

RAISING THE BAR FOR FLEXIBLE POWER DISTRIBUTION



Starline[®]
A brand of **legrand**

PRODUCT OFFERING BROCHURE



A Legacy of Power Distribution.

Starline, a brand of Legrand, is built on over 90 years of innovation in delivering safe and flexible power to a variety of industries, businesses and institutions. Expertly designed as a simple, versatile, fast and economical solution for supplying power, our products are unique because they can be tapped instantly at any location. Plus they can dramatically reduce downtime, as well as costs for expansion and new locations, while providing ongoing customization and flexibility in power distribution. And Starline excels at collaborating with design engineers to provide solutions for any application, and for any industry.

Starline Track Busway, Starline Plug-In Raceway, and Starline Critical Power Monitor are the industry standard for flexible power in mission critical, data center, university, lab, industrial and retail environments. Time, money, and labor savings have made us the power distribution supplier of choice for businesses that recognize that Starline's products are in a class by themselves.



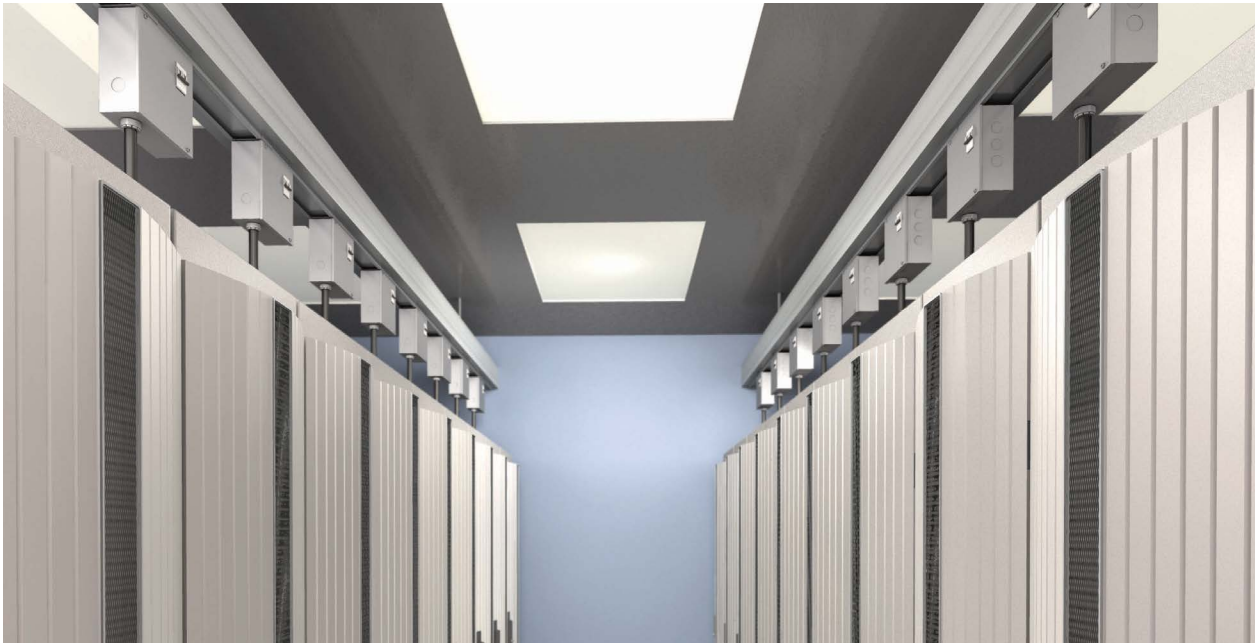
**STARLINE
TRACK BUSWAY**



Distributing power. Removing limitations.

We've built a better way to provide power to any mission critical, industrial, retail or lab environment. With Starline Track Busway, easy installation means faster expansions and additions, plus lower cost of ownership. Our flexible and scalable busway system allows you to relocate power anywhere you need it, and at anytime without shutting down power.

The unique, turn-n-lock connection method used for the plug-in units is the key to our busway's reliability. By inserting the plug head anywhere along the busway and rotating it 90 degrees, you get a constant, locked in, reliable connection – eliminating power interruptions caused by overheating or loss of connections.



BENEFITS

Reduced Facility Construction Costs

- Labor savings mean installation is less expensive
- Eliminates costly changes and outside labor costs for electrical specialists

Faster Installation

- Building projects are up and running faster
- Add, remove or relocate power easily and quickly with no downtime

Flexibility for the Future

- Plug-in units can be disconnected and connected without de-energizing the busway
- Requires no routine maintenance

Environmentally Friendly

- Less installation materials
- Busway and outlets are reusable and relocatable

More Choices

- Scalable and customizable lengths, sizes and configurations to meet your unique specifications

APPLICATIONS



Data Centers/Mission Critical

Mission critical facilities can't afford costly downtimes when expansion is needed. This makes Starline an ideal choice for their power needs.



Retail

Starline has years of experience providing power for the fast-moving retail environment. And Starline allows for lighting and power to be connected in the same housing.



Industrial

Auto, high-tech assembly, and contract manufacturing companies demand a power distribution system capable of providing high density plug-in availability.

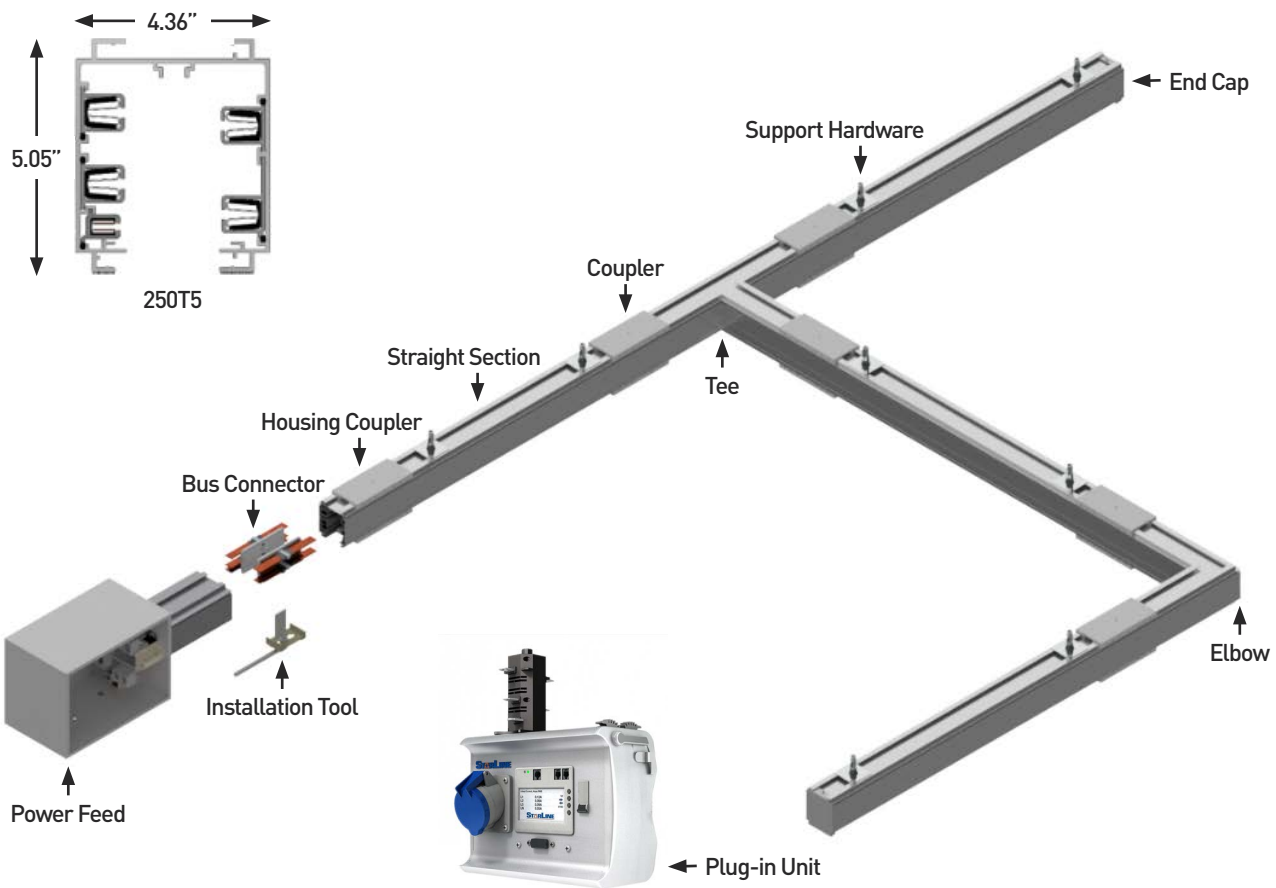


Universities and Labs

Flexibility, adaptability, lower costs and sustainability are just a few reasons why Starline is the preferred power choice for universities and labs.

BUSWAY SYSTEMS

Our most powerful and productive systems feature 250, 400, 600, 800, 1000, and 1200 amps. T5 units can fit any of these busways so that your investment is protected as your power needs change.



SYSTEM NO.	AMPS	VOLTS (MAX)	NEUTRAL	ISO GRD	SIZE
40T1	40	480	100%	NO	1.66 in x 1.62 in
50T1	50	480	100%	NO	1.66 in x 1.62 in
60T1	60	480	100%	NO	1.66 in x 1.62 in
60T2	60	600	100%	NO	2.58 in x 1.79 in
100T2	100	600	100%	NO	2.58 in x 1.79 in
100T3CF*	100	600	200%	YES	4.19 in x 2.38 in
100T3C4	100	600	100%	NO	4.19 in x 2.38 in
100T3CN	100	600	200%	NO	4.19 in x 2.38 in
100T3CG*	100	600	100%	YES	4.19 in x 2.38 in
225T3C4	225	600	100%	NO	4.19 in x 2.38 in
250T5C4	250	600	100%	NO	4.25 in x 5.05 in
250T5CG	250	600	100%	YES	4.25 in x 5.05 in
250T5CN	250	600	200%	NO	4.25 in x 5.05 in
250T5CF	250	600	200%	YES	4.25 in x 5.05 in
400T5C4	400	600	100%	NO	5.7 in x 5.05 in
400T5CG	400	600	100%	YES	5.7 in x 5.05 in
400T5CN	400	600	200%	NO	5.7 in x 5.05 in
400T5CF	400	600	200%	YES	5.7 in x 5.05 in
600T5H4	600	600	100%	NO	6.4 in x 5.05 in
600T5HG	600	600	100%	YES	6.4 in x 5.05 in
800T5C4	800	600	100%	NO	6.4 in x 5.05 in
800T5CG	800	600	100%	YES	6.4 in x 5.05 in
800T5H4	800	600	100%	NO	6.4 in x 5.05 in
800T5HG	800	600	100%	YES	6.4 in x 5.05 in
1000T5H4	1000	600	100%	NO	8.65 in x 5.085 in
1000T5HG	1000	600	100%	YES	8.65 in x 5.085 in
1200T5H4	1200	600	100%	NO	8.65 in x 5.085 in
1200T5HG	1200	600	100%	YES	8.65 in x 5.085 in

Starline Track Busway is the simple, versatile, fast and economical solution for supplying power to electrical loads. And our cutting-edge engineering gives you the unique ability to instantly tap into the busway at any location, with a variety of plug-in units.

- C** = Copper
- H** = Hybrid (Copper Contact)
- 4** = 3 phase plus neutral
- N** = 3 phase plus 200% neutral
- G** = 3 phase plus neutral plus internal ground conductor
- F** = 3 phase plus 200% neutral plus internal ground conductor

*600V must be specified



STARLINE
PLUG-IN RACEWAY

Next generation raceway for today's power needs.

Starline Plug-In Raceway was created to meet the ever-changing power distribution and datacom needs of healthcare, education, industrial, data center and retail applications.

Though it may look like other raceway products, Starline Plug-In Raceway has the fastest install times in the industry. It also has the unique ability to add or relocate plug-in modules anywhere on the raceway quickly and easily, even after installation.

When changing or repositioning power receptacles, you simply snap the pre-assembled plug-in modules into place on the raceway backplane. The connection to power is made automatically without having to interrupt power.





FEATURES

Safe finger-proof design allows end users to add plug-in modules without cutting power

Low installation costs due to its patented pre-wired bus-type raceway design

Flexible design allows receptacle plug-in modules to be added or relocated anywhere on the raceway quickly and easily

Breaker and non-breaker single phase and three phase plug-in modules (up to 30 amps)

Power feeds, elbows, and metering options available

Datcom channel for data, video and audio applications available

Custom color and finishes available



APPLICATIONS



Science & Technology

Ideal for hospitals, pharmacies, and research and development. Designed to provide flexibility and reliability, the raceway helps facilities run at full efficiency.



Education

For use in next generation classrooms, labs, research, science and engineering spaces.



Data Center

For higher density server cabinets, multiple types of receptacles and future flexibility.



Industrial

Efficient and economical solution for supplying power and expanding operations quickly.

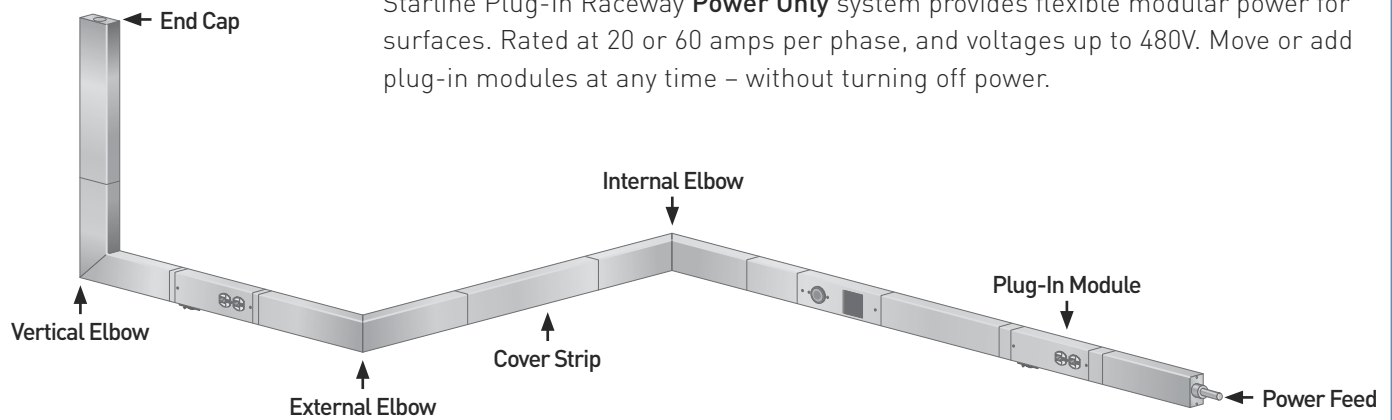


Retail

Ideal in fitness and fast-paced retail environments using modules that are easy to install and no electrician needed to add power.

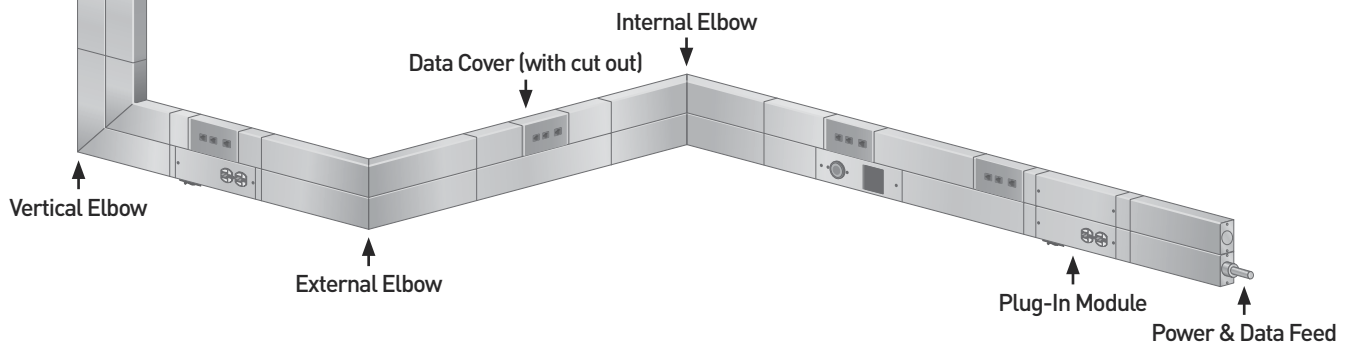
POWER ONLY

Starline Plug-In Raceway **Power Only** system provides flexible modular power for surfaces. Rated at 20 or 60 amps per phase, and voltages up to 480V. Move or add plug-in modules at any time – without turning off power.

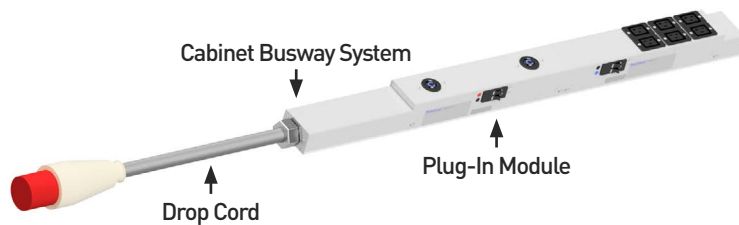


POWER AND DATA

Starline Plug-In Raceway **Power and Data** system provides power and an additional cavity to pull data and fiber cables through. Custom designed covers can assist in making installations faster and easier.



CABINET BUSWAY SERIES



Cabinet Busway is a pre-assembled system ideal for server cabinets and industrial workbench applications. By utilizing the Plug-In Raceway components, it becomes an ideal configuration for applications that require higher power density, multiple types of receptacles, and future flexibility.

PLUG-IN MODULES



Plug-in Modules are universal for the Plug-In Raceway systems above. Modules can be easily moved or added, and receptacle combinations can be mixed and matched to create the most efficient design possible.



STARLINE CRITICAL POWER MONITOR





Real Time Monitoring for Peak Efficiency.

With the market's growing need for energy efficiency, energy monitoring systems are more important than ever. The Starline Critical Power Monitor (CPM) offers an enhanced monitoring package that will allow you to monitor, integrate and display more power information easily and reliably.

The Starline CPM creates value for power distribution systems by providing the critical information needed to optimize management and efficiency.



FEATURES

Revenue grade metering functionality

Monitoring of multi-circuit configurations

End feed and branch circuit models

Display and non-display versions

Standard integral web pages to easily configure meter attributes and view data

Wired Ethernet and serial communications are standard, optional 802.11n Wi-Fi connectivity

Ability to use both Serial and Ethernet protocols simultaneously

Telnet, SNMP, Modbus TCP/IP, BACnet TCP, http/https and Modbus RTU are also standard protocols

Available with daisy-chain Ethernet

Uniquely designed to provide the functionality required for monitoring any facility's power use

Optional temperature monitoring

Both Vac and DC versions available

APPLICATIONS



Data Centers/Mission Critical

Starline CPM provides actionable energy management information for mission critical environments.



Industrial

Due to its application-specific configurations, Starline CPM enables customized power monitoring solutions required to maximize efficiency.



Submetering

Whether new installation or retrofit, Starline CPM provides revenue grade metering functionality to support a wide range of circuit configurations and ratings.

PRODUCTS

Track Busway CPM

Designed to provide the functionality required for both end feed and branch circuit applications.

Standalone CPM

Mounts easily to electrical panels and enclosures using a standard knockout.

Starline Critical Power Monitor is calibrated to meet ANSI Revenue Grade Standards for power usage, and a variety of communications interfaces facilitate seamless integration with BMS and DCIM packages. Monitors are factory-built into Starline power feeds and plug-ins, providing a clean and seamless integration of monitoring with power distribution.

CORDED CPM

The Corded CPM comes with a plug on one end and a connector body or receptacle on the other end.

Ideal for field power monitoring on-the-fly. It is capable of monitoring the energy of any device.

Available with

- Two different box sizes with various single and three phase configurations
- The latest Starline CPM meter features and accessories
- Varying lengths of cord both above and below the meter

CPM TEMPERATURE MONITOR

Compatible with 225, 250, 400, 600, 800 & 1200 amp Starline Track Busway systems

Eliminates need to periodically IR scan

Provides end feed temperature data in real time (4 lugs and internal enclosure temperature)

Data available for end user analysis via webpage



MEASURED PARAMETERS	ACCURACY
Voltage L-N	0.5 % of Reading
Voltage L-L	0.5 % of Reading
Current	0.5 % of Reading
+/- Watts	ANSI 12.20 Class 0.5
+/- Wh	ANSI 12.20 Class 0.5
+/- VARs	ANSI 12.20 Class 0.5
VA	ANSI 12.20 Class 0.5
Power Factor	1.0 % of Reading
Frequency	+/-0.1 Hz

RETROFIT CPM

The Retrofit CPM allows non-metered legacy devices to be upgraded in the field to include metering functionality.

It is compatible with Starline Track Busway Plug-in Units, and other manufacturer's devices as well.

Available with

- Different style boxes dependent on where you would like it attached
- The latest Starline CPM meter features and accessories
- Optional factory-completed rework if desired



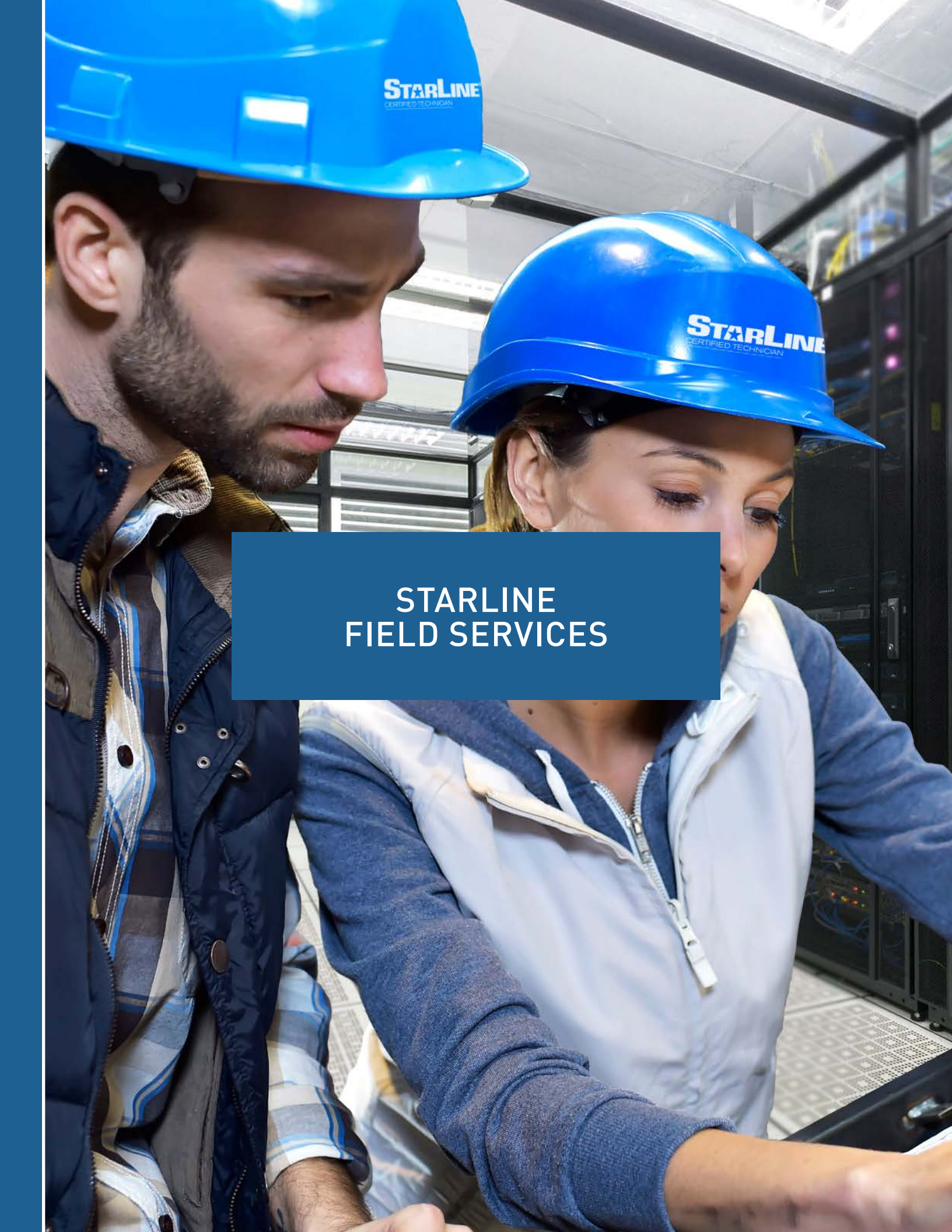
MEASURED VALUES	REAL-TIME	/PHASE	TOTAL	AVERAGE	MAX	MIN
Feed Voltage L-N	•	•		•		
Feed Voltage L-L	•	•		•	•	•
Feed Line Currents*	•	•		•	•	•
Feed Line Demand		•	•		•	
Feed Watts	•	•	•		•	
Feed Watts Demand			•		•	
Feed +/- VAR	•	•	•			
Feed VAR Demand			•		•	
Feed VA	•	•	•			
Feed VA Demand			•		•	
Feed Watt-hour	•	•	•			
Feed Power Factor	•	•	•			
Outlet Line Currents	•	•			•	•
Outlet Line Demand		•	•		•	
Outlet Watts	•		•		•	
Outlet VAR	•		•			
Outlet VA	•		•			
Outlet Watt-hour	•		•			
Outlet +/- Power Factor	•		•			
Frequency	•					

*Measured Feed Neutral Current is optional

STARLINE
CERTIFIED TECHNICIAN

STARLINE
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STARLINE
FIELD SERVICES





Discover the Power of Field 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. Our trained and authorized factory representatives will provide unmatched on-site services whenever you need them.



LOAD BANK TESTING AND EQUIPMENT RENTALS

Factory trained and certified technicians will load bank test and commission busway

Reliable source for load bank rental equipment delivered to site when you need

METER SERVICES

Certified technicians will safely and efficiently program meters

Technicians can integrate your CPM devices so that you can focus on operational goals

Real-time data delivers the analytics to make better operational decisions

STARTUP AND SYSTEM CERTIFICATION

Helps mitigate issues and risks associated with startup by proactively inspecting, testing and reporting on Starline products

Upon successful completion of system startup, Starline's standard manufacturer's warranty will be automatically extended in duration

Our on-site technicians will rely on proven best practices and operational compliance standards to help meet your commissioning deadlines

ENGINEERING STUDIES (US ONLY)

Allow for compliance to safety standards

Engineers will provide facility electrical studies, recommend corrective actions or confirm your systems reliability and compliance with government and safety requirements

ON-SITE INSTALLATION SUPPORT

Confirm equipment delivery and quality

Inspection of proper system installation

Contractor training on best practices for installation

Expedited part replacement (if required)

ON-SITE PRODUCT TRAINING

Classroom and hands-on busway training

Proven course curriculum is thorough and effective meeting Starline's rigorous installation and operational standards

Improve operator safety and learn best practices to care for your product



STARLINE SERVICE OFFERINGS

Choice of Extended Warranty or Enhanced: Silver, Gold or Platinum Service Plans	Extended 1, 2, 3, 4 years	Silver 1, 2, 3, 4 years	Gold 1, 2, 3, 4 years	Platinum 2, 3, 4 years
Repair or replacement of defective parts throughout life of service agreement	•	•	•	•
24/7 technical support hotline	•	•	•	•
Visual inspection of meters		•	•	•
Visual inspection of all joints for visible gaps		•	•	•
Update firmware and verify all Starline CPMs		•	•	•
Includes travel and expenses		•	•	•
One (1) service site visit per year		•		
Two (2) service site visits per year			•	•
Thermal imaging of all plug-in units			•	•
Thermal imaging of all Busway joints			•	•
Thermal imaging of all end feed units			•	•
Detailed and fully executed thermography report			•	•
Online portal for test reports & documentation			•	•
Spare parts inventory management program				•



Starline Field Services offers ongoing support plans so you can get the most out of your Starline Track Busway system. Enjoy peace of mind with a customizable plan to fit your company's needs.