INSTALLATION, OPERATION, & MAINTENANCE MANUAL

1200T5 US SYSTEMS

Starline®

A brand of legrand®

REVISION REGISTER

Version	Details of Update	Date
1	Original document creation	04/15
2	Updated Universal Global Services and warranty section	05/17
3	Addition of 1250 Amp Track Busway	05/18
4	Redesign; Separation of US Domestic, Metric, and Global offerings	04/19
5	Redesign, separation of product selection guide pages, revised feed lug/torque reference chart, revised services chart	04/22

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Section 1: Product Specification

BUSWAY SYSTEM

1 SUMMARY

1.1 This specification covers the electrical characteristics and general requirements for a track busway system, hereafter referred to as Track Busway. The system shall be designed primarily for overhead power distribution of electrical power. Once installed, the Track Busway will provide simple, versatile, fast and economic means of distributing power. Loads fed from Track Busway plug-in units can be added or removed without shutting down the busway.

1.2 Specification includes:

1.2.1 Three-phase Track Busway system with the following features:

1.2.1.1 Extruded aluminum busway housing with conductors

1.2.1.2 Power Feed

1.2.1.3 Plug-in units for power distribution

1.2.1.4 Monitoring

1.2.1.5 Installation tool and joint kits

1.2.1.6 Optional accessories

2 STANDARDS AND CERTIFICATION

2.1 The Track Busway shall be designed and manufactured to the following standards:

2.1.1 Electrical Testing Laboratories (ETL) (US/Canada) Certified to UL 857.

2.1.2 CCC (China) Certified to GB 7251.1-2013. *(pending)*

2.1.3 CE (Europe) Certified to IEC 61439-1 and IEC 61439-6. *(pending)*

2.1.4 NOM (Mexico) Certified to NOM-003-SCFI-2000

2.1.5 National Electric Code (NEC) – Article 368 – Busways

2.1.6 National Fire Protection Agency (NFPA) – 70, National Electric Code (NEC)

2.1.7 National Electrical Manufacturers Association (NEMA) – AB1, Molded Case Circuit Breakers and Molded Case Switches *(if applicable)*

2.1.8 National Electrical Manufacturers Association (NEMA) – KS-1, Enclosed and Miscellaneous Distribution Equipment Switches (600 VAC) *(if applicable)*

3 SYSTEM DESCRIPTION

3.1 Electrical Requirements

3.1.1 System voltage: 600V

3.1.2 Frequency: 50/60 Hz.

3.1.3 Ampacity: 1200

3.1.4 Neutral Ampacity: Minimum of 100% of rating

3.1.5 Short circuit rating must be:
3.1.5.1 65kAIC up to 600V, 85kAIC at 480V with paddles no more than 30" apart, 75 kAIC up to 480V

3.1.6 Conductors: 3 phase conductors, 1 neutral conductor solid copper, tin plated

3.1.7 Grounding: Aluminum casing or 1 dedicated conductor solid copper, tin plated

3.2 Operational Requirements

3.2.1 Environmental Conditions: The Track Busway shall be capable of operating continuously in the following environmental conditions without mechanical or electrical damage, degradation or derating of operating capability.

3.2.1.1 Busway shall operate with continuous load with no derating up to 40 degrees Celsius, 0.95 multiplier at 45 degrees C 0.90 multiplier at 50 degrees C, 0.85 at 55 degrees C and 0.825 at 60 degrees C

3.2.1.2 Relative humidity: 0 to 95 percent, noncondensing

3.2.1.3 Altitude: Sea level to 6600 feet (2000m)

3.3 Manufacturers Qualification

3.3.1 A minimum of 10 years' experience in the manufacturing of the busway products.

3.4 Manufacturing Requirements

3.4.1 All Track Busway components and accessories shall be manufactured by Starline Holdings.
Starline Holdings LLC.
168 Georgetown Rd.
Canonsburg, PA 15317
(724) 597-7800

4 SUBMITTALS

4.1 Submittals shall be in accordance with specified procedures. Submit shop drawing and product data for record purposes prior to shipment. Shop drawings for Track Busway must include:

4.1.1 Detailed equipment assemblies and dimensions, weights, location and identification of each field connection

4.1.2 Wiring Connection: For power and monitoring wiring

4.1.3 Orientation of plug-in units face in final installation

4.1.4 Include plug-in schedule with detailed description

4.2 Provide electrical characteristics and connection requirements for the system and accessories.

4.3 Indicate special receiving and handling procedures.

5 WARRANTY

5.1 The Track Busway manufacturer shall guarantee the entire system against defective material and workmanship for a period of one (1) year from date of shipment.

5.2 Additional years of warranty and ability for start-up services must be an option if required per drawings.

5.3 Warranty shall only cover Track Busway product components manufactured by Starline Holdings LLC.; use of any aftermarket components with Track Busway shall void warranty and any certifying listings completely

6 PRODUCT COMPONENTS

6.1 Track Busway Housing

6.1.1 Extruded aluminum housing certified to serve as a 100% ground. Standard housing lengths are 5 and 10 feet (1.5 and 3 meters). 10 ft. (3 meter) maximum lengths can be cut in customizable lengths down to the inch or 3 centimeters. The housing should be properly extruded with a slot to receive rod mount hangers to hang from a ceiling. This housing should be open on the bottom to accept plug-in units anywhere along its length. This opening shall pass UL's hypothetical finger probe test.

6.1.2 All conductors shall be made of copper, or of copper/aluminum for 800T5 and 1200T5 systems, and sized to handle 100% of its rating continuously up to the maximum ambient temperature. The conductors shall be electrically isolated from the housing. All insulators must be UL and IEC compliant.

6.1.2.1 Ground conductor: An internal, 100% ground conductor is to be supplied if shown on the drawings

6.1.3 Track Busway housing sections shall be joined together by a 'press fit' that requires no bolted connection and no future maintenance

6.1.4 Track Busway T5 series shall have an included data channel built into the housing to accommodate optional, color-coded data cabling accessories

6.1.5 Track Busway housing shall be available in standard silver, red, blue, black, white or custom RAL colors

6.2 Power Feed

6.2.1 The power feed shall provide the connections from the incoming cables to the Track Busway system. The power feed shall have internal connection to a section of busway conductors. End feeds, top feeds, center feeds and bottom feeds shall be available depending upon what Track Busway system is required. Feeds shall have the option to be designed with mechanical or compression type lugs.

6.3 Plug-In Units

6.3.1 Plug-in units shall be polarized to avoid incorrect installation

6.3.2 Plug-in units can be added, removed or repositioned without de-energizing the busway

6.3.3 Plug-in units shall use either a circuit breaker or a fuse for branch circuit protection as shown in the schedule on the project drawings

6.3.4 Plug-in units shall be capable of being built with customer-specified circuit protection, outlets and accessories

6.3.5 Plug-in units shall have a soldered wire connection on each stab that picks up power from the busway. This wire shall then be directly connected to the line side of the circuit breaker. The use of crimp connectors is prohibited.

6.3.6 Plug-in units shall not require any tools to mount to the busway

6.3.7 Plug-in units shall not have a mechanism in order to engage the electrical connection to the busway conductors

6.3.8 Plug-in units shall have locking clips or bolt-on tabs to secure units to the busway

6.3.9 Plug-in units that include drop cords shall be manufactured with cord grips and receptacles as specified in the drawings

6.3.10 Plug-in units shall be configured by the manufacturer to balance the load based on quantity of plug-in unit types provided

6.3.11 Plug-in units shall have the ability to provide up to a 400 amp load in certain plug-in unit configurations

6.3.12 Plug-in units shall have a minimum of 10kAIC and the ability to obtain a maximum of 200kAIC

6.3.13 Plug-in units shall be interchangeable within each Track Busway series (T1, T2, T3, T5)

6.3.14 Plug-in units shall be available with optional, revenue grade metering devices

6.3.15 Plug-in units authenticity shall be proven by the presence of a Starline ratings label

6.4 Accessories *(OPTIONAL)*

6.4.1 Closure strip and access panels shall be available for conductor access points to minimize accidental contact or build-up of debris

6.4.2 Integrated cable management solutions as part of the aluminum housing (T5 series), capable of handling accessories such as the data channel cover, hinged wire way, data cable strap, and multi-use mounting bracket

6.4.2.1 Data channel covers are color-coded for integrated cable management solutions

6.4.3 Universal Server Cabinet Mounting Brackets shall be available as an alternative hanging solution; meant for mission critical applications

6.5 Monitoring *(OPTIONAL)*

6.5.1 Power Feed Monitoring: The power feed is to be provided with the following power measurements and remote monitoring interface:

6.5.1.1 Input Voltage (L/L and L/N)

6.5.1.2 Current per Phase (Min/Max)

6.5.1.3 Voltage per Phase (Min/Max)

6.5.1.4 Neutral Current

6.5.1.5 Power Factor

6.5.1.6 Frequency

6.5.1.7 Power (Active, Reactive, Apparent)

6.5.1.8 Demand (kWH)

6.5.1.9 Current Peak Demand

6.5.1.10 End Feed Lug Temperature

6.5.1.11 Communications is Modbus RTU, Modbus TCP, Ethernet SNMP, BACnet

6.5.1.12 and optional wireless

6.5.1.13 LED colored, 4.9 inch (125mm) display

6.5.2 Plug-In Unit Monitoring: The plug-in units as indicated on the schedule on the project drawings shall have the following power measurements and remote monitoring interface.

6.5.2.1 Input Voltage (L/L and L/N)

6.5.2.2 Current per Phase (Min/Max)

6.5.2.3 Voltage per Phase (Min/Max)

6.5.2.4 Power Factor

6.5.2.5 Frequency

6.5.2.6 Power (Active, Reactive, Apparent)

6.5.2.7 Demand (kWH)

6.5.2.8 Current Peak Demand

6.5.2.9 Accuracy is better than 0.5%

6.5.2.10 Communications is Modbus RTU, Modbus TCP, Ethernet SNMP, BACnet

6.5.2.11 Optional wireless plus available daisy chain Ethernet topology

6.5.2.12 Optional display

7 INSTALLATION

7.1 The contractor shall install Track Busway in accordance with the manufacturer's instructions.

7.1.1 Track Busway runs shall consist of lengths as shown on the drawings.

7.1.2 The plug-in unit orientation shall be indicated on the drawings.

7.1.3 Hanging of the Busway: The Track Busway shall be hung from a structure above the busway, using the supplied busway hangers. The hangers shall connect to the busway, and to an all thread rod provided by the installing contractor. The spacing of the hangers along the busway is 10 feet (3 meters).

7.1.4 The busway shall be installed with the open access channel facing downward, or to the side for special applications. Special installation shall be agreed upon by the manufacturer.

7.1.5 Connecting Sections of Track Busway: At a junction of Track Busway sections, the installer will use a Joint Kit (includes Housing Couplers and Bus Connector) and an Installation Tool supplied by the manufacturer. Two sections are joined together by a 'press fit' that requires no bolted connection and no future maintenance.

7.1.6 End of Runs: End caps will be provided to install at the end of each run.

7.1.7 Closure Strip: The closure strip is an optional accessory that can be cut and fitted to cover the bottom opening of the Track Busway housing to prevent dust and debris. Closure Strip can be field modified for fit.

7.2 All Track Busway joints are non-bolted, compression fit and shall require no maintenance after installation

8 FIELD QUALITY CONTROL

8.1 Manufacturers Field Services: Track Busway shall be accompanied by optional services, such as on-site support and system startup, ongoing support, metering services and extended warranty programs. These services include:

8.1.1 On-site Training

8.1.2 Installation Inspection, Commissioning and Certification

8.1.2.1 Includes comprehensive visual inspection and certified report once results are satisfactory, which extends standard factory warranty from one to two years

8.1.3 Load Bank Testing

8.1.4 IR Scanning and other Ongoing Support

8.1.5 Extended Warranty Programs (Meter programming, commissioning and support)

8.1.6 24/7 Emergency Service and Phone Support

9 DOCUMENTATION

9.1 The following documentation shall be available to assist in product selection and installation, and is available for download at dowloads.starlinepower.com:

9.1.1 Track Busway Product Selection Guide

9.1.2 Operation, Installation and Maintenance Manuals

9.1.3 Installation Instructions

9.2 Product drawings shall be rendered and provided at the time of ordering

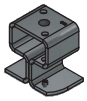
Section 2: Installation Instructions

Starline® Busway Installation Instructions:

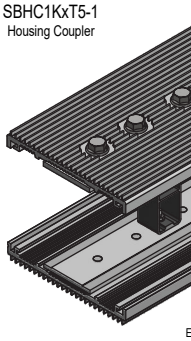
Busway supports (e.g. threaded rod, Unistrut®, etc) are supplied by customer. The maximum spacing between supports/hangers is 10ft. The most common hangers are shown in this instruction but other hangers are available to suit most situations (see catalog).

Tools needed: ST5IT installation tool, 3/4in socket and/or wrench, slotted head screw driver and/or angled pry bar, and dead blow hammer/rubber mallet. Two or more persons and/or a mechanical lift are recommended to install Starline Busway.

UBSHT5-1
Hanger Bracket
(Item 3)



SBHC1KxT5-1
Housing Coupler



Mechanical Installation

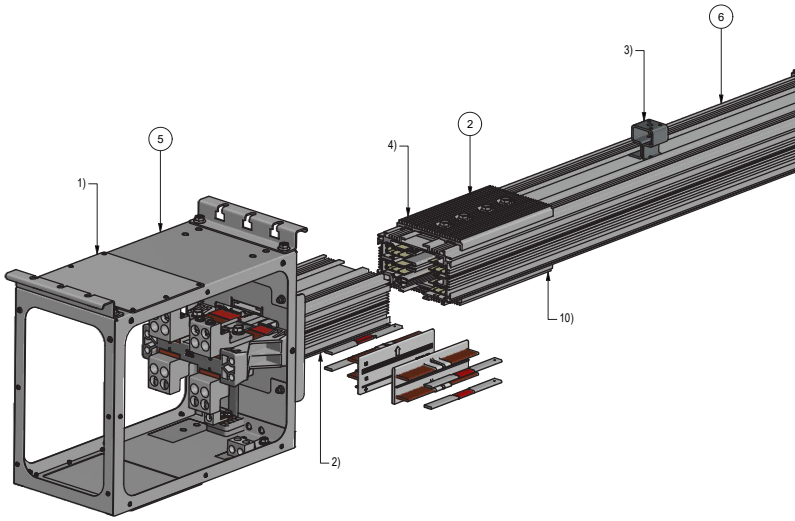
1. Begin installation at one end of the busway, preferably at the location of the supplied power source.
2. If an end feed box is used, ensure the polarizing stripe on the busway section matches the end feed busway stub. End feed box can be attached to the adjoining busway section before or after the busway section is installed on the supports.
3. Attach the hanger bolts to busway supports. Prior to sliding the supports into the busway hanger channel, insert one SBHC1KxT5-1 housing coupler into the top and bottom channels on one housing. Slide the supported hanger bolts into the busway hanger channel. Once in position, secure the supports by tightening the hanger bolts. Install additional section(s) in a similar manner. Note: The housing couplers and hanger channels of the busway are keyed, so the couplers can only be inserted one way.
4. Join the two adjacent busway components (e.g. straight-to-straight, straight-to-elbow) together by positioning only the top housing coupler an equal distance across the two sections. Tighten the bolts securely.
5. For U1200 system only, press the piece blades into each phase/neutral joint, while making sure the notched side of the blade is facing away from the conductor. Press in far enough so that bus connector can be installed next. Bus connector installation will press the piece blades fully into the conductors.
6. The connector bodies are keyed and labeled: L2-L1-GND goes into the polarized side and L3-N goes opposite the polarized side. Insert one of the SBC1KxT5x-1 connectors into the housing slot. Ensure it is facing the correct side of the busway section and it is centered on the joint. Line up copper blades with the conductors.
7. Insert the installation tool ST5IT into the housing slot at the joint location, then position the tool collar around the busway housing. Make sure the radius of the tool blade is against the bus connector body.
8. Using the lever, rotate the installation tool to press the connector into the busway conductors. Work from one end of the connector body to the other until the copper blades are fully seated into the conductors.
9. Once the first connector is installed, insert the second connector into the housing opposite the first. Install as previously described.
10. To complete, center the bottom housing coupler between the two sections. Tighten the bolts on the top and bottom couplers to 80 ft-lbs. Repeat the previous steps until busway run is complete.
11. If installing elbows or tees, check to make sure that you have the appropriate elbow or tee for the direction of travel. Refer to the illustration on right.
12. Install one SEC1KxT5 end cap at any open end of the busway run and tighten the set screws to secure it in place.

Electrical Installation

The end feed and/or above feed (not shown) units are used to make field wiring connections to the busway. Wiring connections are made to the copper blades by means of aluminum box style lugs or compression lugs installed onto the supply cables. For all versions, safety ground connections are made to the box with the lug provided. Isolated ground systems provide a separate, additional connection.

Warning: Make sure the power is off before making your wire connections inside the end feed box.

1. Remove side/top cover(s) as necessary from end/above feed. Drill, punch, etc. holes as needed and attach conduit fittings, etc. Feed wires into end/above feed.
2. If using mechanical lugs, remove the lug for a given phase from the end feed block, attach wire to lug and reinstall back on block. In some cases it may be possible to install wire into the lug without removing the lug from the block. If using compression lugs installed onto cables, remove bolt(s) from end feed block and connect compression lugs/cables directly. End feed units will accept up to 600MCM cable. Secure by tightening the set screw to specified torque shown on label inside end feed. Repeat for the remaining connections.
3. Do not move plug with paddle engaged in busway.

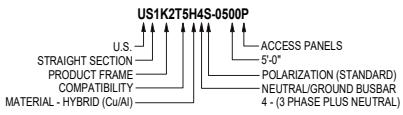


Notes:

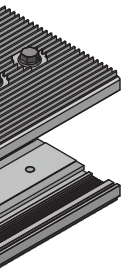
C 1. The aluminum housing is listed by UL for use as a ground conductor. The plug-in units that are bolted to the Busway can be grounded through the housing. Extension of this ground to the customer's equipment should be done in a manner to comply with the National Electric Code.

Starline® Tap Boxes are the only acceptable tap boxes or plug-in devices for use in Starline® Busway.

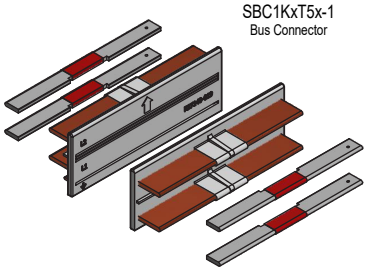
ELBOWS



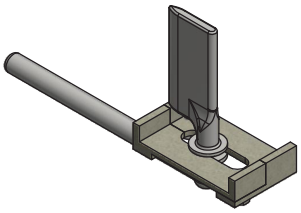
U1000/U1200 INSTALLATION INSTRUCTIONS



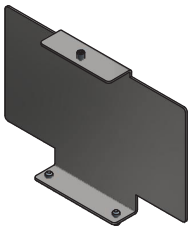
SJK1KxT5x-2
Joint Kit (Item 2)
ach joint kit contains a housing coupler pair (SBHC1KxT5-1) and Bus connector set (SBC1KxT5x-1)



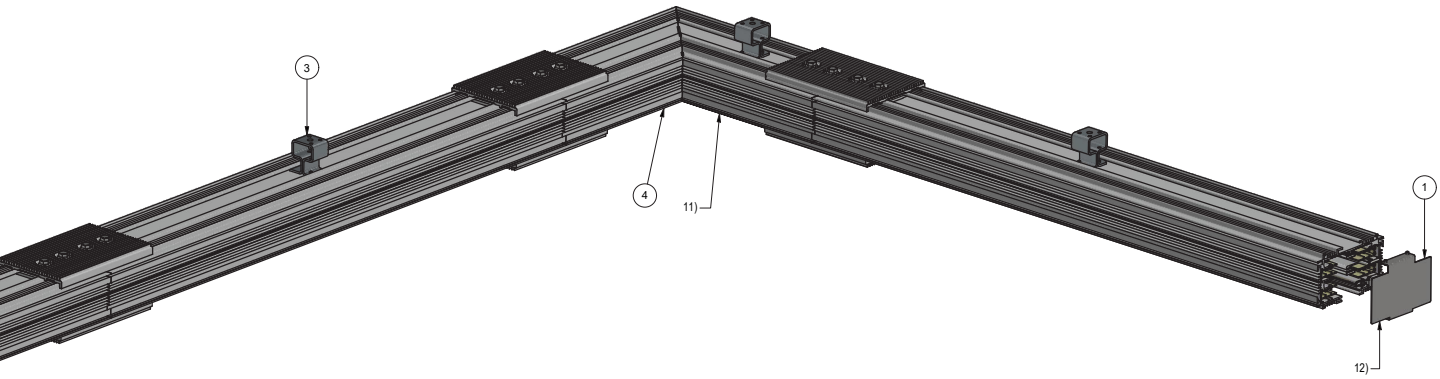
SBC1KxT5x-1
Bus Connector



ST5IT
Installation tool
(Not Shown)



SEC1KxT5
End Cap
(Item 1)

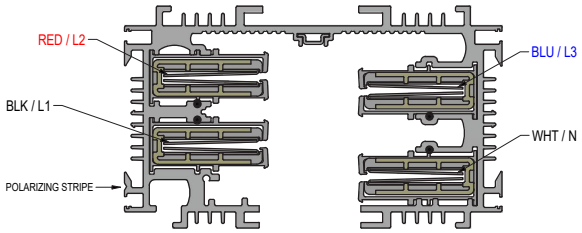


NTS

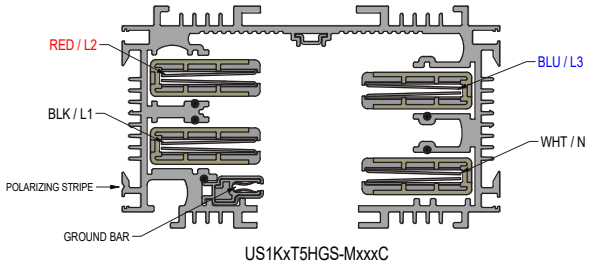
CROSS SECTION

1:2

UE1KxT5HxS-EX
External Elbow
UE1KxT5HxS-IN
Internal Elbow
(Item 4)



US1KxT5H4S-MxxxC



US1KxT5HGS-MxxxC

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Cutting Tolerances
Component Length
≤ 24" : ± .030"
> 24" : ± .063"
> 120" : ± .125"

Revision History

REV	ECO	DATE	REV BY	APPR BY
C	ECO 18485	10/1/2020	fstifter	JMinard
B	ECN 16679	10/22/2019	jminard	mmishra
A	Original Issue	8/26/2016	eschultz	tmorgan

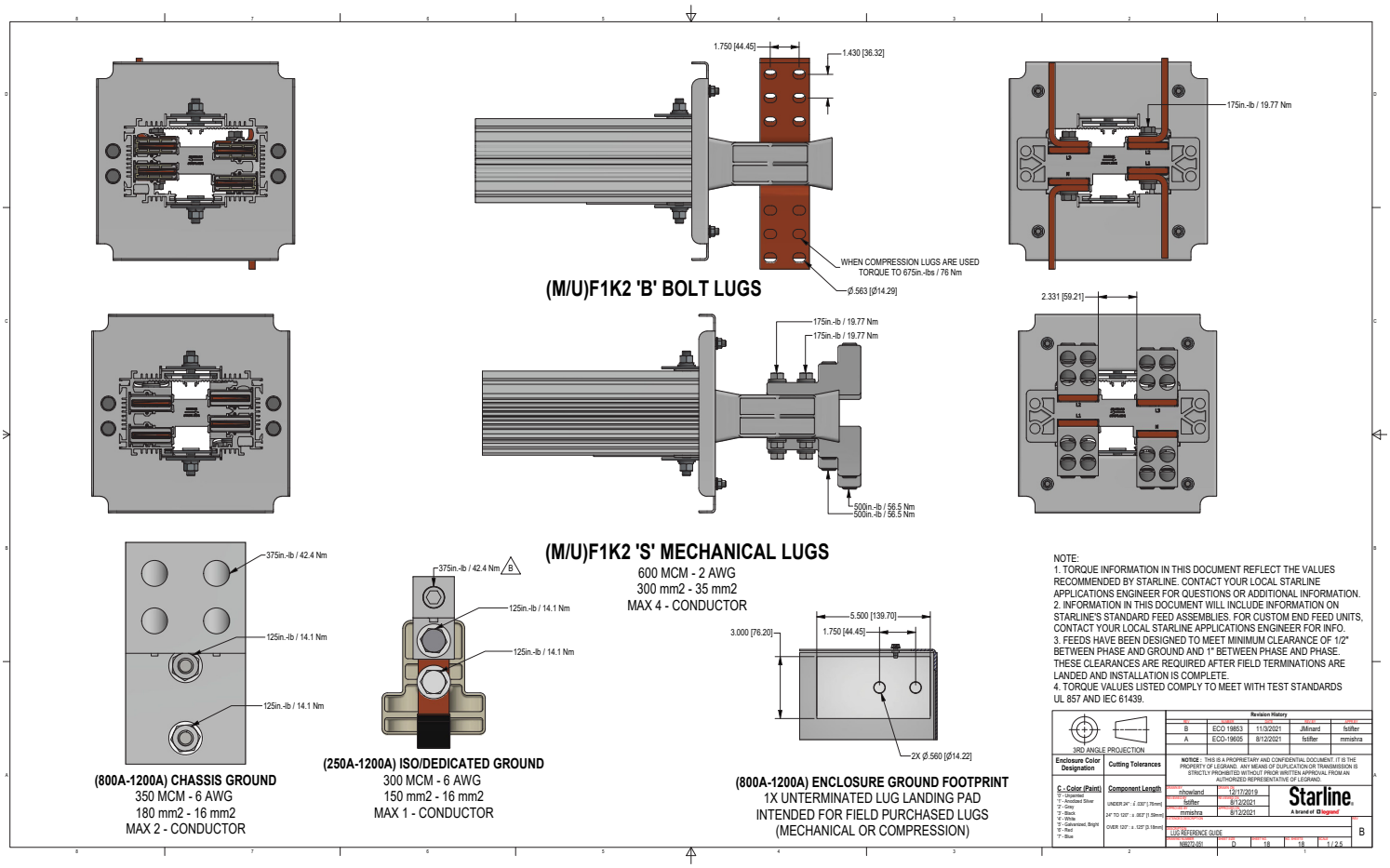
DRAWN BY	DRAWN ON	APPROVED BY	APPROVED ON
eschultz	8/24/2016	tmorgan	8/26/2016

STARLINE TRACK BUSWAY

DRAWING NUMBER: F4006200
SHEET: 1 OF 1
REV: C

FEED REFERENCE CHART

U.S.



NOTE:
1. TORQUE INFORMATION IN THIS DOCUMENT REFLECT THE VALUES RECOMMENDED BY STARLINE. CONTACT YOUR LOCAL STARLINE APPLICATIONS ENGINEER FOR QUESTIONS OR ADDITIONAL INFORMATION.
2. INFORMATION IN THIS DOCUMENT WILL INCLUDE INFORMATION ON STARLINE'S STANDARD FEED ASSEMBLIES. FOR CUSTOM END FEED UNITS, CONTACT YOUR LOCAL STARLINE APPLICATIONS ENGINEER FOR INFO.
3. FEEDS HAVE BEEN DESIGNED TO MEET MINIMUM CLEARANCE OF 1/2" BETWEEN PHASE AND GROUND AND 1" BETWEEN PHASE AND PHASE. THESE CLEARANCES ARE REQUIRED AFTER FIELD TERMINATIONS ARE LANDED AND INSTALLATION IS COMPLETE.
4. TORQUE VALUES LISTED COMPLY TO MEET WITH TEST STANDARDS UL 857 AND IEC 61439.

3RD ANGLE PROJECTION

Revision History

REV	ECN/ERO	DATE	APPROVED
B	ECO 19853	11/3/2021	JMinard	fstifler
A	ECO-19605	8/12/2021	fstifler	mmishra

Enclosure Color Designation: C - Color (Paint)
Cutting Tolerances: Component Length; UNDER 24" ± .030" [.76mm]; 24" TO 120" ± .063" [1.59mm]; OVER 120" ± .125" [3.18mm]

NOTICE: THIS IS A PROPRIETARY AND CONFIDENTIAL DOCUMENT. IT IS THE PROPERTY OF LEGRAND. ANY MEANS OF DUPLICATION OR TRANSMISSION IS STRICTLY PROHIBITED WITHOUT PRIOR WRITTEN APPROVAL FROM AN AUTHORIZED REPRESENTATIVE OF LEGRAND.

DRAWN	DATE
nhowland	12/17/2019
fstifler	8/12/2021
mmishra	8/12/2021

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LUG REFERENCE GUIDE — B

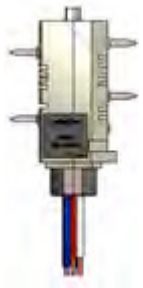
DRAWING NO.	REV	SHEET	SCALE
N9072-001	D	18	1 / 2.5

GROUND OPTIONS

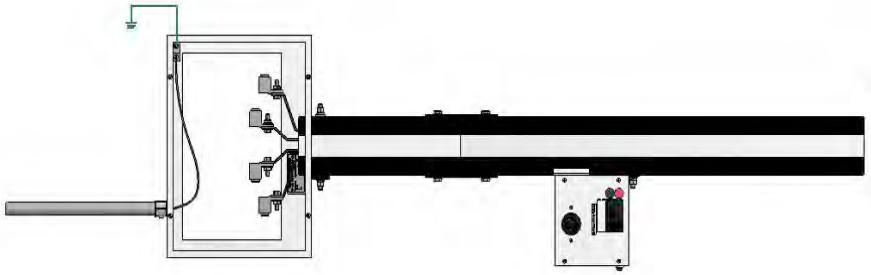
FAQ CASE GROUND, DEDICATED GROUND, ISOLATED GROUND

CASE GROUND

Uses aluminum housing and no extra copper bar.



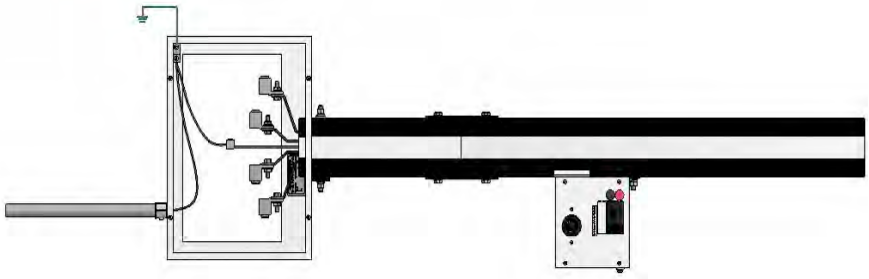
T5



DEDICATED GROUND

Extra bar in busway for ground. Everything tied together inside plugs. Bar and housing at same potential.

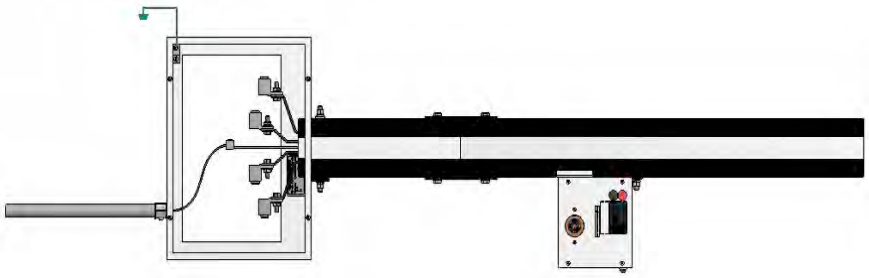
T5G



ISOLATED GROUND

Orange receptacles in plugs. Case ground isolated from copper ground bar. Isolated ground carried back to panel by others.

T5G



1200T5 END FEED INSTALLATION

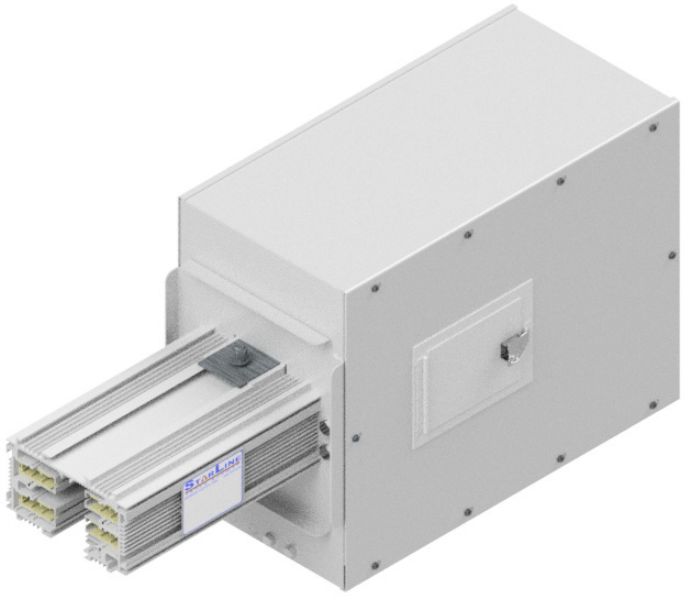
Warning: Make sure the power is off before making your wire connections inside the End Feed Box.

End Feed Units are used to make field wiring connections to the Busway at the end of a run. The End Feed Box installs like a standard section. Wiring connections are made to the copper blades by means of aluminum box style lugs. For all versions, safety ground connection is made to the box with the lug provided. Isolated ground systems provide a separate, additional connection. The End Feed Box can be installed on the Busway section before or after hanging the busway.

End feed boxes can be supported with a variety of hanger options, including gland plates and hangers which are approved for seismic zones. End feeds can also be encased in Unistrut cradle and suspended with threaded rod. See product selection guide for list of end feed support accessories. Drilling through the end feed housing is not recommended due to debris and the potential for violating electrical creepage and clearance.

Field Wiring

Remove the lug from the end feed block. Attach wire to lug. Reinstall back on block. In some cases it may be possible to install wire into the lug without removing the lug from the block. Reference the above feed lug capability chart for lug sizes and torque values



1200T5 JOINT KIT INSTALLATION

For connection of adjacent Busway sections. One Kit is required at each joint. Each Kit is comprised of a housing coupler pair and bus connector set. Specify configuration to match busway configuration.

Insert the pair of Housing Couplers onto one housing section. The housing coupler and the hanger channel of the Busway are polarized; ensure they are aligned before inserting them. Position the bottom coupler away from the joint, and align the Busway with the adjacent Busway section. Center the top housing coupler around the joint and tighten the set screws securely. Next, begin to install the bus connector kit by inserting the A-B Bus Connector inside the slot of the Busway. Ensure the connector is centered on the joint and push the Bus Connector in until secure. Insert the installation tool inside the slot of the Busway at the joint. Position the collar around the Busway housing so that the radius on the tool is positioned against the Bus Connector cover. Using the lever, rotate the installation tool and release. Work toward the end of the blade cover until the copper blades are firmly seeded into channels.

Repeat each of these steps for the other side of the Bus Connector. Remove the installation tool, center the bottom housing coupler, and tighten the 24 set screws.

For further assistance, refer to the installation video here:

https://youtu.be/dosAdBP0txk

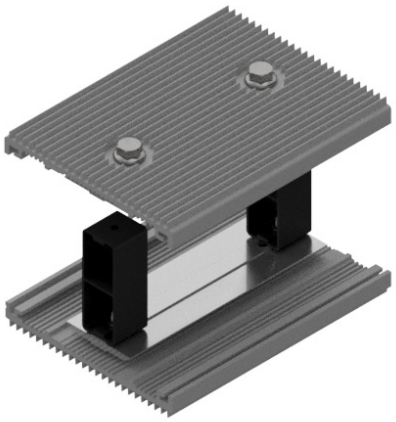


Figure 1: Housing Coupler

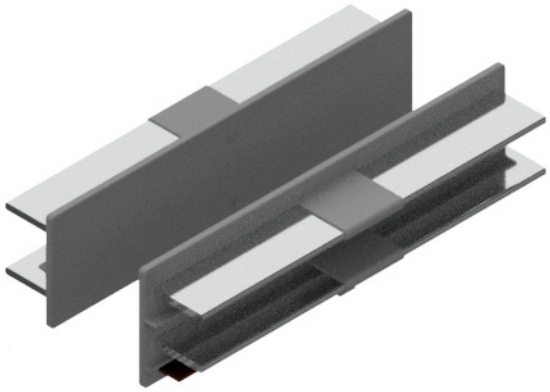


Figure 2: Bus Connector

HANGER BOLT INSTALLATION

There is one standard hanger option for mounting Starline Busway. UBSHT5-1 (Figure 1) is the recommended Standard One-Piece hanger for the 1200/1250 Amp Busway. At a minimum, 10 ft. (3m) intervals support the busway via support hardware. Once the hanger is placed in the mounting channel and the support hardware is installed, tighten down with 1/2" wrench.

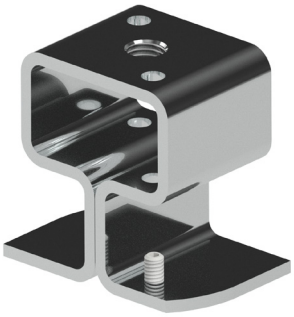


Figure 1: UBSHT5-1

Section 3: Plug-In Insertion Instructions

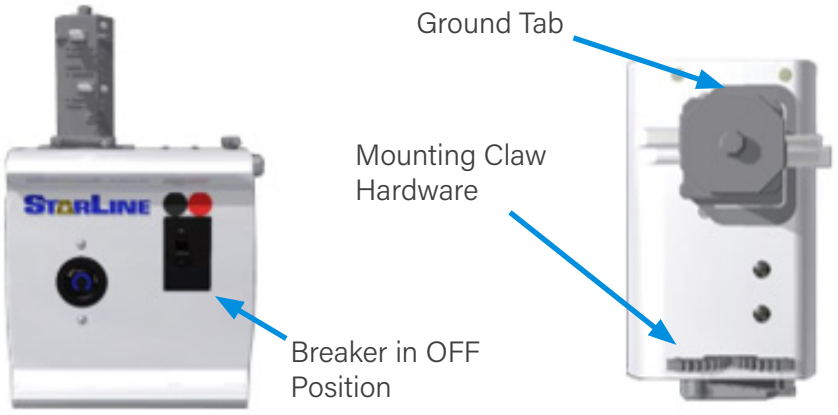
INSTALLING A PLUG-IN UNIT

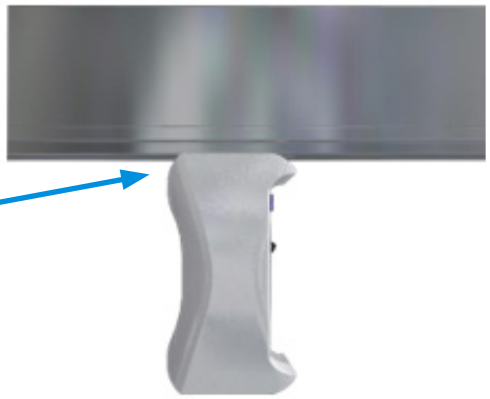
Before You Begin

- Always wear appropriate PPE
- Please consult NFPA 70E for information on calculating incident energy for the location of your work, and the necessary associated PPE for your particular installation.

Step 1	

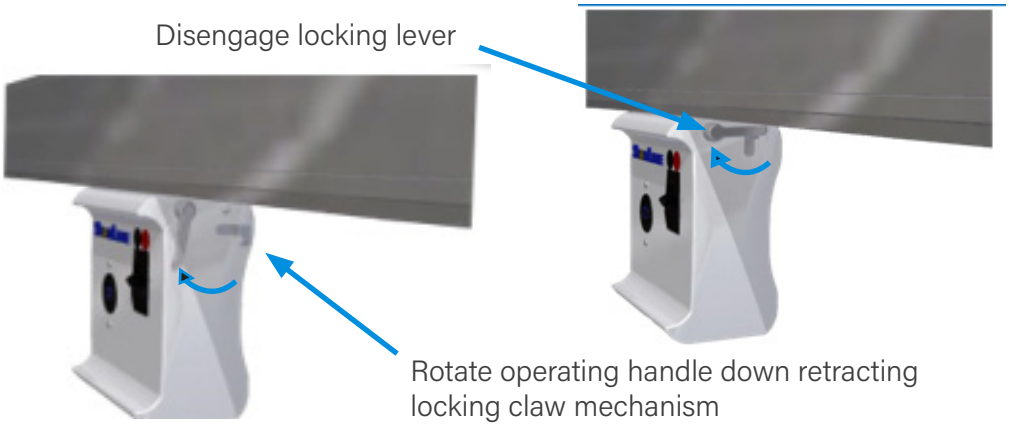
DO NOT install Plug-in units under load. Make sure breakers are in the off position

Step 2	

Step 3	Guide the paddle into the access slot of the busway
Step 4	Plug head inserted completely into busway 
Step 5	Rotate so that the blades engage the busbars Enclosure firmly pressed up against the busway. (Hint: push UP against the busway as you begin to rotate)

Step 6	Rotate plug-in to the right until it is parallel to the busway The typical circuit breaker/ receptacle faces the direction of the polarizing strip for the T5 systems.
Step 7	Engage lever to operate the mounting claw If installing an older style plug, insert hanger bolt to mounting tab and securely tighten.
Step 8	Rotate locking lever to secure the locking claw

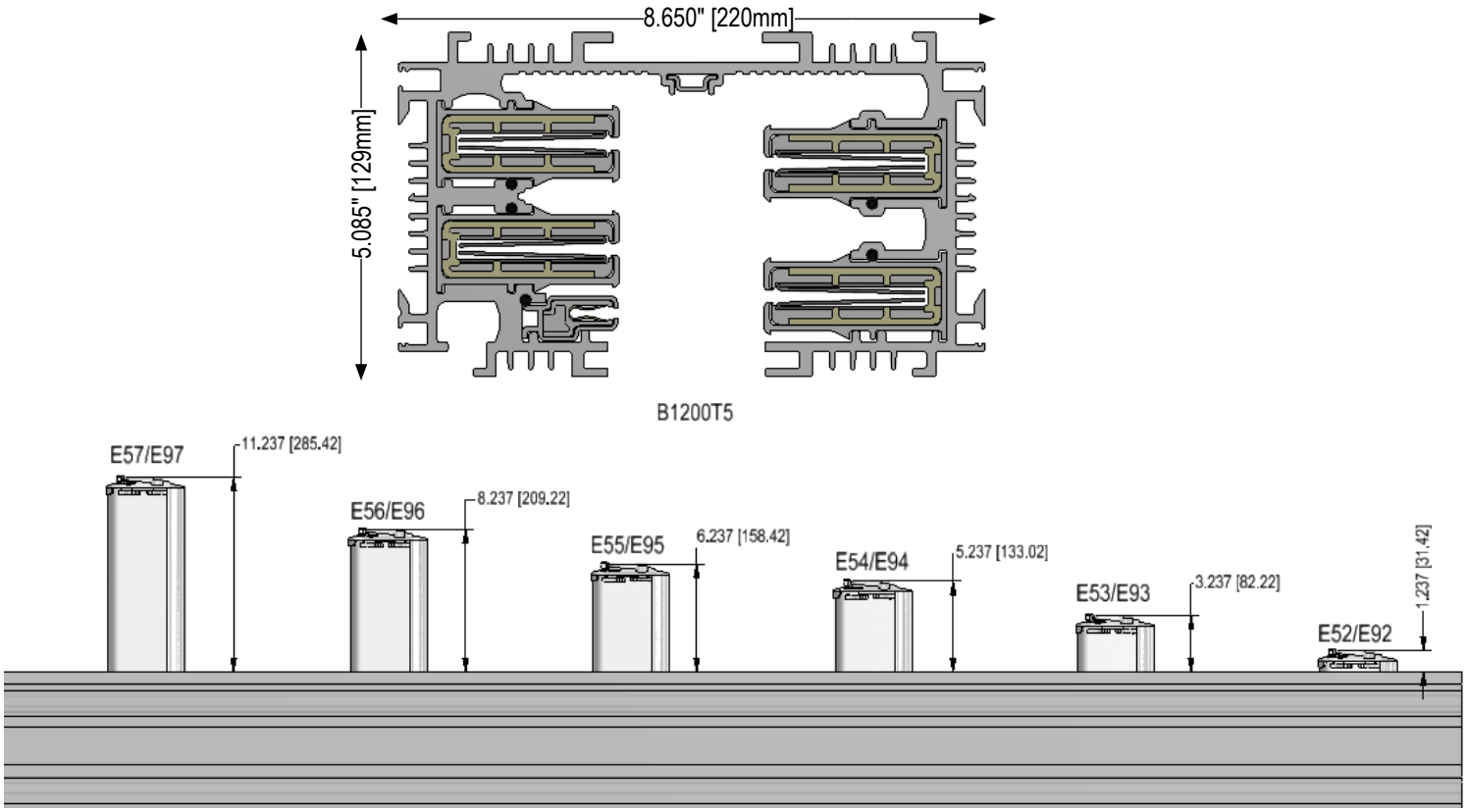
REMOVING A PLUG-IN UNIT

Step 1	Put breaker in OFF position DO NOT remove under load
Step 2	Disengage locking lever  Rotate operating handle down retracting locking claw mechanism
Step 3	Rotate the enclosure 90 degrees and pull down until the paddle is clear of the busway

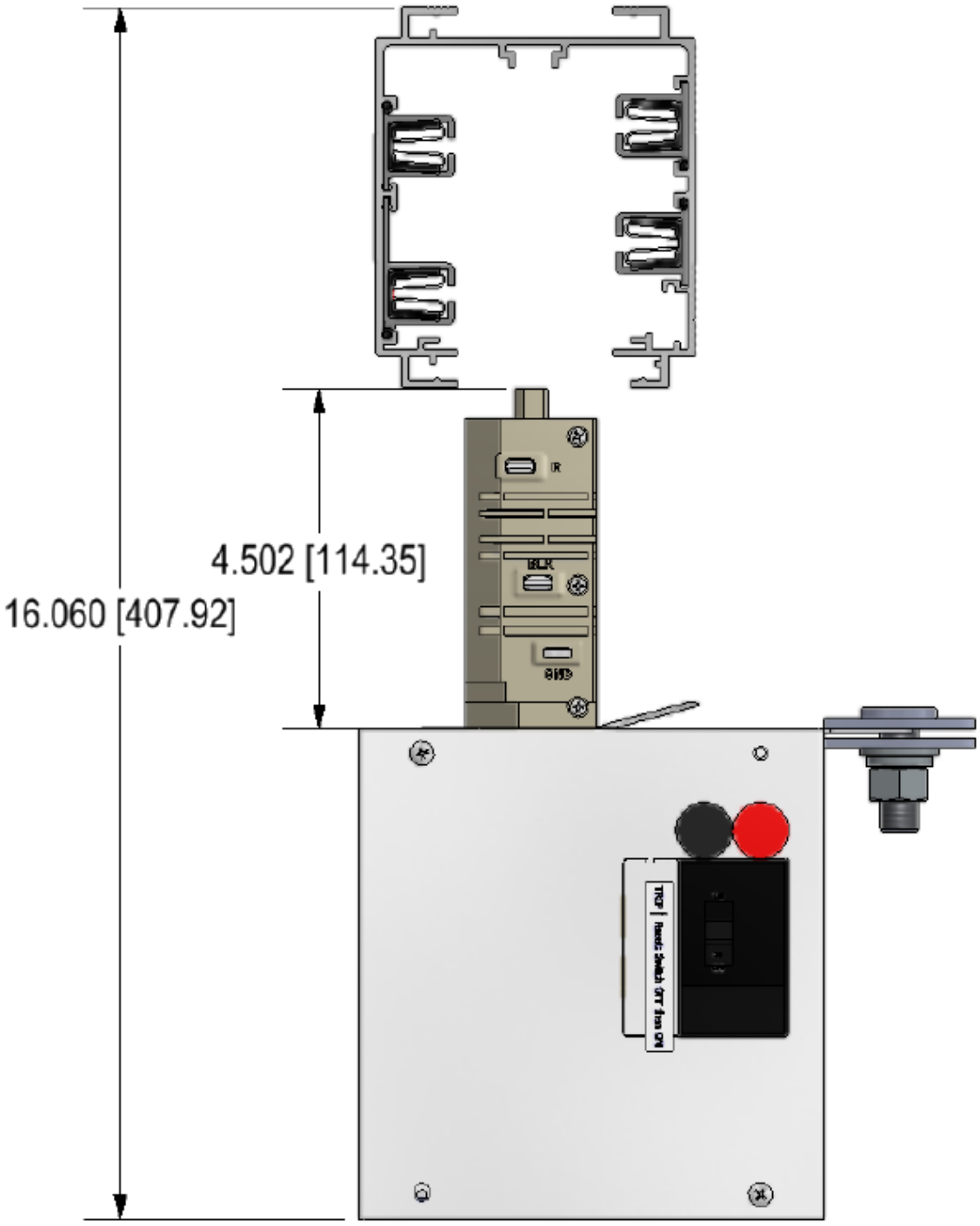
PLUG-IN DISTANCE CLEARANCES

Side Distance Clearance

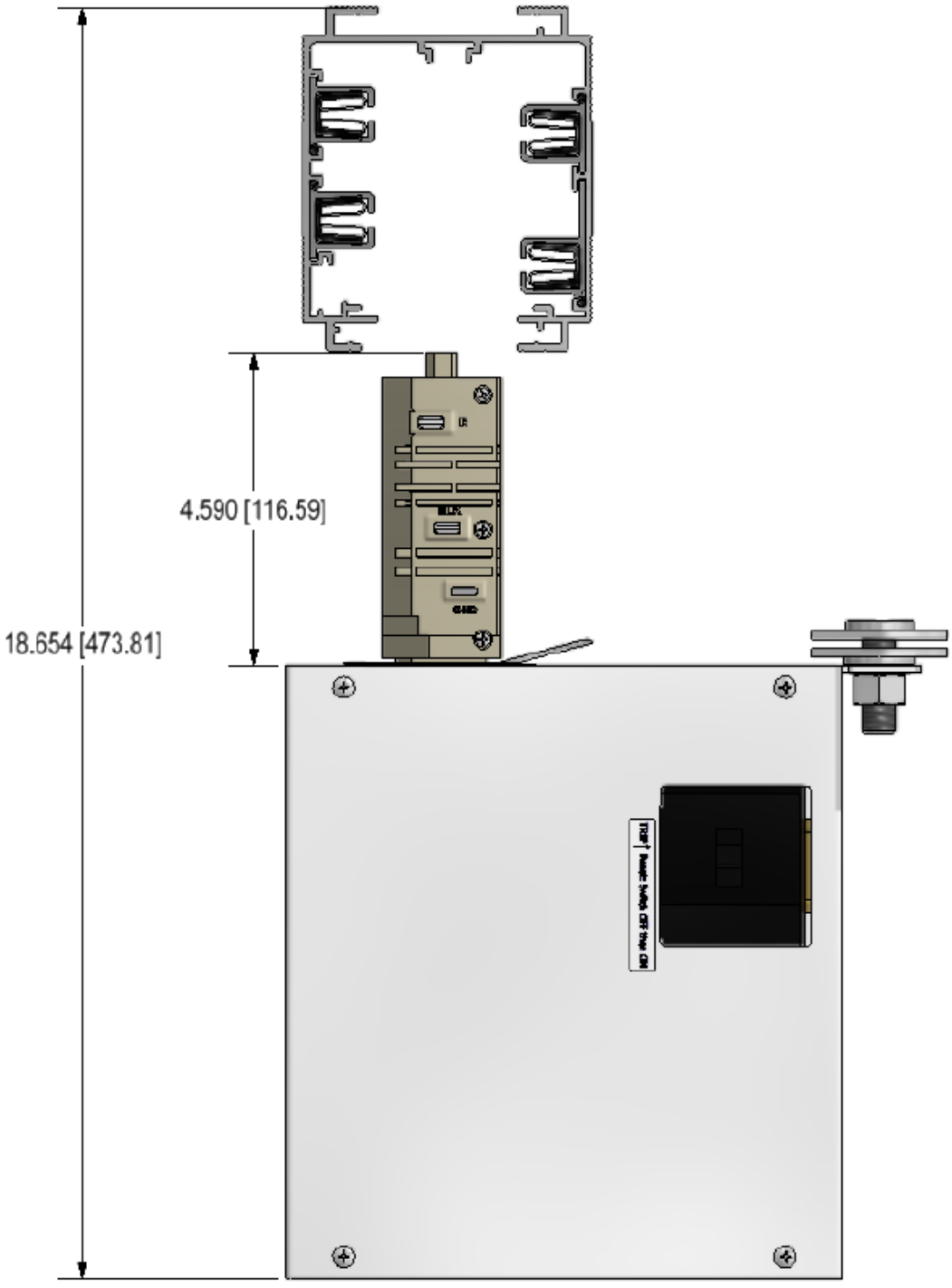
The following tech brief shows the side and height clearances of standard Starline enclosures.



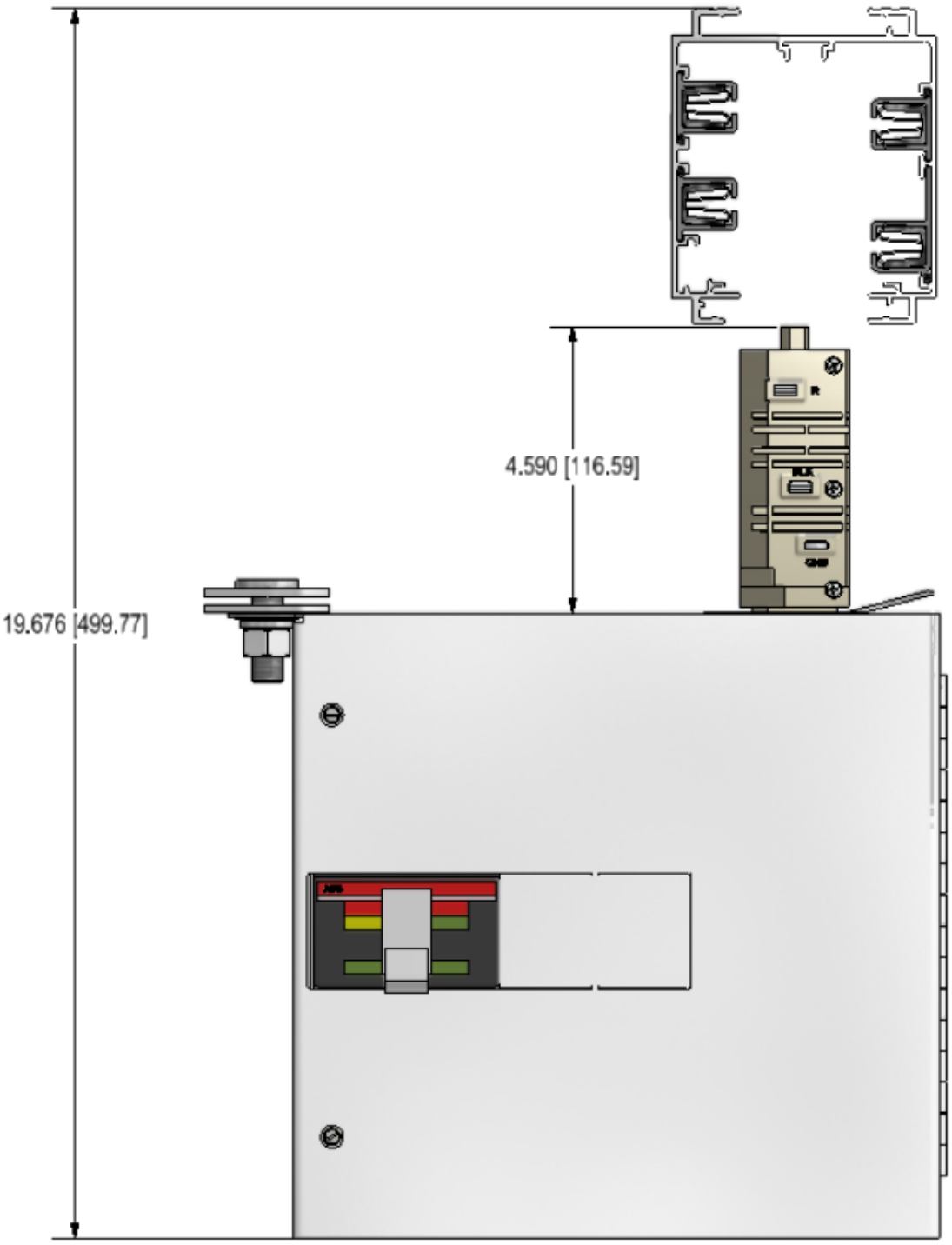
Enclosure E12



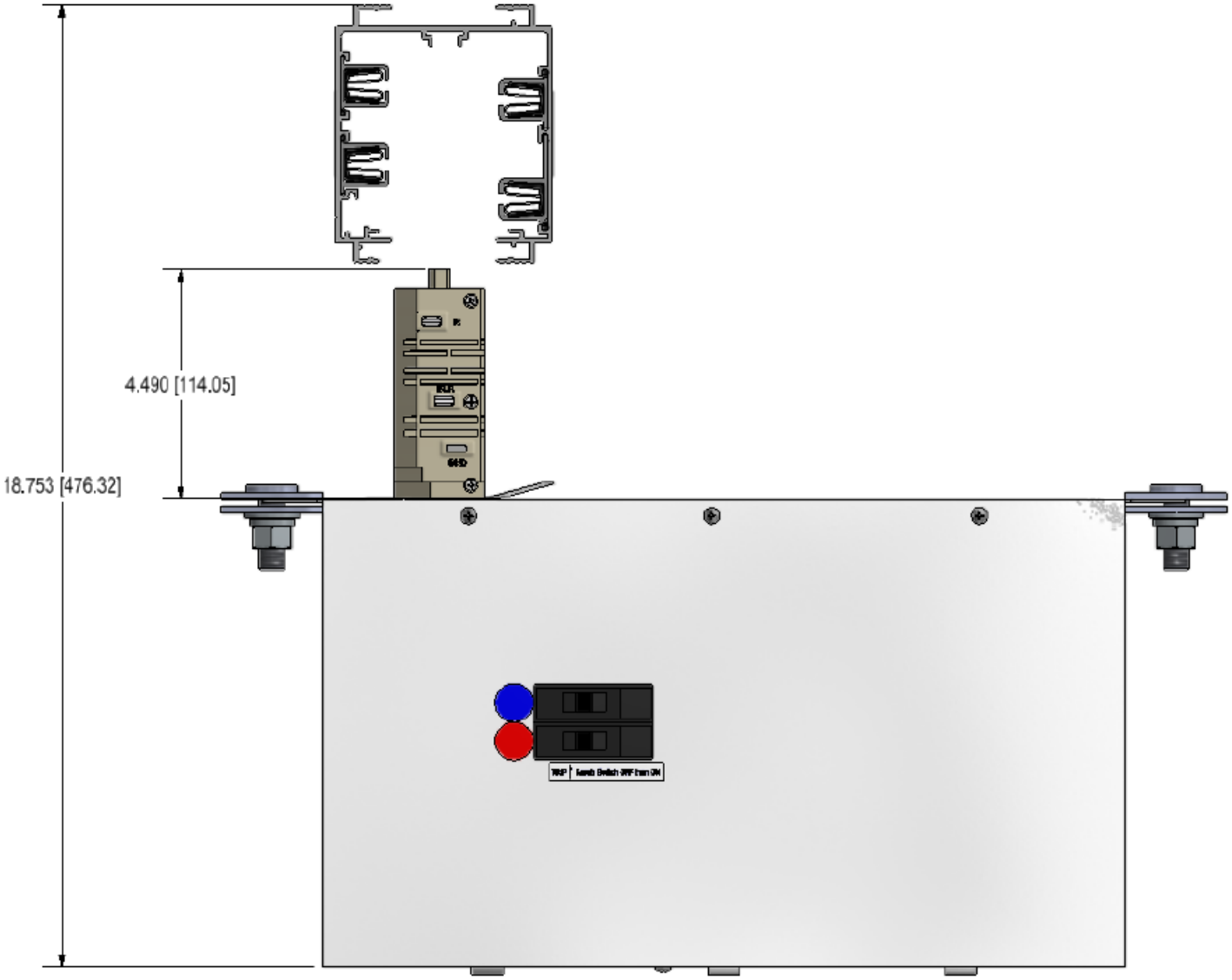
Enclosure E28

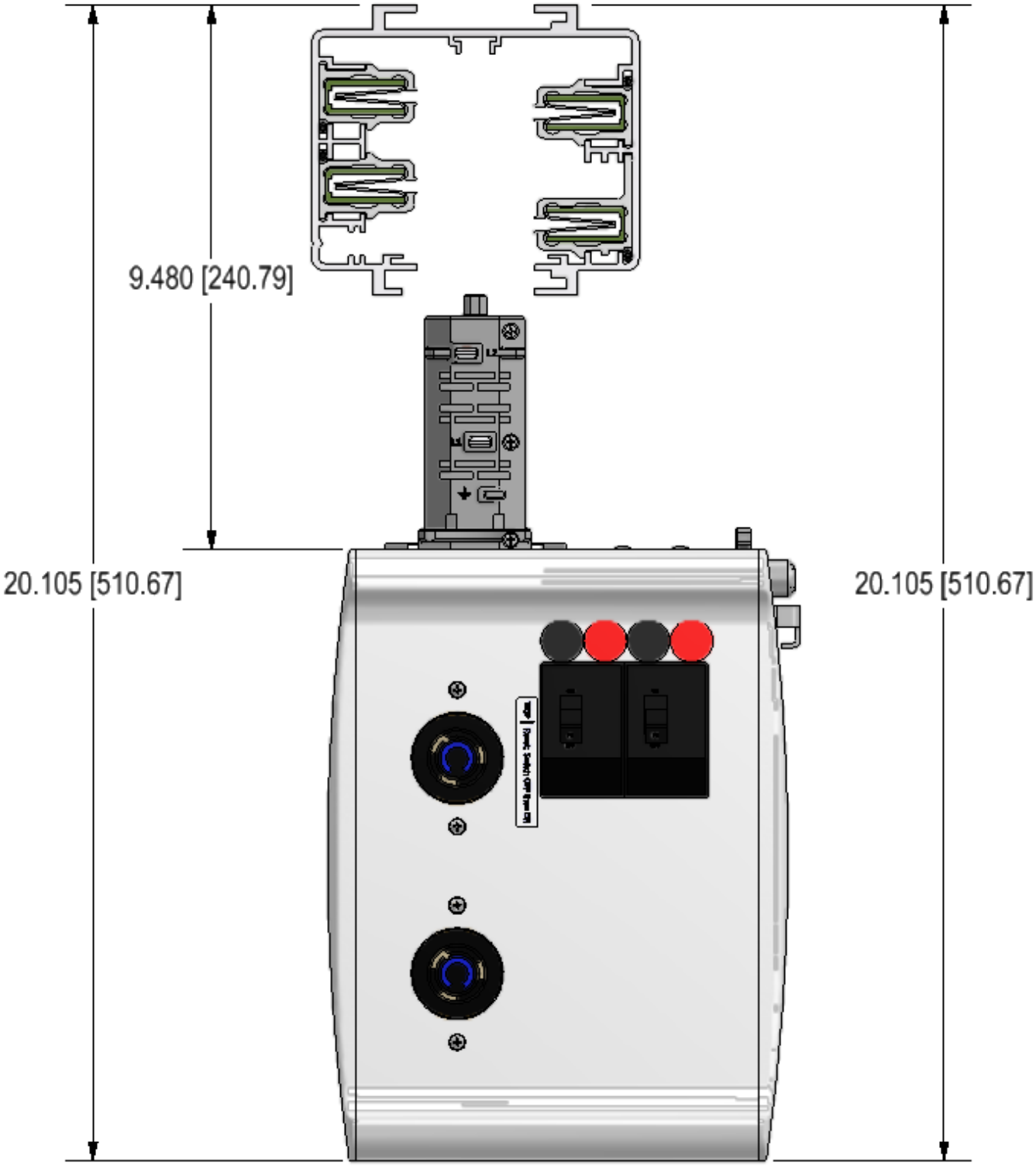


Enclosure E36

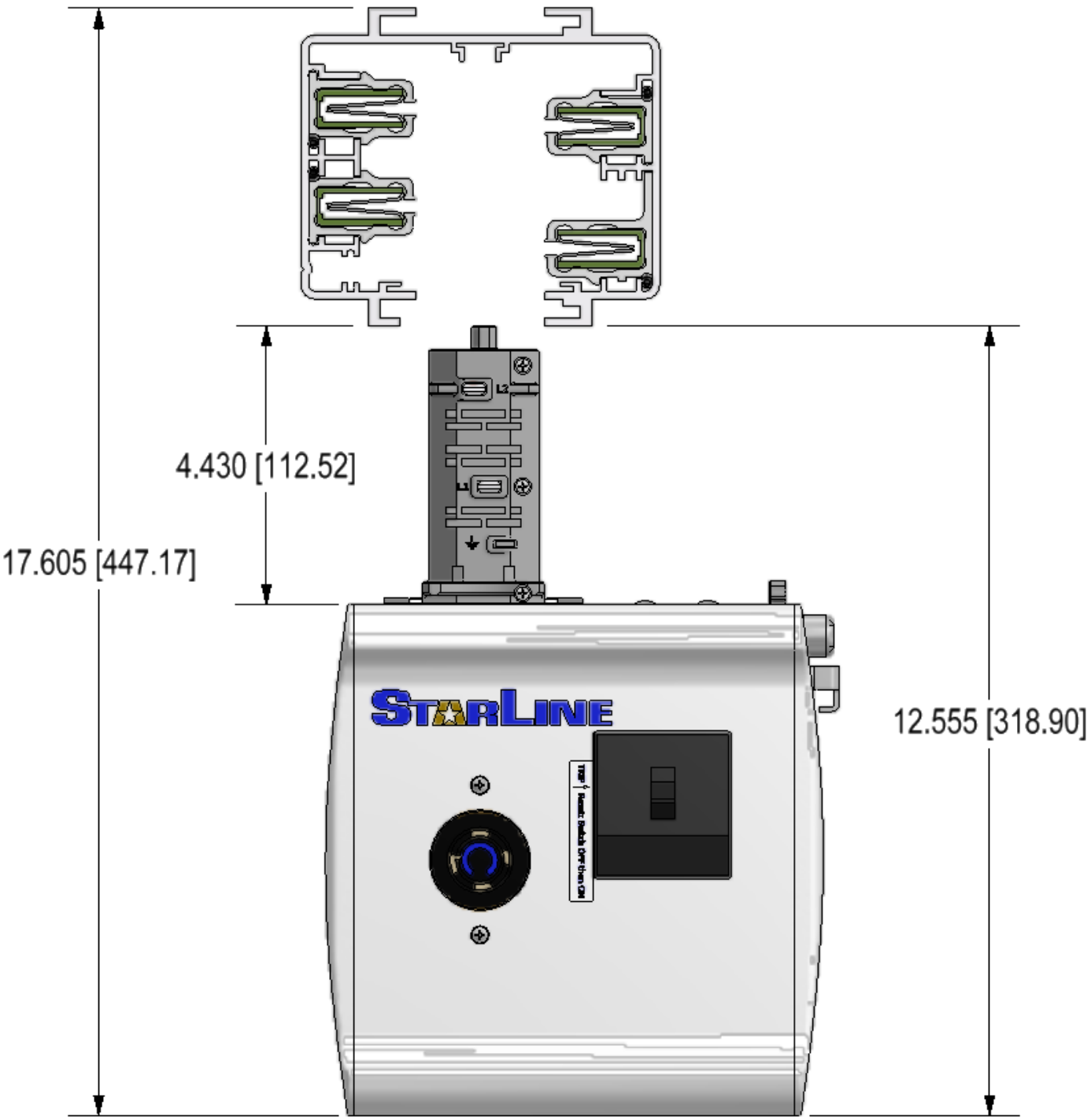


Enclosure E25





E50 Series Plug Shown



E90 Series Plug Shown

Section 4: Field Services and Warranty

STARLINE SERVICES

With over 30 years of experience in the busway market, Starline has the knowledge and expertise to ensure that your Track Busway system is functioning at a best-in-class level.

We are currently offering the following services:

Load Bank Testing and Equipment Rentals

Whether you are in need of rental equipment to test your power system or a team of technicians to test the system for you, Starline Services has you covered. Select testing equipment from our inventory of load banks and associated gear, or work with a Starline engineer to customize your own test plan to suit your individual needs.

Meter Services

Factory trained and certified technicians will provide comprehensive on-site meter commissioning that includes meter inspection, programming and detailed documentation. Our technicians will program CPM meters and offer optional integration services to your BMS or DCIM for any and all meters located within your facility.

Startup and System Certification

Certified technicians inspect and validate that the installation meets factory standards, ensuring ongoing reliability and compliance with facility safety requirements. Upon successful completion of system startup, Starline's standard one (1) year manufacturer's warranty will be automatically extended in duration.

- Double the length of the standard factory warranty
- Ensure all joint and feed connections are properly installed with continuity testing
- Ensure proper installation of all plug-in units
- Validate that system will perform to your specified requirements
- Full certification report delivered electronically at conclusion of service

Engineering Studies (US Only)

Understanding the dangers and implementing a safety program is imperative to maintaining a safe work environment. Our professional engineers will conduct comprehensive facility electrical studies and recommend corrective actions, confirming your systems reliability and compliance with government and safety requirements.

Turnkey Installation Services (UK Only)

Our trained and factory certified Busbar installers are looking forward to completing your next job. You can order your best-in-class power distribution system and leave the rest to us. Our technicians will complete your installation quickly and safely and will reduce your overall TCO by extending your product warranty.

On-Site Installation Support

On-site installation support begins by scheduling a site trip during your system installation. All work is performed by certified technicians- including review of installation best practices prior to the job, visual inspection of safe system installation, contractor installation oversight, and inspection and verification of functionality after rework.

On-Site Product Training

Certified technicians will provide a comprehensive training course curriculum that meets our high factory system standards, ensuring ongoing reliability of the system while also emphasizing operational safety. This course curriculum takes place in both a classroom and on-site with equipment.

Extended Warranty and Enhanced Service Plans

Ensure that your equipment investment is always covered. Select from an extended factory warranty or one of our many Enhanced Service Plans to meet your organizational requirements.

Choice of Extended Warranty or Enhanced Service Plans	Extended 1, 2, 3, 4 Years	Enchanced Plan 1, 2, 3, 4 years
Repair or replacement of defective parts throughout life of service agreement	X	X
One (1) service site visit per year		X
Visual inspection of entire Busway system		X
Update firmware and verify all Starline CPM products		X
Basic thermal survey and “hot spot” findings report with images		X
Thermal imaging of all plug-in units		X
Thermal imaging of all Busway joints		X
Thermal imaging of all end feed units (with IR windows)		X
Detailed and fully executed thermography report		X
Includes travel and expenses		X
24/7 technical support hotline	X	X

Contact your Starline Representative today to add services to your Track Busway order, or download detailed Statement of Work documents at downloads.starlinepower.com/services.

STANDARD FACTORY WARRANTY

Contractor/Customer: _____

Customer Order: _____

Seller warrants all products sold by Starline to be free from defects in material or workmanship for a period of one year from the date of shipping. Seller's liability on this warranty shall be limited to the repair or replacement of any product which is returned to the Seller, within one year of the date of delivery and which is found by the Seller to be defective in material or workmanship. Customer must have written authorization prior to returning any material to Starline. The Buyer will be responsible for the cost of removing and reinstalling a defective part(s) or its replacement and all labor and material and all other costs or expenses incurred in connection therewith.

Notwithstanding any provision contained herein to the contrary, (i) Buyer's use of any plug-ins, parts and/or components that are not manufactured by Starline with the Products, and/or (ii) if any services and/or warranties are provided by any person/entity other than Starline without Starline's prior written consent, all warranties for all Products shall immediately terminate and be null and void.

Warranty Period: 1 year from delivery date

STANDARD FACTORY WARRANTY PROCESS

1. Customer calls either Starline Rep or Starline direct.
2. Customer Service Specialist will issue Return Material Authorization (RMA).
3. Customer returns warranted item along with copy of RMA.
4. Starline will either rework item or manufacture new item depending on the customer needs.
5. Starline ships item back to customer.
6. Starline will determine reason for failure.
7. Corrective action will be documented.
8. If reason for failure is requested by customer. Starline will send report to customer.
9. All action items from corrective action report must be completed by assigned designer and returned to Quality Department.
10. Quality Assurance Department will track all warranted events and report them to Starline Managers, Directors, and the Executive Team.

Section 5: Maintenance

STARLINE BUSWAY RECOMMENDED MAINTENANCE

Starline Track Busway is designed to be user friendly with no mandatory maintenance required. The joints, end feeds, and plugs also require little to no maintenance. Starline Track Busway uses a boltless connection for the joining of the copper conductors. The joint design uses a U-shaped conductor channel that utilizes a joint kit to connect two housing sections. This connection is mechanically pressed into the slot with the use of installation tools that can be purchased from Starline. The end result is a reliable, heat tested connection at every joint that takes little to no maintenance over the life of the product.

The housing couplers, end feed connections, mounting hardware, and hanger bolts can be checked at the user's discretion, but is not required by Starline.

IR inspection of the end feed connections, joints, and plug-in units can be checked at the user's discretion, but is not required by Starline.

We do recommend that the system be inspected periodically for physical damage or signs of any abnormalities.

Starline offers comprehensive on-going service plans that extend the life of the warranty over the duration of the plan. For more information, contact your Starline sales representative or email the factory at service@starlinepower.com.

- Refer to NEMA bulletin BU1.1 for general maintenance instructions.

Starline, a brand of Legrand, has been a leader in power distribution since 1924. The company's founders led the way for many new technologies in the power distribution equipment industry. Today, Starline continues to pave the way for safer, more innovative and more reliable electrical power distribution systems. Visit **StarlinePower.com** to learn more about our flexible power solutions.

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