

INDUSTRY BROCHURE

# Installation Products

## Civil infrastructure industry



### Installation Products Division

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

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**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.**

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# Designed to perform

## Civil infrastructure industry



ABB understands the challenges faced in the civil infrastructure industry 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 civil infrastructure industry:



Continuous operation  
& sustainability



Corrosive & harsh  
environment protection



Grounding & bonding



Liquid ingress  
protection



Safety



Total project  
cost reduction



Hazardous location  
protection



Power quality,  
efficiency & reliability



Extreme temperature  
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 civil infrastructure projects in on time, within budget and profitably.

## Product selection guide

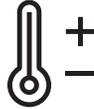
for the civil infrastructure industry



### Product selection guide

Product description	Continuous operation & sustainability	Corrosive & harsh environment protection	Grounding & bonding	Liquid ingress protection
<b>Adaptaflex®</b>				
Cable protection systems - Conduit and connectors	-	•	-	•
<b>Blackburn®</b>				
E-Z-Ground® compression connectors, mechanical grounding and exothermic grounding systems	-	-	•	-
Compression lugs and splices, KUBE® power connectors and motor lead disconnects	•	-	•	-
Ergonomic compression tools	-	-	•	-
High-quality flexible connectors	-	-	•	-
<b>Carlon®</b>				
PVC fittings, expansion fittings, Snap-Loc® spacers and P&C® flex conduit	•	•	-	•
<b>Elastimold®</b>				
High-voltage separable connectors and solid-dielectric switchgear	•	-	•	-
<b>EZCODE®</b>				
Danger/warning labels and signs, industrial markers, barricade/burial tapes and wire markers	-	-	•	-
<b>Fisher Pierce®</b>				
Faulted circuit indicators	-	-	•	-
<b>Homac®</b>				
Copper Flood-Seal® compression splice kits, substation connectors	•	•	•	•
<b>Joslyn®</b>				
Surge protection devices	-	-	-	-
<b>Joslyn Hi-Voltage®</b>				
Capacitor switches and air disconnect switches, obstruction light-lowering device	-	-	-	-
<b>Kindorf®</b>				
Electro-galvanized, aluminum, and 316 stainless steel channel, hangers and clamps	•	•	-	-
<b>Kopex-Ex™</b>				
Explosion-proof raceway and conduit systems	-	•	•	•
<b>Ocal®</b>				
PVC-coated conduit, fittings, Ocal-Blue® NEMA Type 4X form 8 conduit bodies	•	•	-	•
Ocal installation certification training	-	-	-	-
<b>PMA®</b>				
Nylon cable protection systems	•	•	-	•
<b>Red•Dot®</b>				
Code Keeper® weatherproof while-in-use covers	•	•	-	•

Continued on page 8.



Safety	Total project cost reduction	Hazardous location protection	Power quality, efficiency & reliability	Extreme temperature protection	Services & training
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**Blackburn**

**Carlon**



**EZCODE**



**Kindorf**



**Ocal**

**PMA**



**Russellstoll**

**Sta-Kon**

**Steel City**

**Superstrut**

**T&B Fittings**

**Ty-Rap**

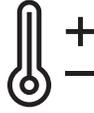
## Product selection guide

for the civil infrastructure industry (continued)

### Product selection guide



Product description	Continuous operation & sustainability	Corrosive & harsh environment protection	Grounding & bonding	Liquid ingress protection
<b>Russellstoll®</b>				
DuraGard® & MaxGard® connectors, explosion-proof receptacles and GSUL ground indicator system	•	–	•	•
<b>Sta-Kon®</b>				
Nylon-, vinyl- and non-insulated wire terminals, luminaire disconnects	–	–	–	–
Corrosion-resistant, nickel-plated wire terminals, high-temperature wire joints and terminals	•	•	–	–
Heat-shrink terminals, ergonomic Comfort Crimp® tools and disconnect installation tool	•	•	–	•
Shrink-Kon® wire and connector insulation products	–	–	–	•
<b>Steel City®</b>				
Metallic boxes, covers and accessories	–	–	–	–
<b>Superstrut®</b>				
Electro-galvanized, aluminum, hot-dip galvanized, and 316 stainless steel channel, hangers and clamps	•	–	–	–
<b>T&amp;B® Fittings</b>				
Type A and LTXE high-/low-temperature liquidtight conduit and fittings	•	•	–	•
Xtra Flex® non-metallic liquidtight conduit, tubing and Bullet® fittings	•	•	–	•
Hubs – Stainless steel and aluminum	–	•	–	–
Liquidtight flexible conduit fittings – Steel, stainless steel, aluminum and non-metallic	•	•	•	•
Cord Connectors – Steel, Stainless Steel, Aluminum and Non-Metallic	•	•	–	•
Explosion-proof boxes, elbows, fittings and XP explosion-proof flexible couplings	–	–	–	–
Silver Grip® tray cord fittings	–	•	–	•
Wire-mesh strain-relief cord and conduit grips	•	•	–	•
CorroStall® aluminum conduit boxes	–	•	–	•
XD expansion/deflection coupling for rigid conduit	•	•	•	–
LU® conduit bodies and form 8 conduit bodies – BlueKote® and stainless steel	•	•	–	–
Star Teck® and Star Teck XP® fittings for jacketed metal-clad and teck cables	•	•	•	•
Grounding fittings	–	–	•	–
<b>Ty-Rap®</b>				
Coated and uncoated stainless steel cable ties	–	•	–	–
Extra-high temperature and flame-retardant UL94V-0 nylon cable ties	–	•	–	–
Ty-Rap Tote® cable tie dispensers and ergonomic installation tools	–	•	–	–
Weather-resistant nylon 12 messenger hanger straps and Deltec® outdoor fastening system	–	•	–	–



Safety	Total project cost reduction	Hazardous location protection	Power quality, efficiency & reliability	Extreme temperature protection	Services & training
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**Blackburn**

**Carlon**



**EZCODE**



**Kindorf**



**Ocal**

**PMA**



**Russellstoll**

**Sta-Kon**

**Steel City**

**Superstrut**

**T&B Fittings**

**Ty-Rap**

# Challenge and commitment

Those responsible for maintenance of our nation's infrastructure include government agencies, transportation administration officials, civil engineers and contractors.

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\*Source:  
Washington Post

Among the challenges they face are:

- Reduced budgets
- Lower gasoline taxes dedicated to infrastructure revenue
- Government's commitment to maintaining infrastructure and current funding
- Strict regulatory restrictions on expansions

Transportation systems and public utilities are essential for the economic vitality of our businesses and communities, the conservation of fuel and other natural resources and the comfort and safety of residents and visitors.

On the most basic level, every community requires access to clean water and sanitary waste disposal. At a higher level, mass transit infrastructure is needed to move people and goods from one area to another. At a higher level, mass transit infrastructure is needed to move people and goods from one area to another.

The highway system is a key component to civil defense. If the infrastructure is poorly constructed and maintained, it could lead to a devastating loss of life, property and business.

Today's project management emphasizes the Total Cost Concept, which factors in maintenance, replacement and downtime cost. In a critical transportation environment, the impact of maintenance and downtime costs is even higher.

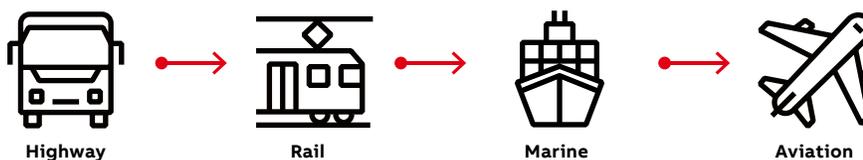
ABB realizes the importance of the Total Cost Concept and ensures well-engineered laborsaving products through critical tests at every stage of manufacturing. Our goal is to be the brand of choice for the end user of our products. We are committed to developing more solutions for civil infrastructure, staying current with the latest available technology and remaining competitive.

ABB provides electrical solutions that help you:

- Keep operations running
- Optimize operation and maintenance costs
- Maintain a safe environment
- Operate within budget

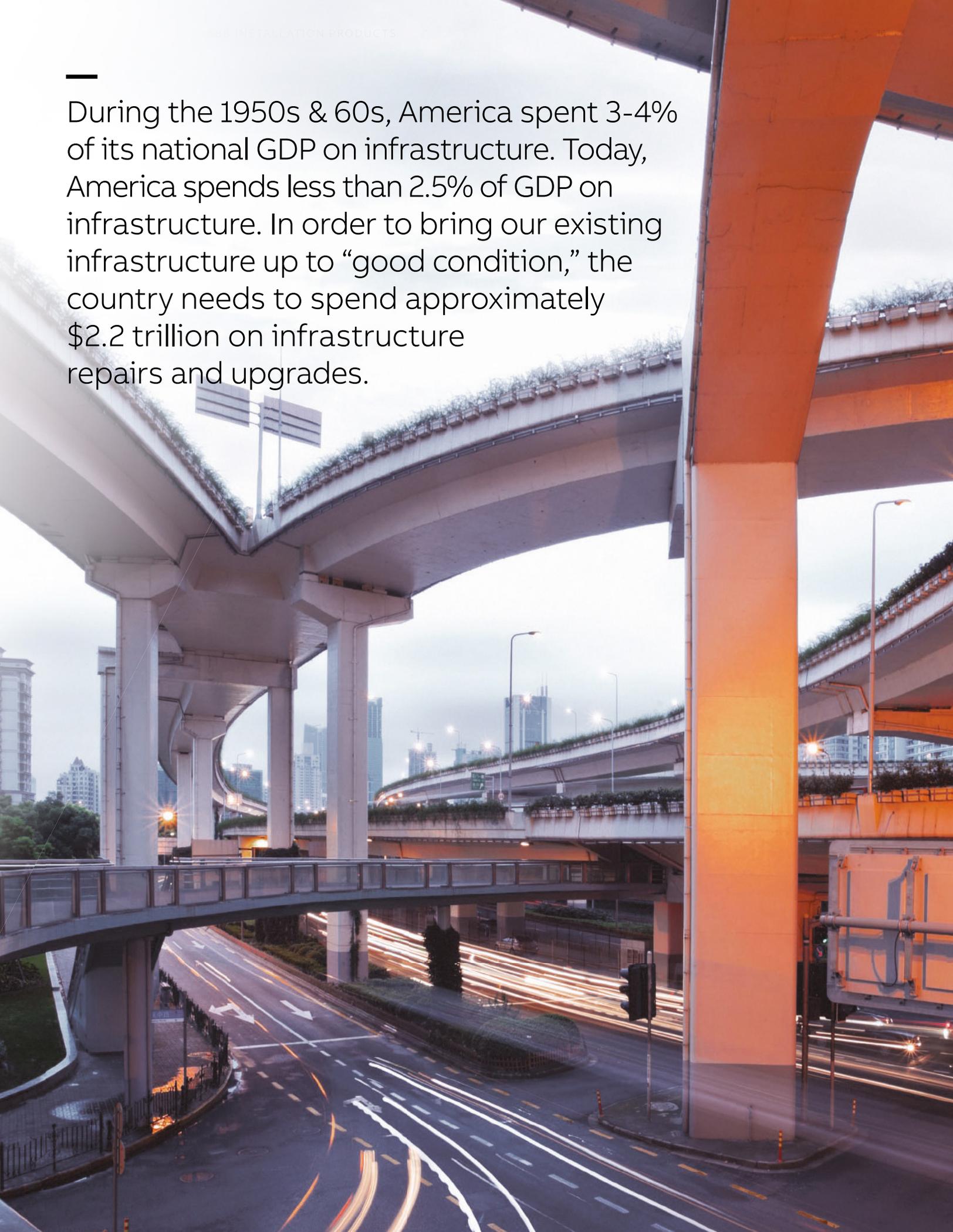
These solutions enable infrastructure professionals to save money, ensure transportation safety and keep America moving.

## Civil Infrastructure applications



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During the 1950s & 60s, America spent 3-4% of its national GDP on infrastructure. Today, America spends less than 2.5% of GDP on infrastructure. In order to bring our existing infrastructure up to “good condition,” the country needs to spend approximately \$2.2 trillion on infrastructure repairs and upgrades.





Continuous operation is the fundamental goal of all civil infrastructure. ABB products help make sure that traffic keeps moving, planes and trains run ontime and ports provide safe harbor.

# Continuous operation & sustainability

01 **Blackburn®**  
• Motor lead disconnects.

02 **Elastimold®**  
• Separable connectors and solid-dielectric switchgear.

03 **Russellstoll®**  
• DuraGard® and MaxGard® connectors, explosion-proof receptacles and GSUL ground indicator system.

04 **T&B® Fittings®**  
• Type A and ATX high-/low-temperature liquidtight conduit and fittings.  
• XTRAFLEX® non-metallic liquidtight conduit, tubing and BULLETT® fittings.  
• Liquidtight flexible conduit fittings – Steel, stainless steel, aluminum and non-metallic  
• Cord connectors – Steel, stainless steel, aluminum and non-metallic  
• Wire-mesh strain-relief cord and conduit grips  
• XD Expansion/deflection coupling for rigid conduit.  
• LU® Conduit Bodies and form 8 conduit bodies – BlueKote® and stainless steel.  
• STAR TECK® and STAR TECK XP® fittings for jacketed metal-clad and teck cables.

**Carlton®**  
• PVC fittings, expansion fittings, Snap-Loc® spacers and P&C® flex conduit.

**Homac®**  
• Copper Flood-Seal® compression splice kits, substation connectors.

Highways, rail and marine transportation sectors must contend with vibration and movement. ABB offers several solutions to help systems maintain service levels.

This includes T&B® Fittings for expansion and expansion/deflection, Carlton® PVC expansion fittings and Ocal® PVC-coated conduits, fittings and accessories. These items are used on bridges and roadways to provide movement and flexibility at seams and transition points.

In addition, our Kindorf® and Superstrut® brands of framing are used in seismic bracing designs.

Airports require a constant power supply to service radar and communications. Cyberex® UPS systems ensure the continued operation of critical air traffic control. Our Amerace® brand is the world leader in the design and manufacture of isolating transformers, connector kits and cable assemblies for airfield lighting.

## **Blackburn® – Motor lead disconnects**

- Quick, reliable change-out of electric motors with no bolting, taping or loose connections
- Complete line of motor lead disconnects for 600V and 5kV applications, covering wire ranges from #16 through 4/0 AWG
- Featuring the Color-Keyed® Compression System that ensures proper connections

## **Elastimold® – Cable accessories**

- A full line of loadbreak and deadbreak separable connectors, cable joints and cable terminations
- Developed for 5 to 35kV distribution systems

## **T&B® Fittings – Type A liquidtight flexible non-metallic conduit with non-metallic or stainless steel fittings**

- Ideal for continuous flexing or vibration applications
- Create a liquid-, dust- and oil-tight seal
- Suitable for operating temperatures from -20°C to 60°C

## **Russellstoll® – DuraGard® pin-and-sleeve connectors**

- Not just watertight, but waterproof, mated or unmated
- Tested to 1000 psi for washdown applications
- Full line of 20–60A (600VAC/250VDC max.) connectors, plugs and receptacles in UL94V-0 flammability-rated, corrosion-resistant, non-metallic housings

## **Sta-Kon® – DuraGard® pin-and-sleeve connectors**

- Corrosion-resistant, nickel-plated wire terminals, high-temperature wire joints and terminals
- Heat-shrink terminals, ergonomic Comfort Crimp® tools and disconnect installation tool



01 **Blackburn®**



02 **elastimold®**



03 **Russellstoll®**



04 **T&B® Fittings**

# Corrosive & harsh environment protection

## 01 Ocal

- PVC-coated conduit, fittings, OCAL-BLUE® NEMA Type 4X Form 8 conduit bodies.

## 02 T&B® Fittings

- Type A liquidtight flexible conduit and fittings.
  - LTXE and LT6XE high-/low-temperature liquidtight conduit and fittings.
  - XTRA FLEX® non-metallic liquidtight conduit, tubing and BULLET® fittings.
  - Hubs – Stainless steel and aluminum.
  - Liquidtight flexible conduit fittings – Steel, stainless steel, aluminum, nickel plated brass and non-metallic.
  - Cord Connectors – Steel, stainless steel, aluminum and non-metallic.
  - Silver Grip® tray cord fittings.
  - Wire-mesh strain-relief cord and conduit grips.
  - CorroStall® aluminum conduit boxes.
  - XD expansion / deflection coupling for rigid conduit.
  - LU® conduit bodies and form 8 conduit bodies – BlueKote® and stainless steel.
  - STAR TECK® and STAR TECK XP® fittings for jacketed metal-clad and teck cables.
- ## 03 Ty-Rap®
- Coated and uncoated stainless steel cable ties.
  - Extra-high temperature and flame-retardant UL94V-0 nylon cable ties.
  - Ty-Rap Tote® cable tie dispensers and ergonomic installation tools.
  - Weather-resistant nylon 12 messenger hanger straps.
  - Deltec® outdoor fastening system.

Highways, rail and marine transportation sectors all require protection from corrosion and harsh environments. ABB offers several solutions to help systems maintain service levels.

Note that some parts of the country use PVC conduit while other parts use rigid. The requirements vary by jurisdiction, and regulations usually pertain to dealing with weather demands.

Corrosion is exceptionally severe near coastal waters, and electrical systems are especially challenged. ABB offers several solutions to help you in these areas. Parts manufactured from corrosion-resistant materials range from PVC to stainless steel.

### T&B® Fittings – Stainless steel liquidtight conduit systems

- Type 316 stainless steel construction for LT fittings, conduits and seal gaskets
- Rated for temperatures up to 105°C

### Ocal® – Ocal-Blue® PVC-coated conduit

- PVC-coated, hot-dipped galvanized conduit and threads
- Provides superior corrosion protection against many harmful elements
- Interior blue urethane provides corrosion protection around cables

### Ty-Rap® – Stainless steel cable ties

- Strong, fireproof and easy to apply – for safe cable bundling
- Resist corrosion and UV light, with the ability to withstand temperature extremes
- Provide a strong, safe installation with a uniuquedual-locking mechanism

### Adaptaflex®

- Cable protection systems – Conduit and connectors

### Carlton®

- PVC fittings, expansion fittings, Snap-Loc® spacers and P&C® flex conduit

### Homac®

- Copper Flood-Seal® compression splice kits

### Kindorf®

- 316 Stainless, aluminum, PVC-coated or non-metallic channel, hangers and clamps

### Kopex-Ex™

- Explosion-proof raceway and conduit systems

### PMA®

- Nylon cable protection systems

### Red-Dot®

- Code Keeper® weatherproof while-in-use covers

### Sta-Kon®

- Corrosion-resistant, nickel-plated wire terminals
- Heat-shrink terminals, ergonomic Comfort Crimp® tools and disconnect installation tool



Ocal®

01



T&B® Fittings

02

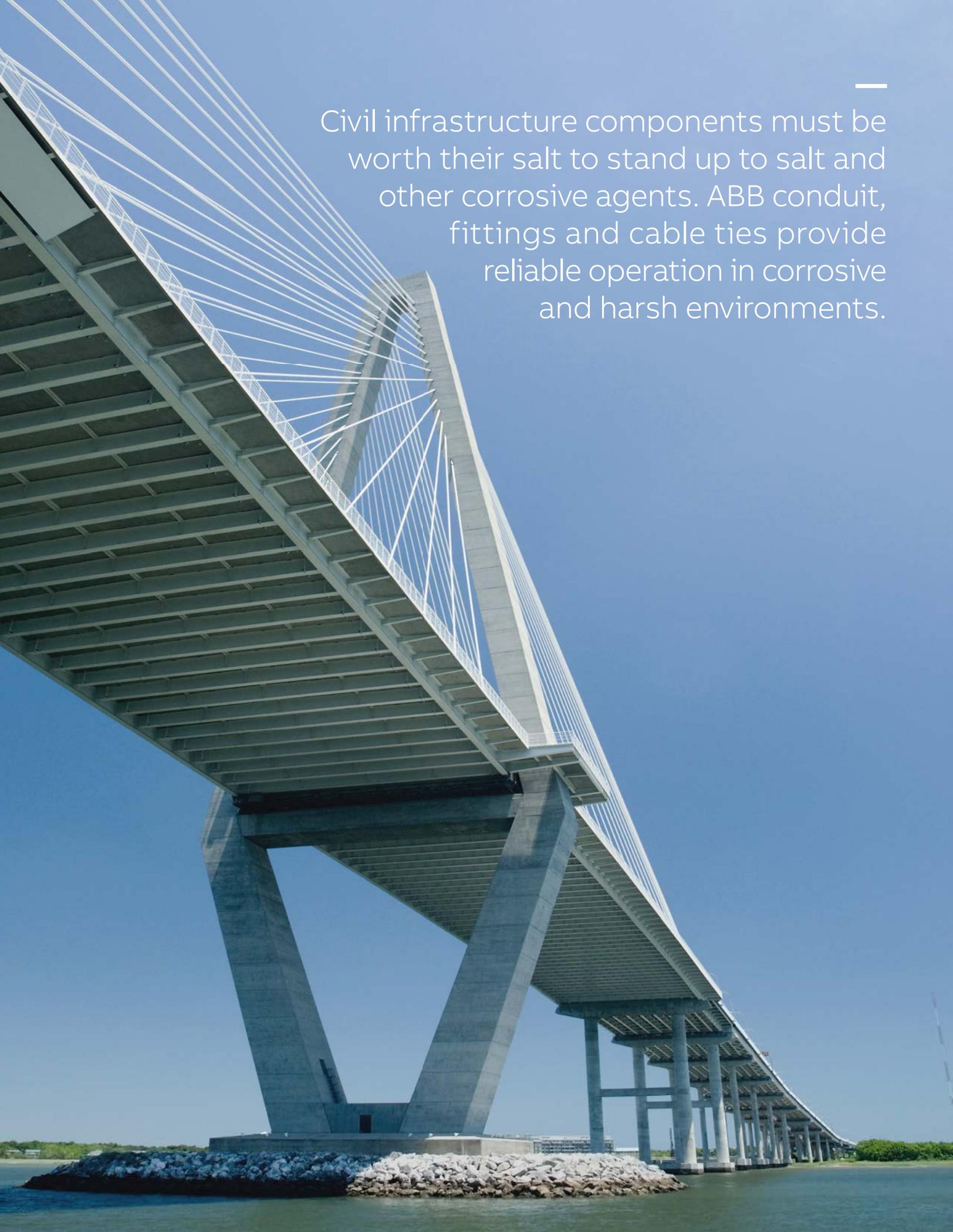


Ty-Rap®

03

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Civil infrastructure components must be worth their salt to stand up to salt and other corrosive agents. ABB conduit, fittings and cable ties provide reliable operation in corrosive and harsh environments.





An electrical system includes various pieces of conductive equipment connected together to keep them at the same potential. ABB manufactures a variety of solutions to meet the installation rules of the National Electrical Code®.

# Grounding & bonding

Grounds from a battery, engine, switch-panel negative bus bar, bonding system, auxiliary power generator, underwater ground plate, a ship's 120V safety ground and LORAN signal ground all meet at one point. This point must be a heavy bus bar or bracket with bolted connections.

## 01 Blackburn®

- High-quality flexible connectors.

## 02 Blackburn®

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

## 03 T&B® Fittings

- XD expansion/deflection coupling for rigid conduit.
- STAR TECK® and STAR TECK XP® fittings for jacketed metal-clad and teck cables.
- Bonding locknuts.
- Bonding & grounding wedges.
- Blackjack® grounding bushing.
- Grounding hub.
- XJG expansion fitting with internal bonding jumper.
- Revolver® grounding liquidtight fitting.

\*NEC® and the National Electric Code® are registered trademarks of the National Fire Protection Association, Inc.

ABB Grounding & bonding products meet exothermic, compression and mechanical requirements.

A ground is a critical part of an electrical system.

In some extreme cases, redundant grounds are used to ensure services and operations are not disrupted and that equipment and personnel safety are not put at risk.

## Blackburn®

- **E-Z-Ground® Compression connectors**
  - High-conductivity copper and bronze enable connections for direct burial, OEM or telecomm applications
  - Featuring the Color-Keyed® compression system that ensures proper connections
- **Mechanical grounding connectors**
  - High-strength split-bolt connectors for copperto-copper connections
  - Service post connectors for steel structures, fence posts or transformers using one or two cables
  - ViceLock® connectors for cable tray, channel and strut applications

## Blackburn® – High-quality flexible connectors

- A wide variety of grounding straps and accessories for grounding applications
- Extra-flexible links for heavy-duty applications up to 3600A
- Standard flexible links for medium-duty applications up to 2350A

## T&B® Fittings – Grounding fittings

- Steel and aluminum construction
- Trade sizes through 1" include Revolver® ground ring
- Straight, 45° angle and 90° elbow versions available

## Elastimold®

- High-voltage separable connectors and solid-dielectric switchgear

## EZCODE®

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

## Fisher Pierce®

- Faulted circuit indicators

## Homac®

- Copper Flood-Seal® compression splice kits

## Kopex-Ex™

- Explosion-proof raceway and conduit systems

## Russellstoll®

- DuraGard® and MaxGard® connectors, explosion-proof receptacles and GSUL ground indicator system



**Blackburn®**

01



**Blackburn®**

02



**T&B® Fittings**

03

# Liquid ingress protection

The smallest amount of liquid ingress can start the corrosion process and destroy vital connections for civil infrastructure operations, causing outages, delays and closures.

## 01 Homac®

- Flood-Seal® street and highway lighting mechanical fuse and disconnect kits.

## 02 Red-Dot®

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

## 03 Russellstoll®

- DuraGard® and MaxGard® connectors, explosion-proof receptacles and GSUL ground indicator system.

## 04 T&B® Fittings®

- Type A liquidtight flexible conduit and fittings.
- LTxE & LT6xE high-/low-temperature liquidtight conduit and fittings.
- XTRA FLEX® non-metallic liquidtight conduit, tubing and BULLET® fittings.
- Liquidtight flexible conduit fittings – Steel, stainless steel, aluminum and non-metallic
- Cord connectors – Steel, stainless steel, aluminum and non-metallic
- Silver Grip® tray cord fittings.
- Wire-mesh strain-relief cord and conduit grips
- CorroStall® aluminum conduit boxes.
- STAR TECK® and STAR TECK XP® fittings for jacketed metal-clad and teck cables.

ABB product solutions are recommended for use in outdoor or indoor locations where applications are exposed to continuous or intermittent moisture.

## T&B® Fittings – Stainless steel liquidtight conduit and cord fittings

- Stainless steel 316 construction resists corrosion
- Rounded gland nut deflects water from connector
- Continuous sealing ring ensures a liquidtight seal

## Homac® – Flood-Seal® multi-port connectors

- All connectors are 100% Hi-Pot Tested at 4000V for 60 seconds
- Flood-Seal® insulating rockets & serve as waterproof spare outlet caps until used
- Dual-rated for copper and aluminum

## Russellstoll® – DuraGard® pin-and-sleeve connectors

- Not just watertight, but waterproof, mated or unmated
- Tested to 1000 psi for washdown applications
- Full line of 20–60A (600VAC/250VDC max.) connectors, plugs and receptacles in UL94V-0 flammability-rated, corrosion-resistant, non-metallic housings

## Red-Dot® – Code Keeper® weatherproof covers

- Rugged aluminum construction resists corrosion
- Cover wet location receptacles to ensure personnel safety

## Adaptaflex®

- Cable protection systems – Conduit and connectors

## Carlone®

- PVC fittings, expansion fittings, Snap-Loc® spacers and P&C® flex conduit

## Kopex-Ex™

- Explosion-proof raceway and conduit systems

## Ocal®

- PVC-coated conduit, fittings, OCAL-BLUE® NEMA type 4X form 8 conduit bodies

## PMA®

- Nylon cable protection systems

## Sta-Kon®

- Heat-shrink terminals, ergonomic Comfort Crimp® tools and disconnect installation tool
- Shrink-Kon® wire and connector insulation products



01 **HOMAC**



02 **red dot**



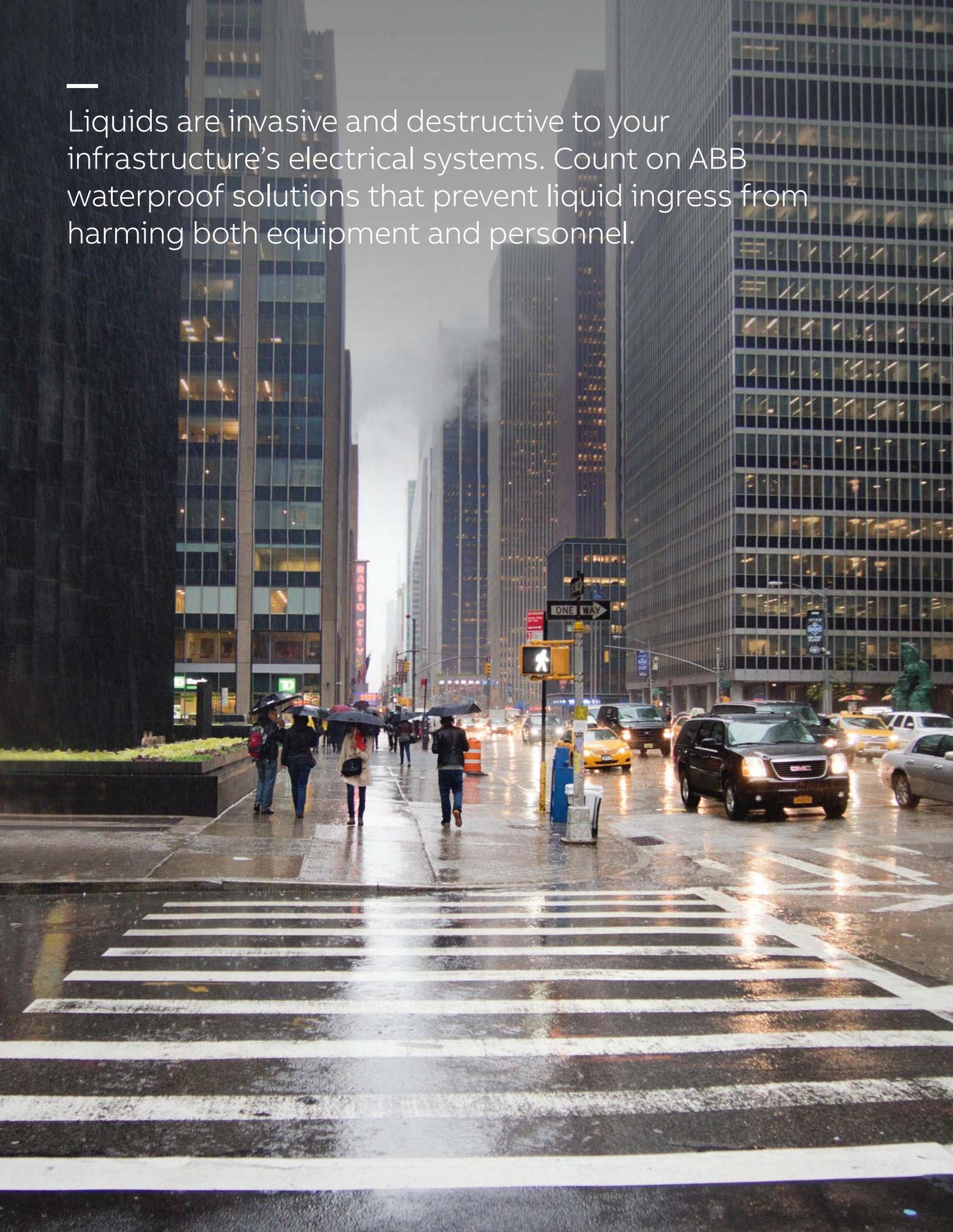
03 **Russellstoll**



04 **T&B Fittings**

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Liquids are invasive and destructive to your infrastructure's electrical systems. Count on ABB waterproof solutions that prevent liquid ingress from harming both equipment and personnel.



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Electricity has long been recognized as a serious workplace hazard, making safety a critical necessity. Electrical safety can help you prevent shock, arc flash, fires and explosions. And since electricity is used everywhere, electrical safety needs to be everywhere, too – especially on the job site.



# Safety

The proper function of signs, lights, switches and signals enables safe operating conditions. ABB Safety solutions bring reliability to your project and meet all required codes and standards.

## 01 EZCODE®

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

## 02 Russellstoll®

- DuraGard® and MaxGard® connectors, explosion-proof receptacles and GSUL ground indicator system.

## 03 Ty-Rap®

- Extra-high temperature and flame-retardant UL94V-0 nylon cable ties.
- Ty-Rap Tote® cable tie dispensers and ergonomic installation tools.
- Deltec® outdoor fastening system

## Homac®

- Copper Flood-Seal® compression splice kits.

## Joslyn®

- Surge protection devices.

## Joslyn Hi-Voltage®

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

## Kindorf®

- Seismic bracing system.

## Kopex-Ex™

- Explosion-proof raceway and conduit systems.

## Ocal®

- PVC-coated conduit, fittings, OCAL-BLUE® NEMA type 4X form 8 conduit bodies.

## PMA®

- Nylon cable protection systems.

## Red-Dot®

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

## Sta-Kon®

- Heat-shrink terminals and ergonomic Comfort Crimp® tools.

## Railway infrastructure

ABB offers many products that provide fault-free operation of signaling and control systems, providing dependability for use with couplings, trucks, and gangways as well as with roof and under-floor equipment. Our products contribute to the safe operation of freight trains, high-speed passenger trains, commuter trains, trams and subways – above or below ground.

## Marine infrastructure

In marine applications, cables and cable bundles are subjected to high stress. Vibration increases the risk of overheating, abrasion damage and electrical short circuits. Cable routing around machinery also requires absolute protection, and it is essential that cables can easily integrate into prefabricated elements like cabins. Many shipping companies rely on the dependability of our products, and ABB products protect the assets of large and small shipping vessels as well as ports.

## EZCODE™ – Safety labels, tags, signs and barricade tapes

- Help to ensure personnel and workplace safety, as well as regulatory compliance
- Highly visible and long-lasting materials

## Ty-Rap® – Fluoropolymer cable ties

- UL® 94V-0 flammability rating
- For use in temperatures ranging from -50°F to 284°F

## Adaptaflex®

- Cable protection systems – Conduit and connectors

## Russellstoll®

### • GSUL Safe ground indicator system

- Prevents operation of pumps without a safe ground for static dissipation
- Indicator lights display the establishment of a safe ground
- **Safety interlocks**
  - 30A and 50A ranges and polarizations to 480VAC
  - Flame rated and DuraV® housing

## Amerace®

- Isolating transformers, connector kits and cable assemblies

## Blackburn®

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

## Fisher Pierce®

- Faulted circuit indicators



**EZCODE®**



**Russellstoll®**



**Ty-Rap®**

# Total project cost reduction

In today's challenging economic environment, projects that were recently considered "a go" are now getting a second look and closer scrutiny. Everyone's goal is to improve total project economics and help make marginal projects viable.

## 01 Kindorf®

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

## 02 Steel City®

- Metallic boxes, covers and accessories.

## 03 T&B® Fittings

- LU® conduit bodies – BlueKote® and stainless steel.

At ABB, our engineers design products that are simpler to use. For example, the new LU® conduit body has enabled installers to reduce wire pulling time by up to 35%. When using products such as the Kindorf® Trapnut® fastener and Cobra® cable and pipe clamp, the overall benefit in a project is installed savings.

### Kindorf®

- **Trapnut® strut fastener**
  - Features either a stainless steel, Galv-Krom® or SilverGalv® finish
  - Corrosion resistant
  - Saves on replacement and labor costs
- **Cobra® one-piece cable and pipe clamp**
  - Installs quickly and securely
  - Attaches to equal trade sizes of EMT and rigid conduit
  - Greatly reduces installation time

### T&B® Fittings – BlueKote® LU® universal conduit elbow

- Provides a 4-to-1 SKU reduction for conduit body applications
- Reduces installation time and risk of installer strain
- Angled cover port – easier wire pulling and uses standard covers
- BlueKote® four-layer protection provides internal and external corrosion resistance
- Rated for 40% wire fill

### Steel City® – Metallic boxes, covers and accessories

- Custom-designed assemblies of components can save over 50% on your in-wall rough-in installation costs
- Special ARRA and Buy American assemblies reduce overall material costs by up to 40%
- Project-specific packaging, labeling and just-in-time direct deliveries the day needed cut material-handling and inventory costs
- Pre-assembled, palletized components reduce onsite packaging and waste
- Steel City® Prefabricator lets you design, manage, quote and order your own in-wall rough-in electrical systems specific for your project

### Carlton®

- PVC fittings, expansion fittings, Snap-Loc® spacers and P&C® flex conduit

### Red-Dot®

- Code Keeper® weatherproof while-in-use covers



**Kindorf®**



**Steel City®**



**T&B® Fittings**

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ABB understands the needs of civil infrastructure, which is why we deliver complete solutions that help reduce costs at every stage of operation and maintenance.



—  
Gases and vapors always pose a concern in garages, hangers and other areas classified as hazardous locations. Our explosion-proof solutions can prevent or contain an explosion in those locations.



# Hazardous location protection

Civil infrastructure has inherent hazardous locations, such as service garages, airport hangars and fueling docks. The National Electrical Code® (NEC®) defines hazardous locations as areas where the possibility of explosion and fire is created by the presence of flammable gases, vapors, dust, fibers or flyings.

## 01 Russellstoll®

- DuraGard® and MaxGard® connectors, explosion-proof receptacles and GSUL ground indicator system.

## 02 T&B® Fittings

- Explosion-proof boxes, elbows, fittings and XP explosion-proof flexible couplings.
- STAR TECK® and STAR TECK XP® fittings for jacketed metal-clad and teck cables.

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

To protect both your facility and your employees, ABB has several solutions to use in hazardous locations that meet the electrical codes and standards.

## T&B® Fittings

- **GUP Explosion-proof enclosure**
  - Compact design is ideal for fuel pumps
  - Constructed of ductile iron for superior strength
  - Dust-ignition-proof, raintight and listed for wet locations
- **XP Explosion-proof flexible couplings**
  - Explosion proof and corrosion resistant for use in hazardous and wet locations
  - Ideal for making tight bends in conduit systems or for applications subject to movement or vibration

## Russellstoll® – MaxGard® Explosion-proof interlocked receptacles

- Copper-free, cast-aluminum, epoxy-coated housing
- O-ring-sealed interior components ensure watertight protection whether connections are mated or unmated
- Explosion-proof systems for 30A, 60A and 100A

## EZCODE®

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

## Kopex-Ex™

- Explosion-proof raceway and conduit systems

## Reznor®

- Heaters



01

**Russellstoll®**



02

**T&B® Fittings**

# Power quality, efficiency & reliability

Power quality and reliability issues are keys to the successful delivery of energy. Power blackouts and brownouts can have serious economic consequences. Poor power quality, for example, affects computers and other sensitive equipment. What's more, keeping security systems operational is also essential with the escalating threat of terrorism.



—  
01 **Joslyn Hi-Voltage®**  
• Capacitor switches  
and air disconnect  
switches.

When the reliable connection and intelligent control of electrical power are necessities, our wide product selection maintains and improves power quality, efficiency and reliability. From 120V to 230kV, our solutions are specified worldwide in the industrial, construction and utility markets.

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## **Joslyn® – VerSaVac™ vacuum switch**

- Completely sealed, long-life vacuum switch
- Operational life of 50,000 open/close maintenance-free operations
- Replace maintenance-intensive oil switches
- Maximizes bank uptime and improves power quality

## **Elastimold®**

- Separable connectors and solid-dielectric switchgear

## **Fisher Pierce®**

- Faulted circuit indicators

## **Homac®**

- Copper Flood-Seal® compression splice kits, substation connectors

## **Joslyn Hi-Voltage®**

- Surge protection devices

## **JT Packard®**

- Electrical and data system installation, inspection and maintenance services

## **Kopex-Ex™**

- Explosion-proof raceway and conduit systems



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Power quality is measured by fluctuations in electricity, such as momentary interruptions, voltage sags or swells, flickering lights, transients, harmonic distortion and electrical noise. ABB power solutions provide clean, dependable electric power and minimize these fluctuations.



Civil infrastructure systems require solid connections for power and communication, whether they operate in arctic, desert or tropical conditions. ABB components protect those connections from exposure to the elements.

# Extreme temperature protection

ABB is a reliable and experienced partner when it comes to protecting your cables and connections in the harshest temperatures.

Our solutions ensure that connections remain properly shielded against extreme temperatures and provide uninterrupted transmission of power and data. We provide tried and tested products for a wide variety of applications.

01 **PMA®**

- Nylon cable protection Systems.

02 **Sta-Kon®**

- High-temperature wire joints and terminals.

03 **T&B® Fittings**

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

04 **Ty-Rap®**

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

**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
- **Heavy-duty stainless steel cable ties**
  - For use in temperatures from -80°C to 538°C
  - Available in both Type 304 and Type 316 stainless steel
  - Quick, easy installation and secure locking

**Sta-Kon® – High-temperature wire joints and terminals**

- Rated for temperatures up to 150°C, 600V maximum
- Molded, one-piece nylon construction for electrical insulation, rated UL94V-2

**T&B® Fittings – LTXE Liquidtight flexible metal conduit**

- Supports operating temperatures from -60°C to 150°C (up to 165° C intermittent)
- Flammability rating of UL94-HB
- Standard flexible metallic core with temperature resistant TPU outer jacket

**Kopex-Ex™**

- Explosion-proof raceway and conduit systems



**PMA® – High-temperature nylon conduit and fittings**

- Comply with the highest international fire safety regulations regarding flammability, smoke and toxicity
- Excellent mechanical impact strength even at low temperatures

**Adaptaflex®**

- Cable protection systems – Conduit and connectors

**EZCODE®**

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



**PMA**

01



**Sta-Kon®**

02



**T&B® Fittings**

03



**Ty-Rap®**

04

# Services & training

In the highly specialized field of electrical equipment design, installation and inspection, the manufacturer plays a key role in helping customers understand the nuances of their equipment.

## 01 Joslyn Hi-Voltage®

- Field services group

## 02 Joslyn Hi-Voltage®

- Ocal installation/  
Certification training.

## Blackburn®

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

## Elastimold®

- High-voltage separable connectors and solid-dielectric switchgear.

## Furse®

- Exothermic welds and lightning protection.

## Ocal®

- Ocal installation certification training.

## Ty-Rap®

- Ty-Rap Tote® cable tie dispensers and ergonomic installation tools.

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

## Our services

### 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 Mobile Technical Specialists are available nationwide to train in the proper use and installation of Blackburn® and Color-Keyed® products
- Inside Tech Support group provides 24/7/365 expertise for Color-Keyed® and Blackburn® products
- Full tool service as well as loaner and tool leasing programs

### Joslyn Hi-Voltage®/Elastimold®

- Power & High Voltage Field Service group provides field maintenance for Joslyn Hi-Voltage® and Elastimold® equipment

### 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

### Additional services & training

- Onsite NEC® Update Training
- Onsite Grounding and Bonding Training
- Free online CAD Library for downloadable 2D and 3D models in more than 90 native CAD file formats





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ABB field application engineers are available to provide field training on Elastimold® medium-voltage cable accessories and switchgear.

# 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.

**ABB**

APPLICATION BROCHURE

**Installation Products**  
Continuous operation and sustainability



① Installation Products Division

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

01

**ABB**

APPLICATION BROCHURE

**Installation Products**  
Corrosion and harsh environment protection



① Installation Products Division

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

02

**ABB**

APPLICATION BROCHURE

**Installation Products**  
Safety and contamination



① Installation Products Division

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

03

**ABB**

APPLICATION BROCHURE

**Installation Products**  
Emergency electrical solutions



① Installation Products Division

- Easy-clearing cable and cable protection for each-down areas
- Supporting and diverting power to temporary structures
- Cable bundling/strapping and identification components
- Temporary power systems

04

**ABB**

APPLICATION BROCHURE

**Installation Products**  
Total project cost reduction



① Installation Products Division

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

05

**ABB**

APPLICATION BROCHURE

**Installation Products**  
Liquid ingress protection



① Installation Products Division

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

06

**ABB**

APPLICATION BROCHURE

**Installation Products**  
Extreme temperature protection



① Installation Products Division

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

07

**ABB**

APPLICATION BROCHURE

**Installation Products**  
Grounding and bonding



① Installation Products Division

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

08

**ABB**

APPLICATION BROCHURE

**Installation Products**  
SKU Reduction



① Installation Products Division

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

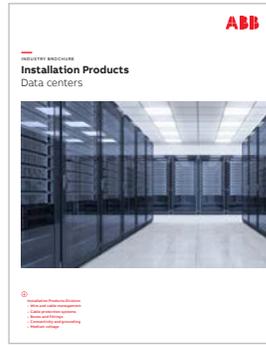
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# Installation Products for industries

- 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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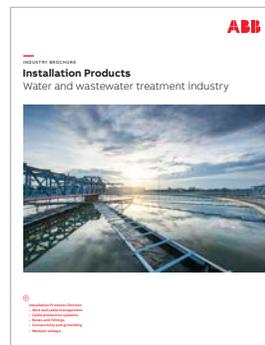
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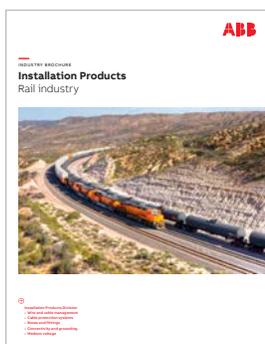
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At ABB, we understand the challenges faced in civil infrastructure. We're focused on providing electrical solutions that address the critical issues in every transportation sector, so you can focus on sustainability, cost, quality, flexibility, safety and regulatory compliance.







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