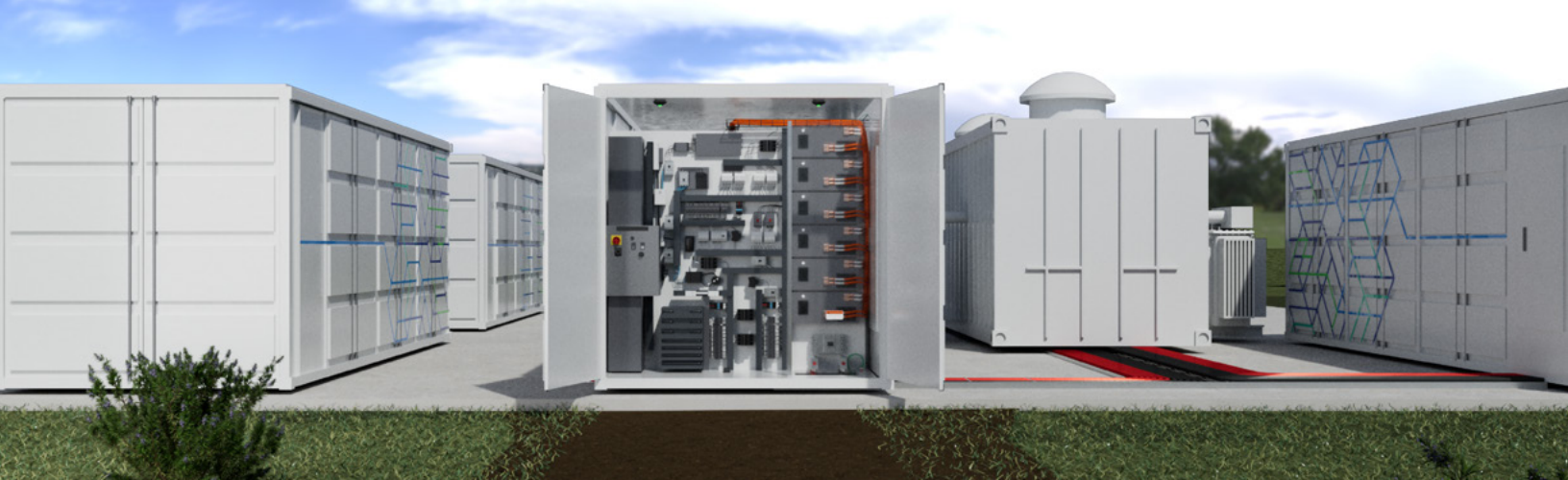


Build BESS Better

**Manufacture and Install Safe, Reliable
Battery Energy Storage Systems**





Energy Storage Partners

When creating cutting-edge power infrastructure, it pays to reduce uncertainty, because the companies who can demonstrate quality are getting spec in energy storage.

Panduit has streamlined complex electrical cabinets for decades. We're applying our expertise to support the design and deployment of energy storage, helping you create reliable systems that deliver long-term performance and safety for your customers.

► For Manufacturers

Panduit helps you optimize BESS performance & exhibit the highest level of quality to earn project preference, through:

- 30,000 readily available components to build your vision
- UL Listed product solutions, so you can deliver UL Listed systems
- Line review consultations for design and manufacturing optimization
- Training for your team delivered by local Technical Solutions Engineers

► For Installers

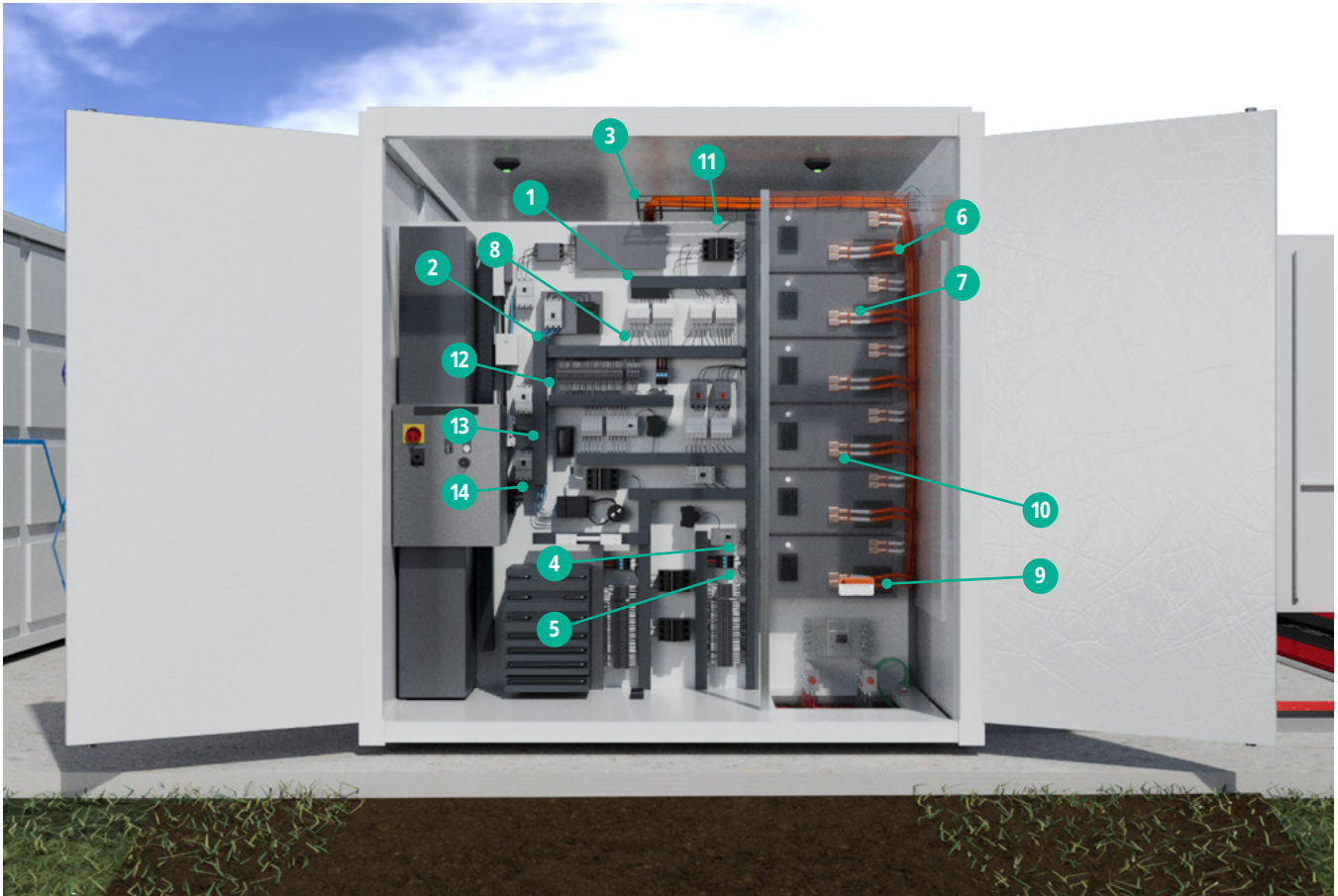
Panduit makes it easier to install BESS for long term safety & reliability than any other supplier, through:

- Our comprehensive balance of system component offering
- A BESS takeoff service to simplify your bill of materials process
- Cable cleat recommendations based off your project's power demands

OEM Solutions for Battery Management Systems & Stacks

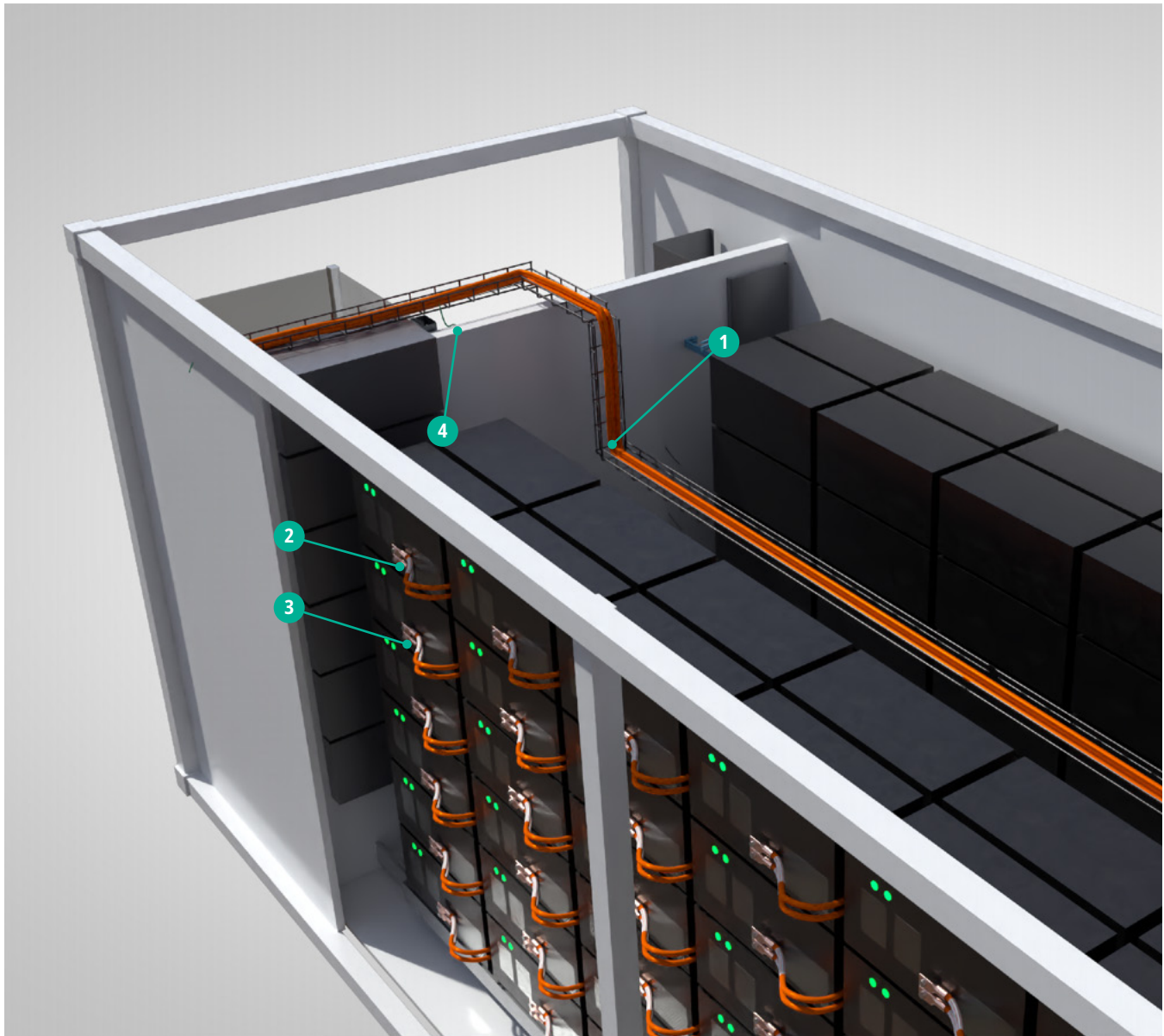
We'll help you choose from our 30,000 readily available components to bring your design to life.

BMS: Optimize Space & Organization



- | | | |
|-------------------------|-----------------------|---------------------------|
| 1 Halogen Free Duct | 6 Abrasion Protection | 11 Bonding Straps |
| 2 Panel Max Wiring Duct | 7 Heat Shrink | 12 Terminals & Ferrules |
| 3 Wire Basket | 8 Wire Identification | 13 Communication Cables |
| 4 Cable Tie Mounts | 9 Safety Labels | 14 Terminal Plugs & Jacks |
| 5 Cable Ties | 10 Power Lugs | |

Battery Stack: Route & Connect Power and Communication Cables



- 1** Route Power & Communication Cables
- Wiring Basket
 - Cable Ties
 - Abrasion Protection

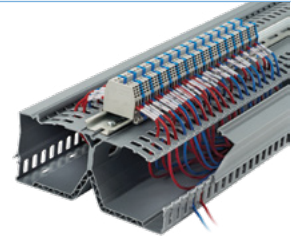
- 2** Connect Battery Modules
- Power Lugs
 - Heat Shrink
- 3** Identify Wires & Cables
- Wire Labels
 - Label Printers

- 4** Bond System Components
- Bonding Straps

Space Optimization

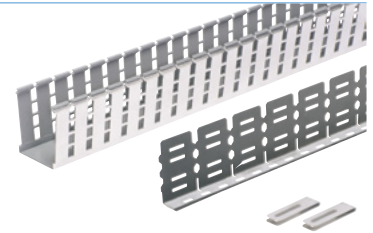
Panduct® PanelMax DIN Wiring Duct

Use available enclosure space up to 30% more efficiently for improved cooling and reduced enclosure size. Also improves component access, eases wire installation, and simplifies troubleshooting.



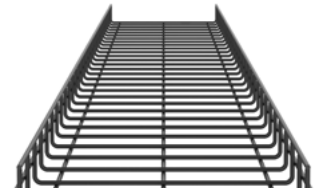
PanelMax Shielded Duct & Noise Shield

Reduce electromagnetic interference (EMI) to protect ethernet cables, sensor cables, controllers, and other communication devices. Helps prevent costs related to downtime, troubleshooting, and device replacement.



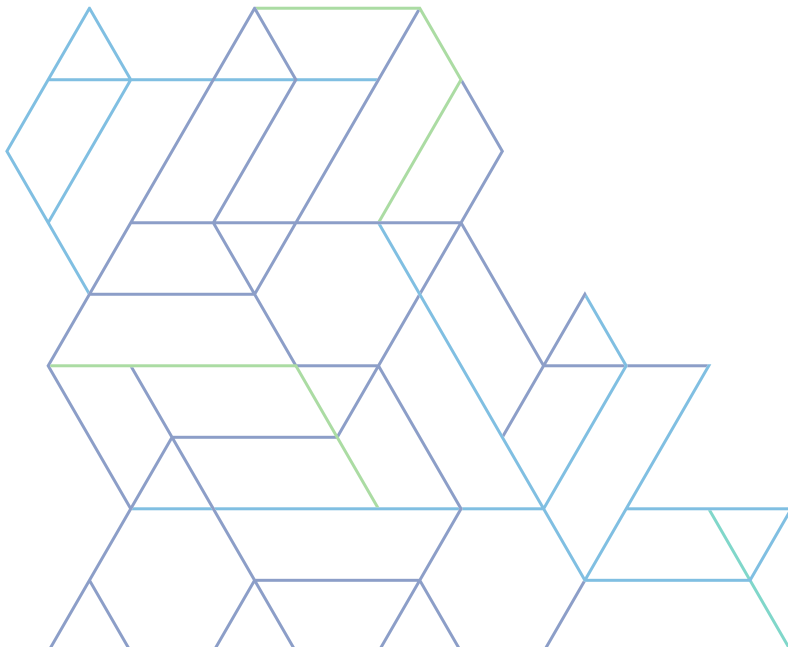
Wire Basket Overhead Cable Tray Routing System

Manage connections between the BMS and Battery Stacks with this next-generation system. Up to 20% lighter, with a greater load carrying capacity, and larger openings to reduce cutting during sweeps.



Panduct® Installation Tools

Easily install Panduct Products with the bench mount or hand-held duct cutting tool.



Power & Grounding

Pan-Lug Power Connectors

Available in multiple configurations, all designed for easy wire entry and repeatable, quality crimps. Meets UL 486 A/B & NEBS Level 3.



Narrow Tongue Lugs

Tin-plated copper compression lug with long barrel to maximize crimps for excellent pull-out strength in tight spaces.



Terminals

Designed for fast assembly and reliable performance. Install with Panduit tools to ensure quality crimps.



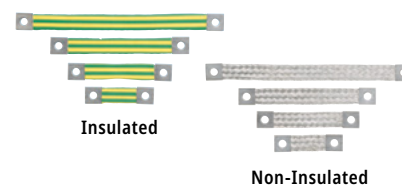
Ferrules

Terminate stranded wire into terminal blocks with superior termination performance. Meets UL486F, CSA-C22.2, and DIN standards.



StructuredGround™ Flat Braided Bonding Straps

Made with #4 AWG tin-plated copper, the flat ferrule design helps reduce effects of EMI because it passes high-frequency noise more effectively than round stranded-type cables.



StructuredGround Universal Ground Bar System

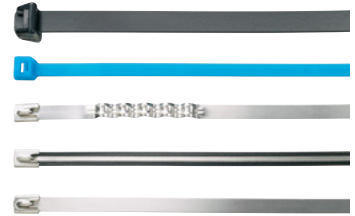
Precision machined from electrolytic copper and tin plated to inhibit corrosion. Offers multiple termination and mounting options. UL 467 Listed and CSA 22.2 Certified.



Cable Management

Cable Ties

Fasten, bundle, clamp, and manage wiring. Choose from a wide range of styles and materials to ensure reliability in tough conditions.



4-Way Adhesive Backed Cable Tie Mounts

Secure wires and cables where mounting holes cannot be drilled. Rubber based adhesive provides relatively quick set and good static load capacity for a long-term reliable bond.



Dynamic Cable Manager

An engineered solution to secure cable bundles routed across enclosure door hinges. Reliable, cost-effective solution to minimize strain on the mount and wiring.



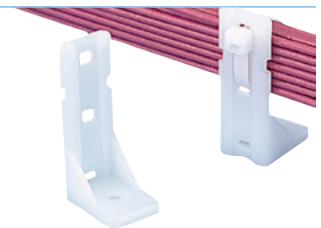
Adhesive Cable Accessories

Route and secure wiring quickly and reliably with this single piece cable management solution. Sizes and styles range from single to multi wire bundles.



Non-Adhesive Cable Tie Mounts

Available for screw or push mount applications, and in a wide range of specialty materials to withstand severe environmental conditions.



Cable Tie Tools

Our ergonomic hand tools provide repeatable, tool-controlled tension, perfect for precise installations of cable ties. Promotes worker safety while boosting productivity.



Labels & Identification

Military Grade Two-Sided Heat Shrink Labels

Permanent, one-piece, heat shrink sleeve designed to provide clear, durable identification of wires and cables.



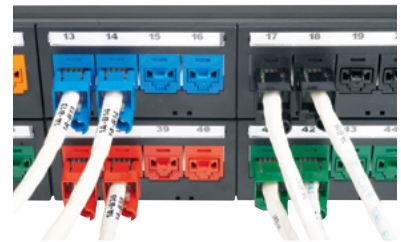
Vinyl Self-Laminating Labels

Includes colored print-on area and clear over-laminate to protect the legend for clear and durable identification.



Turn-Tell Labels

Innovative label design allows labels to rotate for visibility from any angle, and for repositioning on the wire/cable to align legends.



Standard Marker Plates

Non-adhesive and halogen-free. Used to identify wires, cables, equipment, and more.



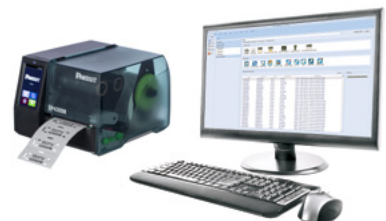
Raised Panel Labels

Raised thermal transfer printable surface with high-tack adhesive for strong holding power on rough, textured, and powder coated surfaces.



DP4300M Thermal Transfer Desktop Printer

Print all label solutions on this page, and several more, with this durable, precise, and easy-to-use desktop printer and Easy-Mark Plus software.



Abrasion Protection & Safety

Adhesive Lined Grommet Edging

Protect wires from chafing against sharp edges of panel walls and knockouts. Pressure sensitive adhesive provides easy, secure application.



Spiral Wrap

Provides abrasion protection and organization for wire and cable, harnessing multiple cables into a single manageable bundle, while allowing for breakouts of individual cables.



Corrugated Loom Tubing

A cost-effective solution to provide abrasion and light crush protection. Lengthwise slit for easy installation on pre-assembled harness bundles.



Arc Flash Super-Tack Polyester Labels

Designed to comply with the latest regulations, including NFPA 70E standard. Print using DP4300M Thermal Transfer Desktop Printer.



VeriSafe™ Absence of Voltage Tester

The safe way to verify the absence of voltage before opening the panel. With a push of a button, workers can quickly determine voltage status and see an active indication when the absence of voltage is confirmed. Safely, reliably, and efficiently test without exposure to electrical hazards.



Network Solutions

Industrial Network Uninterruptible Power Supply (UPS)

Using ultracapacitors instead of batteries, this UPS provides uninterrupted power for critical industrial applications. Reduces risk of downtime for managed network switches, micro PLCs, and HMIs.



IndustrialNet DIN Rail Mount Patching Solutions

Conserve precious real estate by consolidating all patching (fiber and copper) onto the DIN rails of a zone enclosure. Designed to “fit” with standard industrial switches.



Mini-Com DIN Rail Mount Adapter

Enable connection of active equipment in a zone enclosure. Accepts a single Mini-Com Module allowing easy moves, adds, or changes to a single connection.



Copper Patch Cords

Available in multiple performance levels, including shielded, and a variety of colors and lengths. 600 V-rated cords deliver reliability when space is shared with high voltage power cables.



Pre-Configured Network Zone Systems

Category 6 UTP, available in mild or stainless steel, in 24 in. x 36 in. or 24 in. x 24 in. form factor.



Industrial Distribution Frames

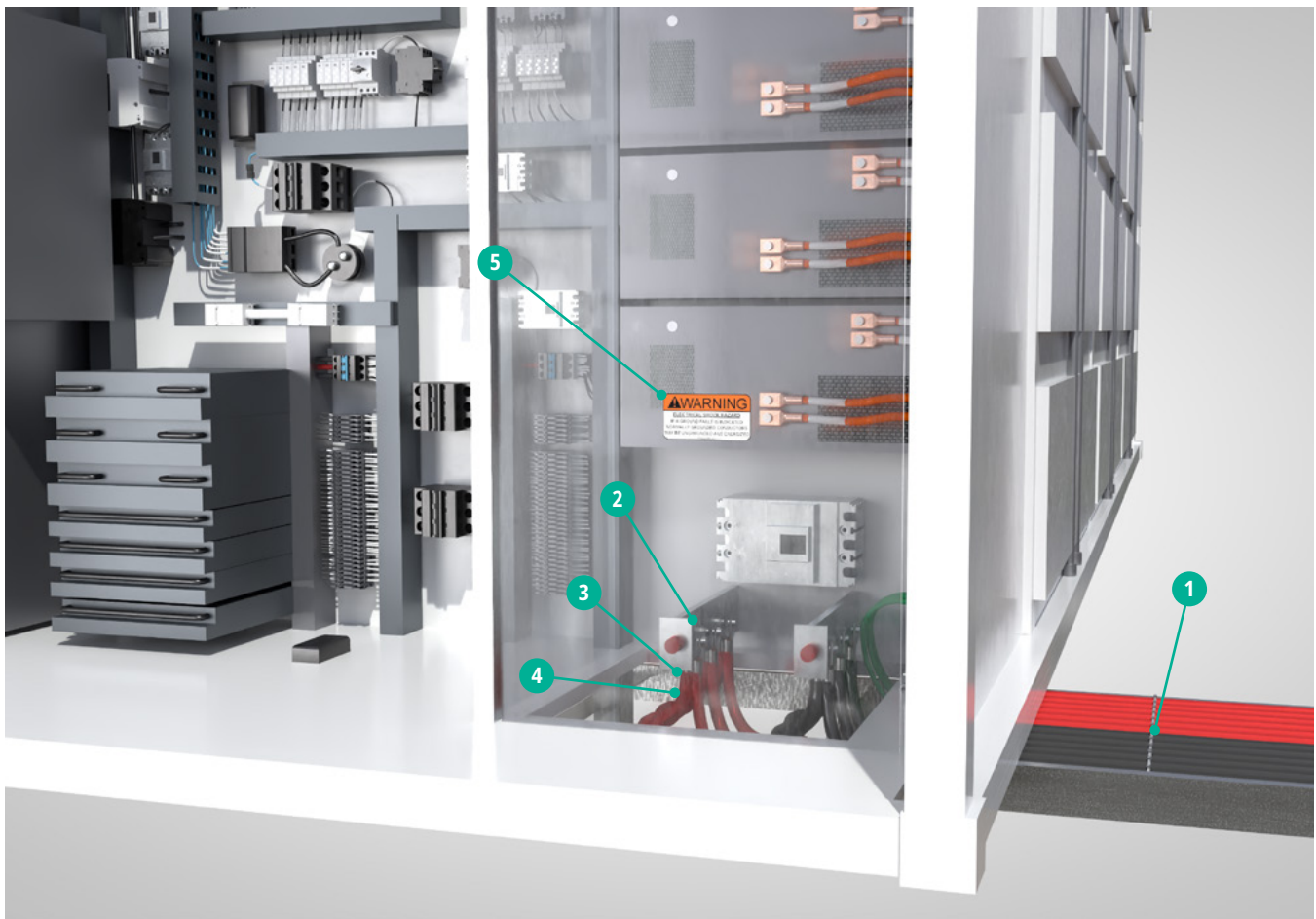
Available in Mild or 316 stainless steel, with two 48-port patch panels, fiber tray, fiber spools, back panels, DIN Rail, and 30 inches of duct. 12U and 26U versions, with up to two access and three distribution switches.



Balance of System Solutions for BESS Installation

We make it easier to install BESS for long term safety and reliability than any other supplier.

BESS Balance of System



1 Cable Cleats

- Strap-style Cable Cleats
- Polymer Cable Cleats
- Aluminum Cable Cleats

2 Power Lugs

3 Heat Shrink

4 Wire Identification

5 Pre-Printed UV Rated Safety Labels

Additional Items

- Write on Tags
- Nylon 612 Cable Ties
- Nylon 6.6 Cable Ties

Cable & Power Management

Stainless Steel Strap-Style Cable Cleat

Secure your cables in harsh environments with our stainless-steel buckle straps. Versatile design combines with cushion sleeve to offer reliable protection against high short circuit fault currents.



Aluminum Cable Cleats

Ideal for medium to high short circuit faults in less corrosive environments.



Polymer Cable Cleat

Suited for medium-high short circuit faults in less severe environments. Includes some range-taking ability.



Pan-Lug Power Connectors

Designed for easy wire entry and repeatable, quality crimps. Available in copper or aluminum, up to 1250kcmil.



Compression Grounding

Extensive portfolio includes E-Style, C-Taps, and Cross-Connects. These connectors can be installed in wet weather, with no open flames, and easy visual verification of bond quality.



Cable Ties

Choose from stainless steel metal locking ties or Nylon 612 cable ties, both backed by our 20-Year Solar Warranty for outdoor use, or proven UV resistant Nylon 6.6 cable ties for less extreme conditions.



Identification & Safety

Wire Identification

Choose from a wide range of Heat-Shrink, Turn-Tell, and Self-Laminating labels to streamline installation and ensure straightforward future O&M.



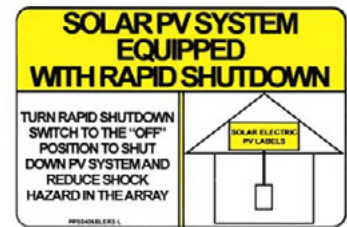
PXE Hand-Held Printers

Print high quality, highly legible labels, wire ID, and even marker plates in the field. Capable of printing die-cut and continuous labels up to 1.5 inches wide, with full and half cuts courtesy of the automatic cutter. 360 dpi resolution and fast printing speed, increasing labeling productivity.



Solar Labels

Choose from pre-printed or print-on-demand UV rated safety labels. Designed to withstand harsh environments, moisture, and adhere to rough or uneven surfaces for long term reliability.



Heat Shrink

Use for abrasion protection or labeling, as well as insulation. Meets UL 224 VW-1 flammability standard.



Write-on Tags

Every job site needs them. You can choose from a wide variety of materials, colors, and lamination types to keep everyone on your crew in the know for safety.



Optimize ESS Installations with Expert Support

Let Panduit fast track the bill of materials for your next Energy Storage System (ESS) installation, at no charge. Our Technical Solutions Engineers can review your plans and suggest the best products to streamline the project.

We cover more of the ESS balance of system than any other supplier, including:

- Cable Cleats
- Power Connectors
- Grounding
- Labeling & Wire ID
- Data Monitoring

Built In Safety

Panduit Cable Cleats set the standard for short circuit protection. As part of this service, we will help you select the right cleat to withstand electromechanical forces based on your cable layout, peak short circuit current, and cable diameter. Building in long-term safety for personnel and equipment.



How It Works for You:

- 1 Send your ESS project drawings or takeoff to renewableenergy@panduit.com
- 2 Our Technical Solutions Engineers will share a BOM proposal within 5 days, including:
 - Product recommendations in application
 - Recommended product quantities
 - Individualized part pricing
 - Associated technical drawings and docs
- 3 We'll provide pricing support, from first pass through best-and-final

Energy Storage BOS Checklist

☒ Available from Panduit

Array

- ☒ Abrasion Protection
- ☒ Aluminum Power Lugs
- ☐ Cable
- ☒ Cable Cleats
- ☐ Cable Tray
- ☒ Compression Grounding Connectors
- ☐ Conduit
- ☒ Copper Power Lugs
- ☒ Data Cabling
- ☒ Data Connectivity
- ☒ Electrical Tape
- ☒ Fiber Connectivity
- ☒ Heat Shrink
- ☐ Metering Equipment
- ☒ Safety Labels
- ☒ Stainless Steel Cable Ties
- ☐ Switchgear
- ☒ Wire Identification
- ☒ UV Rated Cable Ties

Connecting You to What Matters Most

We believe those who design, build, and maintain network and electrical infrastructures are the heroes of business continuity and key drivers of success.

Founded in 1955, Panduit has grown to become a global leader in infrastructure and connectivity solutions, trusted for the high quality of our products and continuing innovation.

Our passion as a technology-driven, customer-centric company, drives everything we do. We put your needs at the heart of our strategy by making targeted R&D investments and working closely with you to provide and develop products that push technology boundaries to address your unique needs and help grow your business.

With proactive communication and seamless global support, we connect you with the ideas and solutions of tomorrow.

Make the most important connection of all.

By partnering with Panduit, you can develop your infrastructure strategy on a foundation of expertise that ensures scalability, accuracy, security, and reliability—so you can build for long-term growth.



250
R&D Personnel



5000+
Employees



112 countries
Serving
Customers



90%
Fortune 100
Companies
are Customers



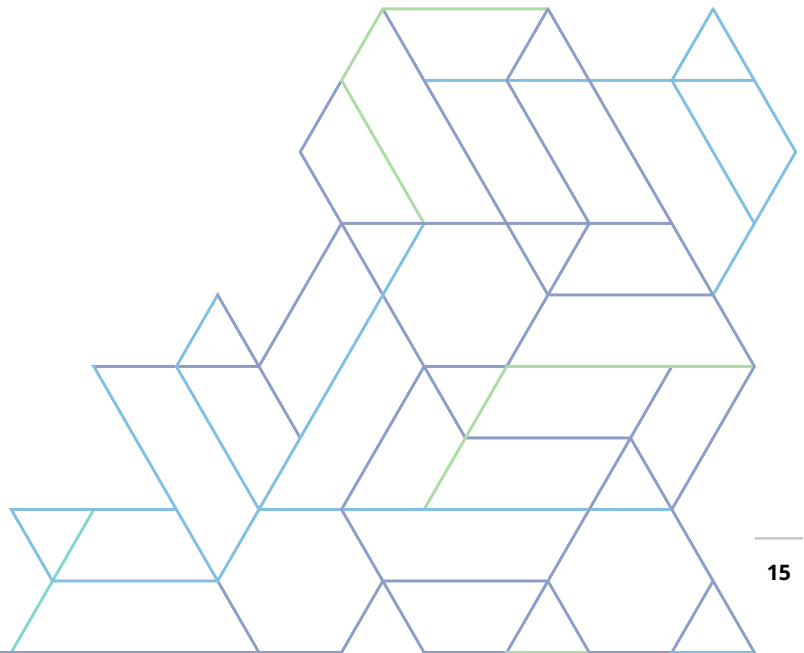
Privately
Owned



\$1 Billion+
Annual Revenue



**Learn more about
our BESS Solutions!**



We have the knowledge
and experience to help you
make the most of your
infrastructure investment.

panduit.com



Let's connect
panduit.com/contact-us

PANDUIT®
infrastructure for a connected world