



# eTRUconnect®

## SHORE POWER SOLUTIONS FOR REFRIGERATED TRUCK-TRAILERS

THE  
**TRU STANDARD**  
**IN SAFETY™**  
[etruconnect.com](http://etruconnect.com)

**ESL**  
POWER SYSTEMS®  
AN EMPLOYEE OWNED COMPANY



# eTRUconnect<sup>®</sup>

## V2 PS Series

ESL's UL Listed eTRUconnect provides safe, utility shore power to electric or hybrid Transport Refrigeration Units (TRU's), eliminating emissions while loading/unloading or idle. Connecting TRU's to shore power eliminates the need of running onboard diesel generators/engines to keep the cargo within the optimal temperature range.



This results in significant savings in fuel cost and reduction in engine maintenance.

eTRUconnect's safe, simple connection and disconnection procedure allows truck operators to use the system while minimizing the risk of injury and the liability to the facility owner. ESL's eTRUconnect is the ideal solution for distribution centers, warehouses, grocery stores and truck stops.

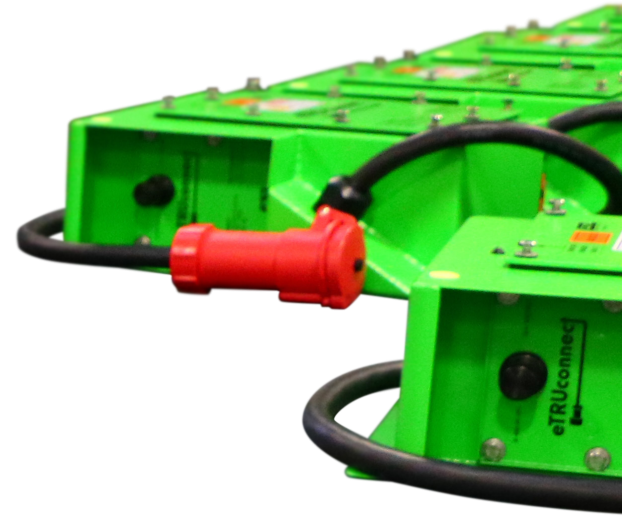


30A 480VAC eTRUconnect V2  
PS Series with cord hanger



**“ON” / “OFF” Breaker Handle**

30A 480VAC  
eTRUconnect V2 Docking Station  
PS Series  
Item #: 6002-001-L



In an effort to accelerate adoption of clean technologies, many local utility companies have instituted incentive programs to cover most or all of the cost to implement TRU electrification. Incentives vary depending on the utility company, state, or country however, they may cover power stations, switchgear, trenching, wiring, project management and labor. ESL's eTRUconnect PS Series meets the requirements established by many utility companies for incentive eligibility.



**Energized Indicator LED**

**Cord Lengths:  
5' to 70'**



# eTRUconnect® V2 PS Series

## TRU Docking Station (Daisy-Chain Capable)

ESL's eTRUconnect V2 PS Series provides safe utility shore power to electric or hybrid refrigerated units on truck trailers with a compact footprint, easier access and simplified operation.

eTRUconnect PS Series TRU Docking Stations are UL Listed, safety-interlocked, and feature branch circuit protection. The PS Series is supplied with the power cord and safety-interlocked connector permanently attached to the power station.



30A 480VAC  
4-pin Safety-interlocked  
Female Connector

### eTRUconnect PS Series Features:

- UL Listed connection sensing device embedded in ESL's female connector prevents "making" or "breaking" electrical connection under load
- Connector can only be energized when properly mated to a truck inlet
- High visibility LED Power "On" indicating light
- Compact foot print (narrower enclosure)
- Optional LED beacon light
- Molded case circuit breaker provides overload and short circuit protection (various AIC ratings available)
- Two "drive-off" features ensure safety and minimize equipment damage at the loading dock and at the truck
- Durable type 3R powder-coated steel enclosure (stainless steel optional)
- Optional relay to integrate to dock signaling systems or large LED signal light
- Optional auxiliary contacts

### PS Series configurations include:

- 30A 480VAC, 4-pin 3-wire pin & sleeve (standard IEC 60309 pin & sleeve female connector, 7h)
- 50A 240VAC, 4-pin 3-wire pin & sleeve connector
- Customized cord lengths (5' to 70')
- 32A 480VAC, 4-pin 3-wire pin & sleeve (standard IEC 60309 pin & sleeve female connector, 3h)



30A 480VAC  
eTRUconnect V2 Docking Station  
PS Series with Truck-trailer Retrofit Kit



The eTRUconnect V2 has been redesigned to fit into tight spaces between dock doors. For staging yard installations, the eTRUconnect V2 can easily be mounted on a pole or rack with the optional mounting kit.

Powering on the eTRUconnect is now simplified with the new V2 "actuation" handle. Just like with the original eTRUconnect, ESL's solution cannot be energized until the 4-pin female plug and the truck-trailer inlet are completely mated.

30A 480VAC  
eTRUconnect V2 Docking Station  
PS Series with LED Beacon  
Item #: 6002-007-5



50A 240VAC  
eTRUconnect  
Docking Station  
PS Series  
Item #: 6002-008AD-L

# eTRUconnect® PS Series Daisy-Chain

## TRU Docking Station

ESL's provides a fully prefabricated and preterminated packaged solution for daisy-chaining. This option offers the ability to daisy-chain multiple (4) eTRUconnects from the same circuit. Doing this provides a savings in panel board circuit breaker wiring and conduit. For installations where larger cable size is required (aluminum), ESL offers a junction box to feed up to two (2) eTRUconnects. Mounting options for this solution include kits for either a pedestal or pole.

### eTRUconnect Daisy Chain Features:

- Prefabricated and preterminated for simplified installation
- Daisy-chain up to (4) eTRUconnects from the same circuit
- Mounting pole design provides easy install to run conduit to the PDB through the bottom
- Powder coated safety yellow mounting pole offers added visibility
- Provisions designed on pole for cable management on both sides
- Pedestal mounting options available
- Optional LED beacon light



## eTRUconnect Mounting Options

### Pole Mount Kit Features:

- Kits available for 3" or 4" pole
- Designed to support single PS Series eTRUconnect
- Powder-coated textured light green (RAL 6018)
- Cord hanging post (optional)

### Pedestal Stand Features:


- Designed to support single and dual PS Series eTRUconnect
- Powder-coated textured light green (RAL 6018)
- Includes (2) cord hanging posts (standard)
- Mounts to concrete pad using 3/4" diameter hardware (not supplied)



eTRUconnect V2  
Pole Mount Kit  
3" or 4" Diameter

# eTRUconnect® vs Competing Proprietary 6-Pin Docking Station

Utilizing a standard safety-interlocked IEC 60309 style pin & sleeve connector, ESL's eTRUconnect cannot be energized until the connector and inlet are completely mated. Similar to other more expensive systems, eTRUconnect relies on a safety-circuit loop to ensure safe connection and energization. However, unlike competing technologies, ESL's innovative design does not require 2 extra pilot pins at the connector. A connection detection device is embedded in the safety-interlocked female connector installed at the end of the cable. This allows truck operators to use the OEM provided inlet for plug-at-front configuration or retrofit their fleet with ESL's cost effective truck-trailer kit.

	eTRUconnect™ 	6-pin
Safety Interlocked & UL Listed	✓	✓
Compatible with OEM Inlet	✓	✗
Drive-off Features	2	1
Molded Case Circuit Breaker	✓	✗
Daisy-Chain Option	✓	✗
Initial Cost	\$	\$\$\$
Cord/Connector Replacement Cost	\$	\$\$\$

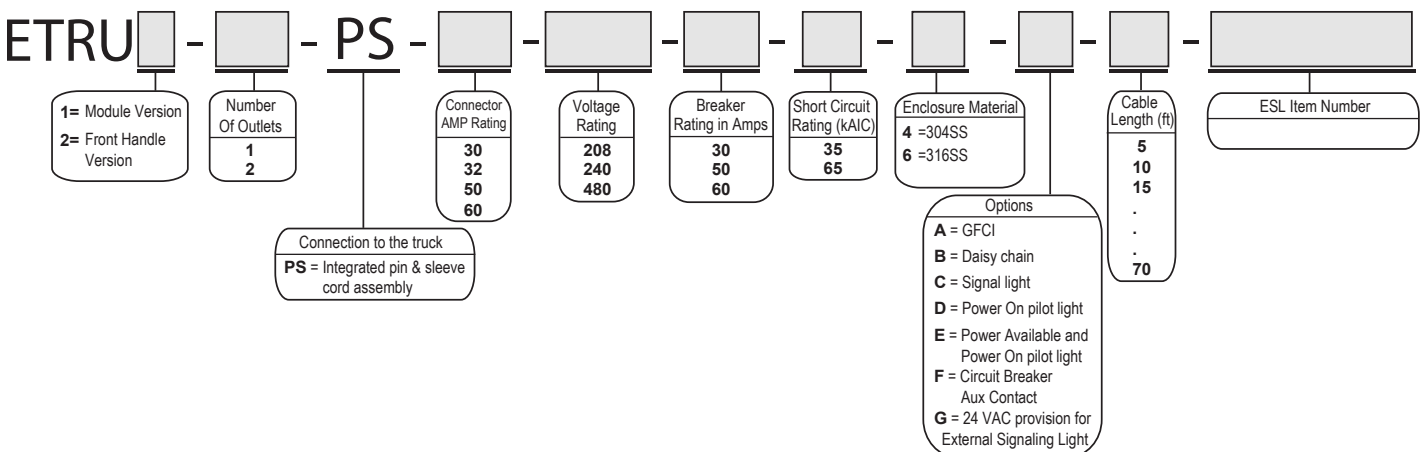
## Savings Calculator

ESL's savings calculator provides a useful tool to help determine how much you could save in fuel consumption by converting to electric standby. To access the savings calculator, visit [eslpwr.com/calculator](http://eslpwr.com/calculator) or scan the QR code.



## eTRUconnect V2 PS Ordering Information

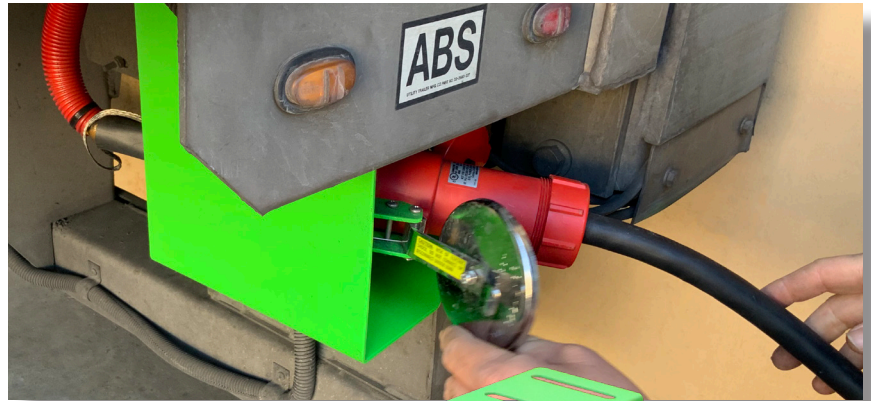
Example: ETRU2 - 1 - PS - 30 - 480 - 30 - 35 - G - D - 5 - 6002001



# Truck-trailer (Inlet) Retrofit Kit

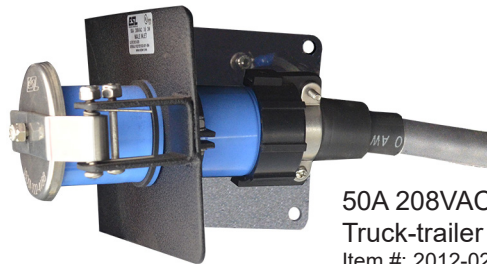
ESL's Truck-trailer kit allows the user to connect the power cord to the back-end of TRU trailers instead of at the refrigeration unit.

The retrofit kit can be mounted on the underside of the trailer, providing a shorter connection distance to the docking station. This enables the added benefit of a safe break-away in case of accidental drive-offs and easier cable management.



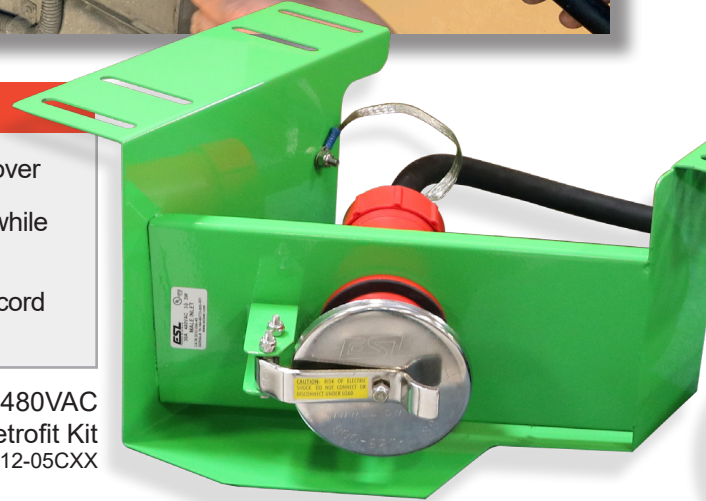
## Truck-Trailer Kit Features:

- Truck inlet receptacle provided with a stainless steel self closing cover
- Heavy gauge powder-coated stainless steel shroud protects inlet while in transit
- Custom cord length with protective wire loom to suit specific truck cord routing options



50A 208VAC  
Truck-trailer Retrofit Kit  
Item #: 2012-02B

30A 480VAC  
Truck-trailer Retrofit Kit  
Item #: 2012-05CXX



# eTRUconnect® Pre-Wired Power Meter Panel



30A 600VAC  
eTRUconnect Power Meter Panel  
Item #: 1423-37

## Power Meter Panel Features:

- Self-powered revenue grade power meter (0.2 accuracy class)
- Energy, time of use & power quality monitoring
- Energized events counter
- NEMA 4X rated polycarbonate panel
- Factory pre-wired & pre-configuration for fast & reliable install
- 8GB on-board memory for data logging
- Built-in HTTP web interface for data monitoring & configuration
- User & admin permission levels
- Compact & simple to install split core CTs (0.5% Accuracy)

# eTRUconnect® MC Series

eTRUconnect MC Series is ideal for deployments, serving fleets with existing twist-lock 6-pin, or any other non-standard inlets on their TRU's.

MC Series power stations are supplied with ESL's standard UL Listed safety-interlocked pin & sleeve receptacles protected by molded case circuit breakers and are offered in multiple voltage and amperage configurations.



50A 480VAC  
eTRUconnect Docking Station  
MC Series with LED Signaling Light  
Item #: 2223-84A

## eTRUconnect MC Series Features:

- ESL standard UL Listed safety-interlocked pin & sleeve receptacles with molded case circuit breakers
- Separate cable with ESL male plug on one end and twist-lock connector for truck inlet on the other end
- Drive-off feature (for trucks with truck-trailer inlet retrofit kit)
- Cable Management System available
- Large LED signal light option
- Additional GFCI receptacle option
- Lock-out padlock collar available





# eTRUconnect® for Box Trucks

50A 208/240VAC (Daisy-Chain Capable)



50A 208VAC  
eTRUconnect Power Station  
MC Series  
Item #: 2223-73GALG

Connecting Box Truck refrigerated units to shore power eliminates the need of running on board diesel TRU generators/ engines to keep the cargo within the optimal temperature range. This results in significant savings attributed to much lower electric energy and maintenance cost.



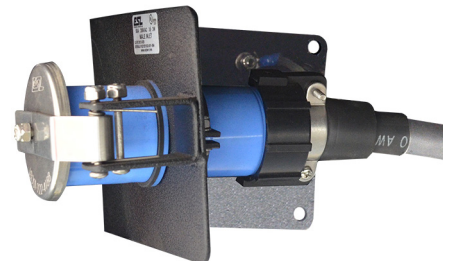
ESL's eTRUconnect offers solutions for Box Trucks that are typically direct drive trucks with the compressor mounted in the engine compartment. Box trucks that are 208V/240VAC can utilize the eTRUconnect for their docking station needs.

50A 240VAC  
eTRUconnect Power Station  
PS Series  
Item #: 6002-008AD-L



50A 208VAC  
eTRUconnect Power Station  
MC Series with GFCI Receptacle  
Item #: 2223-73GA

50A 208VAC  
Truck-Trailer Retrofit Kit  
Item #: 2012-02B



# Dual Voltage eTRUconnect® MC Series

15KVA 480:240 Autotransformer

## Dual Voltage Transformers Features:

- 3-phase self contained, wall-mounted unit; safely connects 32A 480VAC or 30A 240VAC reefer power outlets
- Allows either 480VAC or 240VAC outlet to be energized at one time
- Dual voltage safety-interlocked module #1701-65A containing integral 30A & 50A circuit breakers
- Powder-coated stainless steel enclosure resists corrosion & abuse



480:240VAC  
Wall Mounted  
Dual Voltage Transformer  
Item #: 2219-37A

# Dual Voltage eTRUconnect PS Series

15KVA 480:240 Autotransformer

## Dual Voltage Transformer Features:

- 3-phase self contained, wall-mounted unit; safely connects 30A 480VAC or 30A 240VAC TRUs
- Allows either 480VAC or 240VAC connector to be energized at one time
- Connectors are safety-interlocked preventing making or breaking under load
- Each connector is protected by a molded case circuit breaker



480:240VAC  
Wall Mounted  
Step up / Step Down  
Transformer  
Item #: 2219-37AXX

# Clean Air Incentives in California

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California regulators are designing requirements for minimizing emissions from diesel Transport Refrigeration Units (TRU). As the California Air Resource Board (CARB) finalizes regulations for TRU's, it is expected that the requirements will also include all transportation refrigeration units operating within the state of California. To help with this transformation, California electric companies are developing incentives to help with the installation of eTRU infrastructure.

## eTRU Incentive Programs

In addition to providing EV charging infrastructure, Southern California Edison, Pacific Gas and Electric, and San Diego Gas and Electric provide funding initiatives for installation of eTRU infrastructure to its commercial customers. Through these programs CPUC's goal is to advance the vision for a clean energy future while providing medium- and heavy-duty fleet owners the opportunity to save money.

Utility managed incentive programs offer opportunities such as, no-cost installation of electric infrastructure or giving businesses the option to install, own, operate and maintain the infrastructure on site for a rebate up to 80% of cost. California utilities are also offering special incentives such as commercial rate options that make EV charging and TRU shore power more affordable during certain times of the day. Connecting electric or hybrid refrigerated units to ESL's eTRUconnect truck-trailer shore power eliminates the need of running on board diesel generators/engines to keep the cargo within the optimal temperature range. This results in significant savings attributed to much lower energy and maintenance cost.



## California Air Resource Board:

CARB's Clean Off-Road Equipment Voucher Incentive Project (CORE) features a streamlined voucher process for buyers to receive funding to offset the adoption costs of clean, commercial ready zero-emission equipment including transport refrigeration units, cargo-handling equipment, and more. CARB is also offering eligibility opportunities to offset electricity costs through the Low Carbon Fuel Standard (LCFS) Program which is designed to encourage the use of cleaner low-carbon fuels in California, encourage the production of those fuels, and therefore, reduce greenhouse gas emissions.

Charge Ready Transport, LCFS and CORE are some of the many incentives available in California that provide opportunities to reduce your organization's carbon footprint all while cutting operation and maintenance costs to your fleet. For details on other state incentives throughout the country, contact your local electric company and ask what programs they have in place to help reduce your organization's carbon footprint and improve the air quality in your community.

- Provides safe utility shore power to electric or hybrid refrigerated units on truck trailers
- eTRUconnect PS series utilizes safety-interlocked standard 4-pin IEC configuration connectors that are compatible with most OEM equipment
- Available for truck-trailers with plug-at-front or plug-at-rear connections
- Cannot be energized until the connector and the truck inlet are mated
- Includes both unintended drive-off feature and integral circuit breaker for electrical branch circuit protection
- Results in significant savings attributed to much lower electric energy and maintenance cost
- Ideal solution for distribution centers, warehouses, grocery stores and truck stops
- UL Listed
- Simplified actuation handle
- Compact foot print to fit into tight spaces between dock doors

eTRUconnect®



**ESL**  
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