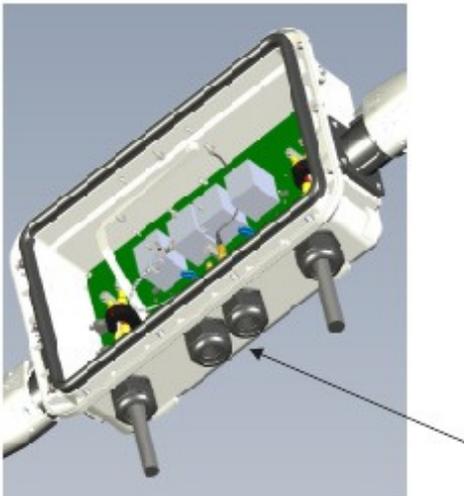


Figure 21: Connecting cord grip to Enclosure

- Recommended – Liquid-Tight Flexible Metal Conduit for single conductor installations (single phase (3) 3C#6AWG) power input connectors.

Install power conductors

Stow enclosure cover in cover mounts for hands free power lead installation as shown in Figure 12: Stowing enclosure cover in cover mounts.

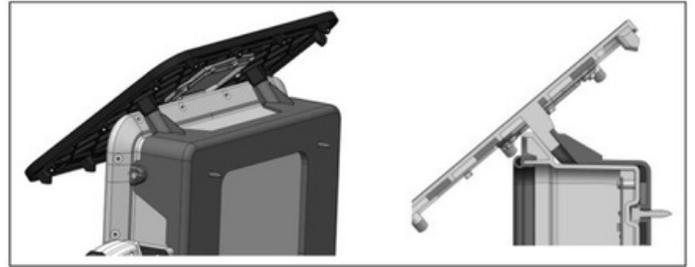


Figure 22: Stowing enclosure cover in cover mounts

- a. Install power leads for dual port configurations as shown in Figure 13: Install Power Leads for Dual Port Configuration. Provide dedicated 50A branch circuits per port for 40A units; provide dedicated 60A branch circuits per port for 50A units. Remove screws located on terminal studs.

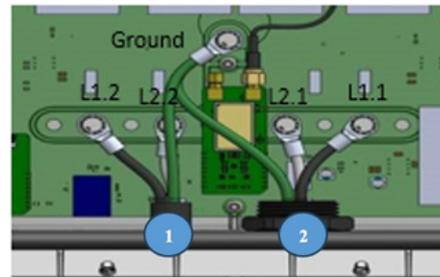


Figure 23: Install Power Leads for Dual Port Configuration

- b. Circuit 1 – Connect L1.2 to ACIN3 and L2.2 to ACIN4 Ground to common Ground Post. Tighten to 2.5 Nm.
 - c. Circuit 2 – Connect L1.1 to ACIN1 and L2.1 to ACIN2 Ground to common Ground Post. Tighten to 2.5 Nm.
2. Verify all power connectors are routed to prevent stress, pitching, phase to phase or ground condition to prevent the need to reopen the charging station.

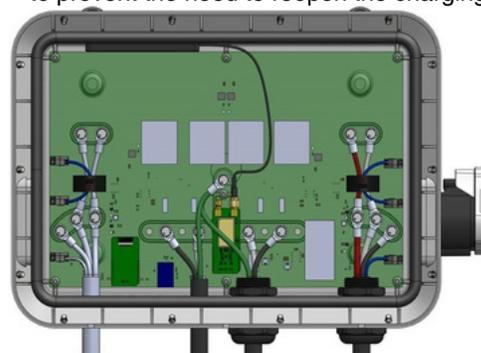


Figure 24: Typical Finished Assembly for 2 Single Phase Feeds Enclosure Cover Installation

4. Hold front enclosure cover within 12 inches of

enclosure housing and connect:

- LCD ribbon cable (white with blue tip), blue tip facing up.
- NFC connector (tan, red stripe and connectors), red stripe on top.

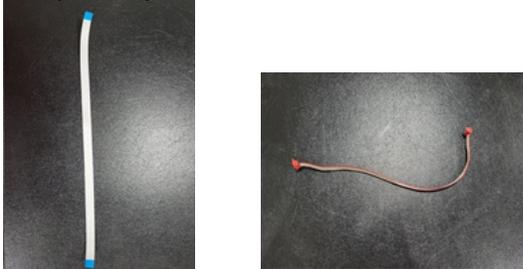
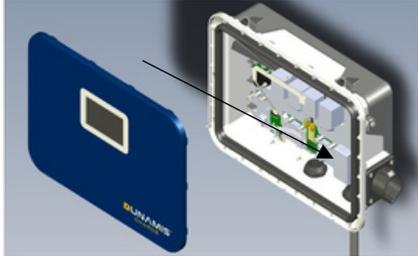
**5. Install cover with hardware provided.**

Figure 25: Install Cover to Enclosure Assembly

6. Install tamper resistant cover screws provided

(M5x0.8mm) to back of enclosure cover with T25H driver as shown in Figure 16: Installing Tamper Resistant Cover Screws to Completed assembly.

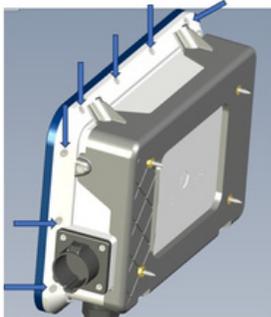


Figure 26: Installing Tamper Resistant Cover Screws to Completed assembly