

# Converge

Intelligent Building Solutions



## ► ConvergeIT™ Cabling Solutions for Intelligent Buildings

Siemon ConvergeIT is a unified intelligent building (IB) concept that builds a better future by changing the way we design and build. It brings together Siemon's proven quality, innovation and expertise with advanced cabling and connectivity technology and digital building systems to create highly efficient, sustainable and cost-effective converged cabling infrastructures for intelligent buildings.

In partnership with like-minded digital building system providers, ConvergeIT aims to effectively converge data, voice, video, lighting, security, building automation and other low-voltage building systems onto a single IP-based physical cabling infrastructure, enabling system integration for new levels of building intelligence and analytics that allow owners to gain significant savings and improve building occupant experiences. At the same time, these converged infrastructures consolidate cabling and reduce unnecessary pathway, material and labor costs while supporting power over Ethernet (PoE) technology that saves up to 75% on deployment costs over AC power.





## ▶ Cisco Digital Building Solution Enabler Partner

Unequivocally aligned with Siemon's ConvergeIT™ Cabling Solutions for Intelligent Buildings that create a unified physical infrastructure for converging low-voltage building systems, Cisco's Digital Building Solution aims to create buildings that are not only smart, but also connected, secure and easy to manage.

A key part of the Cisco Digital Building Solution includes converging previously disparate systems and devices on a single IP network using Cisco switches and Power over Ethernet (PoE), including PoE-powered LED lights with sensors that provide 85% lower energy costs. Siemon's ConvergeIT Cabling Solutions include advanced copper shielded cables and connectivity that provide superior support of PoE-enabled systems.

## ▶ Siemon's Network of Digital Lighting Partners

The exponential growth of intelligent building and PoE technologies represents a unique opportunity for your company to achieve significant capital savings and operational savings, reducing your buildings total cost of ownership. As traditionally disparate systems like voice, data, A/V, security, access control, HVAC and more converge onto a single IP network, you need a strong partner with expert knowledge to help you capitalize on digital lighting and intelligent building opportunities. You need a Siemon certified Digital Lighting Partner (DLP).



Security



Digital Lighting



Audio/Visual



Life Safety



Point of Sale (POS)



Building Automation



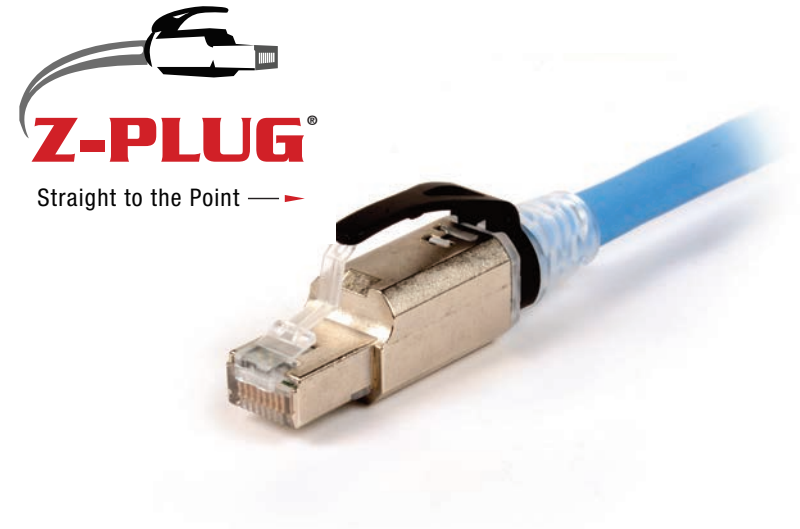
Mass Notification

# Z-PLUG® Field Terminated Plug

Siemon's Category 6A Field Terminated Z-PLUG offers reliable, high-performance plug terminations in the field that enable custom-length direct connections to a variety of IP-based and PoE-enabled devices deployed in today's intelligent buildings. With the proliferation of RJ45 based PoE-enabled end devices, Z-PLUG was developed specifically to allow custom-length cables that can be terminated on site for quick direct-connect efficiency to PoE LED lights, security cameras, wireless access points, digital displays, distributed antenna systems (DAS), building automation controls and more. Rather than connecting to the network via outlets and patch cords, many of these devices can be directly connected using Z-PLUG for rapid, more efficient deployment.

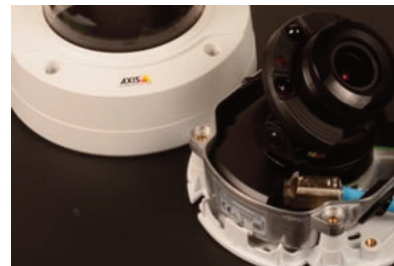
Siemon's Z-PLUG Field Terminated Plug supports 10 Gig system transmission performance for today's high-speed applications and the latest PoE applications, including advanced four-pair Type 3 (60W), Type 4 (90W) and Power over HDBaseT (POH).

Z-PLUG with PowerGUARD technology offers a fully-shielded 360-degree enclosure are 75°C operating temperature for superior heat dissipation in remote power applications like remote powering application like Power over Ethernet PoE.



## High Performance

Z-PLUG exceeds all Category 6A performance requirements, easily supporting high-speed applications like 802.11 Wi-Fi 5 today while delivering future-proof connectivity for tomorrow.



## Low Profile

Z-PLUG's shorter plug design with rounded edges and ability to eliminate the boot and latch protector makes it ideal for connecting to devices with limited space.



## Termination Speed

The user-friendly Z-PLUG termination tool and intuitive hinged lacing module that eliminates cable feed through enables best-in-class termination speed for rapid deployment of IP-based devices.

# Zone Enclosures

Siemon's zone enclosures enable shorter easy-to-manage connections directly to building devices such as LED lights, security cameras, wireless access points or building automation controllers, or to outlets serving voice, data or other systems.

## 24-Port MAX® Zone Unit Enclosure

The 24-Port MAX Zone Unit Enclosure is a flexible, economical solution designed to support zone cabling in a variety of enterprise workspaces. This low-profile enclosure accepts up to 24 ports using flat MAX® (copper or fiber), Z-MAX® or TERA® outlets to support a wide range of horizontal copper and fiber applications.

- Foam gasket to minimize vibration and prevent dust from entering enclosure
- Cover is fully removable via quick release latches, providing easy access to connections
- Keyholes allow easy attachment to walls or other surfaces
- Integrated labeling for port identification and network documentation



Enables flexible copper and fiber distribution for LANs, PONs and intelligent buildings.



Low-profile, economical zone cabling solution that enables shorter links to outlets.



Meets plenum and non-plenum rating requirements.



24-Port MAX Zone Unit Enclosure

## Passive Ceiling Zone Enclosure

The Passive Ceiling Zone Enclosure is a flexible, economic solution to support zone cabling in a variety of enterprise workspaces. Designed to meet UL 2043 plenum requirements and install flush within a 2x2 ft. drop ceiling tile space, the Passive Ceiling Zone Enclosure accepts up to 96 ports.

- 4U adjustable rack system tilts 45 degrees for easy access to terminations
- Multiple mounting options accommodate threaded rod or guide wires
- Vents enable proper airflow and heat dissipation for remote power applications
- Lightweight 8kg (18 lbs.) enclosure for easy overhead installation



Cut ceiling panels easily slide into the door to blend into decor.



Fully adjustable 4U rack system supports a load capacity of 31.7 kg (70 lbs.).



Hinged door and tilting bracket enable easy access to ports.



Passive Ceiling Zone Enclosure

# Z-MAX® Solid Modular Cords

## Z-MAX 6A Shielded Modular Cords

Combining the unparalleled performance of an exclusive PCB-based plug, noise-resistant shielded construction and a host of innovative user-friendly features, shielded Z-MAX 6A modular cords are the ultimate Category 6A cord. All cords are 100% factory-tested to ensure performance and compliance.

### Excellent Bend Relief

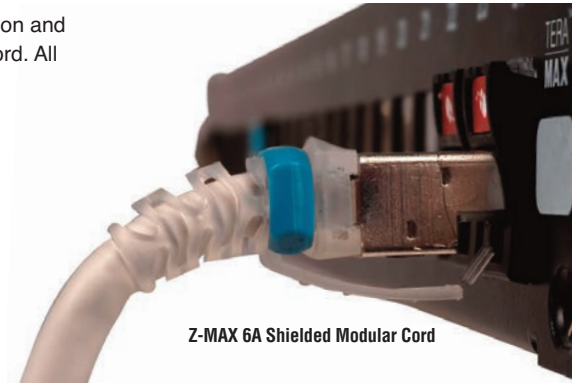
Boot ensures proper bend relief, critical for Category 6A performance

### Colored Clips

Removable clips allow field color coding even when cords are connected

### Solid Cord Option

Solid F/UTP assemblies are available for consolidation point and equipment cord applications



Z-MAX 6A Shielded Modular Cord

## Z-MAX 6A UTP Modular Cords

Z-MAX 6A UTP cords feature dual jacket construction for excellent alien crosstalk performance, setting the bar for Category 6A UTP patching. All cords are 100% factory-tested to ensure performance and compliance.

# IC Solid Modular Cords

## IC Category 5e UTP Solid Modular Cords

Siemon's Category 5e IC solid conductor modular cords are designed for use in Category 5e applications requiring a consolidation point (CP) or cross-connect (as an equipment cord). The cords are 100% factory transmission tested.

## IC Category 6 UTP Solid Modular Cords

Siemon's Category 6 IC solid single-ended modular cords are designed for use in Category 6 applications requiring a consolidation point (CP) or cross-connect (as an equipment cord). The cords are 100% factory transmission tested to 250 MHz and feature the same plug construction used in Siemon's stranded Category 6 modular cords.



# Surface Mount and Surface Pack Boxes



Z-MAX Surface Mount Box



MX-SM Surface Mount Box



Surface Pack Box

## Z-MAX® and MX-SM Surface Mount Boxes

Field-assembled surface mount boxes offer a sleek, compact, easy-to-install design for mounting MAX, Z-MAX and TERA® outlets, or LC/SC duplex fiber adapters.

## Surface Pack Boxes

Siemon's Surface Pack Box is a compact, lightweight box often utilized in high-density work area environments that require rapid deployment of cabling systems. They are compatible with MAX, Z-MAX and TERA outlets.

# Z-MAX Outlets

Combining exceptional performance with best-in-class termination time, the Z-MAX 5e, 6 and 6A shielded outlets are vital parts of an end-to-end Z-MAX cabling system.

This exceptional performance is achieved through Z-MAX's innovative Z-TOOL termination process and linear termination module that eliminates split and crossed pairs. The exclusive diagonally-oriented IDC contact configuration maximizes pair-to-pair separation, minimizing alien cross talk in even the densest Category 6A patching environments.

- Robust glass-reinforced nylon housing provides durability
- Terminates in as little as 60 seconds using the Z-TOOL
- Outlets are available in a wide range of colors and mount in MAX faceplates and accessories.
- Pass-through feature allows mounting from either side of a faceplate
- Optional spring loaded door minimizes exposure to dust and other contaminants
- Rapid connection of cable jacket strain relief via integrated hinged metal clip



Z-MAX Category 5e and 6A Shielded Outlet



Z-MAX Category 6 and Category 6A UTP Outlets

## Z-MAX 45

Siemon's patented Z-MAX 45 shielded Category 6A outlet offers a shorter, compact design and the ability to terminate cable at a 45-degree angle for easier exiting of cable from shallow back boxes or wall-mounted raceway systems, while maintaining proper bend radius of the cable.



Z-MAX 45 Outlet

# MAX® Outlets

The MAX 5e and 6 UTP outlets exceed connecting hardware performance specifications. All outlets utilize our S310 punch-down block - making termination quick and easy.



MAX Category 5e UTP Outlet



MAX Category 6 UTP Outlet

# Twisted-Pair Copper Cables

## Category 7A S/FTP Cable

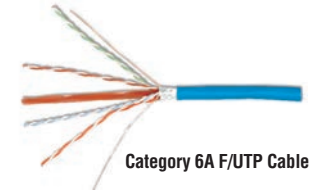
Siemon's Category 7A end-to-end cabling solution is a fully shielded cable with individual foils around each pair coupled with a high screen coverage outer braid provides perfect immunity from outside interferences. In addition, the cable jacket has been qualified for mechanical reliability in high temperature environments up to 75°C (167°F). In PoE remote power applications, this cable can be installed in environments up to 60°C (140°F) and will not experience degradation due to heat rise inside the cable bundle.



Category 7A S/FTP Cable

## Category 6A F/UTP Cable\*

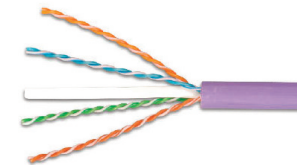
Siemon's Category 6A F/UTP cable, when combined with our Z-MAX® shielded connectivity, offers the best-in-class channel performance capable of supporting 10GBASE-T operation over 100-meter, 4-connector topologies. In addition the screened construction ensures virtually zero alien crosstalk. The Category 6A F/UTP cabling system supports emerging and converging IP applications like Voice over IP (VoIP), IP video and 10 gigabit applications like 802.11 Wi-Fi 5 and future Wi-Fi 6.



Category 6A F/UTP Cable

## Category 6A UTP Cable\*

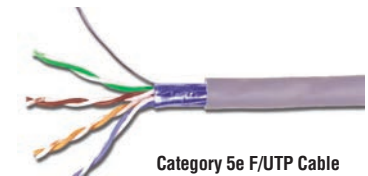
Siemon's Category 6A UTP cable with cross separator uses a central pair separator for optimal pair-to-pair cross-talk isolation as well as Internal Longitudinal Striation (ILS) jacket construction to reduce alien crosstalk (AXT) coupling between adjacent cables. The 6A UTP cabling system supports emerging and converging IP applications like Voice Over IP (VoIP), IP video and other 10GBase-T applications.



Category 6A UTP Cable

## Category 5e F/UTP Cable

Siemon screened Category 5e cable perfectly complements the performance of our screened 5e outlets. Siemon cable exceeds all ANSI/TIA and ISO/IEC requirements for Category 5e/class D transmission performance. Utilizing Siemon cable is the ideal way to ensure optimum channel performance and is essential for a complete end-to-end warranted system.

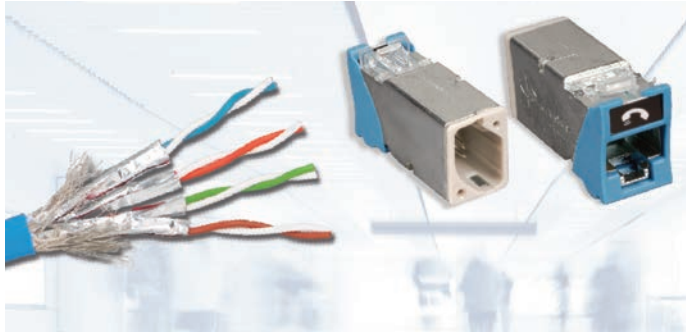


Category 5e F/UTP Cable

*\*Also available in outside plant (OSP) varieties, which are ideal for externally mounting security cameras and wi-fi access points in outdoor locations.*



# Best of Both Worlds



## Category 7A & Z-MAX®

With its fully shielded construction and operating frequency of 1000 MHz, Category 7A cable delivers better performance and protection for today's converged networks than any other twisted-pair cable on the market. That means extended reach beyond 100 meters for Type 3 60W PoE lighting applications and no length de-rating for next generation high-speed 90W and 100W PoE applications.

And when you combine Category 7A cable with Z-MAX Category 6A shielded connectivity, you get the best of both worlds- the industry's highest twisted-pair transmission performance with a familiar RJ45 interface and PowerGUARD® technology, featuring Siemon's patented crowned jack contact geometry for superior support of PoE in converged networks.

### Energy Efficient

Delivers 42% more energy efficiency than 24 AWG Category 5e and 29% more energy efficiency than 23 AWG Category 6A for 60W PoE Lighting applications

### Extended Reach

Extends reach for 10 to 1000 Mb/s 60W PoE lighting applications to 120 meters

### Superior Support

Category 7A fully-shielded cables with PowerGUARD technology supports 10 Gb/s PoE applications to 100 meters with no insertion loss length de-rating in environments up to 75°C (167°F)

### Longer Distance Support

Provides longer distance support than other categories of cabling for 802.11 Wi-Fi 5 and future Wi-Fi 6 operating at elevated temperatures

### Flexible Deployments

Allows up to 96 cables in a bundle to support 60W PoE regardless of pathway type

### Patented Crowned Jack

Z-MAX outlets with PowerGUARD technology prevents PoE arcing damage in the mated position via crowned contact geometry

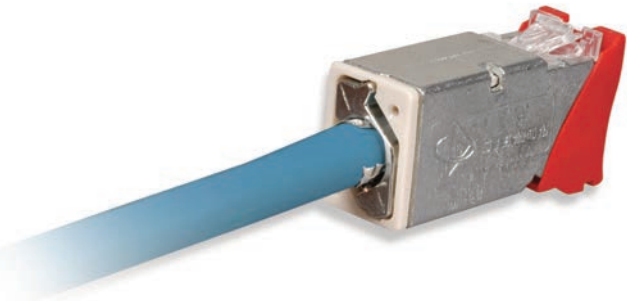
### Clearer Video

Enhances RGB video transmission due to minimal propagation delay skew

### Superior Protection

Offers excellent performance headroom and superior protection against EMI/RFI

Every day, the Internet of Things (IoT) places more PoE-enabled devices on converged networks—everything from IP phones and surveillance cameras, to wireless access points, building automation devices and LED lighting. As PoE standards continues to advance for higher power delivery over all four pairs of a network cable, deploy Category 7A cable with Z-MAX Category 6A shielded connectivity for a more powerful combination.

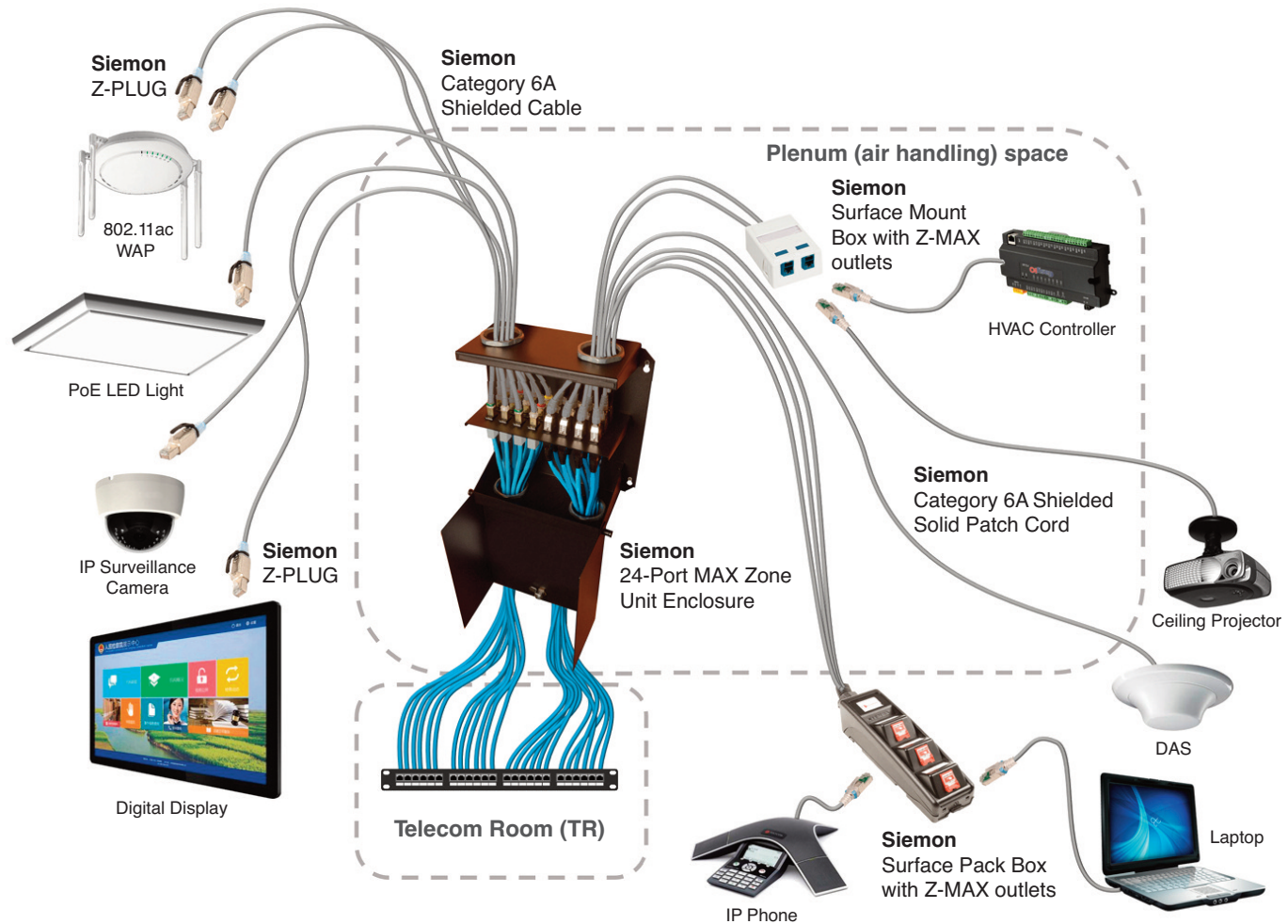


# Superior Support for Intelligent Building Devices and PoE

## Plenum-Rated Cabling Solutions for Intelligent Buildings

Siemon's line of plenum-rated ConvergeIT Cabling Solutions for Intelligent Buildings combines Siemon's proven quality with advanced copper cabling technology to support a variety of IP-based devices located within a building's plenum (air-handling) spaces. Ideal for converging all low-voltage systems onto a single unified physical infrastructure, Siemon's plenum-rated cabling solutions include cables, outlets, plug, patch cords, zone enclosures and surface mount boxes.

In accordance with the National Electric Code® (NFPA 70), Siemon ConvergeIT plenum-rated components meet UL 2043 requirements for smoke and heat release in air-handling spaces, including above drop ceilings and under raised floors. Siemon's zone enclosures are ideal for supporting cost saving zone cabling designs that enable shorter, easy-to manage connections to equipment/service outlets and devices. Patch cords, plug-terminated links, outlets and surface mount boxes are ideal for providing connectivity in the plenum space to Wi-Fi access points, LED lighting, audiovisual equipment, surveillance cameras and a wide range of building automation devices used in today's intelligent buildings.

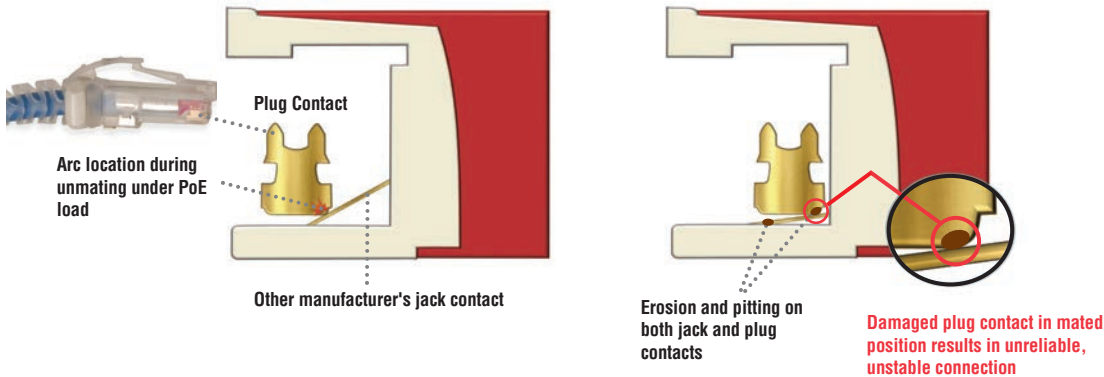


## Siemon Jacks with PowerGUARD® Technology

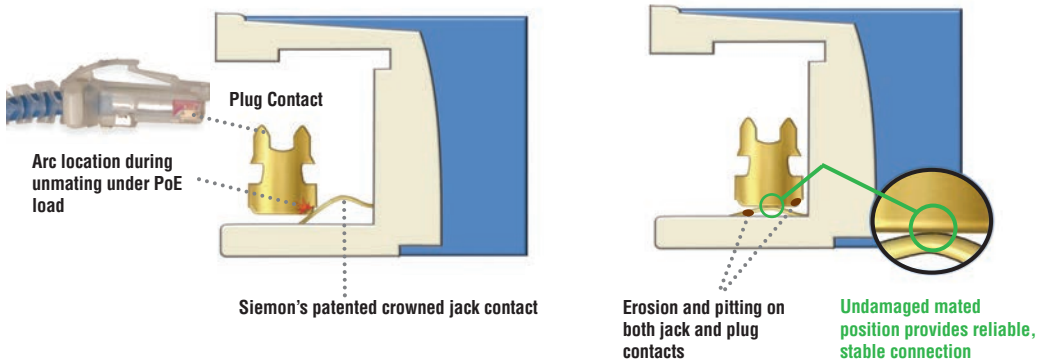
In an effort to improve the electrical and mechanical performance of the traditional RJ-45 jack, Siemon invented and patented a crowned (curved) contact shape for its MAX® and Z-MAX® RJ-45 jacks. In addition to achieving the industry's highest transmission performance and eliminating the risk of permanent contact deformation due to mechanical stress, Siemon's crowned jack contacts provide superior support for remote powering applications.

Unmating a jack-plug connection under a PoE load produces an arc that erodes the gold plated jack-plug contact surfaces at the arcing location. When this erosion occurs in the area of the fully mated position, the result is an unreliable connection. Only Siemon's crowned jack contact geometry places arcing damage to both the plug and jack contacts away from the final mated position—allowing you to connect and disconnect to the latest PoE applications with zero risk.

### Other Jacks... Damaged Fully Mated Position



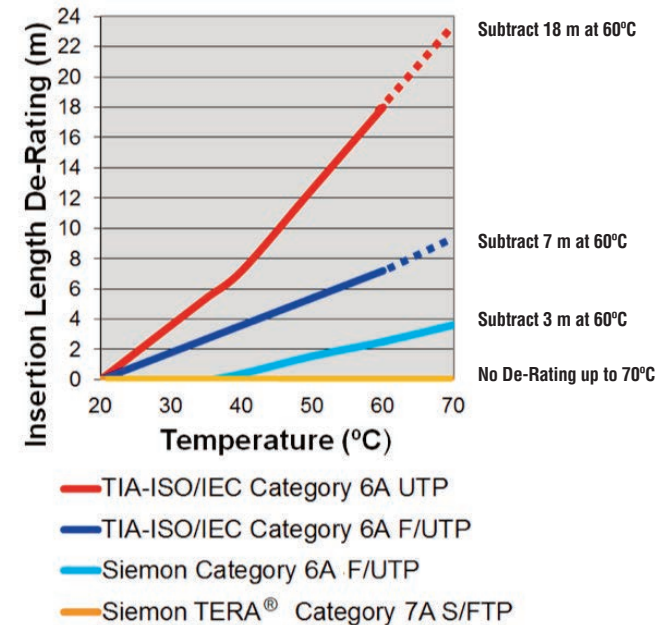
### Siemon... Undamaged Fully Mated Position



## Thermal Stability

PoE results in a temperature rise within bundled cables. Because insertion loss increases in proportion to temperature, this requires length derating at temperatures above 40°C (68°F). This is especially an issue in hotter climates around the globe.

Siemon shielded copper cables are qualified for mechanical reliability up to 75°C (167°F) to ensure superior heat dissipation, providing extremely stable transmission performance at elevated temperatures.



Siemon Category 6A F/UTP and TERA Category 7A require less length reduction, providing significantly more flexibility to reach the largest number of devices in converged building environments.

*Because we continuously improve our products, Siemon reserves the right to change specifications and availability without prior notice.*

**Worldwide Headquarters  
North America**  
Watertown, CT USA  
Phone (1) 860 945 4200

**Regional Headquarters  
Europe Russia Africa**  
Chertsey, Surrey, England  
Phone (44) 0 1932 571771

**Regional Headquarters  
China**  
Shanghai, P.R. China  
Phone (86) 215385 0303

**Regional Headquarters  
Latin America**  
Bogota, Colombia  
Phone (571) 657 1950/51/52

**Regional Headquarters  
India Middle East**  
Dubai, United Arab Emirates  
Phone (971) 4 3689743

**Regional Headquarters  
Asia Pacific**  
Sydney, Australia  
Phone (86) 21 5385 0303

**Siemon Interconnect Solutions  
Watertown, CT USA**  
Phone (1) 860 945 4213 US  
[www.siemon.com/SIS](http://www.siemon.com/SIS)