



Real-time Monitoring For Peak Efficiency

Starline®
A brand of **legrand**

CPM PRODUCT BROCHURE



Power Monitoring You Can Rely On

For more than 30 years, Starline Track Busway has provided facilities with the most flexible, reliable and customizable power distribution systems on the market. Now, because of the market's growing need for greater efficiency and power density, 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 critical power information easily and reliably.

THE STARLINE CPM OFFERS:

- Revenue grade metering functionality
- Monitors multi-circuit configurations
- End feed and branch circuit models
- Display and non-display versions available
- Wired Ethernet and serial communications are standard, optional 802.11n Wi-Fi connectivity
- Ability to use both serial Modbus and Ethernet-based protocols simultaneously
- SNMP, Modbus TCP/IP, BACnet TCP/IP, HTTP(S), Telnet, and SSH are all standard Ethernet protocols
- Daisy-chain Ethernet available
- Retrofit and upgrade options available
- Optional temperature monitoring
- Both Vac and DC versions available

FIRMWARE CONFIGURATIONS:

- Standard Options (IPv4)
- IPV6
- DHCP
- WPA2E (Wi-Fi Only)

CERTIFICATIONS:

- UL, CE, FCC Certified
- RoHS Compliant

M70 CPM

M70 is Starline's next generation power monitoring device for mission critical environments. The platform offers enhanced energy metering to ensure your system's electrical infrastructure is performing at optimal levels.

Revenue-grade power monitoring data is essential when making actionable, purpose-driven decisions in the data center environment. Whether that monitoring is required at the power feed, branch-circuit level or stand-alone enclosure, Starline's M70 offers unmatched granularity.

Equipped with the most comprehensive breadth of features on the market, the meter includes everything from temperature monitoring to audible alarms and a pivoting display for easy visual access from the floor.

FEATURES & BENEFITS

- Redesigned LED and LCD displays for real-time visual data reference
- Easily configured with DCIM and BMS packages for quick field deployment
- The most extensive communications protocol offering on the market





M70 Critical Power Monitor at a Glance

METER TYPES & APPLICATIONS:

Plug-in Unit Monitoring

- (2) RJ11, (2) RJ45, 7-Segment LED and No Display Options

Feed Monitoring; End Feed Retrofits;

Standalone Enclosures

- (2) RJ11, (2) RJ45, 4.3" LCD Touch Screen Display

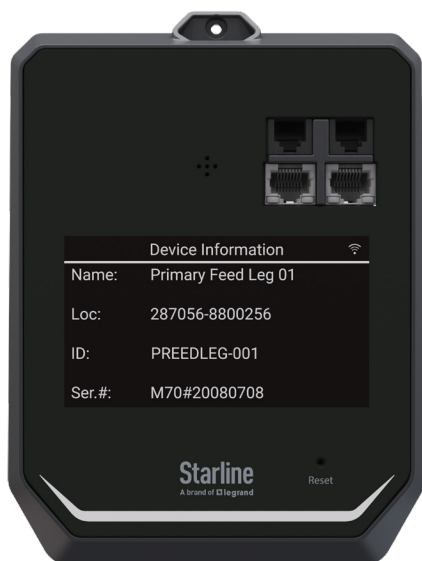
METER FEATURES:

- Single, Two and Three-Phase Power Outlet Monitoring
- Measured Neutral (Feed Only)
- Optional Wi-Fi (Plug-in Unit and End Feed)
- Compatible with AC/DC Power Supply
- Up to 6 current transformer inputs
- End Feed Lug Temperature Monitoring
- Rated up to 1200 Amps; 96-528 Volts AC
- Audible Alarms
- Circuit Breaker Position Sensing
- Password and Firmware Encryption for Enhanced Security

COMMUNICATION PROTOCOLS:

- HTTPS
- SSH
- SNMPv1, SNMPv2c, SNMPv3
- BACnet
- Modbus TCP, Modbus RTU
- Ethernet (Daisy Chain Ethernet Available)
- 802.11n Wi-Fi (Optional)
- Real-time monitoring with integrated webpages
- Simultaneous use of protocols
- Open protocol use for implementation with BMS and DCIM packages

Critical Power Monitor - Power Feeds, Standalone Enclosures and Retrofits



M73

(2) RJ11, (2) RJ54, Lg. Display



M76

Wi-Fi + (2) RJ11, (2) RJ54, Lg. Display

Critical Power Monitor - Plug-in Units



V71

*(2) RJ11, (2) RJ54,
No Display*



V72

*(2) RJ11, (2) RJ54,
Display*



V74

*Wi-Fi + (2) RJ11, (2)
RJ54, No Display*



V75

*Wi-Fi + (2) RJ11, (2)
RJ54, Display*

CPM Temperature Monitor

Temperature sensor technology is an available option with the Starline Critical Power Monitor (CPM) for End Feeds. This innovative technology is a first of its kind; making the monitoring and viewing of temperature data instantaneous.

FEATURES & BENEFITS

- Lower TCO & maintenance
- Compatible with 225, 250, 400, 500, 600, 800, 1000 & 1200 amp Track Busway systems
- Eliminates need to periodically IR scan
- Provides end feed temperature data in real time
- Over-temperature alarms
- Instantaneous firmware updates via CPM
- Compatible with all lug types
- Data for end user analysis via webpage



Nodes are installed in the busway end feed, which measure the temperature of each mechanical lug, as well as the overall internal box temperature.

Each node communicates the temperature back to the Starline CPM. Both power and temperature information will now display on the meter's display screen.

Temperature data also automatically transfer to the CPM's integral webpage—placing timely data at the end users fingertips.

Corded CPM

The corded CPM offers an easy method to add metering capabilities to your existing installation. With two versions of the device available, any load up to 63A three-phase can have monitoring added post installation. The units will be assembled with the necessary plug and connector body, and are easily added in-line with the device. Custom cord lengths and plug/connector body configurations are available to meet the specific metering requirements of your installation.

FEATURES & BENEFITS

- Standalone device
- Ideal for field power monitoring on-the-fly
- Capable of monitoring the energy of any device
- Minimally disruptive option for the addition of post-installation metering to your facility
- No modifications needed to existing infrastructure to add metering functionality
- Plug-in units do not need to be removed from the busway for implementation



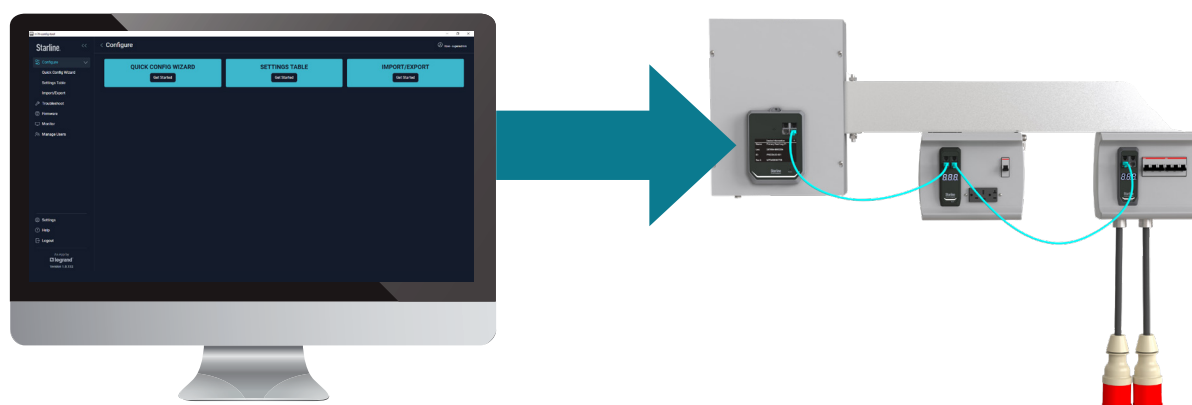
Starline Meter Configuration Tool

The Starline Meter Configuration Tool is available on request. It allows users to configure meters and update parameters on multiple meters simultaneously. It includes an auto-discovery feature that allows CPMs to be discovered through software without addressing each device individually. The tool enables faster startup, with seamless configuration and commissioning.

Product	Starline Meter Configuration Tool
Series	M70
Application	M70 Critical Power Monitor Plug-in units (branch circuit) M70 Critical Power Monitor End-feed units

FEATURES

- **Configuration** – Quickly update a single meter or mass update multiple meters simultaneously.
- **Troubleshoot** – Troubleshoot, download diagnostics and logs, and revert to base configurations.
- **Firmware** – Update firmware and/or the embedded webpage version.
- **Monitor** – View real-time data from multiple meters.



Services - Meter Programming

Starline's certified technicians make optimizing your meters' performance and functionality a breeze. Our comprehensive on-site meter programming service includes inspecting, programming, reporting, and optional retrofitting services for your existing systems. As part of our meter programming services, our Certified Technicians will work closely with your team to develop a customized programming plan.

FEATURES

- Inspection and comprehensive verification of meter functionality.
- Custom programming of set points and communication protocol settings.
- Optional network cabling to all Starline devices.

BENEFITS

- Flexible and quick programming
- Real-time data analytics
- Integrate with any BMS or DCIM system

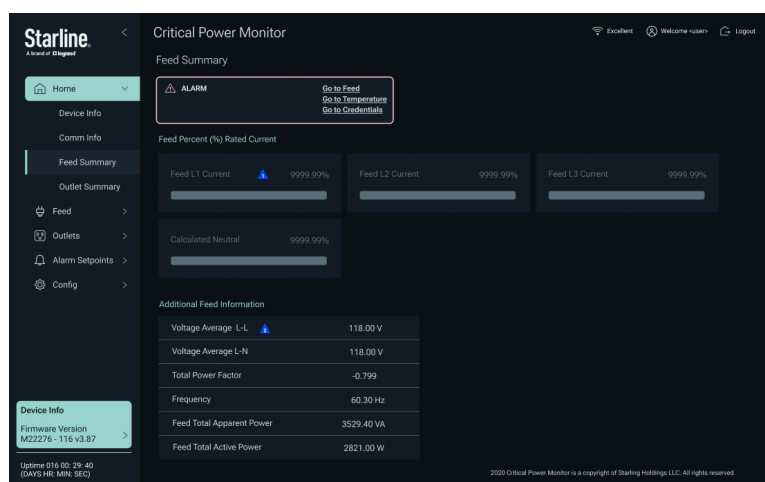
METER RETROFIT

Interested in adding metering to your existing system? Starline's meter upgrade process has never been easier. Our Certified Technicians can add meters or temperature sensing equipment to your existing Starline installation to collect critical information such as branch circuit usage, end feed lug temperatures and more.



Values, Parameters and Integral Web Page

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 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

All CPM meters can be easily integrated with BMS/DCIM packages

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WOULD YOU LIKE TO LEARN MORE?

Go to www.legrand.com/datacenter
or contact your local representative