



# Rail Infrastructure and Maintenance

**PANDUIT**<sup>®</sup>

infrastructure for a connected world



## From Breaking Ground to Regular Maintenance and Repair Panduit Products Impact Your Rail Infrastructure Lifecycle

Partner with a company committed to meeting the daily challenges you face. Panduit offers a full solution of over 30,000 readily available parts – from cable ties to power connectors, terminals to identification – Panduit products are engineered for all aspects of designing, installing and maintaining rail infrastructures.

**Productivity:** Reduce costs and meet deadlines with products and tools engineered to improve efficiency

**Reliability:** Ensure performance and design consistency of products that are vital to the success of the job

**Safety:** Protect personnel, equipment and infrastructure with product systems that meet/exceed industry standards



## We've Got You Covered

Throughout all areas of rail infrastructure, Panduit offers engineered products that help reduce costs while improving performance.

- Station and platform construction
- High speed, mass transit and light rail systems
- Bulk freight and intermodal terminals
- Signaling and communication
- Power distribution infrastructure
- Infrastructure maintenance and upgrades
- Locomotive rebuild and retrofit





# Power and Grounding

## Mechanical Connectors:

- **Fast and Easy Terminations:** ground conductors to water pipe, ground rods, conduit, iron pipe, and structural steel
- **Enhance Reliability and Safety:** high strength electrolytic copper, aluminum and bronze alloy materials for all critical electrical connections the breadth of line to supply the right connector for each unique job, providing maximum reliability and safety for all critical electrical connections throughout your physical infrastructure



## Parallel Splices:

- **Reduce Inventory Requirements:** the most UL Listed and CSA Certified conductor combinations in the industry
- **Increase Productivity:** industry recognized color coding and large, easy-to-read part numbering for visual verification in demanding low light conditions



## Power Connectors:

- **Broad Product Offering:** designed for use with many ridged and flexible strand conductor types, wire range 14 AWG to 1,000 kcmil and 4mm<sup>2</sup> – 630mm<sup>2</sup>
- **Installation Flexibility:** UL Listed and CSA Certified with specified Panduit and competitive crimp tools



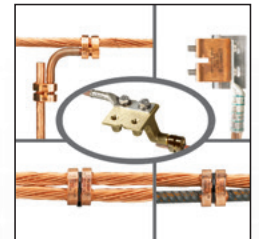
## C-Type Copper Compression TAPS:

- **Optimal Electrical Conductivity:** made from heavy wall, extruded, copper
- **Premium Wire Pull-Out Performance:** delivers permanent, reliable compression connections



## Compression Grounding System:

- **Reduce Labor Costs:** innovative features assure a high quality bond and improved crimp quality
- **Minimize Procurement and Inventory Expenses:** wide range-taking and universal designs provide installation flexibility with a minimum number of parts
- **Exceed Stringent IEEE Std. 837 Requirements:** while offering the speed and safety of a compression connection expenses.





# Cable Management

## Short Circuit Protection:

- Pan-Steel® Self-Locking Cable ties and the MS75 Metal Strapping System can now be used for cable managements applications requiring short circuit protection
- Significant cost advantage over conventional cable cleats by reducing material cost up to 50% while increasing labor efficiency as much as 200%



## Wyr-Grid®:

Easy-to-use overhead cable management system offers speedy deployment, structural integrity and is designed to route and manage copper, fiber and power cabling.



- **Fast and Easy Assembly:** reduces installation time by up to 74%
- **Design Flexibility:** optimizes scalability by offering multiple pathway sizes and accessories

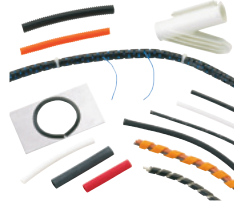
## Permanent Identification:

- **Long-Term Durability and Legibility:** widest range of permanent identification solutions for harsh environments
- **Quick and Easy Identification:** with on-site marking tools
- **Reduce Labor Costs:** factory custom marking service available to deliver embossed or laser etched identification



## Abrasion Protection:

- **Insulate, Protect, Bundle:** provide an economical way to color-code components and cable
- **Breadth of Offering:** wide variety of sizes, materials and designs are available to meet a broad range of indoor and outdoor applications
- **Regulatory Compliance:** designed and manufactured to meet applicable quality standards including UL and CSA



## Weather Resistant Cable Ties:

- **Superior Performance:** for high moisture, corrosive and low temperature indoor or outdoor applications
- **Cable Tie Of Choice:** for making attachments to galvanized surfaces
- **Consistent Performance and Reliability:** with one piece construction

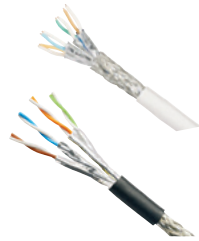




# Industrial Automation Infrastructures

## Harsh Environment Copper Solutions:

The Panduit® TX6000™ and TX6A™ 10Gig™ Shielded Copper Cabling Solutions for Harsh Environment Applications provide a superior infrastructure with a Channel Headroom Guarantee exceeding the TIA/ISO Standards.



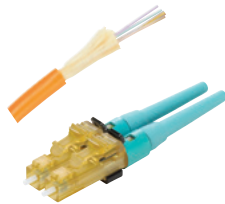
## Pre-Configured Industrial Distribution Frame:

Engineered to deploy and protect rack mount Ethernet switches in industrial applications.



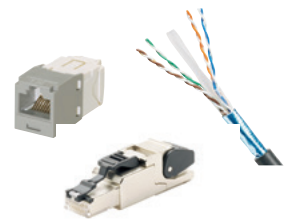
## Fiber Connectivity Solutions:

A complete offering of fiber optic cabling and connectivity for harsh environments.



## Industrial Copper Solutions:

Panduit has a comprehensive line of copper physical layer solutions for the industrial Ethernet.



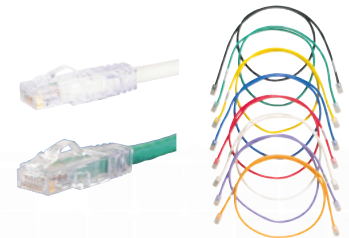
## Grounding:

Increase reliability by minimizing the risk of network equipment and interconnecting cabling from electrical hazards. Facilitates communications by improving immunity from electromagnetic interference (EMI).



## RJ45 Patch Cords:

Panduit has a comprehensive line of copper physical layer solutions for the industrial Ethernet.





# Labeling and Identification

## Arc Flash Labels:

Pre-printed and blank label voltage adhesive markers.



## Voltage and Pipe Markers:

Identify voltage, pipe content, and flow direction for safety and compliance.



## Metal Embossing Hand Tool:

Lightweight, compact, portable embossing tool.



## Portable Embossing System:

Delivers maximum usability for medium to high volume applications that are exposed to dirt and paint.



## OSHA Compliance Training Program:

Complete lockout/tagout program to help your organization enhance safety in the workplace.



## Safety Tags:

Pre-printed Plastic Tags



## Circuit Breaker Lockout Device:

Quick, effective lockout of energy sources controlled by circuit breakers.



## Thermal Transfer Desktop Printer:

Compact, lightweight, and rugged design for use at the job site.



## Hand-Held Thermal Transfer Printer:

QWERTY keypad designed for easier typing.



# Global Capabilities

## Global Expertise and Support

Global distribution, manufacturing, sales and technical support teams make Panduit solutions readily accessible, allowing the right products to be delivered when and where they are needed.

## Worldwide Certifications

Panduit solutions hold a variety of the most common heavy industry certifications and approvals worldwide.



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