

INDUSTRY BROCHURE

Installation Products

Power generation industry



Installation Products Division

- Wire and cable management
- Cable protection systems
- Boxes and fittings
- Connectivity and grounding
- Medium voltage

Thomas & Betts is now part of ABB's Installation Products Division, but our long legacy of quality products and innovation remains the same. From connectors that support wire buildings on Earth to cable ties that help put machines in space, we continue to work every day to make, market, design and sell products that provide a smarter, safer and more reliable flow of electricity, from source to socket.

Table of contents

004–005	Designed to perform
006–007	Product selection guide
010–011	Challenge and commitment
012–013	Safety
014–015	Continuous operation & sustainability
016–017	Grounding & bonding
018–019	Power quality, efficiency & reliability
020–021	Corrosive & harsh environment protection
022–023	Extreme temperature protection
024–025	Total project cost reduction
026–027	Liquid ingress protection
028–030	Services & training
031	Installation Products for applications
032	Installation Products for industries

Designed to perform

Power generation industry



ABB understands the challenges faced in power generation industries and is committed to providing innovative electrical solutions that not only reduce overall project costs, but also increase safety, promote sustainability and even improve cash flow.



Installation Products

for the power generation industry:



Safety



Continuous operation
& sustainability



Grounding & bonding



Power quality,
efficiency & reliability



Corrosive & harsh
environment protection



Extreme temperature
protection



Total project
cost reduction



Liquid ingress
protection



Services & training

Whether it's labor-saving rough-in components, custom-designed electrical prefabrication systems, online cloud-based design tools or even our world-class logistics, ABB can help bring power generation projects in on time, within budget and profitably.

Product selection guide

for the power generation industry



Product selection guide

Product description	Safety	Continuous Operation & Sustainability	Grounding & bonding
Blackburn®			
E-Z-Ground® compression, mechanical grounding and exothermic grounding systems	•	•	•
Compression lugs and splices	•	•	•
KUBE® Power connectors and motor lead disconnects	–	•	
Ergonomic compression tools	•	•	•
Elastimold®			
High-voltage separable connectors	•	•	–
Solid-dielectric switchgear, switchgear automation packages, molded vacuum interrupters and arresters	•	•	–
Field training on cable accessories and switchgear	–	–	–
EZCODE®			
Danger/warning labels and signs, industrial markers, barricade/burial tapes	•	–	–
Fisher Pierce®			
Faulted circuit indicators and voltage and current sensors	–	•	–
Hi-Tech®			
Trans-Guard® fuses, molded current-limiting fuses, molded canister fuses	•	–	–
Field training on current-limiting fuses	–	–	–
Joslyn Hi-Voltage®			
Capacitor switches, reclosers, air disconnect switches and interrupter attachments	–	•	–
Power & high-voltage field maintenance services	–	–	–
Kindorf®			
Surface raceway, lighting support and cable mounting systems, Trapnut® strut fastener	–	–	–
316 Stainless, aluminum, PVC-coated or non-metallic channel, hangers and clamps, seismic bracing system	•	•	–
Kopex-Ex™			
Stainless steel flexible conduit and fittings for hazardous locations	–	–	–
Ocal®			
PVC-Coated Conduit Systems and OCAL-BLUE® Type 4X Form 8 Conduit Bodies	–	•	–
Field training on current-limiting fuses	–	–	–
Red-Dot®			
Code Keeper® weatherproof while-in-use covers	•	–	–
Russellstoll®			
MaxGard® pin-and-sleeve connectors and explosion-proof interlocked receptacles	•	–	–
GSUL ground indicator system	•	•	•
MaxGard® fused disconnect interlocked receptacle	–	•	–
DuraGard® pin-and-sleeve connectors	–	–	–

Continued on page 8.

**Ty-Rap®**

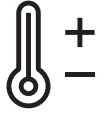
Product selection guide

for the power generation industry (continued)



Product selection guide

Product description	Safety	Continuous Operation & Sustainability	Grounding & bonding
Sta-Kon®			
Nylon-, vinyl- and non-insulated wire terminals	–	•	–
High-temperature wire joints and terminals	–	–	–
Corrosion-resistant, nickel-plated wire terminals	–	•	–
Heat-shrink terminals, ergonomic Comfort Crimp® tools and disconnect installation tool	–	•	–
Shrink-Kon® heat-shrink insulation for harnesses, wires or cables	–	•	–
Shrink-Kon® self-fusing insulation tape	–	–	–
Shield-Kon® coaxial grounding connectors and dragon tooth® insulation-piercing connectors	–	–	•
Steel City®			
Pre-fab components and assemblies	–	–	–
Superstrut®			
Framing channel and accessories	–	–	–
T&B® Cable Tray			
Aluminum, stainless steel and fiberglass support and wire management systems	–	•	–
T&B® Fittings			
Liquidtight conduit and fittings (Type A stainless steel/non-metallic, Type B non-metallic, Type C stainless aluminum/steel/nickel plated)	–	•	–
LXTE high-/low-temperature liquidtight conduit and fittings	–	–	–
Stainless steel form 8 and Bluekote® conduit bodies, Corrostat® aluminum conduit boxes	–	–	–
Xtra Flex® non-metallic liquidtight conduit, tubing and Bullet® fittings	–	–	–
Ranger® series liquidtight cord connectors	–	–	–
Blackjack® grounding bushings	–	–	•
Wire-mesh strain-relief cord and conduit grips	–	•	–
Series 35 conduit bodies	–	–	–
Ty-Rap®			
Coated and uncoated stainless steel, extra-high temperature and flame-retardant UL94V-0 nylon cable ties	•	–	–
Ty-Rap Tote® cable tie dispensers and ergonomic installation tools	•	–	–
Services & training			
Onsite NEC® update training, grounding & bonding, training & tool services, loaner and leasing programs	–	–	–



Power quality,
efficiency
& reliability

Corrosive & harsh
environment
protection

Extreme
temperature
protection

Total
project cost
reduction

Liquid ingress
protection

Services
& training

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Blackburn®

elastimold®

EZCODE®

FISHER PIERCE®

Hi-Tech®

JOSLYN®

Kindorf®

KOPEX-Ex®

Ocal®

redodot®

Russellstoll®

Sta-Kon®

Steel City®

Superstrut®

T&B® Fittings

Ty-Rap®

Challenge and commitment

Power generation using fossil, nuclear and hydroelectric sources has long proven to be effective, reliable and economical to the global consumer. These utilities have served growing populations and increasing energy demand for decades, but mounting pressures on the industry are motivating infrastructure changes.

With each technological innovation deployed, suppliers must assess the impact on performance and design compatibilities from:

- Key electrical equipment
- Critical parts
- System design
- Quality power output
- Consumer demand satisfaction

The business drivers for change are many. Fossil fuels, such as coal and oil, are seeing competition from green, renewable sources. Fossil power generators are retooling, modifying and upgrading their plants with technology that is cleaner and more energy efficient. Hybrid auxiliary systems are also being deployed.

Natural gas, the cleanest fossil fuel, has been the fuel of choice for most plants constructed since the 1990s. Higher-efficiency combined-cycle and peaker plants, new distributed generation options and modern extraction methods increase the importance of natural gas. Nuclear and hydroelectric sources are clean, but new construction has stagnated. Aging plants must be rejuvenated to

increase capacity and efficiency. New plants are subject to substantial capital investments and greater regulations, requiring developers to meet objectives for reliability, efficiency and safety.

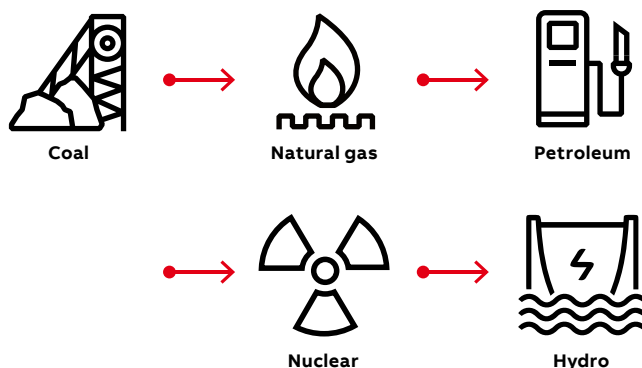
The advent of the Smart Grid deepens the reliance on an advanced network of electrical solutions, requiring suppliers to deliver superior products that will perform as described when they are needed. ABB meets these expectations by providing:

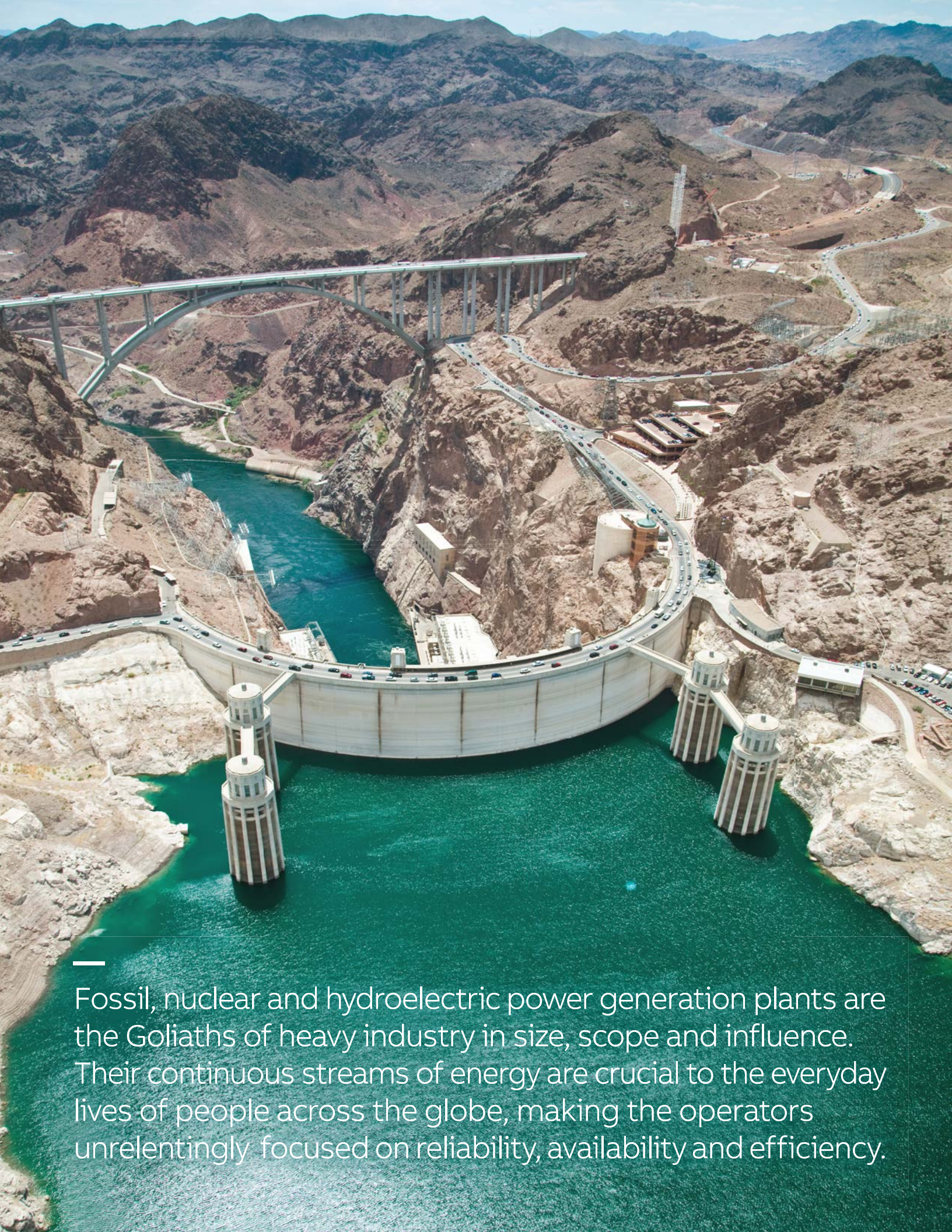
- High-quality products
- Product performance guarantees
- Product warranties
- Expert services and training
- Pre-sets of engineering design solutions

ABB warranties and guarantees demonstrate the confidence we have in our electrical products and services. Full-wrap warranties on product alignment assure our customers of the quality of whole, integrated systems. All products, regardless of supplier, are aligned and integrated throughout the entire supply chain. Output performance guarantees assure ABB customers that they will be able to generate sufficient reactive power to fill consumer demand. Because our products will perform reliably, your system will perform at the guaranteed level of effectiveness.

Performance ratio guarantees set standards for the amount of output produced by the generator that is actually available, which ultimately affects consumer pricing and ROI. To support this guarantee, ABB focuses on system optimization through engineering, system design and manufacture of supply chain components and a high level of service response. Calibrated performance guarantees reflect our dedication to eliminating underperformance of any part of the system by ensuring optimal engineering, design and product quality.

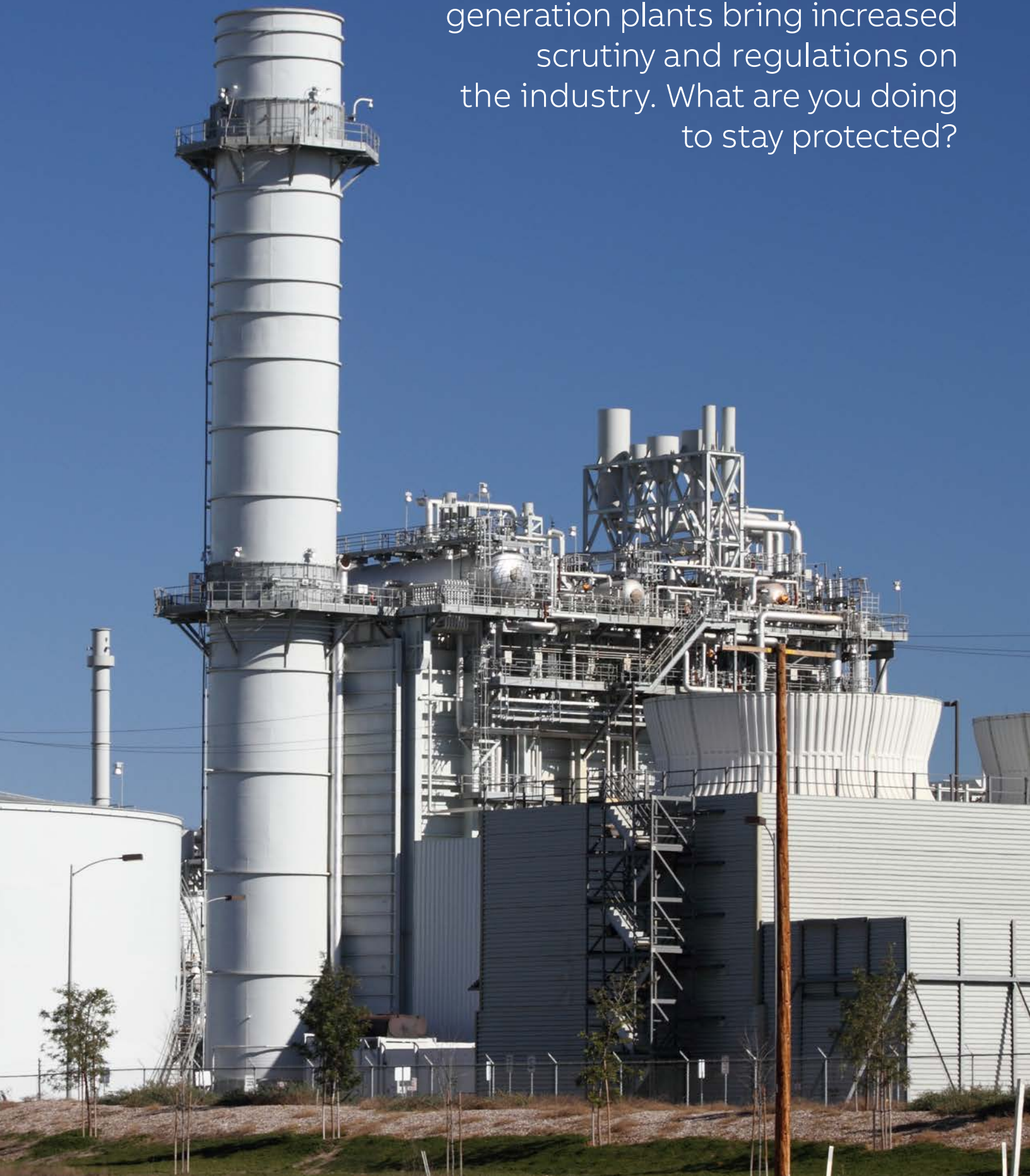
Power generation applications





Fossil, nuclear and hydroelectric power generation plants are the Goliaths of heavy industry in size, scope and influence. Their continuous streams of energy are crucial to the everyday lives of people across the globe, making the operators unrelentingly focused on reliability, availability and efficiency.

Safety failures at power generation plants bring increased scrutiny and regulations on the industry. What are you doing to stay protected?



Safety

Health, safety and contamination are key concerns in fossil, nuclear and hydroelectric power generation. Fossil fuel pollution, coal tar leaks, radiation from nuclear plants and dam integrity breaches get immediate attention from industry regulators and the public.

01 EZCODE®

- Danger/warning labels and signs, industrial/wire markers, barricade/burial tape.

02 Ty-Rap®

- Coated and uncoated stainless steel, extra-high temperature and flame-retardant UL94V-0 nylon cable ties.
- Ty-Rap Tote® cable tie dispensers and ergonomic installation tools.

Hi-Tech®

- Trans-Guard® fuses, molded current-limiting fuses, molded canister fuses.

Kindorf®

- 316 Stainless, aluminum, PVC-coated or non-metallic channel, hangers and clamps, seismic bracing system.

Red-Dot®

- Code Keeper® weatherproof while-in-use covers.

Russellstoll®

- MaxGard® pin-and-sleeve connectors and explosion-proof interlocked receptacles.
- GSUL ground Indicator system.

Ty-Rap®

- Coated and uncoated stainless steel, extra-high temperature and flame-retardant UL94V-0 nylon cable ties.
- Ty-Rap Tote® cable tie dispensers and ergonomic installation tools.

However, the more common, causal issues such as arc flash, grounding errors and vibratory abrasion must be actively mitigated in order to:

- Avoid electrical shocks and burns
- Prevent explosions and fire
- Protect against sustained vibration
- Avert exposure to toxins
- Avoid fugitive emissions
- Eliminate equipment contamination
- Prevent code violations

These issues are alleviated when quality electrical products are properly selected and installed. ABB offers a full suite of electrical solutions that provide active protection against safety and contamination risks. The products include safety labels and lights, cable ties to reduce abrasion and heat-shrink and conduit products to insulate and protect wiring.

Ty-Rap® – Cable ties

- UV resistant
- “The Grip of Steel®” non-magnetic stainless steel locking device
- Versatile nylon 6.6 material
- With and without color and non-color UV-stabilizing additive
- Smooth notchless body reduces stress concentration points under tension

EZCODE® – Safety labels, tags, signs and barricade tapes

- Help to ensure personnel and workplace safety
- Conform to NEC® 2011 Section 110.3(A)(1)
- Highly visible and long-lasting materials
- Barricades and burial marking tapes in a variety of materials and colors
- Custom labels, tags and signs

Blackburn®

- E-Z-Ground® compression, mechanical and exothermic grounding systems
- Compression lugs and splices
- Ergonomic compression tools

Elastimold®

- High-voltage separable connectors
- Solid-dielectric switchgear, switchgear automation
- Packages, molded vacuum interrupters and arresters

Hi-Tech®

- Trans-Guard® fuses, molded current-limiting fuses, molded canister fuses

National Electrical Code and NEC are registered trademarks of the National Fire Protection Association, Inc.

01


EZCODE®

02


Ty-Rap®

Continuous operation & sustainability

In power generation utilities, costly downtime and expensive repairs are to be avoided. If power is lost during generation and reactive power is lost, it could shut down grid operations and cause the need to draw power from other sources.

01 Blackburn®

- E-Z-Ground® compression, mechanical and exothermic grounding systems.
- Compression lugs and splices.
- KUBE® power connectors and motor lead disconnects.
- Ergonomic compression tools.

02 T&B® Fittings

- Liquidtight conduit and fittings (Type A stainless steel/ non-metallic, Type B non-metallic, Type C stainless steel/ aluminum).
- Wire-mesh strain-relief cord and conduit grips.

03 Elastimold®

- High-voltage separable connectors.
- Solid-dielectric switchgear, switchgear automation.
- Packages, molded vacuum interrupters and arresters.

Joslyn Hi-Voltage®

- Capacitor switches, reclosers, air disconnect switches and interrupter attachments.

Kindorf®

- 316 Stainless, aluminum, PVC-coated or non-metallic channel, hangers and clamps, seismic bracing systems.

Ocal®

- PVC-coated conduit systems.

To prevent downtime, power generators need electrical solutions that ensure:

- Superior product engineering
- Quality product construction
- Accurate product selection
- Availability on demand
- Proper installation

UPS systems, motor lead disconnects, liquidtight conduit fittings and electrical interconnection systems are just a few of the solutions that ABB offers to maximize uptime. Our distributor network makes certain that all product needs are filled in a timely manner. With more than 100 years of serving the power generation industry, you can count on ABB products, services and support to prevent outages and ensure sustainable operations.

Elastimold®

- High-voltage separable connectors
- Solid-dielectric switchgear, switchgear automation
- Packages, molded vacuum interrupters and arresters

T&B® Cable Tray

- Aluminum, Stainless Steel and Fiberglass Support and Wire Management Systems

T&B® Fittings – Type A Liquidtight flexible non-metallic conduit

- Non-metallic, steel and stainless steel fittings
- Ideal for continuous flexing or vibration applications
- Create a liquid-, dust- and oil-tight seal

Russellstoll®

• GSUL Ground indicator system

- Ensures safe power movement with ground monitoring
- Establishes safe ground via two visual indicators

• MaxGard® fused disconnect interlocked receptacle

- Heavy service amp loads
- Ever-Lok® system for durable operations
- Backup door safety latch

Blackburn® – Motor lead disconnects

- Quick, reliable change-out of electric motors with no bolting, taping or loose connections
- Complete line for 600V and 5kV applications, and total assembly fits into tight motor housings
- Featuring the Color-Keyed® Compression System that ensures proper connections

Sta-Kon®

- Nylon-, vinyl- and non-insulated wire terminals
- Corrosion-resistant, nickel-plated wire terminals
- Heat-shrink terminals, ergonomic Comfort Crimp® tools and disconnect installation tool
- Shrink-Kon® heat-shrink insulation for harnesses, wires or cables



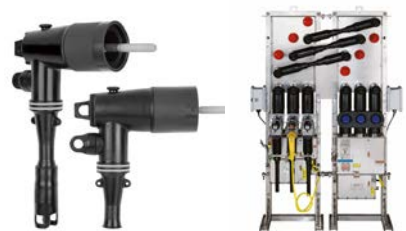
Blackburn®

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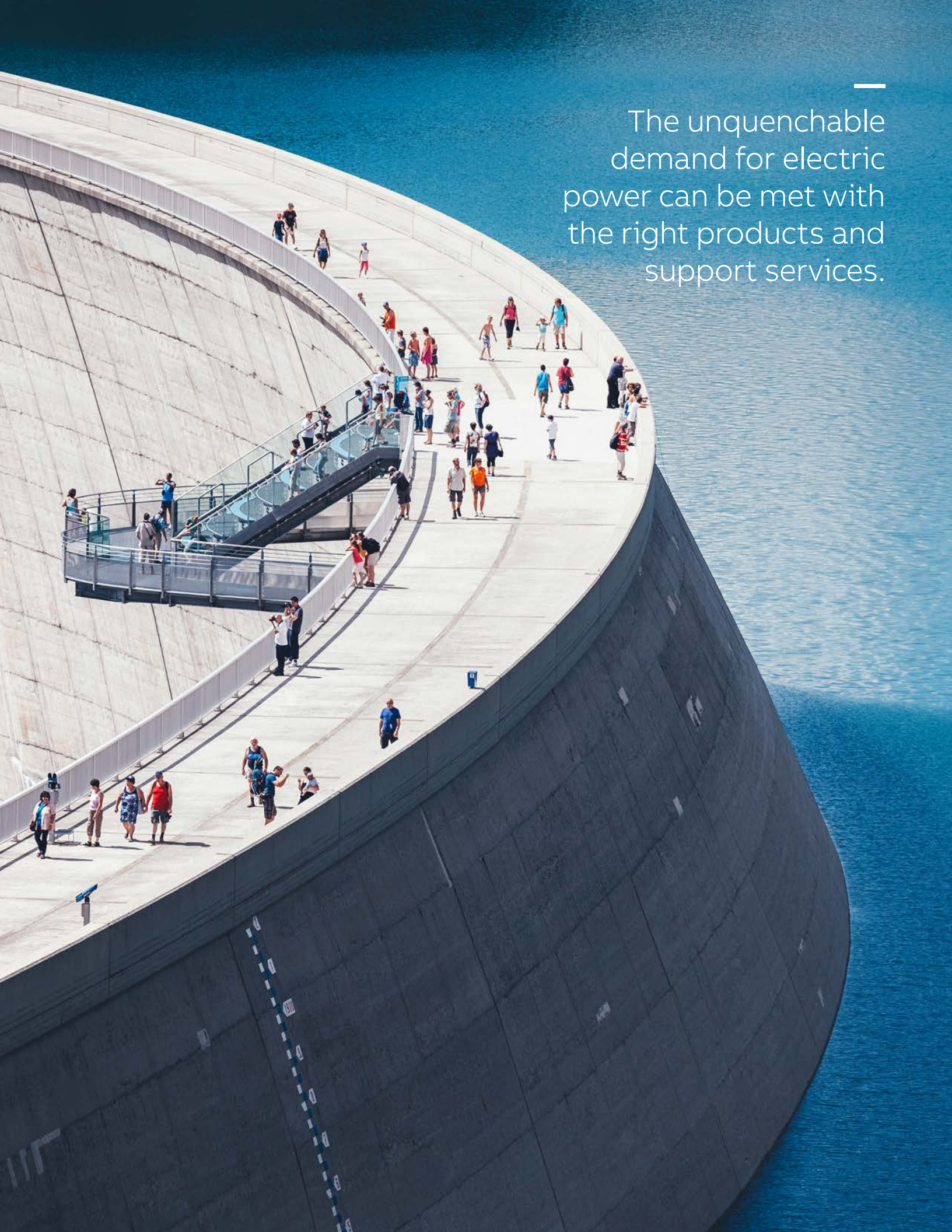
T&B® Fittings

02



elastimold®

03



The unquenchable
demand for electric
power can be met with
the right products and
support services.



Do you have the right mechanical, compression and exothermic products for your above-ground and direct-burial grounding applications?

Grounding & bonding

The electronic technologies in power generation utilities are subject to electrical hazards if improperly grounded or bonded. Grounding absorbs current surges, and bonding eliminates the electrical potential.

01 Blackburn®

- E-Z-Ground® compression, mechanical and exothermic grounding systems.
- Compression lugs and splices.
- Ergonomic compression tools.

02 T&B® Fittings

- Blackjack® grounding bushings.

Together, proper grounding and bonding will:

- Ensure personnel safety
- Eliminate lightning interruptions
- Protect critical equipment
- Meet IEEE, UL® and CSA obligations
- Provide electrical continuity and reliability

Good electrical connections are required for grounding and bonding. ABB offers a wide-ranging selection of products and sizes to accommodate all grounding and bonding applications. The right product selection will minimize the number of conductors and terminations required.

Our durable, code-compliant systems, onsite grounding and bonding training and installation support are designed to ensure the safe and reliable operation of your plant's electrical systems and increase overall equipment effectiveness.

T&B® Fittings – Blackjack® grounding bushings

- Innovative design makes installation quicker and easier
- Design improves performance with superior continuity
- Design secures grip forms for lasting bond

Blackburn®

• Mechanical grounding connectors

- Comprehensive line of pipe, ground rod and structure grounding solutions
- UL® Listed for direct-burial applications

• Compression grounding and bonding connectors

- E-Z-Ground® connectors are UL® Listed for directburial applications
- Range-taking products reduce the number of connectors and dies needed for your installation

• Exothermic grounding system

- Self-contained method of forming high-quality electrical connections
- Requires no external power or heat source, making it completely portable
- Will withstand repeated fault currents without loosening

Russellstoll®

- GSUL Ground indicator system

Sta-Kon®

- Shield-Kon® coaxial grounding connectors and Dragon Tooth® insulation-piercing connectors



Power quality, efficiency & reliability

When a fossil, nuclear or hydroelectric power generator experiences power quality issues such as voltage drops, it puts the plant at risk of equipment damage, blackouts and large financial losses. ABB offers solutions that answer the need for power quality, efficiency and reliability.

01 Joslyn Hi-Voltage®

- Capacitor switches, air disconnect switches and obstruction light-lowering device.

02 Elastimold®

- Solid-dielectric switchgear, switchgear automation packages, molded vacuum interrupters and arresters.

03 Fisher Pierce®

- Faulted circuit indicators and voltage and current sensors.

04 Hi-Tech®

- Trans-Guard® fuses, molded current-limiting fuses, molded canister fuses.

Our products and systems enable maximum uptime and control by:

- Detecting faults and protecting against overcurrent and voltage drops
- Preventing damage due to power quality disturbances
- Eliminating underperformance, minimizing system losses and increasing usable power

Electrical solutions from ABB prevent electrical network events, improve customer satisfaction and protect stakeholder ROI.

•

Elastimold® – Distribution switchgear

- Solid EPDM insulating media makes it maintenance free and environmentally friendly – no oil, no gas
- Compact and modular designs allow for smaller footprint and field assembly inside tight vaults

Fisher Pierce® – Faulted circuit indicators

- Adaptive trip reset reduces inventory and eliminates the need to replace devices as the load changes
- Temporary fault detection option to help locate nuisance temporary faults
- Highly visible strobe, LED and fluorescent orange flag indication options – and SCADA ready

Hi-Tech® – Current-limiting fuses

- Greatly reduce energy let-through, minimizing the risk of catastrophic failures
- Interrupting capabilities up to 50,000A
- Address arc flash concerns and generate no external arcing or byproducts

Joslyn Hi-Voltage®

- Capacitor switches, reclosers, air disconnect switches and interrupter attachments



—
Do your electrical
products meet your
tolerance requirements?
Do you need to improve
your power factor?



—
Uncontrolled corrosion can
cause leaks, component failure
and potentially hazardous
conditions.



Corrosive & harsh environment protection

Power generation facilities are often situated in harsh environments, whether it's the freezing North, hot and humid South or a hydroelectric plant facing the daily onslaught of moisture and humidity.

01 Ocal®

- PVC-coated conduit systems.
- OCAL-BLUE® Type 4X form 8 conduit bodies.

02 T&B® Fittings

- Liquidtight conduit and fittings (Type A stainless steel/non-metallic, Type B non-metallic, Type C stainless steel/aluminum, nickel plated brass).
- LXTE high-/low-temperature liquidtight conduit and fittings.
- Stainless steel form 8 and BlueKote® conduit bodies, CorroStall® aluminum conduit boxes.
- XTRA FLEX® non-metallic liquidtight conduit, tubing and BULLET® fittings.

03 Ty-Rap®

- Coated and uncoated stainless steel cable ties.

Kopex-Ex™

- Stainless steel flexible conduit and fittings for hazardous locations.

Red-Dot®

- Code Keeper® weatherproof while-in-use covers.

Russellstoll®

- MaxGard® pin-and-sleeve connectors and explosion-proof interlocked receptacles.

Sta-Kon®

- Corrosion-resistant, nickel-plated wire terminals.
- Shrink-Kon® heat-shrink insulation for harnesses, wires or cables.
- Shrink-Kon® self-fusing insulation tape.

National Electrical Code and NEC are registered trademarks of the National Fire Protection Association, Inc.

In each case, corrosion and oxidation pose a direct threat to operational safety and reliability. Protecting against harsh and corrosive conditions requires specially designed electrical systems and devices that are able to withstand:

- Excessive moisture and high winds
- Lightning
- Sand, dust and salt spray
- Prolonged sunlight, ice and hail

Several approaches can be taken to protect the electrical infrastructure from the elements. For instance, ABB offers products designed with corrosion-resistant stainless steel, heat-shrink insulation to protect exposed wiring and conductors, coatings to provide water resistance and a product portfolio designed to avoid dissimilar metal occurrences. ABB extensive electrical product line is designed, manufactured and tested to meet the NEMA, UL®, NEC®, IEEE and other specified code requirements.

Ty-Rap® – Cable ties

- Polypropylene ties engineered for harsh environments, especially for corrosion resistance
- Stainless steel ties for enhanced corrosion protection

T&B® Fittings

• Stainless steel liquidtight conduit fittings

- Quickly seal with low torque
- Quality ground through metallic compression
- Single helical threads for easy installation
- Rolled-over edge for conductor protection

• BlueKote® conduit bodies

- Multi-layer protection with epoxy external finish for superior corrosion control
- Tapered NPT threads for integrated bushing
- BlueKote® internal finish for faster, easier wire pulling

Ocal® – OCAL® PVC-coated conduit

- Thread protection through a hot-dipped galvanizing process, and industry leading UL® Listed Type 4X PVC-coated conduit bodies
- Meets the requirements of NEMA RN-1 without exception
- UL® Listed with both the zinc coating and the PVC coating investigated and listed per UL6
- UL® Listed including UV resistance testing
- PVC-Coated Conduit System provides superior corrosion protection against many harmful elements
- Interior blue urethane provides corrosion protection around copper wire or fiber optics

T&B® Cable Tray

- Aluminum, stainless steel and fiberglass support and wire management systems



Ocal®

01



T&B® Fittings

02



Ty-Rap®

03

Extreme temperature protection

Power generation plants that are exposed to extreme temperature conditions need products that can withstand the heat or cold and still perform effectively.

01 Sta-Kon®

- High-temperature wire joints and terminals.

02 T&B® Fittings

- LTxE high-/low-temperature liquidtight conduit and fittings.

03 Ty-Rap®

- Coated and uncoated stainless steel, extra-high temperature and flame-retardant UL94v-0 nylon cable ties.
- Ty-Rap Tote® cable tie dispensers and ergonomic Installation tools.

Environmental damage can shorten the electrical product lifecycle and prove costly to the plant. Instead, the owner/operator must:

- Prevent premature material aging due to prolonged heat
- Avoid material contraction and expansion due to ground frost
- Protect against physical damage from hail

Extreme high and low temperatures may also affect a product's malleability, making it brittle or weaker than intended. ABB offers numerous electrical systems and devices that are designed to withstand and insulate against severe temperatures.

Among the solutions that Thomas & Betts offers are cable ties made of heavy-duty stainless steel and extra-high temperature resistant nylon; insulated terminals with high-temperature ratings; high- and low-temperature fittings; flexible metal conduit; and other products designed specifically to protect against intense heat or cold conditions.

Ty-Rap® – Extra-high temperature nylon cable ties

- For use in temperatures from -40°C to 150°C
- Feature “The Grip of Steel®” stainless steel locking device and offer infinite adjustability

T&B® Fittings – LTxE Liquidtight flexible metal conduit and fittings

- Construction utilizes the flexibility of a standard cable core
- Engineered with the advantage of a thermoplastic rubber jacket
- Virtually unaffected by temperature extremes
- Contain no halogens
- Flammability rating of UL94-HB

Sta-Kon® – High-temperature wire terminals

- Tefzel® insulated terminations for high temperatures
- Braised and overlapped seams eliminate chances for lost wire strands, poor resistance, wire pullout and electrical failure
- Selective annealing to strengthen materials and reduce fatigue
- Anti-rotational tongue prevents shorting by keeping terminal secure within the block

Kopex-Ex™

- Stainless steel flexible conduit systems for hazardous locations

*Tefzel is a registered trademark of the DuPont Corporation.



Sta-Kon®



T&B® Fittings



Ty-Rap®

The risk of extreme temperatures on power generators is twofold: electricity load increases as consumers seek to maintain comfort levels, and the electrical infrastructure is tested for durability.



According to the U.S. Energy Information Administration, 223 gigawatts of new generating capacity (including end-use CHP) will be needed between 2010 and 2035.



Total project cost reduction

Government funding, taxpayer-subsidized loans and other investment sources are essential to getting new power generation projects off the ground.

01 Kindorf®

- Surface raceway, lighting support and cable mounting systems, Trapnut® strut fastener and King Cobra® cable and pipe clamp.
- 316 Stainless, aluminum, PVC-coated or non-metallic channel, hangers and clamps, seismic bracing system.

02 Steel City®

- Pre-fab components and assemblies.

03 T&B® Fittings

- Ranger® series liquidtight cord connectors.
- BlackJack® grounding bushings.
- Series 35 conduit bodies.

To convince investors of a project's cost effectiveness, developers must control:

- Financing costs
- Construction costs
- Environmental regulations
- Fuel expense

Selecting Tier 1 suppliers increases the probability of winning favorable funding. ABB, a Tier 1 supplier that is LEAN and ISO certified, has a proven ability to deliver high-quality, high-performance electrical solutions.

ABB develops products that are easy to install and maintain to save on labor costs. Our systems are engineered with fewer parts to reduce product costs. We enable regulatory compliance upfront to prevent rework later. Our ongoing research and product development helps our customers achieve high energy efficiency, which translates into greater electricity production from less fuel consumption. Manufacturing process controls, safety controls, Factory Acceptance Testing (FAT) and prompt product availability further reduce total project costs.

Steel City® – Pre-fab components and assemblies

- All outlet boxes have pigtail grounding straps
- All UL® Listed components
- Horizontal or vertical support mounting
- Durable steel construction

Blackburn®

- Compression lugs and splices
- Ergonomic compression tools

Kindorf®

• King Cobra® cable and pipe clamp

- Can carry up to 450 lbs
- Durable one-piece construction
- Quick one-handed installation
- Attaches EMT and rigid conduit

• Trapnut® Strut fastener

- Reduces installation time by up to 43% as compared to traditional methods for many mechanical framing assemblies
- Unique scissor action closes at any point on the rod – no need to thread it on from the end

T&B® Fittings – Series 35 conduit bodies

- Standard tapered NPT
- Seven bodies from which to choose
- Gray iron zinc-plating with aluminum acrylic coating
- Neoprene gaskets included
- Standard compliance UL®, Fed. Spec and CSA

T&B® Commercial hubs

- Quality at competitive price alternative for light industrial/ commercial applications

Elastimold®

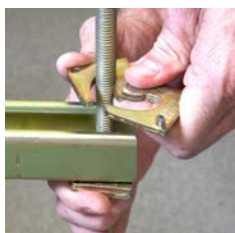
- High-voltage separable connectors
- Solid-dielectric switchgear, switchgear automation packages, molded vacuum interrupters and arresters

Sta-Kon®

- Heat-shrink terminals, ergonomic Comfort Crimp®
- Tools and disconnect installation tool

Superstrut®

- Framing channel and accessories



Liquid ingress protection

If dew point, moisture or liquid breaches an electrical product, it poses a serious and potentially compounding threat to power generation operations.

01 Red-Dot®

- Code Keeper® weatherproof while-in-use covers.

02 Russellstoll®

- DuraGard® pin-and-sleeve connectors.

03 T&B® Fittings

- Liquidtight conduit and fittings (Type A stainless steel/non-metallic, Type B non-metallic, Type C stainless steel/aluminum).
- LTxE high-/low-temperature liquidtight conduit and fittings.
- XTRA FLEX® non-metallic liquidtight conduit, tubing and BULLET® fittings.
- Stainless steel form 8 and BlueKote® conduit bodies.
- CorroStall® aluminum conduit boxes.
- Ranger® Series liquidtight cord connectors.

Power plants must prevent liquid ingress in order to:

- Ensure electrical safety
- Prevent corrosion
- Avoid system degradation
- Minimize costly downtime

Wiring systems are a prime concern for protection. Proper product selection and installation minimize the amount of condensed moisture and rain water flowing into electrical system enclosures. Waterproof materials, watertight devices, sealing systems and compounds are among the approaches to mitigating liquid ingress concerns.

At ABB, we offer moisture protection systems and equipment such as liquid-, moisture and vapor-tight fittings; waterproof interconnection systems; watertight connectors and insulating covers; and watersafe boxes. We also provide training and support to ensure proper product installation and maximum protection from liquid ingress.

Red-Dot® – Code keeper weatherproof while-in-use covers

- A380 aluminum alloy, zinc and stainless steel
- Die-cast construction
- Convenient mounting lugs
- NEMA 3R rated, UL® E-2969 and CSA certified



redodot



Russellstoll



T&B Fittings

T&B® Fittings

• Stainless steel liquidtight conduit fittings

- Quickly seal with low torque
- Quality ground through metallic compression
- Single helical threads for easy installation
- Rolled-over edge for conductor protection

• Type A liquidtight flexible non-metallic conduit and fittings

- Non-metallic, steel and stainless steel fittings
- Ideal for continuous flexing or vibration applications
- Create a liquid-, dust- and oil-tight seal

Russellstoll® – DuraGard® pin-and-sleeve connectors

- CDA 360 solid brass pin and sleeve contact
- Locking bushing with external cable clamps
- Housing mechanical support to hold pin-and-sleeve connections
- Meet NEC® 210-7 and OSHA standards

Kopex-Ex™

- Stainless steel flexible conduit systems for hazardous locations

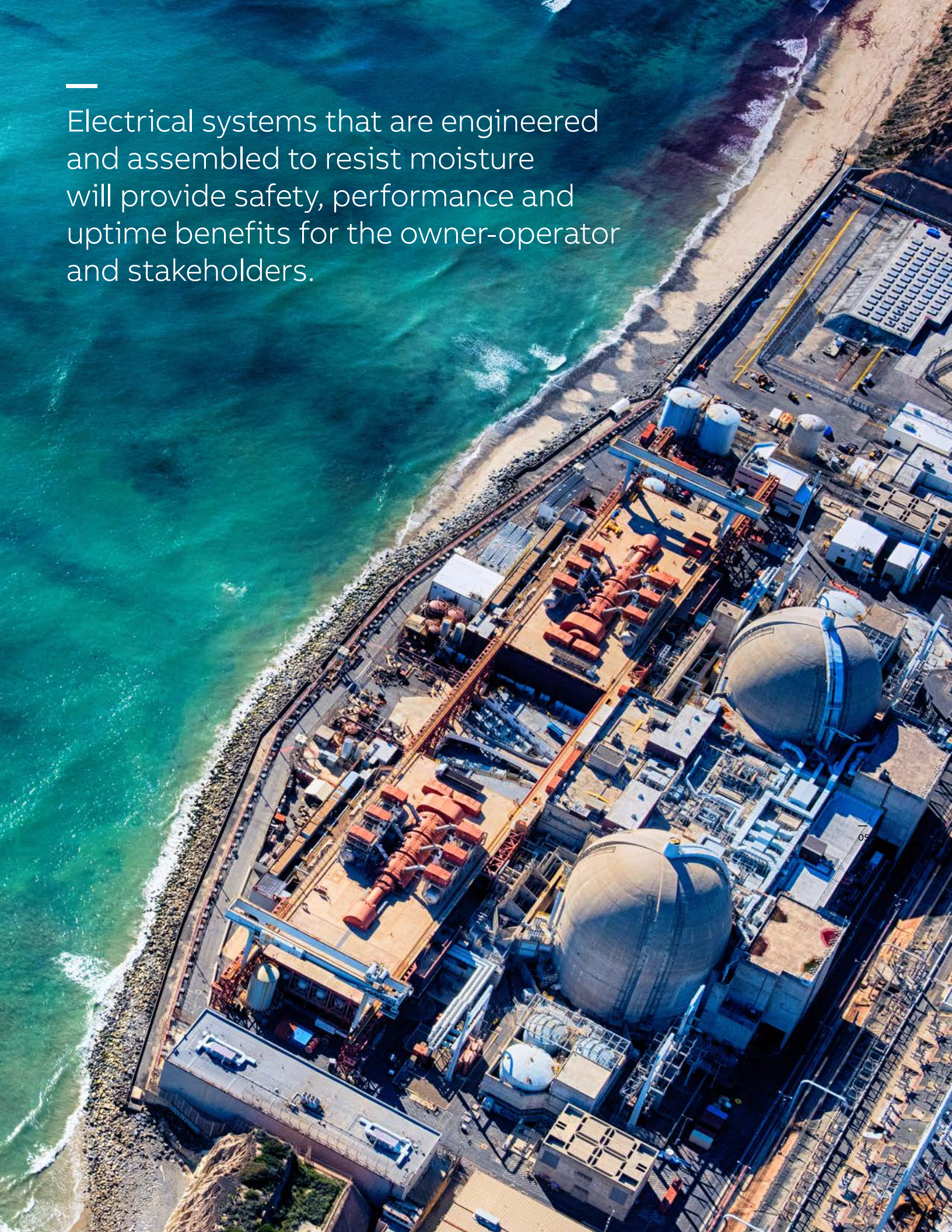
Ocal®

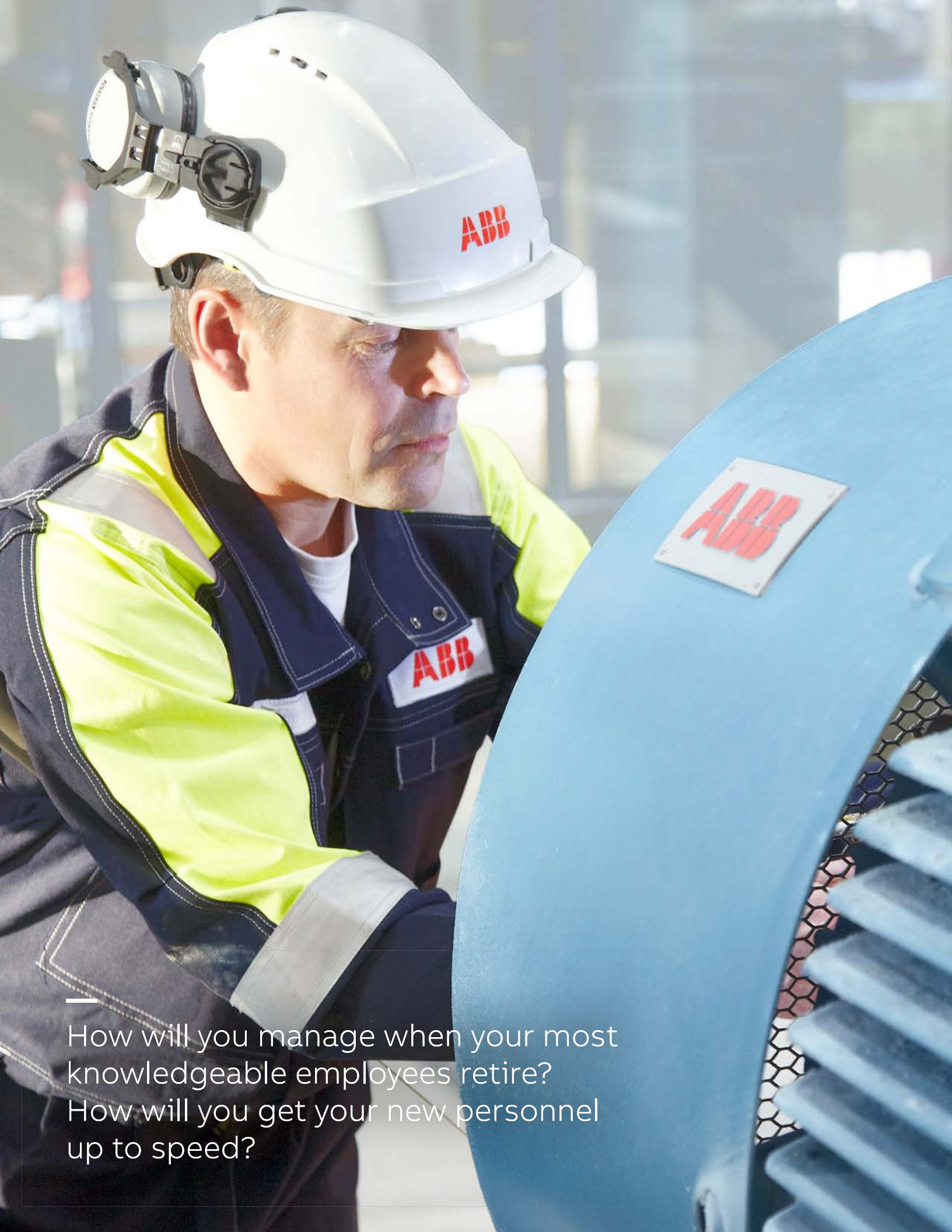
- PVC-coated conduit systems
- OCAL-BLUE® Type 4X form 8 conduit bodies

Sta-Kon®

- Heat-shrink terminals, ergonomic Comfort Crimp® tools and disconnect installation tool
- Shrink-Kon® Heat-Shrink Insulation for harnesses, wires or cables

Electrical systems that are engineered and assembled to resist moisture will provide safety, performance and uptime benefits for the owner-operator and stakeholders.





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How will you manage when your most knowledgeable employees retire?
How will you get your new personnel up to speed?

Services & training

The loss of expertise due to the rising average age of the workforce is putting power generation reliability at risk. Senior-level employees are quickly nearing retirement age, while young entrants into the field are lacking the skills needed for immediate productivity.

01 Blackburn®

- E-Z-Ground® compression, mechanical and exothermic grounding systems.
- Compression lugs and splices.
- Ergonomic compression tools.
- Tool services, loaner and leasing programs.

02 Ocal®

- Installation certification training.

03 ABB Training

- Onsite NEC® update training.
- Onsite grounding & bonding training.

National Electrical Code and NEC are registered trademarks of the National Fire Protection Association, Inc.

Our services

Key challenges include:

- Aging workforce
- Retirement of institutional knowledge
- Evolving regulations
- Rapidly advancing technology
- Skills gap

ABB takes several approaches to addressing these challenges. We offer engineering design and product solution sets that simplify the process of selecting the right products for an application. Our guarantees and warranties provide assurances that selection decisions will be supported.

Our ongoing innovations in electrical system reliability, efficiency and safety are designed to make jobs easier. As a full-service provider, ABB offers product training, installation training and certification, application support, technical support, field engineering and onsite troubleshooting to ensure successful plant operation and maintenance.

Joslyn Hi-Voltage®

- Power & high-voltage field maintenance services

Elastimold®

- Field training on cable accessories and switchgear

Blackburn®

- The QTP program provides a guaranteed two-week shipment of Blackburn® products
- Configurator enables special connectors to be designed with a guaranteed two-week shipment
- Product specification specialists and the Mobile Solutions team are available nationwide to train in the proper use and installation of Blackburn® products
- Inside Tech Support group provides 24/7/365 expertise for Blackburn® products
- Tool service and loaner and tool leasing programs

Ocal®

- Onsite installation training provides a review and hands-on practice of clamping, cutting, threading, assembling and repairing the Ocal® PVC-coated conduit system
- Training also extends warranty from two to five years on a system installed by a certified contractor

Hi-Tech®

- Field training on current-limiting fuses

Additional services & training

- Free Online CAD Library for downloadable 2D and 3D models
- NEC® Update Training provides an overview of the latest changes to the National Electric Code®
- Grounding & Bonding Training covers design, layout and connections



Blackburn®



Ocal®



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Installation Products for applications

01 Continuous operation and sustainability.

02 Corrosion and harsh environment protection.

03 Safety and contamination.

04 Emergency electrical solutions.

05 Total project cost reduction.

06 Liquid ingress protection.

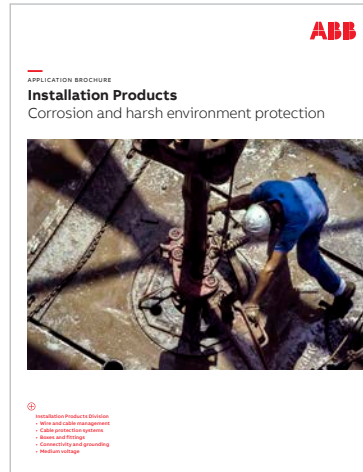
07 Extreme temperature protection.

08 Grounding and bonding.

09 SKU Reduction.



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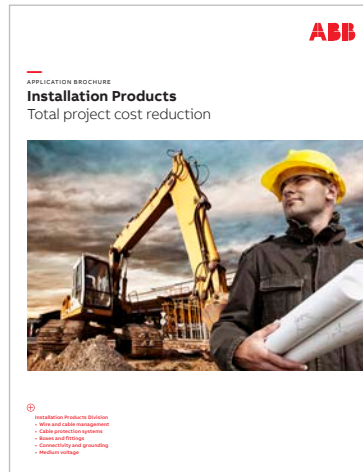
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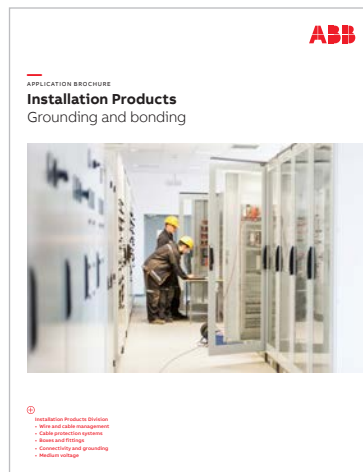
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Installation Products for industries

01 Commercial and institutional buildings.

02 Data centers.

03 Food and beverage industry.

04 Food and beverage industry - plant assessment.

05 Utility industry.

06 Power generation industry.

07 Chemical industry.

08 Oil and gas industry.

09 Wind power industry.

10 Renewable energy industry.

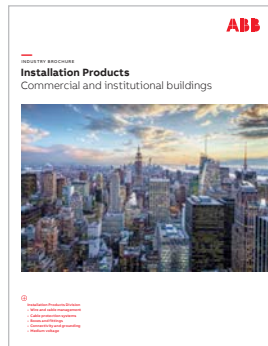
11 Water and wastewater treatment industry.

12 Single and multi-family housing industry.

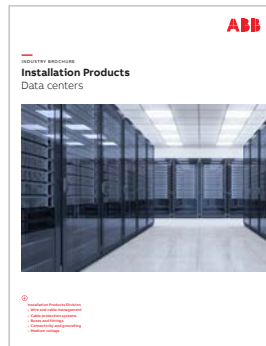
13 Rail industry.

14 Civil infrastructure industry.

15 Metals and mining industry.



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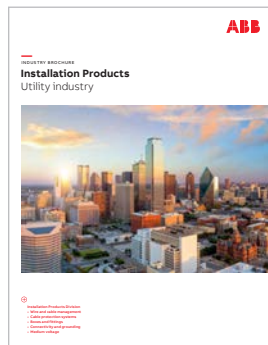
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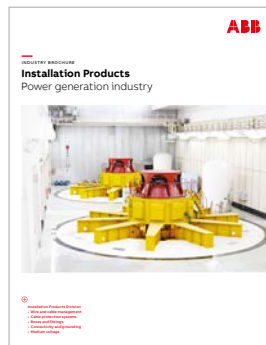
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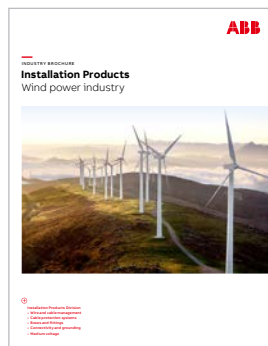
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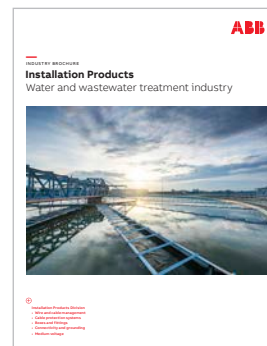
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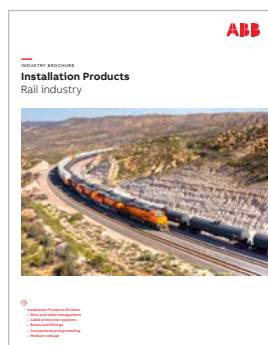
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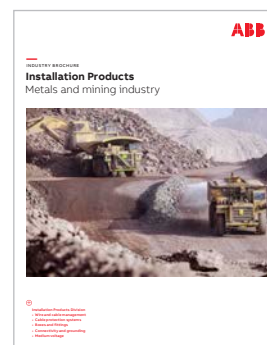
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US

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