# **Maintenance, Repair and Operations**

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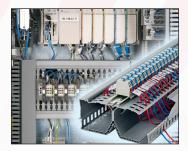
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## Solutions for Industrial and Manufacturing Facilities



## **Eliminate Repetitive Repair Calls**



## Wiring Duct

Panduit wiring duct is the premium wire management product for routing and concealing wiring in control panels. A wide variety of sizes, colors and materials are available to meet the wire capacity needs and space constraints of the smallest wall-mounted panels to the largest integrated turnkey systems. Panduit PanelMax™ **DIN Rail Wiring Duct provides** up to 30% space savings when compared to conventional duct/rail layouts making it an ideal solution for control panel retrofit applications. Panduit Hinged Cover Wiring Duct provides 20% faster wiring changes during maintenance by avoiding the time and hassle in removing and replacing covers.



#### Terminals

Designed and manufactured for superior electrical performance. Panduit offers a complete line of high-quality insulated and non-insulated terminals, disconnects, splices, wire joints and ferrules in loose piece and strip fed, with global availability. Terminals are available in two packaging formats that are ideal for supporting MRO applications. Standard pack terminals offered in a clear plastic bottle design allow for quick product selection. Multi-purpose convenience packs of 20 pieces deliver ultimate flexibility for a wide range of job site applications. The CT-1000 semiautomatic ferrule crimping tool delivers maximum efficiency cut, strip and crimp wire with the convenience of one tool.



## **Crimp Tools**

Panduit connectors are designed to provide UL Listed and CSA Certified termination solutions for wire range 14 AWG to 1,000 kcmil and 4 mm2 - 630 mm2. Compression connectors are designed for use with many rigid and flexible strand conductor types, and can be installed with specified Panduit and competitive crimp tools. Aluminum and copper mechanical lugs, splitbolts and multi-tap connectors are also available, providing ease of installation and lowest installed cost



#### Mechanical Grounding Protection

Provide fast and easy terminating of ground conductors to water pipe, ground rods, conduit, iron pipe, and structural steel for the highest reliability and lowest installed cost. Panduit delivers 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

## **Maintenance, Repair and Operations Solutions**

The greatest challenge facing Maintenance, Repair and Operations Solutions (MRO) teams is maximizing facility uptime while containing maintenance and repair costs. Panduit MRO Solutions deliver best-in-class quality for maximum reliability and defect-free installations that minimize rework and downtime. Superior product development and testing ensure Panduit products meet and exceed industry standards, enabling customers to achieve compliance with ever-changing regulations.

## **Global Approvals and Certifications**



## **Maximize Facility Uptime**



#### **Cable Ties**

Panduit cable ties are engineered from specially selected materials for optimum reliability even in the harshest environments including exposure to: acids, bases, chemicals, radiation, and all-weather conditions with operating temperatures up to 500°F (260°C). A wide range of cable tie sizes and styles is available for fastening, bundling, clamping and identifying in a variety of applications, including metal detectable ties for the food and beverage industry. All Panduit cable ties are designed and manufactured to meet or exceed industry standards to deliver maximum reliability. Packaged in convenient re-sealable bags ideal for MRO use.



#### Stainless Steel Cable Ties and Permanent Identification

Stainless steel cable ties are engineered for safety, productivity and durability by providing rounded edges and smooth surfaces, easy threading and the highest loop tensile strength in the industry. Panduit permanent identification solutions include stainless steel and aluminum cable ties, marker plates and tags in a variety of shapes and sizes. Factory custom marking service delivers embossed or laser etched identification. On-site marking tools are excellent for quick and easy identification in the field.



# StrongHold<sup>™</sup> Supports and Fasteners

Electrical/network supports and fasteners provide a reliable, high-quality solution for routing and securing power and communication cabling within commercial and industrial facilities. They are designed to meet the regulatory requirements of NFPA 70 (National Electric Code), UL standards, and other USA/ Canadian building codes.



### **Surface Raceway**

Designed with attention to form as well as function, allows for moves, adds and changes for future upgrades. Tamperresistant offering increases safety benefits, discourages unauthorized access and protects sensitive cabling from accidental damage and physical contact with electrical wiring.

## **Create a Safe and Secure Work Environment**



## **Safety Systems**

Safety is no accident! Panduit provides a comprehensive system which includes necessary training materials to enable facility wide safety compliance. OSHA Lockout/Tagout Compliance and Training Kit (shown) helps to enhance safety in the workplace, comply with OSHA Standard 1910.147 and mitigate risk of fines. Kit includes: training video, training materials, templates, and demonstration components.

## Lockout/Tagout

The control of hazardous energy, 1910.147 is the OSHA standard for lockout/tagout. The fundamental goal for this standard is to control the release of hazardous energy during maintenance and servicing. All of the following energy types have the potential to cause injury and personnel fatalities and/or environmental and capital equipment damage/destruction: mechanical, hydraulic, electrical and gas.



## Labeling and Identification

From control panel labeling to plant-wide facility identification, Panduit has a labeling solution to fit your application requirements. Utilizing Panduit Easy-Mark<sup>™</sup> Labeling Software and one of the hand-held or desktop printers, all identification requirements can be met. Panduit label media is engineered for ultimate performance in any application with formulations that are chemical, abrasion and UV resistant.



## Network Security

Inadvertent network downtime, data security breaches, infrastructure repair, and hardware replacement due to theft can all be mitigated with secure and controlled physical network connections. The innovative designs of the blockout and lock-in devices ensure the safety and security of the network infrastructure. Devices formatted for: Copper (RJ45), Fiber (LC &SC), USB Type A and B connections.

## **Everything is Easier With the Right Tool for the Job!**



## Prep

- Cable cutting and stripping tools ergonomic design allows for easy one-hand operation
- Optimized design for cutting the largest conductors with minimal force
- Low friction stripping of difficult insulations like rubber and silicon
- All parts made of high-tempered special steel for long term durability



#### Crimp

- Manual and battery powered power and grounding tools designed to minimize operator effort
- Controlled cycle mechanisms ensuring reliability and repeatability in every crimp made
- Crimping dies are color-coded to easily match the compression connector to the proper die
- Complete system ensures compliance with UL and CSA optimal performance



## Identify

- Portable marking tools for quick and easy on-site identification
- Easily identify moves, adds, or changes
- Fast, high quality label production for all your identification requirements
- Solutions for the harshest environments



## Bundle

#### NTROL VALVE

- Full line of lightweight, ergonomic manual and battery powered nylon and stainless steel cable tie tools
- Used in maintenance and construction applications
- Highest reliability in the industry
- Flush cut-off of ties limits exposure to sharp edges

## Panduit's Top Selling MRO Solutions with Grainger:

Cable Ties	Wiring Duct	Stainless Steel Cable Ties	Safety Systems	Terminals
2CMZ7	3FVL8	2CMR4	8AFF0	39CA57
8GVX1	3EYE5	2CMR5	3LTE6	39CA58
2CND2	3EYE3	2CMR9	3LTA3	39CA59
2CNA6	3EYD3	2CMR1	3LTF1	39CA60
2CNE6**	2ETW9**	30PR86**	9HY44	38YU61**

\*\* = Top Selling Tool in the category

